

Appendix C

Past Proceedings

C.1 2018.08.01 Final MND & Attachments

- C.1-1 Project Plans
- C.1- 2a 20160224 Merk Biological Assessment
- C.1- 2b 20160321 Dudek Peer Review of Biological Assessment
- C.1- 2c 20160624 Merk Supplemental Biological Resources
- C.1- 3 20110101 USFWS San Joaquin Kit Fox Avoidance
- C.1- 4 20170810 Monsoon Consultants Analysis of Reservoir Evaporation
- C.1- 5 MND Comment Letters

C.2 2018.12.11 Set Hearing Board Letter & Attachments

C.3 2019.03.05 Board Letter & Attachments



COUNTY OF SANTA BARBARA

Planning and Development

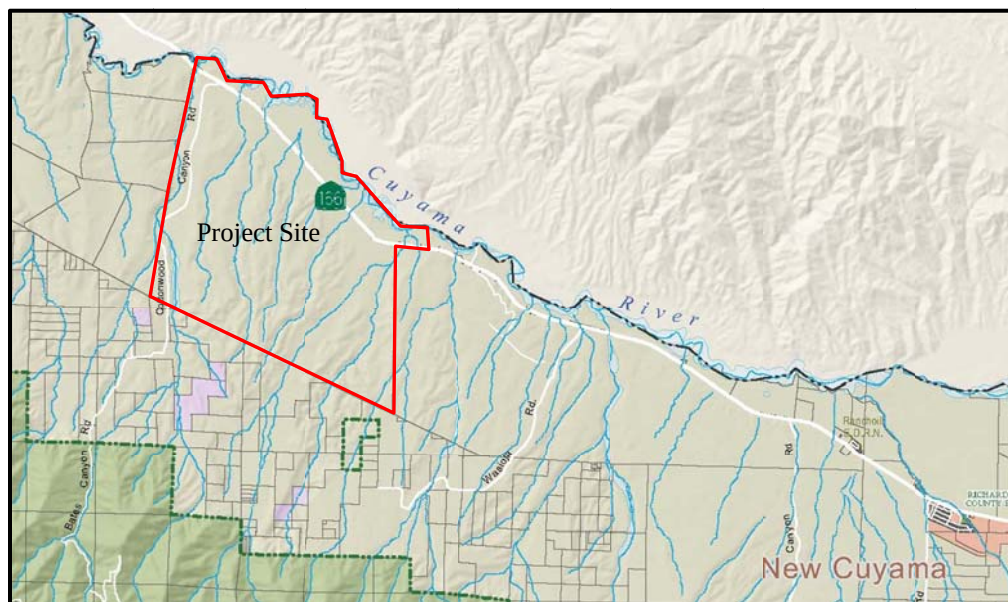
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Attachment D

Final Mitigated Negative Declaration 17NGD-00000-0004

North Fork Ranch Frost Ponds 16CUP-00000-00005

August 1, 2018



Owner/Applicant

Matt Turrentine – Brodiaea, Inc.
P.O. Box 6565
Santa Maria, CA 93455

Agent

Brian A. Tetley – Urban Planning Concepts
2624 Airpark Drive
Santa Maria, CA 93455

For More Information Contact: Steve Rodriguez, Contract Planner, Development Review Division, (805) 682-3413

1.0 REQUEST/PROJECT DESCRIPTION

A request of Brian Tetley, agent for Brodiaea, Inc, owner, to consider Case No. 16CUP-00000-00005. The North Fork Ranch Frost Pond project is a request to construct and operate three frost ponds (reservoirs) that would store water to be used for frost protection at the North Fork Ranch Vineyards. The project also includes the construction of new underground pipelines that would extend between each of the proposed reservoirs and the existing vineyard irrigation system.

The proposed reservoirs would serve approximately 1,000 acres of existing vineyards. ~~an existing 535-acre vineyard and an additional 100-acre area that is to be planted in the future.~~ Reservoir No. 1 would be located on the eastern portion of the project site adjacent to Schoolhouse Canyon Road (a private road). Reservoir No. 2 would be located in the central portion of the project site, and Reservoir No. 3 would be located on the western portion of the project site approximately 0.75 mile east of Cottonwood Canyon Road. Access to the reservoirs would be from existing roads that connect to State Highway 166.

Frost protection would be achieved by sustained spray irrigation when frost has the potential to damage the grape vines. Frost protection would generally be required during the months of February, March and April. The reservoirs would be maintained at a full condition between February and April. A maximum of three feet of well-supplied water would be maintained in the reservoirs between May 1st through January 31st. ~~and would be emptied of well-supplied water between May and January.~~ Water above a depth of three feet contained in the reservoirs after May 1 would be distributed for vineyard irrigation.

Each reservoir would have a water storage capacity of 49 acre-feet and would be lined with a high-density polyethylene plastic liner to prevent water seepage. Each reservoir would also have an emergency overflow discharge system that would prevent stored water from over-topping the reservoir. Water to be stored in the reservoirs would be supplied by existing agricultural wells located on the project parcel and on the north side of State Highway 166. Water from the wells would be conveyed to the reservoirs by existing vineyard irrigation pipelines that extend beneath the highway and throughout the vineyard. A six foot high fence would be installed around the exterior perimeter of each reservoir to prevent unauthorized entry. Life ring stations and floating pool ropes would also be provided for rescue purposes.

A total of approximately 257,945 cubic yards of cut and fill grading would be required to construct the three proposed reservoirs. The reservoirs would have a maximum depth of 27-28 feet, and in total would occupy an area of approximately 15.6 acres. Proposed pipelines that would convey water from the vineyard's existing irrigation system to each of the reservoirs would have a total length of 1,350 feet. Proposed pipelines that would convey water from each of the reservoirs to the vineyard's existing spray irrigation system would have a total length of 976 feet. Construction details for each of the proposed reservoirs are summarized on Table 1. It is estimated that the construction period for the three proposed reservoirs would be approximately one year.

Proposed project plans are provided as Attachment 1.

Table 1
North Fork Ranch Frost Ponds
Construction Characteristics

Reservoir	Proposed Grading			Reservoir Area		Reservoir Depth			Proposed Pipelines	
	Cut (cu. yds.)	Fill (cu. yds.)	Total (cu. yds.)	Approximate Dimensions (feet)	Acres	Top of Reservoir Elevation	Bottom of Pond Elevation	Depth (feet)	Fill Line (feet)	Drain Line (feet)
No. 1	44,062	44,589	88,651	590 x 370	5.0	1,955	1,927	28	624	517
No. 2	44,064	42,205	86,269	580 X 410	5.7	1,788	1,761	27	370	202
No. 3	42,771	40,254	83,025	590 x 360	4.9	1,744	1,717	27	356	257
TOTAL	130,897	127,048 (1)	257,945	--	15.6	--	--	--	1,350	976

(1) Due to shrinkage of fill material, no soil would be exported from the project site

Surface water drainage from upslope areas adjacent to the reservoirs would be collected by proposed drainage swales. The collected water would be discharged and allowed to sheet flow at downslope locations adjacent to the reservoirs. Rock energy dissipaters would be installed at each discharge location to reduce potential erosion-related impacts. Stormwater discharge from Reservoir No. 1 would be conveyed beneath Schoolhouse Canyon Road by a proposed culvert beneath the road.

The application involves Assessor Parcel Number 147-020-045, a 6,565-acre parcel that is zoned AG-II-100.

2.0 PROJECT LOCATION

The project site is on the south side of State Highway 166, between Cottonwood Canyon Road and Schoolhouse Canyon Road, approximately nine miles west of the community of New Cuyama, Fifth Supervisorial District.

2.1 Site Information	
Comprehensive Plan Designation	Agricultural Commercial (AC)
Zoning District, Ordinance	Land Use and Development Code, AG-II-100, Agriculture, 1 unit per 100 acres.
Site Size	The project property is 6,565 acres. The three proposed reservoirs would occupy a combined area of approximately 15 acres.
Present Use & Development	The proposed reservoir sites are vacant. Areas adjacent to the proposed reservoir sites are planted with vineyards.
Surrounding Uses/Zoning	North: AG-II-100, open space South: AG-II-100, open space East: AG-II-100, open space West: AG-II-100, open space
Access	State Highway 166 and existing unpaved ranch/vineyard roads

3.0 ENVIRONMENTAL SETTING

3.1 PHYSICAL SETTING

The 6,565-acre project parcel is located in the Cuyama Valley, approximately nine miles west of the community of New Cuyama. The project parcel is located on the south side of State Highway 166, and the proposed reservoir sites are approximately 4,000 to 5,000 feet south of the Cuyama River. The proposed reservoir sites are currently vacant and adjacent to existing vineyards. Irrigation lines have been installed throughout the vineyards and are located near the proposed reservoir project sites. The existing irrigation lines would also be used to deliver water to the proposed reservoirs.

Slope/Topography. The proposed reservoir sites are generally level and slope gently towards named and unnamed ephemeral drainages.

The Reservoir No. 1 project site is located on the eastern end of the project property adjacent to Schoolhouse Canyon Road. This project site ranges in elevation from approximately 1,958 feet above sea level in the southwest corner to approximately 1,938 feet in the southeast corner, which results in a slope gradient of approximately five percent. The site generally slopes to the east and is approximately 500 feet west of Schoolhouse Canyon Creek.

The Reservoir No. 2 project site is located on the central portion of the project property. This project site ranges in elevation from approximately 1,790 feet above sea level in the southwest corner to approximately 1,766 feet in the northwest corner, which results in a slope gradient of approximately six percent. The site generally slopes to the east and is approximately 100 feet west of a small ephemeral drainage.

The Reservoir No. 3 project site is located on the western end of the project property approximately one mile east of Cottonwood Canyon Road. Small ephemeral drainages are located approximately 100 feet to west and approximately 250 feet to the east of the reservoir site. This project site ranges in elevation from approximately 1,740 feet above sea level in the southeast corner to approximately 1,726 feet in the northwest corner, which results in a slope gradient of approximately two percent. The site generally slopes to the northeast towards the adjacent drainage.

Flora/Fauna. Flora and fauna conditions at and near the proposed reservoir sites are described in a report titled *Biological Resources Assessment for the Reservoir and Operations Yard Project, North Fork Ranch, Santa Barbara County, California* (February 24, 2016, Attachment 2a). The operations yard and vineyard irrigation pipelines described by this report are not part of the proposed frost pond project.

The proposed reservoir sites and surrounding areas have been historically used for cattle grazing and vegetation at and near the sites is sparse and consists predominately of non-native weeds and annual grasses. The proposed reservoir sites and areas adjacent to the sites were recently disked in preparation of planting grape vines. As a result of the disking operations conducted in 2016, much of the proposed reservoir sites are nearly devoid of vegetation. The drainages located near the proposed reservoirs are dry most of the year and generally flow briefly during the summer monsoon season and after winter rains. The drainages support patches of native habitat. 13 species of sensitive plants are known to exist in the project region, although no suitable habitat for sensitive plant species was observed at the project sites, and seasonally timed surveys conducted in 2015 did not observe any sensitive plant species in project-

related disturbance areas. Sensitive wildlife species that have the potential to occur in the project area include San Joaquin kit fox and American badger.

Vegetation coverage at the project sites is sparse and wildlife observed during site visits was limited to coyote tracks and a large flock of American crows in a disked area (KMA, 2016). 12 special status animal species are known to occur in the project region. Species that may still occur in the region include giant kangaroo rat, American badger, San Joaquin kit fox, blunt-nosed leopard lizard, California red-legged frog and prairie falcon. Due to lack of prey or habitat requirements, it is unlikely that these species would be found on the project site, however, species such as the San Joaquin kit fox, if present in the project area, could move through the project sites during foraging or migration activities.

Archaeological Sites. Archaeological resources located on or near the project site are described in a report titled *Phase 1 Cultural Resources Study for the North Fork Reservoir Project, Santa Barbara County, California* (August, 2016). The Phase 1 investigation included a survey of the proposed reservoir sites and the location of the proposed pipelines that would connect the reservoirs to existing irrigation water pipelines. The Phase 1 survey did not identify any archaeological resources within the proposed project site boundaries. The survey report does, however, state that human remains were identified during the excavation of a trench for the installation of an irrigation pipeline on the north side of State Highway 166. Due to the presence of this pre-historic burial, the proposed reservoir sites are considered to be sensitive for cultural resources.

Soils: Reservoir sites 1 and 3 are located on Pleasanton sandy loam, and reservoir site 2 is on Panoche loam. Both soil types have a land capability classification of 2e if irrigated and 3e if non-irrigated.

3.2 ENVIRONMENTAL BASELINE

The environmental baseline from which the project's impacts are measured consists of the on the ground conditions described above.

4.0 POTENTIALLY SIGNIFICANT EFFECTS CHECKLIST

The following checklist indicates the potential level of impact and is defined as follows:

Potentially Significant Impact: A fair argument can be made, based on the substantial evidence in the file, that an effect may be significant.

Less Than Significant Impact with Mitigation: Incorporation of mitigation measures has reduced an effect from a Potentially Significant Impact to a Less Than Significant Impact.

Less Than Significant Impact: An impact is considered adverse but does not trigger a significance threshold.

No Impact: There is adequate support that the referenced information sources show that the impact does not apply to the subject project.

Reviewed Under Previous Document. The analysis contained in a previously adopted/certified environmental document addresses this issue adequately for use in the current case and is summarized in the discussion below. The discussion should include reference to the previous documents, a citation of the page(s) where the information is found, and identification of mitigation measures incorporated from the previous documents.

4.1 AESTHETICS/VISUAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. With Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. The obstruction of any scenic vista or view open to the public or the creation of an aesthetically offensive site open to public view?			X		
b. Change to the visual character of an area?			X		
c. Glare or night lighting which may affect adjoining areas?			X		
d. Visually incompatible structures?			X		

Setting

Physical

State Highway 166 provides regional access through the project region and views from the highway in the project area predominately consist of fore- and mid-ground views of open space and agricultural operations. Background views available from the highway include the Caliente Mountains to the north and the Sierra Madre Mountains to the south.

The proposed reservoir sites are vacant and have little or sparse vegetation coverage. The topography of the sites generally slopes gently towards adjacent drainages. Grape vines have been recently planted in areas adjacent to the proposed reservoir sites. Proposed reservoir site Nos. 1, 2 and 3 would be approximately 3,000, 1,200, and 1,500 feet south/southeast of State Highway 166, respectively.

Regulatory

County Environmental Thresholds: The County's Visual Aesthetics Impact Guidelines classify coastal and mountainous areas, the urban fringe, and travel corridors as "especially important" visual resources. A project may have the potential to create a significantly adverse aesthetic impact if (among other potential effects) it would impact important visual resources, obstruct public views, remove significant amounts of vegetation, substantially alter the natural character of the landscape, or involve extensive grading visible from public areas. The guidelines address public, not private views.

Impact Discussion

(a-d) Less than significant impact: The proposed reservoirs would be constructed by excavating soil below existing grade and using the excavated soil to construct berms that would impound stored water. The height of the water impoundment berms would vary but in general would be approximately three to 20 feet above the adjacent ground surface. Vegetation, likely consisting of an approved erosion control seed mix, would be required on the outside surfaces of the berms for erosion control purposes. The proposed water delivery pipelines that would extend between the reservoirs and existing irrigation water pipelines would be below ground and not visible.

The proposed reservoirs would result in the construction of new above ground facilities that would be visible from public viewing locations such as State Highway 166. Due to the setback distances between the three

reservoir sites and State Highway 166 the reservoirs would not be prominently visible to persons traveling on the highway. Grading required to construct the reservoirs would not result in the creation of grading scars or other alterations to existing topography or vegetation that would result in a significant visual impact. Erosion control planting on the reservoir berms would help to make the appearance of the berms blend with undisturbed areas near the reservoir sites. The proposed reservoir berms would have a maximum height of approximately 20 feet above surrounding grade and would not adversely affect existing views of the Sierra Madre Mountains to the south of the project site from public viewpoints such as State Highway 166. No nighttime lighting would be used at the project sites. Therefore, the project would not obstruct a scenic vista, substantially change the visual character of the project sites, or result in structures that are incompatible with surrounding open space and agricultural uses. Therefore, the project's aesthetic/visual resource impacts would be **less than significant**.

Cumulative Impacts: Proposed grading to construct the three reservoirs would result in relatively minor alterations to the topography of the project sites, and the project would not result in the development of new buildings or structures that would be incompatible with surrounding land uses. Therefore, the project would not result in cumulatively considerable changes to existing aesthetic/visual resource conditions at the project sites or the project area, and would result in **less than significant** cumulative aesthetic/visual resource impacts.

Mitigation and Residual Impact: The project's impacts would be less than significant and no mitigation is required.

4.2 AGRICULTURAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. With Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Convert prime agricultural land to non-agricultural use, impair agricultural land productivity (whether prime or non-prime) or conflict with agricultural preserve programs?			X		
b. An effect upon any unique or other farmland of State or Local Importance?			X		

Background: Agricultural lands play a critical economic and environmental role in Santa Barbara County. Agriculture continues to be Santa Barbara County's major producing industry with a gross production value of almost \$1.5 billion (Santa Barbara County 2014 Crop Production Report). In addition to the creation of food, jobs, and economic value, farmland provides valuable open space and maintains the County's rural character.

Physical: The project parcel has been used for grazing in the past, and the areas near the proposed frost ponds have been recently planted with grape vines. The proposed reservoir sites would encompass a total area of approximately 15 acres. Proposed reservoir sites 1 and 3 are located on Pleasanton sandy loam, and reservoir site 2 is on Panoche loam. Both soil types have a land capability classification of 2e if irrigated and 3e if non-irrigated. Therefore, the proposed reservoir sites are considered to have prime agricultural soils if irrigated. The project sites and adjacent areas are classified as "Grazing Land" by the California Department of Conservation (Farmland Mapping and Monitoring Program, 2016). The project parcel is subject to agricultural preserve contract 95-AP-024.

Regulatory

County Thresholds Manual: The County's Agricultural Resources Guidelines (approved by the Board of Supervisors, August 1993) provide a methodology for evaluating agricultural resources. These guidelines utilize a weighted point system to serve as a preliminary screening tool for determining significance. The tool assists planners in identifying whether a previously viable agricultural parcel could potentially be subdivided into parcels that are not considered viable after division. A project that would result in the loss or impairment of a agricultural resources would result in a potentially significant impact. The proposed project does not include land subdivision, nor would it impair agricultural uses located on the project parcel. Therefore, the weighted point system was not used for this analysis.

Impact Discussion

(a - b) Less than significant impact. The proposed reservoirs would be used to provide frost protection for approximately 400 acres of grape vines that have been recently planted near the reservoir sites. The proposed reservoirs would be located on prime (if irrigated) agricultural soils, however, they would be an agricultural accessory use that supports an irrigated agriculture operation. The proposed reservoirs would not convert prime agricultural land to a non-agricultural use, or impair agricultural land productivity. The project parcel is under an agricultural preserve contract. The proposed project was reviewed by the Agricultural Preserve Advisory Committee on April 1, 2016 and found it to be compatible with the Uniform Rules for agricultural preserves. Therefore, the project would not conflict with an agricultural preserve contract, and its impacts to agricultural recourses would be **less than significant**.

Cumulative Impacts: The proposed reservoirs would support the long-term use of the project parcel for irrigated agriculture. Therefore, the project would not contribute to a cumulatively considerable loss of agricultural resources and its cumulative impacts would be **less than significant**.

Mitigation and Residual Impact: The project's impacts would be less than significant and no mitigation is required.

4.3a AIR QUALITY

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. The violation of any ambient air quality standard, a substantial contribution to an existing or projected air quality violation, or exposure of sensitive receptors to substantial pollutant concentrations (emissions from direct, indirect, mobile and stationary sources)?			X		
b. The creation of objectionable smoke, ash or odors?			X		
c. Extensive dust generation?			X		

Existing Setting: The project site is located within the South Central Coast air basin, a federal and state non-attainment area for ozone (O₃) and a state non-attainment area for particulate matter (PM₁₀). Reactive organic compounds (ROC) and nitrogen oxides (NO_x), which are precursors to ozone, are considered to be non-attainment pollutants. The major sources of ozone precursor emissions in the County are motor vehicles, the petroleum industry and solvent use. Sources of PM₁₀ include grading, road dust and vehicle exhaust.

County Environmental Thresholds: Chapter 5 of the Santa Barbara County Environmental Thresholds and Guidelines Manual addresses the subject of air quality. The thresholds provide that a proposed project will not have a significant impact on air quality if operation of the project will:

- emit (from all project sources, mobile and stationary), less than the daily trigger for offsets (55 pounds per day for NO_x and ROC, 80 pounds per day for PM₁₀);
- emit less than 25 pounds per day of oxides of nitrogen (NO_x) or reactive organic compounds (ROC) and from motor vehicle trips only;
- not cause or contribute to a violation of any California or National Ambient Air Quality Standard (except ozone);
- not exceed the APCD health risk public notification thresholds adopted by the APCD Board; and
- be consistent with the adopted federal and state Air Quality Plans.

As indicated above, long-term/operational emissions thresholds have been established to address mobile emissions (i.e., motor vehicle emissions) and stationary source emissions (i.e., stationary boilers, engines, paints, solvents, and chemical or industrial processing operations that release pollutants). No thresholds have been established for short-term impacts associated with construction activities. However, the County's Grading Ordinance and the Air pollution Control District requires standard dust control conditions for all projects involving grading activities.

Impact Discussion

(a - b) Less than significant impact. Short-term emissions of ozone precursors (NO_x and ROC) during project construction would result primarily from the use of earthmoving equipment. Project-related grading to construct the three proposed reservoirs would require approximately 130,897 cubic yards of cut, and 127,048 cubic yards of fill. Due to soil shrinkage, it is not expected that any excess soil would be exported from the project site. Minor amounts of grading (trenching) would also be required for the installation of approximately 2,326 linear feet of proposed reservoir fill and drain lines. Since short-term construction-related emissions are not considered to result in significant air quality impacts, project-related construction emissions of NO_x and ROC would be **less than significant** on a project-specific and cumulative basis. However, due to the non-attainment status of the air basin for ozone, the project would be required to implement standard conditions required by the APCD to reduce construction-related emissions of ozone precursors to the extent feasible. The implementation of these standard conditions is routinely required for all new development in the County.

The operation of the proposed reservoirs would not generate a substantial amount of traffic (Section 4.15, Transportation/Circulation) or result in substantial direct or indirect emissions from stationary sources. The project would not result in industrial or other operations that would have the potential to result in emissions of smoke, ash, or objectionable odors. Therefore, the project would not be a substantial long-term source of emissions and would result in **less than significant** project-specific and cumulative air emission impacts.

(c) Less than significant impact. Project-related grading would have the potential to be a short-term source of fugitive dust that could have the potential to impact adjacent agricultural operations. Project-related

grading would also contribute to regional emissions of PM₁₀ and PM_{2.5}. Dust emissions resulting from project-related construction would be reduced to the extent feasible through the implementation of County Grading Ordinance and the Air Pollution Control District requirements, which require the implementation of standard dust control measures. Therefore, short-term dust emissions from project-related grading would be **less than significant** under project-specific and cumulative conditions.

Mitigation and Residual Impact: The project's impacts would be less than significant and no mitigation is required.

4.3b AIR QUALITY - GREENHOUSE GAS EMISSIONS

Greenhouse Gas Emissions - Will the project:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X		
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X		

Greenhouse Gas Emissions

Existing Setting: Greenhouse gases include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). The largest source of greenhouse gas emissions from human activities in the United States is from fossil fuel combustion for electricity, heat, and transportation. Specifically, the *Inventory of U.S. Greenhouse Gasses and Sinks* (U.S. Environmental Protection Agency, 2013) states that the primary sources of greenhouse gas emissions in 2013 included electricity production (31%), transportation (27%), industry (21%), commercial and residential (12%), and agriculture (9%). This release of gases creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as “the greenhouse effect,” there is strong evidence to support that human activities have accelerated the generation of greenhouse gases beyond natural levels. The overabundance of greenhouse gases in the atmosphere has led to a warming of the earth and has the potential to severely impact the earth's climate system. For instance, Santa Barbara County is projected to experience an increase in the number of wildfires, land vulnerable to 100-year flood events, and temperature increases, even under a low-emissions scenario (California Energy Commission, 2015).

Climate change results from greenhouse gas emissions “...generated globally over many decades by a vast number of different sources” rather than from greenhouse gas emissions generated by any one project (County of Santa Barbara Planning and Development, 2008). As defined in CEQA Guidelines Section 15355 and discussed in Section 15130, “...a cumulative impact consists of an impact which is created as a result of the combination of the [proposed] project...evaluated...together with other projects causing related impacts.” Therefore, by definition, climate change under CEQA is a cumulative impact.

Environmental Threshold: CEQA Guidelines Section 15183.5(a) states,

Lead agencies may analyze and mitigate the significant effects of greenhouse gas emissions at a programmatic level, such as in...a separate plan to reduce greenhouse gas emissions. Later project-specific environmental documents may tier from...that existing programmatic review...a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan...

In May 2015, the County of Santa Barbara Board of Supervisors adopted the *Energy and Climate Action Plan* (ECAP) (County of Santa Barbara Long Range Planning Division, 2015) and certified the accompanying EIR (SCH# 20144021021) (PMC, 2015). The ECAP includes a greenhouse gas emissions forecast for unincorporated Santa Barbara County to 2035 and otherwise meets the criteria in CEQA Guidelines Section 15183.5(b) for a “plan to reduce greenhouse gas emissions.” The ECAP commits the County to reduce community-wide greenhouse gas emissions by 15 percent below 2007 levels by 2020 consistent with the California Global Warming Solutions Act of 2006 (AB 32) and the related *Climate Change Scoping Plan* (California Air Resources Board, 2008). The ECAP concludes that the County can meet this emission reduction target by implementing 53 existing and new County projects, policies, and programs (“emission reduction measures”). As a result, specific projects included in the ECAP’s emission forecast are not currently required to incorporate emission reduction measures listed in the ECAP or any other mitigation measures to reduce greenhouse gas emissions. Concurrent with the ECAP, the Board of Supervisors also adopted an amendment to the Energy Element of the Comprehensive Plan that requires the County to monitor progress meeting the emission reduction target and, as necessary, update the ECAP.

The growth estimates used in the ECAP’s greenhouse gas emissions forecast were based on the *Santa Barbara County Regional Growth Forecast 2005-2040* (Santa Barbara County Association of Governments, 2007) and the 2010 U.S. Census. The growth estimates were based on factors such as population projections, vehicle trends, and planned land uses. The sources of greenhouse gas emissions included various sectors, such as transportation, residential energy, commercial energy, off-road, solid waste, agriculture, water and wastewater, industrial energy, and aircraft. As a result, most residential and commercial projects that are consistent with the County’s zoning (in 2007) were included in the forecast. However, certain projects were not included in the emissions forecast, such as stationary source projects (e.g., large boilers, gas stations, auto body shops, dry cleaners, oil and gas production facilities, and water treatment facilities), Comprehensive Plan amendments, and community plans that exceed the County’s projected population and job growth.

A proposed project that was included in the ECAP’s emissions forecast may tier from the ECAP’s EIR for its CEQA analysis of greenhouse gas emissions. A project that tiers from the ECAP’s EIR is considered to be in compliance with the requirements in the ECAP and, therefore, its incremental contribution to a cumulative effect is not cumulatively considerable (Class III).

Impact Discussion

(a - b) Less than significant impact. The proposed reservoirs would not result in an increase in population or the development of land uses that would result in substantial long-term emissions of greenhouse gases. Therefore, long-term GHG emissions that may result from the operation of the reservoirs were included in the ECAP’s forecasted 2020 emissions as they are a conditionally permitted use in the AG-II-100 zone district and consistent with the growth projections for the County. As such, GHG emission impacts that may result from the project are mitigated by the 53 emission reduction measures specified in the ECAP.

Therefore, the impact of this individual project is **less than significant** and no mitigation measures are required.

Cumulative Impacts: The ECAP quantifies and forecasts greenhouse gas emissions for certain non-stationary sectors within unincorporated Santa Barbara County through 2020. As discussed for items “a-b” above, the proposed project was included in the ECAP’s greenhouse gas emissions forecast. As a result, the proposed project would tier from the ECAP’s certified EIR for its cumulative impact analysis of greenhouse gas emissions. The EIR contains a programmatic analysis of greenhouse gas emissions for unincorporated Santa Barbara County. The ECAP contains 53 County and community-wide programmatic emission reduction measures to achieve the 15 percent greenhouse gas emissions reduction target by 2020. The County recently created the Energy and Sustainability Initiatives Division and is taking other steps to implement and monitor the effectiveness of these measures throughout the unincorporated county. The ECAP does not require the proposed project to incorporate any project-specific emission reduction measures or any mitigation measures to reduce greenhouse gas emissions. Therefore, the project complies with the requirements of the ECAP and, as provided in CEQA Guidelines 15183.5(b), its incremental contribution to the cumulative effect is not cumulatively considerable and would have a **less than significant impact** on the environment.

Mitigation and Residual Impact: Since the proposed project would not have a significant impact on the environment, no additional mitigation is necessary. Therefore, residual impacts would be less than significant.

4.4 BIOLOGICAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
Flora					
a. A loss or disturbance to a unique, rare or threatened plant community?			X		
b. A reduction in the numbers or restriction in the range of any unique, rare or threatened species of plants?			X		
c. A reduction in the extent, diversity, or quality of native vegetation (including brush removal for fire prevention and flood control improvements)?			X		
d. An impact on non-native vegetation whether naturalized or horticultural if of habitat value?			X		
e. The loss of healthy native specimen trees?			X		
f. Introduction of herbicides, pesticides, animal life, human habitation, non-native plants or other factors that would change or hamper the existing habitat?			X		
Fauna					
g. A reduction in the numbers, a restriction in the range, or an impact to the critical habitat of any unique, rare, threatened or endangered species of animals?		X			
h. A reduction in the diversity or numbers of animals onsite (including mammals, birds, reptiles,		X			

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
amphibians, fish or invertebrates)?					
i. A deterioration of existing fish or wildlife habitat (for foraging, breeding, roosting, nesting, etc.)?			X		
j. Introduction of barriers to movement of any resident or migratory fish or wildlife species?			X		
k. Introduction of any factors (light, fencing, noise, human presence and/or domestic animals) which could hinder the normal activities of wildlife?			X		

Background and Methods

A biological resources assessment for the reservoir project (Kevin Merk Associates, February 24, 2016) was prepared for the project and is provided as Attachment 2a. This report describes the existing conditions at and near the proposed reservoir sites, identifies special-status biological resources known to exist in the project region, and includes recommendations to minimize potential impacts to sensitive wildlife that could result from the implementation of the proposed project. The February 24, 2016 report was peer reviewed and the results of that review are summarized in a memo (Dudek, March 21, 2016) provided as Attachment 2b. Responses to the peer review comments (Kevin Merk Associates, June 24, 2016) are provided as Attachment 2c.

Existing Plant and Animal Communities/Conditions

Plants. The proposed reservoir sites have historically been used for grazing and in 2016 were disked in preparation of planting grape vines in adjacent areas. Botanical surveys on the project property were conducted in April, May, June, August, and September 2015 to search for special status plants and characterize the on-site habitat types. Additional surveys were conducted in the winter and spring 2016 over large areas of the property, including the proposed reservoir sites. In general, the reservoir sites lack plant species diversity and do not support any native plants, and plants observed at the project sites in the spring and summer of 2015 consisted of a mix of non-native weeds including red-stemmed filaree and Russian thistle, and sparse non-native grasses.

The California Natural Diversity Data Base (CNDDB) identifies 13 recorded special status plant species within a five mile radius of the proposed reservoir sites. Table 1 in Attachment 2a lists the special status plants identified by the CNDDB. Based on the habitat requirements of the identified plants, existing conditions at the project sites, and the results of seasonally timed surveys in 2015, it was determined that it is unlikely that any of the identified sensitive plants are located on or near the proposed reservoir sites.

Wildlife. Wildlife observed at the proposed reservoir sites during site visits was limited to coyote tracks and a large flock of American crows in a disked area. The CNDDB identified 13 known occurrences of sensitive wildlife species within five miles of the proposed reservoir sites. Table 1 in Attachment 2a lists the special status wildlife species identified by the CNDDB. The potential for sensitive animal species to occur on or near the proposed reservoir sites is summarized below.

Giant kangaroo rat was last identified in the project area in 1979 and is now identified as “possibly extirpated” by the CNDDB. Surveys of the proposed reservoir sites did not locate any burrow complexes characteristic of the giant kangaroo rat, therefore, this species is unlikely to occur in the project areas.

No evidence (i.e., direct observations, scat or tracks) of the federally endangered San Joaquin kit fox or American badger were observed at the project sites during surveys conducted in 2015 and 2016. The project sites are within the historic range of the San Joaquin kit fox, however, agricultural activities have encroached upon suitable habitat and previous disking has reduced the potential small mammal prey base and potential den sites from the project sites. It is possible that a kit fox, if present in the region, could move through the project area during foraging and/or migration activities, although the lack of a well-developed prey base and limited suitable denning habitat within the project areas indicate a very low potential for this species to occur. The last recorded occurrences of San Joaquin kit fox in the immediate project area are from 1975, and on-going agricultural operations would have restricted any recent denning activities to either higher elevations of the project property or riverbank/terrace areas outside the proposed project footprint areas. Therefore, there is a very low potential for kit fox or American badger to occur at the reservoir project sites. However, due to suitable kit fox and badger denning and foraging habitat in the project area, those species could be a rare transient through the proposed project sites.

Designated critical habitat for California red-legged frog is located beyond the five mile CNDDDB search radius conducted for the proposed project. The ephemeral drainages on the project property do not provide suitable aquatic habitat for red-legged frog. Therefore, it is considered highly unlikely that red-legged frog is located on or near the proposed project sites.

Blunt-nosed leopard lizard (BNLL) was not identified by the CNDDDB as occurring within five miles of the project sites, BNLL has a known occurrence at a site just over five miles east of the eastern project parcel border, and well as other occurrences in the project region. Prior to disking the proposed project sites, 18 protocol-level surveys for BNLL were conducted within the highest quality potential habitat in the eastern portion of the project property. Those surveys did not detect the presence of BNLL. Additional non-protocol condition surveys were also conducted at proposed Reservoir site 2 and 3. Overall, the surveys determined that BNLL were unlikely to occur on or near the proposed reservoir sites. Based on the survey results, it was also determined that is unlikely for coast horned lizard to be present at the project sites.

Special status bird species, including raptors (long-eared owl and prairie falcon), would be expected to forage over or around the proposed project area. However, due to the lack of trees and the encroachment of agriculture, no suitable prey base or nesting habitat is present at the project sites. Therefore, these species are not expected to occur in the project area for long periods.

Other special status animal species known to occur in the project area include: crotch bumble bee, western pond turtle, Kern primrose sphinx moth, San Joaquin whipsnake, Tulare grasshopper mouse, and coast horned lizard. The biological resources assessment prepared for the proposed project concluded that these species are not expected to occur at the project sites, or are unlikely to be found at the sites due to the absence of suitable habitat, such as perennial water, suitable vegetation, and/or prey base.

County Environmental Thresholds: The County of Santa Barbara Environmental Thresholds and Guidelines Manual establishes thresholds for significant impacts to biological resources. Thresholds applicable to the proposed project include:

Other Rare Habitat Types: The Manual recognizes that not all habitat-types found in Santa Barbara County are addressed by the habitat-specific guidelines. Impacts to other habitat types or species may be considered significant, based on substantial evidence in the record, if they substantially: (1) reduce or eliminate species diversity or abundance; (2) reduce or eliminate the quality of nesting areas; (3) limit reproductive capacity through losses of individuals or habitat; (4) fragment, eliminate, or otherwise

disrupt foraging areas and/or access to food sources; (5) limit or fragment range and movement; or (6) interfere with natural processes, such as fire or flooding, upon which the habitat depends.

Impact Discussion

(a-f) Less than significant impact: The proposed reservoir sites have been extensively disturbed by historic grazing operations and recent disking in preparation of planting vineyards in adjacent areas. Vegetation coverage at the project sites is sparse and the minimal vegetation growth consists primarily of non-native weeds and grasses. The biological resources assessment prepared for the proposed project determined it is unlikely that any of the sensitive plants identified by the CNDDDB occur at or near the proposed project sites. This is due primarily to the disturbed character of the project sites and general absence of suitable habitat. In addition, no sensitive plants were observed at the project sites during seasonally appropriate surveys conducted in 2015. The CNDDDB did not identify any sensitive plant communities that are known to exist in the project area. Therefore, the project would have **less than significant** impacts related to sensitive plant communities or species, the quality or extent of native vegetation, or the habitat value of non-native vegetation.

(g - h) Less than Significant with Mitigation: The biological resources assessment prepared for the proposed project determined it is unlikely that most of the sensitive wildlife species identified by the CNDDDB exist at or near the proposed project sites. This is due primarily to the disturbed character of the project sites, absence of suitable habitat, and regular human presence. However, the assessment concluded that while unlikely, there is a potential for San Joaquin kit fox and American badger to move through the proposed project sites while in search of food or suitable denning habitat. Therefore, project-related construction activities would have the potential to result in significant impacts to San Joaquin kit fox and American badger.

In the unlikely event that San Joaquin kit fox is located at the proposed project sites, potential impacts would be reduced to a less than significant level by implementing U.S. Fish and Wildlife Service (2011) Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance avoidance measures during construction of the proposed reservoirs (Mitigation Measure No. 1). In general, these avoidance measures require surveys to identify potential kit fox habitat in proposed disturbance areas, and if necessary, additional preconstruction/pre-activity surveys. The U.S. Fish and Wildlife Service must be contacted if surveys detect an active kit fox den. If an inactive den is observed, specified measures to preclude the use of the den are to be implemented. Implementation of the proposed survey and avoidance measures would be sufficient to ensure that impacts to San Joaquin kit fox are reduced to a less than significant level. Proposed Mitigation Measure No. 3 provides requirements to reduce potential impacts to American badger to a less than significant level. In general, this measure requires preconstruction surveys to identify active dens, includes specified measures to avoid active dens and to discourage the use of inactive dens located in project-related disturbance areas. The mitigation measures for San Joaquin kit fox and American badger would also reduce the potential for less than significant impacts to common wildlife species that may also be present at the project sites by identifying species located in project areas, which would facilitate the implementation of appropriate impact avoidance and/or minimization measures.

(i - k) Less than significant impact: Vegetation at the proposed project sites is sparse and has been disturbed by disking operations. Therefore, construction of the reservoirs would not result in the removal of trees or shrubs, and would not result in the removal of potential breeding, roosting or nesting habitat. The proposed reservoirs would be at least 50 feet from the top of bank of the small ephemeral drainage channels located near the reservoir sites. Therefore, the project would not interfere with the potential use of the channels by wildlife. No lighting would be provided at the project sites and safety fencing that

would be installed around the reservoirs would not interfere with wildlife migration through the project area and would substantially reduce the potential for animals becoming trapped in the reservoirs. Operation of the reservoirs would not result in a substantial increase in noise or other conditions that would result in significant long-term habitat quality impacts to areas at or near the project sites. Therefore, the project would have **less than significant** impacts related to habitat deterioration.

Cumulative Impacts: The proposed project sites have been extensively disturbed and it is unlikely that the sites contain or support sensitive plant or wildlife species. Although unlikely, project-related construction activities would have the potential to result in significant short-term effects to sensitive wildlife. Those temporary impacts would be reduced to a less than significant level with the implementation of proposed mitigation measures. The long-term operation of the proposed reservoirs would not significantly impact biological resources located on or near the project sites. Therefore the project would not have a cumulatively considerable effect on biological resources and the project's contribution to biological resource impacts would be **less than significant**.

Mitigation and Residual Impact

Implementation of the following mitigation measure would reduce the project's short-term impacts to San Joaquin kit fox in the unlikely event that it inhabits the project site. The required pre-construction surveys would also reduce potential impacts to American badger. Implementation of this measure would reduce potential impacts to San Joaquin kit fox and American badger to a **less than significant** level (Class II). Residual impacts would be less than significant.

- 1. Special Condition: San Joaquin Kit Fox Avoidance Measures.** Project-related pre-construction / pre-activity surveys shall be conducted prior to the beginning of ground disturbance and/or construction activities, or any project activity that has the potential to impact the San Joaquin kit fox and/or American badger. Required pre-construction / pre-activity surveys and project-related construction activities shall be conducted in accordance with the requirements of the U.S. Fish and Wildlife Service's *Standardized Recommendations for Protection of The Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (January, 2011). Similar measures and procedures shall be implemented to minimize the potential for impacts to American badger. The Standardized Recommendations are provided as Attachment 3.

PLAN REQUIREMENTS AND TIMING: Prior to the start of any project-related pre-construction / pre-activity, the areas that would be affected by reservoir construction and the construction of the proposed reservoir fill and drain lines shall be marked in the field and surveyed by a qualified biologist. Project-related pre-construction / pre-activity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities. The qualified biologist shall conduct weekly site visits during site disturbance activities that proceed longer than 14 days for the purpose of monitoring compliance with the attached Standardized Recommendations. Site disturbance activities lasting up to 14 days do not require weekly monitoring by the biologist unless observations of kit fox or their dens are made on-site or the qualified biologist recommends additional monitoring. This measure shall be printed on all grading and construction plans.

MONITORING: The qualified biologist shall document the methods and results of site visits in weekly monitoring reports that are to be submitted to P&D. If incidental take of kit fox during project activities is possible, before project activities commence, the applicant must consult with the USFWS and CDFW. The results of this consultation may require the applicant to obtain a federal and/or state permit for incidental take during project activities.

- 2. Bio-09 Fish and Wildlife Jurisdiction Advisory.** The project site is within the range of San Joaquin kit fox, a species listed as Endangered by the U.S. Fish and Wildlife Service, and Threatened by the California Department of Fish and Wildlife. Based upon reports prepared by Kevin Merk Associates, dated February 24, 2016 and June 24, 2016, it has been determined that the probability for San Joaquin kit fox occurrence on the site is very low. The issuance of this permit does not relieve the permit-holder of any duties, obligations, or responsibilities under the federal or California Endangered Species Act or any other law. The permit-holder shall contact the necessary jurisdictional agencies to ascertain his or her level of risk under the federal and California Endangered Species Act in implementing the project herein permitted.

Indemnity for Violation of the Endangered Species Act: The applicant shall defend, indemnify and hold harmless the County or its agents, officers and employees from any and all claims, actions, proceedings, demands, damages, costs, expenses (including attorney's fees), judgments or liabilities, against the County or its agents, offices or employees brought by any entity or person for any and all actions or omissions of the applicant or his agents, employees or other independent contractors arising out of this permit alleged to be in violation of the federal or California Endangered Species Acts (16 USC Sec. 1531 et seq.; Cal. Fish and Game Code Sec. 2050 et seq.). This permit does not authorize, approve or otherwise support a "take" of any listed species as defined under the federal or California Endangered Species Acts. Applicant shall notify County immediately of any potential violation of the federal and/or California Endangered Species Act.

- 3. American Badger Avoidance and Minimization Measures.** A minimum of 14 days prior to initiation of ground disturbing activities, a survey for badger burrows shall be conducted within the disturbance footprint by an approved biologist (a biologist familiar with, including identification of, the wildlife species in the region). Dens found within the survey area shall be mapped and monitored using a tracking medium, remote camera system, and/or spotlighting at night for a minimum of three days to assess the presence of badgers. Inactive dens shall be collapsed by hand with a shovel to prevent badgers from re-using them during construction. Active dens located within the survey area shall be avoided during the breeding season (March 1 through June 30). A minimum buffer of 50 feet around the active den within the proposed area of disturbance shall be demarcated by construction fencing. The fencing shall be installed one foot above ground to permit movement of badgers in and out of the buffer zone. Once the biologist has determined that active dens are no longer in use, the den shall be collapsed by shovel. Prior to ground disturbing activities occurring outside of the breeding season, badgers may be discouraged from using currently active dens by partially blocking the entrance of the den with sticks, debris, and soil for three (3) to five (5) days. Access to the den would be incrementally blocked to a greater degree over this period. This would cause the badger to abandon the den site and move elsewhere. After badgers have stopped using active dens within the project site, the dens would be collapsed by hand with a shovel.

Plan Requirements and Timing. The name, qualifications, scope of biological surveys and contact information for the surveying biologist must be submitted to P&D and CDFW in advance of the surveys. The above measures shall be included on all land use, grading, and building plans for the construction of the reservoirs, water pipelines, and utility line improvements. A report of the results of the badger survey shall be submitted to P&D for review and approval prior to Zoning Clearance.

Monitoring. P&D will review and approve the reports. A County-approved biologist shall be present during the initial ground-disturbing activity.

4.5 CULTURAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
Archaeological Resources					
a. Disruption, alteration, destruction, or adverse effect on a recorded prehistoric or historic archaeological site (note site number below)?		X			
b. Disruption or removal of human remains?		X			
c. Increased potential for trespassing, vandalizing, or sabotaging archaeological resources?		X			
d. Ground disturbances in an area with potential cultural resource sensitivity based on the location of known historic or prehistoric sites?		X			
Ethnic Resources					
e. Disruption of or adverse effects upon a prehistoric or historic archaeological site or property of historic or cultural significance to a community or ethnic group?			X		
f. Increased potential for trespassing, vandalizing, or sabotaging ethnic, sacred, or ceremonial places?			X		
g. The potential to conflict with or restrict existing religious, sacred, or educational use of the area?			X		

Setting

For at least the past 10,000 years, the area that is now Santa Barbara County has been inhabited by Chumash Indians and their ancestors. A Phase 1 investigation (*Phase 1 Cultural Resources Study for the North Fork Reservoir Project, Santa Barbara County, California*, Rincon Consultants, 2016) of the proposed reservoir and pipeline construction sites was conducted. The survey did not identify any archaeological resources. However, prior to the preparation of the Phase 1 investigation, human remains were identified during the excavation of an irrigation pipeline at a location on the north side of Highway 166. Based on the previous discovery of the burial, the project site is considered sensitive for cultural resources.

County Environmental Thresholds: The County Environmental Thresholds and Guidelines Manual contains guidelines for identification, significance determination, and mitigation of impacts to important cultural resources. Chapter 8 of the Manual, the *Archaeological Resources Guidelines: Archaeological, Historic and Ethnic Element*, specifies that if a resource cannot be avoided, it must be evaluated for importance under CEQA. CEQA Section 15064.5 contains the criteria for evaluating the importance of archaeological and historical resources. For archaeological resources, the criterion usually applied is: (D), “Has yielded, or may be likely to yield, information important in prehistory or history.” A project that may cause a substantial adverse effect on an archaeological resource may have a significant effect on the environment.

Impact Discussion

(a-d) Less than significant with mitigation: Background research and the survey of the project sites did not identify any archaeological resources that would be impacted by the construction of the proposed reservoirs or associated pipelines. Therefore, the project would not impact any recorded cultural resource sites. However, based on the previous discovery of pre-historic human remains in the vicinity of the project sites, the project area is considered sensitive for cultural resources. Therefore, there is a potential for unanticipated discoveries of cultural resources during project construction. Mitigation measure No. 4 requires that an archaeological monitor and Native American representative be present during initial ground disturbance at each of the proposed reservoir and pipeline installation sites. Mitigation measure No. 5 describes actions to be implemented in the event that previously unidentified cultural resources are discovered during site development; and mitigation measure No. 6 requires that construction workers be informed about the cultural resources sensitivity of the project area. The proposed mitigation measures would reduce impacts to cultural resources to a **less than significant** level.

(e-g) Less than significant impact. Based on the Phase 1 investigation there is no indication that the proposed reservoir sites are religiously important or that the project site is a sacred site. In addition, under the requirements of AB 52 (Gatto, 2014), the Barbareño/Venentureño Band of Mission Indians was formally notified of the proposed project by a letter dated March 13, 2017. No response to this notification has been received. The use of the proposed reservoirs would not increase the number of people located on the project property or increase the potential for the collection or vandalizing ethnic resources. As a result, impacts would be **less than significant**.

Cumulative Impacts: The project would have a low potential to encounter previously undetected cultural resources during project construction. However, if the project were to result in the disturbance of previously undetected resources, that impact would be reduced to a less than significant level with the implementation of proposed project-specific mitigation measures. Therefore, the project would not have a cumulative considerable effect on the County's cultural resources and its cumulative cultural resource impacts would be **less than significant**.

Mitigation and Residual Impact: Implementation of the following measures would reduce the project's potential impacts to cultural resources to a less than significant level (Class II). Residual impacts would be less than significant.

4. **CulRes-07 Cultural Resource Monitor.** The Owner/Applicant shall have all earth disturbances including scarification and placement of fill within the proposed project sites monitored by a P&D approved archaeologist and a Native American consultant in compliance with the provisions of the County Archaeological Guidelines. The duration and depth of grading below the ground surface that requires monitoring shall be determined by the approved archaeologist and Native American consultant. Ground-disturbing construction work within native soils shall be monitored by a County-qualified archaeologist and a Native American monitor during construction to a depth of 10 feet below the ground surface.

TIMING: Prior to the approval of a grading permit, the Owner/Applicant shall submit for P&D review and approval, a contract or Letter of Commitment between the Owner/Applicant and the archaeologist, consisting of a project description and scope of work, and once approved, shall execute the contract. This condition shall be printed on all building and grading plans.

MONITORING: The Owner/Applicant shall provide P&D compliance monitoring staff with the name and contact information for the assigned onsite monitor(s) prior to grading permit issuance and pre-construction meeting. P&D compliance monitoring staff shall confirm monitoring by archaeologist and Native American consultant and P&D grading inspectors shall spot check field work. The P&D permit processing planner shall check plans prior to approval of all building and grading permits and P&D compliance monitoring staff shall spot check in the field.

5. **CulRes-09 Stop Work at Encounter.** The Owner/Applicant and/or their agents, representatives or contractors shall stop or redirect work immediately in the event archaeological remains are encountered during grading, construction, landscaping or other construction-related activity. The Owner/Applicant shall retain a P&D approved archaeologist and Native American representative to evaluate the significance of the find in compliance with the provisions of Phase 2 investigations of the County Archaeological Guidelines and funded by the Owner/Applicant. If remains are found to be significant, they shall be subject to a Phase 3 mitigation program consistent with County Archaeological Guidelines and funded by the applicant.

PLAN REQUIREMENTS: This condition shall be printed on all building and grading plans.

MONITORING: The P&D permit processing planner shall check plans prior to the issuance of a Zoning Zone Clearance and P&D compliance monitoring staff shall spot check in the field.

6. **Special Condition: Pre-Construction Meeting.** A pre-construction meeting shall be conducted by a County-qualified archaeologist and a local Native American representative funded by the applicant. Meeting attendees shall include the applicant, archaeologist, local Chumash representative, construction supervisors, and heavy equipment operators to ensure that all parties understand the cultural resources monitoring program and their respective roles and responsibilities. All construction personnel who would work on the site during any phase of ground disturbance shall be required to attend the meeting. The names of all personnel who attend the meeting shall be recorded denoting that they have received the required training.

The meeting shall review the following: types of archaeological resources that may be uncovered; provide examples of common archaeological artifacts and other cultural materials to examine; describe why monitoring is required; what makes an archaeological resource significant; identify monitoring procedures; what would temporarily halt construction and for how long; describe a reasonable resource discovery scenario (i.e., feature or artifact); and describe reporting requirements and the responsibilities of the construction supervisor and crew. The meeting shall make attendees aware of prohibited activities, including vehicle use in protected areas, and educate construction workers about the inappropriateness of unauthorized collecting of artifacts that can result in impacts on cultural resources.

PLAN REQUIREMENTS: The pre-construction meeting requirements shall be shown on approved grading and building plans.

TIMING: The pre-construction meeting shall be conducted prior to the start of ground disturbing activities.

MONITORING: The Owner/Applicant shall provide P&D compliance monitoring staff with the names and responsibilities of persons who attended the meeting.

Residual impacts would be less than significant with the implementation of proposed mitigation measures.

4.6 ENERGY

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Substantial increase in demand, especially during peak periods, upon existing sources of energy?			X		
b. Requirement for the development or extension of new sources of energy?			X		

Setting

The County has not identified significance thresholds for electrical and/or natural gas service impacts (Thresholds and Guidelines Manual). Private electrical and natural gas utility companies provide service to customers in Central and Southern California, including the unincorporated areas of Santa Barbara County.

(a-b) Less than significant impact: The proposed project would result in the construction and operation of three water reservoirs. It is not anticipated that energy use to operate the reservoirs would result in a substantial increase in demand for energy; use energy in a wasteful manner; or require the development of new energy sources. Therefore, project-related energy use would be **less than significant**.

Cumulative Impacts: The project's contribution to the regional demand for energy would not be cumulatively considerable and its cumulative effect would be **less than significant**.

Mitigation and Residual Impact: Project-related energy demand would be less than significant. Therefore, no mitigation measures are required.

4.7 FIRE PROTECTION

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Introduction of development into an existing high fire hazard area?			X		
b. Project-caused high fire hazard?			X		
c. Introduction of development into an area without adequate water pressure, fire hydrants or adequate access for fire fighting?			X		
d. Introduction of development that will hamper fire prevention techniques such as controlled burns or backfiring in high fire hazard areas?			X		
e. Development of structures beyond safe Fire Dept. response time?			X		

Setting

Physical: The project site is located within a designated High Fire Hazard area (CalFire, 2007). Vegetation at the project sites is sparse and vegetation near the project sites predominately consists of irrigated vineyards and non-native grasses. Fire protection and suppression services for the project would be provided by Santa Barbara County Fire Station 41 (41 Newsome Street, New Cuyama), which is approximately 9-12 miles from the proposed reservoir sites.

Impact Discussion

(a - e) Less than significant impact: The proposed reservoir project would not result in the construction of habitable or combustible structures, would not increase the population of the area, would not restrict future wildfire suppression activities, and would not result in a substantial demand for fire protection services. Therefore, the project would have a **less than significant** impact on fire protection services.

Cumulative Impacts: The proposed project would not result in a cumulatively considerable increase in the demand for fire protection services and would have a **less than significant** cumulative fire protection impact.

Mitigation and Residual Impact

No mitigation is required. Residual impacts would be less than significant.

4.8 GEOLOGIC PROCESSES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Exposure to or production of unstable earth conditions such as landslides, earthquakes, liquefaction, soil creep, mudslides, ground failure (including expansive, compressible, collapsible soils), or similar hazards?			X		
b. Disruption, displacement, compaction or overcovering of the soil by cuts, fills or extensive grading?			X		
c. Exposure to or production of permanent changes in topography, such as bluff retreat or sea level rise?			X		
d. The destruction, covering or modification of any unique geologic, paleontologic or physical features?			X		
e. Any increase in wind or water erosion of soils, either on or off the site?		X			
f. Changes in deposition or erosion of beach sands or dunes, or changes in siltation, deposition or erosion which may modify the channel of a river, or stream, or the bed of the ocean, or any bay, inlet or lake?		X			

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
g. The placement of septic disposal systems in impermeable soils with severe constraints to disposal of liquid effluent?				X	
h. Extraction of mineral or ore?				X	
i. Excessive grading on slopes of over 20%?			X		
j. Sand or gravel removal or loss of topsoil?				X	
k. Vibrations, from short-term construction or long-term operation, which may affect adjoining areas?				X	
l. Excessive spoils, tailings or over-burden?			X		

Setting

Regulatory/Physical

The proposed reservoir sites are generally level and have gentle slopes of approximately six (6) percent or less. Borings conducted at each of the proposed reservoir sites (*Geotechnical Investigation, North Fork Vineyards, Highway 166, New Cuyama, California*, GSI Soils Inc., January 2016) did not encounter standing groundwater at a depth 20 feet below the ground surface. There are no known faults located in the project area (*2016 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan*).

County Environmental Thresholds: Pursuant to the County's Adopted Thresholds and Guidelines Manual, impacts related to geological resources may have the potential to be significant if the proposed project involves any of the following characteristics:

1. The project site or any part of the project is located on land having substantial geologic constraints, as determined by P&D or PWD. Areas constrained by geology include parcels located near active or potentially active faults and property underlain by rock types associated with compressible/collapsible soils or susceptible to landslides or severe erosion. "Special Problems" areas designated by the Board of Supervisors have been established based on geologic constraints, flood hazards and other physical limitations to development.
2. The project results in potentially hazardous geologic conditions such as the construction of cut slopes exceeding a grade of 1.5 horizontal to 1 vertical.
3. The project proposes construction of a cut slope over 15 feet in height as measured from the lowest finished grade.
4. The project is located on slopes exceeding 20% grade.

Impact Discussion

(a, b, c, i, l) Less than significant impact: Construction of the proposed reservoirs would result in the excavation of approximately 130,897 cubic yards of excavation and 127,048 cubic yards of fill, for a total of 257,945 cubic yards of grading. The excavated soil would be used to construct the proposed reservoir's water impoundment berms, which would be approximately three to 20 feet above surrounding grade. Due to soil compaction and shrinkage, no excess soil would be exported from the project site.

Graded slopes and water impoundment berms would have a gradient of 2.5:1. The geotechnical investigation prepared for the project (GSI, 2016) concluded that instability of the proposed slopes is anticipated to be negligible due to the shear strength and cohesion properties of the native soils and the compactability of these materials. The geotechnical evaluation also concluded that based on a preliminary evaluation of on-site soil and groundwater conditions, the potential for liquefaction at the project sites is low. There are no known faults at the project sites, and the geotechnical evaluation prepared for the project identifies seismic design parameters that comply with building code requirements. All proposed project-related design parameters would be reviewed and included in the grading permit required by the Building and Safety Division for the project. Implementation of requirements included in approved grading plans and adherence to the requirements set forth in the Santa Barbara County Code, Chapter 14 Grading Ordinance would reduce potential seismic and soil-related impacts to a **less than significant** level.

(d) Less than significant impact. There are no unique geologic features at the proposed reservoir sites and proposed modifications to the topography of the project property would not be extensive. Therefore, impacts to unique features would be **less than significant**.

(e, f,) Less than significant with mitigation: The topography of the project site is generally level with gentle slopes. Grading to construct the proposed reservoirs would have the potential to result in significant short- and long-term erosion-related impacts to nearby ephemeral drainages that drain to the Cuyama River, which in general is approximately 4,000 feet northeast of the proposed reservoir sites. The Santa Barbara County Code, Chapter 14 Grading Ordinance (2010) contains the minimum standards and procedures necessary to minimize grading-related hazards. The Ordinance also addresses compliance with the National Pollutant Discharge Elimination System Phase II storm water regulations and sets forth local storm water requirements for project that disturb more than one acre. The implementation of these requirements would reduce the potential for the project to result in erosion- and sedimentation-related impacts to water resources. Mitigation Measure No. 7 provides specific erosion control requirements that would reduce the project's potential erosion-related impacts to a **less than significant** level.

(g, h, j, k) No impact. The project would not require the use of septic systems and would not result in mining operations. The project would not result in construction operations that would be a substantial source of vibrations (i.e., pile driving) and no sensitive vibration receptors are located near the project site.

Cumulative Impacts: Geologic impacts are generally project-specific in nature and addressed based on the characteristics of individual project site. However, erosion and off-site sedimentation from a project site may contribute to off-site water quality and other sedimentation-related impacts. With the implementation of proposed project-specific mitigation, the project would not result in significant short- or long-term erosion impacts and the project's geologic impacts would not be cumulatively considerable and its cumulative effect would be less than significant.

Mitigation and Residual Impact

The following mitigation measure would reduce the project's potential erosion- and sedimentation-related impacts to a less than significant level.

7. **Geo-02. Erosion and Sediment Control Plan.** Where required by the latest edition of the California Green Code and/or Chapter 14 of the Santa Barbara County Code, a Storm Water Pollution Prevention Plan (SWPPP), Storm Water Management Plan (SWMP) and/or an Erosion and Sediment Control Plan (ESCP) shall be implemented as part of the project. Grading and erosion and sediment control plans shall be designed to minimize erosion during construction and

shall be implemented for the duration of the grading period and until re-graded areas have been stabilized by structures, long-term erosion control measures or permanent landscaping. The Owner/Applicant shall submit the SWPPP, SWMP or ESCP using Best Management Practices (BMP) designed to stabilize the site, protect natural watercourses/creeks, prevent erosion, convey storm water runoff to existing drainage systems keeping contaminants and sediments onsite. The SWPPP or ESCP shall be a part of the Grading Plan submittal and will be reviewed for its technical merits by P&D. Information on Erosion Control requirements can be found on the County web site re: Grading Ordinance Chapter 14 (<http://sbcountyplanning.org/building/grading.cfm>) refer to Erosion and Sediment Control Plan Requirements; and in the California Green Code for SWPPP (projects greater than 1 acre) and/or SWMP requirements.

PLAN REQUIREMENTS: The grading and SWPPP, SWMP and/or ESCP shall be submitted for review and approved by P&D prior Zoning Clearance. The plan shall be designed to address erosion, sediment and pollution control during all phases of development of the site until all disturbed areas are permanently stabilized. **TIMING:** The SWPPP requirements shall be implemented prior to the commencement of grading and throughout the year. The ESCP/SWMP requirements shall be implemented between November 1st and April 15th of each year, except pollution control measures shall be implemented year round.

MONITORING: P&D staff shall perform site inspections throughout the construction phase.

4.9 HAZARDOUS MATERIALS/RISK OF UPSET

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. In the known history of this property, have there been any past uses, storage or discharge of hazardous materials (e.g., fuel or oil stored in underground tanks, pesticides, solvents or other chemicals)?			X		
b. The use, storage or distribution of hazardous or toxic materials?			X		
c. A risk of an explosion or the release of hazardous substances (e.g., oil, gas, biocides, bacteria, pesticides, chemicals or radiation) in the event of an accident or upset conditions?			X		
d. Possible interference with an emergency response plan or an emergency evacuation plan?			X		
e. The creation of a potential public health hazard?			X		
f. Public safety hazards (e.g., due to development near chemical or industrial activity, producing oil wells, toxic disposal sites, etc.)?			X		
g. Exposure to hazards from oil or gas pipelines or oil well facilities?			X		
h. The contamination of a public water supply?			X		

Setting

The areas that would be used for the construction of the proposed reservoirs are vacant and have been used for grazing in the past. According to the SWRCB Geotracker website (accessed March 30, 2017) there are no known contamination or permitted hazardous waste sites located on the project property, and there are no active contamination or remediation sites near the project property.

County Environmental Threshold:

Pursuant to the County's Adopted Thresholds and Guidelines Manual, the County's safety threshold addresses involuntary public exposure from projects involving significant quantities of hazardous materials. The threshold addresses the likelihood and severity of potential accidents to determine whether the safety risks of a project exceed significant levels.

Impact Discussion:

(a-h) Less than Significant Impact. The proposed project would result in the development and operation of three water storage reservoirs. The construction and operation of the reservoirs would not result in or require the use of hazardous materials at levels that would have the potential to result in a significant hazard to human health or the environment. Minor amounts of traffic that may be generated by the project would generally be for maintenance-related purposes, and project-related traffic would not substantially interfere with emergency response capabilities to the project site or to other properties in the project area. Therefore, the project's potential hazard-related impacts would be **less than significant**.

Cumulative Impacts

The project would not result in significant impacts with respect to hazardous materials and/or risk of upset. Therefore, the project would not have a cumulatively considerable effect on safety within the County and the project's cumulative impact would be **less than significant**.

Mitigation and Residual Impact: No impacts are identified. No mitigations are necessary.

4.10 HISTORIC RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Adverse physical or aesthetic impacts on a structure or property at least 50 years old and/or of historic or cultural significance to the community, state or nation?				X	
b. Beneficial impacts to an historic resource by providing rehabilitation, protection in a conservation/open easement, etc.?				X	

Existing Setting:

The project property does not contain any structural development that could be considered historical.

County Environmental Threshold

Environmental Threshold: Historic Resource impacts are determined through use of the County's Cultural Resources Guidelines. A significant resource a) possesses integrity of location, design, workmanship, material, and/or setting; b) is at least fifty years old, and c) is associated with an important contribution, was designed or built by a person who made an important contribution, is associated with an important and particular architectural style, or embodies elements demonstrating outstanding attention to detail, craftsmanship, use of materials, or construction methods.

Impact Discussion

(a,b) No Impact: The proposed project site does not include any structures that could be considered historical, and the project would not alter the contextual nature of the site. As a result, **no impacts** to historic resources would result.

Cumulative Impacts: The proposed project would not affect any historic structures and its cumulative impacts to historic resources would not be significant.

Mitigation and Residual Impact: No mitigation is required. Residual impacts would be less than significant.

4.11 LAND USE

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Structures and/or land use incompatible with existing land use?			X		
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X		
c. The induction of substantial growth or concentration of population?			X		
d. The extension of sewer trunk lines or access roads with capacity to serve new development beyond this proposed project?			X		
e. Loss of existing affordable dwellings through demolition, conversion or removal?				X	
f. Displacement of substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X	
g. Displacement of substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X	
h. The loss of a substantial amount of open space?			X		

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
i. An economic or social effect that would result in a physical change? (i.e. Closure of a freeway ramp results in isolation of an area, businesses located in the vicinity close, neighborhood degenerates, and buildings deteriorate. Or, if construction of new freeway divides an existing community, the construction would be the physical change, but the economic/social effect on the community would be the basis for determining that the physical change would be significant.)			X		
j. Conflicts with adopted airport safety zones?				X	

Setting

The project site is located approximately nine miles west of the community of New Cuyama, and is south of and adjacent to Highway 166. The 6,565-acre project property is zoned AG-II-100 and is mostly open space, although the area near the proposed reservoirs was recently planted with grape vines. The proposed reservoirs would be approximately 1,200 to 3,000 feet south of Highway 166, and approximately 4,000 to 5,000 feet south of the Cuyama River.

County Environmental Threshold

The Thresholds and Guidelines Manual contains no specific thresholds for land use. Generally, a potentially significant impact can occur if a project would result in substantial growth inducing effects.

Impact Discussion

(a, b) Less than significant: Land uses on and adjacent to the proposed reservoir sites are open space and agriculture, and the project property is zoned AG-II-100. The reservoirs are a conditionally permitted use by the zoning of the project site, and would not result in land use conflicts with nearby land uses. Therefore, the proposed project would result in **less than significant** land use conflicts with existing land uses and land use requirements.

(c, d) Less than significant: The project would not result in an extension of urban services that could serve new development beyond the proposed project, and would not result in an increase in the population of the project area. Therefore, potential growth inducing impacts would be **less than significant**.

(e, f, g) No impact: The project would not result in the removal of any housing or the displacement of any people. Therefore, the project would have **no impact** to existing housing supplies.

(h) Less than significant: The proposed reservoirs would occupy approximately 15.6 acres of the 6,565-acre project property, and would be used to support an existing agricultural operation. Therefore, impacts to open space would be **less than significant**.

(i) Less than significant: Construction of the proposed reservoirs would not result in adverse economic or social effects that would have the potential to result in physical changes to existing environmental

conditions on the project sites or in the project area. Operation of the reservoirs would require the use of groundwater and the project's contribution to existing groundwater overdraft conditions in the Cuyama Valley would result from evaporative losses of water from the reservoirs. It is estimated the project would result in evaporative losses of approximately ~~eight (8)~~ 26 acre feet per year. This water loss would not result in a significant project-specific or cumulative water use impact based on the County's adopted groundwater use thresholds (Section 4.16, Water Resources/Flooding). Due to the relatively minor increase in groundwater use that would result from the operation of the reservoirs, the proposed project would not result in substantial economic or social changes in the project area, and the project-related physical change in existing groundwater conditions would result in a **less than significant** land use impact.

(j) No Impact: There are no airports in the project area. Therefore, the project would have **no impact** on airport operations.

Cumulative Impacts: The project would not result in any significant project-specific land use impacts. The project would be consistent with the zoning of the project site and would be compatible with surrounding land uses and development. The project's contribution to cumulative land use impacts would not be cumulatively considerable and its cumulative impacts would be **less than significant**.

Mitigation and Residual Impact: No mitigation is required. Residual impacts would be less than significant.

4.12 NOISE

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Long-term exposure of people to noise levels exceeding County thresholds (e.g. locating noise sensitive uses next to an airport)?			X		
b. Short-term exposure of people to noise levels exceeding County thresholds?			X		
c. Project-generated substantial increase in the ambient noise levels for adjoining areas (either day or night)?			X		

Setting/Threshold: Noise is generally defined as unwanted or objectionable sound which is measured on a logarithmic scale and expressed in decibels (dB(A)). The duration of noise and the time period at which it occurs are important values in determining impacts on noise-sensitive land uses. The Community Noise Equivalent Level (CNEL) and Day-Night Average Level (L_{dn}) are noise indices which account for differences in intrusiveness between day- and night-time uses. County noise thresholds are: 1) 65 dB(A) CNEL maximum for exterior exposure, and 2) 45 dB(A) CNEL maximum for interior exposure of noise-sensitive uses. Noise-sensitive land uses include: residential dwellings; transient lodging; hospitals and other long-term care facilities; public or private educational facilities; libraries, churches; and places of public assembly.

Highway 166 is the major noise source in the project area. No other roadways, public facilities, airport approach and take-off zones, or other land uses that are substantial noise sources are located in the project area. No noise-sensitive uses (i.e., residences) are located in the vicinity of the project site.

Impact Discussion

(a, c) Less than significant: The operation of the proposed reservoirs would not result in the generation of noise that would have the potential to result in significant noise impacts to persons or uses located on or near the proposed reservoir sites. Minor amounts of traffic that may be generated by the project would generally be for periodic maintenance-related purposes, and such traffic would not substantially increase existing noise conditions along Highway 166. Therefore, the project's potential long-term noise impacts would be **less than significant**.

(b) Less than significant: The construction of proposed reservoirs would result in a temporary increase in noise levels at the construction sites. However, no construction activities would occur within 1,600 feet of residences or other sensitive receptors located on or adjacent to the project sites. Therefore, the project's potential short-term noise impacts would be **less than significant**.

Cumulative Impacts: The project would not be a substantial source of noise. Therefore, the project's noise impacts would not be cumulatively considerable and its cumulative impacts would be **less than significant**.

Mitigation and Residual Impact: No mitigation is required. Residual impacts would be less than significant.

4.13 PUBLIC FACILITIES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. A need for new or altered police protection and/or health care services?				X	
b. Student generation exceeding school capacity?				X	
c. Significant amounts of solid waste or breach any national, state, or local standards or thresholds relating to solid waste disposal and generation (including recycling facilities and existing landfill capacity)?				X	
d. A need for new or altered sewer system facilities (sewer lines, lift-stations, etc.)?				X	
e. The construction of new storm water drainage or water quality control facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X		

Setting:

The proposed project site does not contain any structural development or any public facilities.

County Environmental Thresholds

Schools: A significant level of school impacts is generally considered to occur when a project would generate a sufficient number of students to require an additional classroom.

Solid Waste: A project is considered to result in significant impacts to landfill capacity if it would generate 196 tons per year of solid waste. This volume represents 5% of the expected average annual increase in waste generation, and is therefore considered a significant portion of the remaining landfill capacity. In addition, construction and demolition waste from remodels and rebuilds is considered significant if it exceeds 350 tons. Waste generation of 40 tons per year is considered a potentially significant contribution to cumulative waste generation.

Impact Discussion

(a-d) No impact: The proposed project would not result in the development of habitable structures and would not increase population on the project site or in the project area. The project would not result in a demand for law enforcement, generate additional school-age children, generate solid waste, or be a source of sewage generation. Therefore, the project would have **no impact** on these services.

(e) Less than significant: Stormwater runoff from slopes south of and adjacent to Reservoir No. 1 (the eastern-most reservoir) would be collected in a proposed drainage swale located adjacent to the southern end of the reservoir. The swale would extend to the east away from the reservoir, and when it reaches Schoolhouse Canyon Road, which is east of and adjacent to the reservoir site, the swale would be convey collected runoff beneath the roadway through a proposed culvert. The runoff would then be discharged over a proposed rock energy dissipater at a site approximately 50 feet east of the road and allowed to sheet flow across native soil towards Schoolhouse Canyon Creek. The proposed drainage culvert beneath Schoolhouse Canyon Road would not substantially alter existing runoff characteristics or result in significant impacts to Schoolhouse Canyon Road. Therefore, the project would have a **less than significant** impact on stormwater drainage facilities.

Cumulative Impacts: The proposed project would not result in a population increase that would contribute to significant public facilities impacts. Solid waste generation would be below the County threshold of 40 tons per year for a significant cumulative impact. The project would not result in a substantial increase in impermeable surfaces at the project sites that would substantially increase runoff water volumes. Therefore, the project's contribution to public facility impacts would not be cumulatively considerable and its cumulative effects would be **less than significant**.

Mitigation and Residual Impact

No mitigation is required. Residual impacts would be less than significant.

4.14 RECREATION

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Conflict with established recreational uses of the area?				X	
b. Conflict with biking, equestrian and hiking trails?				X	
c. Substantial impact on the quality or quantity of existing recreational opportunities (e.g., overuse of an area with constraints on numbers of people, vehicles, animals, etc. which might safely use the area)?				X	

Setting

There are no recreation facilities on or near the project sites.

County Environmental Thresholds: The Thresholds and Guidelines Manual contains no threshold for park and recreation impacts. However, the Board of Supervisors has established a minimum standard ratio of 4.7 acres of recreation/open space per 1,000 people to meet the needs of a community. The Santa Barbara County Parks Department maintains more than 900 acres of parks and open spaces, as well as 84 miles of trails and coastal access easements. The County's Comprehensive Plan, Land Use Element, Parks/Recreation Policies state, in part: "Opportunities for hiking and equestrian trails should be preserved, improved, and expanded wherever compatible with surrounding uses."

Impact Discussion

(a-c) No impact. There are no parks or public trails located on or near the project sites, and the project would not result in a population increase that would contribute to significant impacts to recreation facilities. Therefore, the project would have **no impact** on existing recreational facilities or increase the demand for recreation opportunities.

Cumulative Impacts: The proposed project would not result in an increase in population in the project area and would not directly or indirectly impact any existing recreation facilities. Therefore, the project's contribution to cumulative recreation impacts would not be cumulatively considerable and its cumulative impacts would be **less than significant**.

Mitigation and Residual Impact: No mitigation is required. Residual impacts would be less than significant.

4.15 TRANSPORTATION/CIRCULATION

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Generation of substantial additional vehicular movement (daily, peak-hour, etc.) in relation to existing traffic load and capacity of the street system?			X		
b. A need for private or public road maintenance, or need for new road(s)?			X		
c. Effects on existing parking facilities, or demand for new parking?			X		
d. Substantial impact upon existing transit systems (e.g. bus service) or alteration of present patterns of circulation or movement of people and/or goods?				X	
e. Alteration to waterborne, rail or air traffic?				X	
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians (including short-term construction and long-term operational)?			X		
g. Inadequate sight distance?			X		
ingress/egress?			X		
general road capacity?			X		
emergency access?			X		
h. Impacts to Congestion Management Plan system?			X		

Setting

Regional access to the proposed reservoir sites is provided by State Highway 166. Access to the Reservoir No. 1 project site is provided by Schoolhouse Canyon Road. Access to the Reservoir Nos. 2 and 3 sites is provided by existing ranch roads.

County Environmental Thresholds: The Public Works Department, Roads Division's general standards governs all project proposals within the County. In addition, according to the County's Environmental Thresholds and Guidelines Manual, a significant traffic impact would occur when:

- a. The addition of project traffic to an intersection increases the volume to capacity (V/C) ratio by the value provided below, or sends at least 15, 10 or 5 trips to an intersection operating at LOS D, E or F.

LEVEL OF SERVICE (including project)	INCREASE IN VOLUME/CAPACITY RATIO GREATER THAN
A	0.20
B	0.15
C	0.10
	Or the addition of:
D	15 trips
E	10 trips
F	5 trips

- b. Project access to a major road or arterial road would require a driveway that would create an unsafe situation, or would require a new traffic signal or major revisions to an existing traffic signal.
- c. Project adds traffic to a roadway that has design features (e.g., narrow width, road side ditches, sharp curves, poor sight distance, inadequate pavement structure) or receives use which would be incompatible with substantial increases in traffic (e.g. rural roads with use by farm equipment, livestock, horseback riding, or residential roads with heavy pedestrian or recreational use, etc.) that will become potential safety problems with the addition of project or cumulative traffic. Exceeding the roadway capacity designated in the Circulation Element may indicate the potential for the occurrence of the above impacts.
- d. Project traffic would utilize a substantial portion of an intersection(s) capacity where the intersection is currently operating at acceptable levels of service (A-C) but with cumulative traffic would degrade to or approach LOS D (V/C 0.81) or lower. Substantial is defined as a minimum change of 0.03 for intersections which would operate from 0.80 to 0.85 and a change of 0.02 for intersections which would operate from 0.86 to 0.90, and 0.01 for intersections operating at anything lower.

Impact Discussion

(a-c, f-h) Less than significant impact: Short-term traffic generated by the proposed project would be primarily from the transportation of construction equipment and materials to and from the reservoir site sites, and by construction workers commuting to and from the project sites. Long-term traffic would likely result from periodic maintenance activities. Overall, traffic generated by the project would be very low and would not adversely affect the operation of State Highway 166 or substantially increase the need for road maintenance. Adequate area would be available adjacent to the proposed reservoir sites to accommodate construction and maintenance vehicle parking. Adequate sight distance is provided along State Highway 166 to accommodate project-related vehicles that would enter and leave the project sites. The small amount of traffic generated by the project would result in **less than significant** traffic-related impacts.

(d, e) No impact: The proposed project would not result in an increased demand for transit services, and would have no effect air, rail, or waterborne traffic. Therefore, the project would have **no impact** on these services.

Cumulative Impacts: Long-term traffic generated by the proposed project would primarily be for periodic maintenance of the reservoirs. Therefore, the traffic generated by the project would not cumulatively considerable and the project's cumulative traffic-related impacts would be less than significant.

Mitigation and Residual Impact: No mitigation required. Residual impacts would be less than significant.

4.16 WATER RESOURCES/FLOODING

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Changes in currents, or the course or direction of water movements, in either marine or fresh waters?			X		
b. Changes in percolation rates, drainage patterns or the rate and amount of surface water runoff?			X		
c. Change in the amount of surface water in any water body?			X		
d. Discharge, directly or through a storm drain system, into surface waters (including but not limited to wetlands, riparian areas, ponds, springs, creeks, streams, rivers, lakes, estuaries, tidal areas, bays, ocean, etc) or alteration of surface water quality, including but not limited to temperature, dissolved oxygen, turbidity, or thermal water pollution?			X		
e. Alterations to the course or flow of flood water or need for private or public flood control projects?				X	
f. Exposure of people or property to water related hazards such as flooding (placement of project in 100 year flood plain), accelerated runoff or tsunamis, sea level rise, or seawater intrusion?				X	
g. Alteration of the direction or rate of flow of groundwater?			X		
h. Change in the quantity of groundwater, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations or recharge interference?			X		
i. Overdraft or over-commitment of any groundwater basin? Or, a significant increase in the existing overdraft or over-commitment of any groundwater basin?			X		
j. The substantial degradation of groundwater quality including saltwater intrusion?			X		
k. Substantial reduction in the amount of water otherwise available for public water supplies?			X		
l. Introduction of storm water pollutants (e.g., oil, grease, pesticides, nutrients, sediments, pathogens, etc.) into groundwater or surface water?		X			

Setting:

A series of ephemeral drainages that are tributaries to the Cuyama River bisect the project property in a primarily south to north direction. The largest of these drainages are Cottonwood Creek on the western portion of the project property, and Schoolhouse Canyon Creek on the eastern side. The on-site drainages are dry for most of the year and convey periodic/flashy flow during monsoonal rain events and the winter rain season. The proposed Reservoir No. 1 project site is approximately 500 feet west of Schoolhouse

Canyon Creek, and small unnamed drainage channels are a minimum of approximately 50 feet to the east and west of the project site. The Reservoir No. 2 project site is approximately 100 feet west and approximately 1,000 feet east of small unnamed drainage channels. The Reservoirs No. 3 project site is approximately 250 feet west and 100 feet east of small unnamed drainage channels, and is approximately one mile east of Cottonwood Canyon Creek.

The proposed reservoir sites are located in the western portion of the Cuyama Valley Groundwater Basin. The 2014 Groundwater Basins Status Report (Santa Barbara County Water Agency, 2014) indicates that groundwater level measurements in the Cuyama Valley Groundwater Basin show substantial declines throughout history and over the last three years. In some areas, historical groundwater level declines exceed 400 feet. The County of Santa Barbara Environmental Thresholds and Guidelines Manual (1992) indicates that groundwater overdraft in the Cuyama Valley Groundwater Basin is 28,525 acre feet per year (AFY). The 2014 Groundwater Basins Status Report indicates that long-term overdraft within the basin is estimated to be nearly 30,000 acre feet per year (AFY). In 2015, the Santa Barbara County Water Agency reported that under recent conditions (2000 -2010) total annual net recharge for the Basin is 33,400 acre feet and net discharge (outflow from springs, subsurface flow out of the basin, and groundwater pumping) is 68,300 acre feet, resulting in a difference or “imbalance” of -34,900 acre feet per year (Santa Barbara County Water Agency, Cuyama Groundwater Basin Balance Summary, July 13, 2015).

County Environmental Thresholds: A project is determined to have a significant effect on water resources if it would exceed established threshold values which have been set for each overdrafted groundwater basin. These values were determined based on an estimation of a basin’s remaining life of available water storage. If the project’s net new consumptive water use [total consumptive demand adjusted for recharge less discontinued historic use] exceeds the threshold adopted for the basin, the project’s impacts on water resources are considered significant. The water demand threshold for the Cuyama Valley Groundwater Basin is 31 AFY. The adopted threshold applies only to projects subject to discretionary review by the County, and do not apply to uses, such as agricultural operations, that do not require approval of a discretionary permit.

Water Quality Thresholds: A significant water quality impact is presumed to occur if the project:

- Is located within an urbanized area of the county and the project construction or redevelopment individually or as a part of a larger common plan of development or sale would disturb one (1) or more acres of land;
- Increases the amount of impervious surfaces on a site by 25% or more;
- Results in channelization or relocation of a natural drainage channel;
- Results in removal or reduction of riparian vegetation or other vegetation (excluding non-native vegetation removed for restoration projects) from the buffer zone of any streams, creeks or wetlands;
- Is an industrial facility that falls under one or more of categories of industrial activity regulated under the NPDES Phase I industrial storm water regulations (facilities with effluent limitation; manufacturing; mineral, metal, oil and gas, hazardous waste, treatment or disposal facilities; landfills; recycling facilities; steam electric plants; transportation facilities; treatment works; and light industrial activity);

- Discharges pollutants that exceed the water quality standards set forth in the applicable NPDES permit, the Regional Water Quality Control Board's (RWQCB) Basin Plan or otherwise impairs the beneficial uses¹ of a receiving water body;
- Results in a discharge of pollutants into an "impaired" water body that has been designated as such by the State Water Resources Control Board or the RWQCB under Section 303 (d) of the Federal Water Pollution Prevention and Control Act (i.e., the Clean Water Act); or
- Results in a discharge of pollutants of concern to a receiving water body, as identified by the RWQCB.

Impact Discussion

Each of the proposed reservoirs would impound up to 49 acre feet of water between February 1st and April 30th, and would impound a maximum of three feet of water between May 1st and January 31st, -and would include an emergency overflow system that would discharge water from the reservoir in the event that a precipitation event or mechanical malfunction results in excess water in a reservoir. A maximum of three feet of water would be stored in the reservoirs between May 1st and January 31st to prevent air from entering the pumps and to provide the minimum amount of hydraulic head necessary to operate the pumps (Tetley, August 9, 2017).

Stormwater drainage from upslope areas adjacent to the reservoirs would be collected by proposed drainage swales. Collected stormwater runoff and discharges from the reservoir's overflow control system would be discharged over rock energy dissipaters and allowed to sheet flow at downslope locations adjacent to the reservoirs. Each reservoir would be lined with a high-density polyethylene plastic liner to prevent water seepage beneath the reservoirs and into the reservoir's water impoundment berms.

(a-d) Less than significant impact: Each of the proposed reservoir's stormwater drainage systems would collect water from a limited area upslope of the reservoirs, and water from the reservoir overflow and stormwater drainage systems would be discharged over rock energy dissipaters. After discharge over the energy dissipaters, the water would sheetflow over the ground surface, which in the vicinity of proposed discharge locations has a gradient of five percent or less. Therefore, the amount of stormwater discharged from the drainage systems and the reservoir overflow systems would be limited and would not substantially alter existing drainage patterns, the course or direction of runoff water, or substantially increase or decrease the amount of water in the ephemeral drainages located adjacent to the reservoir sites. With the use of rock energy dissipaters and due to the presence of gentle slope gradients below proposed discharge locations, the proposed water discharges would not be a substantial source of erosion (turbidity) that would have the potential to adversely affect the water quality of the drainages near the reservoirs, which are tributaries to the Cuyama River. The interior of the reservoirs would be provided with an impermeable liner and precipitation that falls within the reservoirs would be retained and would not percolate into the ground. However, most of the retained precipitation would eventually be used for crop production, either for frost protection or irrigation after the end of the frost season. Therefore, the retained precipitation would ultimately be returned to the ground surface and not result in substantial long-term changes to percolation conditions at or near the project

¹ Beneficial uses for Santa Barbara County are identified by the Regional Water Quality Control Board in the Water Quality Control Plan for the Central Coastal Basin, or Basin Plan, and include (among others) recreation, agricultural supply, groundwater recharge, fresh water habitat, estuarine habitat, support for rare, threatened or endangered species, preservation of biological habitats of special significance.

sites. Overall, the project would have **less than significant** impacts on existing drainage conditions at the project site.

(e-f) No impact: The proposed reservoir sites are not located in within the 100-year floodplain for the Cuyama River, and proposed Reservoir Nos. 2 and 3 would be located near but not within the 100-year floodplains identified for tributaries to the Cuyama River (Flood Insurance Rate Maps 06083C0115G and 06083C0305G). The proposed project would be required to comply with County Grading Ordinance requirements, which would ensure that the proposed reservoir berms are structurally adequate to contain the water impounded by the reservoirs. Therefore, the project would have **no impact** related to flood-related hazards.

(g-k) Less than significant: Water that would be impounded in the proposed reservoirs would be supplied by existing agricultural wells located on the north side of State Highway 166. Water would be delivered to the reservoirs by existing irrigation pipelines that extend beneath the highway towards the project sites, and proposed pipelines that would connect the reservoirs to the existing irrigation pipelines.

The County of Santa Barbara Environmental Thresholds Manual states that all projects subject to discretionary review by the County are subject to the water use thresholds included in the Manual. Projects that would use more water than the applicable threshold identified by the Manual would result in a significant water use impact. The water use threshold for projects in the Cuyama Valley Groundwater Basin is 31 AFY.

Agricultural operations conducted on properties with agricultural zoning are an allowed use and no land use entitlements are required for such uses (LUDC Section 35.21.030). The existing vineyard operations that the proposed water storage reservoirs would support are located on property with agricultural zoning (AG-II-100). Therefore, the vineyard operations and water used by the vineyards do not require any discretionary land use entitlements from the County, and water impounded in the proposed reservoirs that would be used to support (i.e., provide frost protection) the existing vineyards is not subject to the water use threshold established for the Cuyama Valley Groundwater Basin.

The amount of water that may be used for vineyard frost protection can vary substantially each year depending on the number, duration, and severity of frost events. The project applicant has indicated that during a frost event, water would be sprayed on the vines at a rate of 45 gallons per minute per acre; typically the vines would be sprayed for a duration of two to three hours; and not all frost events require that the entire vineyard be sprayed. If it is assumed that a frost event required the entire 1,000-acre vineyard to be sprayed for three hours, approximately 8.29 acre feet of frost protection water would be used per hour² and approximately 25 acre feet of water would be used during the three hour frost event. As indicated above, however, the use of water for frost protection supports an allowed agricultural use and is not subject to the water use threshold established for the Cuyama Valley Groundwater Basin.

The proposed water storage reservoirs are a conditionally permitted use in the AG-II-100 zone and require the approval of a discretionary Minor Conditional Use Permit. Therefore, water impounded in the reservoirs that is not directly or indirectly used in support of the existing vineyards is subject to the water use thresholds of the Environmental Thresholds Manual. Water impounded in the reservoirs that would not be directly or indirectly used in support of the vineyards would be the water that evaporates from

²

$$\frac{1,000 \text{ acres} \times 45 \text{ gallons/minute} \times 60 \text{ minutes/hour}}{325,851 \text{ gallons/acre foot}} = 8.29 \text{ acre feet/hour}$$

reservoirs. As proposed, ~~water would be stored in the reservoirs~~ would be maintained in a full condition during the months of February, March and April, which is the part of the year when frost would have the greatest potential to result in damage to the existing vineyards, and a maximum of three feet of water would be maintained in the reservoirs during the months of May through January. If the amount of water that evaporates from the proposed reservoirs ~~during the proposed three month storage period~~ throughout the year exceeds the threshold of 31 AFY, the project would result in a significant water use impact.

Evaporation from the reservoirs was estimated by a report titled *North Fork Vineyards Frost Protection Reservoirs #1, #2 & #3 – Analysis of Reservoir Evaporative Losses* (Monsoon Consultants, August 10, 2017), and the report is provided in Attachment 4. In summary, the report estimated net evaporative losses from the reservoirs based on a variety of factors, including the months of the year that the reservoirs would be maintained in a full condition; the months of the year that the reservoirs would contain three feet of water; precipitation that occurs throughout the year; ~~when the reservoirs are being used for water storage;~~ and evaporative losses. Data regarding precipitation rates were obtained from the New Cuyama Fire Station records, and evaporative losses were based on data from California Irrigation Management Information System. Please refer to Attachment 4 for additional information regarding the data used to calculate project-related evaporation losses. It was estimated that the combined average annual net evaporative losses from all three proposed reservoirs would be approximately ~~8.14~~ 26.28 AFY. Therefore, net evaporative losses from the reservoirs would not exceed the water use threshold of 31 AFY and the project would result in a **less than significant** water use impact.

(l) Less than significant with mitigation: Grading and construction activities could result in temporary runoff, erosion, and the use of concrete and other substances that have the potential to result in short-term water quality impacts. To mitigate the project's potential short-term impacts to runoff and water quality, the project proposes to implement a variety of erosion/sedimentation control Best Management Practices. These measures include the use of silt fences and straw bales, and the maintenance of proposed erosion control measures throughout the rainy season (October 15 through April 15). In addition, proposed Mitigation Measure No. 7 requires the preparation and implementation of a Storm Water Pollution Prevention Plan, and proposed Mitigation Measure Nos. 8 and 9 include additional requirements to provide designated construction equipment washout and equipment storage areas. With implementation of these measures, potential short-term water quality impacts would be **less than significant**.

The operation of the proposed reservoirs would not require the use of fertilizers, pesticides or other substances that would have the potential to result in significant water quality impacts. The project would not result in the use of an on-site wastewater disposal system that could have the potential to contribute to the degradation of groundwater quality. Long-term erosion from proposed reservoir water impoundment berms would have the potential to result in erosion and sediment impacts to drainage channels adjacent to the project sites, however, this potential impact would be reduced to a less than significant level by complying with Grading Ordinance requirements and proposed Mitigation Measure No. 7, which requires the preparation and implementation of a Stormwater Management Plan and/or Erosion and Sediment Control Plan. Therefore, potential long-term erosion impacts of the project would be reduced to a **less than significant with mitigation**.

Cumulative Impacts: The proposed project would result in the use of approximately ~~eight (8)~~ 26 acre feet of water that is subject to adopted water use thresholds. The project's water use would contribute to overdraft conditions in the Cuyama Valley and the general lowering of groundwater levels that have been documented. However, the adopted significance threshold of 31 AFY is also the point at which a project's use of water is determined to be a cumulatively considerable impact. Therefore, the project's use of groundwater would not be cumulatively considerable and the proposed project would result in an adverse but **less than significant** cumulative impact.

Mitigation and Residual Impact

The following mitigation measures would reduce the project's water resource impacts to a less than significant level:

8. **WatConv-04 Equipment Storage-Construction.** The Owner/Applicant shall designate a construction equipment filling and storage area(s) to contain spills, facilitate clean-up and proper disposal and prevent contamination from discharging to the storm drains, street, drainage ditches, creeks, or wetlands. The areas shall be no larger than 50 x 50 foot unless otherwise approved by P&D and shall be located at least 100 feet from any storm drain, water body or sensitive biological resources. **PLAN REQUIREMENTS:** The Owner/Applicant shall designate the P&D approved location on all plans for zoning clearance, grading and building permits. **TIMING:** The Owner/Applicant shall install the area prior to commencement of construction.

MONITORING: P&D compliance monitoring staff shall ensure compliance prior to and throughout construction.

9. **WatConv-05 Equipment Washout-Construction.** The Owner/Applicant shall designate a washout area(s) for the washing of concrete trucks, paint, equipment, or similar activities to prevent wash water from discharging to the storm drains, street, drainage ditches, creeks, or wetlands. Note that polluted water and materials shall be contained in this area and removed from the site daily. The area shall be located at least 100 feet from any storm drain, water body or sensitive biological resources. **PLAN REQUIREMENTS:** The Owner/Applicant shall designate the P&D approved location on all zoning clearance, grading and building permits. **TIMING:** The Owner/Applicant shall install the area prior to commencement of construction.

MONITORING: P&D compliance monitoring staff shall ensure compliance prior to and throughout construction.

5.0 INFORMATION SOURCES

5.1 County Departments Consulted

Police, Fire, Public Works, Flood Control, Parks, Environmental Health, Air Pollution Control District, LAFCO, Special Districts, Regional Programs, Other :

5.2 Comprehensive Plan:

☒ Seismic Safety/Safety Element	☐ Conservation Element
☐ Open Space Element	☐ Noise Element
☐ Coastal Plan and Maps	☐ Circulation Element
☐ ERME	
☐	☐

5.3 Other Sources

☒ Field work	☐ Ag Preserve maps
☒ Calculations	☒ Flood Control maps

☒	Project plans	☒	Other technical references (reports, survey, etc.)
☐	Traffic studies	☒	Planning files, maps, reports
☐	Records	☐	Zoning maps
☒	Grading plans	☒	Soils maps/reports
☐	Elevation, architectural renderings	☒	Plant maps
☒	Published geological map/reports	☒	Archaeological maps and reports
☐	Topographical maps	☐	Other

6.0 PROJECT SPECIFIC (*short- and long-term*) AND CUMULATIVE IMPACT SUMMARY

The proposed project does not have potential impacts that cannot be feasibly mitigated to less than significant levels.

- I. Project-Specific Impacts which are of unavoidable significance levels (Class I): None
- II. Project-Specific Impacts which are potentially significant but can be mitigated to less than significant levels (Class II): Biological Resources (short-term), Cultural Resources (short-term), Geologic Processes, Water Resources/Flooding (short-term).
- III. No potentially significant adverse cumulative impacts have been identified.

7.0 MANDATORY FINDINGS OF SIGNIFICANCE

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
1. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, contribute significantly to greenhouse gas emissions or significantly increase energy consumption, or eliminate important examples of the major periods of California history or prehistory?		X			
2. Does the project have the potential to achieve short-term to the disadvantage of long-term environmental goals?			X		

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
3. Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects and the effects of probable future projects.)			X		
4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X		
5. Is there disagreement supported by facts, reasonable assumptions predicated upon facts and/or expert opinion supported by facts over the significance of an effect which would warrant investigation in an EIR ?			X		

Compliance with required mitigation measures would reduce potentially significant short-term, construction-related impacts to San Joaquin kit fox and American badger to a less than significant level. Compliance with required mitigation would avoid significant impacts to cultural resources that may be encountered during construction activities. The project’s effects on air quality, traffic, water demand, and public services would be below adopted thresholds of significance.

8.0 PROJECT ALTERNATIVES

Not applicable.

9.0 INITIAL REVIEW OF PROJECT CONSISTENCY WITH APPLICABLE SUBDIVISION, ZONING AND COMPREHENSIVE PLAN REQUIREMENTS

Zoning

The proposed project is consistent with the requirements of the Santa Barbara County Land Use and Development Code (Inland Zoning Ordinance). The proposed AG-II-100 zoning of the site allows for the development of reservoirs more than 50,000 square feet in area with the approval of a Minor Conditional Use Permit.

Comprehensive Plan

The project will be subject to all applicable requirements and policies under the Santa Barbara County Land Use and Development Code, and the County's Comprehensive Plan. This analysis will be provided in the forthcoming Staff Report. The following policies will be addressed, among others:

1. Land Use Development Policy #4
2. Hillside & Watershed Protection policy # 1, 2, 3, 5, 6, 7
3. Historical and Archaeological Policy # 2, 3, 5
4. Visual Resources Policy # 2, 5
5. Agricultural Element Goal 1.

10.0 RECOMMENDATION BY P&D STAFF

On the basis of the Initial Study, the staff of Planning and Development:

☐ Finds that the proposed project WILL NOT have a significant effect on the environment and, therefore, recommends that a Negative Declaration (ND) be prepared.

☒ Finds that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures incorporated into the REVISED PROJECT DESCRIPTION would successfully mitigate the potentially significant impacts. Staff recommends the preparation of an ND. The ND finding is based on the assumption that mitigation measures will be acceptable to the applicant; if not acceptable a revised Initial Study finding for the preparation of an EIR may result.

☐ Finds that the proposed project MAY have a significant effect on the environment, and recommends that an EIR be prepared.

☐ Finds that from existing documents (previous EIRs, etc.) that a subsequent document (containing updated and site-specific information, etc.) pursuant to CEQA Sections 15162/15163/15164 should be prepared.

Potentially significant unavoidable adverse impact areas:

☒ With Public Hearing ☐ Without Public Hearing

PREVIOUS DOCUMENT:

PROJECT EVALUATOR: Steve Rodriguez **DATE:** May 26, 2017

11.0 DETERMINATION BY ENVIRONMENTAL HEARING OFFICER

☒ I agree with staff conclusions. Preparation of the appropriate document may proceed.

☐ I DO NOT agree with staff conclusions. The following actions will be taken:

☐ I require consultation and further information prior to making my determination.

SIGNATURE:_____ **INITIAL STUDY DATE:** April 10, 2017_____

SIGNATURE:_____ **NEGATIVE DECLARATION DATE:** May 26, 2017_

SIGNATURE:_____ **REVISION DATE:** 8/9/2017_____

SIGNATURE:_____ **FINAL NEGATIVE DECLARATION DATE:** August 1, 2018

12.0 ATTACHMENTS

1. Project Plans
- 2a. Biological Resources Assessment, February 24, 2016
- 2b. Peer Review of the Biological Resources Assessment, March 1, 2016
- 2c. Supplemental Biological Resources Information, June 24, 2016
3. San Joaquin Kit Fox Avoidance Measures
4. Analysis of Reservoir Evaporative Losses, ~~January~~ August 10, 2017
5. Draft MND Comment Letters
 - State Clearinghouse
 - Native American Heritage Commissions
 - California Department of Transportation
 - California Department of Fish and Wildlife
 - Roberta Jaffee and Stephen Gliessman
 - Joe Haslett
 - Robert Ryan

1. All grading shall conform to Santa Barbara County Code Chapter 14 and standards and requirements pertaining thereto, these construction drawings and the recommendations of the soils engineer and engineering geologist.
2. Contractor to notify the county grading inspector and soils laboratory at least 48 hours before start of grad work or any pre-construction meeting.
3. Contractor shall employ all labor, equipment and methods required to prevent his operations from producing dust in amounts damaging to adjacent property, cultivated vegetation and domestic animals or causing a nuisance to persons occupying buildings in the vicinity of the job site. Contractor shall be responsible for damage caused by dust from his grading operation.
4. Before beginning work requiring exporting or importing of materials, the contractor shall obtain approval from Public Works Road Division for haul routes used and methods provided to minimize the deposit of soils on county roads. Grading/road inspectors shall monitor this requirement with the contractor.
5. The Geotechnical Engineer shall provide observation and testing during grading operations in the field and shall submit a final report stating that all earth work was properly completed and is in substantial conformance with the requirements of the grading ordinance.
6. Areas to be graded shall be cleared of all vegetation including roots and other unsuitable materials for a structural fill, then scarified to a depth of 6" prior to placing any fill. Call grading inspector for initial inspection.
7. A thorough search shall be made for all abandoned man-made facilities such as septic tank systems, fuel or water storage tanks, and pipelines or conduits. Any such facilities encountered shall be removed and the depression properly filled and compacted under observation of the geotechnical engineer.
8. Areas with existing slopes which are to receive fill materials shall be keyed and benched. The design and installation of the roadway shall be per the geotechnical engineer's recommendation or per County Standard Detail No. G-13.
9. Fill materials shall be spread in lifts not exceeding 6" in compacted thickness, moistened or dried as necessary to near optimum moisture content and compacted by an approved method. Fill materials shall be compacted to a minimum of 90% maximum density as determined by 1957 ASTM D-1557-01 modified proctor (ASHO) test or similar approved methods. Some fill areas may require compaction to a greater density if called for in the construction documents. Soil tests shall be conducted at not less than one test for each 18" of fill and/or for each 500 cubic yards of fill placed.
10. Cut slopes shall not exceed a grade of 1 1/2 horizontal to 1 vertical. Fill and combination fill and cut slopes shall not exceed 2 horizontal to 1 vertical. Slopes over three feet in vertical height shall be planted with approved perennial or treated with equally approved erosion control measures prior to final inspection.
11. Surface drainage shall be provided a minimum of 2% for 5 feet away from the foundation line of any structure.
12. All trees that are to remain on site shall be temporarily fenced and protected around the drip line during grading.
13. An erosion and sediment control plan shall be required as part of the grading plan and permit requirements.
14. "Best Management Practices for Construction Activities: Eroded sediments and other pollutants must be retained on-site and must not be transported from the site via sheet flow swales, area drains, natural drainage courses, or wind. Stockpiles of earth and other construction related materials must be protected from being transported from the site by forces of wind or water. Fuels, oils, solvents, and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills may not be washed into the drainage system. Excess or waste concrete may not be washed into public way or any other drainage system. Provisions must be made to retain concrete wastes on site until they can be disposed as solid waste. Trash and construction related solid waste must be deposited into a covered waste receptacle to prevent contamination of rainwater and dispersal by wind. Sediments and other material may not be tracked from the site by vehicular traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental deposition shall be swept up immediately and may not be washed down by rain or other means. Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to minimize erosion by wind and water."
15. If grading occurs during Nov 1 through Apr 15, no grading shall occur unless approved erosion and sediment control measures are in place. Discharges of sediment from the project site may result in a Stop Work Order.
16. All earthwork on hillsides, sloping or mountainous terrain shall be stabilized to protect and prevent loss of soils, as necessary, year-round.

Earthwork Estimates

Cut: 130,280 C.Y. Fill: 127,900 C.Y. Import: 0 C.Y. Export: 0 C.Y. Quantities based on 30% shrinkage

Erosion Control Notes

1. Erosion control measures shall be implemented on all projects and shall include source control, including protection of stockpiles, protection of slopes, protection of all disturbed areas, and protection of accesses. In addition, perimeter containment measures shall be placed prior to the commencement of grading and site disturbance activities unless the Public Works Department determines measures to be unnecessary based upon location, site characteristics or time of year. The intent of erosion control measures shall be to keep all sediment from entering a swale, drainage way, watercourse or onto adjacent properties.
2. Site inspections and appropriate maintenance of erosion control devices shall be conducted and documented prior to, during, and after rain events.
3. The developer shall be responsible for the placement and maintenance of all erosion control devices as specified by the approved plan until such time that the project is accepted as complete by the Public Works Department. Erosion control devices may be relocated, deleted or added as needed depending on the actual soil conditions encountered. Additional erosion control devices shall be placed at the discretion of the Engineer of Work, County Inspector, SWPPP Monitor, or RWQCB Inspector. Guidelines for determining appropriate erosion control devices are included in the appendix of the Public Improvement Standards.
4. All erosion control devices shall be the first order of work and shall be in place between Oct 15 and April 15 or anytime when the rain probability exceeds 30%. This work shall be installed or applied after each area is graded and no later than five (5) working days after the completion of each area.
5. The Engineer of Work and the Public Works Department shall be notified before October 15 for inspection of installed erosion control devices.
6. A standby crew for emergency work shall be available at all times during the rainy season (October 15 through April 15). Necessary materials shall be available and stock piled at convenient locations to facilitate rapid construction or maintenance of temporary devices when rain is imminent.
7. Permanent erosion control shall be placed and established with 90% coverage on all disturbed surfaces other than paved or gravel surfaces, prior to final inspection. Permanent erosion control shall be fully established prior to final acceptance. Temporary erosion control measures shall remain in place until permanent measures are established.
8. In the event of a failure, the developer and/or his representative shall be responsible for cleanup and all associated costs or damages.
9. All projects involving site disturbance of one acre or greater shall comply with the requirements of the National Pollutant Discharge Elimination System (NPDES). The developer shall submit a Notice of Intent (NOI) to comply with the General Permit for Construction Activity with the Regional Water Quality Control Board (RWQCB). The developer shall provide the County with the Waste Discharge Identification Number (WDID #) or with verification that an exemption has been granted by RWQCB.

WDID# _____
10. Person to contact 24 hours a day in the event there is an erosion control/sedimentation problem (Storm Water Compliance Officer):
Name Kevin Merrill
Local Phone Number 310-3989

Project Air Quality Control Notes:

During Construction the contractor shall designate a person or persons to monitor the Dust Control Program and to order increases measures as necessary to prevent the transport of dust off-site. Their duties shall include holiday and weekend periods when work may or may not be in progress. The name and telephone number for such persons shall be provided to the APCD prior to the commencement of construction. The measures for dust control are as follows but not limited to:

Reduce the amount of disturbed area where possible,

1. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever wind speeds exceed 15mph. Reclaimed (non-potable) water should be used whenever possible.
2. All dirt stockpile areas shall be sprayed daily as needed.
3. Exposed ground areas that are planned to be reworked at dates later than one month after initial grading should be seeded with a fast germinating native grass seed and watered until vegetation is established.
4. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD.
5. All external slopes shall be hydroseeded as soon as possible upon completion.
6. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
7. All trucks hauling dirt, sand, soil, or other loose material are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114.
8. Install wheel washers where vehicles enter and exit paved roads and streets, or wash off trucks and equipment leaving the site.
9. Prior to final inspection all disturbed areas shall be vegetated with a fast-growing, native seed mix.

General Notes

1. No construction shall be started without plans approved by the County Planning Department. The Planning Department shall be notified at least 24 hours prior to the start of construction and the time and location for the preconstruction conference.
2. All construction work and installations shall conform to the County Standards and Specifications.
3. Soils tests shall be done in accordance with the County Standards. The test results shall clearly indicate the location and source of materials.
4. Compaction tests shall be made on all embankment materials, subgrades and ditch backfill.
5. There will be no need for special concrete inspection. Concrete for the anchor pad shall be 2000 psi. The rebar shall be inspected prior to the placement of the concrete. All concrete and the two sack slurry for the anti-seep collars and ditch backfill where shown shall be properly vibrated.
6. The Design Engineer shall inspect the installation of the HDPE Liner. The liner shall be installed by a contractor specializing in lining ponds.
7. The Engineer of Record shall certify that the improvements when completed are in accordance to the plans prior to the request for Final Inspection. As-built plans are to be prepared after construction is completed. The Engineer certifying the improvements shall be present at the Final Inspection.
8. Final Reports for grading and earthwork shall be prepared in accordance with the requirements of the UBC, Chapter 33.
9. Upon completion of the work, the Geotechnical Engineer shall submit to the Engineer of Record a complete summary of all testing done during the project.
10. The Construction Contractor shall maintain a current, complete and accurate record of all changes which deviate from the approved plans. No changes shall be made without the prior approval of the Engineer of Record and the County.

North Fork Reservoirs #1-3

APN 147-020-045

Vicinity Map



Scope of Work

The work consists of constructing three new lined reservoirs for irrigation purposes. All areas to receive fill shall be excavated a minimum of three feet, the exposed surface scarified and moisture conditioned, then recompacted to 90% relative compaction. The intent is to balance the earthwork with no import or export. The completed interior slopes shall be fine graded and all rocks removed, then rolled with a smooth drum roller. A 40 mil HDPE geomembrane liner will then be installed on the slopes and bottom. The liner will be installed per manufacturer's recommendations by a company specializing in liner installation. A five foot by twenty three foot by eight inch reinforced concrete pad for anchoring the liner shall be constructed around the pump inlet pipes. No special inspection for the concrete work shall be required. A 6 foot non-climb fence will be built around the exterior perimeter. Coast Guard Approved buoys with a minimum of 90 feet of line shall be placed at no more than 200 foot intervals around the top interior slope of the reservoirs. The sources of water are pvc waterlines from existing wells and no surface water shall enter the reservoir. Valving, filters and pumps will be installed after the reservoirs are constructed by the Irrigation Contractor and are not part of this permit. This contract is for stubbing inlet pipes through the exterior slope for future connection to the fill and transfer lines by an Irrigation Contractor. These pipes shall have 2 sack concrete slurry anti-seep collars. A 15" PVC Drop Pipe Outlet Structure will serve as an emergency overflow in the event the high water limit switch fails and is sized to prevent the reservoir from overtopping. Access to the reservoir is by existing dirt farm roads. No driveways will be constructed. The existing farm fields sheet flow gently across the locations and earthen swales will be constructed around the perimeters where necessary to keep any surface flow away from the toe of the fill slopes. No electrical work is included in this permit.

Benchmark and Basis of Bearing

Benchmark is a 2 1/2" aluminum disc, stamped h-2, Cal-Trans Monument sb166 pm-55.01 elevation = 1824.55 NAVD88

Basis of Bearing is GPS established true north from NAD 83(92) from Cal-Trans Monuments sb166 pm-55.01 and sb166 pm-55.43

Project Information

Address: Hwy 166, Cuyama Valley

APN 147-020-045

Zoning AG

Project Description: Construct three 49 ac-ft Reservoirs for irrigation and frost protection purposes

Pre-Construction Meeting

Prior to construction a pre-construction meeting is required with the inspector to go over the special inspection reporting requirements, final and progress reports, & erosion control. E-mail inspection-North@countyofsb.org

Contacts:

Owner: Grapevine Land Management

Matt Turrentine
444 Higuera St Suite 202
San Luis Obispo, CA 93401
805 312-1828

Engineer: Tom A Howell

1812 N Vine
Santa Maria, CA 93454
805 925-5311

Geotechnical Engineer: GSI Soils, Inc

Rick Amero
524 East Chapel
Santa Maria, CA 93454
805 349-0140

Sheet Index

Sheet 1: Front sheet, notes and title

Sheet 2: Overall Layout & Existing Contours

Sheet 3: Overall Site Piping Layout

Sheet 4: Reservoir #1 Grading Plan

Sheet 5: Reservoir #1 Details

Sheet 6: Reservoir #2 Grading Plan

Sheet 7: Reservoir #2 Details

Sheet 8: Reservoir #3 Grading Plan

Sheet 9: Reservoir #3 Details

Sheet 10: Common Details

Sheet 11: Erosion and Sedimentation Control Plan

Sheet 12: BMP Details

Engineer's Certificate

I, Tom A Howell, RCE 27037, Engineer of Record, hereby certify that these plans are in accordance with the following codes: _____ Date: _____

2013 California Bldg Code (0112 IBC), Appdx Chp 33, 1997 UBC

2013 California Electric Code (2011 NEC)

2013 California Mechanical Code (2012 IAMPO UMC)

2013 California Plumbing Code (2012 IAMPO UPC)

California Title 24: 2011 California Energy Code and Accesibility Standards

County Ordinance(s) Title 19 (Building), (Inland)

Geotechnical Engineer's Certificate

I have reviewed the plans and specifications and have found them to be in

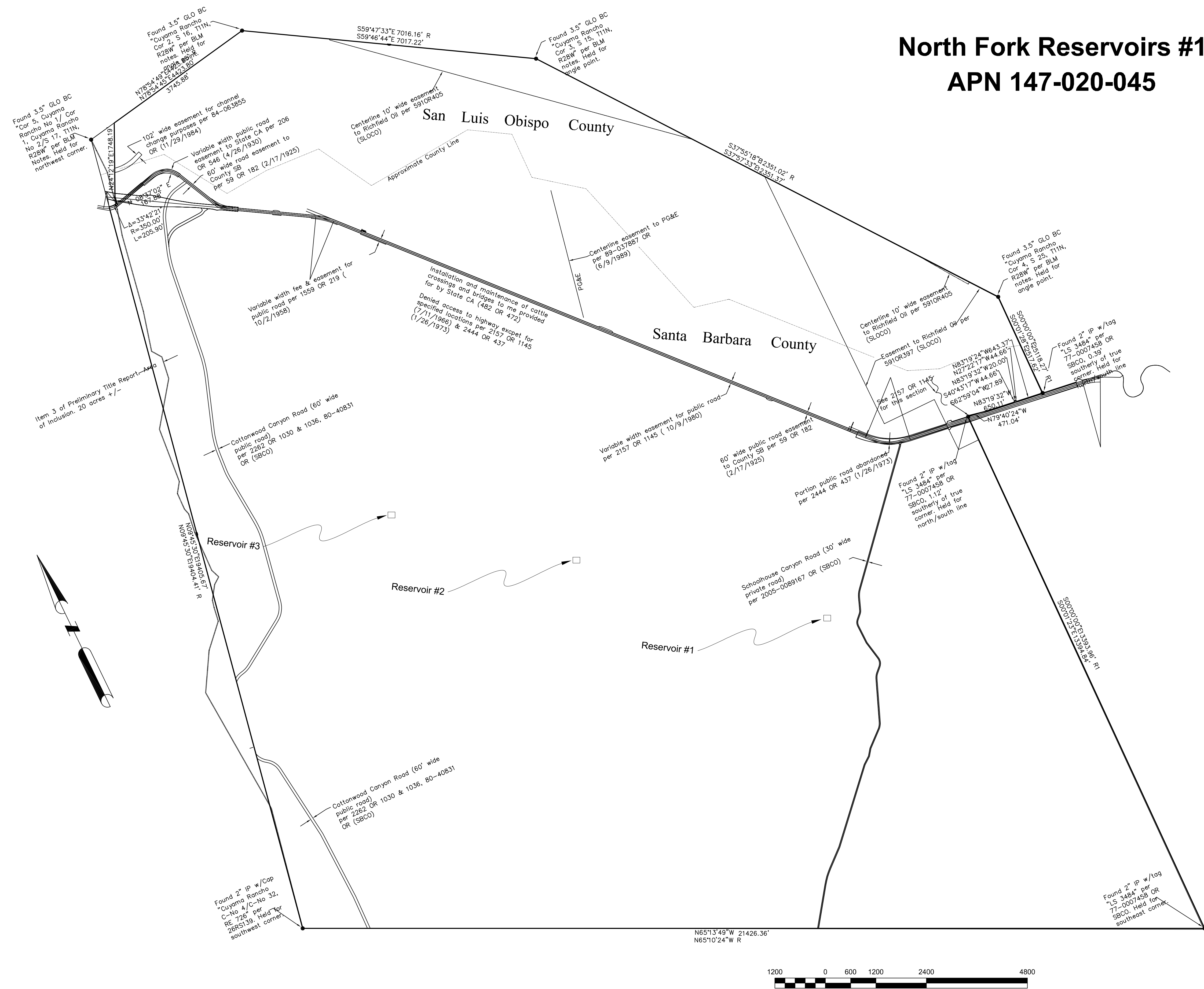
substantial conformance with the recommendations as found in my Soil Investigation.

Date: _____



North Fork Vineyards		
DRAWN <i>TH</i>	DATE <i>1/09/17</i>	<i>49 Ac-ft Reservoirs</i> <i>Hwy 166</i>
APPROVED	DATE	<i>Cuyama, CA</i> <i>Cover Sheet</i>
SCALE <i>Varies</i>	SHEET <i>1 of 12</i>	PROJECT NO. <i>101715-6233</i>

North Fork Reservoirs #1-3
APN 147-020-045



North Fork Vineyards

DRAWN TH	DATE 1/09/17	49 Ac-ft Reservoirs Hwy 166 Cuyama, CA Overall Property
APPROVED	DATE	
SCALE 1"=1200'	SHEET 2 of 12	PROJECT NO. 101715-6233

North Fork Vineyard Frost Protection Overall Site Plan



North Fork Vineyards		
DRAWN	DATE	Reservoirs #1-3
TH	1/09/17	Overall Piping Plan
APPROVED	DATE	Existing Piping
SCALE	SHEET	PROJECT NO.
1"=600'	3 of 12	101715-6233

Reservoir # 1 Grading Plan

Pond #1 Report

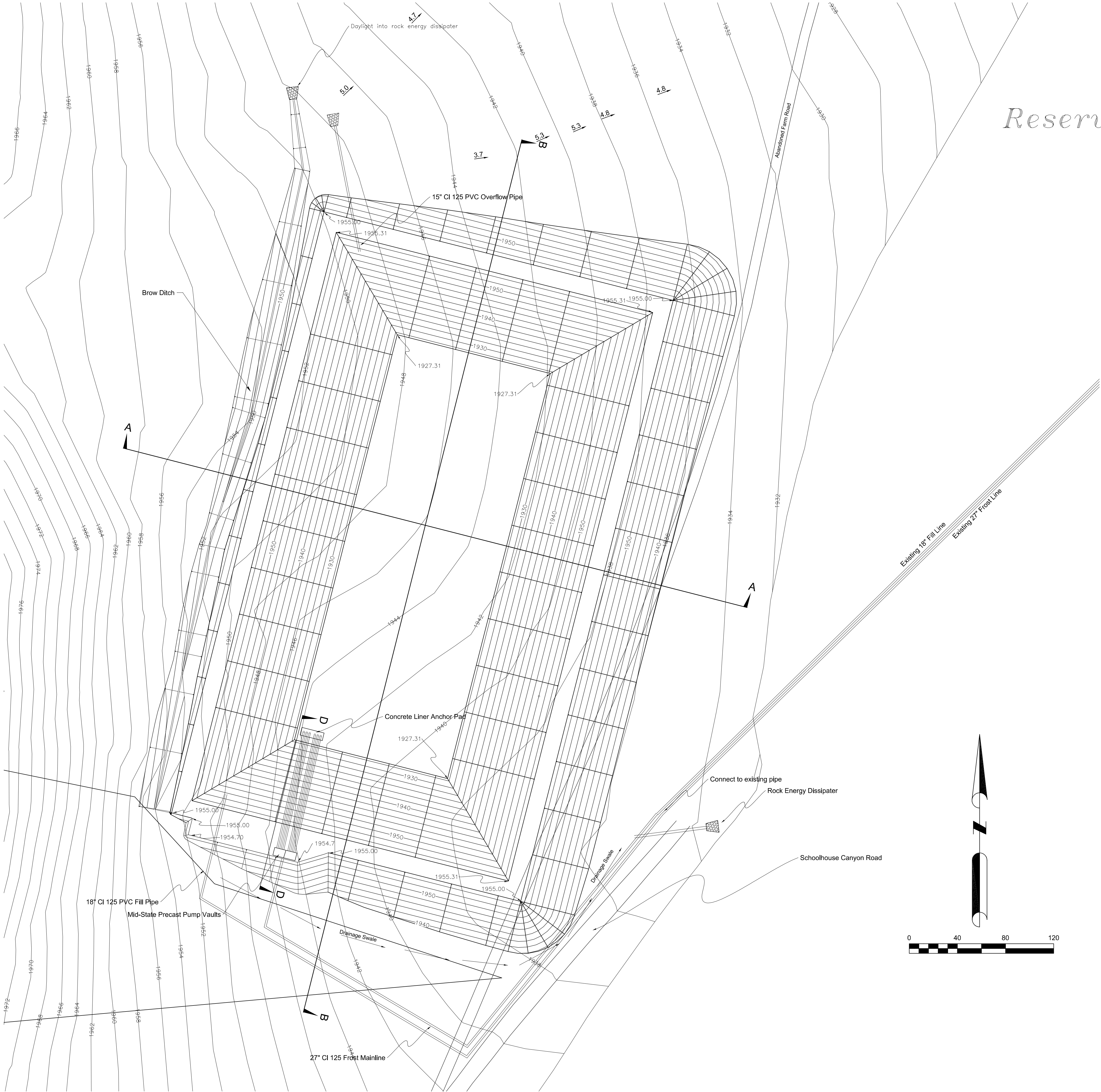
Top of dam elevation: 1955.3
Bottom of pond elevation: 1927.3
Top of dam width: 14.0
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50:1

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 44,062 C.Y.
Total fill: 44,589 C.Y.
Total Disturbed Area: 4.85 Acres

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1927.31	0.00	1.046
1929.31	2.20	1.158
1931.31	4.63	1.274
1933.31	7.30	1.395
1935.31	10.21	1.520
1937.31	13.38	1.650
1939.31	16.81	1.784
1941.31	20.52	1.923
1943.31	24.51	2.066
1945.31	28.79	2.214
1947.31	33.37	2.366
1949.31	38.26	2.523
1951.31	43.46	2.684
1953.31	49.00	2.850
1955.31	54.87	3.020



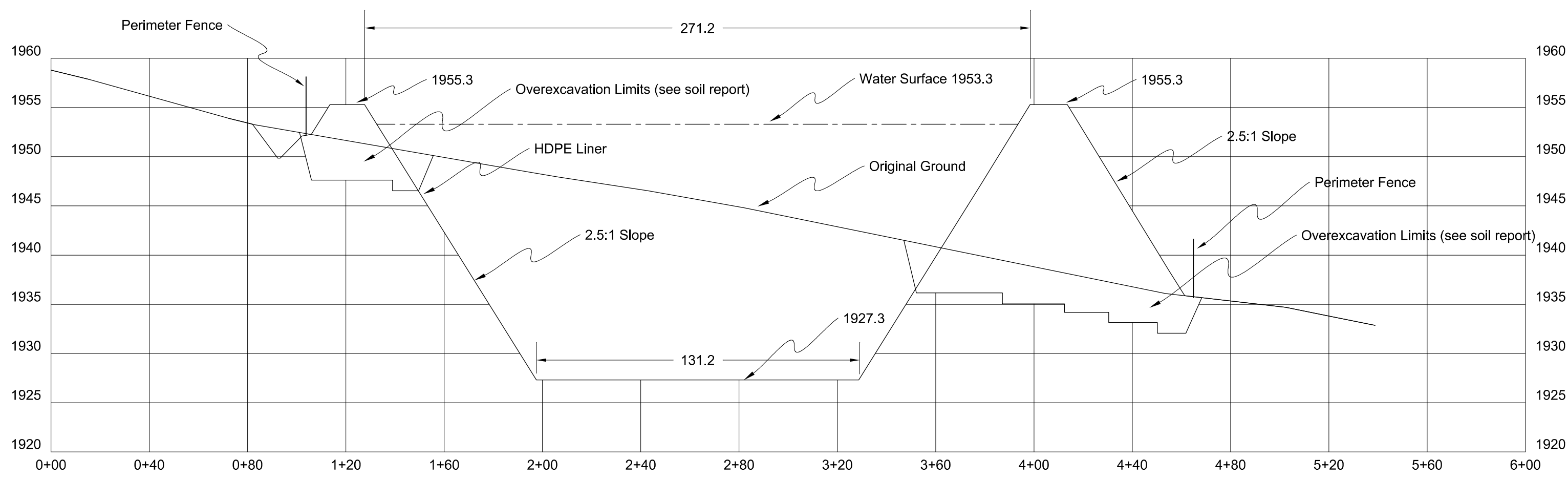
Revisions:
1/03/2017 Added 15" CMP Culvert
Moved Outlet Pipe
Lengthened Drainage Swales

North Fork Vineyards

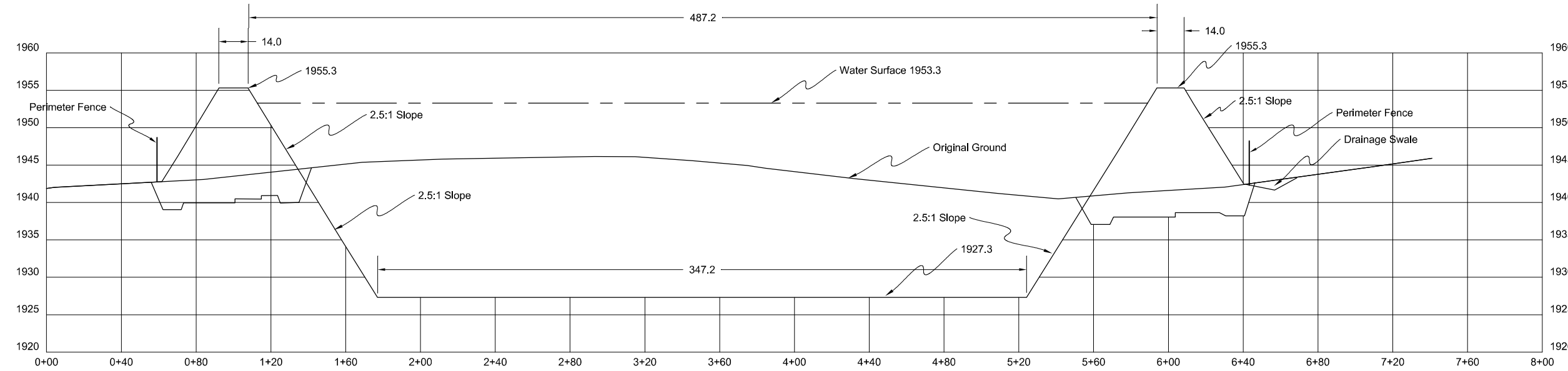
DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #1 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 4 of 12	PROJECT NO. 101715-6233

Reservoir #1 Details

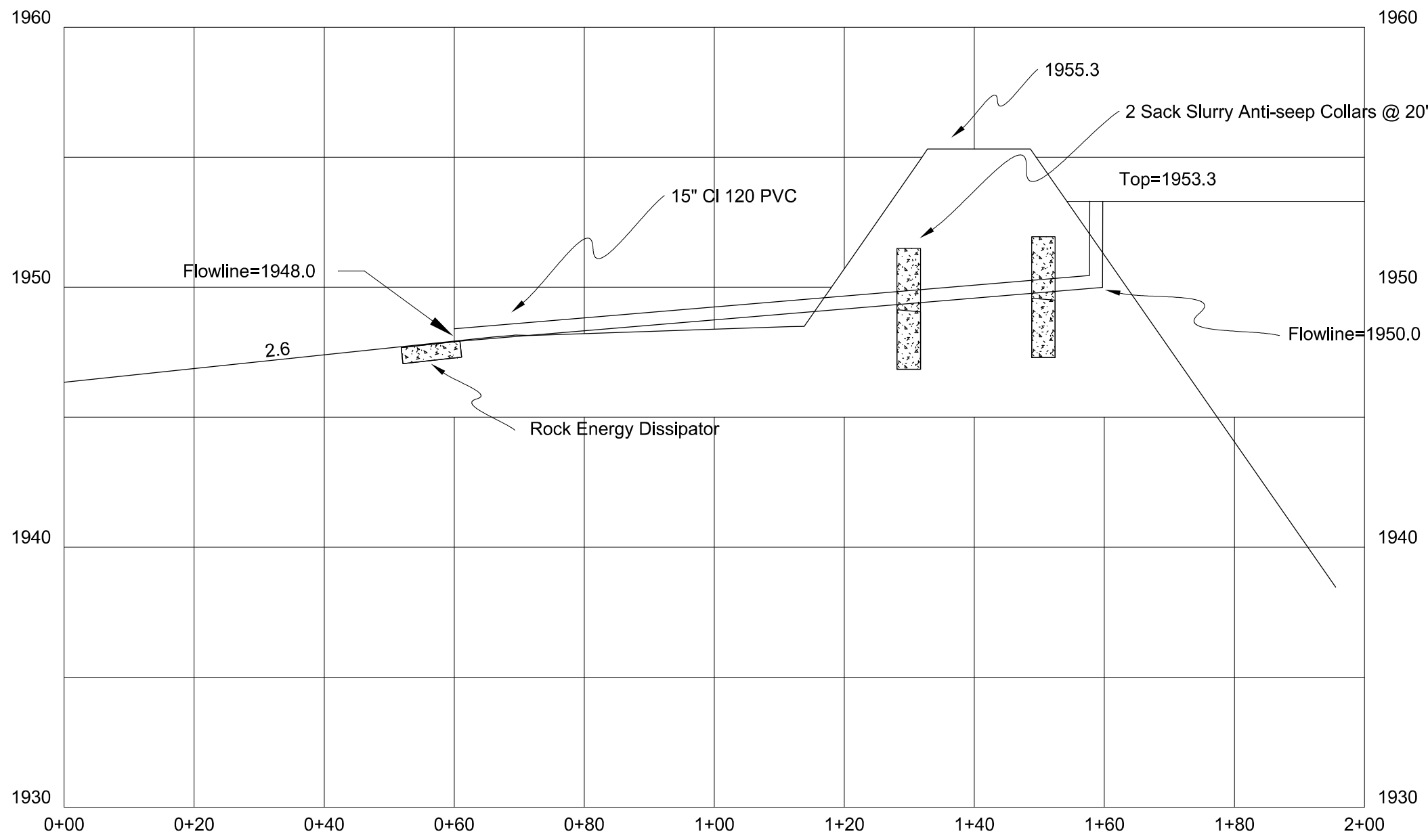
Reservoir #2 Section A-A



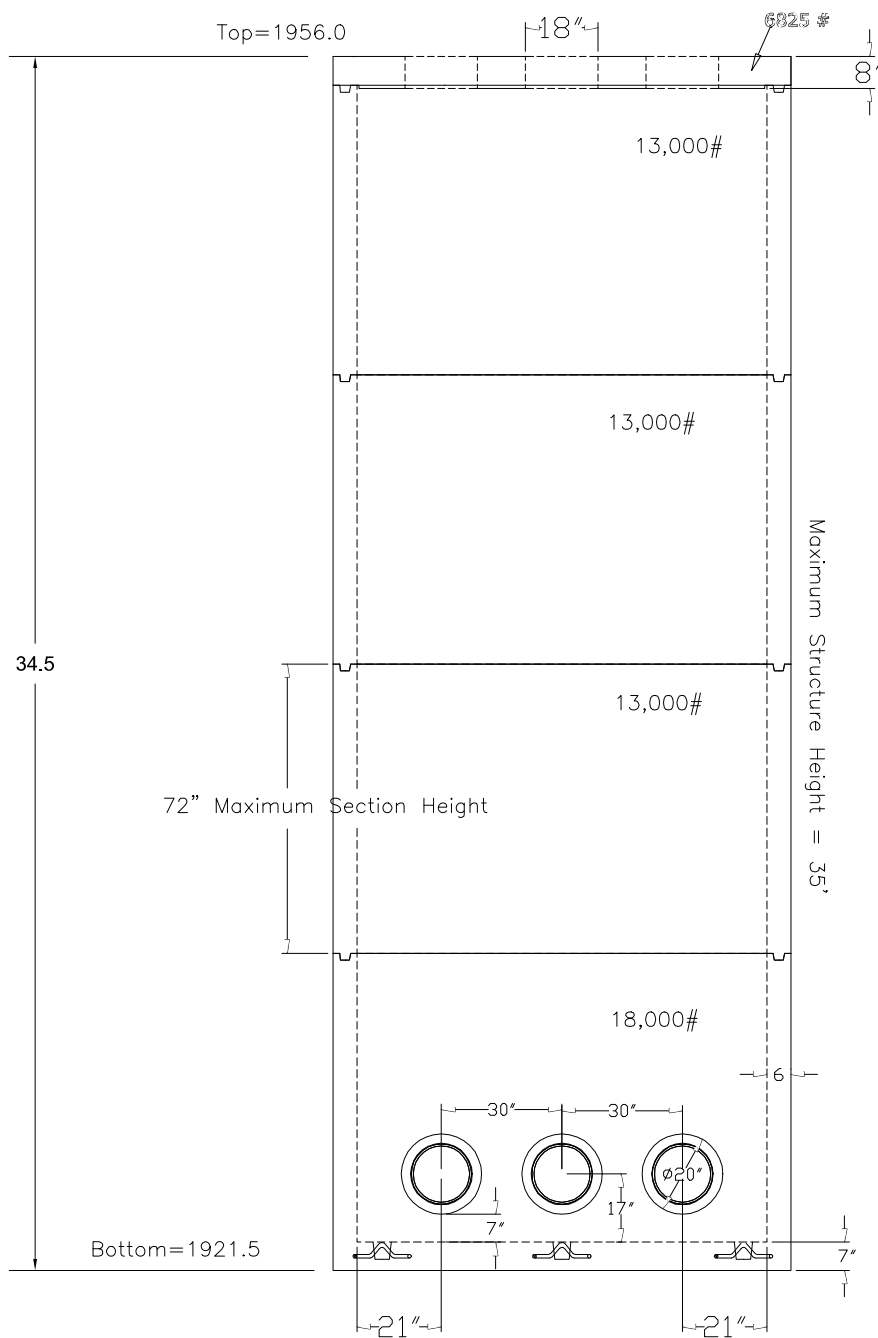
Reservoir #1 Section B-B



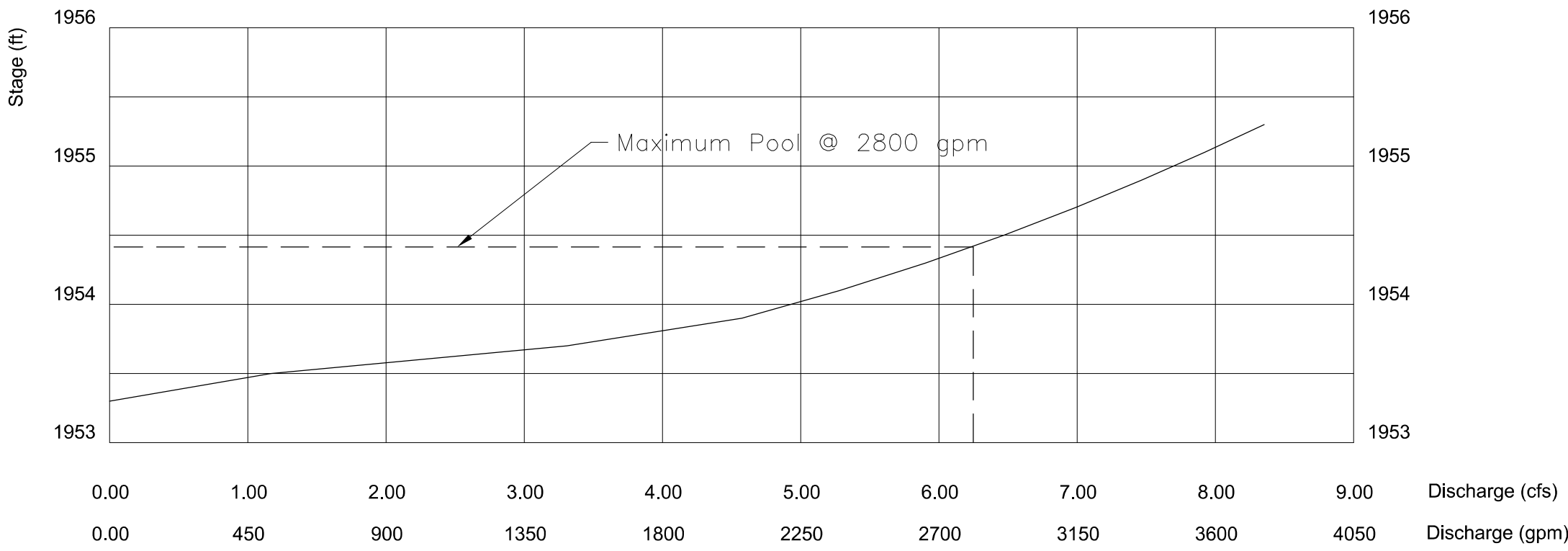
Reservoir #1 Overflow Detail



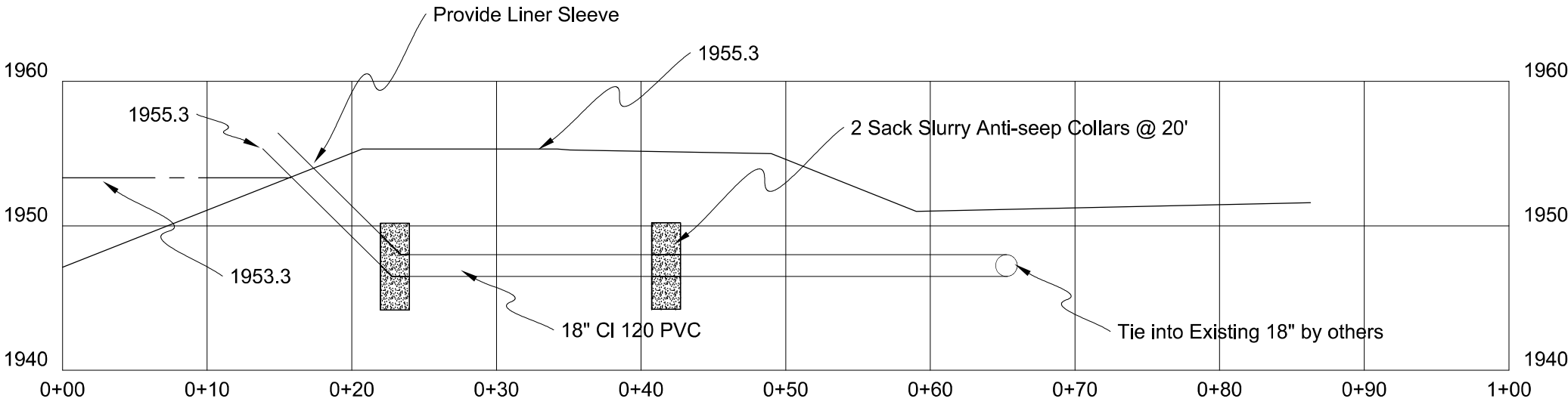
Mid-State Concrete Products
Pump Housing Vault Reservoir #1



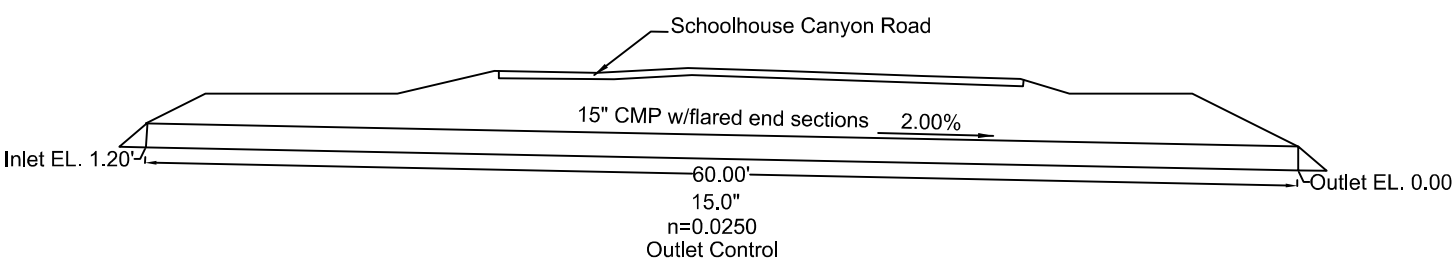
Pond #1 Stage-Storage



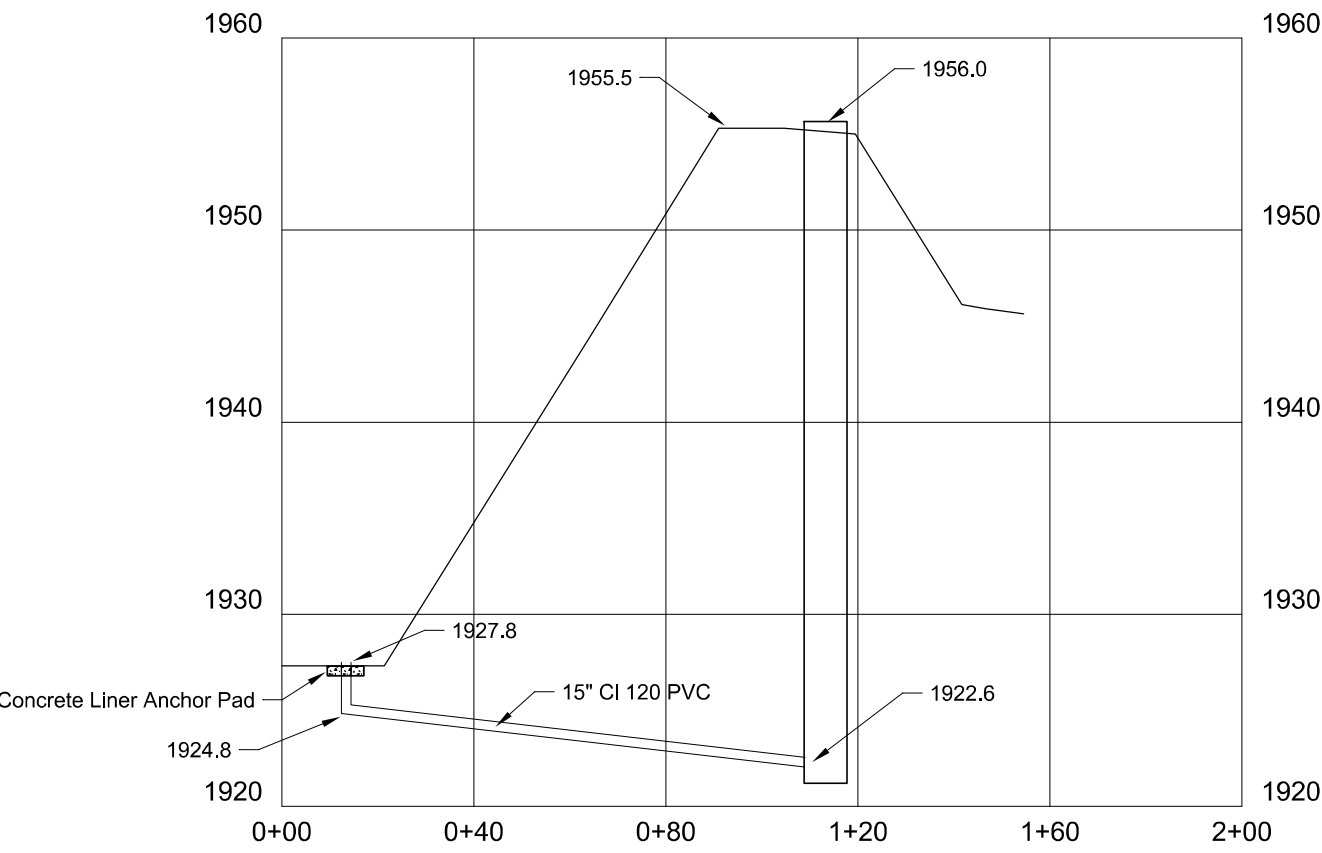
Reservoir #1 Filler Pipe



15" CMP Under Schoolhouse Road



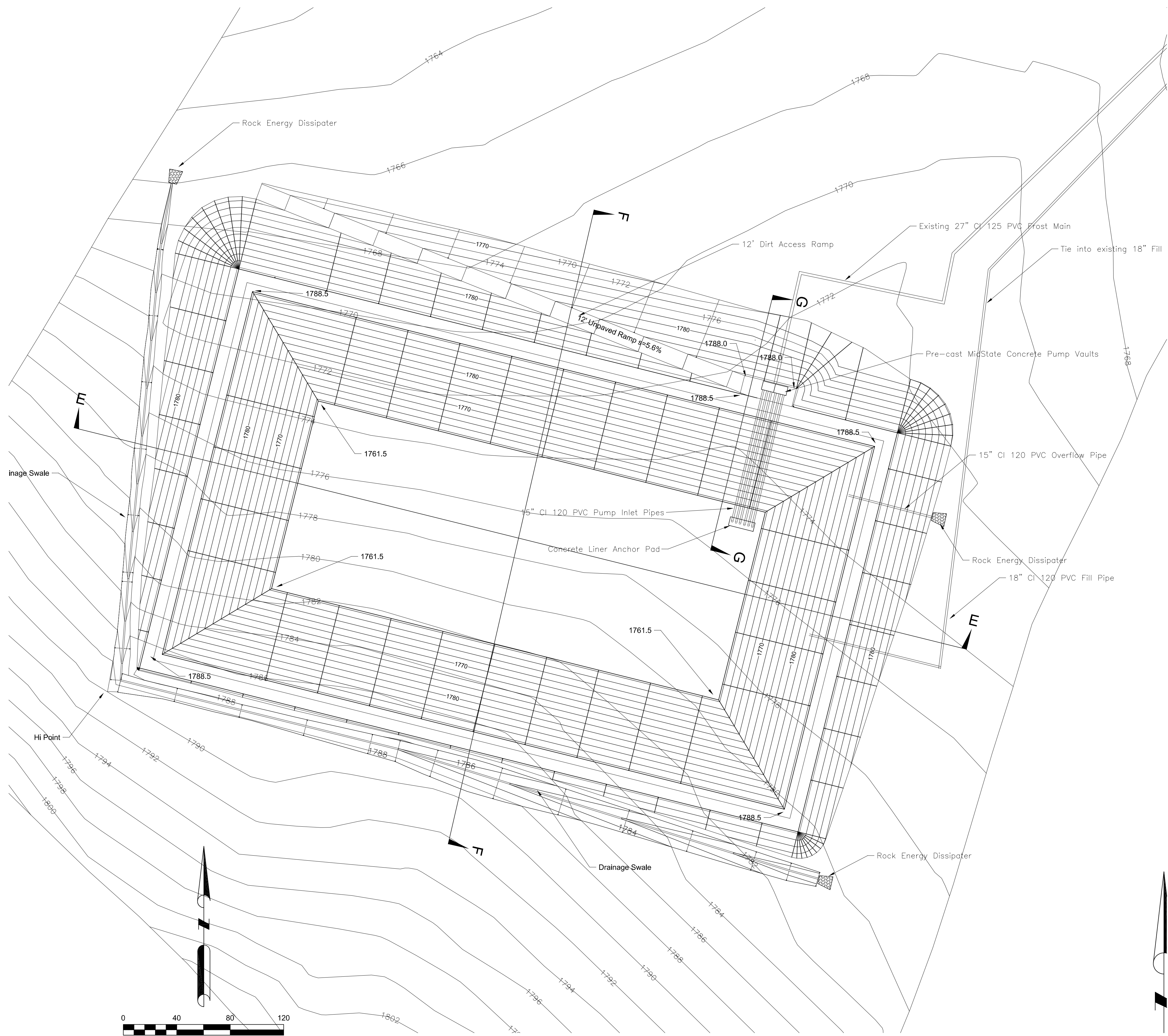
Reservoir #1 Pump Inlet



Revisions:
1/03/2017 Added 15" CMP Culvert Detail
Revised Stage-Storage Diagram
Revised Outlet Pipe Detail

North Fork Vineyards		
DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #1 Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 5 of 12	PROJECT NO. 101715-6233

Reservoir #2 Grading Plan



Pond Report

Tue Oct 20 14:36:54 2015

Top of dam elevation: 1788.50
Bottom of pond elevation: 1761.50
Top of dam width: 14.00
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50:1
Existing Surface: C:\Carlson Projects\North Fork\Reservoir 2B OG.tin

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 44,064.35 C.Y.
Total fill: 1 42,205.16 C.Y.

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1761.50	0.00	1.146
1763.50	2.40	1.259
1765.50	5.04	1.378
1767.50	7.91	1.502
1769.50	11.05	1.630
1771.50	14.44	1.762
1773.50	18.10	1.899
1775.50	22.03	2.040
1777.50	26.26	2.186
1779.50	30.73	2.336
1781.50	35.60	2.490
1783.50	40.74	2.649
1785.50	46.20	2.813
1787.50	52.00	2.981
1788.50	55.02	3.067

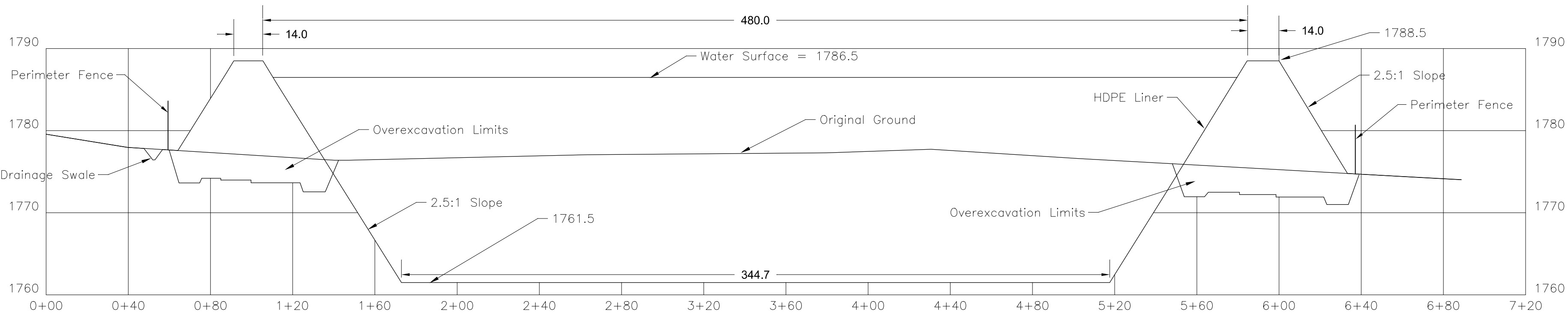
Area in Cut : 148,297.1 S.F.
Area in Fill: 186,122.7 S.F.



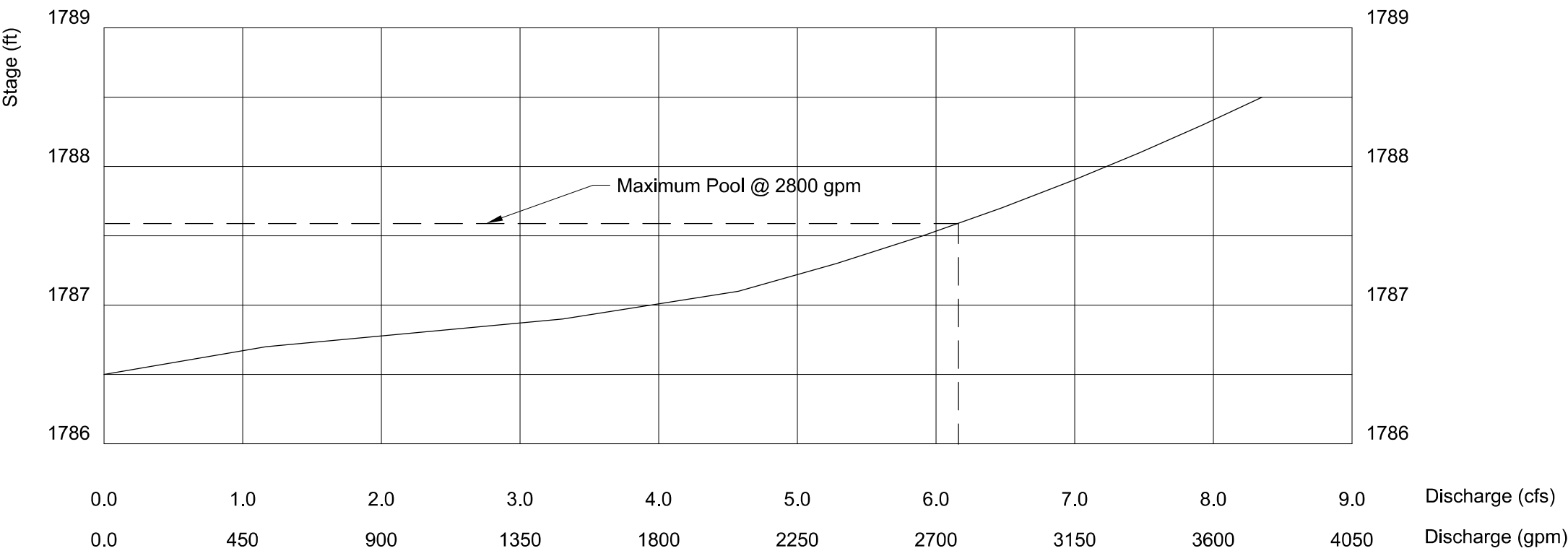
North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #2 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 6 of 12	PROJECT NO. 101715-6233

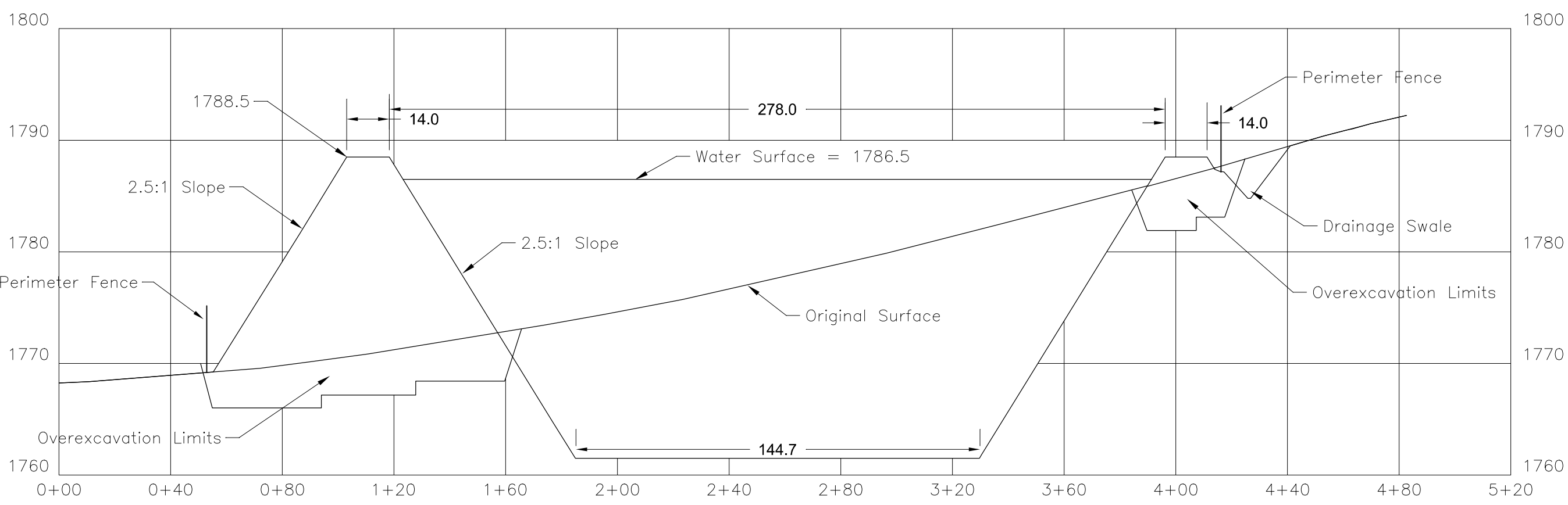
Reservoir #2 Section E-E



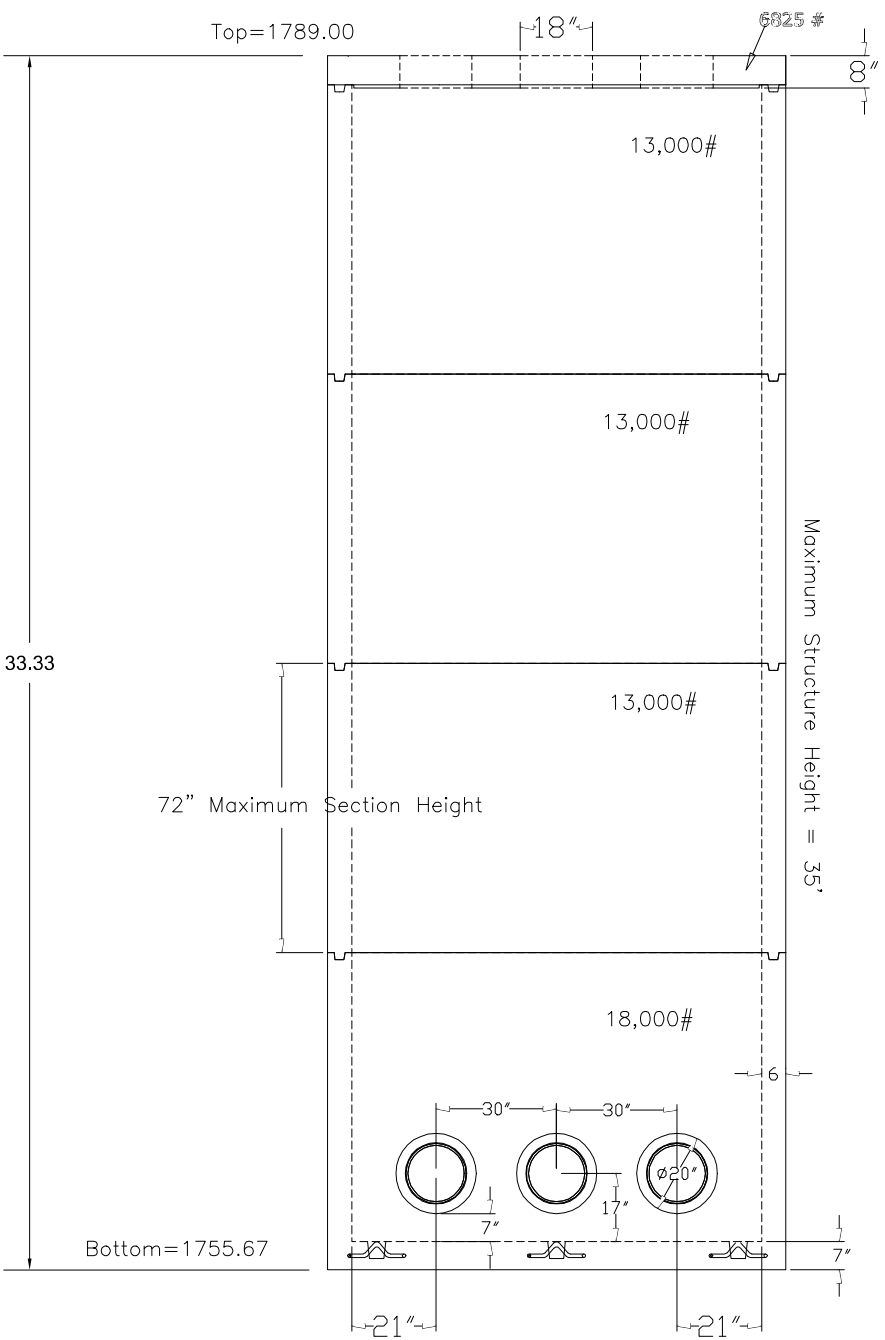
Reservoir #2 Stage Storage



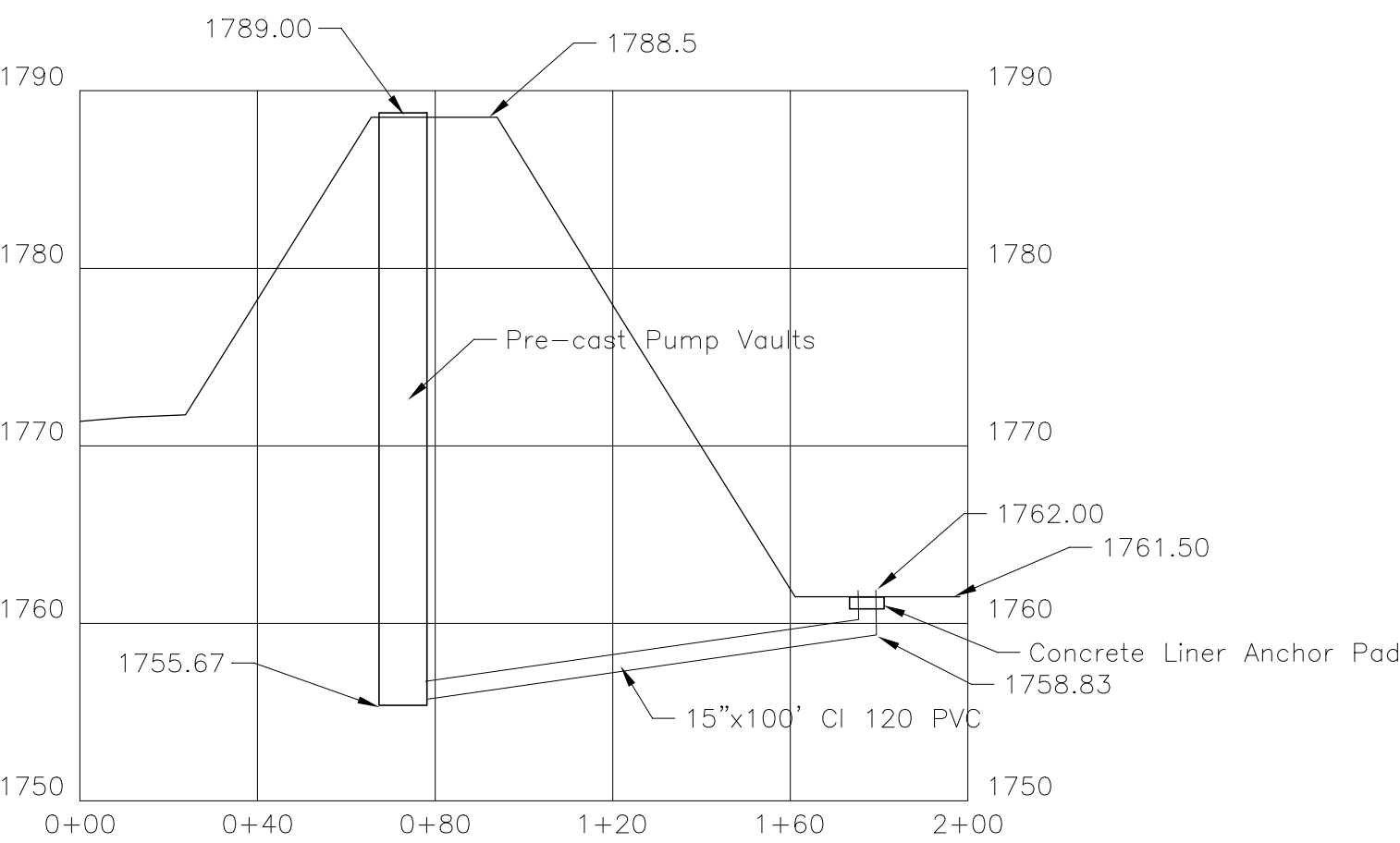
Reservoir #2 Section F-F



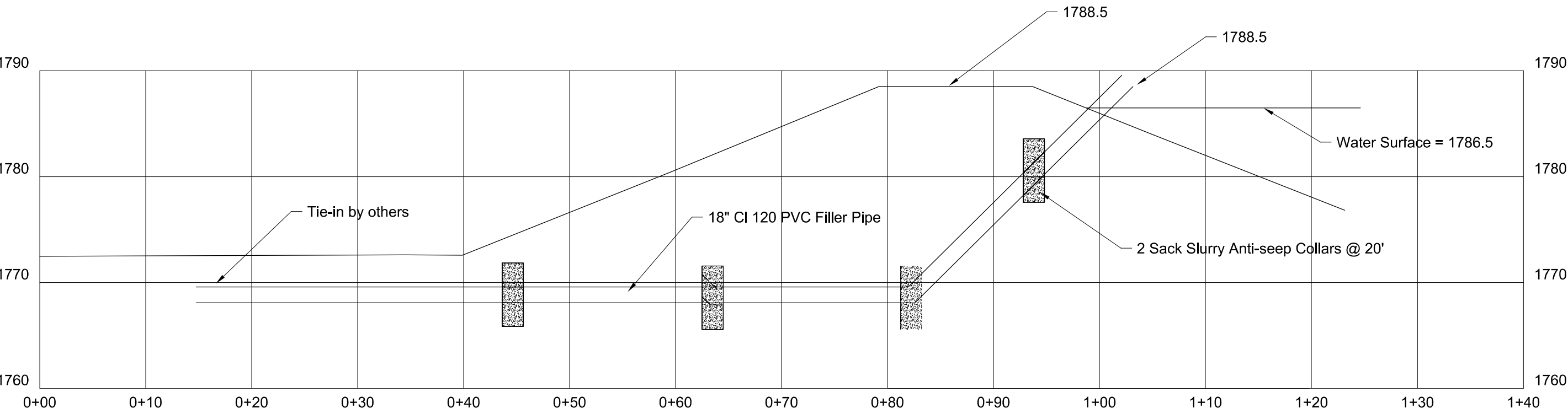
Reservoir #2 Pump Vaults



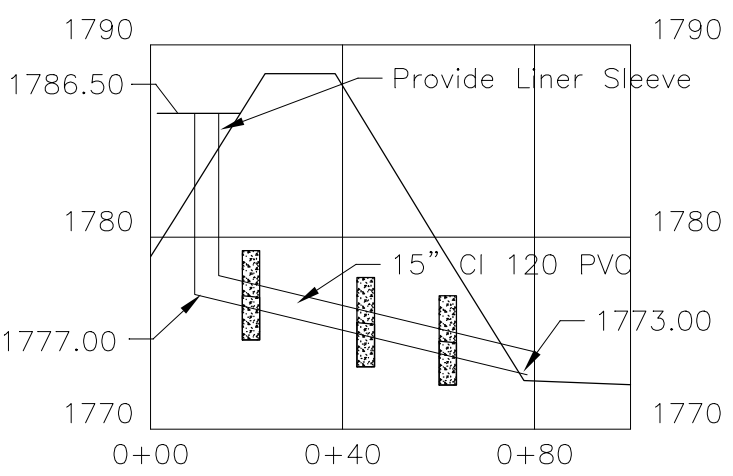
Reservoir #2 Pump Vaults Section G-G



Reservoir #2 Inlet Detail

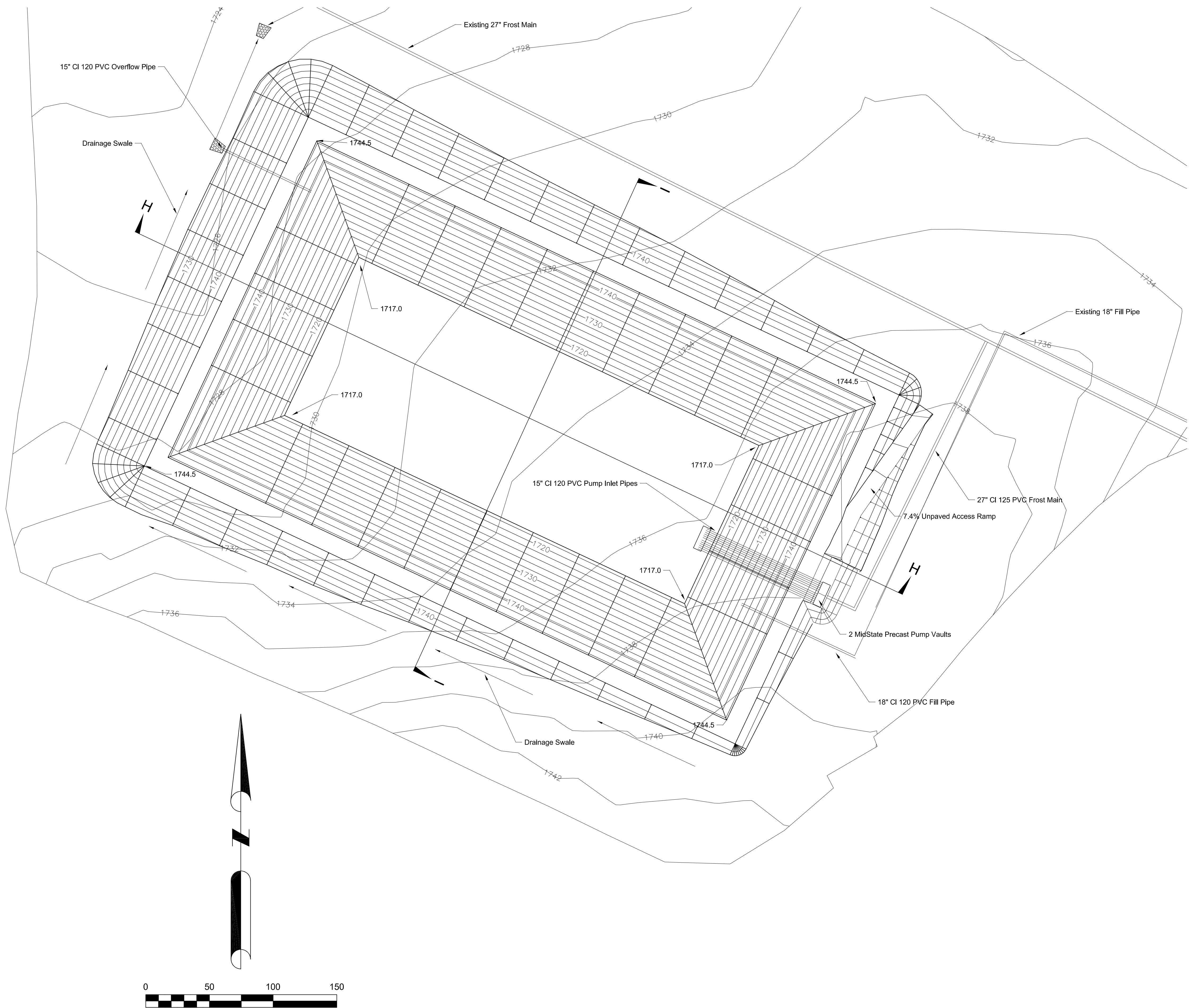


Reservoir #2 Overflow



North Fork Vineyards		
DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #2 Details
APPROVED	DATE	
SCALE Varies	SHEET 7 of 12	PROJECT NO. 101715-6233

Reservoir #3 Grading Plan



Pond Report

Top of dam elevation: 1744.50
Bottom of pond elevation: 1717.00
Top of dam width: 14.00
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 42,770.71 C.Y.
Total fill: 40,253.87 C.Y.

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1717.00	0.00	1.093
1719.00	2.29	1.206
1721.00	4.82	1.323
1723.00	7.59	1.445
1725.00	10.60	1.571
1727.00	13.87	1.701
1729.00	17.41	1.835
1731.00	21.22	1.973
1733.00	25.30	2.116
1735.00	29.68	2.263
1737.00	34.36	2.414
1739.00	39.34	2.570
1741.00	44.64	2.729
1743.00	50.26	2.893
1744.50	54.70	3.019



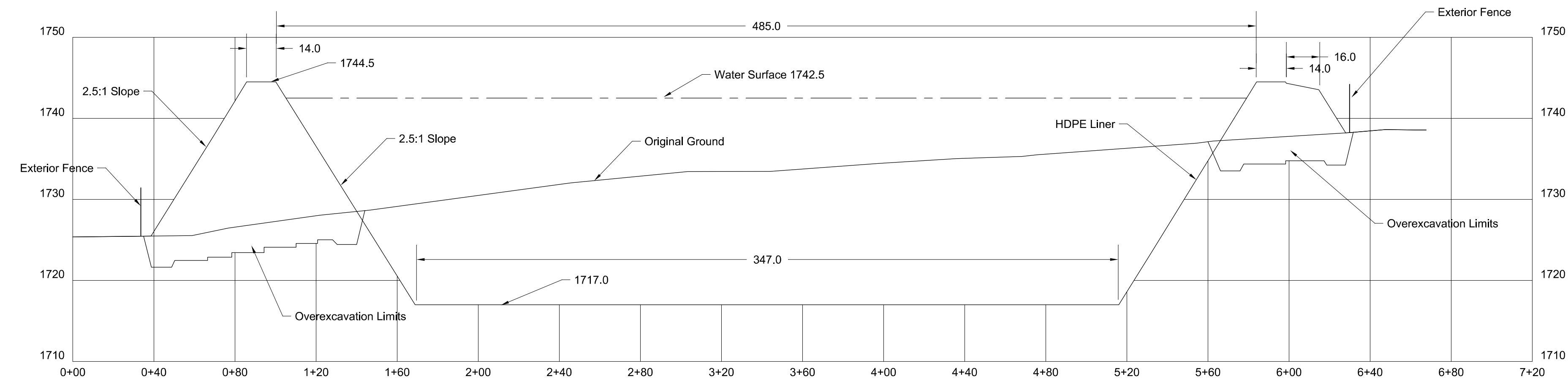
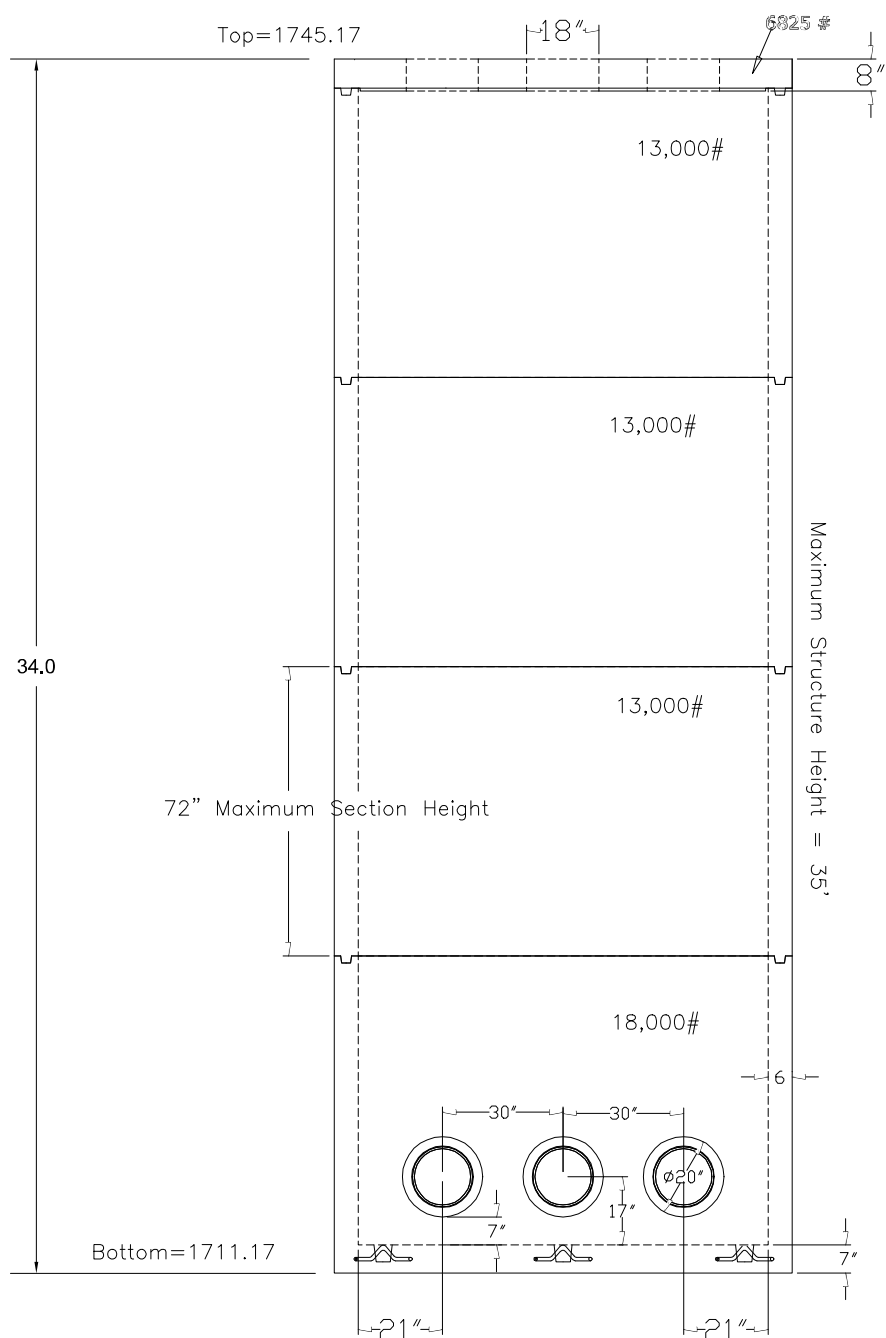
North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #3 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 8 of 12	PROJECT NO. 101715-6233

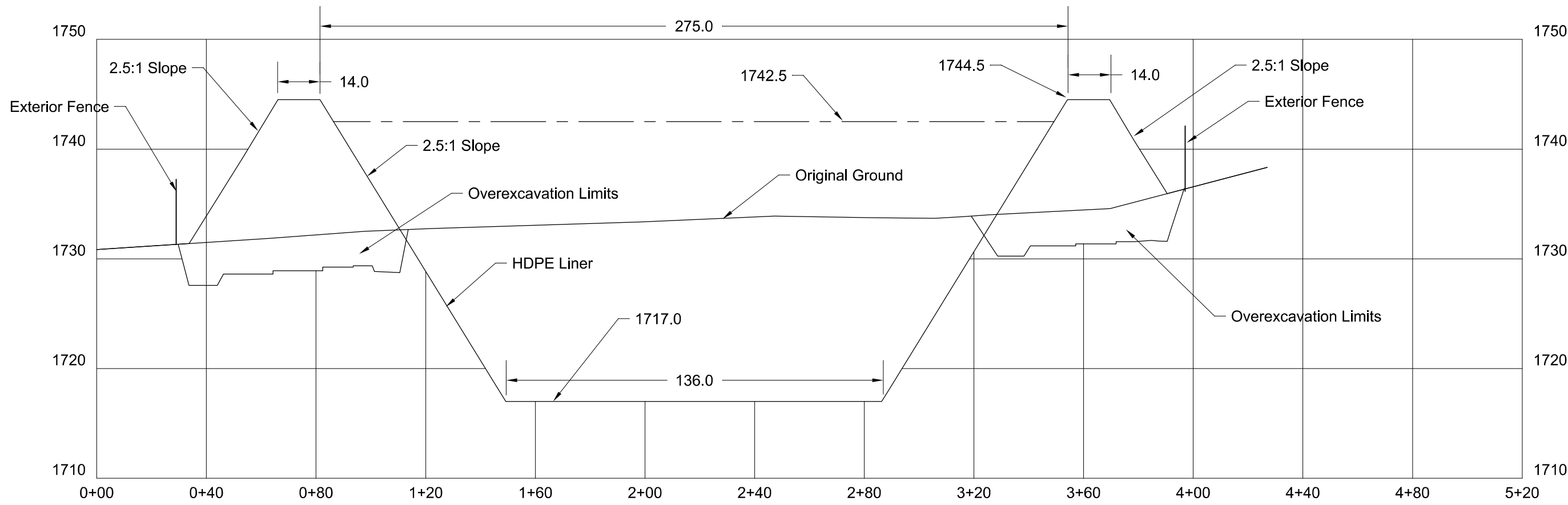
Reservoir #3 Details

Mid-State Concrete Products
Pump Housing Vault Reservoir #3

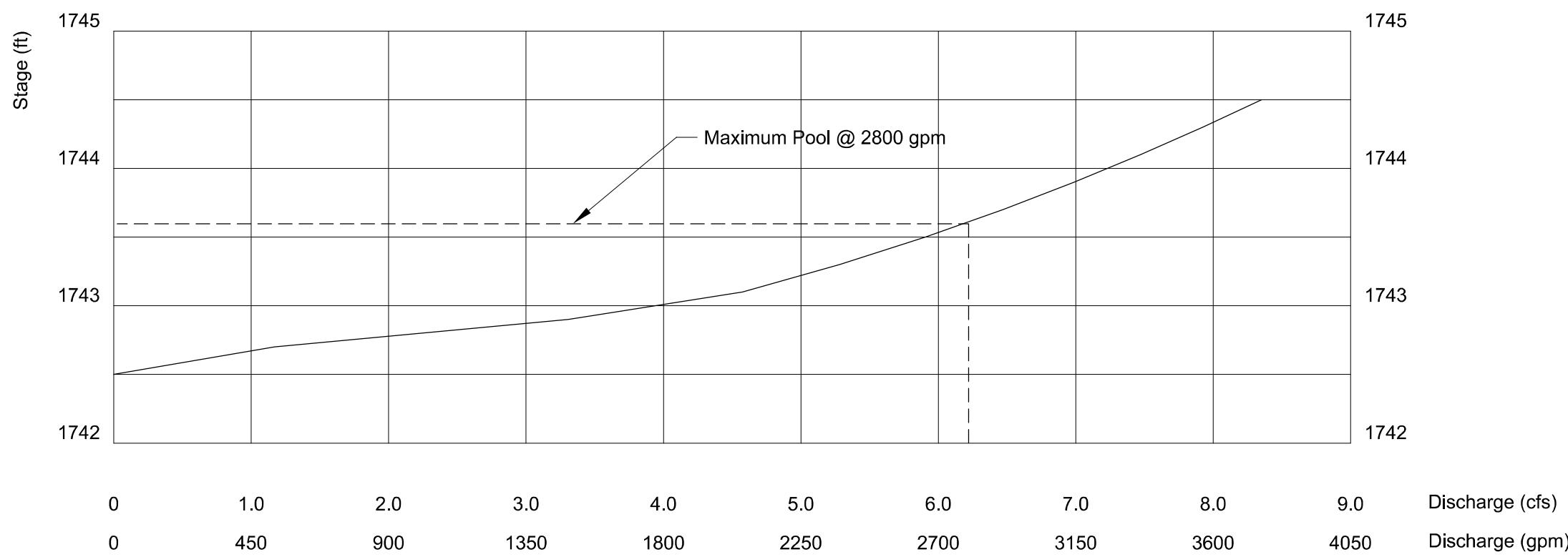
Reservoir #3 Section H-H



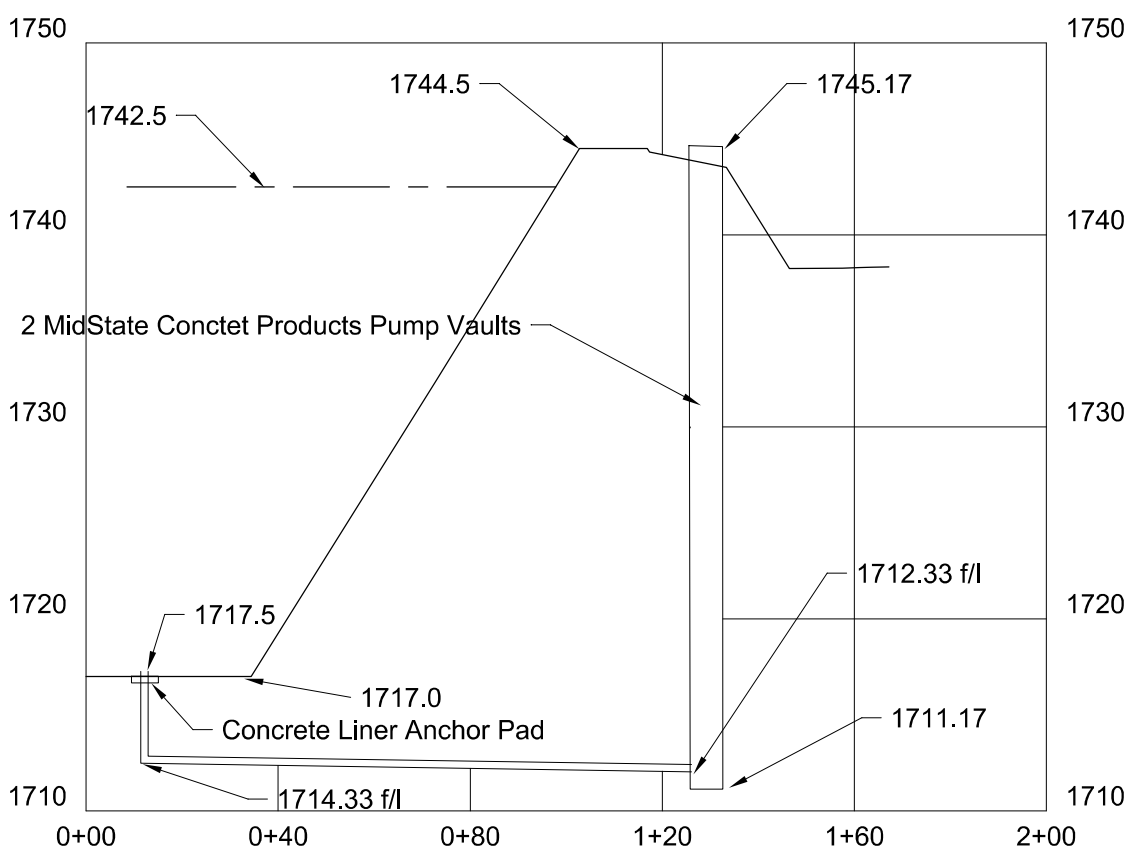
Reservoir #3 Section I-I



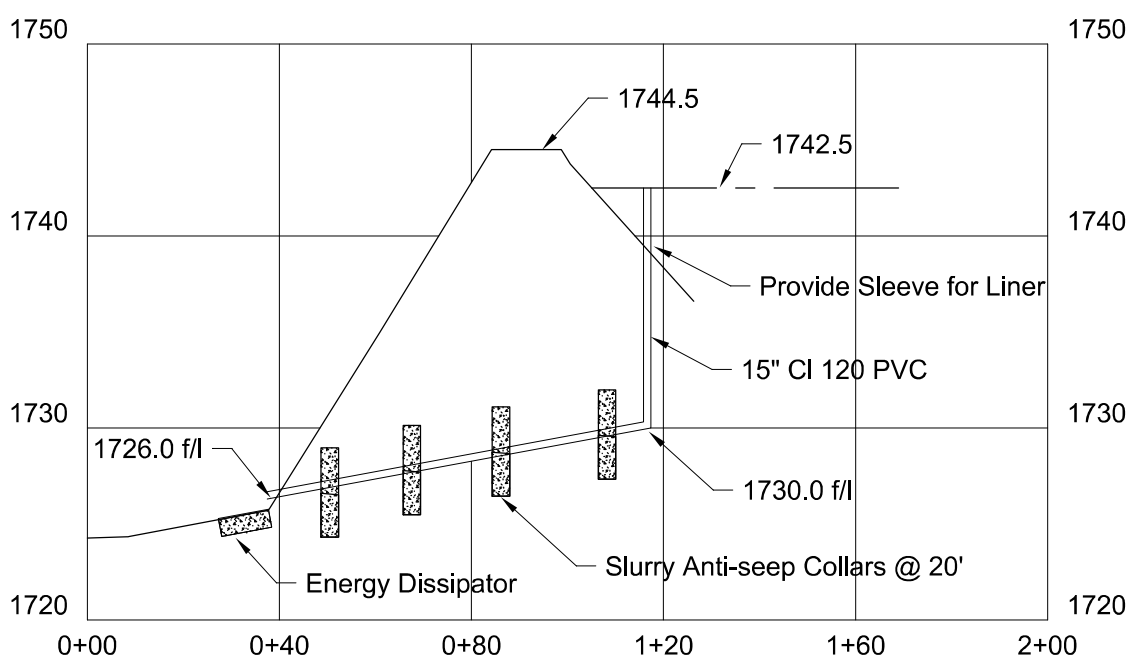
Reservoir #3 Stage Storage



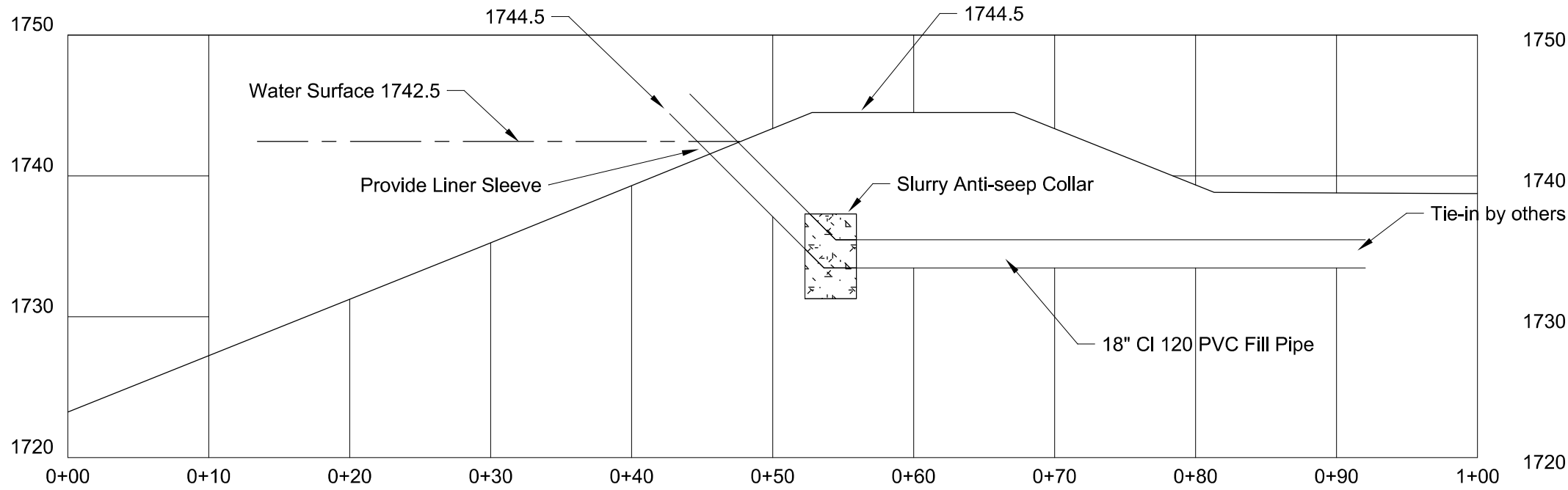
Reservoir #3 Pump Vaults



Reservoir #3 Overflow



Reservoir #3 18" Fill Pipe

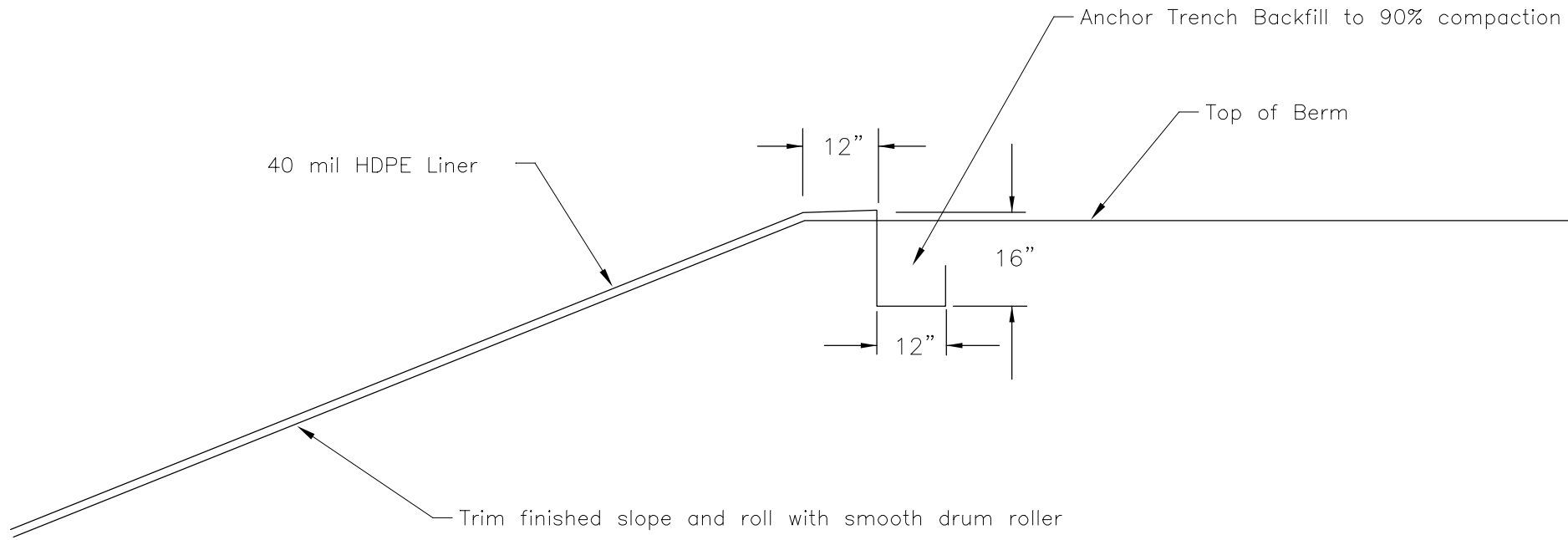


North Fork Vineyards

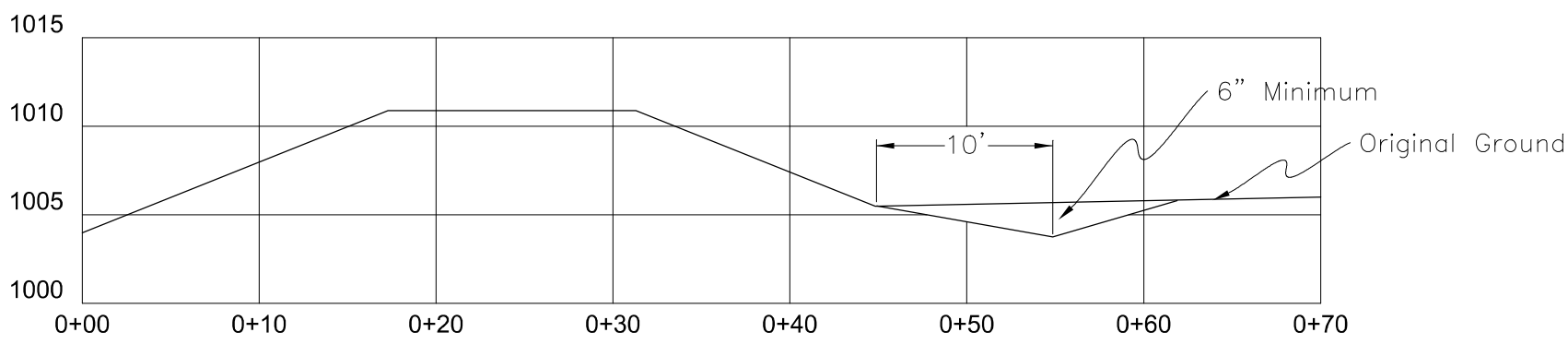
DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #3 Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 9 of 12	PROJECT NO. 101715-6233

Details Common to All Reservoirs

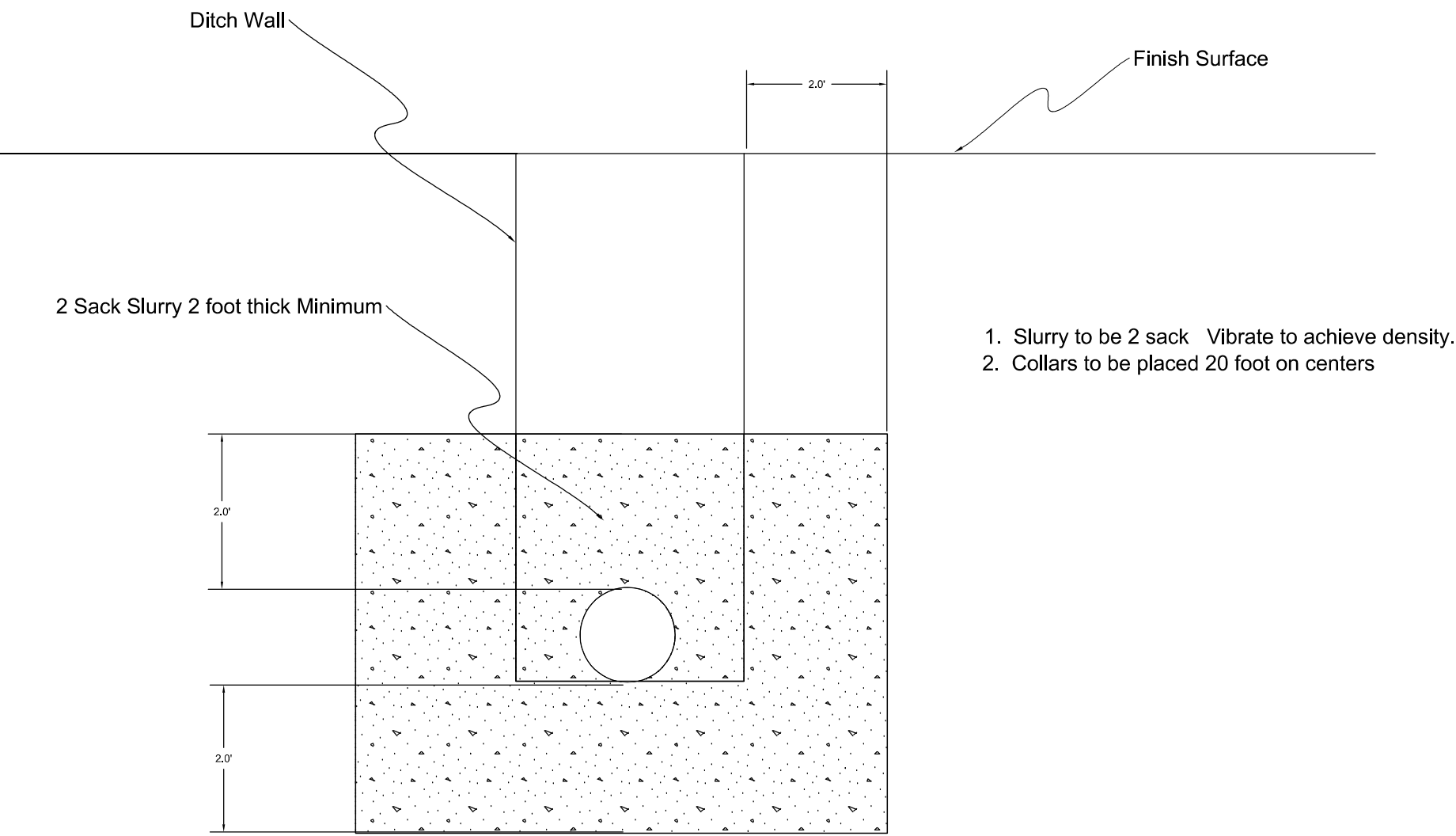
HDPE Liner Anchor Trench



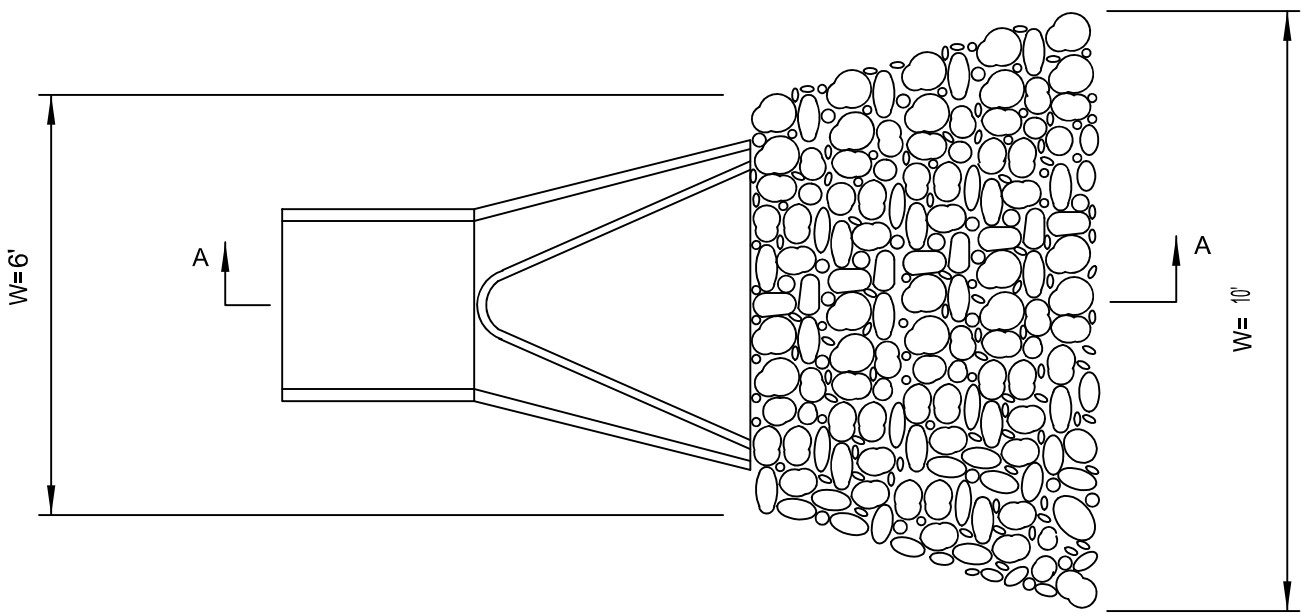
Drainage Swale Detail



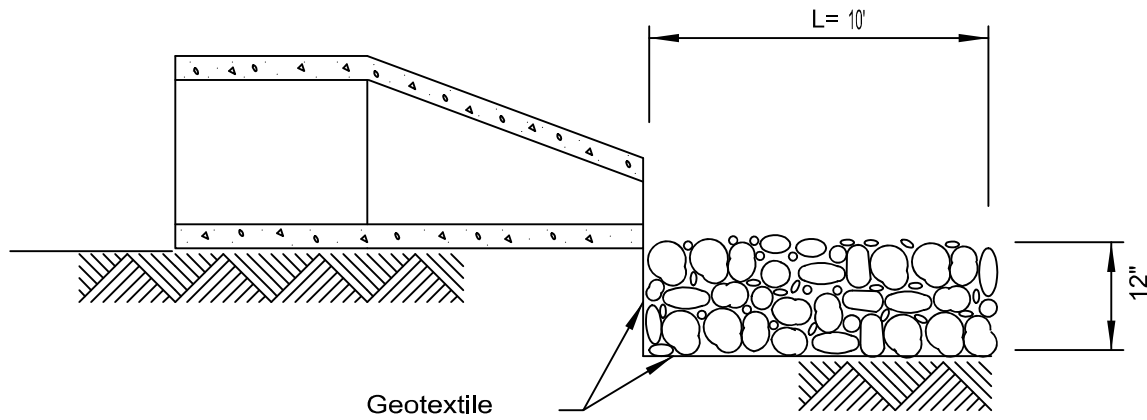
Anti-seep Collar Detail



Rock Energy Dissipater



PLAN



SECTION A-A

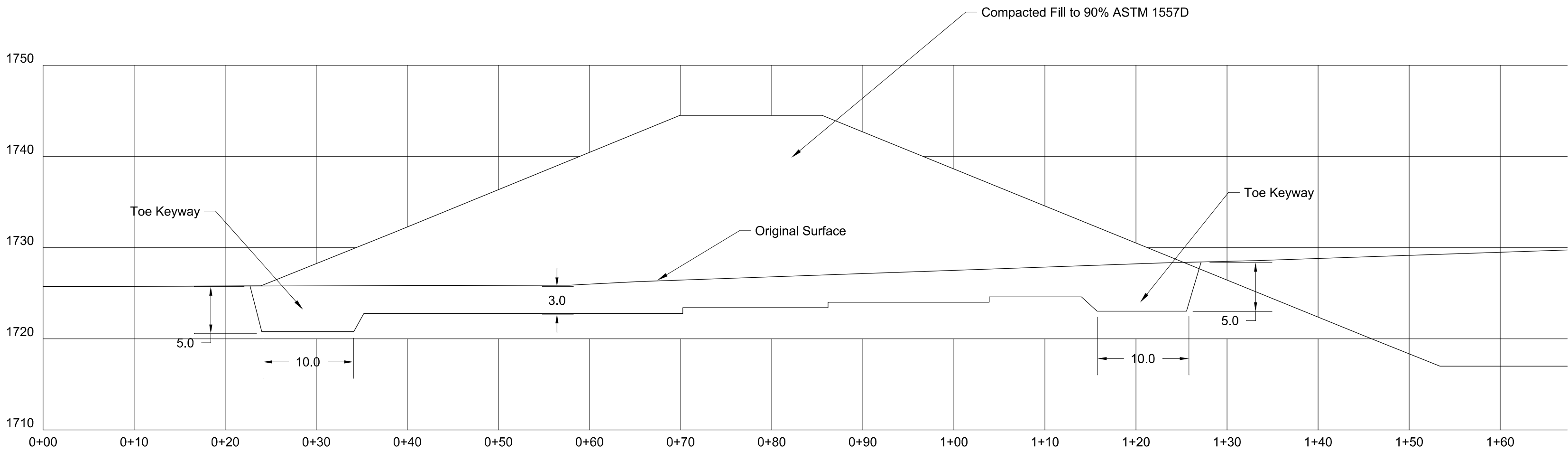
Notes:

1. Rock shall be 6" to 12" diameter
2. Minimum dimension shall be 6' x 10' x 12"

General Notes:

1. All grading shall conform to the Soil Report prepared by GSI Soils for this project dated January 4, 2016.
2. All slopes shall be overfilled than trimmed to finish grade to provide firm surfaces.
3. Finished slopes and the bottom surface shall be rolled with a smooth drum roller prior to placing fabric. The Engineer of Record shall inspect the surfaces to assure they are rock free and to the proper lines and grades before fabric shall be installed.
4. The liner shall be placed by a contractor specializing in pond liners and all pipes extending through the liner shall have sleeves and stainless bands to prevent leakage.
5. A 6 foot high non-climb fence shall be installed around the exterior perimeter of the reservoir. The fabric shall have 10 guage top and bottom wires with 12 1/2 guage 2x4 mesh filler fabric. Tee Posts shall be at 8 feet spacings and shall be heavy weight a minimum of 8 feet long.
6. The finished pond shall be surveyed by the Engineer of Record and the storage volume calculated. The 15" PVC Overflow Pipe shall be adjusted as necessary to ensure that the retained volume below the outflow inlet is no more than 49 acre feet and that there is a minimum of two feet of freeboard to the top of berm at the lowest point.

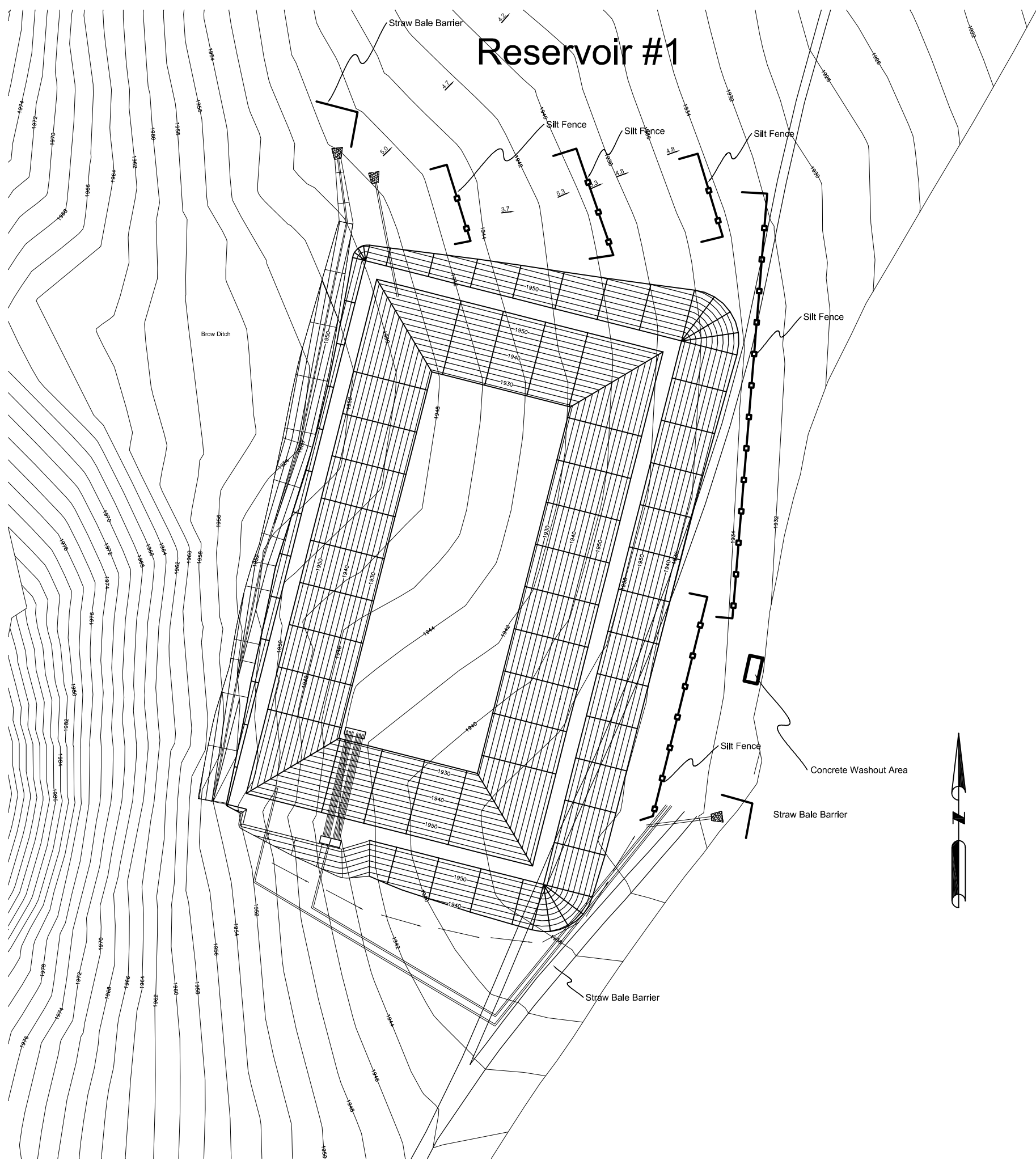
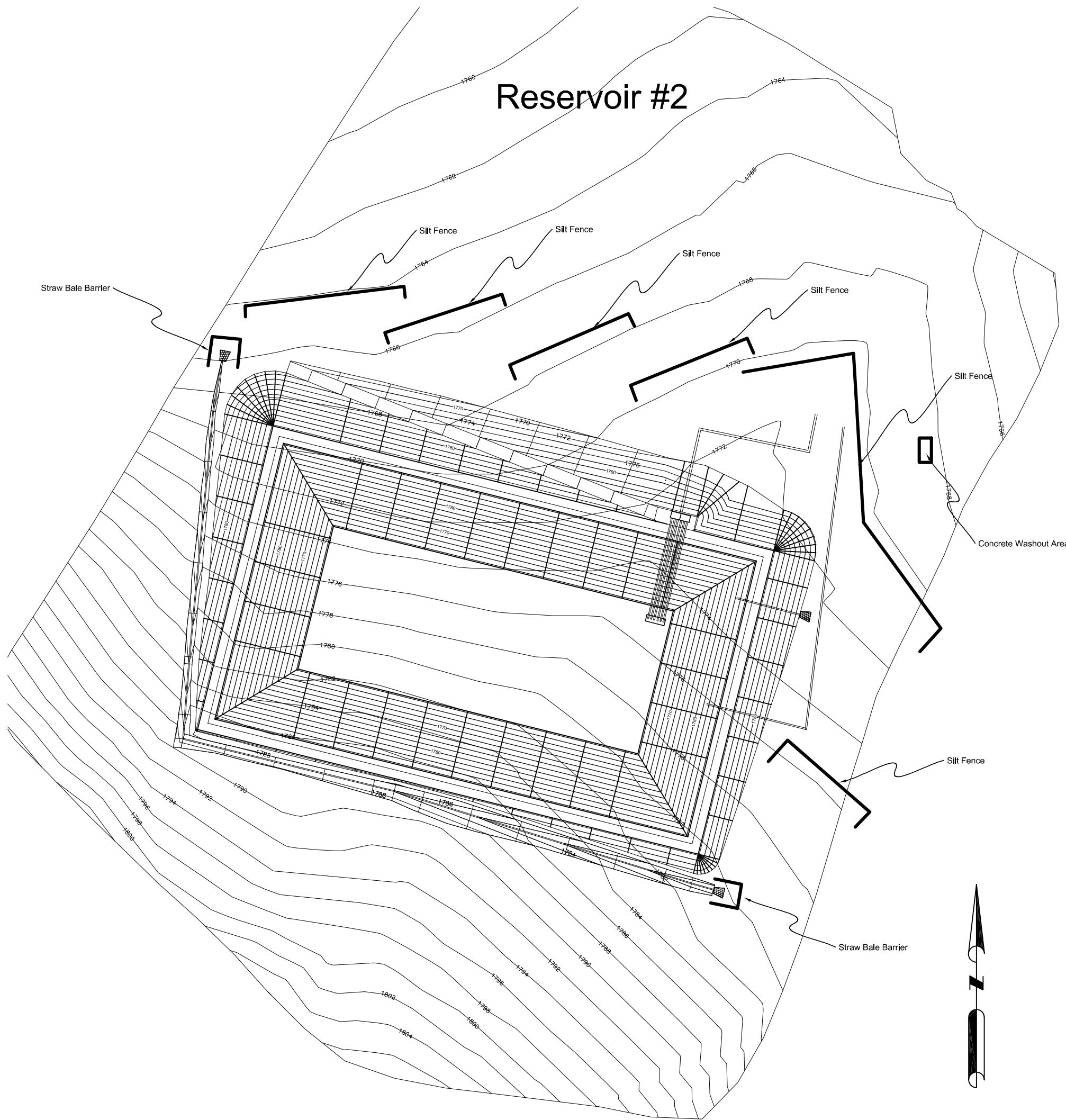
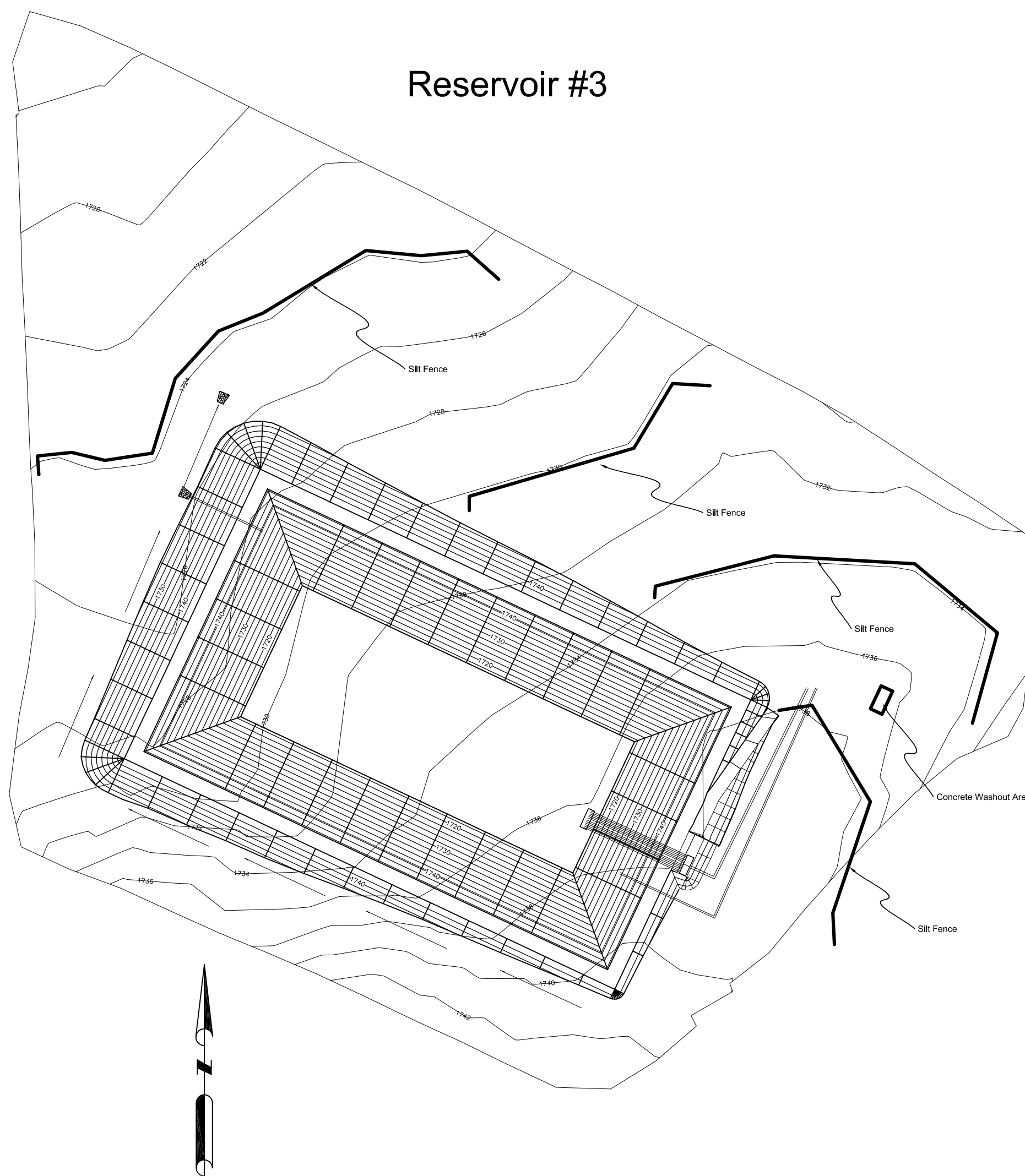
Overexcavation and Keyway Details per Figure 3 of Soil Report



North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoirs #1-3 Common Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 10 of 12	PROJECT NO. 101715-6233

Erosion and Sedimentation Control Plan



Erosion Control Notes:

- Erosion control measures shall be implemented on all projects and shall include source control, including protection of stockpiles, protection of slopes, protection of all disturbed areas, and protection of accesses. In addition, perimeter containment measures shall be placed prior to the commencement of grading and site disturbance activities unless the Engineer determines temporary measures to be unnecessary based upon location, site characteristics or time of year. The intent of the erosion control measures shall be to keep all sediment from entering a swale, drainage way, watercourse or onto adjacent properties. An approved Erosion Control and Sedimentation Control Plan will require County approval.
- Site Inspections and appropriate maintenance of erosion control devices shall be conducted and documented prior to, during, and after rain events.
- The developer shall be responsible for the placement and maintenance of all erosion control devices as specified by the approved plan until such time that the project is accepted as complete by the Engineer. Erosion control devices may be relocated, deleted or additional items may be required depending on the actual soil conditions encountered. Additional erosion control shall be placed at the discretion of the Engineer of Work, Engineer, SWPPP Monitor or RWQCB Inspector. Guidelines for determining appropriate erosion control devices are included in the appendix of the Public Improvement Standards.
- All erosion control devices shall be the first order of work and shall be in place between October 15 and April 15 or anytime when the rain probability exceeds 30%. This work shall be installed or applied after each area is graded and no longer than five (5) working days after the completion of each area.
- The Engineer of Work and the Engineer shall be notified before October 15 for inspection of installed erosion control devices.
- A standby crew for emergency work shall be available at all times during the rainy season (October 15 through April 15). Necessary materials shall be available and stockpiled at convenient locations to facilitate rapid construction or maintenance of temporary devices when rain is imminent.
- Permanent erosion control shall be placed and established with 70% coverage on all disturbed surfaces other than paved or gravel surfaces prior to final inspection. Permanent erosion control shall be fully established prior to final inspection. Temporary erosion control measures shall remain in place until permanent measures are established. A water truck shall be used to water areas hydroseeded until the planting is established.
- In the event of a failure, the developer and/or his representative shall be responsible for cleanup and all associated costs or damages.
- Slurry Mix: The slurry mix shall be composed of the following materials:

Bromus mollis - Blando Brome (95%, 85%)	20 pounds per acre
Festuca megalura - Zorro Fescue (85%, 80%)	8
Trifolium hirtum "Hykon" - Rose Clover (95%, 90%)	30
inoculated with appropriate bacteria	3
Eschscholzia californica - California Poppy (95%, 75%)	3
Lupinus nanus - Sky Lupine (95%, 75%)	4

(Seed available at S&S Seeds (805) 684-0436)

Other Materials:

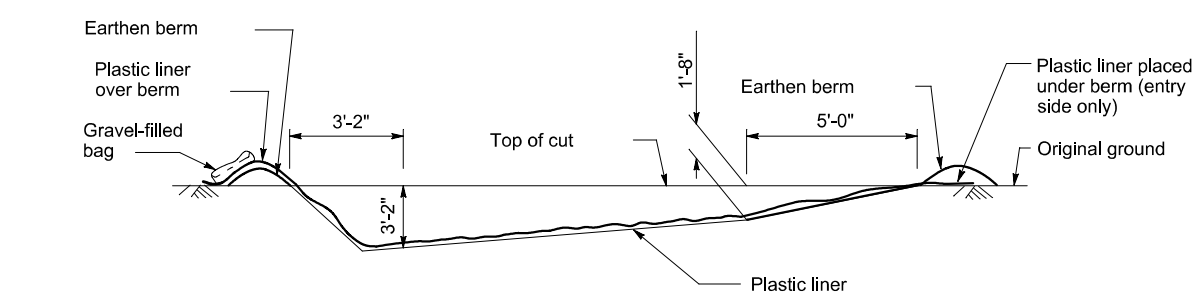
100% Wood fiber mulch (green)	1600 pounds per acre
Commercial Fertilizer (16-20-0)	400
"M-Binder" (stabilizing emulsion) or equal	120
Water (as needed for application and as specified by manufacturer)	
- Application: The slurry preparation shall take place at the site and in the presence of the Engineer. Spraying of the slurry shall be done by an experienced hydroseeding company and commence within five minutes after all the materials have been mixed thoroughly.
- The hydroseeded areas shall be watered with a fine mist periodically until the seed begins to germinate then every other day until the roots are established and 70% of the area is covered. Do not use the side spray of a watertruck but instead use a nozzle adjusted to spray a fine mist attached to a hose.
- BMP's to be constructed include but are not limited to:
 - Silt Fence
 - Straw bale barrier
 - Concrete washout area



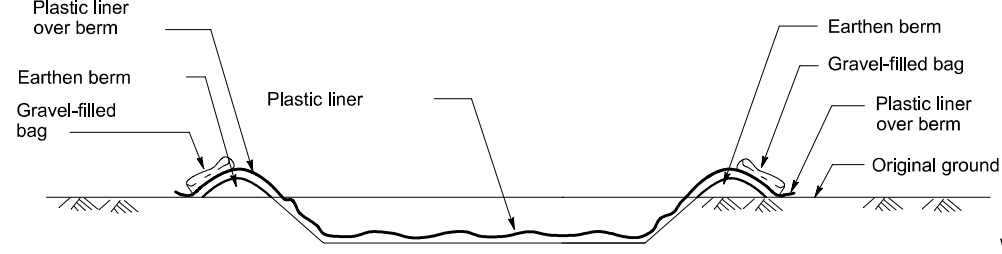
North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	<i>Reservoirs #1-3</i>
APPROVED	DATE	<i>Erosion & Sedimentation Control</i>
SCALE 1"=100'	SHEET 11 of 12	PROJECT NO. 101715-6233

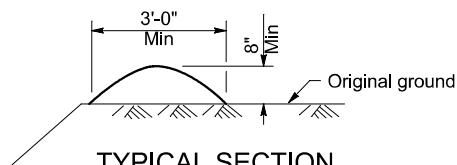
Erosion Control BMP Details



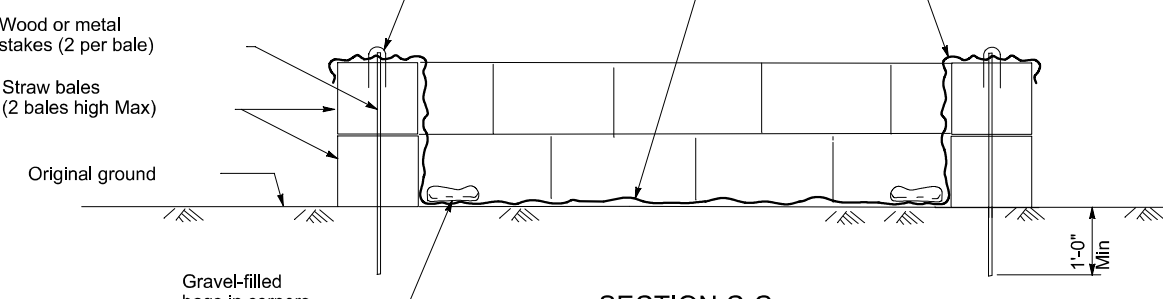
SECTION B-B



SECTION A-A



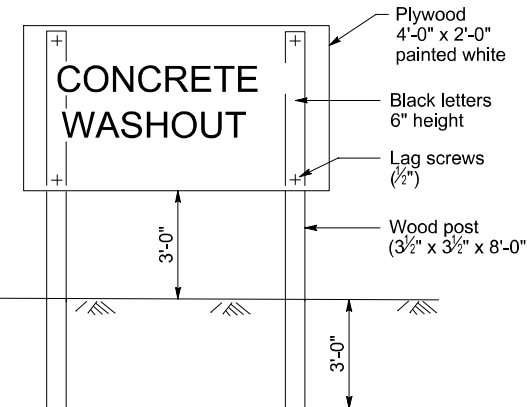
TYPICAL SECTION
EARTHEN BERM



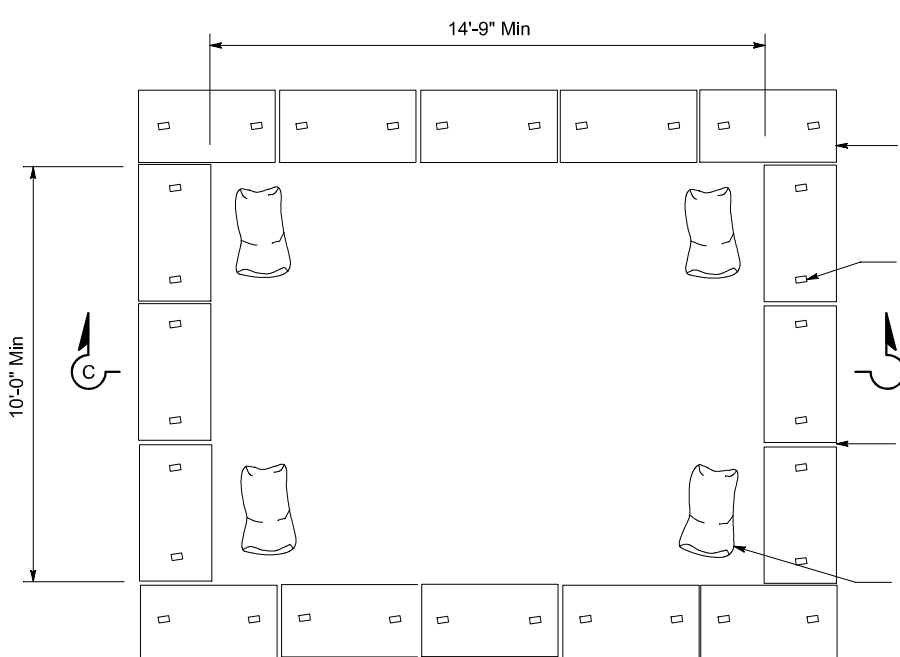
SECTION C-C

NOTES:

1. The concrete washout sign shall be installed within 32'-10" of the temporary concrete washout facility.
2. Plastic liner shall be anchored with gravel-filled bags for below grade concrete washout facility.

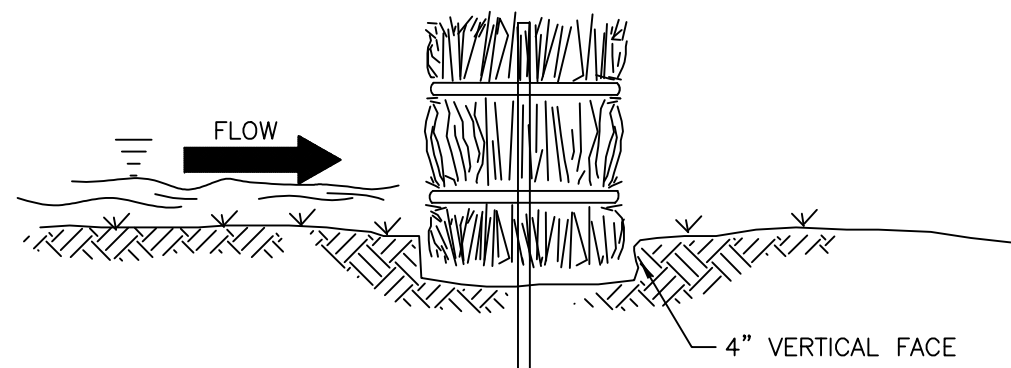


CONCRETE WASHOUT
SIGN DETAIL



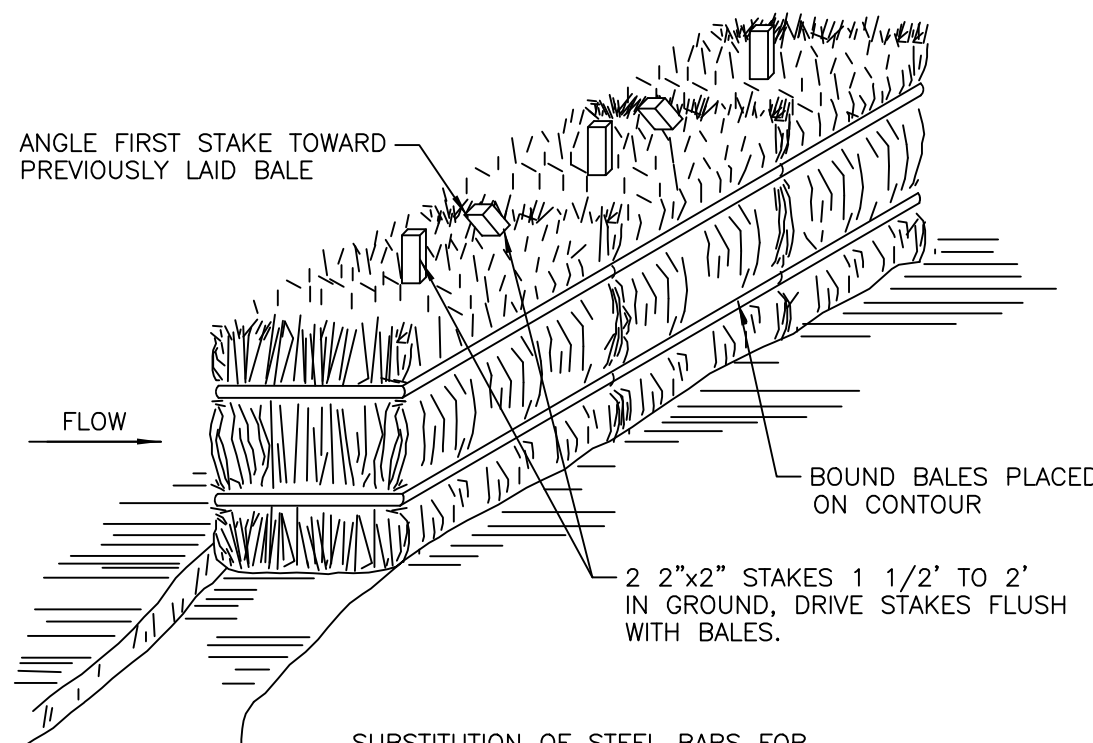
PLAN
TEMPORARY CONCRETE WASHOUT FACILITY

NO SCALE



* PROMOTES ON SITE SEDIMENTATION
BY CREATING A TEMPORARY POND.

BEDDING DETAIL

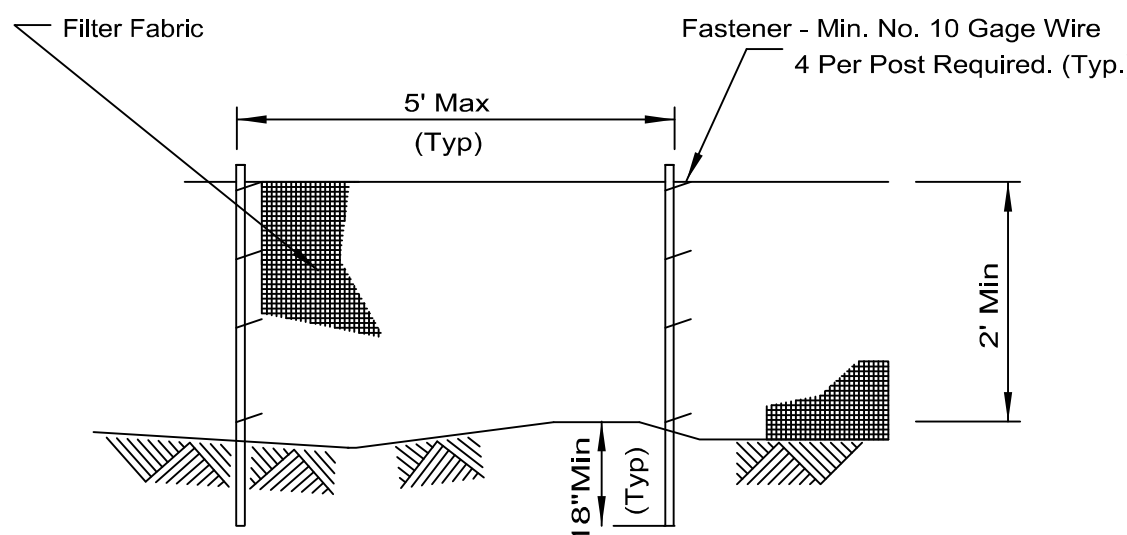


SUBSTITUTION OF STEEL BARS FOR
WOODEN STAKES IS NOT RECOMMENDED DUE
TO POTENTIAL FOR DAMAGING CONSTRUCTION EQUIPMENT

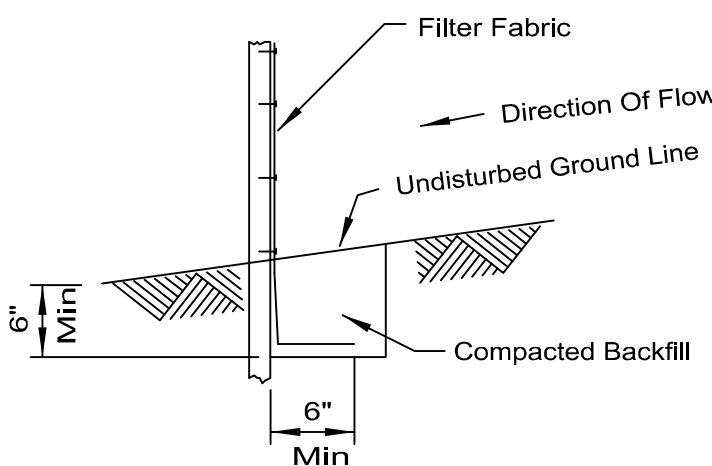
ANCHORING DETAIL

STRAW BALE BARRIERS

SILT FENCE PLAN



ELEVATION



FABRIC ANCHOR DETAIL

NOTES:

1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class with equivalent opening size of at least 30 for nonwoven and 50 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.



North Fork Vineyards

DRAWN TH	DATE 1/09/17	Reservoirs #1-3 BMP Details
APPROVED	DATE	
SCALE Varies	SHEET 12 of 12	PROJECT NO. 101715-6233



Attachment 2a

Kevin Merk Associates, LLC P.O. Box 318, San Luis Obispo, CA 93406 805-748-5837(o)/439-1616(f)

February 24, 2016

Mr. Kevin Merrill
Mesa Vineyard Management
P.O. Box 789
Templeton, California 93465

Subject: Biological Resources Assessment for the Reservoir and Operations Yard Project, North Fork Ranch, Santa Barbara County, California

Dear Mr. Merrill:

Kevin Merk Associates, LLC (KMA), at your request, conducted an assessment of the biological resources at three reservoir sites and an operations yard proposed on a portion of the North Fork Ranch in Santa Barbara County, California. The North Fork Ranch is located approximately 10 miles west of New Cuyama, along the Highway 166 corridor. While the entire North Fork Ranch is roughly 8,400 acres, and is situated in both San Luis Obispo and Santa Barbara Counties, the four sites included in this assessment are located on the gentle to flat slopes on the south side of Highway 166 in Santa Barbara County.

Based on the review of site plans provided by your engineer, Mr. Thomas Howell (2015), the project consists of creating three agricultural reservoirs covering approximately five acres each. An operations yard area of approximately five acres is also included. The biological assessment examined existing conditions at and adjacent to the four proposed project areas, and evaluated the potential for rare or special status species and habitats to be present or affected by reservoir and operations yard construction. As such, the project study area covered by this report consists of a total of approximately 20 acres of land disturbance. Access to the sites would use existing ranch roads that originate from Highway 166. Please refer to attached Figures 1 and 2 for site location and an aerial overview of the study area. The following discussion provides the methods and results of our investigation.

METHODS

Prior to conducting field work, KMA biologists reviewed pertinent background information from the general area, including historic aerial photographs from Google Earth, the U.S. Geological Survey (USGS, 2015), and the Environmental Site Assessment prepared by the RCC Group (2014). Other environmental documents obtained online from the County of Santa Barbara (i.e.: August 2009 E&B Natural Resources Management Production Plan and September 2014 Cuyama Solar Facility Final EIR) were also reviewed to identify special status resources in the region.

The California Natural Diversity Database (updated December 2015; CNDDDB) maintained by the California Department of Fish and Wildlife (CDFW), was searched for special status biological resources documented within the following eight USGS 7.5-minute topographic quadrangles: Manzanita Mountain, Miranda Pine Mountain, Taylor Canyon, Bates Canyon, Caliente Mountain,

Peak Mountain, Wells Ranch, and New Cuyama. A search of this size was conducted to ensure that any new information regarding special-status species and plant community occurrences was included in the assessment. The Central Coast Center for Plant Conservation's Rare Plants of Santa Barbara County List (V2, November 1, 2012) was also reviewed to ensure full coverage of local plant species.

KMA Principal Biologist Kevin Merk conducted numerous site investigations on the North Fork Ranch in the spring and summer of 2015 prior to agricultural activities. General botanical and biological surveys were conducted in April, May, June, July, September and October of 2015 in addition to CDFW protocol level surveys for the blunt nose leopard lizard (*Gambelia sila*). KMA Senior Biologist Bob Sloan and Environmental Scientist, Jaryd Block, also assisted with surveys conducted in September and October 2015 to delineate top of bank buffers along onsite drainages to ensure agricultural activities onsite were setback from natural drainage features.

A detailed survey of the reservoir sites and operations was conducted by Bob Sloan on January 4, 2016. Using the project plans prepared by project engineer, Mr. Thomas Howell, the sites and surrounding areas were surveyed on foot to characterize existing conditions, habitats, and species presence. Existing plant communities and other observations were mapped on an aerial photograph obtained from Google Earth dated 2015. Vegetation classification generally followed Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (1986) and was cross-referenced with *A Manual of California Vegetation, Second Edition* (Sawyer et al., 2009) for consistency. Plant taxonomy followed the *Jepson Manual, Second Edition* (Baldwin et al., 2012).

The Web Soil Survey (websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx) was reviewed to determine the soil mapping units present within the sites (U.S. Department of Agriculture 2015). The U. S. Fish and Wildlife Service's online Critical Habitat Mapper (<http://criticalhabitat.fws.gov/crithab/>) was reviewed to evaluate the extent of designated critical habitat defined in the region. The National Wetland Inventory was also queried to identify drainage features and potential wetlands documented onsite and in the region.

For the purpose of this report, special status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (ESA); those listed or proposed for listing as Rare, Threatened, or Endangered by the California Department of Fish and Wildlife (CDFW) under the California Endangered Species Act (CESA); animals designated as "Species of Special Concern," "Fully Protected," or "Watch List" by the CDFW; and plants occurring on California Rare Plant Rank lists 1, 2, 3 and 4 developed by the CDFW working in concert with the California Native Plant Society. The specific Rare Plant Rank code definitions are as follows:

- *List 1A = Plants presumed extinct in California;*
- *List 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);*
- *List 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened);*

- *List 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known);*
- *List 2 = Rare, threatened or endangered in California, but more common elsewhere;*
- *List 3 = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA);*
- *List 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80% occurrences threatened); and*
- *List 4.3= Plants of limited distribution (watch list), not very endangered in California.*

The evaluation of special status plant and animal species and identification of habitat that could support these species was based on field observations to aid in the development of a habitat suitability analysis. KMA staff spent many hours surveying the lower elevation portions of the ranch along the Highway 166 corridor over the last year, and became very familiar with site conditions and species present. Definitive surveys for the presence or absence of the species such as the San Joaquin kit fox (*Vulpes macrotis mutica*) that may be present in the greater region were not conducted on the sites. Definitive or protocol-level surveys for special status wildlife species generally require specific survey methods with extensive field survey time to be conducted at specific times of the year. Therefore, we relied on existing information and known occurrence records in the region coupled with site-specific observations to make presence/absence determinations for special status species potentially occurring within the four project areas.

RESULTS

The North Fork Ranch is a large property with varied topography and habitats located west of New Cuyama along the northern flank of the Sierra Madre Mountains. The northern property is bisected in an east to west direction by Highway 166, and also includes the Cuyama River and its associated flat terraces. Please refer to the attached Figures 1 and 2 for site location and aerial overview maps. The three proposed reservoir sites and operations yard are located in the gentle slopes and flat areas of the North Fork Ranch, on the south side of Highway 166. All four sites are similar in size and shape, and were accessed by existing ranch roads. Elevations in the project areas range from approximately 1,700 to 1,900 feet above mean sea level.

Numerous drainage features that are tributaries to the Cuyama River bisect the property in a primarily south to north direction. The largest features, Cottonwood Canyon Creek in the west and Schoolhouse Canyon Creek in the east are large washes that are dry for most of the year. They contain periodic ("flashy") flow during the summer monsoon season as well as the winter rain season. The ranch was used to graze cattle for many years, and as a result, the gently-sloped terraces and hills were dominated by non-native weeds. Review of aerial imagery dating back to 1950's showed little change in the distribution/location of drainage features and vegetation formations (i.e.: herbaceous, shrub, tree habitats) onsite. Soils on the ranch in the study area are generally sandy in nature.

The attached Figures 3, 4, and 5 provide close-up views of existing conditions at each project site.

Figure 6 is a CNDDDB Map illustrating the recorded special status species occurrences within a five-mile radius of the study area. Also included as an attachment, Table 1 provides a list of all special status species and plant communities identified in the CNDDDB search area, and a determination of whether or not they are expected to occur in or adjacent to the four sites. Additional attachments include a photo plate to help document conditions at the four project sites, and the USFWS's *Standardized Recommendations for San Joaquin Kit Fox* to avoid impacts to this species during development of the reservoirs and operations yard. Existing conditions observed within the four sites are discussed further below.

Reservoir Site #1

Reservoir Site #1 is located in the eastern portion of the ranch, immediately adjacent to Schoolhouse Canyon Road, west of Schoolhouse Canyon Creek. The site slopes gently to the northeast, and supported a mix of non-native weeds growing on sandy loam soils. Plants observed during the spring and summer of 2015 included red-stemmed filaree (*Erodium cicutarium*) and Russian thistle (*Salsola tragus*). Further upslope on steeper hills were occurrences of California juniper (*Juniperus californicus*) and other scrub species. A small ephemeral drainage channel was present to the north of the proposed reservoir site, and the reservoir construction footprint has been set back over 100 feet from this feature to ensure it will not be disturbed during construction. The recent 2016 survey occurred when site preparation activities such as disking and deep ripping were taking place. The site was nearly devoid of vegetation when the site visit was conducted. Numerous coyote (*Canis latrans*) tracks were noted in the disked area. A large flock of American crows (*Corvus brachyrhynchos*) were present in disked areas south of the reservoir site. Nearby areas outside the disking footprint were dominated by red-stemmed filaree with sparse occurrences of annual grasses beginning to sprout in response to recent rains, which is consistent with observations made in the spring and summer 2015.

Reservoir Site #2

Reservoir Site #2 is located in the middle portion of the study area. The site slopes gently to the northeast, and consisted of non-native weeds growing on sandy soils, which was nearly identical to the conditions observed at Reservoir Site #1. Spring and summer 2015 surveys identified red-stemmed filaree growing as a monoculture with patches of bare soils at this site. The 2016 survey occurred during preparation for vineyard planting, and the site was disked with little to no vegetation present. The reservoir (and nearby operations yard) was sited in the upland area to avoid impacts to the unnamed drainage feature to the east. The proposed operations yard is located further east on the other side of the unnamed drainage feature.

Reservoir Site #3

Reservoir Site #3 is located in the western portion of the study area, approximately 0.75 mile east of Cottonwood Canyon Road. The proposed reservoir is located between two ephemeral drainage features, and was sited in upland areas with a minimum 50 foot setback from the drainages top of banks. Similar to observations made during the spring and summer 2015 at the other reservoir sites, the proposed disturbance area was dominated by red-stemmed filaree with patches of Russian thistle. During the 2016 survey, the area was being disked, and the southwestern half

consisted of a dense cover of red-stemmed filaree. Numerous Russian thistle seedlings were also observed, and a barbed wire fence present in the upper southern portion of the site had trapped numerous dry tumbleweeds (Russian thistle plants) from last year's crop.

Operations Yard

The proposed operations yard is located east of Reservoir Site #2 on the other side of the unnamed drainage feature. The site consists of an area previously used as a staging area for the former cattle grazing operation. During the 2016 survey, it consisted of a large flat area covered with gravel/road base. An existing dirt road connects the operations yard to Highway 166. During the 2015 surveys, the site contained a predominance of bare soils as a result of equipment storage along with patchy occurrences of red-stemmed filaree and Russian thistle. In addition, two small windrows visible in the aerial imagery were no longer present at the time the 2016 survey was conducted.

Habitat Types

During surveys conducted on the property in 2015, the gently sloping areas along the south side of Highway 166 were dominated by non-native weeds characteristic of the non-native grassland habitat described by Holland (1986). Due to the many years of grazing cattle coupled with the ongoing drought, vegetation was patchy and consisted almost entirely of red-stemmed filaree with patches of Russian thistle. Herbaceous alliances dominated by red-stemmed filaree with occurrences of Russian thistle are not described by Sawyer et al (2009). Areas of juniper shrubs were present at higher elevations on slopes outside the proposed disturbance footprints. The sparsely vegetated areas within the four proposed project sites lacked species diversity and did not support any native plants. Patches of native habitat were observed in the unnamed ephemeral drainage features that bisect the ranch in a primarily south to north direction connecting with the Cuyama River to the north of Highway 166. The highest quality native habitat areas were observed in the Schoolhouse Canyon and Cottonwood Canyon corridors and along the Cuyama River, which are outside the proposed project footprints.

Soils

Prior to field investigation, the Web Soil Survey was queried to determine soil composition and the related potential for the site to support special status species. The Soil Survey identified the project areas as composed of primarily sandy loam soils. Reservoir sites 1 and 3 are located on Pleasanton sandy loam (2-9 % slopes), while the operations yard and Reservoir 2 sites are located on Panoche sandy loam (2-9 % slopes).

Drainage Features

A series of ephemeral drainage features that are tributaries to the Cuyama River bisect the ranch in a primarily south to north direction. The largest features, Cottonwood Canyon Creek to the west and Schoolhouse Canyon Creek to the east, are large washes that are dry for most of the year, and contain periodic/flashy flow only during monsoonal rain events and the winter rain season. No areas of in channel ponds were observed in the study area. As we understand, the natural drainage

features will not be impacted or altered by construction at the proposed reservoir and operations yard sites. All work is proposed to occur outside a minimum 50-foot setback established from the top of bank of all drainages on the site.

Special Status Biological Resources

As part of our investigation, a search of the CNDDDB was performed within a five-mile radius of the North Fork Ranch property limits (refer to the attached Figure 6). The CNDDDB records coupled with our knowledge of the area identified thirteen (13) special status plant species and twelve (12) special status animal species known to occur within the general region. No special status plant communities were identified in the CNDDDB within the five-mile radius. Most of these special status species have highly specific habitat requirements that are not present onsite, and therefore are not expected to occur within the proposed project sites. Please refer to Table 1 for more information on these species. The CNDDDB contained special status species observations from the subject property, many of which are over 25 years old. Please refer to the attached Figure 6 and Table 1, Special Status Species Potentially Occurring on the Site, for specific information pertaining to each species listing status, habitat requirements and the potential to occur within the four sites.

The CNDDDB records included sightings of special status plants such as round-leaved filaree (*California macrophylla*), Blakely's spineflower (*Chorizanthe blakelyi*), Kern mallow (*Eremalche kernensis*), pale yellow layia (*Layia heterotricha*), and San Joaquin woolly threads (*Monolopia congdonii*) from the general project area, including within the greater ranch property boundaries. Other species identified are known to occur in higher elevations in the Caliente and Sierra Madre Mountains to the north and south of the project areas. No suitable habitat was observed in the project footprints for rare plants, and seasonally timed surveys conducted in 2015 did not locate these species in the proposed disturbance footprints. As stated above, the proposed reservoirs and operations yard will be constructed in disturbed areas away from the natural drainage features, and therefore, would be unlikely to adversely affect any special status plants.

Special status wildlife identified in the CNDDDB and through our background information review included a range of species, many of which could still occur in the region. Species such as the giant kangaroo rat (*Dipodomys ingens*), however, may no longer be present in the general area (CNDDDB, 2015). The giant kangaroo rat occurrence documented in the northwest corner of the ranch along the Cuyama River was dated 1979, and is currently listed as "possibly extirpated" in the CNDDDB occurrence report. This general area was visited on several instances in the spring and summer 2015 and no burrow complexes typical of the giant kangaroo rate were evident. Surveys of the four project sites did not locate any burrow complexes characteristic of the giant kangaroo rate, and therefore this species is unlikely to occur in the project areas.

Although no potential SJKF den sites or small mammal prey base were observed on the four project sites, highly mobile species such as the SJKF and American badger (*Taxidea taxus*) could potentially move through the ranch and four project areas in search of food or suitable denning habitat. No recent observations of SJKF or badger were identified on or adjacent to the proposed project sites, but both species are known to occur in the larger Cuyama Valley region. It is uncertain if SJKFs are currently present in the general project area. The CNDDDB recorded occurrences of this species on the eastern part of the ranch in the Cottonwood Canyon vicinity are from 1975. Suitable SJKF

denning and foraging habitat are present on the larger ranch, but the four project sites are located in disturbed areas with regular human presence and little to no small mammal prey base. It is possible that a SJKF, if present in the area, could move through the sites during foraging or migration activities, but the lack of a well-developed prey base and no suitable denning habitat within the four sites indicate a very low potential for this species to occur. Moreover, no evidence (i.e.: direct observation of an individual, scat or tracks) of SJKF or American badger presence was observed during surveys conducted by KMA in 2015 and 2016.

Although not included in the five-mile radius search results, the federal and state endangered blunt-nosed leopard lizard (BNLL) has a known occurrence located just over five miles to the east of the eastern property border. Numerous other occurrences are documented in the Carrizo Plain area and in the Cuyama Valley to the east. The closest known occurrence (#414 in the CNDDb) was documented by Caltrans biologists conducting surveys for Highway 166 improvements. Two BNLLs were located on the south side of Highway 166 close to New Cuyama in a large wash with sparse annual grassland habitat. Other biological studies conducted in the general region were completed for oil and gas exploration and solar farms further to the east of the site closer to known and historic occurrences of the species. These studies did not locate BNLL in their respective study areas. The reservoir and operations yard project sites are in the outer limits of the known range for the species.

Prior to disking and agricultural site preparation, KMA conducted a series of 18 protocol-level surveys for BNLL in areas of the highest quality habitat in the eastern part of the ranch. Surveys occurred within the onsite portion of Schoolhouse Canyon and adjacent Cuyama River terraces in the spring, summer and fall 2015. No BNLL were observed in these portions of the site (KMA, 2015). Additional portions of the ranch, including Reservoirs 2 and 3 and the operations yard were also visited during the surveys, but not under protocol conditions (i.e.: either the temperatures were too hot, the wind too strong, or it was too late in the afternoon to meet protocol requirements). A reference site in the Carrizo Plain area was also located and visited on separate occasions (on June 24, July 3 and September 7, 2015) during the protocol surveys to confirm BNLLs were above ground, active and in identifiable condition. The area of the recorded occurrence #414 east of the property was also visited on these occasions to characterize habitat in this area for comparison with habitats on the study area, as well as search for BNLL using binoculars from property margins. Therefore, it was determined that BNLL were unlikely to occur on or in the vicinity of the four project sites. In addition, species of special concern such as the coast horned lizard (*Phrynosoma blainvilli*) is unlikely to occur in the four project sites due to a lack of suitable habitat.

Designated Critical Habitat for the federally threatened California red-legged frog (*Rana draytonii*) is located outside the five-mile radius, to the west of the project, and CRLF have been observed in the Cuyama River further west of the ranch study area. The ephemeral drainages on the site do not provide suitable habitat for this highly aquatic species, and its presence onsite is considered highly unlikely. Similarly, other highly aquatic species such as the western pond turtle (*Emys marmorata*) would not be expected to occur in the project area due to lack of suitable habitat.

A number of birds including species of special concern would be expected to forage over or around the four sites, but no suitable prey base or nesting habitat was present for special status birds

including raptors. Of interest, the four sites are covered by a CNDDDB overlay indicating presence of the prairie falcon (*Falco mexicanus*) within the USGS Caliente Mountain quadrangle. Suitable nesting habitat for the prairie falcon is located in the mountains to the north and south of the project sites, and as such, this species and other birds protected under the Migratory Bird Treaty Act and California Fish and Game Code would not be expected to occur within the project footprints and be adversely affected by the proposed project.

Please note that this evaluation included multiple site visits over the course of numerous months. Although drought conditions prevailed, enough rain fell in the spring to initiate germination and growth of herbaceous vegetation allowing the determination that special status plants are unlikely to occur in the four project footprints. The biological investigation included direct observation and evaluation of onsite and adjacent habitat conditions, and review of CNDDDB records documenting occurrence data from the area. Special status plants would have been observed if they were present within the four project sites. Although the sandy soil types present on-site are suitable for several of the special status plant species known to occur in the area, the disturbed conditions of the four sites dominated by non-native weedy plants would not be suitable to support these species. Higher elevation areas of the North Fork Ranch, and areas not subject to the historic intense grazing pressure would provide more opportunity for these species to be present. For special status wildlife, the habitat suitability analysis was used to determine whether a particular species had potential to be present in the project area. The investigation determined that it is highly unlikely that the four project sites support any special status plant or wildlife.

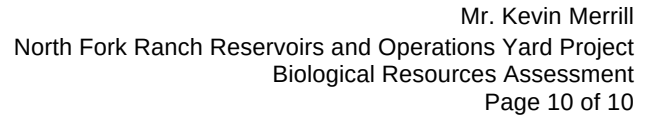
CONCLUSION AND RECOMMENDATIONS

The four project sites are located in areas disturbed by historic ranching operations within or adjacent to proposed vineyard plantings. Field surveys in 2015 and 2016 of the project sites observed disturbed areas dominated by non-native weeds such as red-stemmed filaree and Russian thistle. The sites are currently disked with an annual cover crop as part of agricultural improvements on the property. No special status biological resources (i.e., plant communities, plants, or animals) were observed on the four sites, and given the disturbed site conditions, it is unlikely that any are present.

Based on this evaluation, performance of additional biological investigation such as floristic or focused wildlife surveys on the sites is not recommended. The proposed projects are not expected to adversely affect any special status biological resources since they would occur in disturbed annual grasslands or previously disturbed areas of the ranch. However, due to historic sightings of San Joaquin kit fox in the area and potential that this species along with the American badger could still occur in the greater region and be a rare transient through the site at some point in time, we recommend that the SJKF avoidance measures included as an attachment to this report be implemented prior to and during construction. Implementation of the recommended avoidance measures would be sufficient to ensure the SJKF and American badger, as well as other common wildlife that may be present, are not adversely affected by construction of the three reservoirs and operations yard.

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Kennzeichen

Robert Sloan

Attachments

- Figure 1 - Site Location Map*
- Figure 2 – Aerial Overview Map*
- Figure 3 – Reservoir Site 1*
- Figure 4 - Reservoir Site 2 and Operations Yard*
- Figure 5 – Reservoir Site 3*
- Figure 6 – CNDDB Occurrence Map*
- Table 1 – Special Status Species Potentially Occurring on the Site*
- Photo Plate*
- SJKF Avoidance Measures*



Property Boundary

Operations Yard (~5 acres)

Proposed Irrigation Reservoir (~15 acres)

Drainage Centerline



 Proposed Irrigation Reservoir 1 (4.87 acres)

Unnamed Drainage Feature

Schoolhouse Canyon Road

Unnamed Drainage Feature

Source(s) : Tom A. Howell, PE



1 in = 400 ft

North Fork Ranch
Mesa Vineyard Management

Figure 3
Reservoir 1

- Operations Yard (~5 acres)
- Proposed Irrigation Reservoir 2 (5.42 acres)

Unnamed Drainage Feature

CA-166

Source(s) : ESRI and its data providers ; Tom A. Howell, PE



 Proposed Irrigation Reservoir 3 (4.73 acres)

Unnamed Drainage Feature



Unnamed Drainage Feature

Source(s) : ESRI and its data providers ; Tom A. Howell, PE



1 in = 400 ft

North Fork Ranch
Mesa Vineyard Management

Figure 5
Reservoir 3

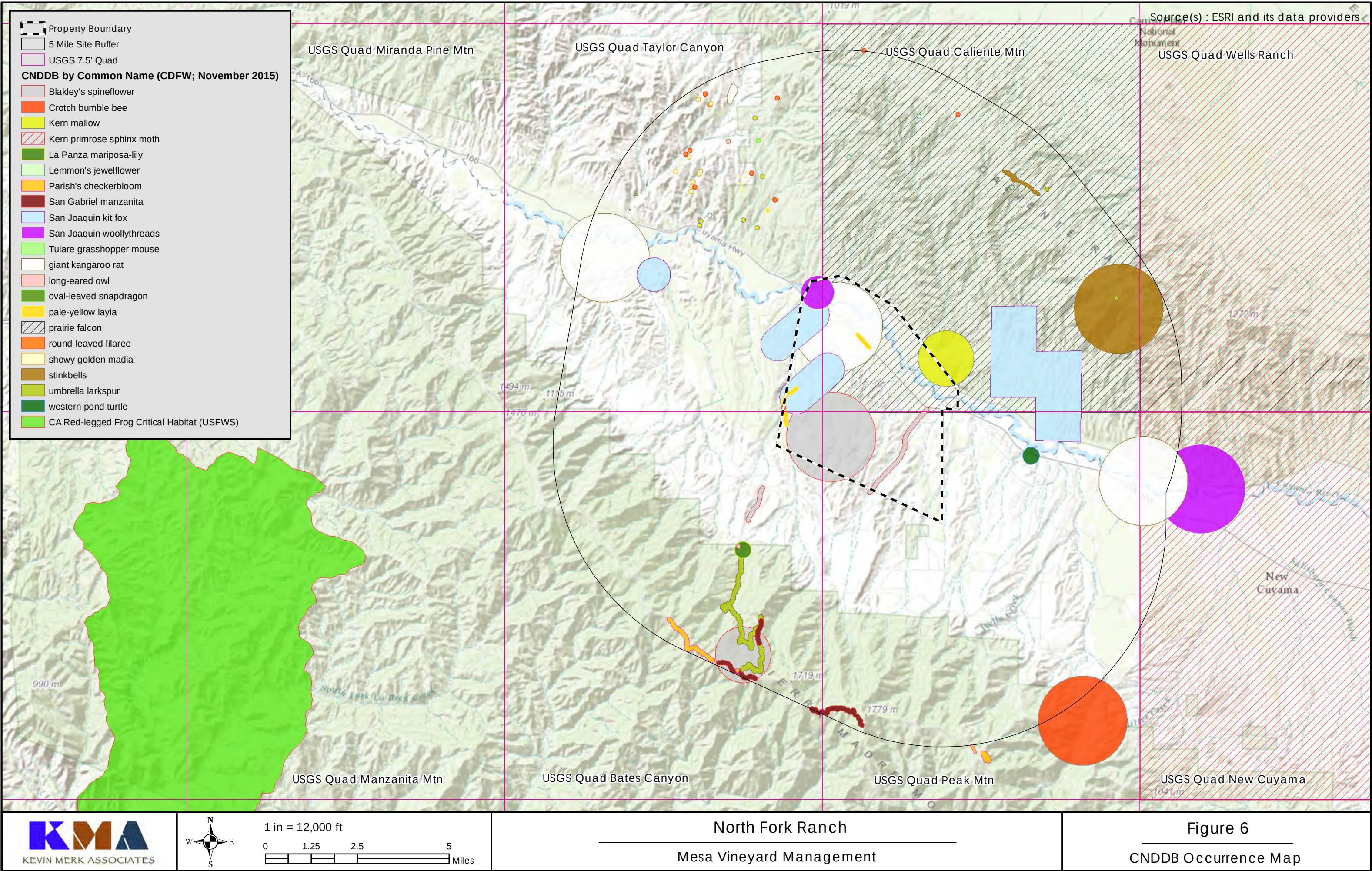


Table 1. Special Status Species Potentially Occurring On-Site

Scientific Name	Common Name	Listing Status*			Habitat Requirements	Probability of Occurrence / Site Suitability / Observations
		Fed	CA	DFW		
PLANTS						
1) <i>Antirrhinum ovatum</i>	oval-leaved snapdragon	--	--	4.2	Annual herb; chaparral, cismontane woodland, pinyon & juniper woodlands, valley & foothill grassland; 200-1000 meters; blooms May to November.	Unlikely. Suitable chaparral, woodland or grassland habitats are not present in the project areas. Not observed during surveys conducted in spring and summer 2015.
2) <i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i>	San Gabriel manzanita	--	--	1B.2	Perennial shrub found in chaparral on granitic soils, 950-2000 meters in elevation. Blooms January through April.	Not expected. Suitable chaparral habitat on granitic soils is not present in the project areas. Perennial shrub would have been identifiable during surveys.
3) <i>California macrophylla</i>	round-leaved filaree	--	--	1B.1	Annual herb commonly found on clay soils in cismontane woodland and valley and foothill grassland at elevations ranging from 15 to 1200 meters. Blooms March to May.	Unlikely. Suitable clay soils and woodland or grassland habitats are not present in the project areas. Species is known to occur in the region and was documented in the Cottonwood Canyon corridor. It was not observed during surveys conducted of the project sites in spring 2015. The four sites were dominated by the non-native red-stemmed filaree.
4) <i>Calochortus simulans</i>	La Panza mariposa-lily	--	--	1.B.3	Perennial bulbiferous herb; chaparral, cismontane woodland, and grasslands in decomposed granite; 395-1100 meters in elevation; blooms April to June.	Unlikely. Suitable chaparral, woodland or grassland habitats with granitic soils are not present in the project areas. Not observed during surveys conducted in spring 2015. Known occurrences in the area are in steeper terrain.
5) <i>Caulanthus lemmonii</i>	Lemmon's jewel-flower	--	--	1B.2	Annual herb; pinyon and juniper woodland, valley and foothill grassland; 80 to 1,220 meters elevation; blooms March to May.	Unlikely. Suitable woodland or grassland habitats are not present in the project areas. Grasslands onsite are impacted from overgrazing and were dominated by weeds. Not observed during surveys conducted in spring 2015. Known occurrences are located in the hills to the north.

Scientific Name	Common Name	Listing Status*			Habitat Requirements	Probability of Occurrence / Site Suitability / Observations
		Fed	CA	DFW		
6) <i>Chorizanthe blakleyi</i>	Blakley's spineflower	--	--	1.B.3	Annual spineflower known to occur in pinyon and juniper woodland areas with a typical elevation of 600 to 1,600 meters. Blooms April to June.	Unlikely. Suitable woodland habitats are not present in the project areas. Not observed during surveys conducted in spring 2015. Known to occur in upper elevation areas south of the property.
7) <i>Delphinium umbraculorum</i>	umbrella larkspur	--	--	1B.3	Perennial herb; found in granite of cismontane woodlands, chaparral, and coastal scrub; 85-1,035 meters in elevation; blooms May to July.	Unlikely. Suitable granite soils and woodland, chaparral, or coastal scrub habitats are not present in the project areas. Not observed during surveys conducted in spring 2015.
8) <i>Eremalche kernensis</i>	Kern mallow	E	--	1.B1	Chenopod scrub, valley and foothill grassland. On dry, open sandy to clayey soils; usually within valley saltbush scrub; often at edge of balds. 70-1290 meters.	Unlikely. Suitable sandy soils are present on the property, but valley saltbush scrub habitats are not present in the specific project areas. Not observed during surveys conducted in spring 2015. Common <i>E. parryi</i> ssp. <i>parryi</i> observed in Schoolhouse Canyon outside disturbance footprints.
9) <i>Fritillaria agrestis</i>	stinkbells	--	--	4.2	Chaparral, valley grassland, foothill woodland, and wetland riparian areas with an elevation of 10 to 1,555 meters. Blooms March to June.	Unlikely. Suitable wetland, riparian, woodland, or grassland habitats are not present in the project areas. Not observed during surveys conducted in spring and summer 2015.
10) <i>Layia heterotricha</i>	pale-yellow layia	--	--	1B.1	Annual herb; alkaline, clay and sandy soils in scrub, cismontane woodland, pinyon-juniper woodland, and valley and foothill grassland; 270-1,365 meters; blooms March to June.	Unlikely. Suitable chaparral, woodland or grassland habitats are not present in the project sites. Project areas impacted from overgrazing and were dominated by weeds. Not observed during surveys conducted in spring 2015.
11) <i>Madia radiata</i>	showy golden madia	--	--	1B.1	Chenopod scrub, valley and foothill grassland, and cismontane woodland areas. Found mostly on adobe clay in grassland or among shrubs with an elevation of 25-1125 meters. Blooms March to May.	Unlikely. Suitable clay soils and woodland or grassland habitats are not present in the project areas. Not observed during surveys conducted in spring 2015.

Scientific Name	Common Name	Listing Status*			Habitat Requirements	Probability of Occurrence / Site Suitability / Observations
		Fed	CA	DFW		
12) <i>Monolopia condonii</i>	San Joaquin woolly-threads	E	--	1B.2	Chenopod scrub, valley and foothill grassland. Alkaline or loamy plains; sandy soils, often with grasses and within chenopod scrub. 60-800 meters.	Unlikely. Disturbed grassland habitat and sandy soils are present, but chenopod scrub habitat is not present in the project areas. Only common <i>Monolopia lanceolata</i> observed on the larger study area outside project disturbance footprints.
13) <i>Sidalcea hickmanii</i> ssp. <i>parishii</i>	Parish's checker-bloom	--	R	1B.2	Chaparral, cismontane woodland, lower montane coniferous forest. Disturbed burned or cleared areas on dry, rocky slopes, in fuel breaks & fire roads along the mtn. summits. 1000-2500 meters.	Unlikely. Chaparral, cismontane woodland, and coniferous forest habitats are not present, and the sites are located on deep alluvial soils, not dry rocky slopes. Not observed during surveys conducted in spring and summer 2015.
ANIMALS						
1) <i>Asio otus</i>	Long-eared owl	--	--	SSC	Winters throughout the Central Valley and southeastern California. Nests in abandoned nests (crow, hawk, or magpie), usually in dense stands of willows, cottonwoods, live oaks, or conifers.	Unlikely. Disturbed grassland habitat suitable for foraging is present, but no nesting habitat is present in the project areas.
2) <i>Bombus crotchii</i>	<i>Crotch</i> bumble bee	--	--	--	Open grassland and scrub habitats from central California to Baja California del Norte, Mexico, including the western edges of the deserts and the Central Valley. Not found in the mountains or cool north coastal areas of California	Unlikely. Sites appear to lack sufficient pollen sources and the general vegetative diversity to attract or support the species.
3) <i>Dipodomys ingens</i>	giant kangaroo rat	E	E	--	Annual grasslands on the western side of the San Joaquin Valley, extending into Carizzo Plain and Cuyama Valley areas. Typically occurs in grasslands but can use alkali scrub. Needs level terrain & sandy loam soils for burrowing.	Not expected. Disturbed grassland habitat on sandy soils is present in the general area, but no typical burrow complexes observed in the project areas. CNDDDB record from Cuyama River is from surveys conducted in 1979 and 1982 and states "possibly extirpated" from this site. General location with alkali scrub/grassland mix visited in the spring and summer 2015 and no burrow complexes typical of this species were observed.

Scientific Name	Common Name	Listing Status*			Habitat Requirements	Probability of Occurrence / Site Suitability / Observations
		Fed	CA	DFW		
4) <i>Emys marmorata</i>	western pond turtle	--	--	SSC	Permanent or nearly permanent water bodies in many habitats.	Not expected. Project sites consist of disturbed upland areas. Ephemeral drainages on the site lack perennial water sources needed for this species to occur in the general area.
5) <i>Euproserpinus euterpe</i>	Kern primrose sphinx moth	T	--	--	Highly localized species found in the Walker Basin, Kern County, and several other scattered locations (Carrizo Plain, Pinnacles National Monument). Host plant is <i>Camissonia contorta epilobioides</i> (evening primrose) that typically grows in washes with loose alluvial soils.	Unlikely. Project sites are located in upland areas away from onsite drainage features. Host plant not observed on the study area during surveys conducted in spring and summer 2015. Prior to farming activities, non-native filaree was the dominant plant growing throughout the project sites, which is known to adversely affect this species.
6) <i>Falco mexicanus</i>	prairie falcon	--	--	WL	Catches prey in air and in open ground in grasslands, Nests in cliffs overlooking large areas; resident, breeding migrant.	Unlikely. Disturbed grassland habitat suitable for foraging is present in the vicinity, but no nesting habitat is present in or near the project areas. CNDDDB records cover the entire USGS quadrangle map and are not specific to this site.
7) <i>Gambelia sila</i>	blunt-nosed leopard lizard	E	E	--	Resident of sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief. Seeks cover in mammal burrows, under shrubs or structures such as fence posts; they do not excavate their own burrows.	Unlikely. Disturbed grassland habitat does not provide sufficient cover and food resources in the project areas to support the species. Very few small mammal burrows (mostly gopher) observed prior to farming activities. Protocol BNLL surveys conducted in 2015 in higher quality habitat areas along Schoolhouse Canyon and Cuyama River did not find the species.
8) <i>Masticophis flagellum ruddocki</i>	San Joaquin whipsnake	--	--	SSC	Occurs in open, dry valley grasslands and saltbush scrub habitats with little or no tree cover. While known from the San Joaquin Valley, species also occurs in western Kern County and eastern San Luis Obispo County. Requires mammal burrows for refuge and egg laying.	Unlikely. Very few small mammal burrows were observed during surveys of the reservoir and operation yard sites. Suitable habitat present in the larger drainage corridors such as Cottonwood Canyon and Schoolhouse Canyon and along the Cuyama River terraces, but no suitable habitat present in the project sites.

Scientific Name	Common Name	Listing Status*			Habitat Requirements	Probability of Occurrence / Site Suitability / Observations
		Fed	CA	DFW		
9) <i>Onychomys torridus tularensis</i>	Tulare grasshopper mouse	--	--	SSC	Inhabits shrubland communities in hot, arid grassland and shrubland associations, including blue oak woodlands, upper Sonoran subshrub scrub, alkali sink and mesquite associations, and grasslands on the sloping margins of the San Joaquin Valley and Carrizo Plain regions.	Unlikely. Disturbed grassland habitat composed of red-stemmed filaree and bare soils is present, but vegetative density and diversity in the project areas is not sufficient to support populations of this species.
10) <i>Phrynosoma blainvilli</i>	Coast horned lizard	--	--	SSC	Frequents a wide variety of habitat including sandy washes with scattered shrubs and open areas for sunning. Loose soils for burial.	Unlikely. Larger property contains drainages including Cuyama River and associated terraces that could support this species. While soils onsite are predominantly sandy, species is unlikely to occur in project footprints due to lack of shrub cover and a prey base.
11) <i>Taxidea taxus</i>	American badger			SSC	Open grasslands and the edge of scrub and woodland habitats; requires dry loose soils for burrowing and shelter and feeds on a variety of small mammals such as California ground squirrel and pocket gopher.	Potential. Suitable habitat present throughout the ranch. Known to occur in the general area. No potential den sites observed during surveys, and no sufficient small mammal prey base in project footprints. Could occur as a transient moving through the area, especially along the larger drainage corridors. Sites are now disked with no suitable habitat present.
12) <i>Vulpes macrotis mutica</i>	San Joaquin kit fox	E	T	--	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	Potential. Suitable foraging habitat and migration corridors are present throughout the site, especially along drainage corridors. No dens or sign (scat tracks, etc.) were observed in project footprint. CNDDDB records are from 1970's. Could occur as a rare transient moving through the area.

*FE – listed as Endangered under federal Endangered Species Act; SE – listed as Endangered under California Endangered Species Act; SR – listed as Rare under California Endangered Species Act; ST – listed as Threatened under California Endangered Species Act; SSC – DFW Species of Special Concern; WL – List of Birds of Conservation Concern; 1A = Plants presumed extinct in California; 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat); 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened); 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known); 2 = Rare, threatened or endangered in California, but more common elsewhere; 3 = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA); 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80% occurrences threatened); and 4.3= Plants of limited distribution (watch list), not very endangered in California.

Photo Plate

Photo 1. View of Reservoir 1 site looking northwest. Stake marks southeast corner of the reservoir. Surveys occurred prior to and after disking and site preparation activities.



Photo 2. Overview of Reservoir 1 site, looking north toward Highway 166. Schoolhouse Canyon Road is located to the right of the picture. Area was composed of non-native weeds and bare soil that was being disked.



Photo 3. View of Operations Yard site looking northeast toward Highway 166.



Photo 4. Easterly view of Operations Yard.



Photo 5. View of Reservoir #2 looking east. Stake marks western corner of the grading limits.



Photo 6. View of Reservoir #2 looking north. Stake marks eastern corner of the grading limits.



Photo 7. View of Reservoir #3 looking east. The site consisted of non-native weeds and bare soils prior to disking and site preparation. Russian thistle was also present and tumbleweeds can be seen along fenceline.



Photo 8. Closeup view of Reservoir #3 looking east. Photo taken prior to disking and site preparation activities showing dominant cover of non-native plants (primarily red-stemmed filaree) and bare soils.

San Joaquin Kit Fox Avoidance Measures

1. Prior to issuance of grading and/or construction permits, the applicant should have a qualified biologist perform the following monitoring activities:
 - a. Prior to issuance of grading and/or construction permits and within 30 days prior to initiation of site disturbance and/or construction, the biologist shall conduct a pre-activity (i.e. pre-construction) survey for known or potential kit fox dens and document in a report the date the survey was conducted, the survey protocol, survey results, and what measures were necessary (and completed), as applicable, to address any kit fox activity within the project limits.
 - b. The qualified biologist shall conduct weekly site visits during site-disturbance activities (i.e. grading, excavation, stock piling of dirt, etc.) that proceed longer than 14 days, for the purpose of monitoring compliance with the below avoidance measures. Site disturbance activities lasting up to 14 days do not require weekly monitoring by the biologist unless observations of kit fox or their dens are made on-site or the qualified biologist recommends monitoring for some other reason (see BR-1-d3). When weekly monitoring is required, the biologist shall document the methods and results of site visits in weekly monitoring reports.
 - c. Prior to or during project activities, if any observations are made of San Joaquin Kit fox, or any known or potential San Joaquin kit fox dens are discovered within the project limits, the qualified biologist shall re-assess the probability of incidental take (e.g. harm or death) to kit fox. If an active den is discovered within 150 feet of construction activities, the qualified biologist shall contact the USFWS and the CDFW for guidance on possible additional kit fox avoidance measures to implement and whether or not a federal and/or state incidental take permit is needed. If a potential den is encountered within 150 feet during construction, work shall stop in that specific area until such time the USFWS and/or CDFW determines it is appropriate to resume work.

If incidental take of kit fox during project activities is possible, before project activities commence, the applicant must consult with the USFWS and the CDFW. The results of this consultation may require the applicant to obtain a federal and/or state permit for incidental take during project activities.
- d. In addition, the qualified biologist shall implement the following measures:
 1. Within 30 days prior to initiation of site disturbance and/or construction, fenced exclusion zones shall be established around all known and potential kit fox dens. Exclusion zone fencing shall consist of either large flagged stakes connected by rope or cord, or survey laths or wooden stakes prominently flagged with survey ribbon. Each exclusion zone shall be roughly circular in configuration with a radius of the following distance measured outward from the den or burrow entrances:
 - a) Potential kit fox den: 50 feet
 - b) Known or active kit fox den: 100 feet
 - c) Kit fox pupping den: 150 feet
 2. All foot and vehicle traffic, as well as all construction activities, including storage of supplies and equipment, shall remain outside of exclusion zones. Exclusion zones shall

- be maintained until all project-related disturbances have been terminated, and then shall be removed.
3. If kit foxes or known or potential kit fox dens are found on site, daily monitoring during ground disturbing activities shall be required by a qualified biologist.
 2. Prior to issuance of grading and/or construction permits, the applicant shall clearly delineate in the field and note on the project plans, that: "Speed limit of 25 mph (or lower) shall be required for all construction traffic to minimize the probability of road mortality of the San Joaquin kit fox". Speed limit signs shall be installed on the project site within 30 days prior to initiation of site disturbance and/or construction. In addition, prior to initiation of any ground disturbing activities, conditions BRc 3 through BRc 9 shall be reviewed with all construction personnel and delineated on project plans.
 3. During the site disturbance phase, grading and construction activities after dusk shall be prohibited unless coordinated through the County, during which additional kit fox measures may be required.
 4. Prior to issuance of grading and/or construction permit and within 30 days prior to initiation of site disturbance and/or construction, all personnel associated with the project shall attend a worker education training program, conducted by a qualified biologist, to avoid impacts on sensitive biological resources such as the San Joaquin kit fox. At a minimum, as the program relates to the kit fox, the training shall include the kit fox's life history, all avoidance measures contained herein, as well as any related biological information prepared for the project. A kit fox fact sheet shall also be prepared prior to the training program, and distributed at the training program to all contractors, employers and other personnel involved with the construction of the project.
 5. During the site disturbance and/or construction phase, to prevent entrapment of the San Joaquin kit fox and other wildlife, all excavation, steep walled holes or trenches in excess of two feet in depth shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Trenches shall also be inspected for entrapped kit fox and wildlife each morning prior to onset of field activities and immediately prior to covering with plywood at the end of each working day. Before such holes or trenches are filled, they shall be thoroughly inspected for entrapped animals. Any kit fox discovered shall be allowed to escape before field activities resume, or removed from the trench or hole by a qualified biologist and allowed to escape unimpeded.
 6. During the site disturbance and/or construction phase, any pipes, culverts, or similar structures with a diameter of four (4) inches or greater, stored overnight at the project site shall be thoroughly inspected for trapped San Joaquin kit foxes before the subject pipe is subsequently buried, capped, or otherwise used or moved in any way. If during the construction phase a kit fox is discovered inside a pipe, that section of pipe will not be moved, or if necessary, be moved only once to remove it from the path of activity, until the kit fox has escaped.
 7. During the site disturbance and/or construction phase, all food related trash items such as wrappers, cans, bottles, and food scraps generated shall be disposed of in closed containers only and regularly removed from the site. Food items may attract San Joaquin kit foxes and

other wildlife onto the project site, consequently exposing such animals to increased risk of injury or mortality. No deliberate feeding of wildlife shall be allowed.

8. Prior to, during and after the site-disturbance and/or construction phase, use of pesticides or herbicides shall be in compliance with all local, State and Federal regulations. This is necessary to minimize the probability of primary or secondary poisoning of wildlife utilizing adjacent habitats, and the depletion of prey upon which San Joaquin kit foxes depend.

9. During the site-disturbance and/or construction phase, any contractor or employee that inadvertently kills or injures a San Joaquin kit fox or who finds any such animal either dead, injured, or entrapped shall be required to report the incident immediately to the applicant. In the event that any observations are made of injured or dead kit fox, the applicant shall immediately notify the USFWS and CDFW by telephone. In addition, formal notification shall be provided in writing within three working days of the finding of any such animal(s). Notification shall include the date, time, location and circumstances of the incident. Any threatened or endangered species found dead or injured shall be turned over immediately to CDFW for care, analysis, or disposition.

Attachment 2b

MEMORANDUM

To: Steve Rodriquez, Rodriquez Consulting, Inc.
From: John H. Davis IV, Dudek, Senior Ecologist
Subject: Peer Review of the Biological Resources Assessment for the Reservoir and Operations Yard Project, Santa Barbara County, California
Date: March 21, 2016
Cc: John Zoro, County of Santa Barbara
Attachments: Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 2000)
Approved Survey Methodology for the Blunt-Nosed Leopard Lizard (CDFG 2004)
Standard Recommendations for the Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011)

This peer review was prepared at the request of the County of Santa Barbara (County) (Case No. 16CUP-00000-00005) for the Biological Resources Assessment for the Reservoir and Operations Yard Project, North Fork Ranch, Santa Barbara County, California (report; Kevin Merk Associates, LLC 2016) in unincorporated Santa Barbara County, California. The report consists of basic methods, results, and conclusion and recommendation, and references sections. Attachments include six figures (site, vicinity, three project figures, and a CNDDDB result), a potential to occur table, photo plate, and San Joaquin kit fox avoidance measures. All report sections and attachments were reviewed per County of Santa Barbara standards for preparation of technical biological reports for proposed projects (County 1994a, revised 2015, including Appendix A (County 1994b)) and other agency survey requirements.

It is my understanding from page 1 of the report, that the proposed project includes the following:

- Three agricultural reservoirs (approximately 5 acres each)
- An operations yard (approximately 5 acres)

These proposed project features are displayed together in the report on the attached Figure 2 (vicinity map) and separately on Figures 3, 4, and 5 (reservoirs 1, 2, and 3, respectively). No details of the proposed project are described beyond Kevin Merk Associates, LLC (KMA) identification of a project study area where biological surveys covered, which included the

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approximately “20 acres of land disturbance” (page 1, paragraph 2). The project study area apparently also covered segments of the “on-site drainages” near the proposed reservoirs to delineate top of bank (page 2, paragraph 1). Again, no project specific information is provided in the report, however, KMA disclosed in the report (page 5, paragraph 4) that the Applicant confirmed that the ephemeral streams will not be impacted by development of the proposed project and that a 50-foot no impact buffer would be respected. Dudek did not receive civil plan set or similar or, as mentioned, a formal project description as part of the report for review.

KMA conducted the following biological surveys within the project survey area (report, pages 1 and 2):

- General botanical and biological surveys
- Blunt-Nosed Leopard Lizard Surveys (CDFG 2004)
- Stream Delineation (top of bank)

In general, the report contains the basic level of information to initiate a review; however, the report itself deviates from the *County of Santa Barbara Environmental Thresholds and Guidelines Manual* (County 1994a, revised 2015) for guidance on reporting details, impact discussion, and mitigation and Appendix A. *Santa Barbara County Planning and Development Department Biological Resources Guidelines Technical Background Document* (County 1994b). Surveys conducted and documented in the report also appear to deviate from protocol and/or guidelines established by state and federal resource agencies. Therefore, additional information is requested to complete the review of the report.

The following are a list of specific comments on the biological report that require further action(s). Comments may include several related items in which one or more actions may be required to rectify the perceived discrepancy:

Comment 1. Project Description. The proposed project, in its entirety, does not appear to be displayed fully and accurately on Figure 2, 3, 4, and 5. Generally, all areas of temporary and permanent project impacts shall be described and displayed.

Action 1.1. Please include in a revised report the complete project description and representation of the proposed project, including all areas of temporary and permanent impacts, including access routes, staging area(s), soil stockpile(s) location(s), and water delivery systems.

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Comment 2. Survey Documentation. On page 2, paragraph 2, KMA indicated that numerous site investigations occurred in the spring and summer of 2015, yet the report is without proper documentation of the surveys. Additionally, protocol blunt-nosed leopard lizard surveys (CDFG 2004) were conducted, which have strict survey requirements and again, no documentation was presented in the report. Furthermore, KMA disclosed that surveys proceeded outside of protocol conditions for reservoir 2 and 3 and the operations yard. Lastly, KMA conducted reference or voucher inspections on June 24, July 3, and September 7, 2015 to confirm that the blunt-nosed leopard lizard is active, but is unclear if voucher visits preceded the initiation of protocol surveys for both adult and juvenile blunt-nosed leopard lizard survey periods as required by the approved survey methodology (CDFG 2004).

Action 2.1. Revise the report to include a table summarizing the dates/times, weather conditions, focus of the surveys, specific location of surveys, and observations.

Action 2.2. Provide data sheets or summarize in a table the 18 blunt-nosed leopard lizard surveys in the revised report, including which areas were surveyed on specific days in protocol conditions, survey observations (lizards and prey observed), and confirm the area(s) of the project study area in which protocol surveys for the blunt-nosed leopard lizard were completed. In addition to the information requested in *Action 2.1*, please indicate the Level II and Level I surveyors and provide blunt-nosed leopard lizard specific resumes. Note, per the BNLL protocol (CDFG 2004), “[BNLL] surveys will be accepted [by CDFW] for one year from the date of completion.”

Action 2.3. Confirm that a BNLL reference or voucher survey was conducted at the Elkhorn Plain Ecological Reserve to confirm BNLL activity prior to the onset of surveys for the proposed project.

Comment 3. Vegetation Community Mapping. On page 2, paragraph 3, KMA stated that existing plant communities and observations were mapped on an aerial photograph from Google Earth dated 2015, however, a vegetation community map singularly or combined with a biological survey map with observations were not included in the report.

Action 3.1. Revise the report to include a vegetation community/habitat map with biological observations of sensitive biological resources, special-status species, or any protected biological resource present on-site, including the top-of-bank of ephemeral streams and their buffers.

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Comment 4. Floristic Surveys. KMA conducted general botanical and biology surveys of the project study area. However, it is unclear if focused floristic surveys were performed per standard accepted guidelines (CDFG 2000). On page 5, paragraph 2 (Habitat Types), KMA noted that cattle grazing coupled with drought conditions created patchy area of non-native or naturalized forbs and that no native plant species were observed within the project study area. The photographs appear to substantiate this claim. However, the environmental conditions during the survey year (i.e., fourth year of drought) and the lack of reference population visit to ensure target special-status plant species were in bloom at the time of the surveys or even germinated during drought conditions, questions the validity of the results. Additionally, the CNDDDB has occurrences of special-status plant species, albeit 25 years old, on the property as acknowledged by KMA. It is uncertain if an attempt to confirm their existence prior to or during botanical surveys was made in an effort to support the reports results and conclusions.

Action 4.1. Conduct full coverage seasonally-appropriate floristic surveys over the entire project site addressing all proposed project components (refer to Comment 1.). Two to three surveys may be necessary. Please revisit and ensure the floristic surveys conform to CNPS *Botanical Survey Guidelines* (CNPS 2001); *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (CDFG 2000); and *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 1996). Reference populations need to be visited and documented. A list of all plants observed on-site is required for floristic surveys. Include the observed plant list within the revised report or as an attachment.

Comment 5. Stream Delineation. KMA delineated top of bank of ephemeral stream channels to determine buffers from reservoirs. This was a good approach for KMA and the Applicant in siting the reservoirs. Unfortunately, the delineation and buffers were not displayed on any of the figures for review. Additionally, beyond the extent of the reservoirs, it is unclear if any proposed project components encroached within the buffer or sensitive biological resources that could be jurisdictional by the California Department of Fish and Wildlife (CDFW) and possibly other agencies. It is KMA understanding is that the ephemeral streams will not be impacted or altered by the proposed project.

Action 5.1. Include the delineated top of bank and buffer for the ephemeral streams on to Figures 2, 3, 4, and 5, as appropriate, in the revised report.

Action 5.2. If any proposed project component occurs within, above, or adjacent to the ephemeral stream (i.e., potential impacts may occur), an approved jurisdictional

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determination shall be prepared per U.S. Army Corps of Engineer standards and guidelines, including jurisdictional boundaries of the CDFW and Regional Water Quality Control Board.

Comment 6. Giant Kangaroo Rat. In the report (page 6, paragraph 3), KMA noted that the CNDDDB documented occurrence of the giant kangaroo rat (*Dipodomys ingens*) in the northwest portion of the ranch was possibly extirpated and confirmed the absence of burrow complexes typical of giant kangaroo rats over several visits. While I don't dispute KMA findings or assessment, the drought has had a severe effect on giant kangaroo rat populations, which exhibit a boom or bust population trend (Dr. Dave Germano, personal communication). The potential of giant kangaroo rats to occur on-site might be unlikely, however, since a historic record occurs on-site and the surveys were conducted during the fourth year of drought, a pre-construction measure is warranted to ensure the absence of giant kangaroo rats within the project study area.

Action 6.1. Include a mitigation measure in the revised report that states a pre-construction survey for the giant kangaroo rat will occur in late spring to search for sign (appropriate sized horizontal and vertical burrows, haystacks, seed caches, scat, tracks, etc.). If sign is observed, the U.S. Fish and Wildlife Service (USFWS) and CDFW shall be contacted to determine if trapping surveys are required for the giant kangaroo rat.

Comment 7. San Joaquin kit fox. In the report, KMA indicated that while protocol surveys for the San Joaquin kit fox (*Vulpes macrotis mutica*) were not conducted (page 3, paragraph 1), no potential kit fox den sites were observed in the project study area. KMA also notes that the absence of a small mammal prey base and the disturbed conditions of the study area reduces the quality of habitat for the kit foxes (i.e., low potential to occur), thereby, only providing movement possibilities by transient foxes. Although this assessment, as it stated in the report, appears valid to me, it is uncertain if any informal CDFW or USFWS coordination occurred on the subject to confirm that no San Joaquin kit fox habitat occurs on the project study area or surrounding area.

Additionally, KMA includes, as an attachment, their San Joaquin kit fox avoidance measures, based on the Standard Recommendations for the Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011). One noticeable discrepancy between the attachment and the USFWS (2011) recommendations is KMA measure for a 150 foot buffer around a kit fox pupping den. The USFWS (2011) requires that they are to be contacted in this situation.

Action 7.1. An early evaluation for the San Joaquin kit fox required per the 1994 USFWS protocol for the fox. Once completed, it is recommended that the USFWS and CDFW be

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contacted and concur with KMA evaluation findings. Please include the evaluation and any agency coordination in the revised report.

Action 7.2. Please revise the attached avoidance measures to identically reflect the USFWS (2011) standard recommendations or attach the standard recommendations in its entirety to the revised report.

Lastly, in revising the report, please refer to the County of Santa Barbara Environmental Thresholds and Guidelines Manual (County 1995, updated 2008) for guidance on reporting details, impact discussion, and mitigation. See also Appendix A *Santa Barbara County Planning and Development Department Biological Resources Guidelines Technical Background Document*. Please reference the “Thresholds” in the Biological Assessment.

REFERENCES

California Department of Fish and Game (CDFG). 2000. Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities.

CDFG. 2004. Approved Survey Methodology for the Blunt-Nosed Leopard Lizard.

County of Santa Barbara. 1994a (revised 2015). Environmental Thresholds and Guideline Manual.

County of Santa Barbara. 1994b. Biological Resources Guidelines Technical Background Document September 1994. Appendix A. to the Environmental Thresholds and Guidelines Manual.

United States Fish and Wildlife Service (USFWS). 1999. San Joaquin Kit Fox Survey Protocol for the Norther Range.

USFWS. 2011. Standard Recommendations for the Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance.

Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities

State of California
THE RESOURCES AGENCY
Department of Fish and Game
December 9, 1983
Revised May 8, 2000

The following recommendations are intended to help those who prepare and review environmental documents determine **when** a botanical survey is needed, **who** should be considered qualified to conduct such surveys, **how** field surveys should be conducted, and **what** information should be contained in the survey report. The Department may recommend that lead agencies not accept the results of surveys that are not conducted according to these guidelines.

1. Botanical surveys are conducted in order to determine the environmental effects of proposed projects on all rare, threatened, and endangered plants and plant communities. Rare, threatened, and endangered plants are not necessarily limited to those species which have been "listed" by state and federal agencies but should include any species that, based on all available data, can be shown to be rare, threatened, and/or endangered under the following definitions:

A species, subspecies, or variety of plant is "endangered" when the prospects of its survival and reproduction are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, over-exploitation, predation, competition, or disease. A plant is "threatened" when it is likely to become endangered in the foreseeable future in the absence of protection measures. A plant is "rare" when, although not presently threatened with extinction, the species, subspecies, or variety is found in such small numbers throughout its range that it may be endangered if its environment worsens.

Rare natural communities are those communities that are of highly limited distribution. These communities may or may not contain rare, threatened, or endangered species. The most current version of the California Natural Diversity Database's List of California Terrestrial Natural Communities may be used as a guide to the names and status of communities.

2. It is appropriate to conduct a botanical field survey to determine if, or to the extent that, rare, threatened, or endangered plants will be affected by a proposed project when:

- a. Natural vegetation occurs on the site, it is unknown if rare, threatened, or endangered plants or habitats occur on the site, and the project has the potential for direct or indirect effects on vegetation; or
- b. Rare plants have historically been identified on the project site, but adequate information for impact assessment is lacking.

3. Botanical consultants should possess the following qualifications:

- a. Experience conducting floristic field surveys;
- b. Knowledge of plant taxonomy and plant community ecology;
- c. Familiarity with the plants of the area, including rare, threatened, and endangered species;
- d. Familiarity with the appropriate state and federal statutes related to plants and plant collecting; and,
- e. Experience with analyzing impacts of development on native plant species and communities.

4. Field surveys should be conducted in a manner that will locate any rare, threatened, or endangered species that may be present. Specifically, rare, threatened, or endangered plant surveys should be:

- a. Conducted in the field at the proper time of year when rare, threatened, or endangered species are both evident and identifiable. Usually, this is when the plants are flowering.

When rare, threatened, or endangered plants are known to occur in the type(s) of habitat present in the project area, nearby accessible occurrences of the plants (reference sites) should be observed to determine that the species are identifiable at the time of the survey.

- b. Floristic in nature. A floristic survey requires that every plant observed be identified to the extent necessary to determine its rarity and listing status. In addition, a sufficient number of visits spaced throughout the growing season are necessary to accurately determine what plants exist on the site. In order to properly characterize the site and document the completeness of the survey, a complete list of plants observed on the site should be included in every botanical survey report.
 - c. Conducted in a manner that is consistent with conservation ethics. Collections (voucher specimens) of rare, threatened, or endangered species, or suspected rare, threatened, or endangered species should be made only when such actions would not jeopardize the continued existence of the population and in accordance with applicable state and federal permit requirements. A collecting permit from the Habitat Conservation Planning Branch of DFG is required for collection of state-listed plant species. Voucher specimens should be deposited at recognized public herbaria for future reference. Photography should be used to document plant identification and habitat whenever possible, but especially when the population cannot withstand collection of voucher specimens.
 - d. Conducted using systematic field techniques in all habitats of the site to ensure a thorough coverage of potential impact areas.
 - e. Well documented. When a rare, threatened, or endangered plant (or rare plant community) is located, a California Native Species (or Community) Field Survey Form or equivalent written form, accompanied by a copy of the appropriate portion of a 7.5 minute topographic map with the occurrence mapped, should be completed and submitted to the Natural Diversity Database. Locations may be best documented using global positioning systems (GPS) and presented in map and digital forms as these tools become more accessible.
5. Reports of botanical field surveys should be included in or with environmental assessments, negative declarations and mitigated negative declarations, Timber Harvesting Plans (THPs), EIR's, and EIS's, and should contain the following information:
- a. Project description, including a detailed map of the project location and study area.
 - b. A written description of biological setting referencing the community nomenclature used and a vegetation map.
 - c. Detailed description of survey methodology.
 - d. Dates of field surveys and total person-hours spent on field surveys.
 - e. Results of field survey including detailed maps and specific location data for each plant population found. Investigators are encouraged to provide GPS data and maps documenting population boundaries.
 - f. An assessment of potential impacts. This should include a map showing the distribution of plants in relation to proposed activities.
 - g. Discussion of the significance of rare, threatened, or endangered plant populations in the project area considering nearby populations and total species distribution.
 - h. Recommended measures to avoid impacts.
 - i. A list of all plants observed on the project area. Plants should be identified to the taxonomic level necessary to determine whether or not they are rare, threatened or endangered.
 - j. Description of reference site(s) visited and phenological development of rare, threatened, or endangered plant(s).
 - k. Copies of all California Native Species Field Survey Forms or Natural Community Field Survey Forms.
 - l. Name of field investigator(s).
 - m. References cited, persons contacted, herbaria visited, and the location of voucher specimens.

May 2004

Dear Blunt-nosed Leopard Lizard Surveyor,

Attached is the revised survey methodology for the blunt-nosed leopard lizard (*Gambelia sila*). The protocol was developed by the San Joaquin Valley Southern Sierra Region (SVSSR) of the California Department of Fish and Game (DFG) with input from the United States Fish and Wildlife Service, the Bureau of Land Management and various species experts. This protocol supercedes previous versions of DFG survey protocols for the blunt-nosed leopard lizard. The range-wide decline of population numbers in the past decade has provided the impetus for development of a more rigorous methodology to detect species presence. Additionally, since DFG is not able to issue any form of "take" permit for the blunt-nosed leopard lizard due to its status as a fully-protected animal under the California Fish and Game Code **§5050**, detection of species presence on a project site is crucial.

This standard methodology has been developed to provide consultants, local, state and federal agencies with minimum acceptable standards for surveys conducted to determine the status of this State and federally endangered species. The survey methods described within this protocol were designed to optimize the likelihood of detecting the presence of blunt-nosed leopard lizards should they occur on a project site.

When the presence of blunt-nosed leopard lizards is detected, we request that you notify the Department's local Permitting and Project Review staff for further instructions of what additional information will be needed to assess the project's potential impact on the species. This will assist in expediting the review of the project and help control the project sponsor's biological survey costs. Additionally, the USFWS should be contacted for further advice since this is also a federally-listed species. Use of this protocol and notification of the Department does not exempt you from consultation with the USFWS.

The Department is willing to cooperate with surveyors who have circumstances or needs not addressed by this protocol and who may wish to propose alternative methods to comply with State law prohibiting take of BNLL. If you have any questions or comments regarding this methodology or if you want to propose the use of a different methodology, please the SVSSR Habitat Conservation Planning staff at (559) 243-4014 (Fresno, Merced, Madera, Kings, Tulare, and Kern Counties) or (805) 528-8670 (San Benito and San Luis Obispo Counties).

CALIFORNIA DEPARTMENT OF FISH AND GAME

APPROVED SURVEY METHODOLOGY FOR THE BLUNT-NOSED LEOPARD LIZARD MAY 2004

Blunt-nosed leopard lizard, *Gambelia sila* = (*Gambelia silus*)

STATUS: SE, FE, DFG fully protected

This protocol has been developed to provide a minimum level of protection for blunt-nosed leopard lizards (BNLL) when projects or maintenance activities are scheduled to occur within potential BNLL habitat. Disturbing activities should not proceed until appropriate surveys are conducted to determine if the species is present on the site. Surveys conducted according to the following protocol by qualified researchers provide a reasonable, although not conclusive, indication of BNLL presence at a particular site and yield critical information needed to prevent mortality and minimize impacts to the species. Researchers conducting the surveys are expected to understand the basic biological requirements of the species and have the ability to recognize potential BNLL habitat. This protocol satisfies the Department of Fish and Game requirements when it is determined that formal BNLL surveys are needed. [Note: This protocol is appropriate for pre-project BNLL surveys, however, population monitoring over time on a site is best conducted using a permanent survey grid, such as described in Tollestrup (1976).]

METHODS:

A minimum of two researchers, walking in parallel on adjacent transects, should conduct a BNLL survey. Optimum BNLL activity periods occur when air temperature is between 25C-35C (77F-95F) (Tollestrup 1976; USFWS 1985, 1998). Surveys must be conducted when the air temperature falls within the optimal range. Surveys may begin after sunrise as soon as the minimum air temperature criterion is met, and must end by 1400 hours or when the maximum temperature is reached, whichever occurs first (Tollestrup 1976). Time of day and air temperature should be recorded at the start and end of each survey. Air temperature should be periodically checked to ensure that the maximum has not been exceeded. Air temperature should be measured at 1-2 cm above the ground over a surface most representative of the area being surveyed. The researcher must shade the thermometer from direct sunlight while taking the reading. Other factors that affect BNLL activity such as soil temperature (measured at 1cm below soil surface with a shaded thermometer) and weather conditions must be recorded at the start and end of each survey. Surveys should not be conducted on overcast days (cloud cover > 90%) or when sustained wind velocity exceeds 10 mph (force > 3 on Beaufort wind scale) (Montanucci 1965; Tollestrup 1976; J. Vance, pers. comm.).

Surveys must be conducted on foot, and researchers must survey all areas with potential BNLL habitat. BNLL are often difficult to detect, particularly in areas where shrubs are fairly numerous (>30% cover) and/or the herbaceous vegetation is tall (>30 cm). In such conditions, 10 meter wide transects should be walked at a slow pace. In areas with few shrubs and shorter herbaceous vegetation (<15 cm), transects as wide as 30 meters are acceptable. When feasible, transects should be walked in a north-south orientation to minimize glare from the sun. The surveyor should stop periodically and scan the transect for BNLL using close-focusing binoculars (minimum 7X35 magnification). In addition to recording the location of all BNLL observed (must provide UTM coordinates), the presence of habitat features important for BNLL (washes, playas, relative abundance of small mammal burrows) should also be recorded for each transect. Streambeds, washes, roads, etc., should be walked in addition to transect lines since BNLL are often seen in these areas.

TIMING AND LENGTH OF SURVEY:

Survey intensity should be commensurate with the anticipated level of disturbance to the BNLL habitat. The primary concern for BNLL when disturbance occurs during maintenance activities is direct mortality from equipment or personnel. Removal of intact BNLL habitat has a much greater potential for “take” due to direct impact on animals aboveground as well as any hibernating animals or eggs underground. A longer survey effort including both spring adult surveys and fall hatchling surveys is therefore required for activities that cause impacts to undisturbed BNLL habitat. The more intensive survey effort increases the chances of observing the species, even if the population is small. Once a BNLL has been observed, surveys may cease and consultation with the Department must begin regarding avoidance measures. If BNLL are observed incidentally while conducting surveys for other species, specific surveys for BNLL are not required. Surveys will be accepted for one year from the date of completion.

Disturbances for Maintenance Activities

Examples of maintenance activities include grading existing roads, grass mowing on roadsides, and maintaining existing structures. BNLL are active and above ground from April through September, but optimum activity periods for adults occur between April 15 and July 15 (Montanucci 1965; Tollestrup 1979; USFWS 1985, 1998). BNLL surveys should be conducted for a total of 8 days over the course of the 90-day time span. A minimum of 3 survey days should be conducted consecutively, with a maximum of 6 days completed within any 30-day time period. Fall hatchling surveys are not required for activities in this category.

Disturbances Leading to Habitat Removal

Examples of disturbances that impact intact habitat include establishment of new roads or structures, housing subdivisions, and changes in historic land use. BNLL surveys should be conducted for 12 days over the course of the 90-day

adult optimal survey period (April 15 to July 15), with a maximum of 4 survey days per week and 8 days within any 30-day time period. At least one survey session should be conducted for 4 consecutive days, weather permitting. BNLL hatchlings and subadults are most commonly observed from August 1 to September 15, along with a few adults that are still active above ground (Montanucci 1965; Tollestrup 1979; USFWS 1985, 1998). In addition to the 12 days of adult BNLL surveys required for activities in this category, 5 more survey days are required during the hatchling optimal survey period for a total of 17 survey days overall.

QUALIFICATIONS OF RESEARCHERS:

An acceptable BNLL survey crew should consist of no more than 3 Level I researchers for every Level II researcher. This restriction should reduce the number of incorrect/missed identifications. The names and affiliations of all researchers must be recorded for each survey day.

Level I: Researcher has demonstrated the ability to distinguish BNLL from other common lizard species that may inhabit the area;

Level II: Researcher has demonstrated the ability to distinguish BNLL from other common lizard species that may inhabit the area and has participated in at least 50 survey days for BNLL (or 25 survey days and a BNLL identification course recognized by/acceptable to the Department of Fish and Game). Researcher has made at least one confirmed* field sighting of a BNLL.

REPORTING

All BNLL observations should be reported to the California Natural Diversity Database within 30 days. A sample form is attached. Additional forms can be obtained at <http://www.dfg.ca.gov/whdab/html/animals.html> .

SPECIAL REQUIREMENT FOR SURVEYS IN DFG CENTRAL COAST REGION (San Luis Obispo County)

Lands with potential BNLL habitat in the Department's Central Coast Region (CCR) have different conditions compared to the San Joaquin Valley Southern Sierra Region (SJVSSR). The sites with habitat in the CCR tend to be at higher elevations, where nighttime temperatures can remain low even though daytime temperatures meet minimum survey criteria. In such conditions, BNLL activity is likely to be low and surveys conducted at this time could result in non-detection of the species even though they are present. As such, an additional requirement of a visit to a known voucher site to check for BNLL activity applies to surveys conducted in this region. Once the species has been observed at the voucher site, formal surveys can begin. The Elkhorn Plain ER has been selected as the voucher site for the CCR.

LITERATURE CITED

- Montanucci, R.R., 1965. Observations of the San Joaquin leopard lizard, *Crotaphytus wislizenii silus* Stejneger. *Herpetologica* 21(4): 270-283.
- Tollestrup, K. 1976. A standardized method of obtaining an index of densities of blunt-nosed leopard lizards, *Crotaphytus silus*. Unpub. Rpt. U. S. Fish and Wildlife Service, Sacramento, CA. 11pp + Appendices.
- Tollestrup, K. 1979. The ecology, social structure, and foraging behavior of two closely-related leopard lizards, *Gambelia silus* and *Gambelia wislizenii*. PhD Dissertation, University of California Berkeley.
- United States Fish and Wildlife Service. 1985. Revised blunt-nosed leopard lizard recovery plan. United States Fish and Wildlife Service. Region 1, Portland, OR. 85 pp.
- United States Fish and Wildlife Service. 1998. Recovery plan for upland species of the San Joaquin Valley, California. United States Fish and Wildlife Service. Region 1, Portland, OR. 319 pp.

PERSONAL COMMUNICATIONS

Julie Vance, California Department of Water Resources, San Joaquin District, 3374 E. Shields Ave, Fresno, California, 93726.

*A minimum of one confirmed field sighting must be documented for each Level II researcher and be available to the Department upon request. As with all BNLL sightings, it should also be submitted to the California Natural Diversity Database. Information to be included in documentation of BNLL sighting: Name of researcher, date of survey, location of survey, names of accompanying researchers who can confirm the sighting, and details of sighting (distance, BNLL activity, etc).

CONTACT INFORMATION

California Department of Fish and Game

San Joaquin Valley Southern Sierra Region
Habitat Conservation Planning
1234 Shaw Ave
Fresno, CA 93710
559/243-4005

Central Coast Region
Habitat Conservation Planning
P.O. Box 47
Yountville, CA 94599
805/528-8670

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The Department is willing to cooperate with researchers who have circumstances or needs not addressed by this protocol and who may wish to propose alternative methods to comply with State law prohibiting take of BNLL.

**U.S. FISH AND WILDLIFE SERVICE
STANDARDIZED RECOMMENDATIONS
FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX
PRIOR TO OR DURING GROUND DISTURBANCE**

Prepared by the Sacramento Fish and Wildlife Office
January 2011

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. **However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act) and does not preclude the need for section 7 consultation or a section 10 incidental take permit for the proposed project.** Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). These protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

IS A PERMIT NECESSARY?

Certain acts need a permit from the Service which includes destruction of any known (occupied or unoccupied) or natal/pupping kit fox dens. Determination of the presence or absence of kit foxes and /or their dens should be made during the environmental review process.

All surveys and monitoring described in this document must be conducted by a qualified biologist and these activities do not require a permit. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, the biologist(s) must be able to identify coyote, red fox,

gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount. Resumes of biologists should be submitted to the Service for review and approval prior to any survey or monitoring work occurring.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints, of approximately one acre or less, such as an individual in-fill oil well, communication tower, or bridge repairs. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features and utilize this information as guidance to situate the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then surveys should be conducted and the Service should be contacted for technical assistance to determine the extent of possible take.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Kit foxes change dens four or five times during the summer months, and change natal dens one or two times per month (Morrell 1972). Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol). Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities.

If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If the take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping den which may not be destroyed while occupied. A take authorization/permit is required to destroy these dens even after they are vacated. Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: Linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project and those requirements supersede any requirements found in this document.

EXCLUSION ZONES

In order to avoid impacts, construction activities must avoid their dens. The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances due to the length of dens underground. The following distances are **minimums**, and if they cannot be followed the Service must be contacted. Adult and pup kit foxes are known to sometimes rest and play near the den entrance in the afternoon, but most above-ground activities begin near sunset and continue sporadically throughout the night. Den definitions are attached as Exhibit A.

Potential den**	50 feet
Atypical den**	50 feet
Known den*	100 feet
Natal/pupping den (occupied <u>and</u> unoccupied)	Service must be contacted

***Known den:** To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, orange construction fencing or other fencing as approved by the Service as long as it has openings for kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

****Potential and Atypical dens:** Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited or greatly restricted within the exclusion zones.

DESTRUCTION OF DENS

Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection.

Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service.

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use.

If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities.

The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities shall cease and the Service shall be notified immediately.

CONSTRUCTION AND ON-GOING OPERATIONAL REQUIREMENTS

Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities should be minimized by adhering to the following activities. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting achievement of project goals. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.
2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.
3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is

discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.
5. No firearms shall be allowed on the project site.
6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.
7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.
8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.
9. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.
10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be

re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance.
12. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.
13. The Sacramento Fish and Wildlife Office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFG contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.
14. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600

EXHIBIT “A” - DEFINITIONS

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means " . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Pupping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposes of this definition either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.



Attachment 2c

Kevin Merk Associates, LLC P.O. Box 318, San Luis Obispo, CA 93406 805-748-5837(o)/439-1616(f)

June 24, 2016

Mr. Kevin Merrill
Mesa Vineyard Management
P.O. Box 789
Templeton, California 93465

Subject: Supplemental Biological Resources Information for the Reservoir and Operations Yard Project (Case No. 16CUP-00000-00005), North Fork Ranch, Santa Barbara County, California

Dear Mr. Merrill:

At your request, Kevin Merk Associates, LLC (KMA) prepared a biological resources assessment for three reservoir sites and an operations yard proposed on a portion of the North Fork Ranch in Santa Barbara County, California. Our analysis utilized project plans prepared by Thomas Howell (2015) showing only the extent of the reservoirs. The County of Santa Barbara during their review of the project application materials requested additional biological information such as the locations of water supply pipelines and details as to how they would cross onsite drainage features. Please refer to the Determination of Application Incompleteness (March 16, 2016) from the County of Santa Barbara and the Peer Review Memorandum (March 21, 2016) from Dudek.

The following information addresses each Comment and the associated Action Items outlined in the Peer Review. In order to supply this information, the Vineyard Irrigation Reservoir Fill Lines prepared by Ag-Ideas LLC (April, 2016) was provided to us showing the pipeline routes from onsite wells to the proposed reservoirs. The project team also provided additional project description information to help in the impact analysis. This included additional site plans showing the location of pressure mainlines that will run from the reservoirs to vineyard blocks. Subsequent site visits were conducted by KMA biologists to assess the proposed pipeline routes and the potential impacts to onsite drainage features and areas outside the farming footprint. The pipeline routes originating from wells on the north side of Highway 166 and all proposed drainage crossings were inspected for special status biological resources including species of rare plants and animals.

The plans provided by Ag Ideas LLC identified reservoir fill lines and pressure mainlines crossing onsite drainage features. The proposed installation methodology, as we understand, is to have the underground pipe "daylight" outside the drainage feature's top of bank of bank and a removable flexible pipe would then be attached to the main pipe and laid across the channel connecting to a similar structure on the opposite side. It is our understanding that the flexible pipe would span the active stream channel using a stand or support structure to avoid U.S. Army Corps of Engineers (USACE) Clean Water Act jurisdictional areas. The flexible pipe would be removed from the channel prior to rain events that have the potential to create flows through the site. Since the pipelines are proposed to cross the drainage features, early consultation with the California Department of Fish and Wildlife (CDFW) and USACE occurred to review the extent of each agency's jurisdiction over the proposed project. A site visit was conducted by CDFW representative, Ms.

Sarah Rains, on April 15, 2016 to inspect the proposed crossings, and consultation with USACE Project Manager, Ian Bordenave, occurred to evaluate the extent of Clean Water Act requirements for the project. The following provides the supplemental biological resources information requested from the County of Santa Barbara.

Peer Review Comments, Actions, and Responses

Comment 1. Project Description.

Action 1.1. Please include in a revised report the complete project description and representation of the proposed project, including all areas of temporary and permanent impacts, including access routes, staging area(s), soil stockpile(s) location(s), and water delivery systems.

Action 1.1 Response: The revised project description is presented below.

The project consists of constructing three agricultural reservoirs covering approximately five acres each, on existing agricultural lands south of Highway 166. The reservoirs will be connected to agricultural wells on the north side of Highway 166 by water lines. Additional pressure main lines will extend from the reservoirs to feed the vineyard drip irrigation system. An operations yard area of approximately five acres will also be constructed on agricultural land, and will be used for materials and equipment storage, and staging during reservoir and water line construction. Temporary soil stockpiles will occur in agricultural areas at each reservoir location, and along pipeline routes. Access to the reservoirs, well sites, and operations yard will use existing ranch roads that originate from Highway 166. Pipeline routes estimated at approximately 10 feet wide will primarily follow existing dirt ranch roads, and will cross agricultural lands to reach the reservoirs. Where the pipelines cross the onsite drainages, flexible High Density Polyethylene (HDPE) flexible pipes will be laid overland to avoid impacts to non-native annual grassland habitat. Six small ephemeral drainage channels on the south side of Highway 166 will be crossed by water lines suspended above the active channel.

The project will result in approximately 20 acres permanently disturbed by reservoir and operations yard construction, and roughly 11 acres temporarily disturbed by reservoir fill and pressure main waterline installation. Of this total impact area, the majority of the impacted area is within existing agricultural areas and ranch roads. Small areas of annual grassland within the drainage setback areas and along road edges will be temporarily disturbed during pipeline installation. Please refer to the attached Figure 7 illustrating onsite habitat conditions, proposed water pipeline routes and drainage crossing locations, and reservoir/operations yard sites. Figure 7 also shows the drainage corridors and minimum 50-foot setback established from the top of banks where vineyard planting blocks will be sited. For detailed information regarding the extent of regulatory agency jurisdiction and associated vineyard setbacks from the top of banks, please refer to Figures 8, 9 and 10 attached to this report. Photographs of the six drainage crossing locations and proposed pipeline configuration crossing the drainages are also provided as an attachment.

As shown on project maps, Reservoir 1 is located in the eastern portion of the ranch, immediately adjacent to Schoolhouse Canyon Road. Reservoir 2 is located in the middle portion, and Reservoir 3 is located in the western portion, approximately 0.75 mile east of Cottonwood Canyon Road. The

operations yard is located east of Reservoir 2, on a site previously used as a staging area for the former cattle grazing operation. Although Reservoirs 1 and 2 appear to extend into annual grassland habitat, their footprints are within currently disked and dry farmed wheat fields. Please refer to the attached photo plate.

Reservoir fill lines from agricultural wells will cross under Highway 166 in two locations: at Schoolhouse Canyon Road, and directly northeast of Reservoir 2 in the center of the site. The highway crossings will be accomplished by horizontal boring, and installation of casing pipes under the roadway. The reservoir fill lines will primarily follow existing ranch roads and agricultural areas. Where drainage crossings are proposed, the underground waterline will “daylight” and flexible High Density Polyethylene (HDPE) pipe will be attached and run overland to span the active stream channel. Small areas of annual grassland within the drainage corridors may be temporarily affected. The pressure main lines will also be located within existing agricultural lands except where annual grassland habitat is present at drainage crossing locations. The reservoir fill lines will cross three ephemeral drainages on the south side of Highway 166. Pressure main lines will extend from the reservoirs to vineyard blocks, and will cross a total of six drainage features. Three of these pressure line crossings are located in conjunction with the three fill line crossings to minimize impact areas. Of the six proposed waterline drainage crossings, four are located within or immediately adjacent to existing road crossings. Please refer to the attached photo plate for additional information.

The crossing pipelines will consist of flexible temporary HDPE piping laid on the ground from outside the top of banks down into the channel. The lower active channel areas will be spanned by an approximate 20-foot long section of steel pipe (roughly two to five feet wide depending on pipe width), supported at each end by a metal stand keyed into the slope within the top of bank but outside the Ordinary High Water Mark (OHWM). The steel pipe sections will be elevated above the OHWM, with no dredge or fill placement or effect on water flow within Clean Water Act Section 404 jurisdictional areas. Each support stand will consist of a 24x48-inch flat metal foot placed on the ground surface, with a central metal riser extending to cradle each end of the pipe. Please refer to Photo 12 included in the photo plate for additional detail. Minor excavation using hand tools may be required in some locations to create a level surface for the support stands, and all excavated soil will be recontoured around the span supports or removed from the channel. No large mechanized equipment such as a bulldozer or excavator will be required to enter the channel, and no concrete or other materials will be used.

Following the regulatory agency early consultation process, it was determined that a Streambed Alteration Agreement from the CDFW will be required for the six drainages to be crossed by waterlines on the south side of Highway 166. All supports, pipe materials, soil disturbance, and associated impacts proposed within the top of bank of each drainage will be quantified in the Streambed Alteration Agreement currently being prepared for the project. During a meeting between Dave Swenk of Urban Planning Concepts and USACE Project Manager Ian Bordenave on June 2, 2016, Mr. Bordenave stated that a Clean Water Act Section 404 permit would not be required based on the proposed crossing method that avoids placement of dredge or fill material within the OHWM. A formal letter from USACE documenting this decision is pending, and upon receipt will be submitted to the County for placement in the project file.

Comment 2. Survey Documentation.

Action 2.1. Revise the report to include a table summarizing the dates/times, weather conditions, focus of the surveys, specific location of surveys, and observations.

Action 2.1 Response: As stated in the Biological Resources Assessment prepared in February 2016, general and focused biological surveys occurred during the spring, summer and fall 2015 to help agricultural development of the property avoid impacts to special status resources such as the onsite drainages. In April 2016 following receipt of the Ag-Ideas LLC reservoir pipeline map, additional field work was conducted to search for special status plants and wildlife focused along the pipeline route and reservoir sites. Stream delineation also occurred to make sure pipeline installation avoided impacts to the active channel. A table summarizing biological survey efforts covering the Phase I farming activities including the proposed reservoir and operations yard project is presented below. Included as an attachment is a table summarizing the survey data from the blunt-nosed leopard lizard (*Gambelia sila*) protocol surveys conducted in the spring, summer and fall 2015.

General Biological Survey Data Summary Table*

Survey Date, Time, and Location	Survey Focus	Weather Conditions and Species Observations	Survey Personnel
February 29, 2015 8:00AM to 12:00PM Proposed agricultural areas on terraces between Schoolhouse and Cottonwood Canyons.	General Botany and Wildlife	Dense ground fog clearing through the morning; light winds, spring bloom period underway	Merk
April 26, 2016 9:30AM to 1:30PM Carrizo/Elkhorn Plain, agricultural areas and Schoolhouse Canyon Road in the east of the site	General Botany and Wildlife; BNLL reference site visit	Clear, 70-79 degrees F, BNLL on Elkhorn Plain	Merk
April 29, 2015 8:30AM to 4PM Proposed agricultural areas on terraces, Cuyama River, Schoolhouse and Cottonwood Canyons	General Botany and Wildlife, BNLL during suitable conditions	Sunny, 80-95 degrees F (warm), light winds. Horned lizard observed in Schoolhouse Canyon.	Merk, Kirschenstein
May 28, 2015 8:30AM to 4PM Proposed agricultural areas on terraces, Cuyama River, Schoolhouse and Cottonwood Canyons	General Botany and Wildlife, BNLL during suitable conditions	Sunny and warm, light winds. Heerman's K-rat sign observed on river terraces.	Merk, Kirschenstein

Survey Date, Time, and Location	Survey Focus	Weather Conditions and Species Observations	Survey Personnel
June 8, 2015 8:45AM to 4PM Proposed agricultural areas on terraces, Cuyama River, Schoolhouse and Cottonwood Canyons	General Botany and Wildlife, BNLL during suitable conditions	Mostly sunny and warm, light wind.	Merk, Kirschenstein
June 24, 2015 8:45AM to 4PM Proposed agricultural areas on terraces, Cuyama River, Schoolhouse and Cottonwood Canyons	General Botany and Wildlife, BNLL during suitable conditions	Sunny and warm, light wind. Horned lizards and Heerman's K-rat sign observed on Cuyama river terrace	Merk, Kirschenstein
September 29, 2015 9AM to 2:30PM Agricultural areas south of 166	General Botany, Wildlife, Vegetation Mapping, Stream Delineation	Sunny and warm, light wind. No sensitive species observed.	Merk, Sloan
September 30, 2015 8AM-4:30PM Stream corridors south of 166	Stream Delineation and Setback Mapping, General Botany and Wildlife	Sunny and warm, light wind, cloudy, light rain Oct 1. No sensitive species observed.	Sloan, Block
October 1, 2015 8AM-4:30PM Stream corridors south of 166	Stream Delineation and Setback Mapping, General Botany and Wildlife	Sunny and warm, light wind, cloudy, light rain Oct 1. No sensitive species observed.	Sloan, Block
January 4, 2016 8:30AM to 4:30PM Reservoir and Operations Yard Sites	General Botany and Wildlife	Sunny, cool (58 degrees F), no wind. No sensitive species observed.	Sloan
April 6, 2016 8:30AM to 4:30PM Reservoir Pipeline Routes	General Botany and Wildlife, Stream Crossing Locations, CNDDDB Reference Locations	Sunny and warm, light wind. No sensitive species observed.	Merk, Sloan
April 15, 2016 8:30AM to 4:30PM Reservoir Pipeline Routes	General Botany and Wildlife, Stream Crossing Assessment with CDFW	Sunny and warm, light wind. No sensitive species observed.	Merk

Survey Date, Time, and Location	Survey Focus	Weather Conditions and Species Observations	Survey Personnel
June 7, 2016 9AM to 3:30PM Reservoir Pipeline Crossings	General Botany and Wildlife, Stream Crossings	Sunny and hot (95-100 degrees F), winds 10+mph in afternoon. No sensitive species observed.	Sloan

*refer to attached Table 1 for the blunt nose leopard lizard survey information.

Action 2.2 Provide data sheets or summarize in a table the 18 blunt-nosed leopard lizard surveys in the revised report, including which areas were surveyed on specific days in protocol conditions, survey observations (lizards and prey observed), and confirm the area(s) of the project study area in which protocol surveys for the blunt-nosed leopard lizard were completed. In addition to the information requested in Action 2.1, please indicate the Level II and Level I surveyors and provide blunt-nosed leopard lizard specific resumes.

Action 2.2 Response: The North Fork Ranch BNLL Phase I Survey Data Summary Table, and resumes for the two surveyors are attached. Protocol surveys were conducted by Mr. Jason Kirschenstein (Level II) and Kevin Merk (Level I), and covered approximately 390 acres of suitable BNLL habitat on the lower terraces and wash habitat in the portion of Schoolhouse Canyon on the property extending north into the Cuyama River. An additional roughly 130-acre area along the lower Cuyama River terraces north of Highway 166 near the Cottonwood Canyon confluence was also surveyed after 1400 hours or when the temperature was too hot to meet protocol requirements. Additional walking surveys and spot checks were conducted within onsite drainages and other areas of the ranch outside the agricultural footprint containing what was identified as low potential BNLL habitat based on steep slopes, dense grassland vegetation cover and lack of burrows. Please note that the surveys covered additional parts of the ranch outside the agricultural footprint and proposed reservoir/operations yard disturbance areas.

Action 2.3 Confirm that a BNLL reference or voucher survey was conducted at the Elkhorn Plain Ecological Reserve to confirm BNLL activity prior to the onset of surveys for the proposed project.

Action 2.3 Response: As documented in the 2015 Biological Resources Assessment (page 7, 3rd paragraph), a BNLL reference site in the Carrizo Plain area was visited on several occasions (June 24 and July 3, 2015) during the spring-summer surveys and again on September 7, 2015 during the fall hatchling surveys during the course of the study to confirm BNLLs were above ground, active and identifiable. Prior to the start of the surveys, the same reference site was visited on the Carrizo Plain on 4/26/16 to confirm BNLL were active and above ground. The area of the recorded BNLL occurrence #414 (from 2007) east of the property was also visited on two occasions to characterize habitat in this area for comparison with habitats on the study area, as well as search for BNLL using binoculars from property margins. A BNLL was observed at the Carrizo Plain reference site during each visit, but was not observed at the occurrence #414 site.

Comment 3. Vegetation Community Mapping.

Action 3.1. Revise the report to include a vegetation community/habitat map with biological observations of sensitive biological resources, special-status species, or any protected biological resource present on-site, including the top-of-bank of ephemeral streams and their buffers.

Action 3.1 Response: The attached Figure 7 contains vegetation community/habitat information and current project details as shown on the Ag-Ideas 2016 map, including the drainage setbacks in relation to the vineyard blocks shown as Agriculture. Figures 8, 9, and 10, also attached to this report, show the limits of CDFW jurisdiction (i.e.: top of bank to top of bank) and USACE jurisdiction (i.e.: the extent of active stream channel with an observable OHWM) at each crossing location. Please note the pipeline crossing location is identified as a solid blue line that is approximately five (5) feet wide, which represents the width of two 24-inch HDPE pipes and steel structure that will support the pipes to span the stream channel.

Comment 4. Floristic Surveys.

Action 4.1. Conduct full coverage seasonally-appropriate floristic surveys over the entire project site addressing all proposed project components (refer to Comment 1.). Two to three surveys may be necessary. Please revisit and ensure the floristic surveys conform to CNPS Botanical Survey Guidelines (CNPS 2001); Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 2000); and Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants (USFWS 1996). Reference populations need to be visited and documented. A list of all plants observed on-site is required for floristic surveys. Include the observed plant list within the revised report or as an attachment.

Action 4.1 Response: As documented in the Biological Resources Assessment Report prepared in February 2016, and summarized in the Survey Table presented in Action 2.1 above, botanical surveys were conducted in April, May, June, August, and September 2015 to search for special status plants and characterize the onsite habitat types. Additional surveys were conducted in the winter and spring 2016, over large areas of the property, including the reservoir and operations yard locations, ranch access roads, drainage setback areas, and agricultural and grassland areas. Subsequent botanical surveys conducted in April and June 2016 along the proposed water line routes and associated roadways on both sides of Highway 166 provided additional field observations confirming special status plants were not present within the agricultural footprint or the proposed pipeline disturbance area.

The surveys were floristic in nature, covered suitable habitat areas within the study area and were conducted by qualified biologists, consistent with the CNPS, CDFW and USFWS botanical survey guidelines. This two-year survey effort covered the blooming periods of the special status species potentially present in the project area and in adjacent areas. The April 6 and 15, 2016 surveys included visits to recorded occurrences of pale yellow layia (*Layia heterotricha*) and round-leaf filaree (*California macrophylla*) along Cottonwood Canyon Road outside the project area, and were unable to relocate these occurrences. Personal communication with Mr. Dave Hacker with CDFW also occurred to discuss past observations of special status species in this area. In addition, surveys

of historic occurrences of San Joaquin wooly threads (*Monolopia congdonii*) along the old Highway 166 right of way at the northwest corner of the Ranch near the confluence of Cottonwood Canyon Creek and the Cuyama River were conducted and the species was not observed. It is important to note that the study area was visited on multiple occasions and no special status plants were observed within the agricultural footprint or areas proposed for waterline, reservoir and operations yard construction. A list of plants observed on site in 2015 and 2016 is included as an attachment.

Comment 5. Stream Delineation.

Action 5.1 Include the delineated top of bank and buffer for the ephemeral streams on Figures 2, 3, 4, and 5, as appropriate, in the revised report.

Action 5.1 Response: The buffer zones for all drainages on the southern side of the Highway are shown on Figure 7 as Annual Grassland habitat separating the agricultural blocks from the stream channels. As stated in the Biological Resources Assessment Report, KMA delineated top of banks along the onsite drainages, and established a minimum 50-foot buffer or setback along the entire length of each of the drainages. The top of bank line identified by KMA followed the top of bank definition presented in Section 15B -2 of the *Santa Barbara County Public Works Water Course Setback Ordinance*, and was based on field observation of a defined hinge point where the dominant topographic relief changed from generally level to an uninterrupted slope leading to the active portion of the channel. Using a 50-foot tape, stakes were set and numbered at intervals along each drainage to delineate the outer edge of the 50-foot buffer. Stake locations were surveyed by professional land surveyor Steve Fleming, and the survey results were used by the vineyard development team to establish the limits of agricultural uses as shown on project plans.

Subsequent field work was conducted in the spring of 2016 to delineate the jurisdictional boundaries within each proposed drainage crossing location, and the results of those surveys were reviewed in the field with CDFW in April 2016 to confirm the identification of the top of banks was consistent with their Streambed Alteration Agreement notification requirements. KMA biologists used a Trimble Geo XH 6000 GPS unit capable of decimeter accuracy to delineate the top of bank and extent of OHWM associated with the active stream channel. Boundary mapping followed the general methods outlined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0; U.S. Army Corps of Engineers 2008), and the *Corps of Engineers 2008 Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States*. The top of bank line was identified and mapped as described above. The jurisdictional boundaries at the six crossing points are shown on Figures 8, 9, and 10 attached to this letter. Based on the early consultation process with CDFW and USACE, the proposed drainage crossings using HDPE flexible pipe laid over ground and supported by steel supports to span the active stream channel would not require a Clean Water Act permit, but will require notifying the CDFW through the preparation of a Streambed Alteration Agreement application.

***Action 5.2** If any proposed project component occurs within, above, or adjacent to the ephemeral stream (i.e., potential impacts may occur), an approved jurisdictional determination shall be prepared per U.S. Army Corps of Engineer standards and guidelines, including jurisdictional boundaries of the CDFW and Regional Water Quality Control Board.*

Action 5.2 Response: As shown on Figure 7, no jurisdictional impacts are proposed for the reservoir/operations yard portion of the project. The reservoir and operations yard locations are in upland areas outside the banks of the drainages. The top of bank and the OHWM were delineated at each of the six waterline crossing sites per the methodology described in response to Action 5.1 above. Based on a site visit with CDFW representative Sarah Rains in April 2016, CDFW requires notification of the pipe being laid across the channel, and as such, a Streambed Alteration Agreement application will be submitted for the six waterline crossings south of Highway 166. The applicant will use a steel support structure to span or elevate the HDPE flexible pipe over the active stream channel, and therefore, no impacts are proposed within the OHWM of the drainages. A U.S. Army Corps of Engineers formal jurisdictional delineation and permitting pursuant to Section 404 of the Clean Water Act are not required based on the early consultation process with USACE Project Manager Ian Bordenave (personal communication with Mr. Bordenave and David Swenk of UPC). Still, USACE delineation methodologies were used to collect field data and prepare the attached Figures 8, 9 and 10.

Comment 6. Giant Kangaroo Rat.

***Action 6.1** Include a mitigation measure in the revised report that states a pre-construction survey for the giant kangaroo rat will occur in late spring to search for sign (appropriate sized horizontal and vertical burrows, haystacks, seed caches, scat, tracks, etc.). If sign is observed, the U.S. Fish and Wildlife Service (USFWS) and CDFW shall be contacted to determine if trapping surveys are required for the giant kangaroo rat.*

Action 6.1 Response: Surveys conducted within the project area in 2015-2016 did not find evidence of giant kangaroo rat (GKR). The recent surveys of the irrigation line routes on the north and south sides of Highway 166 conducted in April 2016 did not observe haystack caches or burrow precincts typical of this species. Furthermore, historic occurrence records to the northwest of the study area from 1979 and 1986 were also visited, and no sign of GKR was observed. Surveys did observe sign of Heermann's kangaroo rat (*Dipodomys heermanni*) and common pocket gopher (*Thomomys bottae*) in select areas along the lower river terraces north of Highway 166. The pressure main line routes either follow the reservoir fill line routes, or are within disturbed agricultural lands. The three pressure line drainage crossings not associated with irrigation line crossings were surveyed in June 2016 during jurisdictional delineation efforts. No sign of GKR was observed in these three areas, two of which are immediately adjacent to existing road crossings.

The agricultural activities onsite have removed all potential habitat for GKR from the reservoir sites and operations yard, as well as the majority of the proposed waterline corridor. In addition, laying the HDPE pipes above ground and spanning the drainage features is not expected to adversely impact GKR if they were present since the lines will be installed by farm personnel on foot and no earth disturbance other than keying the span support into the slope with hand tools is proposed.

Still, a condition could be included that requires a preconstruction survey immediately prior to earth disturbing activities in annual grassland habitat associated with the waterlines spanning the drainage features on the south side of Highway 166. As stated above, based on the analysis to date, it appears highly unlikely that GKR are present within the proposed project area, and would not be expected to be impacted by the reservoir and operations yard project since the area is being actively farmed.

Comment 7. San Joaquin Kit Fox.

Action 7.1 An early evaluation for the San Joaquin kit fox is required per the 1994 USFWS protocol for the fox. Once completed, it is recommended that the USFWS and CDFW be contacted and concur with KMA evaluation findings. Please include the evaluation and any agency coordination in the revised report.

Action 7.1 Response: As discussed in the Biological Resources Assessment Report, repeated surveys did not observe evidence of SJKF presence or potential SJKF den sites in or near the project area. The project site is within the historic range of the species, and it is possible that a SJKF, if present in the region, could move through the project area during foraging or migration activities. The lack of a well-developed prey base and no suitable denning habitat within the project area (i.e.: the agricultural activities have removed all suitable habitat and the disking removes potential small mammal prey base and potential den sites), however, indicate a very low potential for this species to occur. The last recorded occurrences of this species in the immediate area are from 1975, and ongoing agricultural operations would have restricted any recent denning activities to either higher elevations of the property or riverbank/terrace areas outside the proposed disturbance footprint. Therefore, the early evaluation process was determined to not be necessary for implementation of this project. It is assumed that SJKF could potentially occur in the greater area, and implementation of the USFWS recommended avoidance measures is considered sufficient to ensure that SJKF is not adversely affected by project construction and long-term agricultural activities on the property.

Action 7.2 Please revise the attached avoidance measures to identically reflect the USFWS (2011) standard recommendations or attach the standard recommendations in its entirety to the revised report.

Action 7.2 Response: The USFWS 2011 Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance are included as an attachment to this report.



Thank you for the opportunity to provide environmental consulting services for this project. If you have any questions regarding the above findings, please contact Kevin Merk directly by phone at 805-748-5837 or via email at kmerk@kevinmerkassociates.com.

Sincerely,

KEVIN MERK ASSOCIATES, LLC

A handwritten signature in blue ink, appearing to read "Kevin Merk".

Kevin B. Merk
Principal Biologist

A handwritten signature in blue ink, appearing to read "Robert Sloan".

Robert Sloan
Senior Biologist

*Attachments Figure 7 – Project Details and Habitats
 Figures 8, 9, and 10 - Jurisdictional Boundaries at Crossing Locations
 Photo Plate of Crossing Sites and Proposed Pipe Crossings
 List of Plants Observed During Surveys of the Site
 BNLL Survey Summary Table
 BNLL Surveyor Resumes
 USFWS Standardized Recommendations for San Joaquin Kit Fox*

Property Boundary

Proposed Irrigation Reservoirs

Proposed Reservoir Fill Lines

Proposed Pressure Mains

Drainage Centerline

Well Location

Habitat

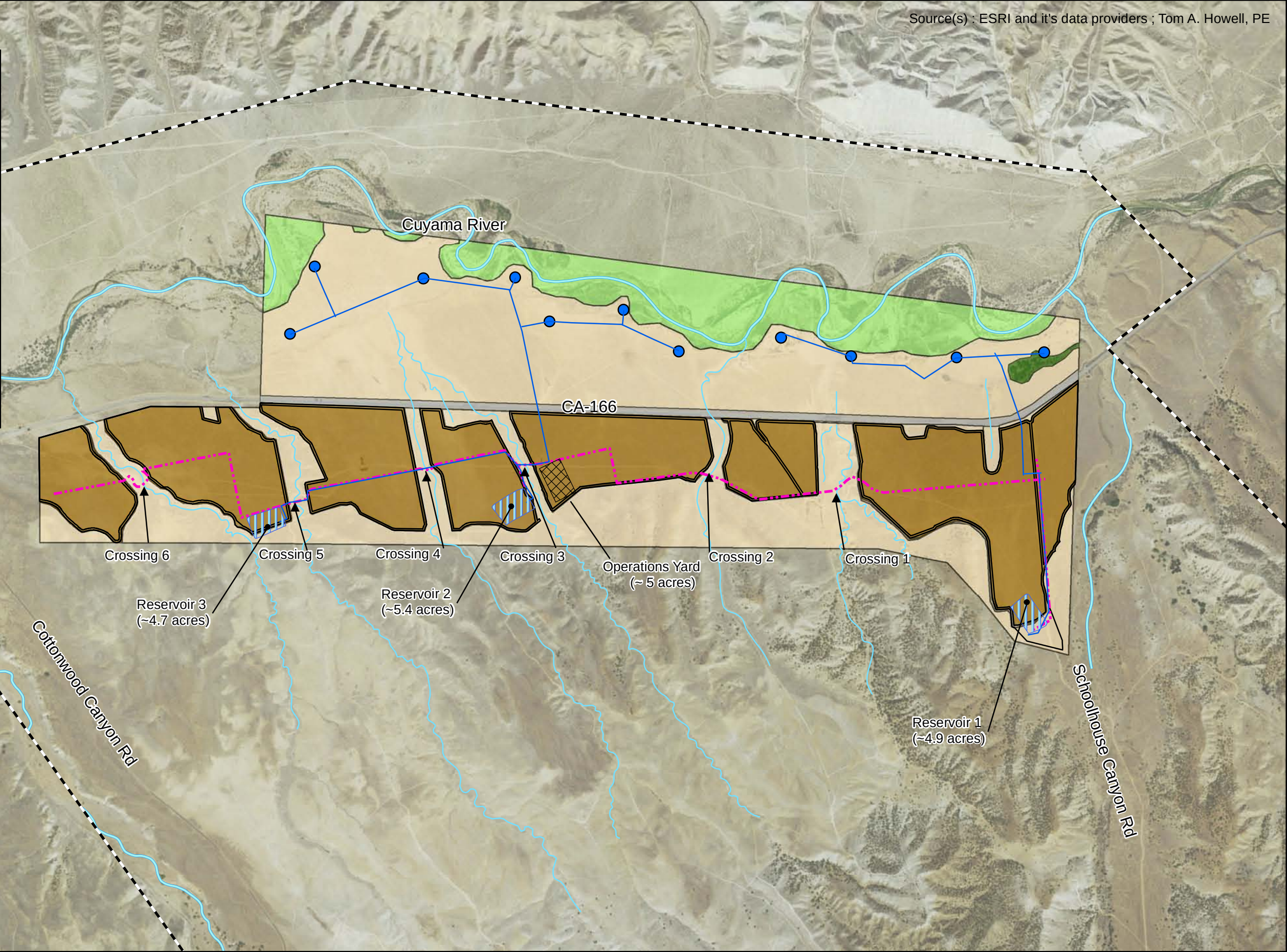
Agriculture

Annual Grassland

Mixed Oak Woodland

Riparian Scrub

Ruderal/Disturbed



USACE Jurisdiction

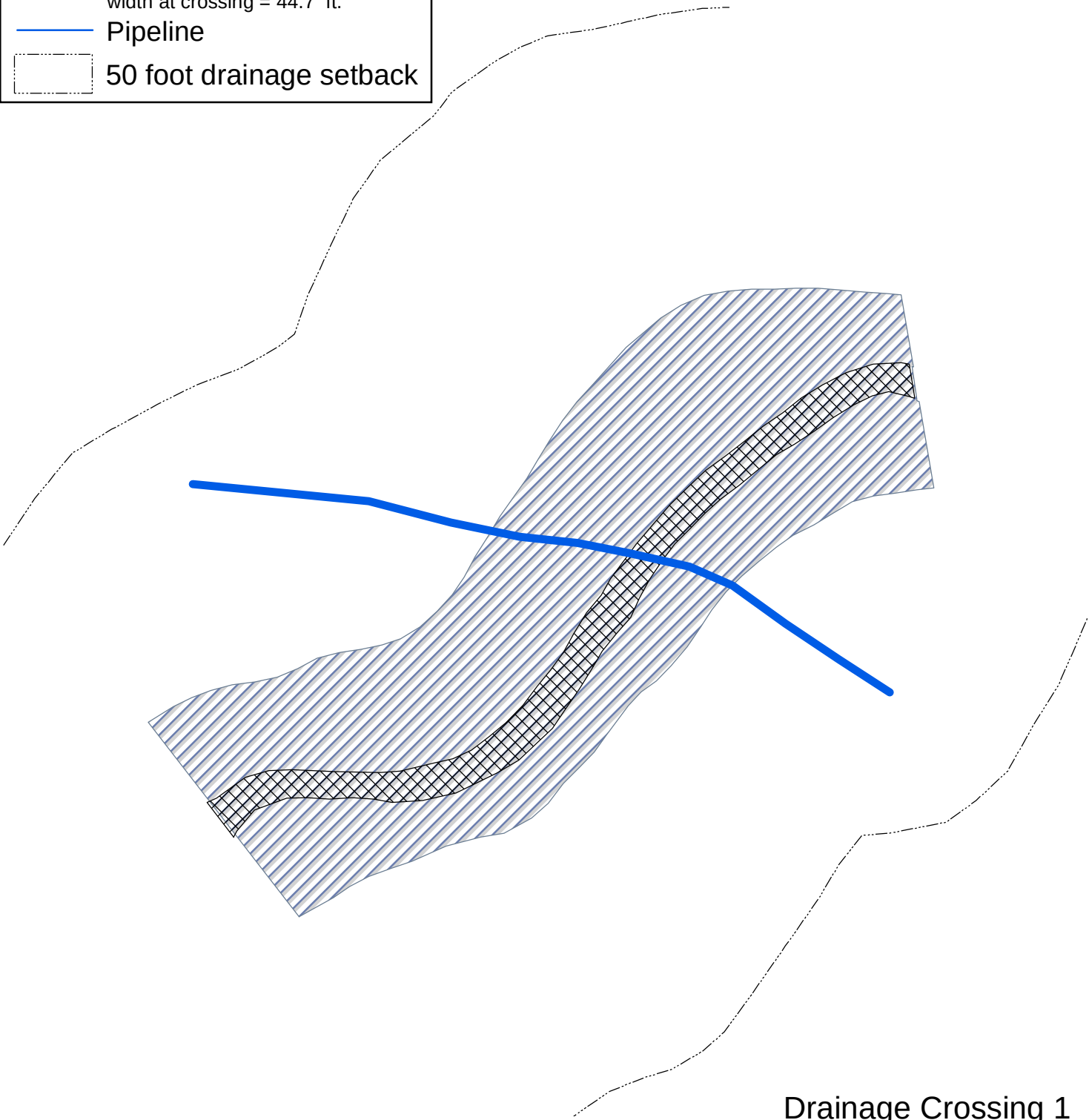
OHWM width at crossing = 7.2 ft.

CDFW Jurisdiction

Top of Bank to Top of Bank
width at crossing = 44.7 ft.

Pipeline

50 foot drainage setback



Drainage Crossing 1

USACE Jurisdiction

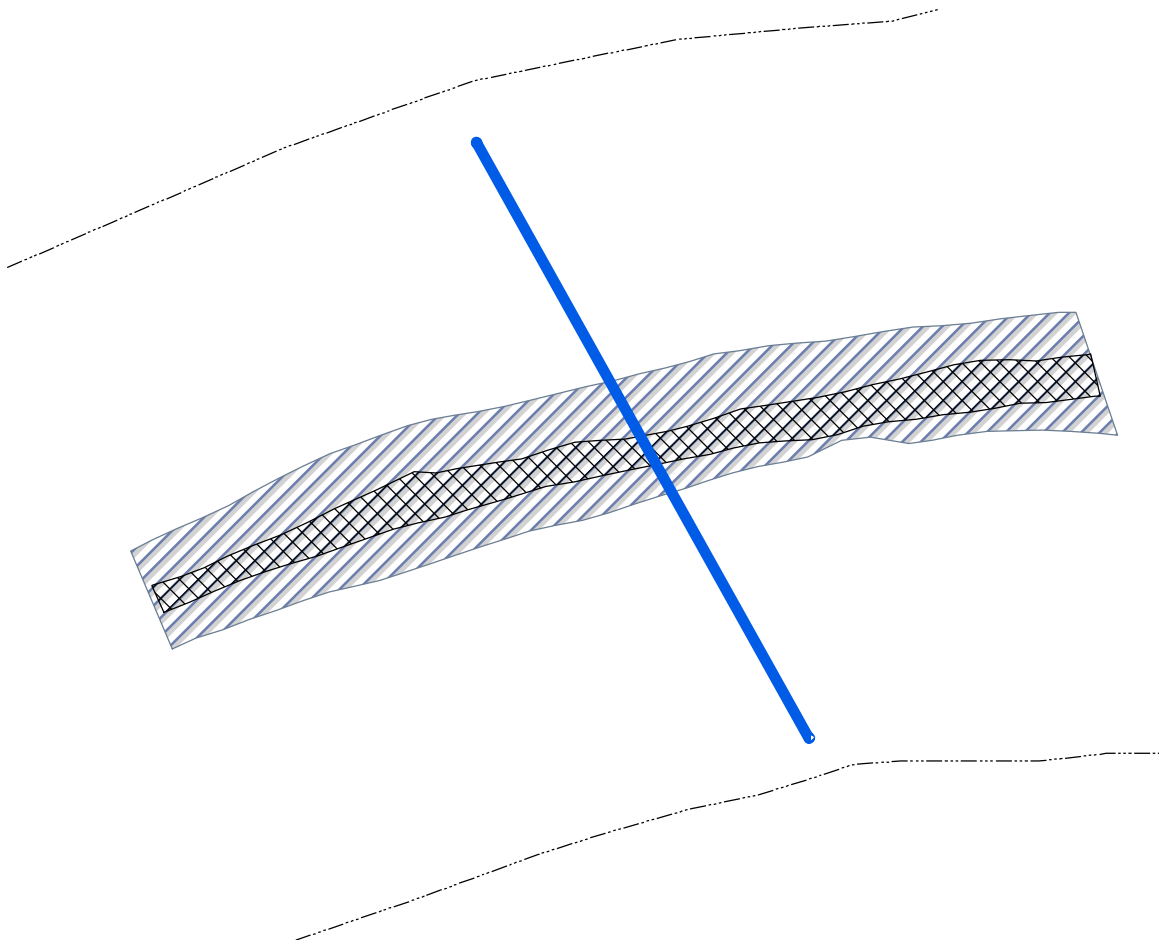
OHWM width at crossing = 4.7 feet

CDFW Jurisdiction

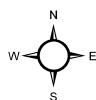
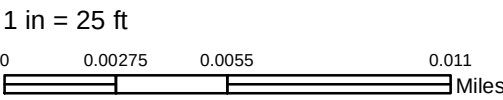
Top of bank to top of bank
width at crossing = 19.7 ft.

Pipeline

50 foot drainage setback

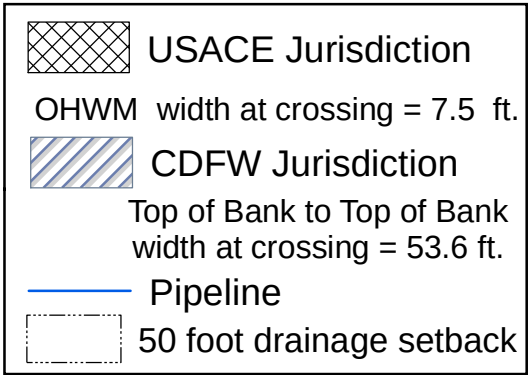
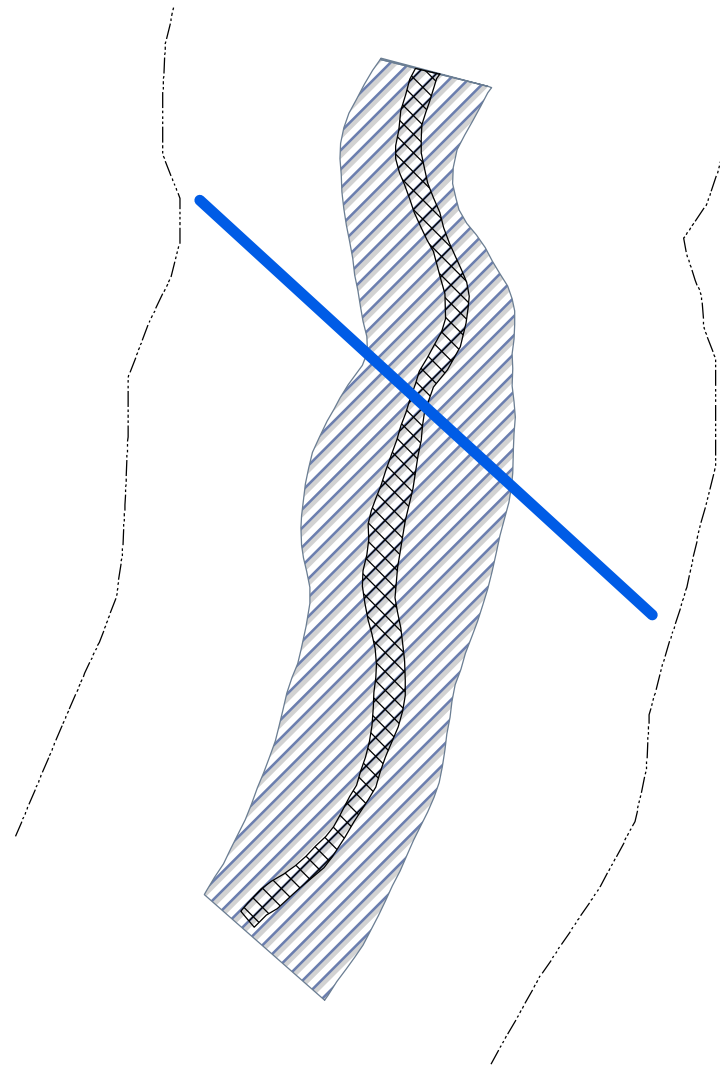


Drainage Crossing 2

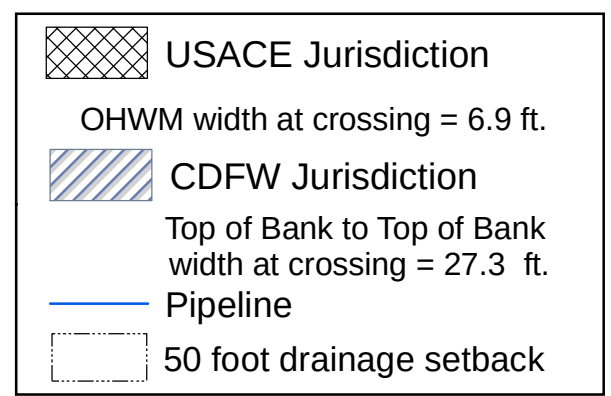
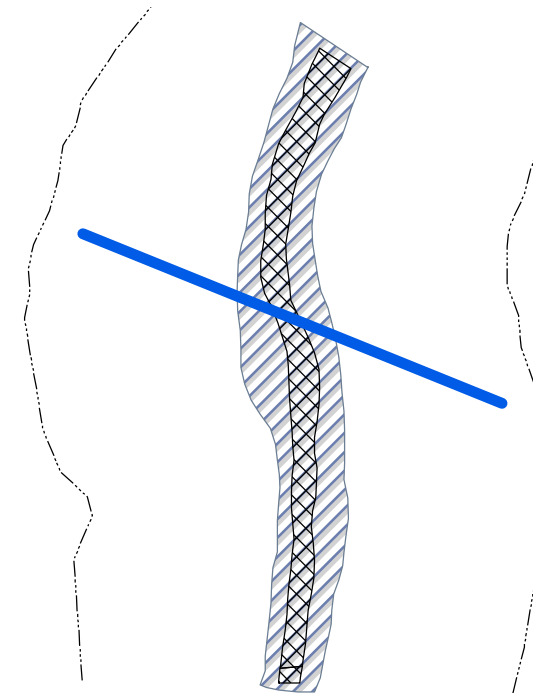


North Fork Ranch
Mesa Vineyard Management

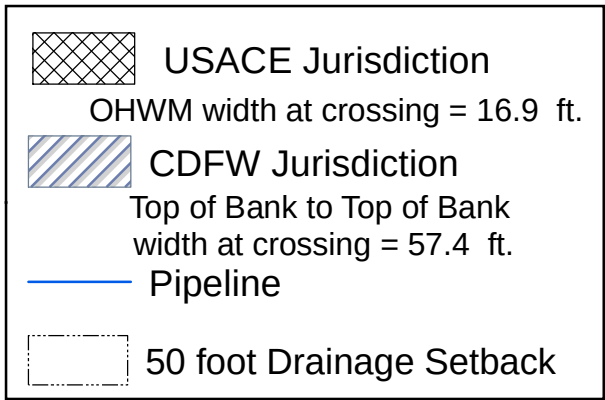
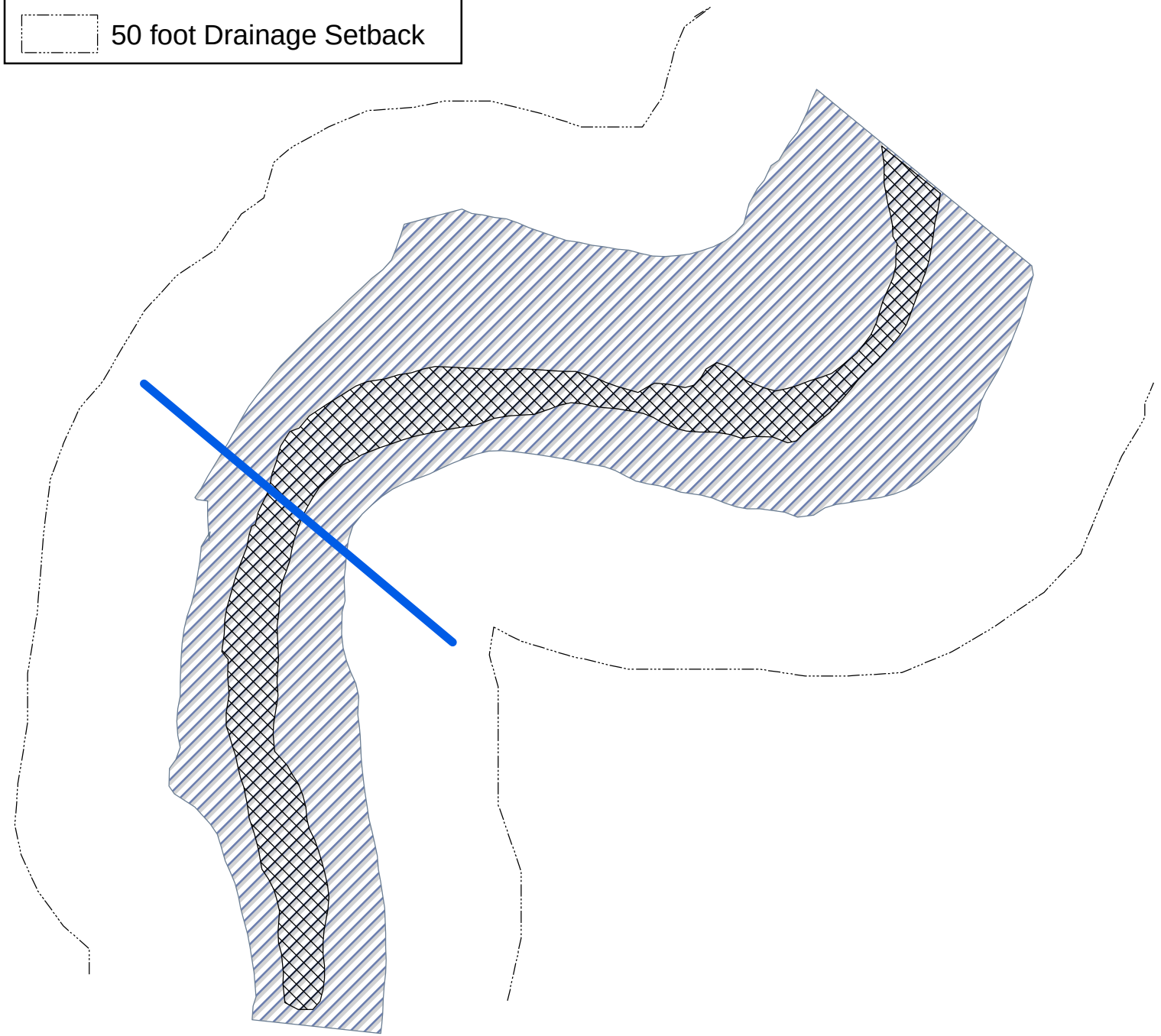
Figure 8
Drainage Crossings 1 and 2



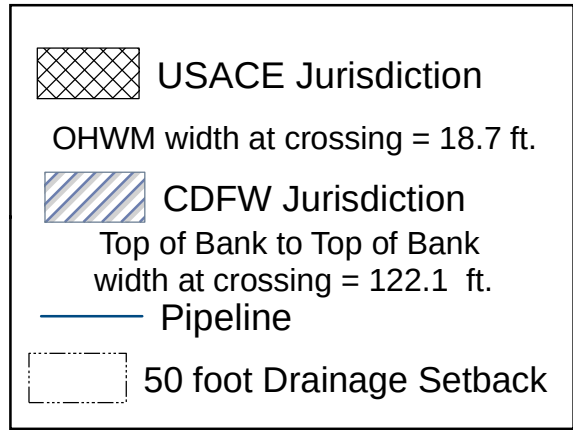
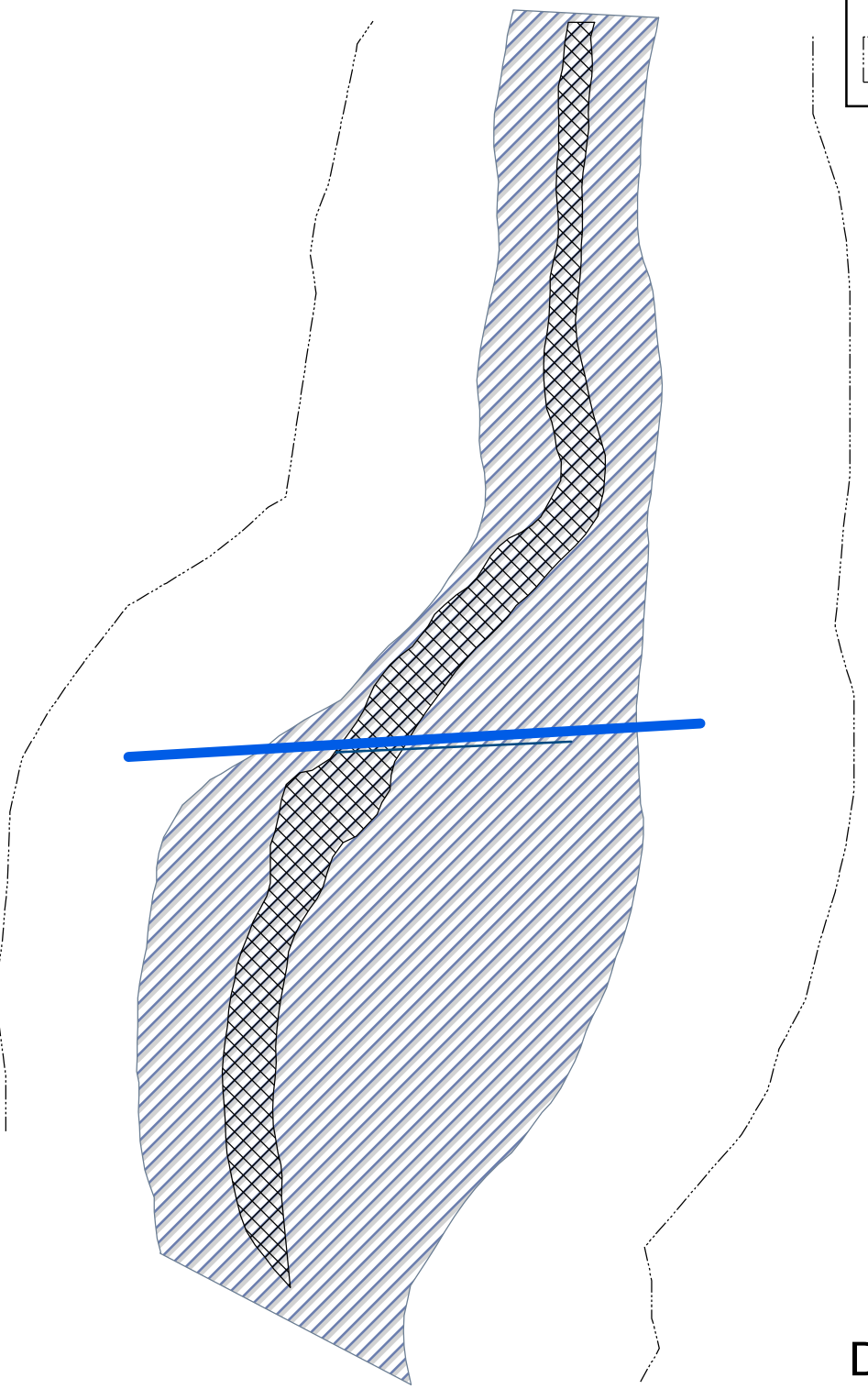
Drainage Crossing 3



Drainage Crossing 4



Drainage Crossing 5



Drainage Crossing 6

Photo Plate

Photo 1. View of Crossing #1, looking upstream. Note narrow active channel section to be avoided by suspending waterlines above the banks.



Photo 2. View of Crossing #2, looking upstream. Crossing alignment will be at downstream edge of road. Note flat, shallow channel configuration at this location.



Photo 3. View of Crossing #3, looking upstream. Crossing alignment will be at downstream edge of road.



Photo 4. View of Crossing #4, looking upstream. Crossing alignment will be at downstream edge of road.



Photo 5. View of Crossing #5, looking upstream. Note flat, shallow active channel area and steep upper bank configuration.



Photo 6. View of Crossing #6, looking upstream. Crossing alignment will be at downstream edge of road.



Photo 7. Overview of planted cover crop surrounding proposed Reservoir 2 with operations yard in the distance.



Photo 8. Overview of proposed Reservoir 3 (visible as bare soil area) with planted cover crop in flats and annual grassland on the slope in the foreground. Schoolhouse Canyon Road is visible in the distance.



Photo 9. Representative photo from another site showing the flexible HDPE pipe to be laid above ground over the drainage features.



Photo 10. Representative photo of how waterline with valves will “daylight” outside top of bank of drainages. Flexible HDPE pipe will be attached and then run overland at drainage crossings.



Photo 11. Representative photo illustrating connection of HDPE pipe and underground pipe.

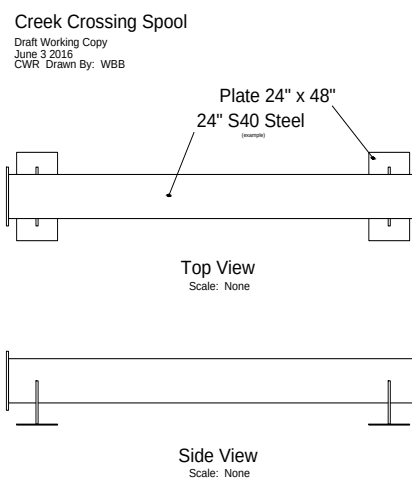


Photo 12. HDPE pipes will span active stream channels using the 20' long steel supports shown above.

List of Plants Observed During 2015 and 2016 Field Surveys.

Scientific Name	Common Name
<i>Amsinckia intermedia</i>	Common fiddleneck
<i>Atriplex lentiformis</i>	Brewer's saltbush
<i>Atriplex spinifera</i>	Spinescale saltbush
<i>Astragalus douglasii</i>	Douglas's milkvetch
<i>Avena barbata</i> *	Slender wild oats
<i>Baccharis pilularis</i>	Coyote brush
<i>Bromus madritensis</i> *	Red brome
<i>Carduus pycnocephalus</i> *	Italian thistle
<i>Castilleja exserta</i>	Owl's clover
<i>Chaenactis glabriuscula</i>	Yellow pincushion
<i>Chenopodium album</i> *	Goosefoot
<i>Cucurbita palmata</i>	Coyote melon
<i>Delphinium parryi</i> ssp. <i>parryi</i>	Parry's larkspur
<i>Dichelostemma capitatum</i>	Blue dicks
<i>Encelia californica</i>	Bush sunflower
<i>Eriodictyon tomentosum</i>	Wooly yerba santa
<i>Eriogonum gracile</i>	Slender buckwheat
<i>Eriophyllum confertiflorum</i>	Golden yarrow
<i>Erodium cicutarium</i> *	Red-stemmed filaree
<i>Hirschfeldia incana</i> *	Summer mustard
<i>Hordeum murinum</i> *	Foxtail
<i>Juniperus californicus</i>	California juniper
<i>Lasthenia gracilis</i>	Needle goldfields
<i>Layia platyglossa</i>	Tidy tips
<i>Lepidium nitidum</i>	Pepper grass
<i>Lepidospartum squamatum</i>	California broomsage
<i>Malva parviflora</i> *	Cheeseweed
<i>Marrubium vulgare</i>	White horehound
<i>Medicago polymorpha</i> *	Bur clover
<i>Monolopia lanceolata</i>	Common monolopia
<i>Phacelia distans</i>	Common phacelia
<i>Plagiobothrys canescens</i>	Valley popcorn flower
<i>Platanus racemosa</i>	Western sycamore (planted as windrow)
<i>Pluchea sericea</i>	Arrow weed
<i>Poa secunda</i>	Bluegrass
<i>Populus fremontii</i>	Fremont cottonwood (Cottonwood Cyn and in windrow)
<i>Quercus douglasii</i>	Blue oak
<i>Quercus john-tuckeri</i>	Tucker oak
<i>Salsola tragus</i> *	Russian thistle
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	Blue elderberry
<i>Schismus arabicus</i> *	Arabian schismus
<i>Silene gallica</i> *	Common catchfly
<i>Sisymbrium altissimum</i> *	Tumble mustard
<i>Sonchus asper</i> *	Prickly sow thistle
<i>Stanleya pinnata</i>	Prince's plume
<i>Tamarix ramosissima</i> *	Saltcedar
<i>Thysanocarpus laciniatus</i>	Narrow-leaved lacepod

*Asterisk identifies non-native species.

TABLE 1: North Fork Ranch BNLL Phase I Survey Data Summary Table

Survey Number and Date	Survey Time Start / End (2400 hrs)	Air Temp Start / End (°F)	Ground Temp Start / End (°F)	Wind Speed Start / End (mph)	Cloud Cover Start / End (%)	BNLL Observed	Other Reptile Observations	BNLL Surveyor / Level
Spring – Summer Surveys								
1) 04/29/15	1000/1320	80.0/95.2	82/101.8	5.0/5.0	0/0	None	6x <i>Uta stansburiana</i> 4x <i>Aspidoscelis tigris</i> 1x <i>Thamnophis sirtalis</i> 1x <i>Phrynosoma blainvillii</i>	K. Merk / I J. Kirschenstein / II
2) 05/28/15	0930/1400	77.0/89.0	74.0/94.6	6.0/3.0	0/0	None	14x <i>Uta stansburiana</i> 3x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
3) 06/08/15	0845/1200	87.8/95.5	86.9/101.3	2.8/6.5	5/0	None	8x <i>Uta stansburiana</i>	K. Merk / I J. Kirschenstein / II
4) 06/12/15	0815/1215	79.0/95.0	78.6/99.6	3.0/4.5	0/0	None	7x <i>Uta stansburiana</i> 5x <i>Aspidoscelis tigris</i> 1x <i>Thamnophis sirtalis</i>	K. Merk / I J. Kirschenstein / II
5) 06/24/15	0845/1245	77.9/92.5	80.0/96.0	3.0/2.0	0/0	None	10x <i>Uta stansburiana</i> 1x <i>Phrynosoma blainvillii</i>	K. Merk / I J. Kirschenstein / II
6) 06/26/15	0815/1130	77.4/95.0	72.0/98.0	3.0/5.0	10/5	None	8x <i>Uta stansburiana</i> 7x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
7) 07/03/15	0800/1130	77.0/95.5	72.5/99.8	0/3.0	0/0	None	9x <i>Uta stansburiana</i> 3x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
8) 07/06/15	0900/1400	78.2/94.0	74.0/98.5	2.0/5.0	<5/0	None	8x <i>Uta stansburiana</i> 8x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
9) 07/08/15	0915/1345	77.3/86.0	72.0/90.5	3.0/4.5	<5/5	None	10x <i>Uta stansburiana</i> 5x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
10) 07/10/15	1000/1400	77.0/84.0	72.0/87.5	5.0/7.0	20/15	None	9x <i>Uta stansburiana</i> 2x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
11) 07/14/15	0900/1330	77.5/89.0	73.5/93.2	3.0/5.0	5/0	None	12x <i>Uta stansburiana</i> 3x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
12) 07/15/15	0950/1345	77.0/86.2	73.4/91.5	3.0/7.0	5/5	None	14x <i>Uta stansburiana</i> 1x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II



Survey Number and Date	Survey Time Start / End (2400 hrs)	Air Temp Start / End (°F)	Ground Temp Start / End (°F)	Wind Speed Start / End (mph)	Cloud Cover Start / End (%)	BNLL Observed	Other Reptile Observations	BNLL Surveyor / Level
Fall Hatchling Surveys								
13) 09/01/15	0950/1330	77.0/86.0	68.0/89.5	3.0/6.5	0/<5	None	36x <i>Uta stansburiana</i> 1x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
14) 09/07/15	0900/1215	77.0/95.0	73.0/99.0	5.5/3.0	<5/5	None	32x <i>Uta stansburiana</i> 1x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
15) 09/11/15	0900/1230	80.0/95.3	76.0/101.3	3.5/5.0	30/20	None	31x <i>Uta stansburiana</i>	K. Merk / I J. Kirschenstein / II
16) 09/13/15	0845/1350	77.0/93.5	71.5/98.8	3.0/7.0	20/15	None	31x <i>Uta stansburiana</i> 1x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
17) 09/14/15	1215/1400	77.0/86.0	75.0/82.5	6.0/7.5	60/70	None	36x <i>Uta stansburiana</i> 2x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
18) 09/15/15	1130/1330	77.0/84.2	86.0/87.8	4.0/7.0	20/30	None	35x <i>Uta stansburiana</i>	K. Merk / I J. Kirschenstein / II
General Notes: Black-tailed jackrabbit, elk, coyote, bobcat, American badger, kangaroo rat, California ground squirrel, gopher, raccoon, lark sparrow, mourning dove, California quail, and common raven individuals and/or sign also observed within the survey area.								



Kevin Merk Associates, LLC

KEVIN B. MERK

Principal Biologist

Kevin Merk is the founding principal of Kevin Merk Associates, LLC. With over 20 years of environmental consulting experience, Kevin has directed, managed, and conducted hundreds of natural resource and environmental studies throughout California. Mr. Merk has a diverse background in the biological sciences with expertise in plant taxonomy, quantitative vegetation analysis, habitat classification/evaluation procedures, surveys for special status species, habitat restoration and biotechnical erosion control. His work experience includes general biological and species-specific surveys, U.S. Army Corps of Engineers and California Coastal Commission wetland delineations, as well as permit acquisition and regulatory compliance. He has prepared, implemented and monitored Habitat Conservation Plans and habitat mitigation/restoration projects throughout California. Mr. Merk is a well-versed regulatory specialist that provides a balance between rigorous scientific documentation, environmental regulatory requirements and project development goals and objectives.

TECHNICAL CAPABILITIES

- Mr. Merk has an in-depth knowledge of the California flora and protocols for surveying rare, threatened and endangered plant species.
- He has conducted floristic surveys and mapped vegetation communities for private, state and local government clients including California State Parks, California State University System, Fort Ord Reuse Authority, Cities and Counties of Monterey, San Luis Obispo, and Santa Barbara, and Cities of Arroyo Grande, Lompoc, Sand City, Santa Maria and Scotts Valley.
- Mr. Merk has also conducted rare wildlife surveys throughout California for species such as the California tiger salamander, California red-legged frog, western spadefoot toad, legless lizard, horned lizard, burrowing owl and other raptors and nesting birds.
- Mr. Merk has conducted multi-parameter wetland delineations throughout the state including within the Coastal Zone, and is an expert in environmental regulation compliance (e.g., Endangered Species Act, Clean Water Act, Coastal Development Act, California Department of Fish and Game Code, Porter-Cologne Act).

EDUCATION, CERTIFICATIONS, REGISTRATIONS

B.A. Biology (Plant Sciences), University of California, Santa Cruz

40 Hour OSHA HAZWOPER Training and 8 eight-hour annual refresher courses

Hydrogeomorphic Approach to Functional Assessment of Riverine Waters/Wetlands in the South Coast Region of Santa Barbara County

Biology and Handling Trainings for California red-legged frog, California tiger salamander, and Santa Cruz long-toed salamander

U.S. Army Corps of Engineers Wetland Delineation Training

California Native Plant Society

California Botanical Society

California Invasive Plant Council

Society for Ecological Restoration

American Public Works Association

International Erosion Control Association

Wildlife Society, Western Chapter

EMPLOYMENT HISTORY

Kevin Merk Associates, LLC, Founding Principal Biologist (2011 through present)
Rincon Consultants, Inc., Biological Program Manager (2000-2011)
Zander Associates, Senior Botanist/Restoration Ecologist (1995 through 2000)
University of California, Santa Cruz Natural Resource Assessment Group, Botanist (1993-1995)
Greening Associates, Restoration Ecologist (1991-1992)

REPRESENTATIVE PROJECT EXPERIENCE*Conservation Planning*

- North of Playa Habitat Conservation Plan for the Smith's blue butterfly, Sand City.
- Mahoney Ranch Habitat Conservation Plan for the California tiger salamander (CTS) and California red-legged frog (CRLF), Santa Maria.
- Highway 46 Corridor Improvement Section 7 and 2081 Authorization for San Joaquin kit fox, San Luis Obispo County.
- Rancho Larios Subdivision Section 7 Consultation for CTS and CRLF, San Benito County.
- Union Valley Parkway Section 7 Consultation for CTS and CRLF on the Union Valley Parkway Project, Santa Maria.
- Salinas Road Interchange Section 7 Consultation for CTS and CRLF, Monterey County.
- Silver Creek Valley Country Club Section 7 Consultation for Bay checkerspot butterfly, San Jose.

Biological Resources Assessments

- Froom Ranch, mapped/classified vegetation, conducted rare plant and CRLF surveys, delineated USACE wetlands and CDFW jurisdictional areas, supporting design team during planning and CEQA review process, San Luis Obispo.
- More Mesa, conducted rare plant surveys, mapped vegetation communities and delineated USACE and Coastal Commission wetlands, Santa Barbara County.
- May Family Trust Property, mapped/classified vegetation, conducted rare plant surveys, delineated USACE wetlands, and assisted design team during planning and CEQA review process, San Luis Obispo County.
- Harmony Ranch, mapped/classified vegetation, conducted rare plant and California red-legged frog surveys, delineated USACE and Coastal Commission wetlands, and assisted design team during development planning process, San Luis Obispo County.
- Mormann Property, mapped/classified vegetation and conducted rare plant surveys, San Luis Obispo County.
- Laetitia Winery Improvement Project, rare plant surveys, CRLF surveys, and USACE wetland delineation, San Luis Obispo County.
- Santa Rosa Creek Trail, rare plant surveys and habitat assessments for California red-legged frog, pond turtle, steelhead and tidewater goby, Cambria.
- Pecho Valley Road Property vegetation classification, rare plant surveys and USFWS protocol Morro shoulderband snail surveys, Los Osos, San Luis Obispo County.

Focused Botanical Surveys

- Bradley Ranch Botanical Inventory and Wetland Delineation, Santa Maria.
- Entrada de Paso Robles Botanical Inventory, Paso Robles.
- Pismo Lake Ecological Reserve Botanical Inventory, San Luis Obispo County.
- Harmony Headlands Botanical Inventory, California State Parks.
- Sheridan Lane Botanical Inventory, San Luis Obispo County.

- Chevron Estero Marine Terminal Rare Plant Surveys and Wetland Delineation, San Luis Obispo County.
- Biddle Ranch Rare Plant Surveys and Wetland Delineation, San Luis Obispo County.
- Tract 1998 Rare Plant Surveys (Pismo Clarkia), Arroyo Grande.
- James Way Fuel Modification Project Rare Plant Surveys, Arroyo Grande.
- Highland Ranch Rare Plant Surveys, San Luis Obispo County.
- San Miguel Ranch Rare Plant Surveys and Wetland Delineation, San Luis Obispo County.
- Continental Vineyards Rare Plant Surveys and Wetland Delineation, San Luis Obispo County.
- Chandler Ranch Rare Plant Surveys, Paso Robles.
- Focused surveys for the rare Morro Manzanita in Los Osos.

Focused Animal Surveys

- SoCalGas Lines 300 and 90 Pipeline Removal Project Protocol Blunt-Nosed Leopard Lizard Surveys, Avenal, Kings County.
- SoCalGas Lincoln Street Pipeline Replacement Project Protocol Blunt-Nosed Leopard Lizard Surveys, Kern County.
- Tulare County Property Protocol Blunt-Nosed Leopard Lizard Surveys, Tulare County.
- North Fork Ranch Protocol Blunt-Nosed Leopard Lizard Surveys, San Luis Obispo and Santa Barbara Counties.
- Salinas Road Interchange Project, Caltrans Designated Biologist conducted California red-legged frog and California tiger salamander aquatic surveys. Captured and relocated over 10,000 life stages of California red-legged frog during construction, Monterey County.
- Santa Maria Integrated Waste Management Facility, USFWS protocol Vernal Pool Branchiopod and CTS Surveys (upland and aquatic) on 1,770-acre site, northern Santa Barbara County.
- Mahoney Ranch USFWS protocol California red-legged frog and California tiger salamander surveys, Santa Maria, Santa Barbara County.
- Biddle Ranch USFWS CRLF surveys and CTS habitat assessment, San Luis Obispo County
- Union Valley Parkway USFWS CRLF and CTS surveys (upland and aquatic), Santa Maria.
- Monarch butterfly annual population censusing surveys in Santa Cruz County, UCSC.
- Birch Street Project, USFWS CRLF surveys and Monarch butterfly habitat assessment, and riparian restoration plan in support of Coastal Development Permit, Cayucos.
- San Joaquin Kit Fox Habitat Evaluations and USFWS protocol surveys for numerous projects (winery expansion, residential subdivisions, linear utilities and transportation, telecommunication), northern San Luis Obispo County and southern Monterey County.

CEQA and NEPA Compliance Documents (primary author of Biological Resources Sections)

- Ahmanson Ranch General Plan Amendment and Specific Plan EIR, Ventura County.
- Rancho Maria Estates EIR Biological Resources Section, Santa Barbara County.
- Union Valley Parkway EIR/EA, City of Santa Maria.
- Santa Maria Integrated Waste Management Facility EIR, City of Santa Maria.
- Santa Maria Airport Specific Plan EIR, City of Santa Maria.
- Mahoney Ranch Environmental Assessment (EA), City of Santa Maria.
- Tract 1998 Rancho Grande EIR and supplements, City of Arroyo Grande.
- Biddle Ranch Agricultural Cluster Subdivision EIR, San Luis Obispo County.
- General Plan Land Use and Conservation Element Update EIR, City of San Luis Obispo.
- Chevron Estero Marine Terminal Source Removal Project EIR, San Luis Obispo County.
- Downtown Specific Plan EIR, City of Scotts Valley, Santa Cruz County.

Restoration Ecology and Regulatory Compliance Monitoring

- Los Angeles International Airport, prepared and implemented Ecological Landscape Plan for Coastal Development Permit to allow street removal and coastal dune habitat restoration in the northern El Segundo Dunes, Los Angeles World Airports.
- Surfer's Point Shoreline Retreat Project, prepared Coastal Dune Habitat Restoration Plan in support of Coastal Development Permit acquisition, City of Ventura.
- Cross Creek Bridge Replacement, prepared and implemented riparian habitat restoration plan, monitored construction and restoration activities in support of Coastal Development Permit, Malibu, Los Angeles County.
- Cherry Creek Residential Development, conducted USACE wetland delineation, prepared USACE, CDFG, and RWQCB permit applications including riparian and wetland habitat restoration plan, and provided biological monitoring during construction, Arroyo Grande
- California State University, Channel Islands, biological studies and wetland delineation, prepared riparian and wetland habitat mitigation program as part of USACE, CDFG and RWQCB permit applications, monitored construction, implemented habitat mitigation program and provided annual monitoring for five years, Ventura County.
- Damon Garcia Sports Complex Project, conducted focused studies including CRLF surveys and wetland delineation, prepared riparian/wetland habitat mitigation program as part of USACE, CDFG and RWQCB permit applications, monitored construction and implemented habitat mitigation program (i.e.: weed abatement and planting), City of San Luis Obispo.
- Bret Harte Unified High School District Sports Fields Complex, conducted wetland delineation, prepared riparian/wetland habitat mitigation plan as part of USACE, CDFG and RWQCB permit applications, Calaveras County.
- Salinas Regional Sports Authority Soccer Complex Project, conducted wetland delineation and prepared riparian and wetland habitat mitigation plan, City of Salinas.
- Highway 46 East Improvement Project, Senior Biologist overseeing environmental permit compliance during construction, Caltrans , San Luis Obispo County.
- Union Valley Parkway, prepared EIR/EA, BA, facilitated ESA Section 7 Consultation, and then was the Designated Biologist overseeing environmental permit compliance during construction, Caltrans/City of Santa Maria Local Assistance Project.
- Biddle Ranch Agricultural Cluster Subdivision Project, County of San Luis Obispo designated environmental monitor overseeing construction of roads and infrastructure improvements.
- Santa Maria River Mining, CDFW and Department of Conservation permit acquisition, riparian habitat restoration plan preparation and annual monitoring and permit compliance reporting, City of Santa Maria.

Teaching

- Workshop Instructor - California Native Plant Society Rare Plants and Habitats of San Luis Obispo County (separated into coastal and inland sections).
- Workshop Instructor/Field Coordinator - Elkhorn Slough Coastal Training Program's Management and Conservation of Coastal Grasslands.
- Guest lecturer – CalPoly San Luis Obispo Natural Resource Management and Landscape Architecture Departments.
- Lab Instructor - Ecology of California Flora, Plant Anatomy, Plant Taxonomy, Plant Physiology, Mycology, and Plants and Human Affairs, University of California, Santa Cruz.
- Presenter - Association of Environmental Professionals state and national conferences; Society of Ecological Restoration annual conferences, and International Erosion Control Association conferences.

Professional Resume

Jason Kirschenstein

Principal Biologist, Vice President

EMPLOYMENT HISTORY

2003 to present

Principal Biologist / Vice President
Sage Institute, Inc.

1998 to 2003

Biologist / Project Manager
Rincon Consultants, Inc.

2000 to 2002

Dendrology Instructor
California Polytechnic State University

1995 to 1998

Research Assistant
California Polytechnic State University

EDUCATION, AFFILIATIONS,

PERMITS

B.S., Forestry and Natural Resource Management / Wildlife Biology, California Polytechnic State University, San Luis Obispo

Association of Environmental Professionals, Audubon Society, Wildlife Society

Southwestern Willow Flycatcher Workshop and Certification

CDFW Blunt-Nosed Leopard Lizard Identification Workshop and Certification (Level II surveyor)

Giant Kangaroo Rat Identification/Handling Workshop and Certification

USFWS-approved monitor for various San Joaquin Valley listed species, CA Red-Legged Frog, steelhead, Southwestern Willow Flycatcher, and Least Bell's Vireo

State Rare, Threatened, Endangered plant collection permit

Venomous and non-Venomous snake handling training and certification, 2015

FERC Environmental Review and Compliance Training Certification

Santa Barbara County and San Luis Obispo County pre-approved biological resources consultant.

Morro Shoulderband Snail Protocol Survey Training

Jason Kirschenstein serves as a Principal Biologist and Vice President for Sage Institute, Inc. (SII). Mr. Kirschenstein is highly experienced in general and special-status wildlife and vegetation surveys, mitigation planning, regulatory compliance, Geographic Information System (GIS) applications, and environmental impact analysis. Mr. Kirschenstein is well versed in the planning process, and has successfully performed as an integral member on planning and design teams. He has provided biological and regulatory compliance services for local agencies, utilities, and private development projects.

Mr. Kirschenstein has conducted numerous biological surveys and is experienced in preparing biological assessments related to flora, fauna, endangered species, and sensitive habitats. Mr. Kirschenstein is well versed in construction and mitigation monitoring and habitat restoration design / implementation.

Mr. Kirschenstein has extensive experience in the preparation of permit packages for Clean Water Act Section 404 U.S. Army Corps of Engineers permits, CWA Section 401 Certifications from the Regional Water Quality Control Board, and California Department of Fish and Wildlife Section 1602 Streamed Alteration Agreements. Mr. Kirschenstein has also managed the preparation of U.S. Fish and Wildlife Service Section 7 and Section 10 documentation per the Federal Endangered Species Act and CDFW Section 2081 take authorization documentation per the California Endangered Species Act. Mr. Kirschenstein has worked closely with local agencies on permitting and environmental compliance projects, and is proficient in CEQA and NEPA analysis.

With over sixteen years of experience working with various GIS applications, Mr. Kirschenstein's capabilities range from habitat suitability mapping to performing complex constraints analyses. He has worked closely with various public agencies and private interests to obtain and properly manage GIS data. Mr. Kirschenstein's proficiency with advanced GPS technology, AutoCAD applications, image processing software, database management, and other GIS-related equipment enhances his overall GIS production and management capabilities.

SELECTED PROJECT EXPERIENCE

- **Sempra Energy (Southern CA Gas Company / San Diego Gas and Electric)** – Clean Water Act, Endangered Species Act, SWPPP, and local agency environmental compliance for operation, maintenance, capital, and Pipeline Integrity projects (2003 – ongoing).
 - Programmatic Compliance Efforts: Programmatic permit compliance efforts in Southern California, San Joaquin Valley, California Desert, and Coastal California. Performed as key team member for regional Biological Opinion and HCP planning and implementation efforts.
 - Transmission, Distribution, PSEP, and PIP Services: Biological impact assessments, permit facilitation, agency negotiations, construction monitoring, site restoration, and compliance assistance for State and Federal Endangered Species Acts, Sections 401 and 404 of the Clean Water Act, and CDFW 1600.
 - Construction Monitoring: Lead construction monitor for various Capital Improvement and maintenance (Transmission, Distribution, and Pipeline Integrity) projects. Duties include permit compliance oversight and construction monitor coordination and reporting.
- **Southern California Gas Company, San Joaquin Valley Programmatic Compliance Efforts and Draft Habitat Conservation Plan (2003-ongoing)**. Assisted SoCalGas for over 12 years in implementing, amending, and reporting for a San Joaquin Valley Biological Opinion covering operations and maintenance (O&M), and new construction activities on its natural gas pipeline system within Kern, Tulare, Fresno, Kings, San Luis Obispo, Santa Barbara, and Ventura counties. Services include project specific Biological Assessments, special-status plant and wildlife surveys, construction monitoring, and general regulatory compliance services. In 2014/2015 assisted in preparation of draft Habitat Conservation Plan for a 30-year FESA take permit covering 21 species in the San Joaquin Valley, including development of a comprehensive predictive species GIS model.
- **SoCalGas, Line 300 and Line 90 Pipeline Removal Project, Avenal and Kings Counties (March 2013 – December 2013)**. Protocol blunt-nosed leopard lizard surveys for 1.5-mile pipeline abandonment and removal project in the Kettleman Hills. Surveys also included presence / absence for San Joaquin kit fox, San Joaquin antelope squirrel, burrowing owl, and special-status plants including California jewelflower and San Joaquin woollythreads. Serviced as lead construction monitor, conducted San Joaquin kit fox den closure along project alignment, and assisted with field effort and coordinated giant kangaroo rat trapping efforts.
- **Southern CA Gas Company, Line 85 Pipeline Replacement Project, Kern and Los Angeles Counties (2003-2004)** Lead biological construction monitor for 20+ mile pipeline replacement project extending from the southern San Joaquin Valley to Frazier Park. Duties included conducting focused surveys for blunt-nosed leopard lizard, San Joaquin kit fox, rare plants, and nesting birds.
- **Southern CA Gas Company, Line 119 PIP Pipeline Replacement Project, Angeles National Forest (June 2012 – October 2014)**. Regulatory compliance and permitting, construction monitoring and post-construction permit compliance reporting. Included field GPS data collection along the 1.5 mile project alignment adjacent to Pyramid Lake.
- **Southern CA Gas Company, Lincoln Street Pipeline Replacement, Kern County (April 2013 – May 2014; SoCalGas Contact Johnny Grady)**. Regulatory compliance and permitting, general biological surveys and protocol blunt-nosed leopard lizard and San Joaquin antelope squirrel surveys.
- **Southern CA Gas Company, Avenal Creek Exposure Repair, Kings County (February 2012 – February 2014; SoCalGas Contact Johnny Grady)**. Regulatory compliance and permitting, protocol blunt-nosed leopard lizard, San Joaquin kit fox, giant kangaroo rat (assisted), rare plant surveys, construction monitoring.
- **Southern CA Gas Company, San Julian Ranch, Santa Barbara County (April 2009 – December 2012; SoCalGas Contact Johnny Grady)**. Regulatory compliance and permitting, USFWS protocol surveys for Least Bell's vireo and southwestern willow flycatcher. Approved California red-legged frog, steelhead, least Bell's vireo, and southwestern willow flycatcher monitor. Lead construction monitor for multiple HDD's within occupied California red-legged frog and steelhead habitat.
- **Southern CA Gas Company, L3003/407 Sullivan Canyon ROW Maintenance, City of Los Angeles (2005 – ongoing; SoCalGas Contact Johnny Grady)**. Regulatory compliance and permitting lead for long-term maintenance Corps 404 Individual Permit, RWQCB 401 Certification, CDFW Streambed Alteration Agreement, City of L.A. Tree Permit. Includes restoration design, implementation, and monitoring along approximately 4-miles of ROW within riparian habitat.

**U.S. FISH AND WILDLIFE SERVICE
STANDARDIZED RECOMMENDATIONS
FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX
PRIOR TO OR DURING GROUND DISTURBANCE**

Prepared by the Sacramento Fish and Wildlife Office
January 2011

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. **However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act) and does not preclude the need for section 7 consultation or a section 10 incidental take permit for the proposed project.** Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). These protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

IS A PERMIT NECESSARY?

Certain acts need a permit from the Service which includes destruction of any known (occupied or unoccupied) or natal/pupping kit fox dens. Determination of the presence or absence of kit foxes and /or their dens should be made during the environmental review process.

All surveys and monitoring described in this document must be conducted by a qualified biologist and these activities do not require a permit. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, the biologist(s) must be able to identify coyote, red fox,

gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount. Resumes of biologists should be submitted to the Service for review and approval prior to any survey or monitoring work occurring.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints, of approximately one acre or less, such as an individual in-fill oil well, communication tower, or bridge repairs. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features and utilize this information as guidance to situate the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then surveys should be conducted and the Service should be contacted for technical assistance to determine the extent of possible take.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Kit foxes change dens four or five times during the summer months, and change natal dens one or two times per month (Morrell 1972). Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol). Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities.

If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If the take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping den which may not be destroyed while occupied. A take authorization/permit is required to destroy these dens even after they are vacated. Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: Linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project and those requirements supersede any requirements found in this document.

EXCLUSION ZONES

In order to avoid impacts, construction activities must avoid their dens. The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances due to the length of dens underground. The following distances are **minimums**, and if they cannot be followed the Service must be contacted. Adult and pup kit foxes are known to sometimes rest and play near the den entrance in the afternoon, but most above-ground activities begin near sunset and continue sporadically throughout the night. Den definitions are attached as Exhibit A.

Potential den**	50 feet
Atypical den**	50 feet
Known den*	100 feet
Natal/pupping den (occupied <u>and</u> unoccupied)	Service must be contacted

***Known den:** To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, orange construction fencing or other fencing as approved by the Service as long as it has openings for kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

****Potential and Atypical dens:** Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited or greatly restricted within the exclusion zones.

DESTRUCTION OF DENS

Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection.

Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service.

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use.

If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities.

The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities shall cease and the Service shall be notified immediately.

CONSTRUCTION AND ON-GOING OPERATIONAL REQUIREMENTS

Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities should be minimized by adhering to the following activities. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting achievement of project goals. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.
2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.
3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is

discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.
5. No firearms shall be allowed on the project site.
6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.
7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.
8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.
9. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.
10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be

re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance.
12. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.
13. The Sacramento Fish and Wildlife Office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFG contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.
14. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600

EXHIBIT “A” - DEFINITIONS

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means " . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Pupping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposes of this definition either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

Attachment 3

STANDARD RECOMMENDATIONS

1

U.S. FISH AND WILDLIFE SERVICE STANDARDIZED RECOMMENDATIONS FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX PRIOR TO OR DURING GROUND DISTURBANCE

Prepared by the Sacramento Fish and Wildlife Office
January 2011

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. **However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act) and does not preclude the need for section 7 consultation or a section 10 incidental take permit for the proposed project.** Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). These protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

IS A PERMIT NECESSARY?

Certain acts need a permit from the Service which includes destruction of any known (occupied or unoccupied) or natal/pupping kit fox dens. Determination of the presence or absence of kit foxes and /or their dens should be made during the environmental review process.

All surveys and monitoring described in this document must be conducted by a qualified biologist and these activities do not require a permit. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, the biologist(s) must be able to identify coyote, red fox,

gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount. Resumes of biologists should be submitted to the Service for review and approval prior to any survey or monitoring work occurring.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints, of approximately one acre or less, such as an individual in-fill oil well, communication tower, or bridge repairs. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features and utilize this information as guidance to situate the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then surveys should be conducted and the Service should be contacted for technical assistance to determine the extent of possible take.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Kit foxes change dens four or five times during the summer months, and change natal dens one or two times per month (Morrell 1972). Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol). Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities.

If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If the take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping den which may not be destroyed while occupied. A take authorization/permit is required to destroy these dens even after they are vacated. Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: Linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project and those requirements supersede any requirements found in this document.

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In order to avoid impacts, construction activities must avoid their dens. The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances due to the length of dens underground. The following distances are **minimums**, and if they cannot be followed the Service must be contacted. Adult and pup kit foxes are known to sometimes rest and play near the den entrance in the afternoon, but most above-ground activities begin near sunset and continue sporadically throughout the night. Den definitions are attached as Exhibit A.

Potential den**	50 feet
Atypical den**	50 feet
Known den*	100 feet
Natal/pupping den (occupied <u>and</u> unoccupied)	Service must be contacted

***Known den:** To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, orange construction fencing or other fencing as approved by the Service as long as it has openings for kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

****Potential and Atypical dens:** Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

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Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection.

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Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use.

If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities.

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1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.
2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.
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discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.
5. No firearms shall be allowed on the project site.
6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.
7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.
8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.
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10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be

re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance.
12. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.
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14. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

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(916) 414-6620 or (916) 414-6600

EXHIBIT “A” - DEFINITIONS

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means " . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Pupping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposes of this definition either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

Revised Attachment 4



MONSOON CONSULTANTS

**P.O. Box 151 San Luis Obispo, California 93406 Tel 805-280-1051
breely@monsoonconsultants.com**

August 10, 2017

Mr. Kevin Merrill
Mesa Vineyard Management, Inc.
P.O Box 789
Templeton, California 93465
Tel: 805-434-4100

**Re: NORTH FORK VINEYARDS FROST PROTECTION RESERVOIRS #1, #2 & #3 –
ANALYSIS OF RESERVOIR EVAPORATIVE LOSSES**

Dear Mr. Merrill:

Per your request Monsoon Consultants (Monsoon) has been retained by Mesa Vineyard Management, Inc. (MESA) to provide hydrologic consulting services for the referenced project. Our specific scope of services is related to the estimation of net evaporative losses from the three (3) proposed agricultural reservoirs. The proposed reservoirs are planned to be constructed for frost protection at the North Fork Vineyards, which is located approximately 9-miles west of the community of New Cuyama in Santa Barbara County, California. The approximate coordinates of the subject property are Latitude: 35.014835 Longitude: -119.861751. The project includes APN 147-020-045 and 147-020-146. Monsoon has performed the requested evaporation analyses and the corresponding results are presented below.

HYDROLOGIC ANALYSIS

The owners of North Fork Vineyards are proposing to construct three (3) agricultural reservoirs which will be utilized for water storage for frost protection of the vines.

CIVIL ENGINEERS / HYDROLOGISTS

The vines are particularly vulnerable to damage from frost events during the months of February, March and April. When not needed for frost protection, frost pond water will be metered out for vineyard irrigation. In an effort to minimize the amount of evaporation that will occur from the subject agricultural reservoirs, MESA plans to maintain water levels in the reservoirs as follows:

- May 1st – January 31st - Reservoirs will be maintained with a water depth of 3-feet from well supplied water.
- February 1st – April 30th - Reservoirs will be maintained at a full condition for potential frost protection.

For the purposes of estimating the magnitude of monthly net evaporative losses from each of the subject frost protection reservoirs, Monsoon obtained and analyzed historic precipitation and evapotranspiration data from existing climatologic recording gage sites which are in close proximity to the North Fork Vineyards property. Specifically, we utilized average monthly precipitation data from the recording station located at the New Cuyama Fire Station. This data set is maintained by the Western Regional Climate Center and includes recorded data between 1974 and 2016. A copy of the summary data is included as an attachment to this report.

In addition to the precipitation analysis, Monsoon also developed an estimate of the average monthly evaporative losses which will occur within each of the subject reservoirs. For the purposes of this estimate, Monsoon reviewed monthly reference evapotranspiration (ET_o) data from the California Irrigation Management Information System (CIMIS) for the period between January 1, 2000 and December 31, 2016 which was obtained from the CIMIS station in Cuyama (CIMIS Station #88). During the referenced time frame, the average monthly ET_o for the Cuyama CIMIS site ranged from a minimum of 3.13-inches in December to a maximum of 14.45 inches in July. Pan evaporation was estimated by applying the conversion: $ET_o / 0.6 = \text{Pan Evaporation}$. Pan evaporation was then converted to lake evaporation by applying a factor of 0.75. A copy of the summary evaporation calculations is included as an attachment to this report.

Based on the results of our analysis, the average monthly lake evaporation rate for each of the North Fork Vineyards Reservoirs ranges from approximately 2.35-inches in December to a maximum of 10.84-inches in July. Based on our review of the design drawings for the

subject reservoirs, which were prepared by Tom A. Howell (CA CE 27037), it was determined that the surface area, at full conditions, is approximately 2.8 acres for each of the sites. This is the condition that will be maintained during the months of February, March and April for frost protection. During the remainder of the year, when there will be 3-feet of water in each of the reservoirs, the pond surface area is approximately 1.2 – 1.3 acres in the reservoirs.

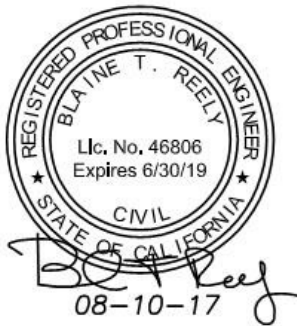
Through the implementation of the reservoir management strategy described above, the total average annual net evaporative losses, from each of the subject reservoirs, is summarized below. The combined average annual estimated net evaporative losses from all three reservoirs, is approximately 26.28 AC-FT. A summary of the hydrologic analysis is attached.

ANNUAL NET EVAPORATIVE LOSSES (AC-FT)

RESERVOIR #1	8.50
RESERVOIR #2	9.04
RESERVOIR #3	8.74

If you have any questions or require additional information, please do not hesitate to call.

Sincerely,



Monsoon Consultants

Blaine T. Reely, PhD, PE
Principal Engineer

attachments

CIVIL ENGINEERS / HYDROLOGISTS

**NORTH FORK VINEYARDS - RESERVOIR #1
FROST PROTECTION RESERVOIR
ANNUAL EVAPORATION PROFILE
POND MINIMUM: MAY - JAN
(AVERAGE CONDITIONS)**

IRRIGATION RESERVOIR EVAPORATION ANALYSIS

MONTH	AVG. MONTHLY PAN EVAPORATION (IN)	AVG. MONTHLY LAKE EVAPORATION (IN)	AVG. MONTHLY PRECIPITATION (IN)	RESERVOIR #1 MONTHLY NET EVAPORATION LOSSES (AC-FT)	CONDITION OF THE IRRIGATION RESERVOIR #1
JAN	3.57	2.68	1.45	0.12	3' OF WATER IN POND
FEB	4.22	3.16	1.68	0.35	POND FULL
MAR	6.92	5.19	1.62	0.85	
APR	9.02	6.77	0.47	1.50	
MAY	12.07	9.05	0.24	0.89	3' OF WATER IN POND
JUN	13.89	10.41	0.04	1.05	
JUL	14.45	10.84	0.08	1.09	
AUG	13.30	9.98	0.10	1.00	
SEP	10.21	7.66	0.35	0.74	
OCT	7.02	5.27	0.30	0.50	
NOV	4.31	3.23	0.55	0.27	
DEC	3.13	2.35	1.03	0.13	
TOTAL ANNUAL EVAP. LOSSES (AC-FT)				8.50	

NOTE 1: CONVERSION: 1 AC-FT/AC/YR = 892.7 GAL/DAY

NOTE 2: WATER SURFACE AREA ESTIMATES FOR EVAPORATION LOSS ESTIMATES: Reservoir #1 = 2.85 AC (RESERVOIR FULL)

NOTE 2: WATER SURFACE AREA ESTIMATES FOR EVAPORATION LOSS ESTIMATES: Reservoir #1 = 1.216 AC (3' OF WATER IN RESERVOIR)

NOTE 4: RESERVOIR WATER STORAGE CAPACITY ESTIMATE (MAXIMUM): RESERVOIR #1 = 49.0 AC-FT

NOTE 5: AVERAGE MONTHLY PRECIPITATION DATA SOURCE = WESTERN REGIONAL CLIMATE CENTER WEBSITE / NEW CUYAMA STATION (1974-2016)

NOTE 6: AVERAGE MONTHLY EVAPORATION DATA SOURCE = CALIFORNIA IRRIGATION MANAGEMENT INFORMATION SYSTEM (CIMIS) WEBSITE / CUYAMA STATION (2000-2016)

**NORTH FORK VINEYARDS - RESERVOIR #2
FROST PROTECTION RESERVOIR
ANNUAL EVAPORATION PROFILE
POND MINIMUM: MAY - JAN
(AVERAGE CONDITIONS)**

IRRIGATION RESERVOIR EVAPORATION ANALYSIS

MONTH	AVG. MONTHLY PAN EVAPORATION (IN)	AVG. MONTHLY LAKE EVAPORATION (IN)	AVG. MONTHLY PRECIPITATION (IN)	RESERVOIR #1	CONDITION OF THE IRRIGATION RESERVOIR #2
				MONTHLY NET EVAPORATION LOSSES (AC-FT)	
JAN	3.57	2.68	1.45	0.13	3' OF WATER IN POND
FEB	4.22	3.16	1.68	0.36	POND FULL
MAR	6.92	5.19	1.62	0.86	
APR	9.02	6.77	0.47	1.52	3' OF WATER IN POND
MAY	12.07	9.05	0.24	0.97	
JUN	13.89	10.41	0.04	1.14	
JUL	14.45	10.84	0.08	1.18	
AUG	13.30	9.98	0.10	1.09	
SEP	10.21	7.66	0.35	0.80	
OCT	7.02	5.27	0.30	0.55	
NOV	4.31	3.23	0.55	0.29	
DEC	3.13	2.35	1.03	0.14	
TOTAL ANNUAL EVAP. LOSSES (AC-FT)				9.04	

NOTE 1: CONVERSION: 1 AC-FT/AC/YR = 892.7 GAL/DAY

NOTE 2: WATER SURFACE AREA ESTIMATES FOR EVAPORATION LOSS ESTIMATES: Reservoir #2 = 2.897 AC (RESERVOIR FULL)

NOTE 2: WATER SURFACE AREA ESTIMATES FOR EVAPORATION LOSS ESTIMATES: Reservoir #2 = 1.319 AC (3' OF WATER IN RESERVOIR)

NOTE 4: RESERVOIR WATER STORAGE CAPACITY ESTIMATE (MAXIMUM): RESERVOIR #2 = 49.1 AC-FT

NOTE 5: AVERAGE MONTHLY PRECIPITATION DATA SOURCE = WESTERN REGIONAL CLIMATE CENTER WEBSITE / NEW CUYAMA STATION (1974-2016)

NOTE 6: AVERAGE MONTHLY EVAPORATION DATA SOURCE = CALIFORNIA IRRIGATION MANAGEMENT INFORMATION SYSTEM (CIMIS) WEBSITE / CUYAMA STATION (2000-2016)

**NORTH FORK VINEYARDS - RESERVOIR #3
FROST PROTECTION RESERVOIR
ANNUAL EVAPORATION PROFILE
POND MINIMUM: MAY - JAN
(AVERAGE CONDITIONS)**

IRRIGATION RESERVOIR EVAPORATION ANALYSIS

MONTH	AVG. MONTHLY PAN EVAPORATION (IN)	AVG. MONTHLY LAKE EVAPORATION (IN)	AVG. MONTHLY PRECIPITATION (IN)	RESERVOIR #1 MONTHLY NET	CONDITION OF THE IRRIGATION RESERVOIR #3
				EVAPORATION LOSSES (AC-FT)	
JAN	3.57	2.68	1.45	0.13	3' OF WATER IN POND
FEB	4.22	3.16	1.68	0.35	POND FULL
MAR	6.92	5.19	1.62	0.85	
APR	9.02	6.77	0.47	1.50	3' OF WATER IN POND
MAY	12.07	9.05	0.24	0.93	
JUN	13.89	10.41	0.04	1.09	
JUL	14.45	10.84	0.08	1.13	
AUG	13.30	9.98	0.10	1.04	
SEP	10.21	7.66	0.35	0.77	
OCT	7.02	5.27	0.30	0.52	
NOV	4.31	3.23	0.55	0.28	
DEC	3.13	2.35	1.03	0.14	
TOTAL ANNUAL EVAP. LOSSES (AC-FT)				8.74	

NOTE 1: CONVERSION: 1 AC-FT/AC/YR = 892.7 GAL/DAY

NOTE 2: WATER SURFACE AREA ESTIMATES FOR EVAPORATION LOSS ESTIMATES: Reservoir #3 = 2.852 AC (RESERVOIR FULL

NOTE 2: WATER SURFACE AREA ESTIMATES FOR EVAPORATION LOSS ESTIMATES: Reservoir #3 = 1.265 AC (3' OF WATER IN RESERVOIR

NOTE 4: RESERVOIR WATER STORAGE CAPACITY ESTIMATE (MAXIMUM): RESERVOIR #1 = 48.9 AC-FT

NOTE 5: AVERAGE MONTHLY PRECIPITATION DATA SOURCE = WESTERN REGIONAL CLIMATE CENTER WEBSITE / NEW CUYAMA STATION (1974-2016)

NOTE 6: AVERAGE MONTHLY EVAPORATION DATA SOURCE = CALIFORNIA IRRIGATION MANAGEMENT INFORMATION SYSTEM (CIMIS) WEBSITE / CUYAMA STATION (2000-2016)

NOTE:
To print data frame (right side), click on right frame before printing.

1981- 2010

- [Daily Temp. & Precip.](#)
- [Daily Tabular data \(-23 KB\)](#)
- [Monthly Tabular data \(-1 KID](#)
- [NCDC 1981-2010 Normals HKB\)](#)

1971- 2000

- [Daily Temp. & Precip.](#)
- [Daily Tabular data \(-23 KB\)](#)
- [Monthly Tabular data \(-1 KID](#)
- [NCDC 1971-2000 Normals HKB\)](#)

1961-1990

- [Daily Temp. & Precip.](#)
- [Daily Tabular data \(-23 KB\)](#)
- [Monthly Tabular data \(-1 KR\)](#)

NEW CUYAMA FIRE STN, CALIFORNIA (046154)

Period of Record Monthly Climate Summary

Period of Record: 01/01/1974 to 06/09/2016

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	60.9	61.8	65.1	70.5	79.6	88.2	94.3	93.3	87.6	77.7	66.4	60.8	75.5
Average Min. Temperature (F)	32.4	34.2	36.5	38.6	44.3	50.8	55.8	54.7	50.9	43.0	35.3	31.5	42.3
Average Total Precipitation (in.)	1.44	1.68	1.59	0.46	0.24	0.04	0.08	0.10	0.35	0.30	0.55	1.03	7.84
Average Total Snowfall (in.)	0.1	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 94.1% Min. Temp.: 94.3% Precipitation: 96.4% Snowfall: 95.8% Snow Depth: 95.9%
Check [Station Metadata](#) or [Metadata graphics](#) for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

CUVAMA
CIMIS STATION#88
REFERENCE EVAPOTRANSPIRATION DATA
2000=2016

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Average Eto (IN)	Average Pan Evaporation (IN)	Average Lake Evaporation (IN)
2.13	2.35	1.97	1.87	1.87	2.28	1.82	2.44	1.97	2.24	2.52	2.08	3.08	2.29	1.7	2.14	3.57	2.68
3.06	1.95	2.14	2.08	2.75	2.43	2.57	2.36	2.08	2.52	2.82	2.78	2.88	3.11	3.26	2.53	4.22	3.16
4.2	3.91	4.86	3.65	2.79	4.83	3.9	4.27	4.13	3.49	4.21	4.47	4.64	4.96	4.4	4.15	6.92	5.19
5.53	4.26	6.12	5.12	4.02	5.82	5.45	5.85	4.77	5.25	5.21	6.36	6.12	6.38	5.66	5.41	9.02	6.77
7.79	6.84	7.82	7	6.76	8.03	6.97	6.61	6.89	6.82	7.61	7.75	8.2	7.06	6.81	7.24	12.07	9.05
8.81	8.47	8.38	8.06	7.87	8.59	7.84	7.67	8.46	7.87	8.54	8.62	9.07	8.35	8.97	8.33	13.89	10.41
8.85	8.8	8.65	9.14	8.48	8.19	8.43	9.44	9.09	8.78	8.68	8.97	8.8	8.16	9.42	8.67	14.45	10.84
8.42	8.02	7.43	8.26	7.87	6.75	7.56	7.95	8.35	8.23	8.32	8.05	8.16	8.14	8.46	7.98	13.30	9.98
6.31	6.54	5.93	5.57	6.19	5.35	5.65	6.69	6.38	6.17	6.38	6.2	6.16	6.24	6.24	6.13	10.21	7.66
4.21	5.19	3.56	4.07	3.84	3.96	4.73	4.34	3.61	4.19	4.24	4.47	4.67	4.02	4.12	4.21	7.02	5.27
2.77	2.26	2.25	2.68	2.53	2.67	2.63	2.76	2.62	2.4	2.64	2.81	2.72	2.53	2.78	2.59	4.31	3.23
1.63	1.84	2.09	1.82	2.08	2.05	1.89	1.78	1.71	2.17	1.52	2.36	1.62	1.82	1.68	1.88	3.13	2.35
															61.26	102.11	76.58

DEPARTMENT OF TRANSPORTATION

50 HIGUERA STREET
SAN LUIS OBISPO, CA 93401-5415
PHONE (805) 549-3111



*Serious drought.
Help save water!*

July 7, 2017

SB 166 PM 53.72
SCH# 2017061009

Steve Rodriguez
Planning and Development
County of Santa Barbara
123 E. Anapamu Street
Santa Barbara, CA 93101

RE: DRAFT MITIGATED NEGATIVE DECLARATION – NORTH FORK RANCH FROST PONDS

Dear Mr. Rodriguez:

The California Department of Transportation (Caltrans) District 5, Local Development-Intergovernmental Review (LD-IGR) Branch, appreciates the opportunity to review the draft Mitigated Negative Declaration (MND) for a conditional use permit (16CUP-00000-00005) to construct and operate a 147-acre-foot reservoir for an existing vineyard along State Route (SR) 166. The project site is located approximately nine miles west of the unincorporated community of New Cuyama. Caltrans offers the following comments in response to the project's evaluation of potential impacts to the state highway system as discussed in the draft MND:

Water Resources/Flooding

The document states that the proposed project would be required to comply with County Grading Ordinance requirements to ensure that the proposed reservoir berms are structurally adequate to contain the water impounded by the reservoirs. The document concludes that the project would have **no impact** related to flood-related hazards. However, Caltrans notes that the potential exists for catastrophic failure of the berms and inundation of SR 166 resulting in potentially significant impacts to state facilities. Caltrans is concerned regarding the adequacy of the County Grading Ordinance requirements, and recommends the incorporation of a mitigation measures to require review and approval of the berms by the California Department of Water Resources in order to ensure structural integrity and adequacy and reduce potential impacts to **less than significant with mitigation**.

Encroachment Permits and Irrigation Lines

The project details state that water from wells conveyed to the reservoir will utilize existing vineyard irrigation pipelines extending beneath SR 166. Please provide more information regarding these irrigation lines so they can be positively located. Caltrans notes that there is a record of an encroachment permit (0589 NMC 0256) for a three-inch galvanized steel waterline crossing under SR 166 on the floor of a cattle pass structure located at Post Mile (PM) 53.7 (actual cattle pass is at PM 53.5). However, without positive location Caltrans is not able to verify that these are the same irrigation line being proposed for use by the project. Please be aware that any project-related activities

North Fork Ranch Frost Ponds
July 7, 2017
Page 2

(e.g., construction, maintenance, general operations, etc.) that would occur within the Caltrans right-of-way will require an approved encroachment permit.

If you have any questions, or need further clarification on items discussed above, please don't hesitate to contact me directly at Michael.Hollier@dot.ca.gov or (805) 549-3131.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Hollier", written in a cursive style.

MICHAEL D. HOLLIER
Transportation Planner
Development Review Coordinator
District 5, LD-IGR South Branch

cc: none

Subj: **North Fork Ranch Frost Ponds Project draft Mitigated Negative Declaration, Santa Barbara County SCH# 2017061009**
 Date: 7/6/2017 3:45:28 P.M. Pacific Daylight Time
 From: Martin.Potter@wildlife.ca.gov
 To: Rodriguezaicp@aol.com
 CC: Christine.Found-Jackson@wildlife.ca.gov, Christine.Thompson@wildlife.ca.gov,
Bob.Stafford@wildlife.ca.gov, Sarah.Rains@wildlife.ca.gov

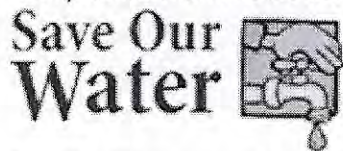
Dear Mr. Rodriguez,

The Department has reviewed the above Subject Mitigated Negative Declaration (MND) for impacts to biological resources. The proposed project includes the construction of 3 five-acre frost ponds, with associated pipelines between ponds, to facilitate the growing of grapes. The proposed project site is 6,565 acres located in the Cuyama Valley and is within the range of several special status plant and animal species, including the Federal Endangered San Joaquin woollythreads (*Monolopia congdonii*), the Federal and State Endangered and Fully Protected blunt-nosed leopard lizard (*Gambelia sila*), the Federal Endangered and State Threatened San Joaquin kit fox (*Vulpes macrotis mutica*), and the Federal and State Endangered giant kangaroo rat (*Dipodomys ingens*). Surveys were conducted for these listed species, using Department-recognized protocols. No listed species or their habitats were observed on the proposed project site. However, Department staff observed in November, 2015 approximately 1,000 acres of the project site (that portion in which the frost ponds would be constructed) had been recently deep-ripped and disked. According to the MND, the disking was done in preparation for the planting of grape vines. The disking would have had the potential to destroy the habitats of the above listed species. According to the MND, surveys for special status species were conducted prior to disking. There was some indication in the MND that disking was routinely performed on the project site, but this was not clear.

CEQA requires the whole of the action to be considered when assessing the significance of impacts from a project (CEQA Guidelines §15063(a)(1), §15378). The Department is concerned that the construction of frost ponds could be considered, along with the disking of the project site and planting of grapes, to be parts of one project which should have been analyzed for significant impacts under CEQA. The Department therefore recommends a more comprehensive analysis of impacts from the proposed project, together with measures proposed to mitigate significant impacts, be presented in a revised and re-circulated MND. Please contact me if you have questions or require clarification of these issues. Thank you.

Martin Potter
 Senior Environmental Scientist (Specialist)
 California Department of Fish and Wildlife
 South Coast Region
 P.O. Box 1797 Ojai, CA 93024
 Phone/Fax (805) 640-3677
 email: Martin.Potter@wildlife.ca.gov

Every Californian should conserve water. Find out how at:



SaveOurWater.com · Drought.CA.gov

Dear Mr. Rodriguez,

Once again we would like to thank you for holding the June 26th meeting on the draft NMD in New Cuyama. As you witnessed there was an excellent community turnout expressing concern for the NMD and asking the Planning Department to take into consideration the whole project in this review. Furthermore since the Cuyama Valley is identified as one of the critically overdrafted water basins and subject to SGMA, we want to encourage the Planning Department to use this opportunity to bring the review of this project in compliance with SGMA regulations, since it appears that the Threshold data used for the Cuyama Valley is out of date.

Attached you will find our letter to the Zoning Administrator that we ask you to include with the North Fork Frost Pond application as part of the review.

Please do not hesitate to contact us with any questions.

Sincerely,

Roberta Jaffe & Stephen Gliessman
Condor's Hope Ranch
Cuyama Valley
Santa Barbara County
www.condorshope.com

To: Ms. Linda Liu, Santa Barbara County Zoning Administrator
From: Roberta Jaffe and Stephen Gliessman, residents and farmers
Cottonwood Canyon, Cuyama Valley
Contact: condor@condorshope.com

Re: North Fork Ranch Frost Ponds Project (17NGD-00000-00004)

Date: June 29, 2017

These are comments in regards to the application of Brodiaea, Inc. to install 3 – 49 acre foot reservoirs (total 147 acre-feet) in their newly planted vineyard in the Cuyama Valley, a designated critically overdrafted water basin by the California Department of Water Resources.

We along with approximately 25 other concerned citizens attended the June 26th meeting in New Cuyama on the Mitigated Negative Declaration draft for this project. As residents and farmers on the western end of the Cuyama Valley we want to express our strong concerns about the prepared NMD and opposition to this project.

(1) The MND is based on outdated data

The MND is based on the Santa Barbara County Environmental Thresholds and Guidelines Manual published October 2008 and last revised in July 2015. Specifically, the groundwater table section was last updated in 1992. (p.73)

The NMD also states that agriculture is not regulated in Santa Barbara County: from p. 36: County Environmental Thresholds: “A project is determined to have a significant effect on water resources if it would exceed established threshold values which have been set for each overdrafted groundwater basin. These values were determined based on an estimation of a basin’s remaining life of available water storage. If the project’s net new consumptive water use [total consumptive demand adjusted for recharge less discontinued historic use] exceeds the threshold adopted for the basin, the project’s impacts on water resources are considered significant.” The (outdated) water demand threshold for the Cuyama Valley Groundwater Basin is 31 AFY. The MND states: “The adopted threshold applies only to projects subject to discretionary review by the County, and do not apply to uses, such as agricultural operations, that do not require approval of a discretionary permit.”

So, if this were not an agricultural project, groundwater pumpage to fill these reservoirs would exceed the established threshold. Because it is an agricultural project, the amount of groundwater that will be potentially pumped multiple times in a season to fill the reservoirs is not being considered.

Since the last update of the Threshold document:

- USGS completed a 5-year study of the Cuyama Valley in May 2015

While the Threshold document estimated the Groundwater Gross Pumpage for the Cuyama Valley at 48,000 AFY; the USGS study listed the gross pumpage at 68,300 AFY for the period of 2000-2010 for the Cuyama Valley study area.

- And CA passed the Sustainable Groundwater Management Act (SGMA) in September 2014. DWR identified the Cuyama Valley as defined by its current Bulletin 118

boundaries (which includes the vineyard parcel) as one of 21 water basins in the state in critical overdraft (July, 2015).

There is no mention of SGMA or the USGS study in the Environmental Thresholds document. The county document that determines what is significant does not comply with SGMA. Even so, the reservoir project will increase pumpage beyond the threshold amount identified as 31 AFY.

Both the USGS study and SGMA point clearly to the need to balance agricultural use of groundwater, and that the Cuyama Valley is already in overdraft from the direct impacts of water intensive agriculture.

Quote from USGS study 2014 Hansen et al:

“Simulated changes in storage over time showed that significant withdrawals from storage generally occurred not only during drought years (1976–77 and 1988–92) but also during the early stages of industrial agriculture, which was initially dominated by alfalfa production. Since the 1990s, agriculture has shifted to more water-intensive crops. Measured and simulated groundwater levels indicated substantial declines in selected subregions, mining of groundwater that is thousands to tens of thousands of years old, increased groundwater storage depletion, and land subsidence. Most of the recharge occurs in the upland regions of Ventucopa and Sierra Madre Foothills, and the largest fractions of pumpage and storage depletion occur in the Main subregion. The long-term imbalance between inflows and outflows resulted in simulated overdraft (groundwater withdrawals in excess of natural recharge) of the groundwater basin over the 61-year period of 1949–2010.”

The Cuyama Valley Groundwater Sustainability Agency was just approved by the Board of Supervisors in accordance with SGMA. It is beginning its work to develop a Groundwater Sustainability Plan (GSP) for the Cuyama Valley that includes developing a balanced water budget for all uses of groundwater including agriculture. The NMD is outdated in not considering SGMA and the legal requirement to develop a Cuyama Valley GSP that takes into account agricultural use of groundwater. This project will further push the groundwater into over-pumpage and be detrimental to the sustainability of the Cuyama Valley. The proposed reservoirs will add significantly to the amount of groundwater being extracted from the Basin and will need to be accounted for in this budget.

- (2) The NMD by reviewing only the 3 reservoirs is only considering a small part of the project and not taking into consideration what has occurred on this parcel since 2015 nor what future plans will be for this parcel.

This 6565 acre parcel started being converted from non-irrigated rangeland to intensively irrigated vineyards in 2015. After the passage of SGMA and Cuyama Valley being identified as a critically overdrafted basin, Santa Barbara County permitted the new owners, Brodiaea, Inc., to drill 11 new agricultural wells. The proposed 3x 49-acre foot reservoirs were most likely part of Brodiaea, Inc.'s vineyard initial development plan. Evidence of this is the way the vineyard infrastructure included underground lines and overhead sprinklers for frost protection, even though no permit for reservoirs had been obtained. Thus this MND is looking at part of the project, not the whole project. When a project gets piecemealed like this it slips through regulations. If we were to look at the amount of water the 11 agricultural wells North Fork/Brodiaea were

allowed to drill post-SGMA, it seems they would definitely be withdrawing more than 31 AFY to fill 3- 49 AF reservoirs in an area that is subject to multiple late spring frosts. The reservoirs are not a stand-alone project, but are part of the vineyard development. Therefore the impact of the whole project should be analyzed, not just a part of the project.

This vineyard is located in a cold pocket and is highly susceptible to late spring frosts. Farmers who use overhead sprinklers to protect from frost damage report needing to water 10 hours per event. Thus for a 1000 planted acres, Brodiaea will deplete all 3 reservoirs for one event. Mr. Rodriguez stated at the meeting that his research showed there can be between zero and twenty frost events in the months of March and April.

Furthermore, since less than a 1000 acres of the 6565 acre parcel are currently planted, shouldn't Planning and Development be asking what the overall plan for vineyard development on this parcel is and how many reservoirs are in the overall plan?

This is an opportunity for the Planning and Development Department to look at the whole project and not just a small piece of it. It is also an opportunity for Planning and Development to align itself with the new regulations of SGMA which are crucial to any land use development, whether agriculture or not, in the Cuyama Valley.

- (3) Santa Barbara County has just begun the process of monitoring wells on the west end of the Valley including those of the North Fork Ranch vineyards, and the impact and groundwater flow is not clear. This study needs to be completed before any new impacts on groundwater are permitted for the western Cuyama Valley.

As of June 12th, a SB County hydrologist reported: "There's been a lot of variation in well recovery throughout the western basin and the different drainages. In Cottonwood Canyon, there appears to be a difference between the western wells and the eastern wells. Western wells have actually dropped since the fall 2016 measurements; while wells in the eastern Cottonwood Canyon drainage have increased."

-
- (4) Concerns regarding draining reservoirs in May.

The application states that the frost ponds will only be filled January through April and used for frost events mainly in March and April. In May the water left in the reservoirs will be released to irrigate the vineyard. At the June 26th meeting on the NMD we were told that there will be no monitoring of this by the County and even if they did keep the ponds full, there are really no consequences. It seems there needs to be a monitoring system in place to make sure the reservoirs are depleted in May so that there is not excessive summer evaporation. In addition, at the meeting there was concern that if the reservoirs emptied over the summer months the polyethylene liner would both decay as well as be damaged by rodents; thus potentially creating an annual need to replace the liners at a great expense and be a significant addition to the landfill.

In conclusion, we do not think the NMD considers the full impact of the proposed reservoirs and request that the Zoning Administration require a more extensive environmental review that takes into account the impacts of the whole vineyard project.

Furthermore this project provides the Planning and Development Department an opportunity to include the new regulations of California's Sustainable Groundwater Management Act (SGMA) when reviewing projects that affect the groundwater in critically overdrafted water basins. We are not out of drought. Predictions for the southwestern US is that drought will continue. When Santa Barbara County reviews projects for critically overdrafted basins, whether agricultural projects or not, this long-term climatic situation should be considered. We appreciate your review of our concerns of the NMD which we consider to be an incomplete environmental review.

Thank you for your consideration.

Steve,

Hello,

Thank you for the opportunity to comment on the "Vineyard Frost Pond Project" in Cuyama Valley. I attended the meeting on Monday, June 26th for the discussion concerning the environmental impacts of the project, per you and your colleague, the description and the mitigations all seemed reasonable, for a project in a different climate and water supply situation and still may be appropriate for this situation if managed appropriately. What I took away from the meeting and discussion was that there is a glaring lack of oversight for a project that has the potential to be utilized for more than the purpose described in the request by the applicant. The explanation of mitigating a miss use of the "frost ponds" was weak at best, primarily because a violation would need to be reported and since water in the ponds will not be visible from a public view point, how would a violation be detected? There are questions that I would raise with the applicant, how will they reconcile water accumulation in the ponds for frost protection with early irrigation requirements during low rainfall years? Will the "Frost" water be used to overhead irrigate the vineyard in low rain fall years, as done in the Los Alamos area that the same vineyard management company practices, to wet the soil profile as rain would provide. What will be the cultural practices, such as the timing of pruning to mitigate the need for frost protection and mowing of cover crop early to assist cold air drainage. I believe the vineyard has installed standard impact sprinklers to use for frost protection, if so, these use more water than more efficient "micro mist" style fixtures that can provide the same protection with less water volume. What is the recharge rate of the wells supplying the water to the ponds, is it sustainable to pump enough water to keep the ponds full for a long term frost event and with a 1000 acre final planting will these ponds be sufficient to provide enough coverage or will more reservoirs be needed? The construction methods of the Ponds also comes into question, if the ponds are to be dry for nine months out of the year how are they going to be maintained during that time, especially to keep the integrity of the liner intact, an important environmental consideration is the altitude, light intensity and humidity of the climate, all detrimental to a pond liner holding up over time, frankly the best way to keep a liner in good shape is to keep water in the pond, what if the applicant decides to do so? Also, there can be a problem with the liner floating up when there is not enough water kept in place as the weight of the water holds the liner down. A concrete material covering may be required to line the ponds to avoid the potential hazards of a nine month dry period.

To conclude I want to recommend that the entire property be certified by the Sustainable In Practice program conducted by the Vineyard Team group, through this program I would suggest that the oversight of the "Frost Pond Water" utilization be incorporated into the required certification process, this would provide a 3rd party to be involved so that the Frost Ponds are only used for the intended purpose. The SIP program holds a very high degree of respect in the Agricultural community and will provide a credible program to insure that the whole property be managed on a sustainable basis. This area has a delicate ecosystem and is on the edge between regional influences, the rainfall patterns are dramatically different in a short distance, with the weather stations the applicant has in place they know what they have to work with and should be considered as part of a decision making process. I would also suggest a quarterly community access visit to view the ponds and be updated on the SIP program. The last thing will be to participate in the groundwater plans in the coming future, to be part of the solution so that the vineyard that is being developed now will be a continuing part of the agricultural community in the years ahead.

I want to finish by stating that I am a fan of the overall project and I am hopeful that it will be successful, this vineyard has the potential to bring credibility to the area as a quality wine grape growing region, as a grape grower in the area I believe it will be helpful to all growers, current and future, but it must be managed in a way that will last, we have altered our vineyard practices over time from the common beliefs of vineyard management to the conditions we are faced with, it works but you have to be engaged in what you are doing. If the project fails or creates problems then the opposite could happen, nobody wants that. I have a high degree of respect for the the vineyard management company, they are good farmers and I am sure they are learning what the conditions are and will respond appropriately and it will bode well for everyone. I strongly support the Agricultural Right to Farm philosophy of the county, it is important to encourage farming and give farmers the ability to be good stewards of the land.

These comments are my own, I do not represent anyone other than myself.

Thank you for your attention.

Joe Haslett
2875 Cottonwood Canyon Road
Cuyama Valley, CA
805-748-4033

STATE OF CALIFORNIA

NATIVE AMERICAN HERITAGE COMMISSION

Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710
Fax (916) 373-5471

Edmund G. Brown Jr., Governor



July 3, 2017

Steve Rodriguez
Santa Barbara County Planning and Development
624 W. Foster Road
Santa Maria, CA 93455

Sent via e-mail: rodriguezaicp@aol.com

Re: SCH# 2017061009, North Fork Ranch Frost Ponds Project, Community of New Cuyama; Santa Barbara County, California

Dear Mr. Rodriguez:

The Native American Heritage Commission (NAHC) has reviewed the Mitigated Negative Declaration prepared for the project referenced above. The review included the Introduction and Project Description, and the Potentially Significant Effects Checklist prepared by Rincon for the Santa Barbara County Planning and Development. We have the following concerns:

1. There is no documentation of **government-to-government consultation by the lead agency** under AB-52 with Native American tribes traditionally and culturally affiliated to the project area as required by statute, or that mitigation measures were developed in consultation with the tribes. Discussions under AB-52 may include the type of document prepared; avoidance, minimization of damage to resources; and proposed mitigation. Contact by consultants during the Cultural Resources Assessments is not formal consultation.
2. While Archaeological Mitigation includes a Native American Monitor, there are no mitigation measures specifically addressing Tribal Cultural Resources separately. Mitigation measures must take Tribal Cultural Resources into consideration as required under AB-52, **with or without consultation** occurring. Mitigation language for archaeological resources is not always appropriate for or similar to measures specifically for handling Tribal Cultural Resources.

The California Environmental Quality Act (CEQA)¹, specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment.² If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared.³ In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended in 2014 by Assembly Bill 52. (AB 52).⁴ **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** AB 52 created a separate category for "tribal cultural resources"⁵, that now includes "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment."⁶ Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.⁷ Your project may also be subject to **Senate Bill 18 (SB 18)** (Burton, Chapter 905, Statutes of 2004), Government Code 65352.3, if it also involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space. **Both SB 18 and AB 52 have tribal consultation requirements.** Additionally, if your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966⁸ may also apply.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

Agencies should be aware that AB 52 does not preclude agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52. For that reason, we urge you

¹ Pub. Resources Code § 21000 et seq.

² Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b); CEQA Guidelines Section 15064.5 (b)

³ Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1); CEQA Guidelines § 15064 (a)(1)

⁴ Government Code 65352.3

⁵ Pub. Resources Code § 21074

⁶ Pub. Resources Code § 21084.2

⁷ Pub. Resources Code § 21084.3 (a)

⁸ 16 U.S.C. 300101, 36 C.F.R. § 800 et seq.

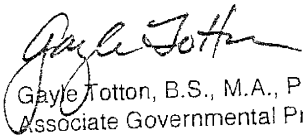
to continue to request Native American Tribal Consultation Lists and Sacred Lands File searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>. Additional information regarding AB 52 can be found online at http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf, entitled "Tribal Consultation Under AB 52: Requirements and Best Practices".

The NAHC recommends lead agencies consult with all California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources.

A brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments is also attached.

Please contact me at gayle.totton@nahc.ca.gov or call (916) 373-3710 if you have any questions.

Sincerely,



Gayle Totton, B.S., M.A., Ph.D
Associate Governmental Project Analyst

Attachment

cc: State Clearinghouse

Pertinent Statutory Information:

Under AB 52:

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a **lead agency** shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice.

A **lead agency** shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.⁹ and **prior to the release of a negative declaration, mitigated negative declaration or environmental impact report.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18).¹⁰

The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- a. Alternatives to the project.
- b. Recommended mitigation measures.
- c. Significant effects.¹¹

1. The following topics are discretionary topics of consultation:

- a. Type of environmental review necessary.
- b. Significance of the tribal cultural resources.
- c. Significance of the project's impacts on tribal cultural resources.

If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency.¹²

With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process **shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10.** Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.¹³

If a project may have a significant impact on a tribal cultural resource, **the lead agency's environmental document shall discuss both of the following:**

- a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
- b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource.¹⁴

Consultation with a tribe shall be considered concluded when either of the following occurs:

- a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
- b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.¹⁵

Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 **shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program**, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable.¹⁶

If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, **the lead agency shall consider feasible mitigation** pursuant to Public Resources Code section 21084.3 (b).¹⁷

An environmental impact report **may not be certified**, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

- a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
- b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

⁹ Pub. Resources Code § 21080.3.1, subds. (d) and (e)

¹⁰ Pub. Resources Code § 21080.3.1 (b)

¹¹ Pub. Resources Code § 21080.3.2 (a)

¹² Pub. Resources Code § 21080.3.2 (a)

¹³ Pub. Resources Code § 21082.3 (c)(1)

¹⁴ Pub. Resources Code § 21082.3 (b)

¹⁵ Pub. Resources Code § 21080.3.2 (b)

¹⁶ Pub. Resources Code § 21082.3 (a)

¹⁷ Pub. Resources Code § 21082.3 (e)

- c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days.¹⁸
This process should be documented in the Tribal Cultural Resources section of your environmental document.

Under SB 18:

Government Code § 65352.3 (a) (1) requires consultation with Native Americans on general plan proposals for the purposes of "preserving or mitigating impacts to places, features, and objects described § 5097.9 and § 5091.993 of the Public Resources Code that are located within the city or county's jurisdiction. Government Code § 65560 (a), (b), and (c) provides for consultation with Native American tribes on the open-space element of a county or city general plan for the purposes of protecting places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code.

- SB 18 applies to **local governments** and requires them to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf
- **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.**¹⁹
- **There is no Statutory Time Limit on Tribal Consultation under the law.**
- **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research,²⁰ the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction.²¹
- **Conclusion Tribal Consultation:** Consultation should be concluded at the point in which:
 - The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
 - Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation.²²

NAHC Recommendations for Cultural Resources Assessments:

- Contact the NAHC for:
 - A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
 - A Native American Tribal Contact List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
 - The request form can be found at <http://nahc.ca.gov/resources/forms/>.
- Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
 - If part or the entire APE has been previously surveyed for cultural resources.
 - If any known cultural resources have been already been recorded on or adjacent to the APE.
 - If the probability is low, moderate, or high that cultural resources are located in the APE.
 - If a survey is required to determine whether previously unrecorded cultural resources are present.
- If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
 - The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

¹⁸ Pub. Resources Code § 21082.3 (d)

¹⁹ (Gov. Code § 65352.3 (a)(2)).

²⁰ pursuant to Gov. Code section 65040.2,

²¹ (Gov. Code § 65352.3 (b)).

²² (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Examples of Mitigation Measures That May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

- Avoidance and preservation of the resources in place, including, but not limited to:
 - Planning and construction to avoid the resources and protect the cultural and natural context.
 - Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - Protecting the cultural character and integrity of the resource.
 - Protecting the traditional use of the resource.
 - Protecting the confidentiality of the resource.
- Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed.²³
- Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated.²⁴

The lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

- Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources.²⁵ In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
- Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
- Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

²³ (Civ. Code § 815.3 (c)).

²⁴ (Pub. Resources Code § 5097.991).

²⁵ per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)).

Mr. Rodriguez,

Please include this letter at the hearing of the above subject.

Thank you.

Robert Ryan
(805) 441-0958

eKit - the global phonecard with more!

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Picture a tall glass of water and next to it, a bottle of wine.

The water comes from my well. The wine hypothetically will come from Brodiaea Inc.

Geologically we share the same ground water.

My concern is that you, a governing/planning body will allow a project that could potentially cause over draught.

In May 2015 the USGS released its 5 year study of the Cuyama Valley, one of 21 California groundwater basins experiencing extreme over draught. Subsequent well testing for water levels has been underway in the Cottonwood Canyon area, just west of the Brodiaea Inc. project. Together, this information can be helpful.

Attachment 5



Edmund G. Brown Jr.
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit



Ken Alex
Director

July 7, 2017

Steve Rodriguez
Santa Barbara County
624 W. Foster Rd
Santa Barbara, CA 93455

Subject: North Fork Ranch Frost Ponds
SCH#: 2017061009

Dear Steve Rodriguez:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on July 6, 2017, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Morgan".

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

**Document Details Report
State Clearinghouse Data Base**

SCH# 2017061009
Project Title North Fork Ranch Frost Ponds
Lead Agency Santa Barbara County

Type MND Mitigated Negative Declaration
Description A request of Brian Tetley, agent for Brodiaea, inc, owner, to consider Case No. 16CUP-00000-00005. The North Fork Ranch Frost Pond project is a request to construct and operate three frost ponds that would store water to be used for frost protection at the North Fork Ranch Vineyards. The project also includes the construction of new underground pipelines that would extend between each of the proposed reservoirs and the existing vineyard irrigation system.

Lead Agency Contact

Name Steve Rodriguez
Agency Santa Barbara County
Phone 805-682-3413
email
Address 624 W. Foster Rd
City Santa Barbara
Fax
State CA **Zip** 93455

Project Location

County Santa Barbara
City
Region
Lat / Long
Cross Streets HWY 166
Parcel No. 147-020-045
Township

Range **Section** **Base**

Proximity to:

Highways SR 166
Airports
Railways
Waterways Cuyama River
Schools
Land Use LU: Rural area, ag commercial; Z:AG-II-100

Project Issues Archaeologic-Historic; Biological Resources; Geologic/Seismic; Soil Erosion/Compaction/Grading; Water Quality; Wildlife

Reviewing Agencies Resources Agency; Department of Conservation; Department of Fish and Wildlife, Region 5; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 5; Regional Water Quality Control Board, Region 3; State Water Resources Control Board, Division of Drinking Water, District 6; State Water Resources Control Board, Division of Drinking Water; Native American Heritage Commission; State Lands Commission

Date Received 06/07/2017 **Start of Review** 06/07/2017 **End of Review** 07/06/2017

- All grading shall conform to Santa Barbara County Code Chapter 14 and standards and requirements pertaining thereto, these construction drawings and the recommendations of the soils engineer and engineering geologist.
- Contractor to notify the county grading inspector and soils laboratory at least 48 hours before start of grad work or any pre-construction meeting.
- Contractor shall employ all labor, equipment and methods required to prevent his operations from producing dust in amounts damaging to adjacent property, cultivated vegetation and domestic animals or causing a nuisance to persons occupying buildings in the vicinity of the job site. Contractor shall be responsible for damage caused by dust from his grading operation.
- Before beginning work requiring exporting or importing of materials, the contractor shall obtain approval from Public Works Road Division for haul routes used and methods provided to minimize the deposit of soils on county roads. Grading/road inspectors shall monitor this requirement with the contractor.
- The Geotechnical Engineer shall provide observation and testing during grading operations in the field and shall submit a final report stating that all earth work was properly completed and is in substantial conformance with the requirements of the grading ordinance.
- Areas to be graded shall be cleared of all vegetation including roots and other unsuitable materials for a structural fill, then scarified to a depth of 6" prior to placing any fill. Call grading inspector for initial inspection.
- A thorough search shall be made for all abandoned man-made facilities such as septic tank systems, fuel or water storage tanks, and pipelines or conduits. Any such facilities encountered shall be removed and the depression properly filled and compacted under observation of the geotechnical engineer.
- Areas with existing slopes which are to receive fill materials shall be keyed and benched. The design and installation of the keyway shall be per the geotechnical engineer's recommendation or per County Standard Detail No. G-13.
- Fill materials shall be spread in lifts not exceeding 6" in compacted thickness, moistened or dried as necessary to near optimum moisture content and compacted by an approved method. Fill materials shall be compacted to a minimum of 90% maximum density as determined by 1957 ASTM D-1557-01 modified proctor (ASHO) test or similar approved methods. Some fill areas may require compaction to a greater density if called for in the construction documents. Soil tests shall be conducted at not less than one test for each 18" of fill and/or for each 500 cubic yards of fill placed.
- Cut slopes shall not exceed a grade of 1 1/2 horizontal to 1 vertical. Fill and combination fill and cut slopes shall not exceed 2 horizontal to 1 vertical. Slopes over three feet in vertical height shall be planted with approved perennial or treated with equally approved erosion control measures prior to final inspection.
- Surface drainage shall be provided a minimum of 2% for 5 feet away from the foundation line of any structure.
- All trees that are to remain on site shall be temporarily fenced and protected around the drip line during grading.
- An erosion and sediment control plan shall be required as part of the grading plan and permit requirements.
- "Best Management Practices for Construction Activities: Eroded sediments and other pollutants must be retained on-site and must not be transported from the site via sheet flow swales, area drains, natural drainage courses, or wind. Stockpiles of earth and other construction related materials must be protected from being transported from the site by forces of wind or water. Fuels, oils, solvents, and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills may not be washed into the drainage system. Excess or waste concrete may not be washed into public way or any other drainage system. Provisions must be made to retain concrete wastes on site until they can be disposed as solid waste. Trash and construction related solid waste must be deposited into a covered waste receptacle to prevent contamination of rainwater and dispersal by wind. Sediments and other material may not be tracked from the site by vehicular traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental deposition shall be swept up immediately and may not be washed down by rain or other means. Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to minimize erosion by wind and water."
- If grading occurs during Nov 1 through Apr 15, no grading shall occur unless approved erosion and sediment control measures are in place. Discharges of sediment from the project site may result in a Stop Work Order.
- All earthwork on hillsides, sloping or mountainous terrain shall be stabilized to protect and prevent loss of soils, as necessary, year-round.

Earthwork Estimates

Cut: 130,280 C.Y. Fill: 127,900 C.Y. Import: 0 C.Y. Export: 0 C.Y. Quantities based on 30% shrinkage

Erosion Control Notes

- Erosion control measures shall be implemented on all projects and shall include source control, including protection of stockpiles, protection of slopes, protection of all disturbed areas, and protection of accesses. In addition, perimeter containment measures shall be placed prior to the commencement of grading and site disturbance activities unless the Public Works Department determines measures to be unnecessary based upon location, site characteristics or time of year. The intent of erosion control measures shall be to keep all sediment from entering a swale, drainage way, watercourse or onto adjacent properties.
- Site inspections and appropriate maintenance of erosion control devices shall be conducted and documented prior to, during, and after rain events.
- The developer shall be responsible for the placement and maintenance of all erosion control devices as specified by the approved plan until such time that the project is accepted as complete by the Public Works Department. Erosion control devices may be relocated, deleted or added as necessary during the project. Erosion control devices shall be maintained. Additional erosion control devices shall be placed at the discretion of the Engineer of Work, County Inspector, SWPPP Monitor, or RWQCB Inspector. Guidelines for determining appropriate erosion control devices are included in the appendix of the Public Improvement Standards.
- All erosion control devices shall be the first order of work and shall be in place between Oct 15 and April 15 or anytime when the rain probability exceeds 30%. This work shall be installed or applied after each area is graded and no later than five (5) working days after the completion of each area.
- The Engineer of Work and the Public Works Department shall be notified before October 15 for inspection of installed erosion control devices.
- A standby crew for emergency work shall be available at all times during the rainy season (October 15 through April 15). Necessary materials shall be available and stock piled at convenient locations to facilitate rapid construction or maintenance of temporary devices when rain is imminent.
- Permanent erosion control shall be placed and established with 90% coverage on all disturbed surfaces other than paved or gravel surfaces, prior to final inspection. Permanent erosion control shall be fully established prior to final acceptance. Temporary erosion control measures shall remain in place until permanent measures are established.
- In the event of a failure, the developer and/or his representative shall be responsible for cleanup and all associated costs or damages.
- All projects involving site disturbance of one acre or greater shall comply with the requirements of the National Pollutant Discharge Elimination System (NPDES). The developer shall submit a Notice of Intent (NOI) to comply with the General Permit for Construction Activity with the Regional Water Quality Control Board (RWQCB). The developer shall provide the County with the Waste Discharge Identification Number (WDID #) or with verification that an exemption has been granted by RWQCB.

- WDID# _____
- Person to contact 24 hours a day in the event there is an erosion control/sedimentation problem (Storm Water Compliance Officer):

Name Kevin Merrill

Local Phone Number 310-3989

Project Air Quality Control Notes:

During Construction the contractor shall designate a person or persons to monitor the Dust Control Program and to order increases measures as necessary to prevent the transport of dust off-site. Their duties shall include holiday and weekend periods when work may or may not be in progress. The name and telephone number for such persons shall be provided to the APCD prior to the commencement of construction.

The measures for dust control are as follows but not limited to:

Reduce the amount of disturbed area where possible,

- Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever wind speeds exceed 15mph. Reclaimed (non-potable) water should be used whenever possible.
- All dirt stockpile areas shall be sprayed daily as needed.
- Exposed ground areas that are planned to be reworked at dates later than one month after initial grading should be seeded with a fast germinating native grass seed and watered until vegetation is established.
- All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the ACCD.
- All external slopes shall be hydroseeded as soon as possible upon completion.
- Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
- All trucks hauling dirt, sand, soil, or other loose material are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114.
- Install wheel washers where vehicles enter and exit paved roads and streets, or wash off trucks and equipment leaving the site.
- Prior to final inspection all disturbed areas shall be vegetated with a fast-growing, native seed mix.

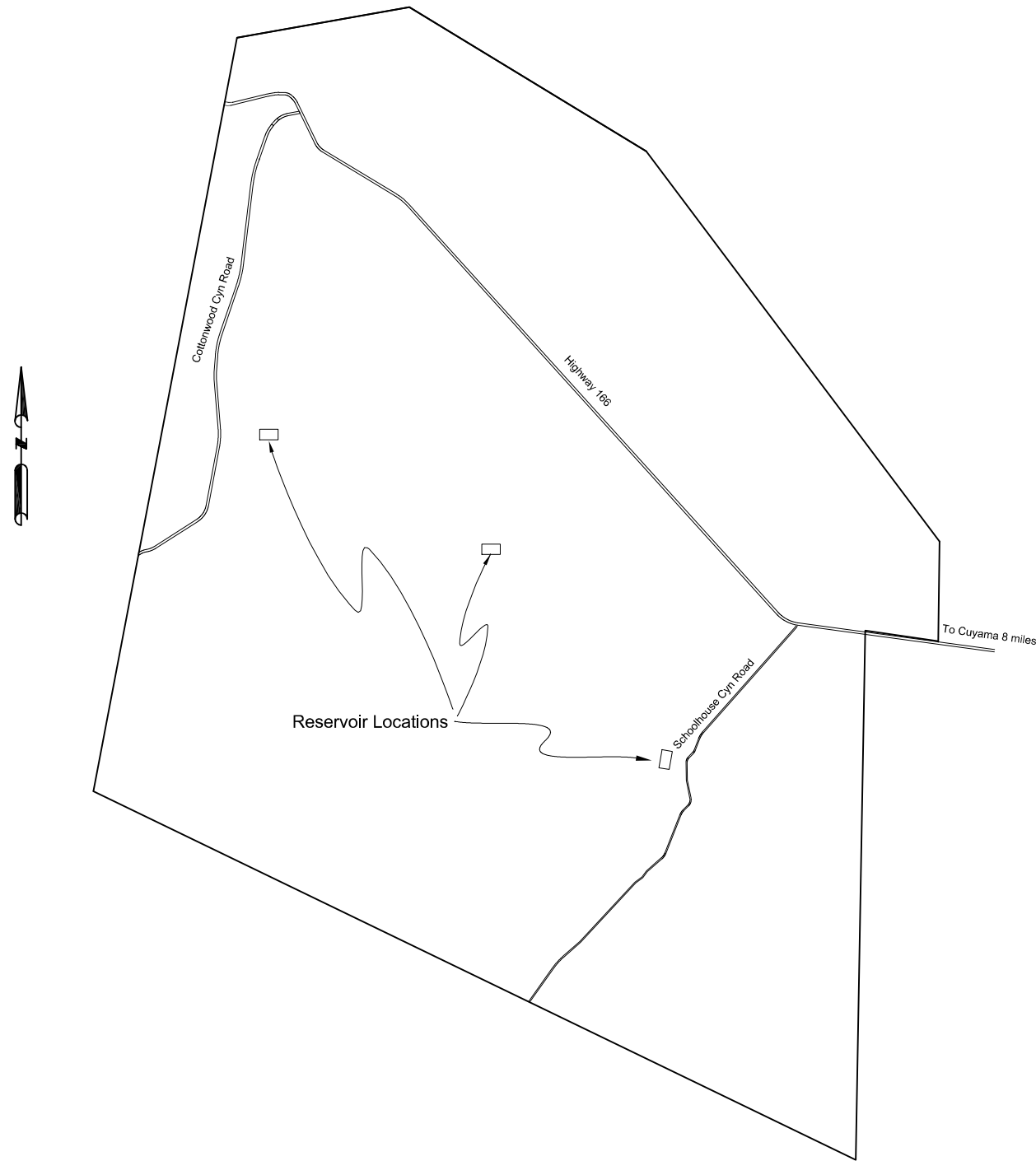
General Notes

- No construction shall be started without plans approved by the County Planning Department. The Planning Department shall be notified at least 24 hrs prior to the start of construction and the time and location for the preconstruction conference.
- All construction work and installations shall conform to the County Standards and Specifications.
- Soils tests shall be done in accordance with the County Standards. The test results shall clearly indicate the location and source of materials.
- Compaction tests shall be made on all embankment materials, subgrades and ditch backfill.
- There will be no need for special concrete inspection. Concrete for the anchor pad shall be 2000 psi. The rebar shall be inspected prior to the placement of the concrete. All concrete and the two sack slurry for the anti-seep collars and ditch backfill where shown shall be properly vibrated.
- The Design Engineer shall inspect the installation of the HDPE Liner. The liner shall be installed by a contractor specializing in lining ponds.
- The Engineer of Record shall certify that the improvements when completed are in accordance to the plans prior to the request for Final Inspection. As-built plans are to be prepared after construction is completed. The Engineer certifying the improvements shall be present at the Final Inspection.
- Final Reports for grading and earthwork shall be prepared in accordance with the requirements of the UBC, Chapter 33.
- Upon completion of the work, the Geotechnical Engineer shall submit to the Engineer of Record a complete summary of all testing done during the project.
- The Construction Contractor shall maintain a current, complete and accurate record of all changes which deviate from the approved plans. No changes shall be made without the prior approval of the Engineer of Record and the County.

North Fork Reservoirs #1-3

APN 147-020-045

Vicinity Map



Scope of Work

The work consists of constructing three new lined reservoirs for irrigation purposes. All areas to receive fill shall be excavated a minimum of three feet, the exposed surface scarified and moisture conditioned, then recompacted to 90% relative compaction. The intent is to balance the earthwork with no import or export. The completed interior slopes shall be fine graded and all rocks removed, then rolled with a smooth drum roller. A 40 mil HDPE geomembrane liner will then be installed on the slopes and bottom. The liner will be installed per manufacturer's recommendations by a company specializing in liner installation. A five foot by twenty three foot by eight inch reinforced concrete pad for anchoring the liner shall be constructed around the pump inlet pipes. No special inspection for the concrete work shall be required. A 6 foot non-climb fence will be built around the exterior perimeter. Coast Guard Approved buoys with a minimum of 90 feet of line shall be placed at no more than 200 foot intervals around the top interior slope of the reservoirs. The sources of water are pvc waterlines from existing wells and no surface water shall enter the reservoir. Valving, filters and pumps will be installed after the reservoirs are constructed by the Irrigation Contractor and are not part of this permit. This contract is for stubbing inlet pipes through the exterior slope for future connection to the fill and transfer lines by an Irrigation Contractor. These pipes shall have 2 sack concrete slurry anti-seep collars. A 15" PVC Drop Pipe Outlet Structure will serve as an emergency overflow in the event the high water limit switch fails and is sized to prevent the reservoir from overtopping. Access to the reservoir is by existing dirt farm roads. No driveways will be constructed. The existing farm fields sheet flow gently across the locations and earthen swales will be constructed around the perimeters where necessary to keep any surface flow away from the toe of the fill slopes. No electrical work is included in this permit.

Benchmark and Basis of Bearing

Benchmark is a 2 1/2" aluminum disc, stamped h-2, Cal-Trans Monument sb166 pm-55.01 elevation = 1824.55 NAVD88

Basis of Bearing is GPS established true north from NAD 83(92) from Cal-Trans Monuments sb166 pm-55.01 and sb166 pm-55.43

Project Information

Address: Hwy 166, Cuyama Valley

APN 147-020-045

Zoning AG

Project Description: Construct three 49 ac-ft Reservoirs for irrigation and frost protection purposes

Pre-Construction Meeting

Prior to construction a pre-construction meeting is required with the inspector to go over the special inspection reporting requirements, final and progress reports, & erosion control. E-mail inspection-North@countyofsb.org

Contacts:

Owner:

Grapevine Land Management

Matt Turrentine
444 Higuera St Suite 202
San Luis Obispo, CA 93401
805 312-1828

Engineer:

Tom A Howell

1812 N Vine
Santa Maria, CA 93454
805 925-5311

Geotechnical Engineer: GSI Soils, Inc

Rick Amero
524 East Chapel
Santa Maria, CA 93454
805 349-0140

Sheet Index

Sheet 1: Front sheet, notes and title

Sheet 2: Overall Layout & Existing Contours

Sheet 3: Overall Site Piping Layout

Sheet 4: Reservoir #1 Grading Plan

Sheet 5: Reservoir #1 Details

Sheet 6: Reservoir #2 Grading Plan

Sheet 7: Reservoir #2 Details

Sheet 8: Reservoir #3 Grading Plan

Sheet 9: Reservoir #3 Details

Sheet 10: Common Details

Sheet 11: Erosion and Sedimentation Control Plan

Sheet 12: BMP Details

Engineer's Certificate

I, Tom A Howell, RCE 27037, Engineer of Record, hereby certify that these plans are in accordance with the following codes: _____ Date: _____

2013 California Bldg Code (0112 IBC), Appdx Chp 33, 1997 UBC

2013 California Electric Code (2011 NEC)

2013 California Mechanical Code (2012 IAMPO UMC)

2013 California Plumbing Code (2012 IAMPO UPC)

California Title 24: 2011 California Energy Code and Accesibility Standards

County Ordinance(s) Title 19 (Building), (Inland)

Geotechnical Engineer's Certificate

I have reviewed the plans and specifications and have found them to be in

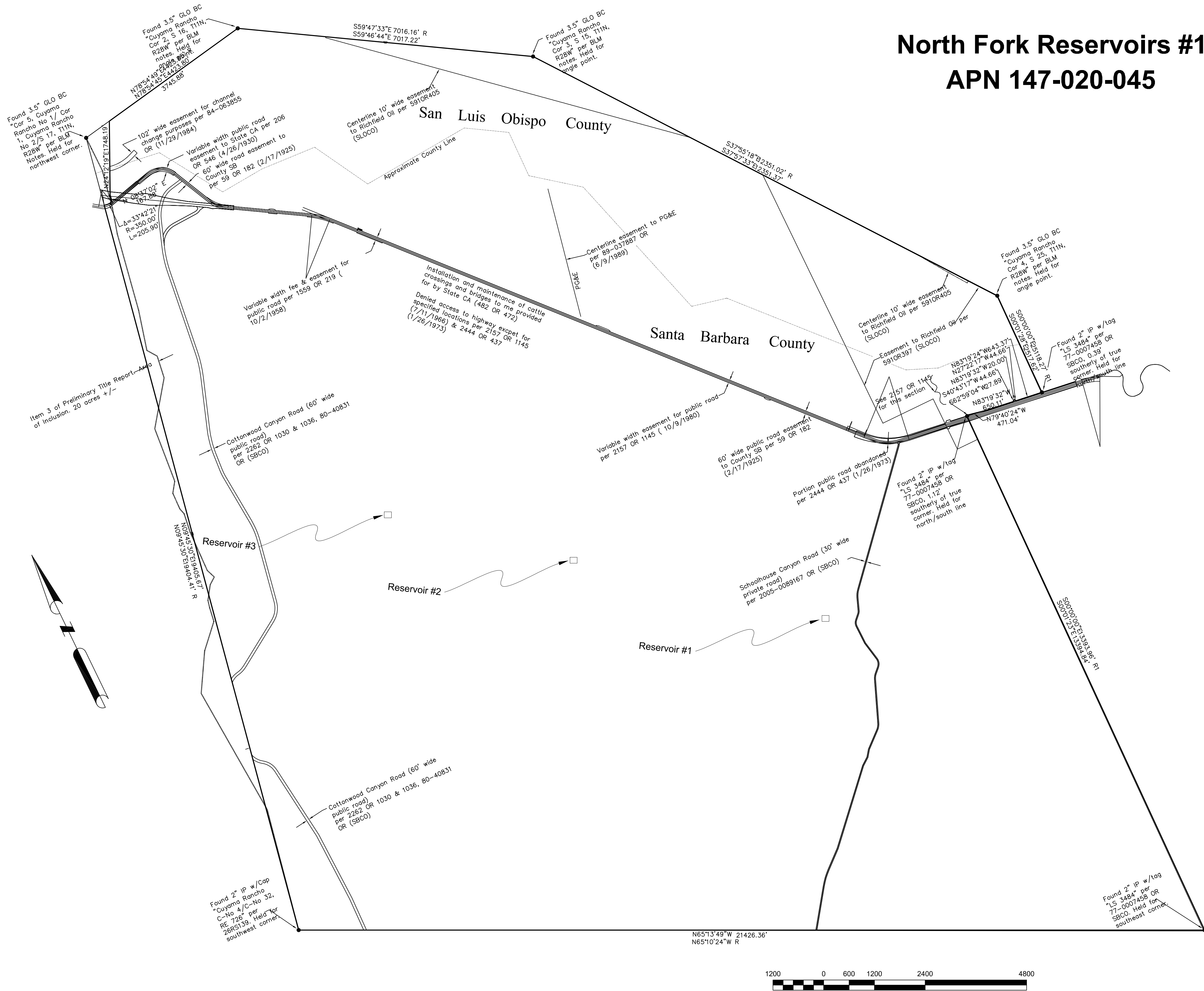
substantial conformance with the recommendations as found in my Soll Investigation.

Date: _____



North Fork Vineyards		
DRAWN <i>TH</i>	DATE <i>1/09/17</i>	<i>49 Ac-ft Reservoirs</i> <i>Hwy 166</i>
APPROVED	DATE	<i>Cuyama, CA</i> <i>Cover Sheet</i>
SCALE <i>Varies</i>	SHEET <i>1 of 12</i>	PROJECT NO. <i>101715-6233</i>

North Fork Reservoirs #1-3
APN 147-020-045



North Fork Vineyards		
DRAWN	DATE	49 Ac-ft Reservoirs
TH	1/09/17	Hwy 166
APPROVED	DATE	Cuyama, CA
		Overall Property
SCALE	SHEET	PROJECT NO.
1"=1200'	2 of 12	101715-6233

North Fork Vineyard Frost Protection Overall Site Plan



North Fork Vineyards		
DRAWN	DATE	Reservoirs #1-3
TH	1/09/17	Overall Piping Plan
APPROVED	DATE	Existing Piping
SCALE	SHEET	PROJECT NO.
1"=600'	3 of 12	101715-6233

Reservoir # 1 Grading Plan

Pond #1 Report

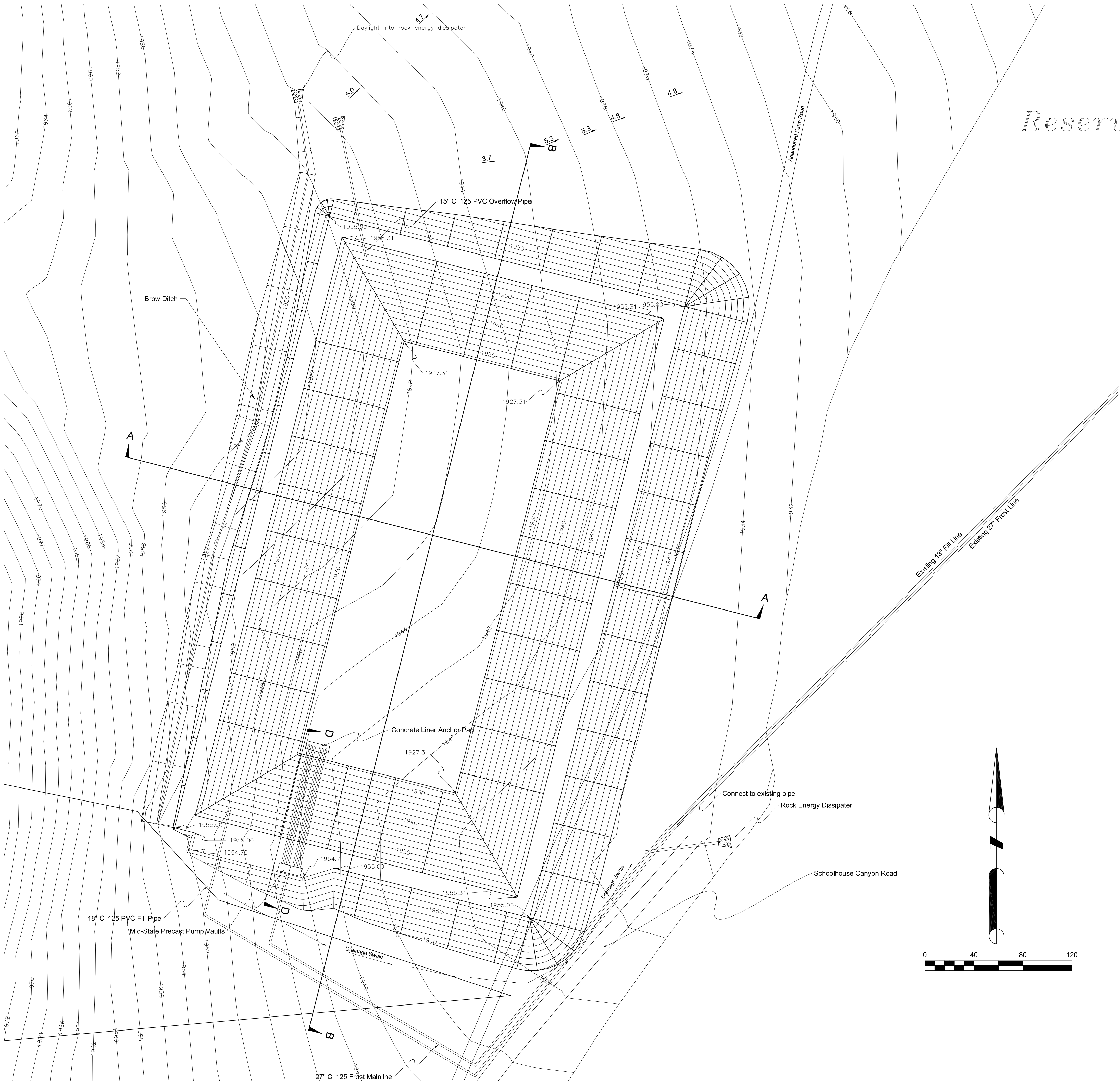
Top of dam elevation: 1955.3
Bottom of pond elevation: 1927.3
Top of dam width: 14.0
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50:1

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 44,062 C.Y.
Total fill: 44,589 C.Y.
Total Disturbed Area: 4.85 Acres

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1927.31	0.00	1.046
1929.31	2.20	1.158
1931.31	4.63	1.274
1933.31	7.30	1.395
1935.31	10.21	1.520
1937.31	13.38	1.650
1939.31	16.81	1.784
1941.31	20.52	1.923
1943.31	24.51	2.066
1945.31	28.79	2.214
1947.31	33.37	2.366
1949.31	38.26	2.523
1951.31	43.46	2.684
1953.31	49.00	2.850
1955.31	54.87	3.020



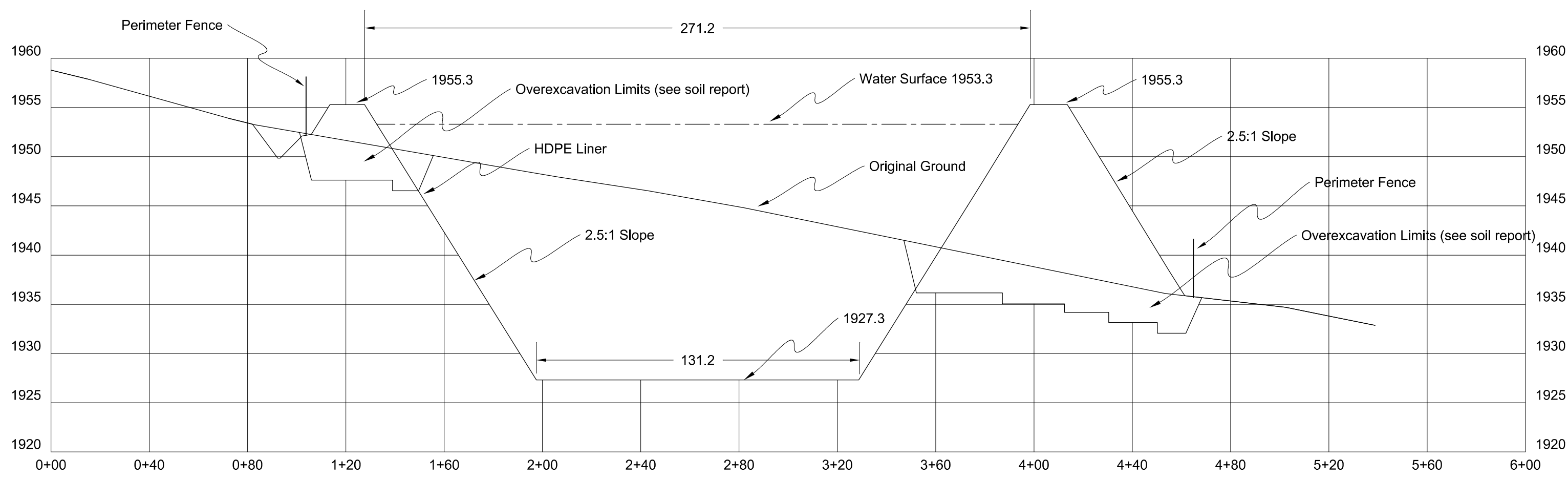
Revisions:
1/03/2017 Added 15" CMP Culvert
Moved Outlet Pipe
Lengthened Drainage Swales

North Fork Vineyards

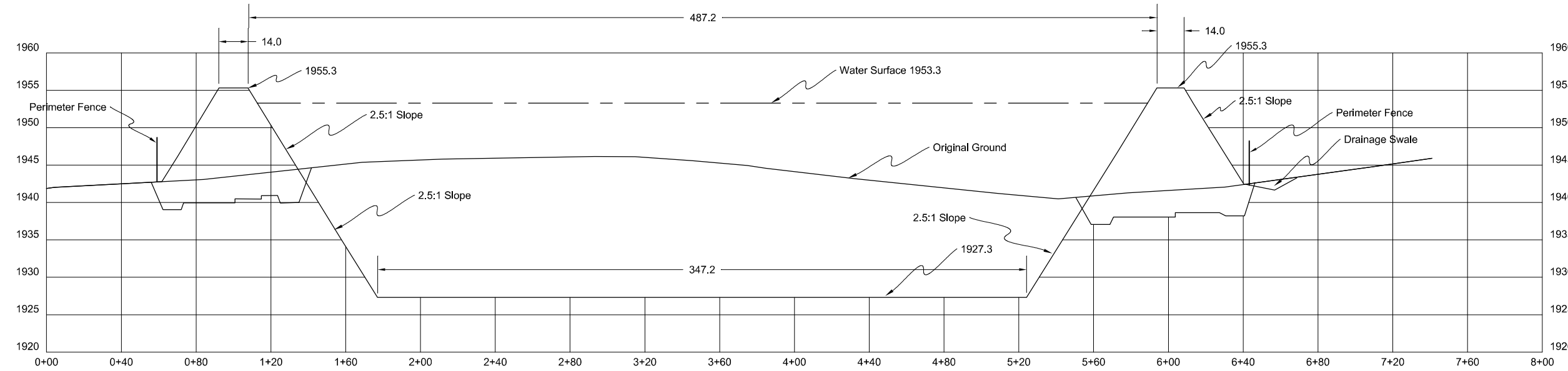
DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #1 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 4 of 12	PROJECT NO. 101715-6233

Reservoir #1 Details

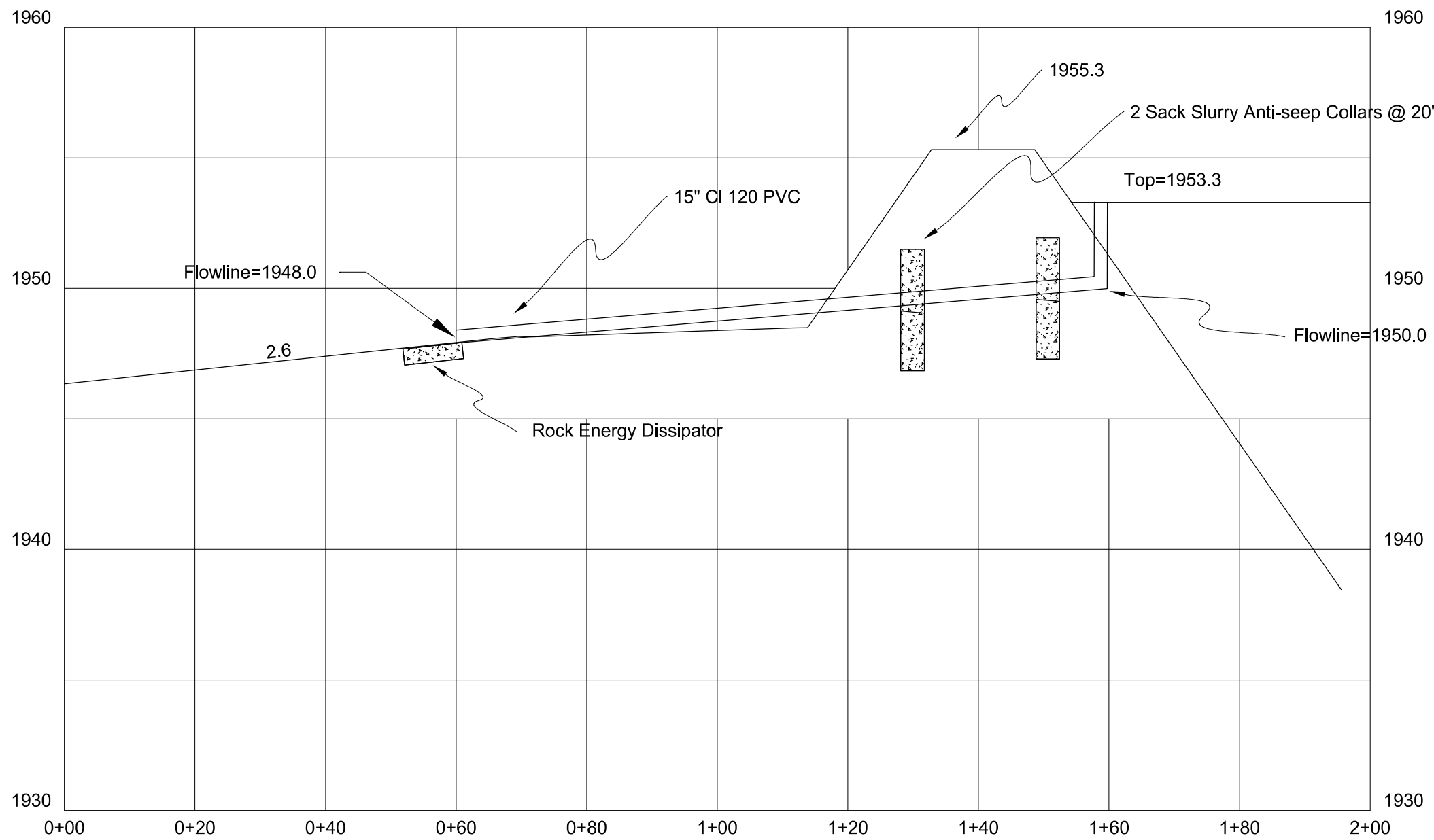
Reservoir #2 Section A-A



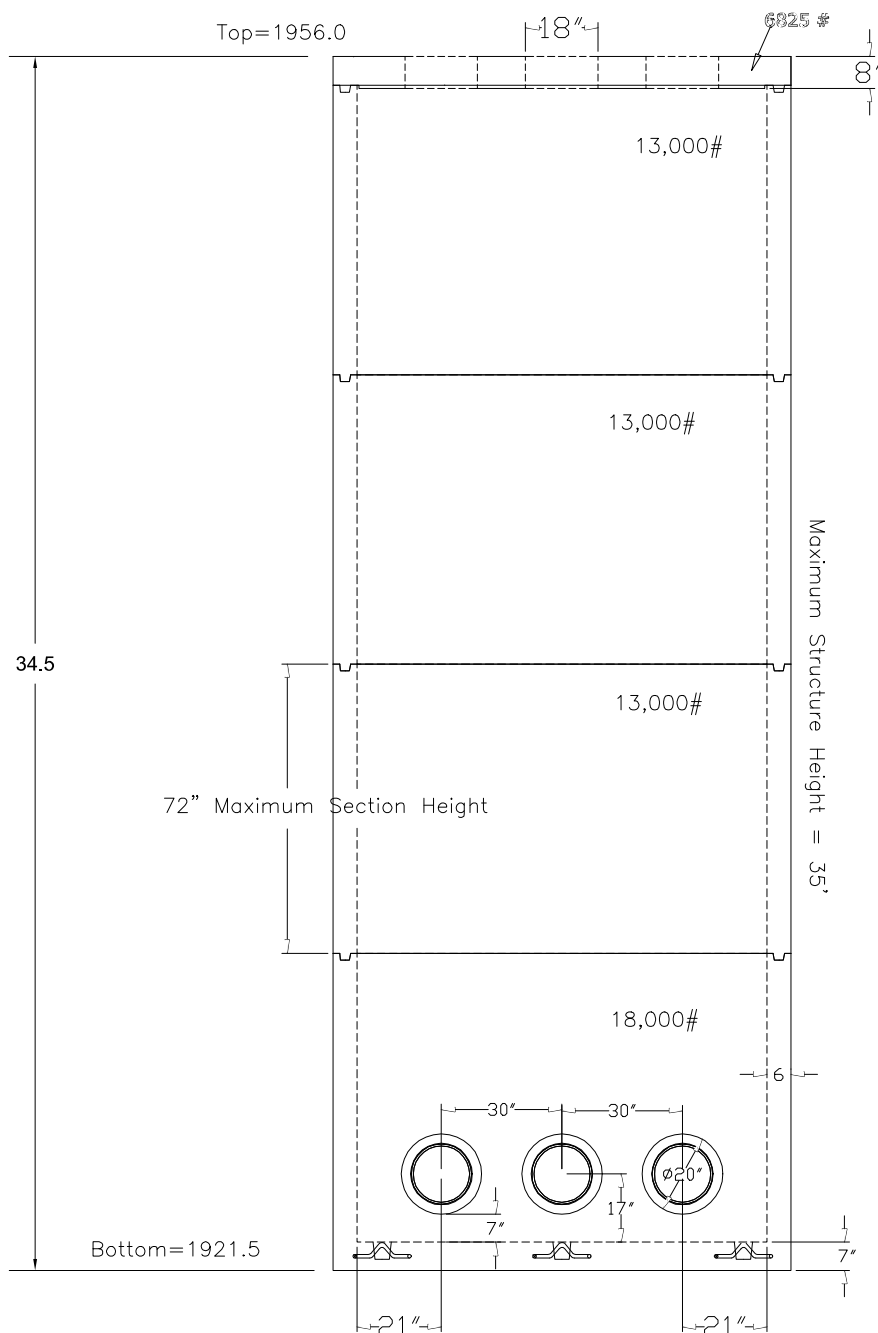
Reservoir #1 Section B-B



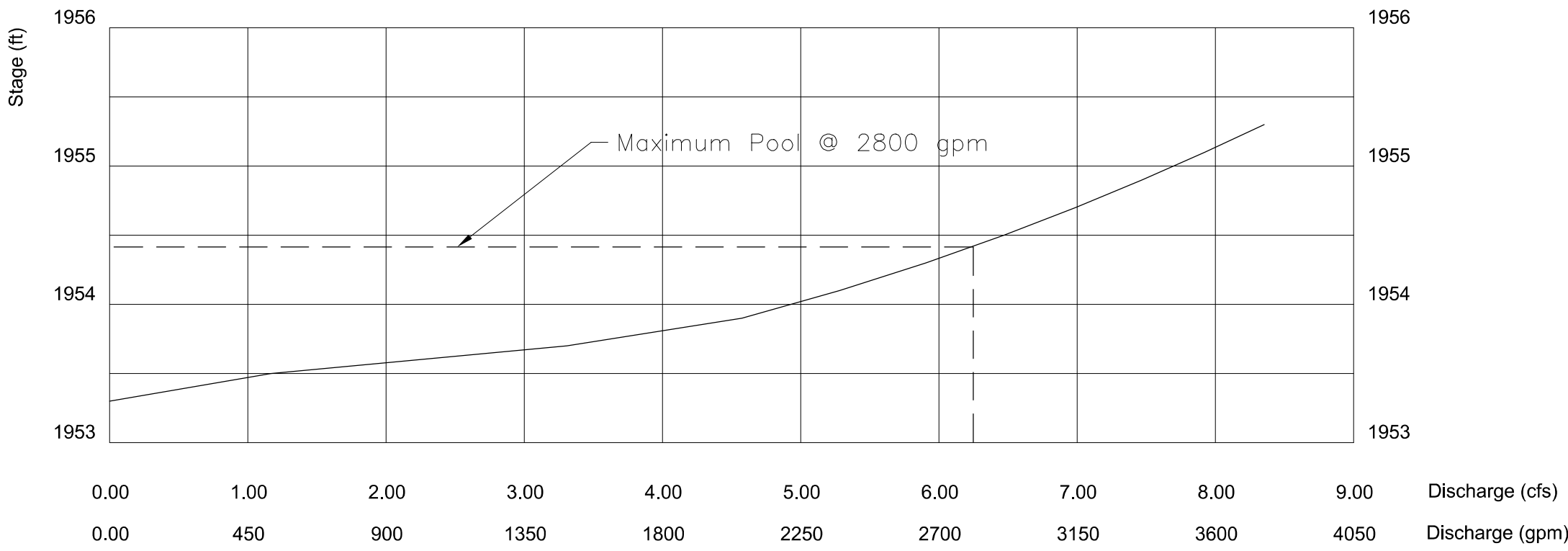
Reservoir #1 Overflow Detail



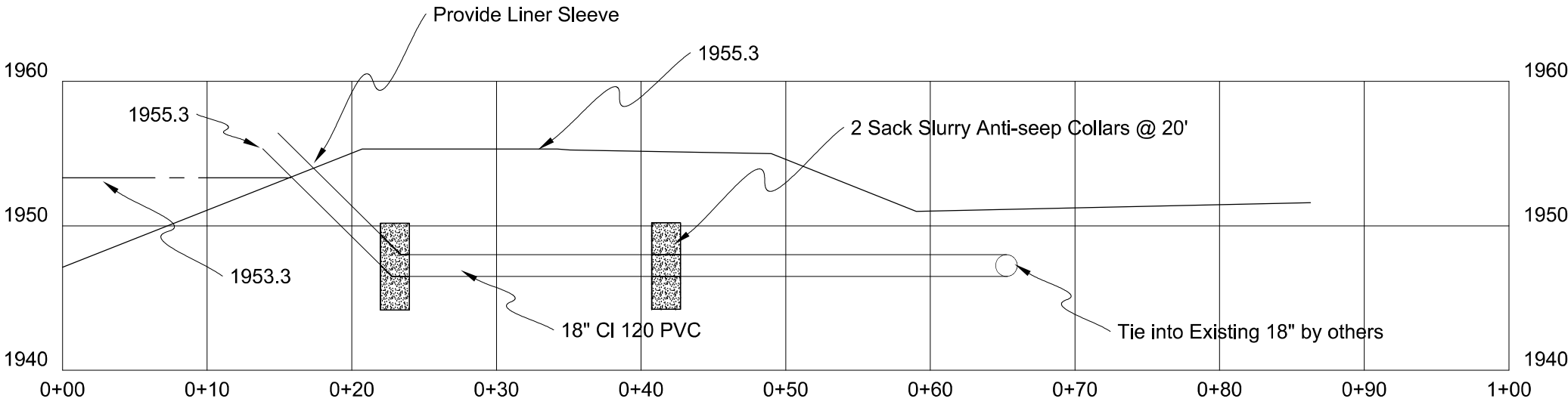
Mid-State Concrete Products
Pump Housing Vault Reservoir #1



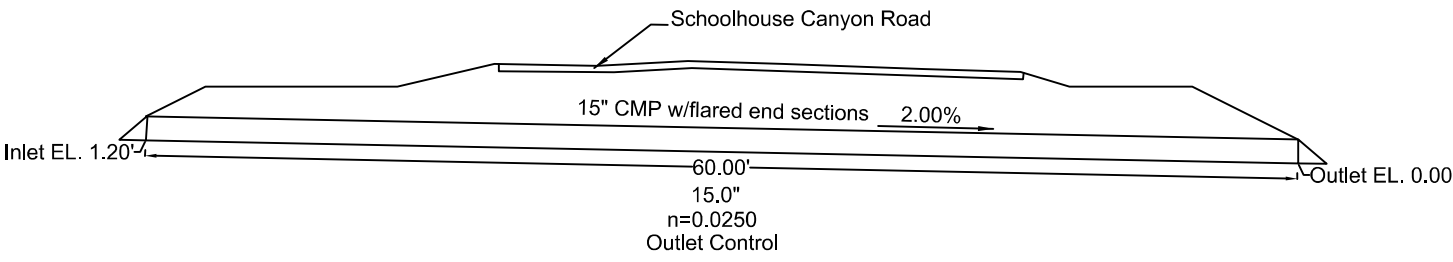
Pond #1 Stage-Storage



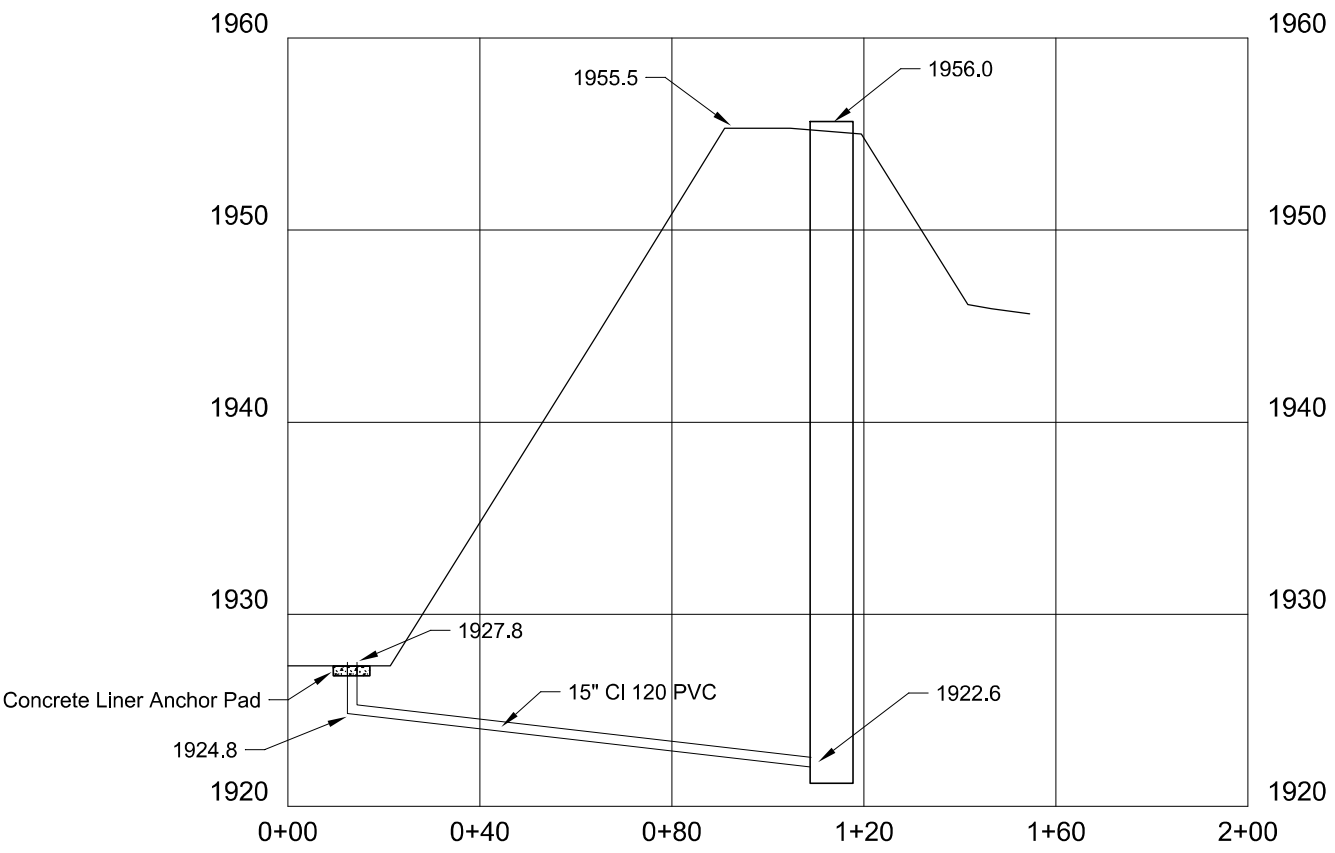
Reservoir #1 Filler Pipe



15" CMP Under Schoolhouse Road



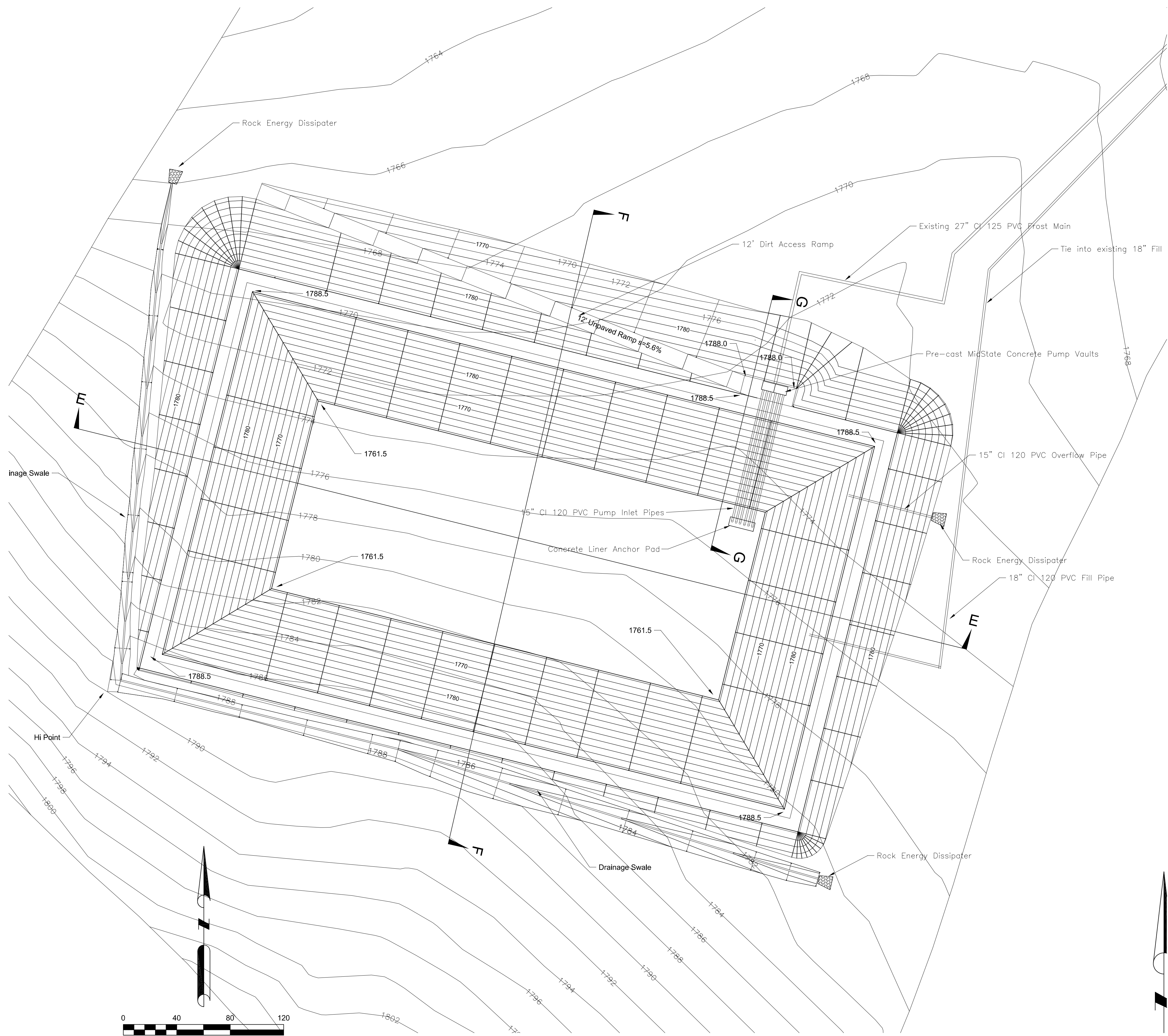
Reservoir #1 Pump Inlet



Revisions:
1/03/2017 Added 15" CMP Culvert Detail
Revised Stage-Storage Diagram
Revised Outlet Pipe Detail

North Fork Vineyards		
DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #1 Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 5 of 12	PROJECT NO. 101715-6233

Reservoir #2 Grading Plan



Pond Report

Tue Oct 20 14:36:54 2015

Top of dam elevation: 1788.50
Bottom of pond elevation: 1761.50
Top of dam width: 14.00
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50:1
Existing Surface: C:\Carlson Projects\North Fork\Reservoir 2B OG.tin

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 44,064.35 C.Y.
Total fill: 1 42,205.16 C.Y.

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1761.50	0.00	1.146
1763.50	2.40	1.259
1765.50	5.04	1.378
1767.50	7.91	1.502
1769.50	11.05	1.630
1771.50	14.44	1.762
1773.50	18.10	1.899
1775.50	22.03	2.040
1777.50	26.26	2.186
1779.50	30.73	2.336
1781.50	35.60	2.490
1783.50	40.74	2.649
1785.50	46.20	2.813
1787.50	52.00	2.981
1788.50	55.02	3.067

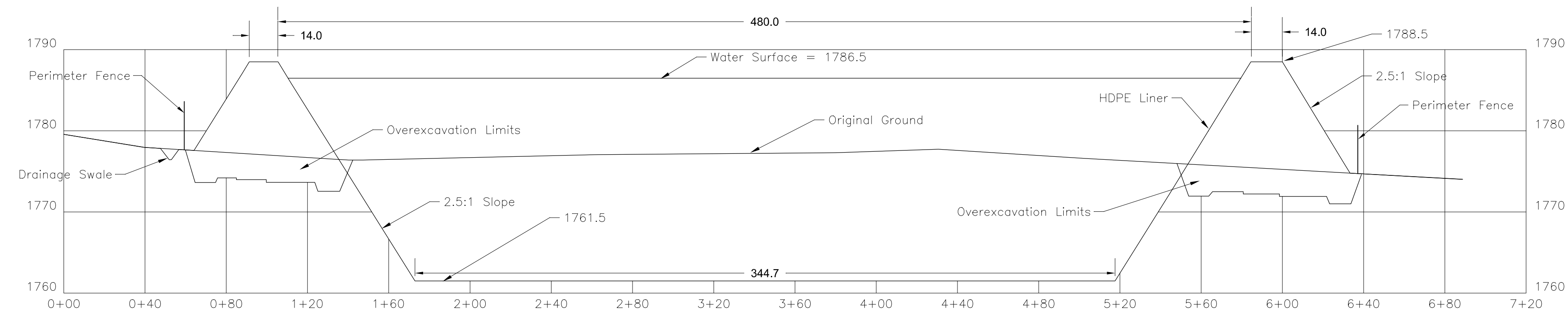
Area in Cut : 148,297.1 S.F.
Area in Fill: 186,122.7 S.F.



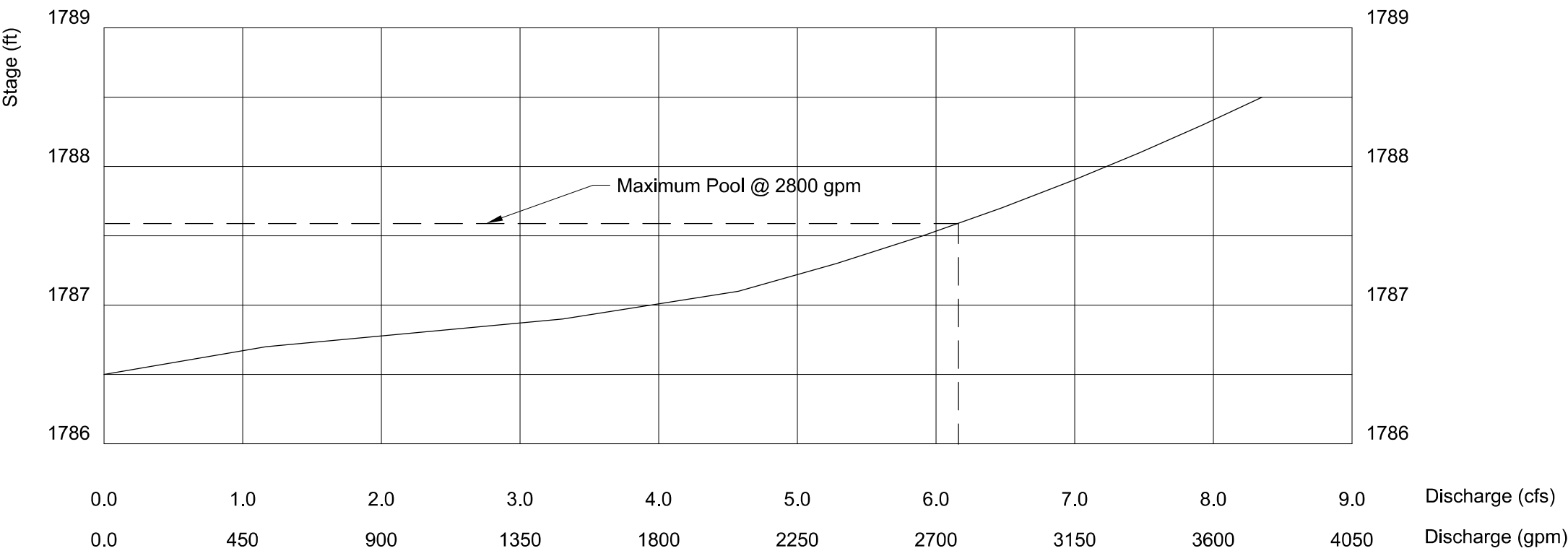
North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #2 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 6 of 12	PROJECT NO. 101715-6233

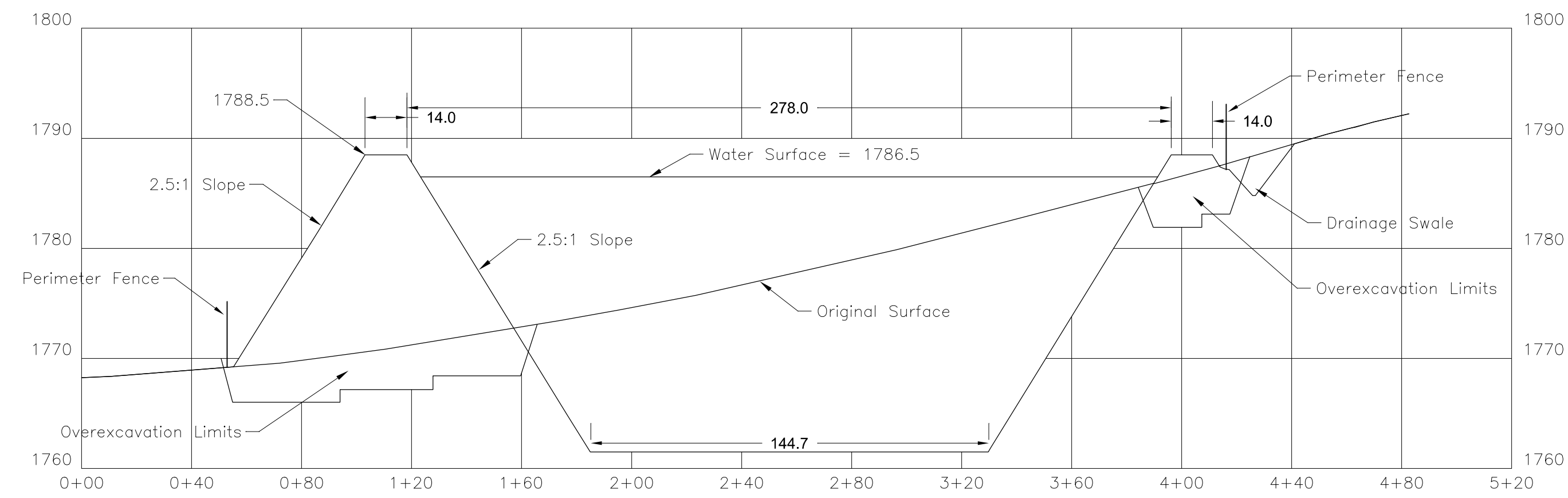
Reservoir #2 Section E-E



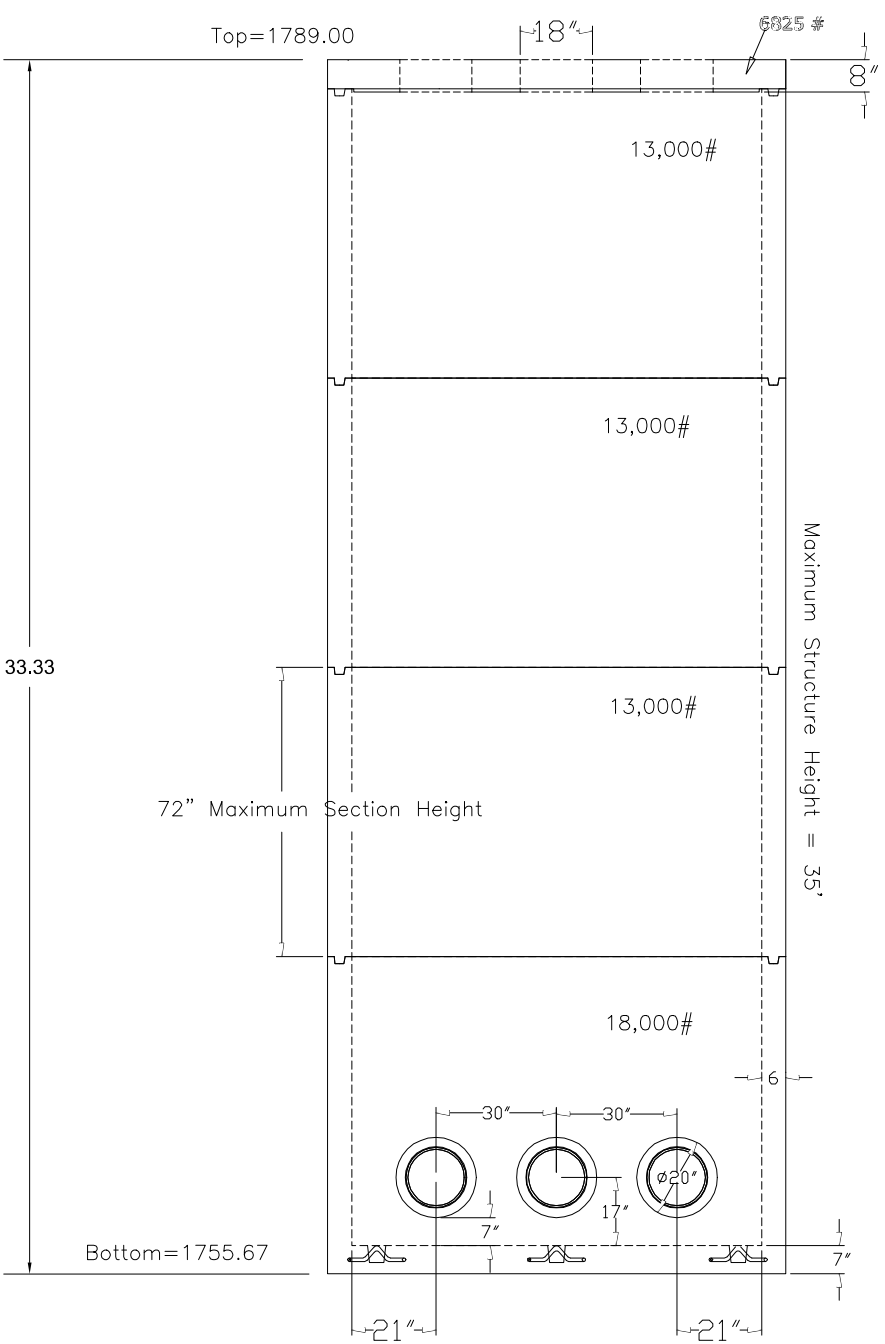
Reservoir #2 Stage Storage



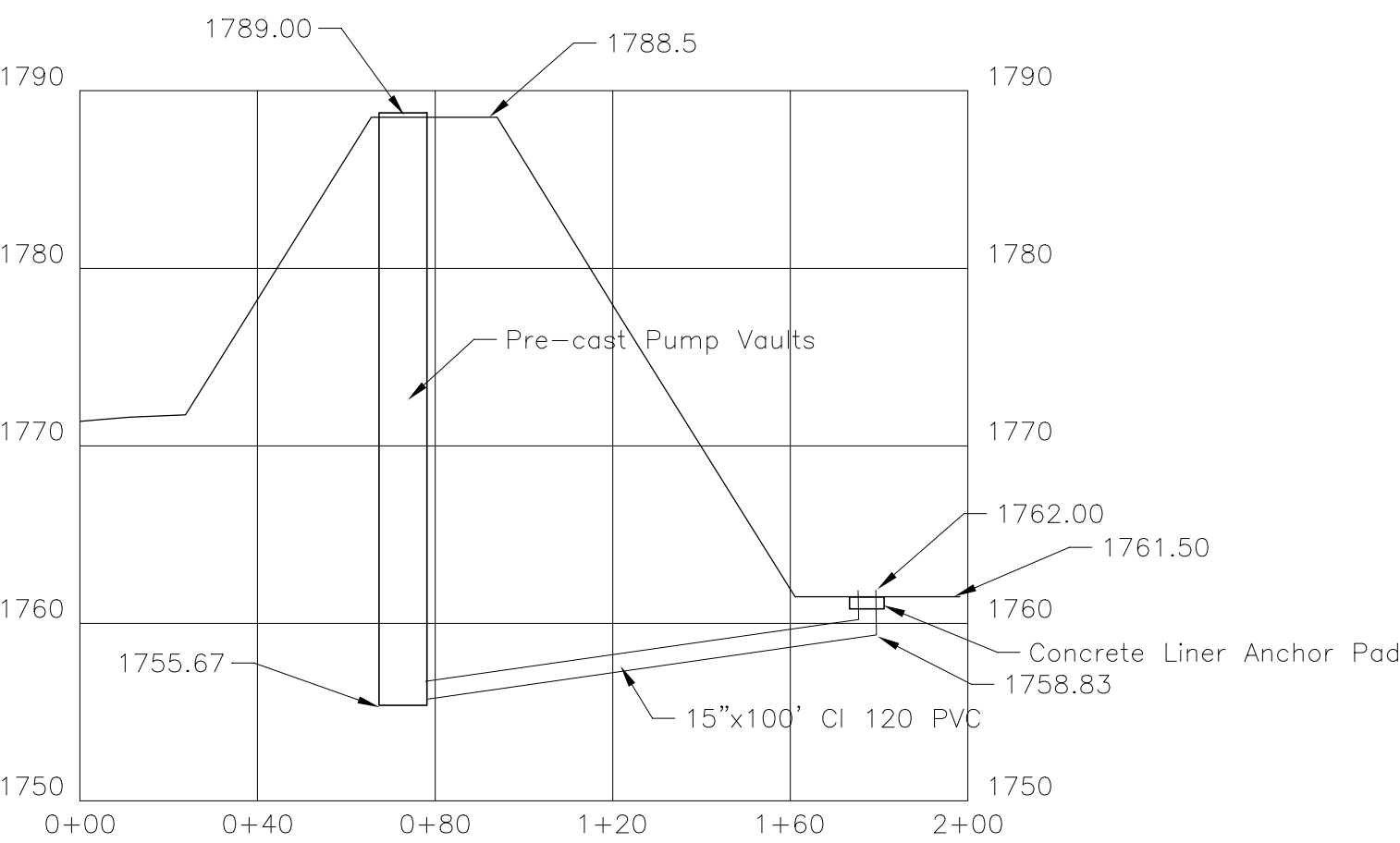
Reservoir #2 Section F-F



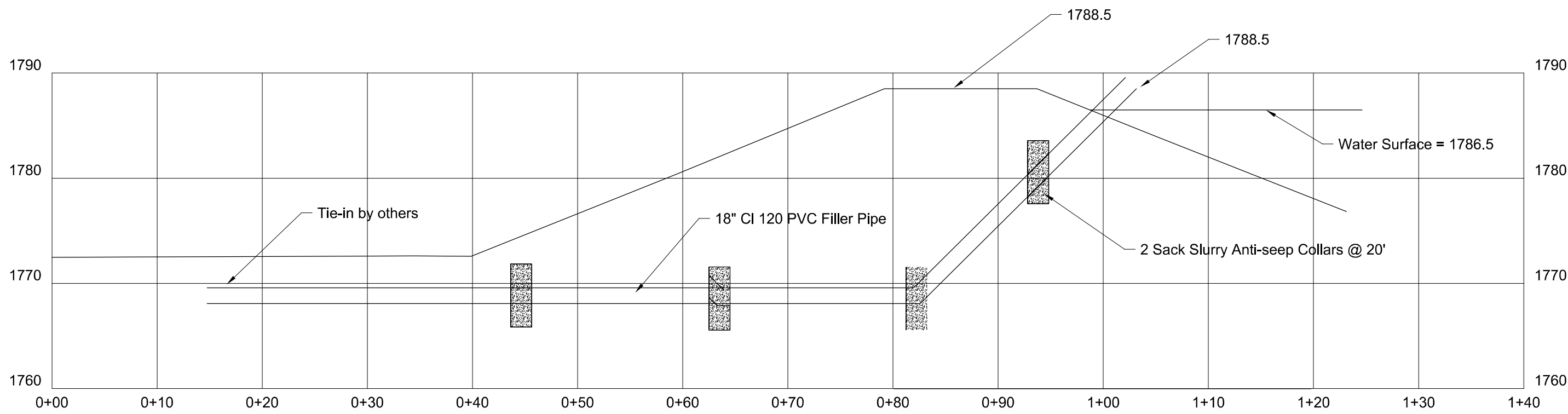
Reservoir #2 Pump Vaults



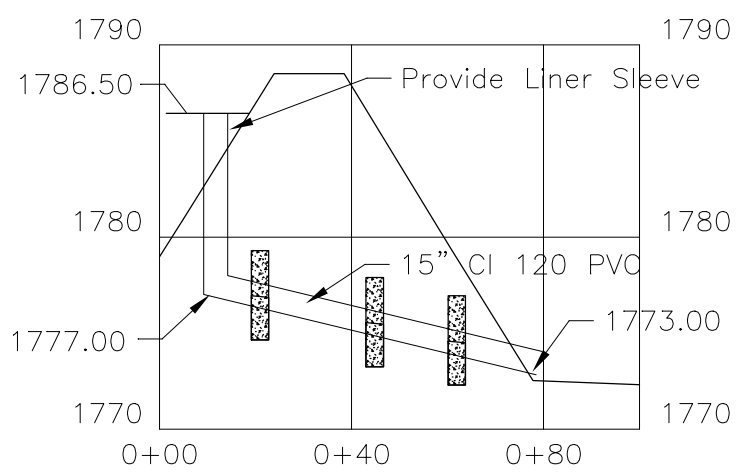
Reservoir #2 Pump Vaults Section G-G



Reservoir #2 Inlet Detail



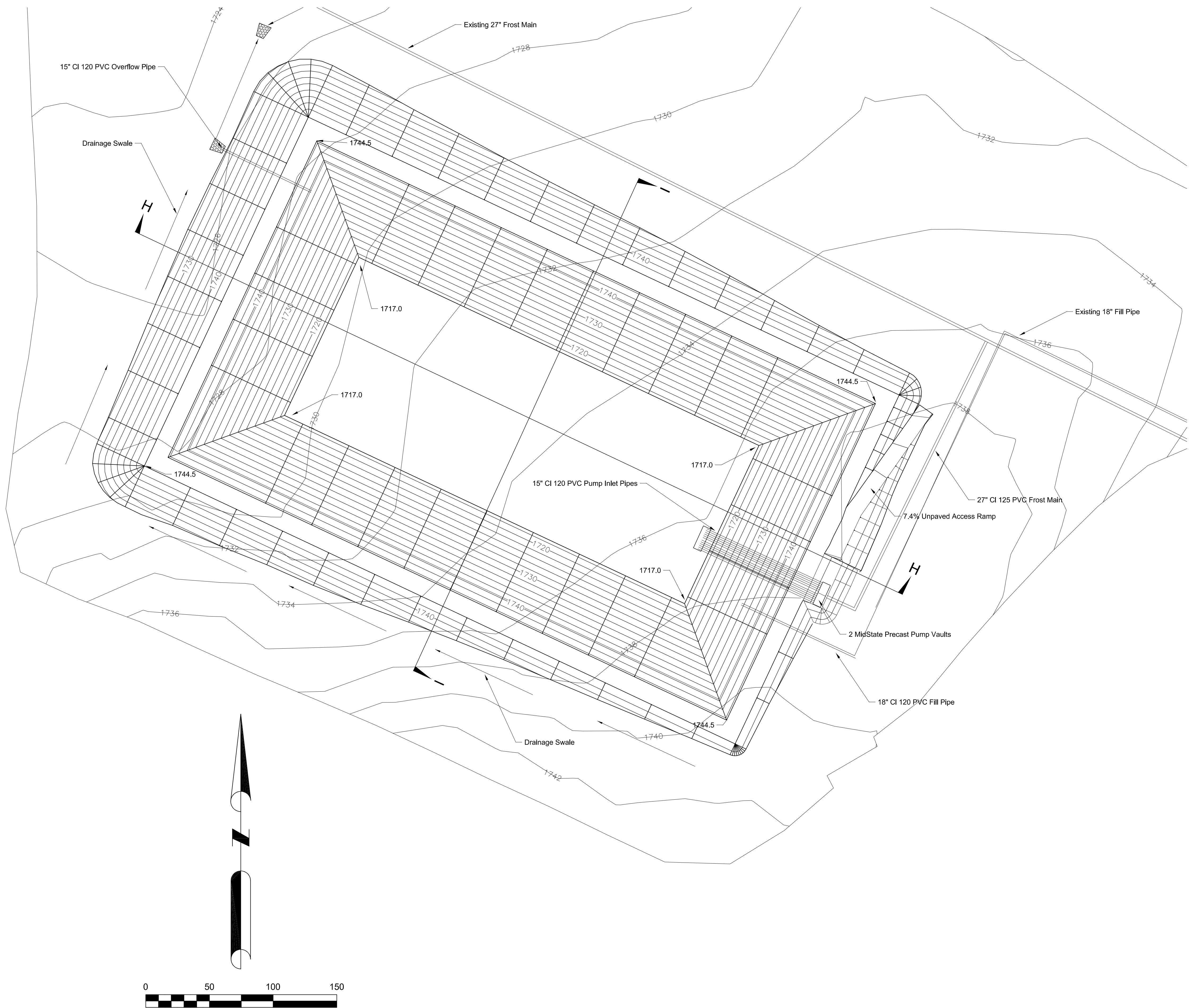
Reservoir #2 Overflow



North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #2 Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 7 of 12	PROJECT NO. 101715-6233

Reservoir #3 Grading Plan



Pond Report

Top of dam elevation: 1744.50
Bottom of pond elevation: 1717.00
Top of dam width: 14.00
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 42,770.71 C.Y.
Total fill: 40,253.87 C.Y.

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1717.00	0.00	1.093
1719.00	2.29	1.206
1721.00	4.82	1.323
1723.00	7.59	1.445
1725.00	10.60	1.571
1727.00	13.87	1.701
1729.00	17.41	1.835
1731.00	21.22	1.973
1733.00	25.30	2.116
1735.00	29.68	2.263
1737.00	34.36	2.414
1739.00	39.34	2.570
1741.00	44.64	2.729
1743.00	50.26	2.893
1744.50	54.70	3.019



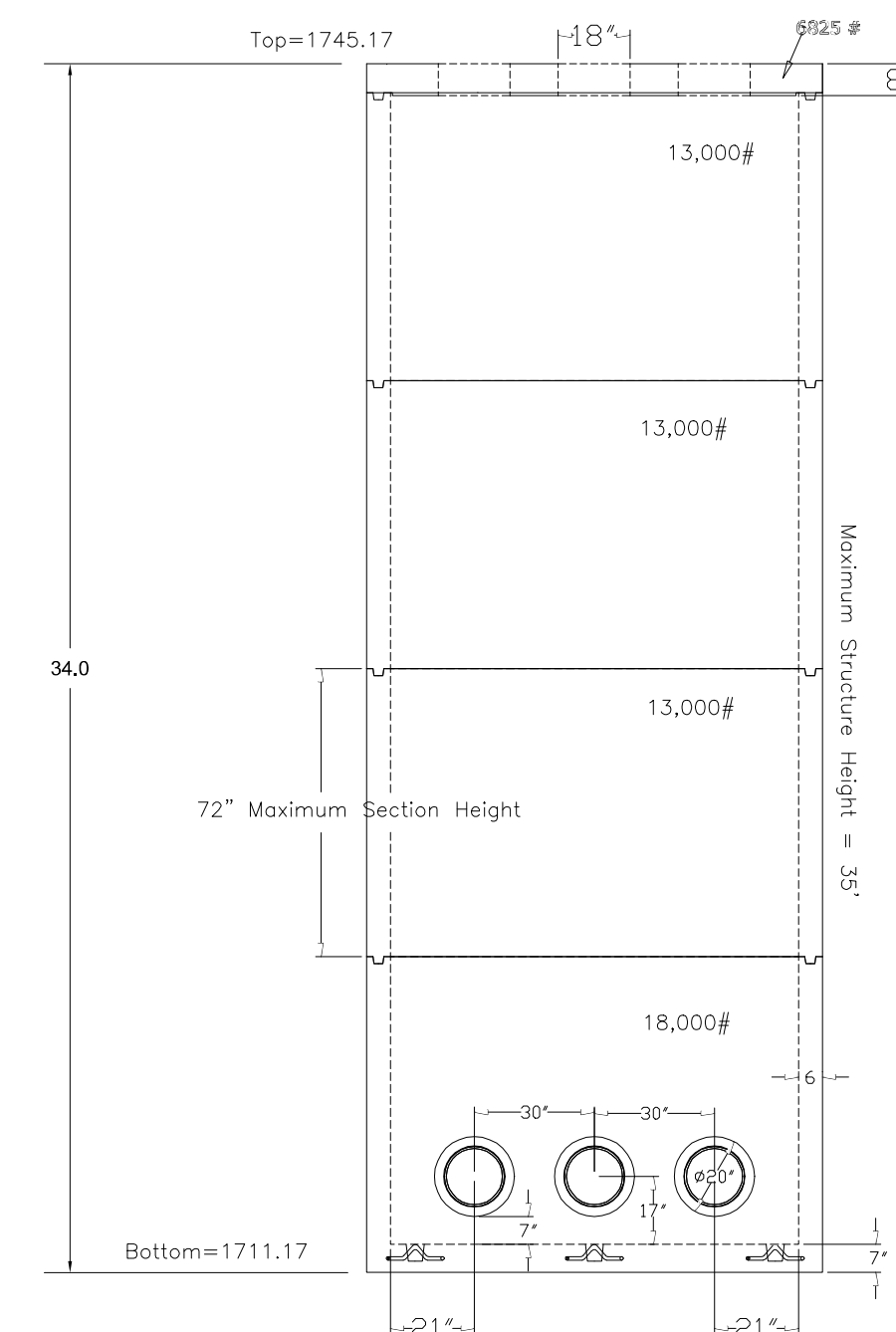
North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #3 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 8 of 12	PROJECT NO. 101715-6233

Mid-State Concrete Products
Pump Housing Vault Reservoir #3

The diagram illustrates a cross-section of a proposed waterway. Key features include:

- Water Surface:** Indicated by a dashed line at an elevation of 1742.5.
- Original Ground:** Shown as a solid line representing the existing terrain.
- Excavation:** The area between the original ground and the water surface is excavated, with slopes specified as 2.5:1.
- HDPE Liner:** A liner is shown at the bottom of the excavation, with a width of 14.0.
- Exterior Fence:** Located on the left side of the excavation.
- Overexcavation Limits:** Indicated by vertical lines on the slopes.
- Dimensions:** A total length of 485.0 is shown for the main section, and a width of 14.0 is specified for the HDPE liner section.
- Elevation Markers:** The vertical axis shows elevations from 1710 to 1750.



The graph shows the relationship between Stage (ft) and Discharge (cfs) for a culvert. The y-axis represents Stage in feet, ranging from 1742 to 1745. The x-axis represents Discharge in cubic feet per second (cfs), ranging from 0 to 4050. A solid curve represents the culvert's performance. A horizontal dashed line at approximately 1743.5 ft is labeled "Maximum Pool @ 2800 gpm". A vertical dashed line at 2700 cfs intersects the curve at the maximum pool stage.

Discharge (cfs)	Stage (ft)
0	1742.5
450	1742.7
900	1742.8
1350	1742.9
1800	1743.0
2250	1743.2
2700	1743.5
3150	1743.8
3600	1744.2
4050	1744.5

1750

1742.5

1744.5

1745.17

1740

2 MidState Concret Products Pump Vaults

1730

1720

1717.5

1717.0

1712.33 f/l

Concrete Liner Anchor Pad

1714.33 f/l

1711.17

1710

0+00 0+40 0+80 1+20 1+60 2+00

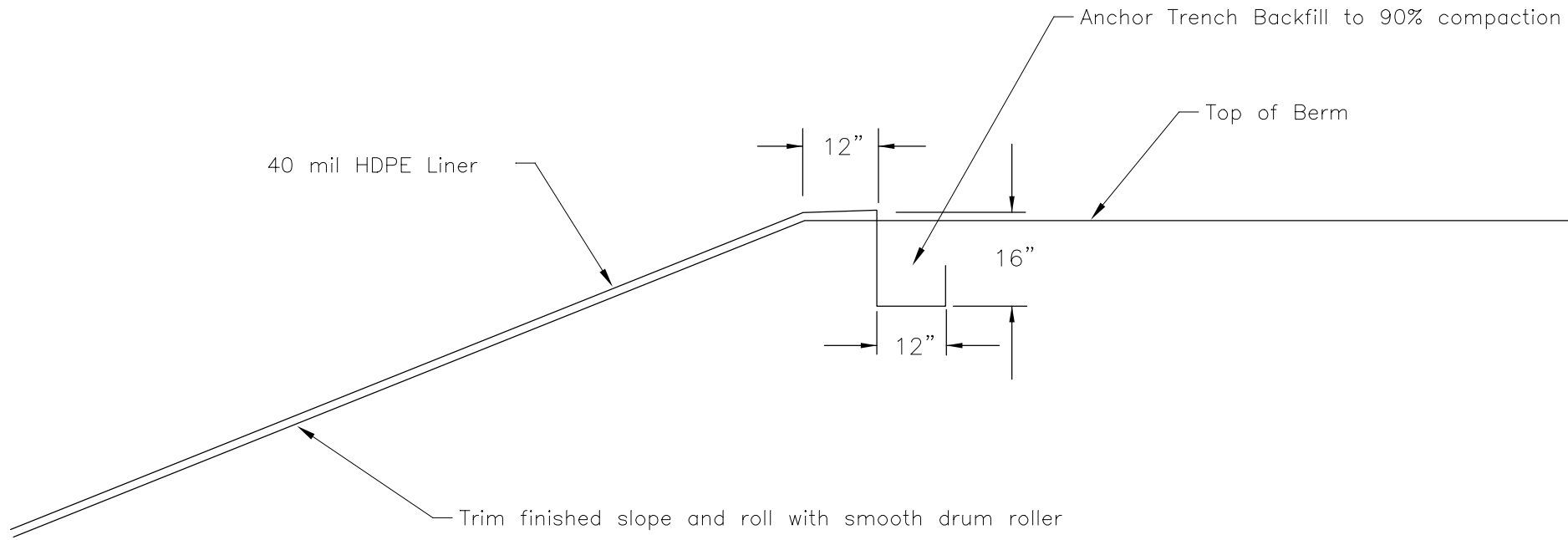
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North Fork Vineyards

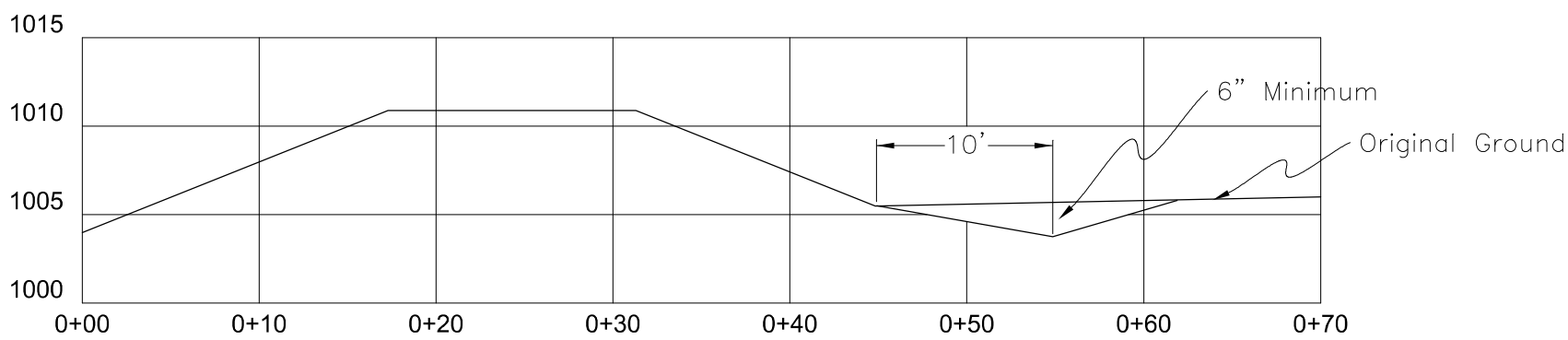
DRAWN <i>TH</i>	DATE <i>1/09/17</i>	<i>Reservoir #3 Details</i>
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET <i>9 of 12</i>	PROJECT NO. <i>101715-6233</i>

Details Common to All Reservoirs

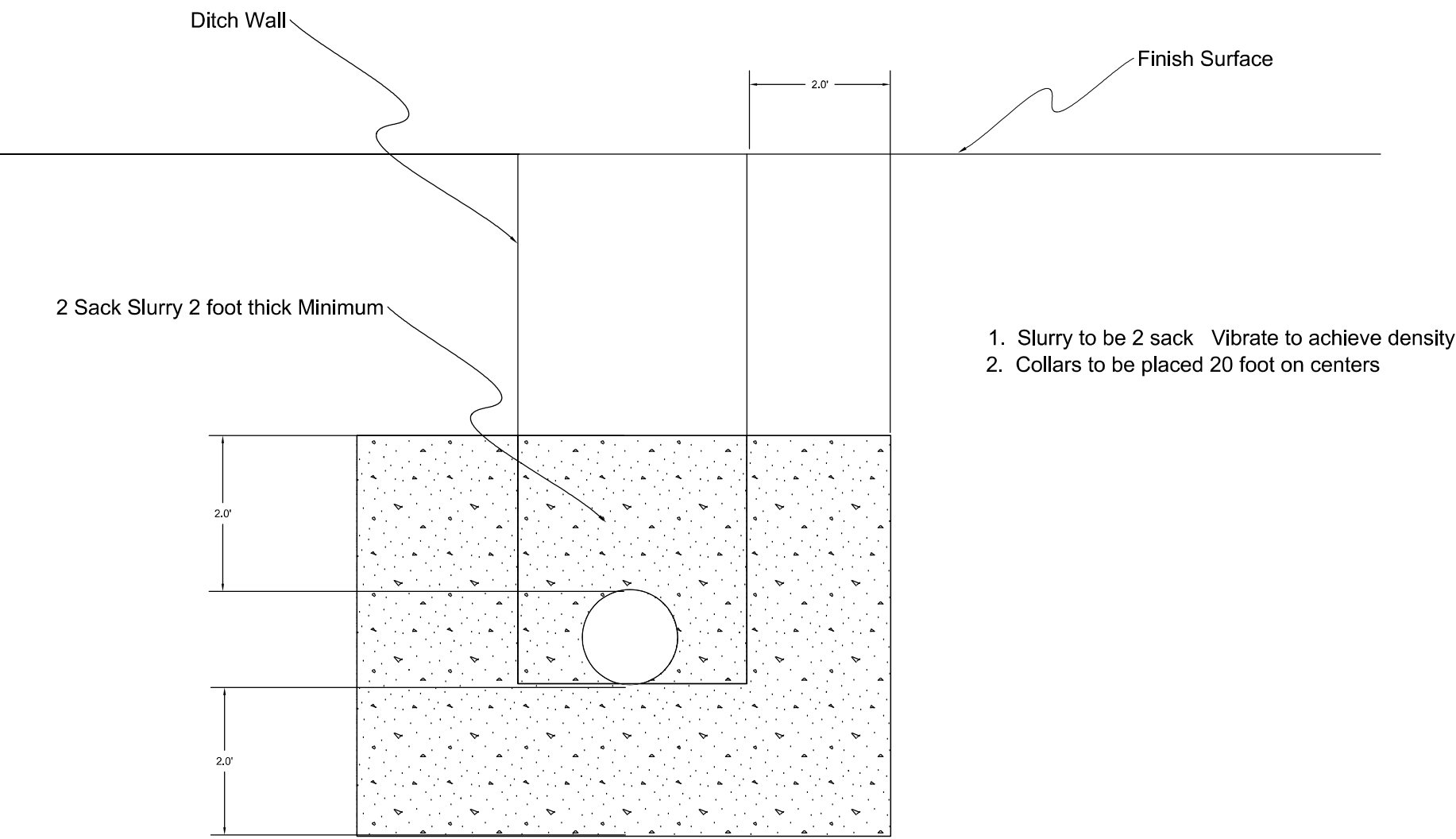
HDPE Liner Anchor Trench



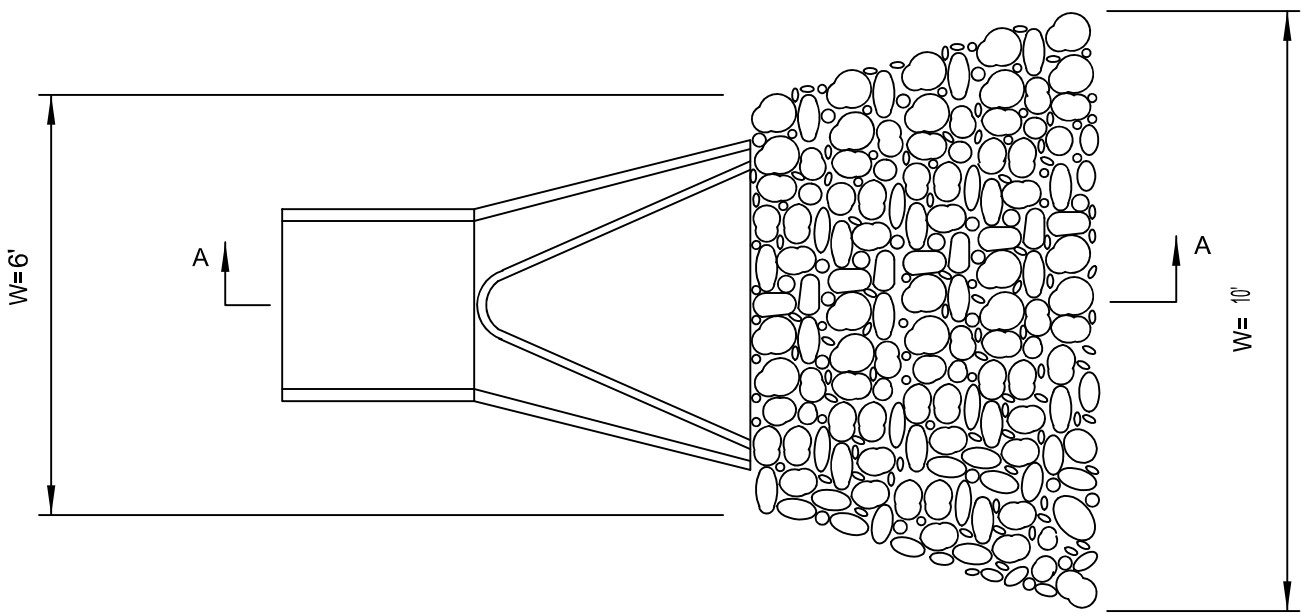
Drainage Swale Detail



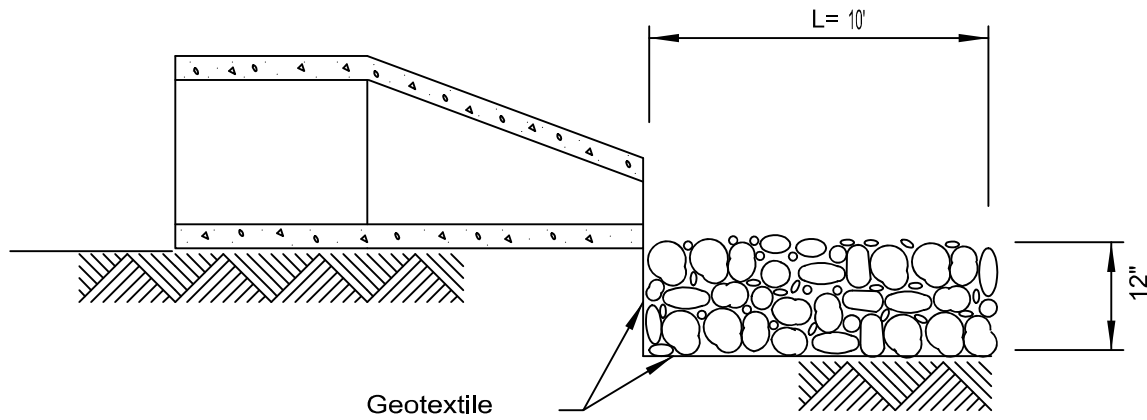
Anti-seep Collar Detail



Rock Energy Dissipater



PLAN



SECTION A-A

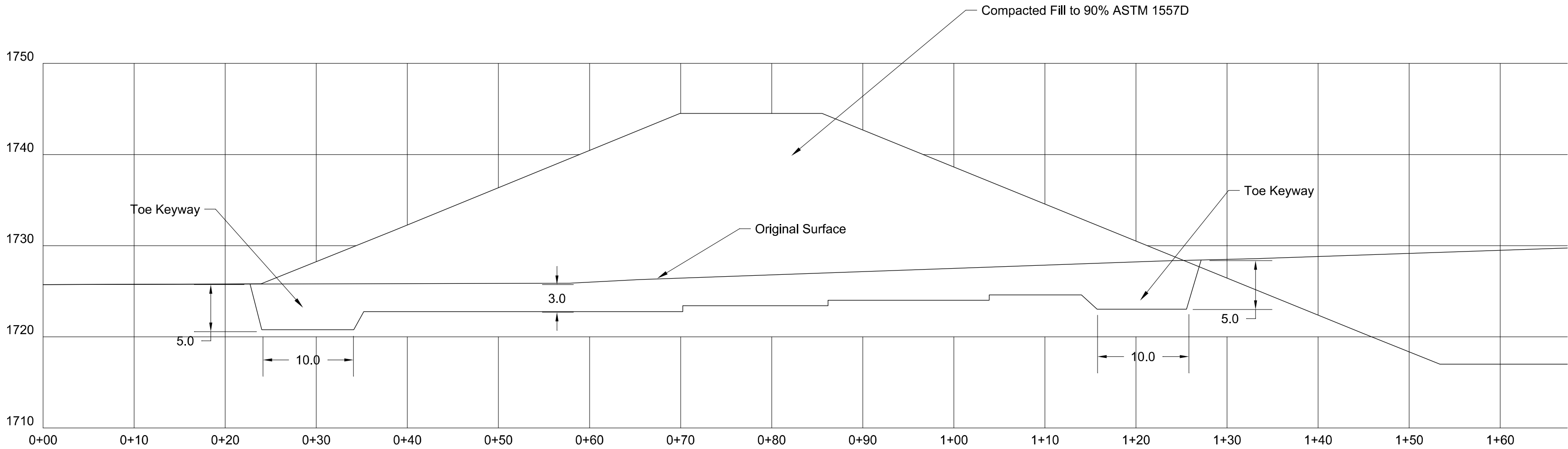
Notes:

1. Rock shall be 6" to 12" diameter
2. Minimum diminsion shall be 6' x 10' x 12"

General Notes:

1. All grading shall conform to the Soil Report prepared by GSI Soils for this project dated January 4, 2016.
2. All slopes shall be overfilled than trimmed to finish grade to provide firm surfaces.
3. Finished slopes and the bottom surface shall be rolled with a smooth drum roller prior to placing fabric. The Engineer of Record shall inspect the surfaces to assure they are rock free and to the proper lines and grades before fabric shall be installed.
4. The liner shall be placed by a contractor specializing in pond liners and all pipes extending through the liner shall have sleeves and stainless bands to prevent leakage.
5. A 6 foot high non-climb fence shall be installed around the exterior perimeter of the reservoir. The fabric shall have 10 guage top and bottom wires with 12 1/2 guage 2x4 mesh filler fabric. Tee Posts shall be at 8 feet spacings and shall be heavy weight a minimum of 8 feet long.
6. The finished pond shall be surveyed by the Engineer of Record and the storage volume calculated. The 15" PVC Overflow Pipe shall be adjusted as necessary to ensure that the retained volume below the outflow inlet is no more than 49 acre feet and that there is a minimum of two feet of freeboard to the top of berm at the lowest point.

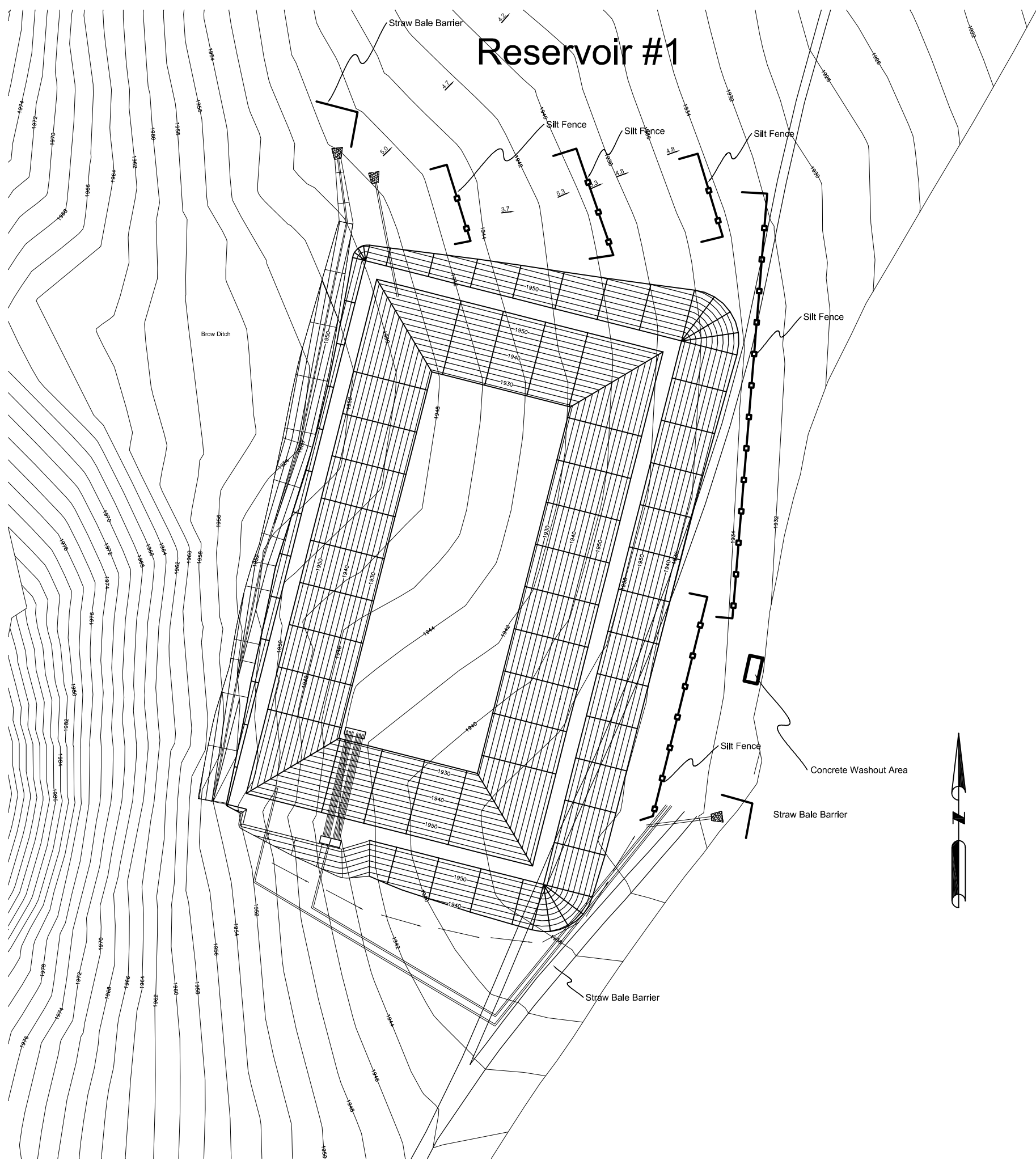
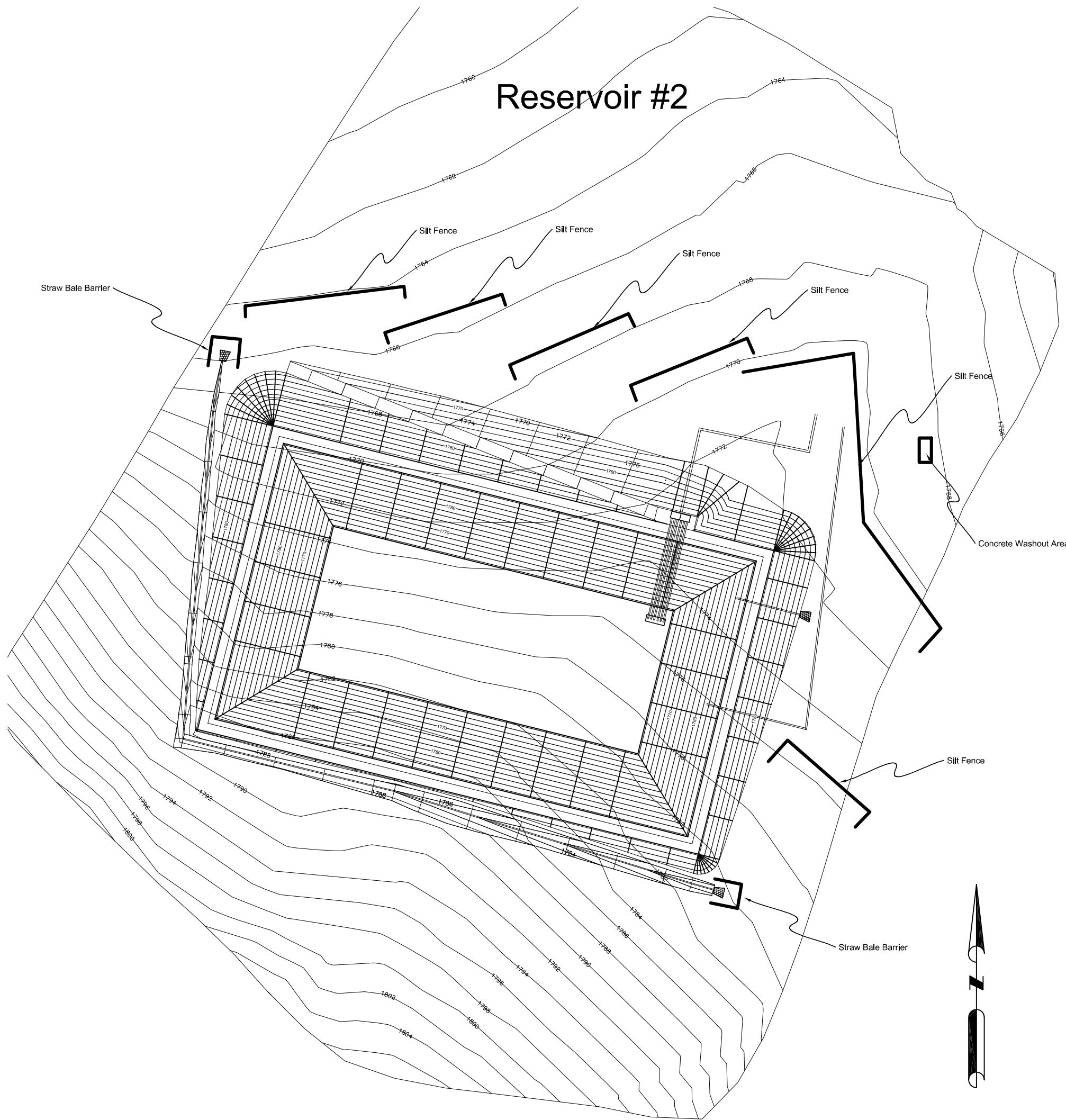
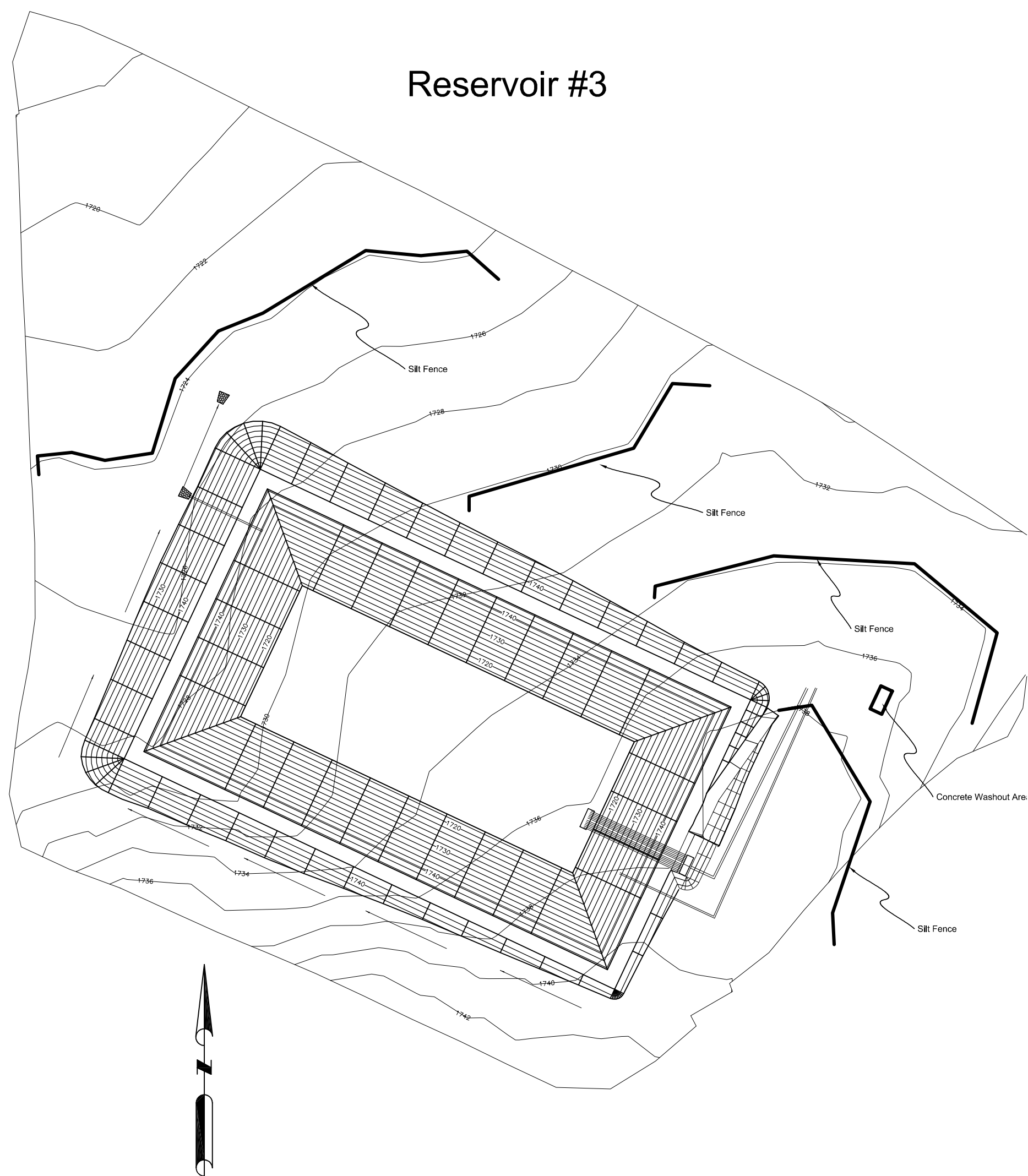
Overexcavation and Keyway Details per Figure 3 of Soil Report



North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoirs #1-3 Common Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 10 of 12	PROJECT NO. 101715-6233

Erosion and Sedimentation Control Plan



Erosion Control Notes:

- Erosion control measures shall be implemented on all projects and shall include source control, including protection of stockpiles, protection of slopes, protection of all disturbed areas, and protection of accesses. In addition, perimeter containment measures shall be placed prior to the commencement of grading and site disturbance activities unless the Engineer determines temporary measures to be unnecessary based upon location, site characteristics or time of year. The intent of the erosion control measures shall be to keep all sediment from entering a swale, drainage way, watercourse or onto adjacent properties. An approved Erosion Control and Sedimentation Control Plan will require County approval
- Site Inspections and appropriate maintenance of erosion control devices shall be conducted and documented prior to, during, and after rain events.
- The developer shall be responsible for the placement and maintenance of all erosion control devices as specified by the approved plan until such time that the project is accepted as complete by the Engineer. Erosion control devices may be relocated, deleted or additional items may be required depending on the actual soil conditions encountered. Additional erosion control shall be placed at the discretion of the Engineer of Work, Engineer, SWPPP Monitor or RWQCB Inspector. Guidelines for determining appropriate erosion control devices are included in the appendix of the Public Improvement Standards.
- All erosion control devices shall be the first order of work and shall be in place between October 15 and April 15 or anytime when the rain probability exceeds 30%. This work shall be installed or applied after each area is graded and no longer than five (5) working days after the completion of each area.
- The Engineer of Work and the Engineer shall be notified before October 15 for inspection of installed erosion control devices.
- A standby crew for emergency work shall be available at all times during the rainy season (October 15 through April 15). Necessary materials shall be available and stockpiled at convenient locations to facilitate rapid construction or maintenance of temporary devices when rain is imminent.
- Permanent erosion control shall be placed and established with 70% coverage on all disturbed surfaces other than paved or gravel surfaces prior to final inspection. Permanent erosion control shall be fully established prior to final inspection. Temporary erosion control measures shall remain in place until permanent measures are established. A water truck shall be used to water areas hydroseeded until the planting is established.
- In the event of a failure, the developer and/or his representative shall be responsible for cleanup and all associated costs or damages.
- Slurry Mix: The slurry mix shall be composed of the following materials:

Bromus mollis - Blando Brome (95%, 85%)	20 pounds per acre
Festuca megalura - Zorro Fescue (85%, 80%)	8
Trifolium hirtum "Hykon" - Rose Clover (95%, 90%)	30
inoculated with appropriate bacteria	3
Eschscholzia californica - California Poppy (95%, 75%)	3
Lupinus nanus - Sky Lupine (95%, 75%)	4

(Seed available at S&S Seeds (805) 684-0436)

Other Materials:

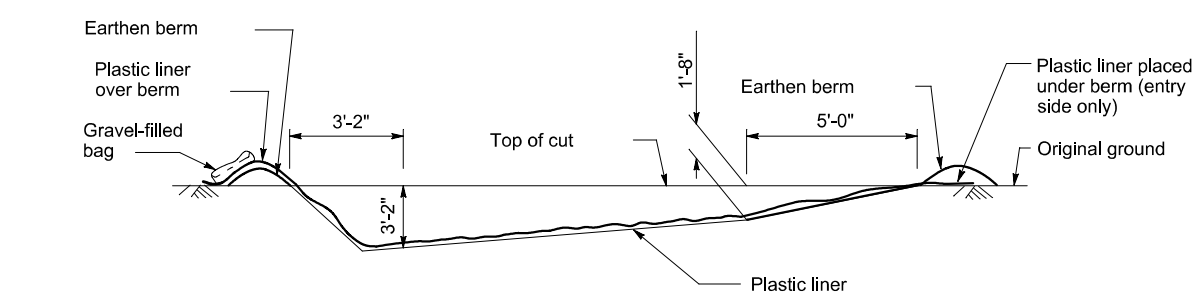
100% Wood fiber mulch (green)	1600 pounds per acre
Commercial Fertilizer (16-20-0)	400
"M-Binder" (stabilizing emulsion) or equal	120
Water (as needed for application and as specified by manufacturer)	
- Application: The slurry preparation shall take place at the site and in the presence of the Engineer. Spraying of the slurry shall be done by an experienced hydroseeding company and commence within five minutes after all the materials have been mixed thoroughly.
- The hydroseeded areas shall be watered with a fine mist periodically until the seed begins to germinate then every other day until the roots are established and 70% of the area is covered. Do not use the side spray of a watertruck but instead use a nozzle adjusted to spray a fine mist attached to a hose.
- BMP's to be constructed include but are not limited to:
 - Silt Fence
 - Straw bale barrier
 - Concrete washout area



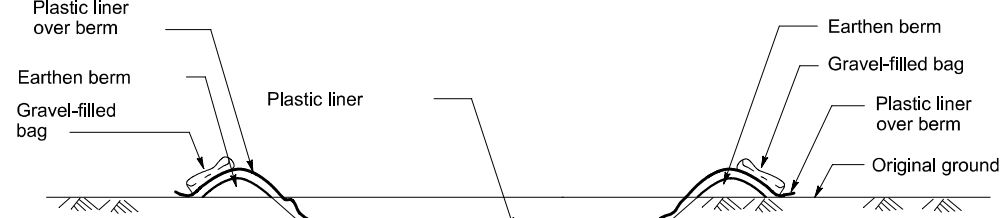
North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoirs #1-3 Erosion & Sedimentation Control
APPROVED	DATE	
SCALE 1"=100'	SHEET 11 of 12	PROJECT NO. 101715-6233

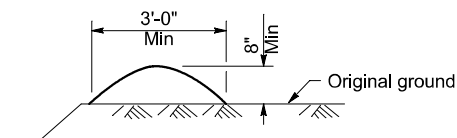
Erosion Control BMP Details



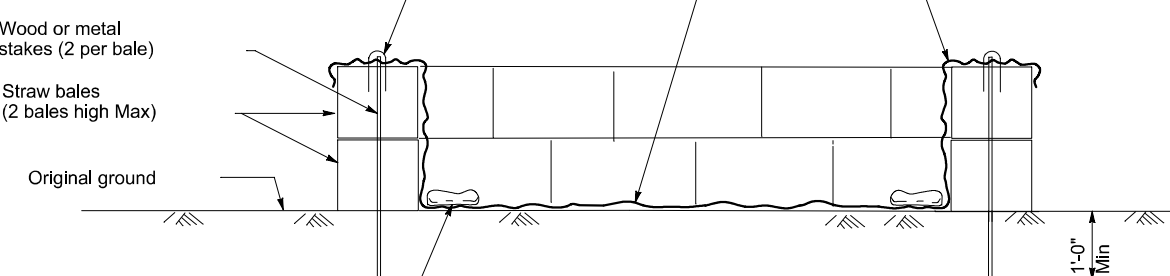
SECTION B-B



SECTION A-A



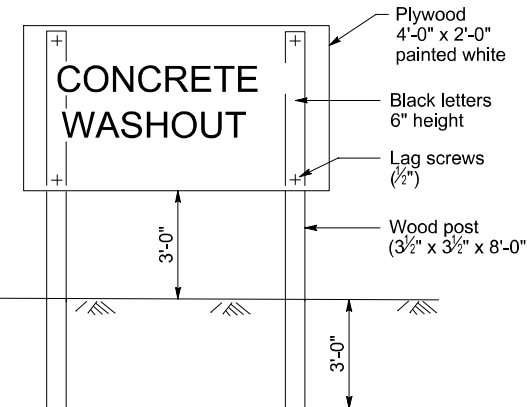
TYPICAL SECTION
EARTHEN BERM



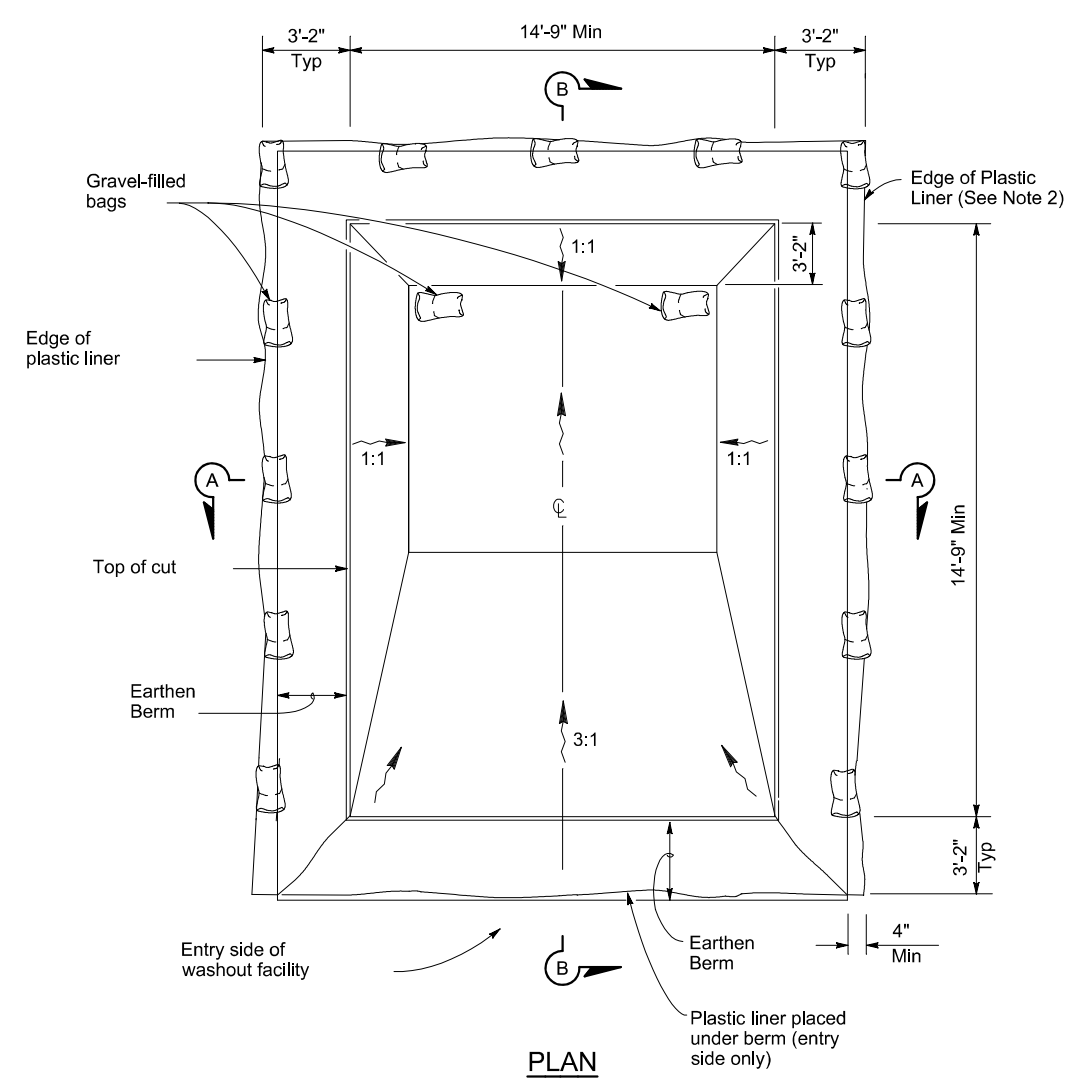
SECTION C-C

NOTES:

1. The concrete washout sign shall be installed within 32'-10" of the temporary concrete washout facility.
2. Plastic liner shall be anchored with gravel-filled bags for below grade concrete washout facility.

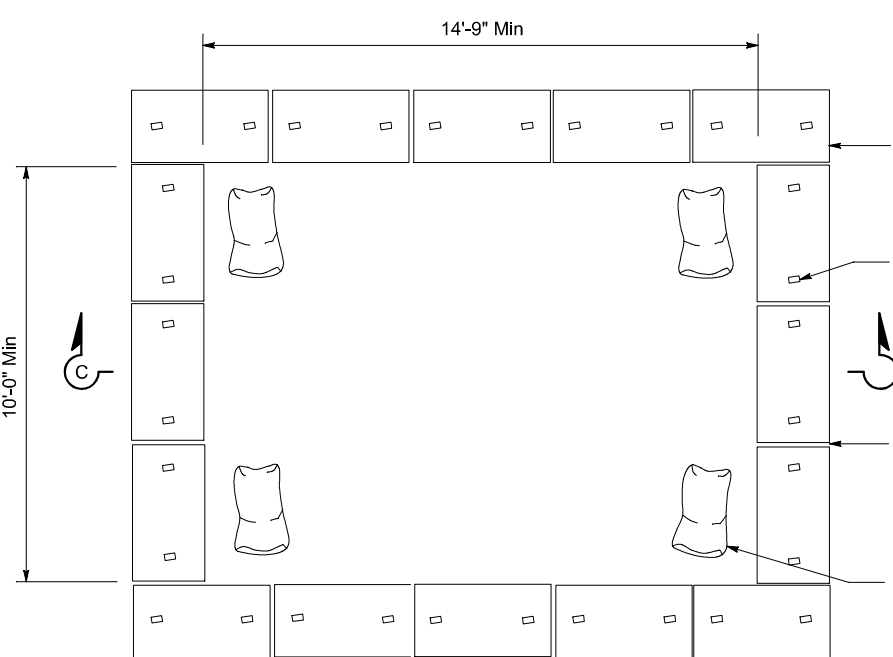


CONCRETE WASHOUT
SIGN DETAIL



PLAN

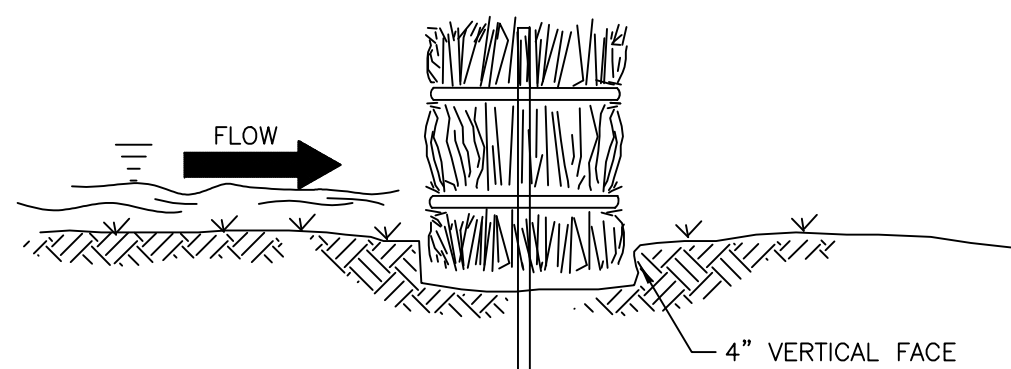
TEMPORARY CONCRETE WASHOUT FACILITY



PLAN

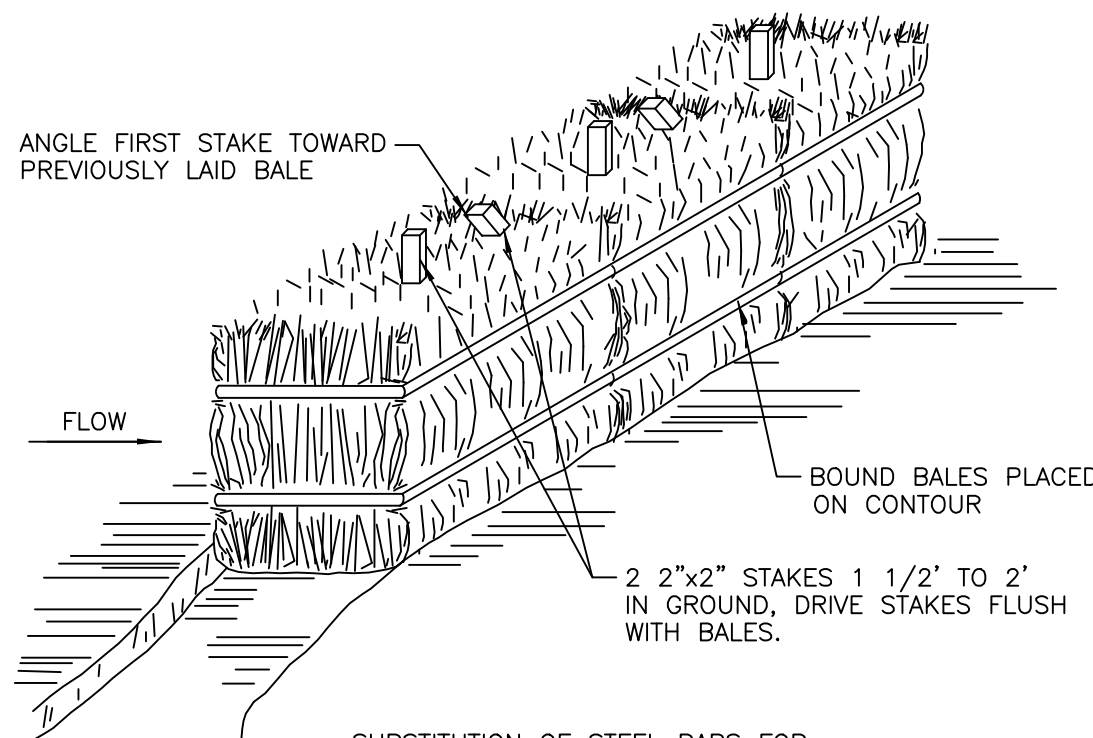
TEMPORARY CONCRETE WASHOUT FACILITY

NO SCALE



* PROMOTES ON SITE SEDIMENTATION
BY CREATING A TEMPORARY POND.

BEDDING DETAIL

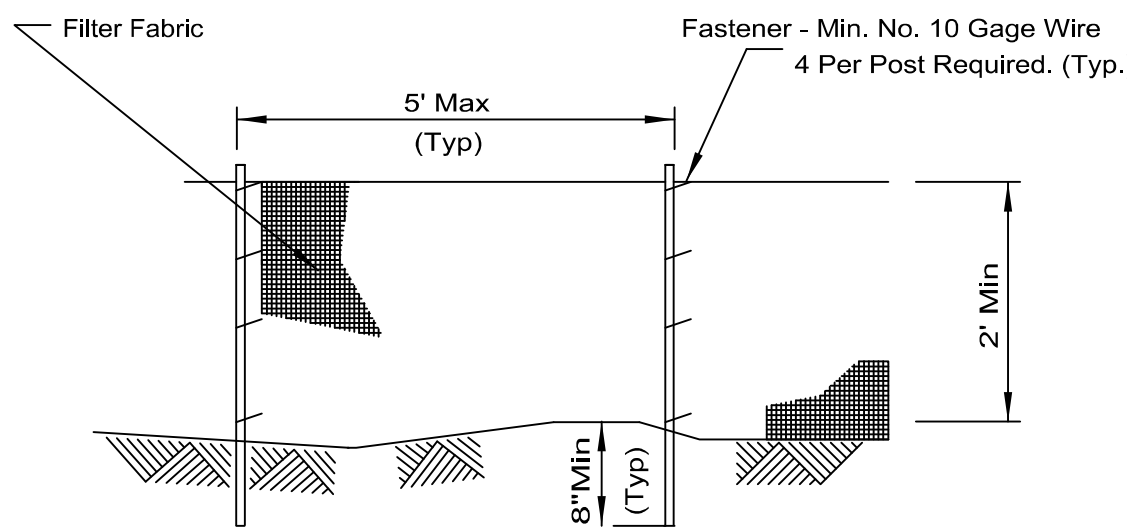


SUBSTITUTION OF STEEL BARS FOR
WOODEN STAKES IS NOT RECOMMENDED DUE
TO POTENTIAL FOR DAMAGING CONSTRUCTION EQUIPMENT

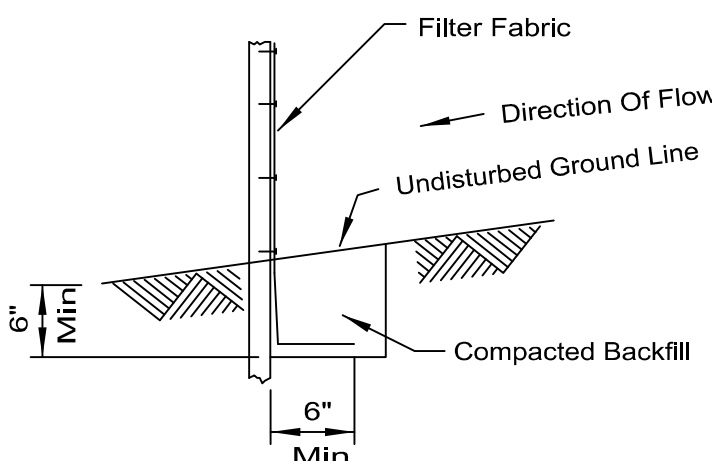
ANCHORING DETAIL

STRAW BALE BARRIERS

SILT FENCE PLAN



ELEVATION



FABRIC ANCHOR DETAIL

NOTES:

1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class with equivalent opening size of at least 30 for nonwoven and 50 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.



North Fork Vineyards

DRAWN TH	DATE 1/09/17	Reservoirs #1-3 BMP Details
APPROVED	DATE	
SCALE Varies	SHEET 12 of 12	PROJECT NO. 101715-6233



**BOARD OF SUPERVISORS
AGENDA LETTER**

Agenda Number:

Clerk of the Board of Supervisors
105 E. Anapamu Street, Suite 407
Santa Barbara, CA 93101
(805) 568-2240

Department Name: Planning and Development
Department No.: 053
For Agenda Of: December 11, 2018
Placement: Set hearing on December 11, 2018 for January 15, 2019
Estimated Tme: 1.0 hour on January 15, 2019
Continued Item: No
If Yes, date from:
Vote Required: Majority

TO: Board of Supervisors

FROM: Department Dianne M. Black, Director, Planning & Development
Director(s) (805) 568-2086
Contact Info: Jeff Wilson, Deputy Director, Development Review Division
(805) 568-2518

SUBJECT: Set a hearing to consider an Applicant appeal of the County Planning Commission's action to require a focused Environmental Impact Report for the North Fork Ranch Frost Ponds Minor Conditional Use Permit, Fifth Supervisorial District

County Counsel Concurrence

As to form: Yes

Auditor-Controller Concurrence

As to form: N/A

Other Concurrence: N/A

Recommended Actions:

On December 11, 2018, set a hearing for January 15, 2019, to consider appeal case number 18APL-00000-00019, filed by Mr. Matt Turrentine of Brodiaea, Inc., the project applicant, of the County Planning Commission's, September 12, 2018, determination that the proposed Final Mitigated Negative Declaration (MND), case number 16NGD-00000-00004 prepared for the North Fork Ranch Frost Ponds project, case number 16CUP-00000-00005, is inadequate and that a focused Environmental Impact Report (EIR) to evaluate issues associated with evaporative water loss from the reservoirs and biological resources is required. The project site is located at 7400 Highway 166, approximately nine miles west of the community of New Cuyama, Fifth Supervisorial District. The application involves Assessor's Parcel No. 147-010-045.

On January 15, 2019, your Board can take either of the two following options:

Option 1

- a) Conceptually determine that the Mitigated Negative Declaration, case no. 17NGD-000-00004, is inadequate and that an EIR is required because there is substantial evidence in the record supporting a fair argument that the project may have a significant effect on the environment;
- b) Conceptually deny the appeal, case no. 18APL-00000-00019, thereby affirming the Planning Commission's action;
- c) Conceptually direct staff to prepare an EIR focused on issues associated with evaporative water losses resulting from the proposed project, potential biological resource impacts, and potential flooding impacts to State Highway 166; and to bring the project back to the Planning Commission for further consideration upon completion of the EIR; and
- d) Continue the hearing in order to adopt findings that an EIR is required to evaluate the environmental impacts of the proposed project.

Option 2

- a) Conceptually determine that an EIR is not required at this time because the current evidence in the record does not support that there is substantial evidence of a fair argument that the project as analyzed in the Mitigated Negative Declaration, case no. 17NGD-00000-00004 may have significant effect on the environment;
- b) Conceptually approve the appeal, case no. 18APL-00000-00019, thereby reversing the County Planning Commission's action;
- c) Conceptually direct staff to bring the project back to the County Planning Commission for full consideration of the project; and
- d) Continue the hearing in order to adopt findings that an EIR is not required at this time.

Summary Text:

On September 12, 2018, the County Planning Commission reviewed the North Fork Ranch Frost Ponds project, (16CUP-00000-00005), which involves the construction of three water storage reservoirs (ponds) for frost control and irrigation of existing vineyards in the New Cuyama area. The Planning Commission considered the proposed project's potential water use impacts resulting from the use of water stored in the reservoirs for spray irrigation to provide frost protection for existing vineyards, crop irrigation, and the evaporative losses of water stored in the reservoirs. The Commission also considered the proposed project's potential impacts to biological resources, and potential flooding impacts to State Highway 166 that could result from a structural failure of a proposed reservoir. After substantial discussion, the Planning Commission (on a 3 to 2 vote) concluded that the Mitigated Negative Declaration for the project is inadequate and directed staff to prepare a focused EIR evaluating water use

impacts resulting from the use of the vineyard's entire frost protection system, potential impacts to biological resources, and potential flooding impacts to State Highway 166.

The Planning Commission's decision was based on its review of the staff report and supporting information, the Mitigated Negative Declaration, comment letters from agencies, organizations and individuals as well as public testimony. A copy of the Planning Commission's action letter is included as Attachment 1 to this Board letter.

The proposed Final MND prepared for the project, dated August 1, 2018, (included in Attachment 2: Planning Commission Staff Report dated September 4, 2018, Attachment D) evaluated the potential environmental impacts that may result from the construction and operation of the proposed reservoirs. Potentially significant impacts identified by the proposed Final MND include short-term construction-related impacts to biological and cultural resources, and construction-related erosion and water quality impacts. The proposed Final MND identified mitigation measures that would reduce the potentially significant environmental impacts of the project to a less than significant level, and those mitigation measures were included as conditions of approval for the proposed project (Attachment 2: Planning Commission Staff Report dated September 4, 2018, Attachment B). The proposed Final MND determined that estimated evaporation losses from the three proposed reservoirs would not result in a significant water use impact because the combined water losses from the three proposed reservoirs would be less than the 31 acre feet per year groundwater use threshold of significance adopted for the Cuyama Valley Groundwater Basin. Since the construction and operation of the discretionary reservoir project would not result in any significant environmental impacts after the implementation of proposed mitigation measures/conditions of approval, an MND was prepared for the project.

A letter from Marc Chytilo dated September 10, 2018, submitted to the Planning Commission (Attachment 3), and testimony provided at the September 12, 2018 hearing, states that the project's proposed Final MND did not adequately evaluate the proposed project's groundwater use impacts because the consumptive water use of the frost protection system must be considered in the environmental analysis, not only the evaporation from the three frost ponds themselves. Public comments have also raised the issue that the County's significance threshold for the Cuyama Valley Groundwater Basin is out of date because groundwater overdraft in the basin has increased since the threshold was adopted by the Board of Supervisors in 1992. The significance of the proposed project's water use impacts was evaluated based on the adopted groundwater use significance threshold of 31 acre feet per year.

The project applicant's appeal pertains only to the Planning Commission's determination that an EIR should be prepared for the proposed reservoir project. Your Board's action regarding the appeal should only address the adequacy of the project's environmental review and not the merits of the project.

Standard of Review of Mitigated Negative Declarations

As the appeal authority, the Board is guided by CEQA Guidelines section 15064 (f) (1) which states: "If the lead agency determines there is substantial evidence in the record that the project may have a significant effect on the environment, the lead agency shall prepare an EIR (Friends of B Street v. City of Hayward (1980) 106 Cal. App. 3d 988). Said another way, if a lead agency is presented with substantial evidence of a fair argument that a project may have a significant effect on the environment, the lead agency shall prepare an EIR even though it may also be presented with other substantial evidence that the project will not have a significant effect (No Oil, Inc. v. City of Los Angeles (1974) 13

Cal. 3d 68).” Substantial evidence includes “facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts (CEQA Guidelines section 15384(b).)

The project applicant is appealing the County Planning Commission’s action based on the contention that there is no justification for requiring the preparation of an EIR for the project and that no substantial evidence has been presented to support a fair argument that the project’s impacts would be significant after mitigation. A copy of the appeal letter, which describes the appellant’s appeal issues, is included as Attachment 4 to this Board letter.

If your Board determines that based on the criteria in CEQA Guidelines Section 15064 (f)(1) presented above that there is substantial evidence of a fair argument the proposed project may have a significant effect on the environment, then staff recommends that your Board take the action presented in Option No. 1.

Alternatively, if your Board determines that there is no substantial evidence of a fair argument that the project may have a significant effect on the environment, and then staff recommends that your Board take the action outlined in Option No. 2.

Background

The project that is subject to the appeal is the North Fork Ranch Frost Ponds project, which involves the construction and operation of three water storage reservoirs for frost control and irrigation of existing vineyards located on a 6,565-acre parcel that is zoned AG-II. Each reservoir would have the capacity to store up to 49 acre feet of water that would be used to protect the vineyards from frost damage during the months of February, March and April. The existing agricultural uses have been in operation for approximately three-years—the water wells, water pipelines and the irrigation system were installed in 2014 and 2015, and the vineyards planted in early 2016.

On September 25, 2018, the Zoning Administrator approved a Minor Conditional Use Permit (16CUP-00000-00005) and MND for the North Fork Ranch Frost Ponds project. The approved MND addressed biological resources, cultural resources, geologic processes, and water resources/flooding. The Zoning Administrator Action Letter dated October 2, 2017, is included as Attachment 5.

On October 2, 2018, the Zoning Administrator’s decision was appealed by Roberta Jaffe and Stephen Gliessman (17APL-00000-00017) citing concerns with the conclusions of the mitigated negative declaration and project water usage. The Jaffee/Gliessman appeal letter is Attachment 6.

On September 12, 2018, the Planning Commission conducted a public hearing on the appeal. The Planning Commission staff report for the appeal is included as Attachment 2.

On September 21, 2018, the project applicant appealed the Planning Commission action to require a focused EIR for the North Fork Ranch Frost Ponds Minor Use Permit. The Commission action is discussed in the Summary Text section of this report. The issues raised by the appellant are discussed below.

Appellants Issues:

Appeal Issue No. 1: Vineyards and cultivated agriculture are exempt from County permits and CEQA, and the MND prepared for the project adequately evaluated evaporative water losses from the proposed reservoirs.

The Appellant states that the cultivation of crops, the drilling of agricultural wells, and spray irrigation for frost protection in the Inland area of the County is exempt from permits. Therefore, these normal agricultural activities are not considered a “project” under CEQA and are exempt from environmental review. The Appellant believes that the proposed project’s evaporative water losses were adequately evaluated by the MND.

Water storage reservoirs greater than 50,000 square feet are a conditionally permitted use in the AG-II zone and require the approval of a Minor Conditional Use Permit (LUDC Section 35.21.030). Vineyards in the AG-II zone are exempt from the County’s land use permitting requirements (LUDC Section 35.21.030). Vineyards located in the AG-II zone are also exempt from CEQA review requirements because no permit approvals are required.

The proposed Final MND prepared for the project, dated August 1, 2018, (Attachment 2: Planning Commission Staff Report dated September 4, 2018, Attachment D) evaluated the potential environmental impacts that may result from the construction and operation of the proposed reservoirs. Potentially significant impacts that were identified include short-term construction-related impacts to biological and cultural resources, and construction-related erosion and water quality impacts. The proposed Final MND identified mitigation measures that would reduce potentially significant environmental impacts of the project to a less than significant level, and those mitigation measures were included as conditions of approval for the proposed project (Attachment 2: Planning Commission Staff Report dated September 4, 2018, Attachment B). The proposed Final MND also evaluated the water usage impacts of the proposed project. That analysis determined that estimated evaporation losses from the three proposed reservoirs would not result in a significant groundwater resource impact because the combined water losses would be less than the 31 acre feet per year groundwater use threshold of significance adopted for the Cuyama Valley Groundwater Basin. Since the construction and operation of the discretionary reservoir project would not result in any significant environmental impacts after the implementation of proposed mitigation measures/conditions of approval, an MND was prepared for the project.

The Planning Commission concluded that the subsequent use of the water stored in the reservoirs for frost protection or crop irrigation should be considered to be a water use impact of the proposed reservoir project. The Commission also determined that the MND did not adequately address this issue and that this potential impact should be analyzed in a focused EIR. The Board should determine if comments on the adequacy of the analysis of the project’s water use impacts have presented substantial evidence of a fair argument supported by substantial evidence that an EIR must be prepared to evaluate the project’s potential water use impacts.

Appeal Issue No. 2: The project MND includes an adequate evaluation of the project's impacts to biological resources.

The Appellant believes that the proposed Final MND prepared for the proposed project adequately evaluated the project's potential impacts to biological resources and that no additional analysis is required.

Comments submitted to the Planning Commission hearing by Dr. Stephen Gliessman in a letter dated September 6, 2018 (Attachment 3), and testimony provided at the hearing state that the floristic surveys of the project site were conducted after four years of drought, which may have influenced the validity of the surveys. A similar comment was provided by a peer review of the proposed project's 2016 biological resource impact assessment report prepared by Kevin Merk Associates. In response to these comments, the Planning Commission requested additional evaluation of the project's potential biological resource impacts because rainfall conditions will influence plant growth in the project area. The proposed project's 2016 biological resource impact assessment report, peer review comments on the assessment report, and responses to the peer review comments are provided as attachments to the proposed Final MND prepared for the project (Attachment 2 to this Board letter: Planning Commission Staff Report dated September 4, 2018; Attachment D to the Planning Commission staff report is the proposed Final MND dated August 1, 2018, Attachments 2a, 2b and 2c to the proposed Final MND are the referenced documents).

According to the February 2016 biological resource impact assessment report, the general botanical and biological surveys of the North Fork Ranch were conducted in April, May, June, July, September and October of 2015 prior to the initiation of on-site agricultural activities. The assessment report concluded that the ranch has been used to graze cattle for many years, and as a result the gently-sloped and flat areas of the ranch (i.e., the types of areas where the proposed reservoirs would be located) were dominated by non-native weeds. Surveys of the proposed reservoir sites were also conducted on January 4, 2016. Areas adjacent to the disturbed reservoir sites were also surveyed and vegetation in those areas was dominated by non-native weeds. Further, at the proposed Reservoir No. 1 site, sparse occurrences of annual grasses were beginning to sprout in response to recent rains. The 2016 impact assessment report concluded that no special status biological resources (i.e., plant communities, plants or animals) were observed on the proposed project sites, and given the long-term disturbance of the sites due to cattle grazing, it is unlikely that any are present. In addition to the conclusions of the 2016 assessment report, responses to the report's peer review indicate that additional surveys of the project sites were conducted in the spring of 2016. Those surveys provided additional field observations confirming that special status plants were not present.

The project site conditions described by the 2016 biological resource impact assessment report and the proposed Final MND are the "baseline" conditions from which the potential impacts of the project are to be evaluated. Due to the disturbed character of the project sites and the results of numerous site surveys for sensitive plants and animals, the proposed Final MND concluded that the project would not result in significant impacts to sensitive vegetation. The proposed Final MND also concluded that although unlikely, potential construction-related impacts of the project to sensitive animal species (e.g., San Joaquin kit fox and American badger) would be reduced to less than significant level with the implementation of identified mitigation measures that were also included as conditions of approval. Since the construction and operation of the proposed reservoirs would not result in significant impacts to sensitive biological resources after the implementation of proposed mitigation measures/conditions of approval, an MND was prepared for the project.

The Santa Barbara County Flood Control District's *Santa Barbara County Hydrology Report, Precipitation, Rivers/Streams & Reservoirs, Water-Year 2016* report indicates that for the 2016 water year, 7.85 inches of rain was measured at the Cuyama fire station, which is 102 percent of the normal Cuyama area rainfall. An excerpt from the hydrology report depicting measured rainfall in the Cuyama area during the 2016 water year is included as Attachment 7. This information verifies that the sensitive plant surveys of the project sites were conducted after a year with normal rainfall conditions.

The Planning Commission concluded that below normal rainfall may have resulted in conditions that affected the validity of plant surveys conducted for the project, and that project-related plant surveys should be conducted after a normal rainfall year. Based on the above information and comments received at the Planning Commission hearing, the Board should determine if comments on the adequacy of the biological surveys conducted for the project have presented substantial evidence of a fair argument supported by substantial evidence that additional surveys are required and that an EIR must be prepared to evaluate potential impacts to sensitive plants.

Appeal Issue No. 3: No additional evaluation of the proposed reservoir's potential slope failure impacts to State Highway 166 should be required.

The Planning Commission expressed concerns with the potential for impacts to State Highway 166 due to flooding due to reservoir slope failure and determined that this issue should be analyzed in a focused EIR. The potential for project-related impacts to State Highway 166 were raised by a comment letter on the Draft MND submitted by Caltrans (Attachment 2 to this Board letter: Planning Commission Staff Report dated September 4, 2018; Attachment D to the Planning Commission staff report is the proposed Final MND dated August 1, 2018, Attachment 5 includes the Caltrans comment letter). In their letter, Caltrans stated that a catastrophic failure of a reservoir berm could result in flooding impacts to State Highway 166, and that the County's Grading Ordinance may not adequately address this potential impact. The Appellant believes that if a proposed reservoir were to experience a structural failure, potential impacts to State Highway 166 would be minor and temporary due to the size of the reservoirs and distance from SR 166.

The proposed Final MND concludes that the proposed reservoirs would not result in potential flooding-related impacts because they must comply with County Grading Ordinance requirements, which would ensure that the reservoir's water containment berms are structurally adequate to contain impounded water. The Grading Ordinance requires the proposed reservoirs to be designed by a licensed civil engineer. In addition, the interior slopes of the reservoirs would be lined with an impermeable material that would prevent stored water from infiltrating and saturating the reservoir's containment berms, the exterior slopes of the reservoirs would be vegetated, and runoff from upslope areas be diverted around the reservoirs.

The Planning Commission determined that the proposed MND did not adequately address this issue and that further analysis was warranted in a focused EIR. The Board should determine if substantial evidence of a fair argument has been presented that the proposed reservoirs would have the potential to result in significant flooding-related impacts to State Highway 166 and that an EIR must be prepared for the project.

Fiscal and Facilities Impacts:

Budgeted: Yes

The costs for processing appeals are provided through a fixed appeal fee and funds in Planning and Development's adopted budget. Total costs for processing the appeal are approximately \$9,040 (40 hours). The costs are partially offset by the appeal fee of \$610.06. Funding for processing this appeal is budgeted in the Permitting Budget Program, as shown on page D-272 of the adopted FY 2018-19 budget.

Special Instructions:

The Clerk of the Board shall publish a legal notice at least 10 days prior to the hearing on January 15, 2019. The notice shall appear in the Santa Maria Times. The Clerk of the Board shall fulfill noticing requirements. Mailing labels for the mailed notices are attached. A minute order of the hearing and copy of the notice and proof of publication shall be forwarded to the Planning and Development Department, Hearing Support, Attention: David Villalobos.

Attachments:

1. Planning Commission Hearing Action Letter for 17APL-00000-00017
2. Planning Commission Staff Report for 17APL-00000-00017 dated September 4, 2018
3. Comments submitted to the Planning Commission regarding 17APL-00000-00017
4. Project Applicant's Board of Supervisors appeal letter
5. Zoning Administrator Action Letter
6. Jaffe/Gliessman Planning Commission appeal letter
7. 2016 Cuyama area rainfall data

Authored by:

Steve Rodriguez, Planner, 805 682-3413
Development Review Division, Planning and Development Department

Attachment 1



COUNTY OF SANTA BARBARA
CALIFORNIA

PLANNING COMMISSION

COUNTY ENGINEERING BUILDING
123 E. ANAPAMU ST.
SANTA BARBARA, CALIF. 93101-2058
PHONE: (805) 568-2000
FAX: (805) 568-2030

September 14, 2018

Brian Tetley
Urban Planning Concepts
2624 Airpark Drive
Santa Maria, CA 93455

PLANNING COMMISSION
HEARING OF SEPTEMBER 12, 2018

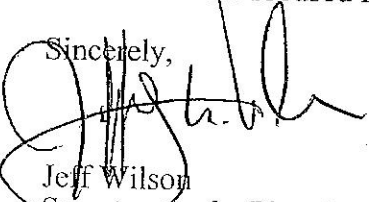
**RE: Jaffe/Gliessman Appeal of the North Fork Ranch Frost Ponds Minor Conditional Use Permit;
17APL-00000-00017**

Hearing on the request of Roberta Jaffe and Stephen Gliessman to consider the appeal, Case No. 17APL-00000-00017 [application filed on October 2, 2017] in compliance with Section 35.102 of the County Land Use and Development Code, of the decision of the Zoning Administrator to approve a Minor Conditional Use Permit, Case No. 16CUP-00000-00005, for the North Fork Ranch Frost Ponds project on property located in the AG-II-100 Zone; and to adopt the Mitigated Negative Declaration (16NGD-00000-00004) pursuant to the State Guidelines for Implementation of the California Environmental Quality Act (CEQA). As a result of this project, significant but mitigable effects on the environment are anticipated in the following categories: Biological Resources, Cultural Resources, Geologic Processes, and Water Resources/Flooding. The application involves Assessor Parcel No. 147-010-045, located on the south side of State Route 166, approximately nine miles west of the community of New Cuyama, between Cottonwood Canyon Road and Schoolhouse Canyon Road, Fifth Supervisorial District.

Dear Mr. Tetley:

At the Planning Commission hearing of September 12, 2018, Commissioner Cooney moved, seconded by Commissioner Brown and carried by a vote of 3 to 2 (Ferini and Blough no) to remand the matter back to staff with direction to prepare a focused Environmental Impact Report (EIR) that evaluates potential water use and biological impacts that may result from the operation of the proposed reservoirs for frost protection and associated frost protection systems. The Planning Commission also directed staff to determine if an evaluation of potential reservoir failure impacts to State Route 166 should be included in the focused EIR.

Sincerely,


Jeff Wilson
Secretary to the Planning Commission

cc: Case File: 17APL-00000-00017
Planning Commission File

Owner: Matt Turrentine – Brodiaea, Inc., P.O. Box 6565, Santa Maria, CA 93455
Appellant: Roberta Jaffe and Stephen Gliessman, P.O. Box 215, New Cuyama, CA 93254
Steve Lavagnino, Fifth District Supervisor
Dan Blough, Fifth District Planning Commissioner
Jenna Richardson, Deputy County Counsel
Steve Rodriguez, Planner

JW/dmv

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SANTA BARBARA COUNTY PLANNING COMMISSION
Staff Report for the Jaffe/Gliessman Appeal of the North Fork Ranch Frost Ponds
Minor Conditional Use Permit

Hearing Date: September 12, 2018
Staff Report Date: September 4, 2018
Case No. 17APL-00000-00017
Environmental Document: Mitigated
Negative Declaration 17NGD-00000-00004

Deputy Director: Jeff Wilson 
Division: Development Review
Supervising Planner: John Shoals
Supervising Planner Phone No.: 934-6297
Staff Contact: Steve Rodriguez
Staff Contact Phone #: 805 682-3413

OWNER/APPLICANT

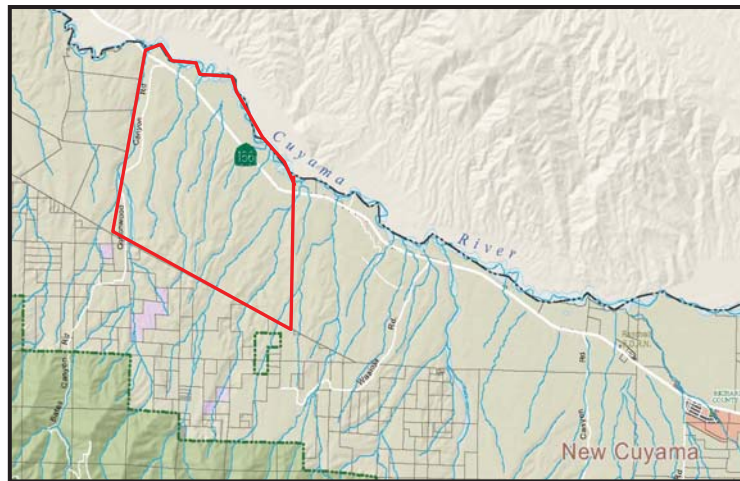
Matt Turrentine – Brodiaea, Inc.
P.O. Box 6565
Santa Maria, CA 93455
(805) 312-1828

OWNER'S AGENT

Mr. Brian A. Tetley
Urban Planning Concepts
2624 Airpark Drive
Santa Maria, CA 93455
(805) 934-5760

APPELLANT

Roberta Jaffe
Stephen Gliessman
PO Box 215
New Cuyama, CA 93254
(831) 818-2451



The project parcel is identified as Assessor's Parcel Number 147-010-045, located along State Route 166, approximately nine miles west of the community of New Cuyama, between Cottonwood Canyon Road and Schoolhouse Canyon Road, Fifth Supervisorial District.

Zoning Administrator Approval: September 25, 2017
Appeal of Zoning Administrator Decision Filed: October 2, 2017

1.0 REQUEST

Hearing on the request of Roberta Jaffe and Stephen Gliessman to consider the appeal, Case No. 17APL-00000-00017 [application filed on October 2, 2017] in compliance with Section 35.102 of the County Land Use and Development Code, of the decision of the Zoning Administrator to approve a Minor Conditional Use Permit, Case No. 16CUP-00000-00005, for the North Fork Ranch Frost Ponds project on property located in the AG-II-100 Zone; and to adopt the Mitigated Negative Declaration (16NGD-00000-00004) pursuant to the State Guidelines for Implementation of the California Environmental Quality Act (CEQA). As a result of this

project, significant but mitigable effects on the environment are anticipated in the following categories: Biological Resources, Cultural Resources, Geologic Processes, and Water Resources/Flooding.

The application involves Assessor Parcel No. 147-010-045, located on the south side of State Route 166, approximately nine miles west of the community of New Cuyama, between Cottonwood Canyon Road and Schoolhouse Canyon Road, Fifth Supervisorial District.

2.0 RECOMMENDATION AND PROCEDURES

Follow the procedures outlined below and deny the appeal, and grant *de novo* conditional approval of Case No. 16CUP-00000-00005, marked “Officially Accepted, County of Santa Barbara (September 4, 2018) County Planning Commission Attachments A-G,” based upon the project's consistency with the Comprehensive Plan and based on the ability to make the required findings.

Your Commission's motion should include the following:

1. Deny the appeal, Case No. 17APL-00000-00017;
2. Make the required findings for approval of the project, Case No. 16CUP-00000-00005, specified in Attachment A of this staff report, including CEQA findings;
3. Adopt the Final Mitigated Negative Declaration 17NGD-00000-00004 dated August 1, 2018, and included as Attachment D of this staff report, and adopt the mitigation monitoring program contained in the conditions of approval; and
4. Grant *de novo* approval of the project, Case No. 16CLUP-00000-00005, subject to the conditions included as Attachment B, thereby affirming the decision of the Zoning Administrator.

Refer back to staff if the County Planning Commission takes other than the recommended action for appropriate findings and conditions.

3.0 JURISDICTION

The County Planning Commission is considering this project based on Section 35.102.040.A.4.a (Appeals Procedures) of the Santa Barbara County Land Use and Development Code (LUDC), which states that any decision of the Zoning Administrator to approve, conditionally approve, or deny an application for a Conditional Use Permit where the Zoning Administrator is the applicable review authority, except when specifically provided that the action, decision or determination is final and not subject to appeal, may be appealed to the Planning Commission.

4.0 ISSUE SUMMARY

The North Fork Ranch Frost Pond project would result in the construction and operation of three water storage reservoirs (frost ponds) located on the south side of State Route 166 on a 6,565-acre parcel that is located approximately nine miles west of the community of New Cuyama. The reservoirs would be used to supply frost protection water to approximately 1,000 acres of existing vineyards generally during the months of February, March and April. Each of the proposed reservoirs would be lined to prevent water infiltration, and each would occupy an area of approximately five acres and have the capacity to store up to 49 acre feet of water.

The Zoning Administrator approved a Minor Conditional Use Permit for the reservoir project on September 25, 2017. The Zoning Administrator Action Letter dated October 2, 2017, is included as Attachment E to this staff report. The appellants submitted an appeal of the Zoning Administrator's decision on October 2, 2017 (Attachment F). The appellants assert that the project should not have been approved because it would not be consistent with CEQA Finding 1.2. and Conditional Use Permit Finding No. 5. CEQA Finding 1.2 requires a determination that there is no substantial evidence that the project will have a significant effect on the environment. Conditional Use Permit Finding No.5 requires a determination that the project will not be detrimental to the comfort, convenience, general welfare, health, and safety of the neighborhood and will be compatible with the surrounding area.

The appellant's assertions that the project would not be consistent with the identified findings are primarily related to the project's use of groundwater. Water stored in the reservoirs would be supplied by existing agricultural wells located on the project parcel and north of SR 166. The wells produce water from the Cuyama Valley Groundwater Basin, which is in a state of overdraft. The appellants also assert that the existing vineyards that would be supported by the proposed reservoirs resulted in the conversion of dry rangeland to agriculture, which also contributes to existing groundwater overdraft conditions. The project that has been appealed is a proposal to construct three frost pond reservoirs, and the previous conversion of open space for an agricultural use is not a part of the reservoir project and is not a discretionary activity. The appeal issues and staff's responses are discussed in detail in Section 6.0 of this staff report. Staff's recommendation is to deny the appeal and approve the proposed project.

5.0 PROJECT INFORMATION

5.1 Site Information

Site Information	
Comprehensive Plan Designation	Rural Area, Agricultural Commercial (AC)
Ordinance, Zone	Land Use and Development Code, AG-II-100, 100-acre minimum parcel size
Site Size	6,565 acres
Present Use & Development	The three proposed reservoir sites are vacant and located

Site Information	
	adjacent to existing vineyards
Surrounding Uses/Zone(s)	North: Open Space, AG-II-100 South: Open Space, AG-II-100 East: Open Space, AG-II-100 West: Open Space, AG-II-100
Access	State Route 166
Public Services	Water Supply: Private wells Sewage: None Fire: Santa Barbara County Fire, Station No. 41 Police Services: County Sheriff

5.2 Setting

The 6,565-acre project parcel is located along State Highway 166, and the three proposed reservoir sites are approximately 4,000 to 5,000 feet south of the Cuyama River. The reservoir sites are currently vacant and adjacent to existing vineyards. Approximately 1,000 acres of vineyards have been planted on the project property. Water to be stored in the proposed reservoirs would be supplied by existing private water wells located on the project parcel. Existing vineyard irrigation pipelines would be used to deliver water from the existing wells to the proposed reservoirs.

Slope/Topography. The proposed reservoir sites are generally level and slope gently towards named and unnamed ephemeral drainages.

The Reservoir No. 1 project site is located on the eastern end of the project property adjacent to Schoolhouse Canyon Road. This project site ranges in elevation from approximately 1,958 feet above sea level in the southwest corner to approximately 1,938 feet in the southeast corner, which results in a slope gradient of approximately four percent. The site generally slopes to the east and is approximately 500 feet west of Schoolhouse Canyon Creek.

The Reservoir No. 2 project site is located on the central portion of the project property. This project site ranges in elevation from approximately 1,790 feet above sea level in the southwest corner to approximately 1,766 feet in the northwest corner, which results in a slope gradient of approximately six percent. The site generally slopes to the east and is approximately 100 feet west of a small ephemeral drainage.

The Reservoir No. 3 project site is located on the western end of the project property approximately one mile east of Cottonwood Canyon Road. Small ephemeral drainages are located approximately 100 feet to the west and approximately 250 feet to the east of the reservoir site. This project site ranges in elevation from approximately 1,740 feet above sea level in the southeast corner to approximately 1,726 feet in the northwest corner, which results in a slope gradient of approximately two percent. The site generally slopes to the northeast towards the adjacent drainage.

Flora/Fauna. Flora and fauna conditions at and near the proposed reservoir sites are described in a report titled *Biological Resources Assessment for the Reservoir and Operations Yard Project, North Fork Ranch, Santa Barbara County, California* (Kevin Merk Associates, February 24, 2016). This report is included in the project's Final MND, dated August 1, 2018 (Attachment D).

The proposed reservoir sites and surrounding areas have been historically used for cattle grazing and vegetation at and near the sites is sparse and consists predominately of non-native weeds and annual grasses. The proposed reservoir sites and areas adjacent to the sites were recently disked in preparation of planting grape vines. As a result of the disking operations conducted in 2016, much of the proposed reservoir sites are nearly devoid of vegetation. The drainages located near the proposed reservoirs are dry most of the year and generally flow briefly during the summer monsoon season and after winter rains. The drainages support patches of native habitat. Thirteen species of sensitive plants are known to exist in the project region, although no suitable habitat for sensitive plant species was observed at the project sites, and seasonally timed surveys conducted in 2015 did not observe any sensitive plant species in project-related disturbance areas. Sensitive wildlife species that have the potential to occur in the project area include San Joaquin kit fox (*Vulpes macrotis mutica*) and American badger (*Taxidea taxus*).

Vegetation coverage at the project sites is sparse and wildlife observed during site visits was limited to coyote tracks and a large flock of American crows in a disked area (KMA, 2016). Twelve special status animal species are known to occur in the project region. Species that may still occur in the region include giant kangaroo rat (*Dipodomys ingens*), American badger, San Joaquin kit fox, blunt-nosed leopard lizard (*Gambelia sila*), and prairie falcon (*Falco mexicanus*). Due to lack of prey or habitat requirements, it is unlikely that these species would be found on the project site; however, species such as the San Joaquin kit fox, if present in the project area, could move through the project sites during foraging or migration activities.

Archaeological Sites. Archaeological resources located on or near the project site are described in a report titled *Phase 1 Cultural Resources Study for the North Fork Reservoir Project, Santa Barbara County, California* (Rincon, August, 2016). The Phase 1 investigation included a survey of the proposed reservoir sites and the location of the proposed pipelines that would connect the reservoirs to existing irrigation water pipelines. The Phase 1 survey did not identify any archaeological resources within the proposed project site boundaries. The survey report does, however, state that human remains were identified during the excavation of a trench for the installation of an irrigation pipeline on the north side of State Highway 166. Due to the presence of this pre-historic burial, the proposed reservoir sites are considered to be sensitive for cultural resources.

Soils: Reservoir sites 1 and 3 are located on Pleasanton sandy loam, and reservoir site 2 is on Panoche loam. Both soil types have a land capability classification of 2e if irrigated and 3e if non-irrigated.

5.3 Description

The North Fork Ranch Frost Pond project involves the construction and operation of three frost ponds (reservoirs) that would store water to be used for frost protection at the North Fork Ranch Vineyards. The project also includes the construction of new underground pipelines that would extend between each of the proposed reservoirs and the existing vineyard irrigation system.

The proposed reservoirs would serve approximately 1,000 acres of existing vineyards. Reservoir No. 1 would be located on the eastern portion of the project site adjacent to Schoolhouse Canyon Road (a private road). Reservoir No. 2 would be located in the central portion of the project site, and Reservoir No. 3 would be located on the western portion of the project site approximately 0.75 mile east of Cottonwood Canyon Road. Access to the reservoirs would be from existing roads that connect to State Highway 166.

Frost protection would be achieved by sustained spray irrigation when frost has the potential to damage the grape vines. Frost protection would generally be required during the months of February, March, and April. The reservoirs would be maintained at a full condition between February and April. A maximum of three feet of well-supplied water would be maintained in the reservoirs between May 1st through January 31st. Water above a depth of three feet contained in the reservoirs after May 1 would be distributed for vineyard irrigation.

Each reservoir would have a water storage capacity of 49 acre-feet and would be lined with a high-density polyethylene plastic liner to prevent water seepage. Each reservoir would also have an emergency overflow discharge system that would prevent stored water from over-topping the reservoir. Water to be stored in the proposed reservoirs would be supplied by existing agricultural wells located on the project parcel and the north side of State Route 166. Water from the wells would be conveyed to the reservoirs by existing vineyard irrigation pipelines that extend beneath the highway and throughout the vineyard. A six foot high fence would be installed around the exterior perimeter of each reservoir to prevent unauthorized entry. Life ring stations and floating pool ropes would also be provided for rescue purposes.

A total of approximately 257,945 cubic yards of cut and fill grading would be required to construct the three proposed reservoirs. The reservoirs would have a maximum depth of 27-28 feet, and in total would occupy an area of approximately 15.6 acres. Proposed pipelines that would convey water from the vineyard's existing irrigation system to each of the reservoirs would have a total length of 1,350 feet. Proposed pipelines that would convey water from each of the reservoirs to the vineyard's existing spray irrigation system would have a total length of 976 feet. Construction details for each of the proposed reservoirs are summarized in Table 1. It is estimated that the construction period for the three proposed reservoirs would be approximately one year. Proposed project plans are provided as Attachment G.

Table 1
North Fork Ranch Frost Ponds
Construction Characteristics

Reservoir	Proposed Grading			Reservoir Area		Reservoir Depth			Proposed Pipelines	
	Cut (cu. yds.)	Fill (cu. yds.)	Total (cu. yds.)	Approximate Dimensions (feet)	Acres	Top of Reservoir Elevation	Bottom of Pond Elevation	Depth (feet)	Fill Line (feet)	Drain Line (feet)
No. 1	44,062	44,589	88,651	590 x 370	5.0	1,955	1,927	28	624	517
No. 2	44,064	42,205	86,269	580 X 410	5.7	1,788	1,761	27	370	202
No. 3	42,771	40,254	83,025	590 x 360	4.9	1,744	1,717	27	356	257
TOTAL	130,897	127,048 (1)	257,945	--	15.6	--	--	--	1,350	976

(1) Due to shrinkage of fill material, no soil would be exported from the project site

Surface water drainage from upslope areas adjacent to the reservoirs would be collected by proposed drainage swales. The collected water would be discharged and allowed to sheet flow at downslope locations adjacent to the reservoirs. Rock energy dissipaters would be installed at each discharge location to reduce potential erosion-related impacts. Stormwater discharge from Reservoir No. 1 would be conveyed beneath Schoolhouse Canyon Road by a proposed culvert beneath the road.

5.4 Background Information

Water storage reservoirs greater than 50,000 square feet are a conditionally permitted use in the AG-II zone and require the approval of a Minor Conditional Use Permit. Vineyards that would be served by the proposed reservoirs were planted in early 2016 and water wells and pipelines that would be used to convey water to the reservoirs were installed in 2014 and 2015. The existing vineyards, irrigation infrastructure, and the production of water used to support the vineyards are activities allowed in the AG-II zone, do not require the approval of any discretionary or ministerial permits (LUDC Section 35.21.030), and are existing and established uses.

6.0 PROJECT ANALYSIS

6.1 Appeal Issues and Staff Responses

The appeal of the North Fork Ranch Frost Ponds project focuses on the ability to make required CEQA and Conditional Use Permit findings of approval due to the project's water use and other environmental impacts. The appellants' appeal issues are summarized below and are followed by staff's response. In addition, the project applicant submitted a letter dated February 19, 2018, (Attachment I) in response to the project appeal application, incorporated herein by reference.

Appeal Issue No. 1: The proposed reservoirs and the existing vineyards they would serve should be evaluated as a single project.

The Appellants state that the proposed reservoirs are part of the existing 1,000-acre vineyard, which was planted on what was previously dry rangeland. Therefore, the CEQA evaluation of the project should consider the conversion of rangeland to irrigated agriculture, and the evaluation of the project's water use impacts on the overdrafted Cuyama Valley Groundwater Basin should be based on the total amount of water used for frost protection and the amount of water used for irrigating the existing vineyards.

Staff Response. As described in Section 5.4 above, agricultural operations in the AG-II zone are allowed uses that do not require the approval of a land use entitlement. Similarly, the production and use of water that supports agricultural uses does not require the approval of a discretionary permit. The establishment of vineyards on the project parcel is not discretionary and has already occurred; therefore, it is an existing baseline condition for CEQA purposes and is not a part of the discretionary reservoir project.

Since the proposed water storage reservoirs require the approval of a discretionary permit (a Minor Condition Use Permit), their construction and operation is subject to CEQA review. However, water that would be stored in the reservoirs and applied directly to the vineyards for frost protection would support an allowed agricultural use, similar to the application of irrigation water, and that water use is not a discretionary action that is subject to CEQA review. Water stored in the reservoirs during the frost protection season would not be used for crop irrigation but may be used for irrigation after the end of the frost season. Water that evaporates from the reservoirs, however, would not directly support an allowed agricultural use and such water losses are subject to CEQA review. Evaporative losses from the proposed reservoirs are estimated to be approximately 26.28 acre feet per year, which is below the 31 acre foot per year water use significance threshold adopted for the Cuyama Valley Groundwater Basin. Therefore, total annual project-related evaporative losses would not result in a significant project-specific or cumulative water use impact.

Appeal Issue No. 2: The Appellants state that the proposed project would not be consistent with the requirements of CEQA Finding 1.2 and Conditional Use Permit Finding 5.

CEQA Finding 1.2 and Conditional Use Permit Finding 5 are included as Attachment A to this staff report dated September 14, 2018.

CEQA Finding 1.2. The appellants assert that the MND does not provide substantial evidence that the project's environmental impacts would be reduced to a less than significant level as required by CEQA Finding 1.2. CEQA Finding 1.2 states:

On the basis of the whole record, including the Mitigated Negative Declaration and any comments received, the Zoning Administrator finds that through feasible conditions

placed upon the project, the significant impacts on the environment have been eliminated or substantially mitigated and on the basis of the whole record (including the initial study and any comments received), there is no substantial evidence that the project will have a significant effect on the environment.

The Appellants state that they disagree with the approval of the MND prepared for the project because concerns regarding the project's environmental impacts, including comments from the California Department of Fish and Wildlife (CDFW), were not addressed.

The Final MND prepared for the proposed project dated August 1, 2018, (Attachment D of this staff report dated September 14, 2018) evaluated the potential for the project to result in significant environmental impacts and determined that impacts related to Biological Resources, Cultural Resources, Geologic Processes, and Water Resources/Flooding would be reduced to a less than significant level with the implementation of identified mitigation measures. These mitigation measures were carried forward and included as Conditional Use Permit conditions of approval Nos. 3-11 (Attachment B).

Section 5.2.2 of the Zoning Administrator Staff Report dated September 8, 2017, (Attachment C) and incorporated herein by reference, provides responses to the public review comments that addressed the adequacy of the environmental review provided by the Draft MND. The responses address comments related to the project's water use, CEQA requirements related to the evaluation of the entire project, requirements of the Sustainable Groundwater Management Act (SGMA), the potential for future expansions of the project, compliance with the requirements of AB 52, comments submitted by CDFW, and reservoir safety. Additional information regarding the individuals and agencies that provided comments on the Draft MND is provided in Section 6.2 below.

The Appellants also assert that the project would result in significant water use impacts to the overdrafted Cuyama Valley Groundwater Basin; therefore, CEQA Finding 1.2 cannot be made. As described in the staff response to Appeal Issue No. 1, the CEQA evaluation of the project's water use impacts is limited to evaporative losses from the proposed reservoirs, and an evaluation of that impact determined that water losses would not result in a significant environmental impact.

In conclusion, the Final MND prepared for the project (Attachment D) provides substantial evidence that the project's water use impacts would not be significant, and that other identified potentially significant environmental impacts would be reduced to a less than significant level with the implementation of mitigation measures that were adopted as conditions of approval (Attachment B). Therefore, CEQA Finding 1.2 can be made.

Conditional Use Permit Finding 5. The Appellants assert that the project would result in significant water use impacts that would be detrimental to the New Cuyama area; therefore, Conditional Use Permit Finding 5 cannot be made. This Finding requires a determination that "[t]he proposed project will not be detrimental to the comfort, convenience, general welfare, health, and safety of the neighborhood and will be compatible with the surrounding area."

The analysis of Finding No. 5 included in the Zoning Administrator Staff Report dated September 8, 2017 (Attachment C), and incorporated herein by reference, states in part that there are no residences or other buildings located near the proposed reservoir sites. Due to the absence of sensitive receptors on or near the 6,565-acre project site, the proposed reservoirs would not result in significant short-term (i.e., construction) or long-term operation-related impacts that would adversely affect nearby sensitive receptors. The Zoning Administrator Staff Report also states that the reservoirs and associated pipeline improvements would be required to conform to applicable County requirements. Through compliance with existing regulations (i.e., Grading Ordinance requirements) the project would not result in significant long-term erosion- or safety-related impacts that would adversely affect project area residents.

Final MND Section 4.11 (Land Use) concluded that the project's use of groundwater would be primarily in support of an allowed agricultural use, and the amount of water used by the project that is subject to discretionary review (evaporative water losses) would be less than significant. The project's water use that is subject to discretionary review would not result in substantial economic or social changes in the project area, and the project-related physical change in existing groundwater conditions would result in a less than significant land use impact. Therefore, the project's water use that is subject to discretionary review would not result in environmental effects that would be detrimental to the comfort, convenience, general welfare, health, and safety of the project area and Conditional Use Permit Finding 5 can be made.

Appeal Issue No. 3: The proposed reservoirs and vineyard operations contribute to existing groundwater overdraft conditions in the Cuyama Valley.

The Appellants state that a recent study of the Cuyama Valley Groundwater Basin by the United States Geological Survey (USGS) describes existing groundwater overdraft conditions in the Cuyama Valley, and also describes environmental impacts that have resulted from on-going overdraft conditions. The Appellants also state that water levels in their well continue to decline despite last winter's heavy rains. In addition, the Appellants assert that the water wells used to provide irrigation water for the existing vineyards, and that would also be used to produce water stored in the proposed reservoirs, were constructed after California enacted the Sustainable Groundwater Management Act (SGMA) and should be subject to the requirements of SGMA.

Staff Response. This appeal issue refers to a study of the Cuyama Valley Groundwater Basin that was conducted by the USGS and the Santa Barbara County Water Agency between 2008 and 2012. That study evaluated a variety of groundwater-related issues in the Cuyama Valley, and included an evaluation of geologic conditions, water quality, and hydrological data. The study provides extensive data regarding groundwater and other related conditions in the various sub-basins that comprise the Cuyama Valley Groundwater Basin. In general, the study concludes that groundwater levels throughout much of the Basin are declining. The conclusions of the USGS study regarding groundwater level declines in the Cuyama Valley are similar to information presented in Section 4.6 (Water Resources/Flooding) of the Final MND dated August 1, 2018, (Attachment D) and by the Zoning Administrator Staff Report dated September 8, 2017 (Attachment C). The Final MND and Zoning Administrator staff report describe the

conclusions of reports prepared by the Santa Barbara County Agency in 2014 and 2015, which also state that the Cuyama Valley Groundwater Basin is in a state of overdraft.

As described in the Staff Response for appeal issue No. 2 above, the Final MND prepared for the project determined that project-related water use that is subject to CEQA review (evaporative losses from the proposed reservoirs) would not exceed the adopted significance threshold of 31 acre feet per year. Therefore, the reservoir project would not result in a significant project-specific water use impact to the Cuyama Valley Groundwater Basin. The Final MND also concluded that the project would contribute to overdraft conditions in the Cuyama Valley; however, the project's cumulative water use impact would not be cumulatively considerable and would not result in a significant impact.

This appeal issue also refers to requirements of SGMA. SGMA took effect on January 1, 2015, and requires the Cuyama Valley Groundwater Basin to be sustainably managed by the year 2040. The Cuyama Valley Groundwater Basin is listed as a "medium" priority basin by the Department of Water Resources (DWR) and is also listed as a "critically overdrafted" basin by DWR. SGMA requires that a Groundwater Sustainability Plan be prepared for the Cuyama Valley Groundwater Basin by a local Groundwater Sustainability Agency (GSA), and that the plan be completed by 2020. After a Groundwater Sustainability Plan is prepared and adopted, the GSA will have the authority to conduct investigations, measure and limit groundwater extractions, require registration of water wells, and impose fees for groundwater management. The GSA for the Cuyama Valley Groundwater Basin is in the initial stages of preparing a Groundwater Sustainability Plan. Until the Plan is prepared and adopted in 2020, there are no SGMA-related requirements for the proposed reservoir project to implement or comply with. After a Plan is prepared and adopted, the wells used to supply water to the proposed reservoirs could be subject to the adopted groundwater management and reporting requirements.

The Final MND and Zoning Administrator staff report state that the proposed reservoirs would contribute to the lowering of groundwater levels in the Cuyama Valley Groundwater Basin. However, based on substantial evidence presented in the Final MND, the project's water use that is subject to discretionary review (evaporative losses) would not result in a significant water use impact. In addition, the existing water wells that would be used to supply water to the proposed reservoirs may be subject to future requirements of an adopted Groundwater Sustainability Plan prepared in accordance with the requirements of SGMA. However, until a Plan is adopted there are no SGMA-related requirements that the project must satisfy

Appeal Issue No. 4: The Appellants state that a comment letter on the Draft Mitigated Negative Declaration from the California Department of Fish and Wildlife was not addressed.

The California Department of Fish and Wildlife (CDFW) submitted a comment letter on the Draft MND prepared for the proposed project. The comment letter is included in Attachment 5 of the Final MND dated August 1, 2018 (Attachment D). The comment letter states the 6,565-acre project parcel is within the range of several sensitive plant and animal species, including the San Joaquin woolly threads, blunt-nosed leopard lizard, San Joaquin kit fox, and giant kangaroo

rat. The CDFW also stated that the identified sensitive species were not identified during reservoir project site surveys that were conducted using CDFW-recognized protocols; however, impacts to those species may have occurred when the vineyard fields were disked and the vines planted. As a result, the potential impacts of constructing the proposed reservoirs should be considered in conjunction with impacts that may have resulted from planting the vineyards.

Responses to comments submitted by the CDFW are included in Section 5.2.2 of the Zoning Administrator staff report dated September 8, 2017 (Attachment C), incorporated herein by reference. The responses state that: (1) the CEQA evaluation of the reservoir project is limited to the discretionary approval required for the construction and operation of the reservoirs; and (2) agricultural actions required to plant and operate the vineyards, such as ground disturbance prior to planting the vines and water used for irrigation and frost protection, are not subject to CEQA review. The responses also state that disking of the ground surface to plant the vines on the project parcel occurred in August 2015, while the application for the proposed reservoirs was submitted to Planning and Development in February 2016. Therefore, the ground disturbance that occurred to facilitate vineyard planting was the “baseline” condition that existed when the environmental review of the reservoir project began. As a result, the vineyards located on the project site are not part of the reservoir project and an evaluation of impacts that may have resulted from planting the vineyard is not required by CEQA.

6.2 Environmental Review

A Draft Mitigated Negative Declaration (17NGD-00000-00005) was prepared for the proposed project and determined that the project would have the potential to result in significant environmental impacts related to biological resources, cultural resources, geologic processes, and water resources/flooding. The Draft MND was circulated for a 30-day public review period from June 9 to July 10, 2017. Written comments on the Draft MND were submitted by the California Native American Heritage Commission, California Department of Transportation, CDFW, Roberta Jaffee and Stephen Gliessman, Joe Haslett, and Robert Ryan. Each of the comment letters are included as Attachment 5 to the Final MND dated August 1, 2018 (Attachment D).

A summary of the comments submitted on the Draft MND and responses to those comments are provided in Section 5.2.2 of the Zoning Administrator staff report dated September 8, 2017 (Attachment C). Where appropriate, revisions to the Draft MND were made using ~~strike through~~ and underline format, and those revisions are included in the proposed Final MND. Please refer to the Final MND for a full discussion of each of the environmental issue areas that were evaluated, a description of existing conditions at the proposed project sites, potential project-specific and cumulative impacts, and proposed mitigation measures. The proposed Final MND concludes that with the implementation of identified mitigation measures, the project’s significant environmental impacts would be reduced to a less than significant level.

6.3 Comprehensive Plan Consistency

North Fork Ranch Frost Ponds Project Comprehensive Plan Policy Consistency Analysis	
REQUIREMENT	DISCUSSION
Land Use Element –Land Use Development Policies	
Land Use Development Policy 4: <i>Prior to issuance of a development permit, the County shall make the finding, based on information provided by environmental documents, staff analysis, and the applicant, that adequate public or private services and resources (i.e., water, sewer, roads, etc.) are available to serve the proposed development. The applicant shall assume full responsibility for costs incurred in service extensions or improvements that are required as a result of the proposed project. Lack of available public or private services or resources shall be grounds for denial of the project or reduction in the density otherwise indicated in the land use plan.</i>	Consistent: Adequate services are in place to serve the proposed reservoirs, and the project would not decrease the ability to provide required services for new or existing development. Water to be stored in the reservoirs would be provided from existing private wells that produce irrigation water for the existing vineyards that would be served by the reservoirs. The proposed reservoirs would not generate wastewater that require sewer disposal. Regional access to the reservoirs would be from State Route 166 and existing access roads from the highway to the reservoir sites are adequate to serve the project. The reservoirs would not generate a substantial amount of traffic. Fire service would be provided by the Santa Barbara County Fire Station #41, located approximately nine miles west of the project site. Therefore, adequate public services and resources are available to serve the reservoirs and the proposed project is consistent with this policy.
Land Use Element – Hillside and Watershed Protection Policies	
Hillside and Watershed Protection Policy 1: <i>Plans for development shall minimize cut and fill operations. Plans requiring excessive cutting and filling may be denied if it is determined that the development could be carried out with less alteration of the natural terrain.</i>	Consistent: The proposed reservoirs would be constructed by excavating soil below existing grade and using the excavated soil to construct berms that would impound stored water. Approximately 130,897 cubic yards of cut and 127,048 cubic yards of fill would be required. No soil would be imported or exported from the project site. Therefore, proposed grading would not be excessive and the proposed project is consistent with this policy.
Hillside and Watershed Protection Policy 2. <i>All developments shall be designed to fit the site topography, soils, geology, hydrology, and</i>	Consistent: The proposed reservoir sites have slopes that generally range between two and six percent. Grading required to construct the

North Fork Ranch Frost Ponds Project Comprehensive Plan Policy Consistency Analysis	
REQUIREMENT	DISCUSSION
<p><i>any other existing conditions and be oriented so that grading and other site preparation is kept to an absolute minimum. Natural features, landforms, and native vegetation, such as trees, shall be preserved to the maximum extent feasible. Areas of the site which are not suited to development because of known soil, geologic, flood, erosion or other hazards shall remain in open space.</i></p>	<p>reservoirs would not result in the creation of grading scars or other alterations to existing topography or vegetation that would result in a significant visual impact. The project would not result in the removal of trees or other native vegetation, and required erosion control planting on the reservoir berms would help to make the appearance of the berms blend with undisturbed areas near the reservoir sites. The proposed reservoirs would be located a minimum of 100 feet from ephemeral drainages that drain to the Cuyama River. Therefore, the proposed reservoirs would be located at sites suited for their development and the proposed project is consistent with this policy.</p>
<p>Hillside and Watershed Protection Policy 3. <i>For necessary grading operations on hillsides, the smallest practical area of land shall be exposed at any one time during development, and the length of exposure shall be kept to the shortest practicable amount of time. The clearing of land should be avoided during the winter rainy season and all measures for removing sediments and stabilizing slopes should be in place before the beginning of the rainy season.</i></p> <p>Hillside and Watershed Protection Policy 5. <i>Temporary vegetation, seeding, mulching, or other suitable stabilization method shall be used to protect soils subject to erosion that have been disturbed during grading or development. All cut and fill slopes shall be stabilized as rapidly as possible with planting of native grasses and shrubs, appropriate non-native plants, or with accepted landscaping practices.</i></p>	<p>Consistent: As noted above for Hillside and Watershed Protection Policy No. 2, the proposed reservoir sites would not be located on hillsides, but on terrain that is relatively level, consisting of slopes ranging between two and six percent. It is estimated that it would require approximately one year to construct the three proposed reservoirs. Condition of approval No. 9 (Geo-02. Erosion and Sediment Control Plan) requires that the project prepare and implement an approved Storm Water Pollution Prevention Plan (SWPPP), Storm Water Management Plan (SWMP) and/or an Erosion and Sediment Control Plan (ESCP). Required erosion and sediment control measures must be implemented for the duration of the grading period and until graded areas have been stabilized by long-term erosion control measures or permanent landscaping. Adherence to these requirements would minimize the potential for the project to result in grading- and erosion-related impacts if construction occurs during the rainy season. Therefore, the proposed project would not result in significant erosion or sedimentation impacts and is consistent with these policies.</p>

North Fork Ranch Frost Ponds Project Comprehensive Plan Policy Consistency Analysis	
REQUIREMENT	DISCUSSION
Hillside and Watershed Protection Policy 6. <i>Provisions shall be made to conduct surface water to storm drains or suitable watercourses to prevent erosion. Drainage devices shall be designed to accommodate increased runoff resulting from modified soil and surface conditions as a result of development. Water runoff shall be retained onsite whenever possible to facilitate groundwater recharge.</i>	Consistent: The stormwater drainage systems for each of the proposed reservoirs would collect water from a limited upslope area and divert that water around the reservoirs. Water from the drainage systems, as well as water from the reservoir's overflow systems, would be discharged over rock energy dissipaters. After discharge over energy dissipaters, the water would sheetflow over the ground surface, which in the vicinity of proposed discharge locations has a gradient of five percent or less. Therefore, the amount of stormwater discharged from the drainage systems and the reservoir overflow systems would be limited and would not substantially alter existing drainage patterns, the course or direction of runoff water, or substantially increase or decrease the amount of water in the ephemeral drainages located adjacent to the reservoir sites. Therefore, the proposed project is consistent with this policy.
Hillside and Watershed Protection Policy 7. <i>Degradation of the water quality of groundwater basins, nearby streams, or wetlands shall not result from development of the site. Pollutants, such as chemicals, fuels, lubricants, raw sewage, and other harmful waste, shall not be discharged into or alongside coastal streams or wetlands either during or after construction.</i>	Consistent: Condition of approval No. 9 (Geo-02. Erosion and Sediment Control Plan) requires that the project prepare and implement an approved SWPPP, SWMP, and/or an ESCP. In addition, conditions of approval 10 and 11 (WatConv-04 Equipment Storage-Construction, and Wat Conv-05 Equipment Washout-Construction) would reduce the potential for short-term construction-related water quality impacts to a less than significant level. The proposed project would not be a substantial source of pollutants. Therefore, the proposed project would not result in significant water quality-related impacts and is consistent with this policy.
Land Use Element - Visual Resources Policies	
Visual Resources Policy 2. <i>In areas designated as rural on the land use plan maps, the height, scale, and design of structures shall be compatible with the character of the</i>	Consistent: The proposed reservoirs would be visible from public viewing locations such as State Route 166. The three reservoirs would be setback from the highway by approximately

North Fork Ranch Frost Ponds Project Comprehensive Plan Policy Consistency Analysis	
REQUIREMENT	DISCUSSION
<i>surrounding natural environment, except where technical requirements dictate otherwise. Structures shall be subordinate in appearance to natural contours of the landscape; and shall be sited so as not to intrude into the skyline as seen from public viewing place.</i>	3,000, 1,200 and 1,500 feet. Due to the distances between the three reservoir sites and State Route 166, they would not be prominently visible to persons traveling on the highway. Grading required to construct the reservoirs would not result in the creation of grading scars or other alterations to existing topography or vegetation that would result in a significant visual impact. Erosion control planting on the reservoir berms that has been approved by P&D, as required by Condition No. 9 would make the appearance of the berms blend with undisturbed areas near the reservoir sites. The proposed reservoir berms would have a maximum height of approximately 20 feet above surrounding grade and would not adversely affect existing views of the Sierra Madre Mountains to the south of the project site from public viewpoints such as State Highway 166. No nighttime lighting would be used at the project sites. Therefore, the proposed project would be consistent with this policy.
Land Use Element – Historical and Archaeological Sites Policies	
Historical and Archaeological Sites Policy 2. <i>When developments are proposed for parcels where archaeological or other cultural sites are located, project design shall be required which avoids impacts to such cultural sites if possible.</i>	Consistent: As described by the Final MND dated August 1, 2018 (Attachment D), the proposed reservoir sites were surveyed for the presence of cultural resources. During the preparation of the survey, the Native American Heritage Commission, Santa Ynez Band of Mission Indians, Barbareño/Ventureño Band of Mission Indians, and other Native American tribes were contacted. In addition, the Barbareño/Ventureño Band of Mission Indians was contacted in compliance with the requirements of AB 52. The cultural resources evaluation did not identify any archaeological resources that would be impacted by the construction of the proposed reservoirs or associated pipelines. However, based on a previous discovery of pre-historic human remains in the vicinity of the project sites, the
Historical and Archaeological Sites Policy 3. <i>When sufficient planning flexibility does not permit avoiding construction on archaeological or other types of cultural sites, adequate mitigation shall be required. Mitigation shall be designed in accord with guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission.</i>	
Historical and Archaeological Sites Policy 5:	

North Fork Ranch Frost Ponds Project Comprehensive Plan Policy Consistency Analysis	
REQUIREMENT	DISCUSSION
<i>Native Americans shall be consulted when development proposals are submitted which impact significant archaeological or cultural sites.</i>	project area is considered sensitive for cultural resources. Conditions of approval 6, 7 and 8 (CulRes-07 Cultural Resource Monitor; CulRes-09 Stop Work at Encounter; and Special Condition: Pre-Construction Meeting) would reduce potential impacts to cultural resources should previously undetected cultural resources be encountered during the construction of the proposed reservoirs. Therefore, the proposed project would be consistent with these policies.
Agricultural Element	
Agricultural Element, Goal I: Santa Barbara County shall assure and enhance the continuation of agriculture as a major viable production industry in Santa Barbara County. Agriculture shall be encouraged.	Consistent: The proposed reservoirs would not remove any land from existing agricultural production and would support vineyards established on the project property by supplying frost protection water when it is needed. Therefore, the project is consistent with this policy.

6.4 Zoning: Land Use and Development Code Compliance

The project property is located in the AG-II-100 (Agriculture, 100 acre minimum parcel size) zone district. The AG-II zone district is applied to areas appropriate for agricultural land uses on prime or non-prime agricultural lands located within the Rural Area as shown on the Comprehensive Plan maps. The intent of the AG-II zone is to preserve lands for long-term agricultural use on large properties (a minimum of 40- to 320-acre lots) with prime and non-prime agricultural soils in the rural areas of the County, and to preserve prime and non-prime soils for long-term agricultural use.

The construction and operation of the proposed reservoirs is a conditionally permitted use in the AG-II zone. Table 2-3 of the Land Use Development Code specifies standards for new development in the AG-II zone related to structure setbacks, height limits, landscaping, parking, and signs. The proposed reservoirs would be located a minimum of 1,200 feet south/southeast of Highway 166 and would comply with the required 50-foot setback requirement of the AG-II zone. Structure height requirements in the AG-II zone are only applicable to residential structures and do not apply to the proposed reservoirs. Similarly, the landscaping (LUDC Chapter 35.34) and parking (LUDC Chapter 35.36) standards identified by Table 2-3 are not applicable to the development of reservoirs in the AG-II zone, and the project does not include a proposal to install any signs. Therefore, the project would be consistent with all applicable AG-II development standards.

6.5 Subdivision/Development Review Committee

The project application was distributed to the Development Review Committee members for review and comment. The Santa Barbara Air Pollution Control District provided a condition letter that is included in Attachment B.

7.0 APPEALS PROCEDURE

The action of the Planning Commission may be appealed to the Board of Supervisors within 10 calendar days of said action. The appeal fee to the Board of Supervisors is \$650.06.

ATTACHMENTS

- A. Findings for Approval
- B. Conditions of Approval
- C. Zoning Administrator Staff Report dated September 8, 2017
- D. Final Mitigated Negative Declaration dated August 1, 2018.
- E. Zoning Administrator Action Letter dated October 2, 2017
- F. Appeal Application, Case No. 17APL-00000-00017
- G. Project Plans
- H. APN Sheet
- I. Applicant's letter dated February 19, 2018

ATTACHMENT A: FINDINGS

1.0 CEQA FINDINGS

1.1 CONSIDERATION OF THE NEGATIVE DECLARATION AND FULL DISCLOSURE

The Planning Commission has considered the Mitigated Negative Declaration, 17NGD-00000-00004, together with the comments received and considered during the public review process. The Mitigated Negative Declaration reflects the independent judgment and analysis of the Planning Commission and has been completed in compliance with CEQA, and is adequate for this proposal.

1.2 FINDING OF NO SIGNIFICANT EFFECT

On the basis of the whole record, including the Mitigated Negative Declaration and any comments received, the Planning Commission finds that through feasible conditions placed upon the project, the significant impacts on the environment have been eliminated or substantially mitigated and on the basis of the whole record (including the initial study and any comments received), there is no substantial evidence that the project will have a significant effect on the environment.

1.3 LOCATION OF DOCUMENTS

The documents and other materials which constitute the record of proceedings upon which this decision is based are in the custody of the Secretary of the Planning Commission of the Planning and Development Department located at 624 W. Foster Road, Santa Maria, CA, 93455.

1.4 ENVIRONMENTAL REPORTING AND MONITORING PROGRAM

Public Resources Code Section 21081.6 and CEQA Guidelines Section 15074(d) require the County to adopt a reporting or monitoring program for the changes to the project that it has adopted or made a condition of approval in order to avoid or substantially lessen significant effects on the environment. The approved project description and conditions of approval, with their corresponding permit monitoring requirements, are hereby adopted as the reporting and monitoring program for this project. The monitoring program is designed to ensure compliance during project implementation.

2.0 ADMINISTRATIVE FINDINGS

2.1 Conditional Use Permits

- A. Findings required for all Conditional Use Permits.** In compliance with Subsection 35.82.060.E.1 of the County Land Use and Development Code, prior to the approval or conditional approval of an application for a Minor Conditional Use Permit the review authority shall first make all of the following findings:

1. The site for the proposed project is adequate in terms of location, physical characteristics, shape, and size to accommodate the type of use and level of development proposed.

The project property (147-020-045) is approximately 6,565 acres. The proposed reservoir sites are generally level and slope gently to the east or northeast. The proposed reservoirs would be approximately 3,000, 1,200 and 1,500 feet south of State Route 166 and at least 100 feet from nearby ephemeral drainages. The proposed reservoirs would be located in areas adjacent to the vineyards they would serve and would limit the amount of required grading to the maximum extent feasible. Further, as discussed in Sections 6.3 and 6.4 of this staff report, dated September 4, 2018, and incorporated herein by reference, the proposed project is consistent with the Comprehensive Plan and LUDC. Therefore, this finding can be made.

2. Within the Inland area significant environmental impacts will be mitigated to the maximum extent feasible.

The proposed reservoir sites are located within an area where San Joaquin kit fox and American badger have historically existed. However, according to the Biological Resources Assessment prepared by Kevin Merk Associates, LLC (dated February 24, 2016), the potential for these or other sensitive animal species to be located at the proposed reservoir sites is very low due to habitat conditions on and near the sites. However, to reduce the potential for the project to result in short-term construction-related impacts to these species to the maximum extent feasible, conditions of approval require preconstruction surveys and if necessary the implementation of appropriate avoidance measures.

A survey of the proposed reservoir sites (Rincon Consultants, August, 2016) did not detect evidence of archaeological resources, however, the project area is considered to be sensitive for cultural resources. Conditions of approval require that: a preconstruction educational meeting be conducted with construction personnel; monitoring occurs during construction of the reservoirs; and if cultural resources are encountered during construction work must be stopped within the vicinity of the find so appropriate actions can be taken. The implementation of these conditions would reduce the potential for impacts to cultural resources to the maximum extent feasible.

Construction of the proposed reservoirs would have the potential to result in erosion and other water quality-related impacts. Conditions of approval require the preparation and implementation of approved short- and long-term water quality protection measures. The implementation of these conditions would reduce the potential for impacts to water quality to the maximum extent feasible.

The Final MND prepared for the project, dated August 1, 2018 (Attachment D), did not identify any other potentially significant environmental impacts that would result from the construction or operation of the proposed reservoirs. Therefore, this finding can be made.

3. Streets and highways are adequate and properly designed to carry the type and quantity of traffic generated by the proposed use.

Vehicular access to the reservoirs would be from State Route 166. This public highway is adequate to serve the project as designed. As described in the Final MND prepared for the project dated August 1, 2018, the project will not result in a substantial increase in traffic on the highway

and would not result in a significant decrease in the highway's current level of service. Therefore this finding can be made.

4. There will be adequate public services, including fire protection, police protection, sewage disposal, and water supply to serve the proposed project.

Water to be stored in the proposed reservoirs would be supplied by existing private water wells located on the project parcel. The project would draw groundwater from the Cuyama Groundwater Basin, which is in a state of overdraft. The proposed project's water use that is subject to the County's adopted groundwater use threshold for the Cuyama Valley Groundwater Basin consists only of the reservoir's annual evaporative losses. The annual evaporative losses from the three proposed reservoirs are estimated to be approximately 26 AFY, which is below the adopted significance threshold of 31 acre feet per year. No sewage will be produced by the proposed project; therefore, no waste water disposal systems are required. The project would not have a substantial demand for fire and police protection services; therefore, adequate services are available to serve the project. Therefore this finding can be made.

5. The proposed project will not be detrimental to the comfort, convenience, general welfare, health, and safety of the neighborhood and will be compatible with the surrounding area.

The project site is located in an agricultural zone (AG-II-100). The Land Use and Development Code allows for the construction of agricultural reservoirs greater than 50,000 square feet in the AG-II zone with the approval of a Minor Conditional Use Permit. As described by the Final MND dated August 1, 2018 and hereby incorporated by reference, the potentially significant environmental impacts of the project can be reduced to a less than significant level with the implementation of mitigation measures that have been included as conditions of project approval (Attachment B). There are no residences or other buildings located near the proposed reservoir sites. Due to the absence of sensitive receptors on or near the 6,565-acre project parcel, the proposed reservoirs would not result in significant short-term (i.e., construction-related) or long-term operational impacts that would adversely affect nearby residents or other sensitive receptors. The reservoirs and associated pipeline improvements would be designed to conform to all applicable County requirements. Through compliance with existing regulations (i.e., Grading Code requirements) the project would not result in significant long-term erosion- or safety-related impacts that would adversely affect project area residents. The project also includes fencing and safety equipment to reduce the potential for humans and animals to become trapped in the reservoirs. Also as described by the Final MND, the project's water use that is subject to discretionary review would contribute to declining groundwater levels in the project region. However, this project-related effect would not be significant on a project-specific or cumulative basis because evaporative losses from the reservoirs would be below the adopted significance threshold of 31 acre feet per year. As a result, the project's water use that is subject to discretionary review, and other environmental impacts of the project, would not be detrimental to the comfort, convenience, general welfare, health and safety of the project area and this finding can be made.

6. The proposed project will comply with all applicable requirements of this Development Code and the Comprehensive Plan, including any applicable community or area plan.

As discussed in Sections 6.3 and 6.4 of this staff report, dated September 4, 2018, and

incorporated herein by reference, the project is consistent with the Comprehensive Plan and Land Use and Development Code. Therefore, this finding can be made.

7. Within Rural areas as designated on the Comprehensive Plan maps, the proposed use will be compatible with and subordinate to the rural and scenic character of the area.

As discussed in Section 6.3 of this staff report, dated September 4, 2018, the agricultural reservoirs have been designed in a manner that is compatible with the rural and scenic character of the area. The reservoirs would not result in grading scars, would not be prominently visible from State Route 166, and would not obstruct scenic views of the mountains located south of the project site as seen from the highway. Therefore, this finding can be made.

ATTACHMENT B: CONDITONS OF APPROVAL

North Fork Ranch Frost Ponds Case No. 16CUP-00000-00005

September 12, 2018

I. PROJECT DESCRIPTION

1. **Proj Des-01 Project Description.** This Conditional Use Permit is based upon and limited to compliance with the project description, the hearing exhibits marked Attachment A-I, and all conditions of approval set forth below, including mitigation measures and specified plans and agreements included by reference, as well as all applicable County rules and regulations.

The project description is as follows:

The North Fork Ranch Frost Pond project consists of the construction and operation of three frost ponds (reservoirs) that would store water to be used for frost protection at the North Fork Ranch Vineyards. The project also includes the construction of new underground pipelines that would extend between each of the proposed reservoirs and the existing vineyard irrigation system.

The proposed reservoirs would serve approximately 1,000 acres of existing vineyards. Reservoir No. 1 would be located on the eastern portion of the project site adjacent to Schoolhouse Canyon Road (a private road). Reservoir No. 2 would be located in the central portion of the project site, and Reservoir No. 3 would be located on the western portion of the project site approximately 0.75 mile east of Cottonwood Canyon Road. Access to the reservoirs would be from existing roads that connect to State Highway 166.

Frost protection would be achieved by sustained spray irrigation when frost has the potential to damage the grape vines. Frost protection would generally be required during the months of February, March and April. The reservoirs would be maintained at a full condition between February and April. A maximum of three feet of well-supplied water would be maintained in the reservoirs between May 1st through January 31st. Water above a depth of three feet contained in the reservoirs after May 1 would be distributed for vineyard irrigation.

Each reservoir would have a water storage capacity of 49 acre-feet and would be lined with a high-density polyethylene plastic liner to prevent water seepage. Each reservoir would also have an emergency overflow discharge system that would prevent stored water from over-topping the reservoir. Water to be stored in the reservoirs would be supplied by existing agricultural wells located on the project parcel and the north side of State Highway 166. Water from the wells would be conveyed to the reservoirs by

existing vineyard irrigation pipelines that extend beneath the highway and throughout the vineyard. A six foot high fence would be installed around the exterior perimeter of each reservoir to prevent unauthorized entry. Life ring stations and floating pool ropes would also be provided for rescue purposes.

A total of approximately 257,945 cubic yards of cut and fill grading would be required to construct the three proposed reservoirs. The reservoirs would have a maximum depth of 27-28 feet, and in total would occupy an area of approximately 15.6 acres. Proposed pipelines that would convey water from the vineyard's existing irrigation system to each of the reservoirs would have a total length of 1,350 feet. Proposed pipelines that would convey water from each of the reservoirs to the vineyard's existing spray irrigation system would have a total length of 976 feet. Construction details for each of the proposed reservoirs are summarized on Table 1. It is estimated that the construction period for the three proposed reservoirs would be approximately one year.

Table 1
North Fork Ranch Frost Ponds
Construction Characteristics

Reservoir	Proposed Grading			Reservoir Area		Reservoir Depth			Proposed Pipelines	
	Cut (cu. yds.)	Fill (cu. yds.)	Total (cu. yds.)	Approximate Dimensions (feet)	Acres	Top of Reservoir Elevation	Bottom of Pond Elevation	Depth (feet)	Fill Line (feet)	Drain Line (feet)
No. 1	44,062	44,589	88,651	590 x 370	5.0	1,955	1,927	28	624	517
No. 2	44,064	42,205	86,269	580 X 410	5.7	1,788	1,761	27	370	202
No. 3	42,771	40,254	83,025	590 x 360	4.9	1,744	1,717	27	356	257
TOTAL	130,897	127,048 (1)	257,945	--	15.6	--	--	--	1,350	976

(1) Due to shrinkage of fill material, no soil would be exported from the project site

Surface water drainage from upslope areas adjacent to the reservoirs would be collected by proposed drainage swales. The collected water would be discharged and allowed to sheet flow at downslope locations adjacent to the reservoirs. Rock energy dissipaters would be installed at each discharge location to reduce potential erosion-related impacts. Stormwater discharge from Reservoir No. 1 would be conveyed beneath Schoolhouse Canyon Road by a proposed culvert beneath the road.

The application involves Assessor Parcel Number 147-020-045, a 6,565-acre parcel that is zoned AG-II-100.

2. **Proj Des-02 Project Conformity.** The grading, development, use, and maintenance of the property, the size, shape, arrangement, and location of the structures, parking areas and landscape areas, and the protection and preservation of resources shall conform to the project description above and the hearing exhibits and conditions of approval below. The

property and any portions thereof shall be sold, leased or financed in compliance with this project description and the approved hearing exhibits and conditions of approval thereto. All plans (such as Landscape and Tree Protection Plans) must be submitted for review and approval and shall be implemented as approved by the County.

II. CONDITIONS INCORPORATED FROM MITIGATION MEASURES

3. **Special Condition: San Joaquin Kit Fox Avoidance Measures.** Project-related pre-construction / pre-activity surveys shall be conducted prior to the beginning of ground disturbance and/or construction activities, or any project activity that has the potential to impact the San Joaquin kit fox and/or American badger. Required pre-construction / pre-activity surveys and project-related construction activities shall be conducted in accordance with the requirements of the U.S. Fish and Wildlife Service's *Standardized Recommendations for Protection of The Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (January, 2011). Similar measures and procedures shall be implemented to minimize the potential for impacts to American badger. The Standardized Recommendations are included as Attachment 3 to the Final MND dated August 1, 2018 (Attachment D).

PLAN REQUIREMENTS AND TIMING: Prior to the start of any project-related pre-construction / pre-activity, the areas that would be affected by reservoir construction and the construction of the proposed reservoir fill and drain lines shall be marked in the field and surveyed by a qualified biologist. Project-related pre-construction / pre-activity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities. The qualified biologist shall conduct weekly site visits during site disturbance activities that proceed longer than 14 days for the purpose of monitoring compliance with the attached Standardized Recommendations. Site disturbance activities lasting up to 14 days do not require weekly monitoring by the biologist unless observations of kit fox or their dens are made on-site or the qualified biologist recommends additional monitoring. This measure shall be printed on all grading and construction plans.

MONITORING: The qualified biologist shall document the methods and results of site visits in weekly monitoring reports that are to be submitted to P&D. If incidental take of kit fox during project activities is possible, before project activities commence, the applicant must consult with the USFWS and CDFW. The results of this consultation may require the applicant to obtain a federal and/or state permit for incidental take during project activities.

4. **Bio-09 Fish and Wildlife Jurisdiction Advisory.** The project site is within the range of San Joaquin kit fox, a species listed as Endangered by the U.S. Fish and Wildlife Service, and Threatened by the California Department of Fish and Wildlife. Based upon reports prepared by Kevin Merk Associates, dated February 24, 2016, and June 24, 2016, it has been determined that the probability for San Joaquin kit fox occurrence on the site is very low. The issuance of this permit does not relieve the permit-holder of any duties,

obligations, or responsibilities under the federal or California Endangered Species Act or any other law. The permit-holder shall contact the necessary jurisdictional agencies to ascertain his or her level of risk under the federal and California Endangered Species Act in implementing the project herein permitted.

Indemnity for Violation of the Endangered Species Act: The applicant shall defend, indemnify and hold harmless the County or its agents, officers and employees from any and all claims, actions, proceedings, demands, damages, costs, expenses (including attorney's fees), judgments or liabilities, against the County or its agents, offices or employees brought by any entity or person for any and all actions or omissions of the applicant or his agents, employees or other independent contractors arising out of this permit alleged to be in violation of the federal or California Endangered Species Acts (16 USC Sec. 1531 et seq.; Cal. Fish and Game Code Sec. 2050 et seq.). This permit does not authorize, approve or otherwise support a "take" of any listed species as defined under the federal or California Endangered Species Acts. Applicant shall notify County immediately of any potential violation of the federal and/or California Endangered Species Act.

5. **American Badger Avoidance and Minimization Measures.** A minimum of 14 days prior to initiation of ground disturbing activities, a survey for badger burrows shall be conducted within the disturbance footprint by an approved biologist (a biologist familiar with, including identification of, the wildlife species in the region). Dens found within the survey area shall be mapped and monitored using a tracking medium, remote camera system, and/or spotlighting at night for a minimum of three days to assess the presence of badgers. Inactive dens shall be collapsed by hand with a shovel to prevent badgers from re-using them during construction. Active dens located within the survey area shall be avoided during the breeding season (March 1 through June 30). A minimum buffer of 50 feet around the active den within the proposed area of disturbance shall be demarcated by construction fencing. The fencing shall be installed one foot above ground to permit movement of badgers in and out of the buffer zone. Once the biologist has determined that active dens are no longer in use, the den shall be collapsed by shovel. Prior to ground disturbing activities occurring outside of the breeding season, badgers may be discouraged from using currently active dens by partially blocking the entrance of the den with sticks, debris, and soil for three to five days. Access to the den would be incrementally blocked to a greater degree over this period. This would cause the badger to abandon the den site and move elsewhere. After badgers have stopped using active dens within the project site, the dens would be collapsed by hand with a shovel.

Plan Requirements and Timing. The name, qualifications, scope of biological surveys and contact information for the surveying biologist must be submitted to P&D and CDFW in advance of the surveys. The above measures shall be included on all land use, grading, and building plans for the construction of the reservoirs, water pipelines, and utility line improvements. A report of the results of the badger survey shall be submitted to P&D for review and approval prior to Zoning Clearance.

MONITORING. P&D will review and approve the reports. A County-approved biologist shall be present during the initial ground-disturbing activity.

6. **CulRes-07 Cultural Resource Monitor.** The Owner/Applicant shall have all earth disturbances including scarification and placement of fill within the proposed project sites monitored by a P&D approved archaeologist and a Native American consultant in compliance with the provisions of the County Archaeological Guidelines. Ground-disturbing construction work within native soils shall be monitored by a County-qualified archaeologist and a Native American monitor during construction to a depth of 10 feet below the ground surface.

TIMING: Prior to the approval of a grading permit, the Owner/Applicant shall submit for P&D review and approval, a contract or Letter of Commitment between the Owner/Applicant and the archaeologist, consisting of a project description and scope of work, and once approved, shall execute the contract. This condition shall be printed on all building and grading plans.

MONITORING: The Owner/Applicant shall provide P&D compliance monitoring staff with the name and contact information for the assigned onsite monitor(s) prior to grading permit issuance and pre-construction meeting. P&D compliance monitoring staff shall confirm monitoring by archaeologist and Native American consultant and P&D grading inspectors shall spot check field work. The P&D permit processing planner shall check plans prior to approval of all building and grading permits and P&D compliance monitoring staff shall spot check in the field.

7. **CulRes-09 Stop Work at Encounter.** The Owner/Applicant and/or their agents, representatives or contractors shall stop or redirect work immediately in the event archaeological remains are encountered during grading, construction, landscaping or other construction-related activity. The Owner/Applicant shall retain a P&D approved archaeologist and Native American representative to evaluate the significance of the find in compliance with the provisions of Phase 2 investigations of the County Archaeological Guidelines and funded by the Owner/Applicant. If remains are found to be significant, they shall be subject to a Phase 3 mitigation program consistent with County Archaeological Guidelines and funded by the applicant.

PLAN REQUIREMENTS: This condition shall be printed on all building and grading plans.

MONITORING: The P&D permit processing planner shall check plans prior to the issuance of a Zoning Clearance and P&D compliance monitoring staff shall spot check in the field.

8. **Special Condition: Pre-Construction Meeting.** A pre-construction meeting shall be conducted by a County-qualified archaeologist and a local Native American representative funded by the applicant. Meeting attendees shall include the applicant,

archaeologist, local Chumash representative, construction supervisors, and heavy equipment operators to ensure that all parties understand the cultural resources monitoring program and their respective roles and responsibilities. All construction personnel who would work on the site during any phase of ground disturbance shall be required to attend the meeting. The names of all personnel who attend the meeting shall be recorded denoting that they have received the required training.

The meeting shall review the following: types of archaeological resources that may be uncovered; provide examples of common archaeological artifacts and other cultural materials to examine; describe why monitoring is required; what makes an archaeological resource significant; identify monitoring procedures; what would temporarily halt construction and for how long; describe a reasonable resource discovery scenario (i.e., feature or artifact); and describe reporting requirements and the responsibilities of the construction supervisor and crew. The meeting shall make attendees aware of prohibited activities, including vehicle use in protected areas, and educate construction workers about the inappropriateness of unauthorized collecting of artifacts that can result in impacts on cultural resources.

PLAN REQUIREMENTS: The pre-construction meeting requirements shall be shown on approved grading and building plans.

TIMING: The pre-construction meeting shall be conducted prior to the start of ground disturbing activities.

MONITORING: The Owner/Applicant shall provide P&D compliance monitoring staff with the names and responsibilities of persons who attended the meeting.

9. **Geo-02. Erosion and Sediment Control Plan.** Where required by the latest edition of the California Green Code and/or Chapter 14 of the Santa Barbara County Code, a Storm Water Pollution Prevention Plan (SWPPP), Storm Water Management Plan (SWMP) and/or an Erosion and Sediment Control Plan (ESCP) shall be implemented as part of the project. Grading and erosion and sediment control plans shall be designed to minimize erosion during construction and shall be implemented for the duration of the grading period and until re-graded areas have been stabilized by structures, long-term erosion control measures or permanent landscaping. The Owner/Applicant shall submit the SWPPP, SWMP or ESCP using Best Management Practices (BMP) designed to stabilize the site, protect natural watercourses/creeks, prevent erosion, convey storm water runoff to existing drainage systems keeping contaminants and sediments onsite. The SWPPP or ESCP shall be a part of the Grading Plan submittal and will be reviewed for its technical merits by P&D. Information on Erosion Control requirements can be found on the County web site re: Grading Ordinance Chapter 14 (<http://sbcountyplanning.org/building/grading.cfm>) refer to Erosion and Sediment Control Plan Requirements; and in the California Green Code for SWPPP (projects greater than 1 acre) and/or SWMP requirements.

PLAN REQUIREMENTS: The grading and SWPPP, SWMP and/or ESCP shall be submitted for review and approved by P&D prior to issuance of a Zoning Clearance. The plan shall be designed to address erosion, sediment and pollution control during all phases of development of the site until all disturbed areas are permanently stabilized.

TIMING: The SWPPP requirements shall be implemented prior to the commencement of grading and throughout the year. The ESCP/SWMP requirements shall be implemented between November 1st and April 15th of each year, except pollution control measures shall be implemented year round.

MONITORING: P&D compliance monitoring staff shall perform site inspections throughout the construction phase.

10. **WatConv-04 Equipment Storage-Construction.** The Owner/Applicant shall designate a construction equipment filling and storage area(s) to contain spills, facilitate clean-up and proper disposal and prevent contamination from discharging to the storm drains, street, drainage ditches, creeks, or wetlands. The areas shall be no larger than 50 x 50 feet unless otherwise approved by P&D and shall be located at least 100 feet from any storm drain, water body or sensitive biological resources. **PLAN REQUIREMENTS:** The Owner/Applicant shall designate the P&D approved location on all plans for zoning clearance, grading and building permits. **TIMING:** The Owner/Applicant shall install the area prior to commencement of construction.

MONITORING: P&D compliance monitoring staff shall ensure compliance prior to and throughout construction.

11. **WatConv-05 Equipment Washout-Construction.** The Owner/Applicant shall designate a washout area(s) for the washing of concrete trucks, paint, equipment, or similar activities to prevent wash water from discharging to the storm drains, street, drainage ditches, creeks, or wetlands. Note that polluted water and materials shall be contained in this area and removed from the site daily. The area shall be located at least 100 feet from any storm drain, water body or sensitive biological resources.

PLAN REQUIREMENTS: The Owner/Applicant shall designate the P&D approved location on all zoning clearance, grading and building permits. **TIMING:** The Owner/Applicant shall install the area prior to commencement of construction.

MONITORING: P&D compliance monitoring staff shall ensure compliance prior to and throughout construction.

III. COUNTY RULES AND REGULATIONS

12. **Rules-05 Acceptance of Conditions.** The Applicant's acceptance of this permit and/or commencement of use, construction and/or operations under this permit shall be deemed acceptance of all conditions of this permit by the Applicant.
13. **Rules-12 CUP Expiration.** The Applicant shall obtain the required Zoning Clearance within the 18 months following the effective date of this Conditional Use Permit. If the required Zoning Clearance is not issued within the 18 months following the effective date of this Conditional Use Permit, or within such extended period of time as may be authorized in compliance with Section 35.84.030.2 of the County Land Use and Development Code, and an application for an extension has not been submitted to the Planning and Development Department, then this Conditional Use Permit shall be considered void and of no further effect.
14. **Rules-17 CUP-Void.** This Conditional Use Permit shall become void and be automatically revoked if the development and/or authorized use allowed by this Conditional Use Permit is discontinued for a period of more than 12 months, or within such extended period of time as may be authorized in compliance with Section 35.84.030 of the County Land Use And Development Code. Any use authorized by this Conditional Use Permit shall immediately cease upon expiration or revocation of this Conditional Use Permit. Any Zoning Clearance approved or issued pursuant to this Conditional Use Permit shall expire upon expiration or revocation of the Conditional Use Permit. Conditional Use Permit renewals must be applied for prior to expiration of the Conditional Use Permit. [LUDC §35.82.060 & §35.84.060].
15. **Rules-29 Other Dept Conditions.** Compliance with Departmental/Division letters required as follows:
 1. Air Pollution Control District letter dated June 28, 2017.
16. **Rules-31 Mitigation Monitoring Required.** The Owner/Applicant shall ensure that the project complies with all approved plans and all project conditions including those which must be monitored after the project is built and operational. To accomplish this, the Owner/Applicant shall:
 - a. Contact P&D compliance staff as soon as possible after project approval to provide the name and phone number of the future contact person for the project and give estimated dates for future project activities;
 - b. Sign a separate Agreement to Pay for compliance monitoring costs and remit a security deposit prior to approval of a Land Use Permit as authorized by ordinance and fee schedules. Compliance monitoring costs will be invoiced monthly and may include costs for P&D to hire and manage outside consultants when deemed necessary by P&D staff (e.g. non-compliance situations, special monitoring needed

- for sensitive areas including but not limited to biologists, archaeologists) to assess damage and/or ensure compliance. In such cases, the Owner/Applicant shall comply with P&D recommendations to bring the project into compliance. The decision of the Director of P&D shall be final in the event of a dispute. Monthly invoices shall be paid by the due date noted on the invoice;
- c. Note the following on each page of grading and building plans “This project is subject to Mitigation and Condition Compliance Monitoring and Reporting. All aspects of project construction shall adhere to the approved plans, conditions of approval, and mitigation measures from Mitigated Negative Declaration 17NGD-00000-00004”;
 - d. Contact P&D compliance staff at least two weeks prior to commencement of construction activities to schedule an on-site pre-construction meeting to be led by P&D Compliance Monitoring staff and attended by all parties deemed necessary by P&D, including the permit issuing planner, grading and/or building inspectors, other agency staff, and key construction personnel: contractors, sub-contractors and contracted monitors among others.
17. **Rules-33 Indemnity and Separation.** The Owner/Applicant shall defend, indemnify and hold harmless the County or its agents or officers and employees from any claim, action or proceeding against the County or its agents, officers or employees, to attack, set aside, void, or annul, in whole or in part, the County's approval of this project. In the event that the County fails promptly to notify the Applicant of any such claim, action or proceeding, or that the County fails to cooperate fully in the defense of said claim, this condition shall thereafter be of no further force or effect.
18. **Rules-37 Time Extensions-All Projects.** The Owner / Applicant may request a time extension prior to the expiration of the permit or entitlement for development. The review authority with jurisdiction over the project may, upon good cause shown, grant a time extension in compliance with County rules and regulations, which include reflecting changed circumstances and ensuring compliance with CEQA. If the Owner / Applicant requests a time extension for this permit, the permit may be revised to include updated language to standard conditions and/or mitigation measures and additional conditions and/or mitigation measures which reflect changed circumstances or additional identified project impacts.



**Santa Barbara County
Air Pollution Control District**

Our Vision  Clean Air

June 28, 2017

Steve Rodriguez
Santa Barbara County
Planning and Development
624 W. Foster Road
Santa Maria, CA 93455

RECEIVED

JUL 05 2017

**S B COUNTY
PLANNING & DEVELOPMENT**

Re: APCD Suggested Conditions on North Fork Ranch Frost Ponds, 16CUP-00000-00005

Dear Mr. Rodriguez:

The Air Pollution Control District (APCD) has reviewed the referenced project, which consists of a request to construct and operate three frost ponds (water storage reservoirs) to provide frost protection at the North Fork Ranch Vineyard. Each reservoir would have a storage capacity of 49 acre feet and would occupy an area of approximately five acres. Grading consists of approximately 130,280 cubic yards (cy) of cut and 127,900 cy of fill to construct the three proposed reservoirs. The subject property, a 6,565-acre parcel zoned AG-II-100 and identified in the Assessor Parcel Map Book as APN 147-020-045 is located on the south side of State Highway 166, between Cottonwood Canyon Road and Schoolhouse Canyon Road about 9 miles west of the unincorporated community of New Cuyama.

Air Pollution Control District staff offers the following suggested conditions:

1. The State of California considers particulate matter emitted by diesel engines carcinogenic. Therefore, during project grading, construction, and hauling, construction contracts must specify that contractors shall adhere to the requirements listed in **Attachment B** to reduce emissions of particulate matter (as well as of ozone precursors) from diesel equipment. Recommended measures should be implemented to the maximum extent feasible.
2. All portable diesel-fired construction engines rated at 50 bhp or greater must have either statewide Portable Equipment Registration Program (PERP) certificates or APCD permits prior to grading/building permit issuance. Construction engines with PERP certificates are exempt from APCD permit, provided they will be on-site for less than 12 months.

June 28, 2017

Page 2

If you or the project applicant have any questions regarding these comments, please feel free to contact me at (805) 961-8893 or via email at NightingaleK@sbcapcd.org.

Sincerely,



Krista Nightingale,
Air Quality Specialist
Technology and Environmental Assessment Division

Attachments: Diesel Particulate and NO_x Emission Measures

cc: Brian Tetley, Urban Planning Concepts
TEA Chron File



ATTACHMENT B
DIESEL PARTICULATE AND NO_x EMISSION REDUCTION MEASURES

Particulate emissions from diesel exhaust are classified as carcinogenic by the state of California. The following is a list of regulatory requirements and control strategies that should be implemented to the maximum extent feasible.

The following measures are required by state law:

- All portable diesel-powered construction equipment shall be registered with the state's portable equipment registration program OR shall obtain an APCD permit.
- Fleet owners of mobile construction equipment are subject to the California Air Resource Board (CARB) Regulation for In-Use Off-Road Diesel Vehicles (Title 13, California Code of Regulations (CCR), §2449), the purpose of which is to reduce oxides of nitrogen (NO_x), diesel particulate matter (DPM), and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles. Off-road heavy-duty trucks shall comply with the State Off-Road Regulation. For more information, see www.arb.ca.gov/msprog/ordiesel/ordiesel.htm.
- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-Use (On-Road) Heavy-Duty Diesel-Fueled Vehicles (Title 13, CCR, §2025), the purpose of which is to reduce DPM, NO_x and other criteria pollutants from in-use (on-road) diesel-fueled vehicles. On-road heavy-duty trucks shall comply with the State On-Road Regulation. For more information, see www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.
- All commercial off-road and on-road diesel vehicles are subject, respectively, to Title 13, CCR, §2449(d)(3) and §2485, limiting engine idling time. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to five minutes; electric auxiliary power units should be used whenever possible.

The following measures are recommended:

- Diesel equipment meeting the CARB Tier 3 or higher emission standards for off-road heavy-duty diesel engines should be used to the maximum extent feasible.
- On-road heavy-duty equipment with model year 2010 engines or newer should be used to the maximum extent feasible.
- Diesel powered equipment should be replaced by electric equipment whenever feasible.
- Equipment/vehicles using alternative fuels, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel, should be used on-site where feasible.
- Catalytic converters shall be installed on gasoline-powered equipment, if feasible.
- All construction equipment shall be maintained in tune per the manufacturer's specifications.
- The engine size of construction equipment shall be the minimum practical size.
- The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time.
- Construction worker trips should be minimized by requiring carpooling and by providing for lunch onsite.

Plan Requirements: All requirements shall be shown on grading and building plans and/or as a separate information sheet listing the conditions of approval to be recorded with the map. **Timing:** Requirements shall be shown on plans prior to grading/building permit issuance and/or recorded with the map during map recordation. Conditions shall be adhered to throughout all grading and construction periods.

MONITORING: Lead Agency shall ensure measures are on project plans and/or recorded with maps. Lead Agency staff shall ensure compliance onsite. APCD inspectors will respond to nuisance complaints.

ATTACHMENT C



SANTA BARBARA COUNTY ZONING ADMINISTRATOR STAFF REPORT

September 8, 2017

PROJECT: North Fork Ranch Frost Ponds
HEARING DATE: September 25, 2017
STAFF/PHONE: Steve Rodriguez, (805) 682-3413

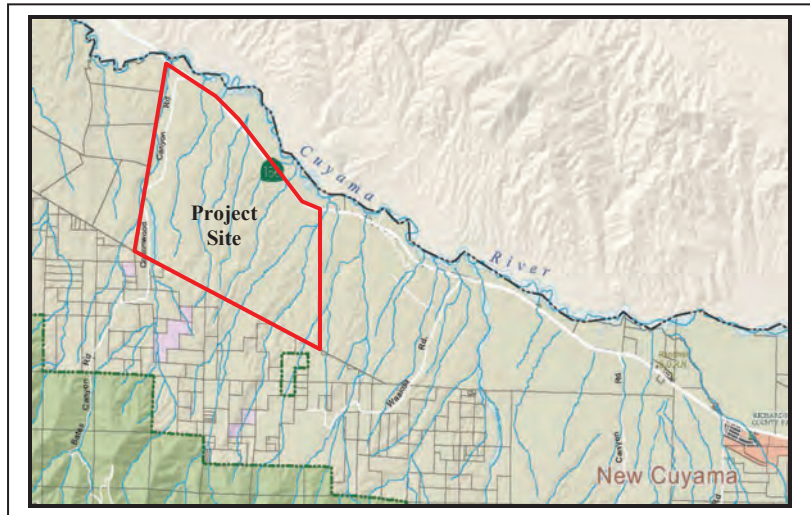
GENERAL INFORMATION

Case No. 16CUP-00000-00005

Assessor's Parcel Number:
147-020-045

Applicant/Phone:
Matt Turrentine – Brodiaea, Inc.
P.O. Box 6565
Santa Maria, CA 93455
(805) 312-1828

Agent/Phone
Mr. Brian A. Tetley
Urban Planning Concepts
2624 Airpark Drive
Santa Maria, CA 93455
(805) 934-5760



1.0 EXECUTIVE SUMMARY

The proposed project is a request for the approval of a Minor Conditional Use Permit (CUP) to allow for the construction and operation of three water storage reservoirs that would provide frost protection water for an existing vineyard. Each reservoir would have a storage capacity of 49 acre feet and would occupy an area of approximately five acres. A total of approximately 257,945 cubic yards of cut and fill grading would be required to construct the three reservoirs. The proposed project is consistent with all policy and ordinance requirements.

2.0 REQUEST

Hearing on the request of Brian Tetley, Urban Planning Concepts, agent for Brodiaea, Inc., owner, to consider Case No. 16CUP-00000-00005 [application filed on February 17, 2016] for a Conditional Use Permit allowing the construction and operation of three water storage reservoirs within a 6,565-acre parcel in compliance with Section 35.82.60 of the County Land Use and Development Code, on property zoned AG-II-100; and to adopt the Mitigated Negative Declaration (17NGD-00000-0004) pursuant to the State Guidelines for Implementation of the California Environmental Quality Act. As a result of this project, significant but mitigable effects on the environment are anticipated in the following categories: Biological Resources, Cultural Resources, Geologic Processes, and Water Resources/Flooding.

The Mitigated Negative Declaration (MND) and all documents may be reviewed at the Planning and Development Department, 624 West Foster Road, Suite C, Santa Maria. The MND is also available for review at the Cuyama Branch Public Library located at 4689 Highway 166, New Cuyama. The application involves Assessor Parcel No. 147-020-045, located approximately nine miles west of the community of New Cuyama between Cottonwood Canyon Road and Schoolhouse Canyon Road, Fifth Supervisorial District.

3.0 RECOMMENDATION

Follow the procedures outlined below and conditionally approve case number 16CUP-00000-00005 marked “Officially Accepted, County of Santa Barbara, September 25, 2017, Zoning Administrator Attachments A-E”, based upon the project's consistency with the Comprehensive Plan and the ability to make the required findings.

The Zoning Administrator’s action should include the following:

- Make the required findings for approval of the project, Case No. 16CUP-00000-00005, specified in Attachment A of this staff report, including CEQA findings;
- Adopt the Mitigated Negative Declaration included as Attachment C and adopt the mitigation monitoring program contained in the conditions of approval; and
- Approve the project, Case No. 16CUP-00000-00005, subject to the conditions included as Attachment B.

4.0 PROJECT SPECIFICATIONS

4.1 Site Information

Site Size:	6,565 acres
Comprehensive Plan Designation:	Rural Area, Agriculture Commercial (AC)
Ordinance/Zoning:	Land Use Development Code / AG-II-100, 100-acre minimum parcel size.
Surrounding Use, Zoning:	North: Open space, AG-II-100 South: Open space, AG-II-100 East: Open space, AG-II-100 West: Open space, AG-II-100
Services/Systems:	Water: Private Wells Sewer: None Fire: Santa Barbara County Fire, Station #41 Access: State Route 166 Police: County Sheriff
History:	The project site has been historically used for grazing.
Present Use and Development:	The three proposed reservoir sites are vacant and located adjacent to existing vineyards.

4.2 Project Description

The North Fork Ranch Frost Pond project is a request to construct and operate three frost ponds (reservoirs) that would store water to be used for frost protection at the North Fork Ranch Vineyards. The project also includes the construction of new underground pipelines that would be located between each of the proposed reservoirs and the existing vineyard irrigation system.

The proposed reservoirs would serve an existing 535-acre vineyard and an additional 100-acre area that is to be planted in the future. Reservoir No. 1 would be located on the eastern portion of the vineyard adjacent to Schoolhouse Canyon Road (a private road). Reservoir No. 3 would be located on the western portion of the vineyard approximately 0.75 mile east of Cottonwood Canyon Road. Reservoir No. 2 would be located between proposed Reservoir Nos. 1 and No. 3. Access to the reservoirs would be from existing roads that connect to State Highway 166.

Frost protection would be achieved by sustained spray irrigation when frost has the potential to damage the grape vines. Frost protection would generally be required during the months of February, March and April. The reservoirs would be maintained at a full condition between February and April. A maximum of three feet of well-supplied water would be maintained in the reservoirs between May 1st through January 31st. Water above a depth of three feet contained in the reservoirs after May 1 would be distributed for vineyard irrigation.

Each reservoir would have a water storage capacity of 49 acre-feet and would be lined with a high-density polyethylene plastic liner to prevent water seepage. Each reservoir would also have an emergency overflow discharge system that would prevent stored water from over-topping the reservoir. Water to be stored in the reservoirs would be supplied by existing agricultural wells located on the north side of State Route 166. Water from the wells would be conveyed to the reservoirs by existing vineyard irrigation pipelines that extend beneath the highway and throughout the vineyard. A six foot high fence would be installed around the exterior perimeter of each reservoir to prevent unauthorized entry. Life ring stations and floating pool ropes would also be provided for rescue purposes.

A total of approximately 257,945 cubic yards of cut and fill grading would be required to construct the three proposed reservoirs. The reservoirs would have a maximum depth of 27-28 feet, and in total would occupy an area of approximately 15.6 acres. Proposed pipelines that would convey water from the vineyard's existing irrigation system to each of the reservoirs would have a total length of 1,350 feet. Proposed pipelines that would convey water from each of the reservoirs to the vineyard's existing spray irrigation system would have a total length of 976 feet. Construction details for each of the proposed reservoirs are summarized on Table 1. It is estimated that the construction period for the three proposed reservoirs would be approximately one year.

Proposed project plans are provided as Attachment D.

Table 1
North Fork Ranch Frost Ponds
Construction Characteristics

Reservoir	Proposed Grading			Reservoir Area		Reservoir Depth			Proposed Pipelines	
	Cut (cu. yds.)	Fill (cu. yds.)	Total (cu. yds.)	Approximate Dimensions (feet)	Acres	Top of Reservoir Elevation	Bottom of Pond Elevation	Depth (feet)	Fill Line (feet)	Drain Line (feet)
No. 1	44,062	44,589	88,651	590 x 370	5.0	1,955	1,927	28	624	517
No. 2	44,064	42,205	86,269	580 X 410	5.7	1,788	1,761	27	370	202
No. 3	42,771	40,254	83,025	590 x 360	4.9	1,744	1,717	27	356	257
TOTAL	130,897	127,048 (1)	257,945	--	15.6	--	--	--	1,350	976

(1) Due to shrinkage of fill material, no soil would be exported from the project site

Surface water drainage from upslope areas adjacent to the reservoirs would be collected by proposed drainage swales. The collected water would be discharged and allowed to sheet flow at downslope locations adjacent to the reservoirs. Rock energy dissipaters would be installed at each discharge location to reduce potential erosion-related impacts. Stormwater discharge from Reservoir No. 1 would be conveyed beneath Schoolhouse Canyon Road by a proposed culvert beneath the road.

5.0 PROJECT ANALYSIS

5.1 Background

The proposed reservoir sites are vacant and have historically been used for grazing. Vineyards that would be served by the reservoirs were planted in early 2016. Water wells and pipelines that would be used to convey water to the reservoirs were installed in 2014 and 2015. The existing vineyards and irrigation infrastructure are allowed uses in the AG-II zone and do not require the approval of any discretionary land use permits.

5.2 Environmental Review

5.2.1 Impacts and Mitigation

Environmental impacts that could result from the implementation of the reservoir project are described in the proposed Final Mitigated Negative Declaration (MND) dated August 11, 2017 (Attachment C) and are summarized below.

Biological Resources. Due to the low quality of habitat at the project sites, it is unlikely that the construction or operation of the reservoirs would result in significant impacts to sensitive wildlife such as San Joaquin kit fox and American badger. The potential for impacts to those sensitive species, however, would be reduced to a less than significant level with the implementation of avoidance measures and other requirements of conditions of approval 3, 4 and 5.

Cultural Resources. Based on the results of cultural resource surveys conducted at the project sites it is unlikely that construction of the proposed reservoirs and pipelines adjacent to the reservoirs would result in impacts to cultural resources. The project would, however, have the potential to result in a significant impact if intact cultural resources were encountered during project construction. This potential impact would be

reduced to a less than significant level with the implementation of conditions of Nos. 6, 7 and 8, which specify resource monitoring and other requirements to be implemented during initial ground disturbing operations.

Geologic Processes. Grading required to construct the proposed reservoirs has the potential to result in significant short- and long-term erosion and sedimentation impacts to nearby ephemeral drainages that drain to the Cuyama River. These impacts would be reduced to a less than significant level with the implementation of condition of approval No. 9, which requires the preparation and implementation of an approved Erosion and Sediment Control Plan.

Water Resources/Flooding. Construction of the proposed reservoirs has the potential to result in impacts to the quality of surface water sources near the project sites. These impacts can be reduced to a less than significant level with the implementation of conditions of approval No. 10 and 11, which identify measures that minimize the potential for the release of construction site pollutants.

5.2.2 Comments on the Draft MND

A total of 7 letters commenting on the Draft MND prepared for the project were submitted. The comment letters are included as Attachment 5 of the Final MND dated August 11, 2017 (Attachment C). In addition to the comment letters, verbal comments regarding the Draft MND were provided during a public hearing conducted in New Cuyama on June 26, 2017. Comments on the Draft MND are summarized below and responses to those comments are also provided.

Water Use and Impact Analysis. Several comments on the Draft MND expressed concerns that the project's water use would contribute to groundwater overdraft conditions in the Cuyama Valley. Other comments indicated that the groundwater use significance threshold used by the MND is no longer applicable to the project because it is out of date. In regard to comments related to the project's groundwater use, the water that would be stored in the proposed reservoirs and used for frost protection would support an allowed agricultural use and that water use would not be subject to the groundwater withdrawal threshold established for the Cuyama Valley Groundwater Basin (31 acre feet per year) that is identified by the *County of Santa Barbara Environmental Thresholds and Guideline Manual* (1992). Water that evaporates from the proposed reservoirs, however, would not be used as part of an allowed agricultural use and would be subject to the adopted groundwater use threshold. Section 4.16 (Water Resources/Flooding) of the Draft MND and Final MND dated August 11, 2017, provides additional information regarding the groundwater use threshold.

The Draft MND indicated that water would be stored in the proposed reservoirs for three months of the year. The project applicant subsequently indicated that water would be stored in the reservoirs throughout the year. The estimate of reservoir-related evaporative losses included in the Final MND has been revised to state that total annual evaporative losses from the proposed reservoirs would be approximately 26 acre feet per year, which would not exceed the adopted threshold of 31 acre feet per year. The Final MND dated August 11, 2017, acknowledges that project's water use would contribute to overdraft conditions in the Cuyama Valley and the general lowering of groundwater levels, however, the project would not result in significant project-specific or cumulative groundwater use impacts because reservoir-related evaporative losses would not exceed the adopted groundwater use threshold.

In regard to comments related to the applicability of the adopted groundwater use threshold of significance, the Draft MND acknowledged that groundwater overdraft conditions in the Cuyama Valley Groundwater Basin have increased since the 31 acre foot threshold was adopted, and that overdraft conditions in the Basin reported

by the *Environmental Thresholds and Guideline Manual* (28,525 acre feet per year) increased to approximately 30,000 acre feet per year in 2014. The Final MND, dated August 11, 2017, provides additional information regarding current groundwater conditions in the Basin and reports that groundwater usage is greater than replenishment by 34,900 acre feet per year. Despite the recent increase in groundwater use, the groundwater extraction significance threshold included in the *Environmental Thresholds and Guideline Manual* is still considered to be applicable to the Cuyama Valley Groundwater Basin and appropriate to evaluate the significance of groundwater use impacts.

Evaluation of the Entire Project. Several comments on the Draft MND indicated that the proposed reservoirs would serve approximately 1,000 acres of vineyards, and the California Department of Fish and Wildlife commented that that disking conducted to plant the vineyards should have been analyzed as part of the project's potential impacts to sensitive species. The Draft and Final MND state that the proposed reservoirs would serve approximately 635 acres of vineyards. It is possible that the reservoirs may serve a larger area of vineyards, however, the area served by the reservoirs is not the basis for determining the significance of project-related impacts. Planting vineyards is an allowed agricultural use that does not require discretionary permit approvals by the County. The proposed reservoirs, however, require the approval of a discretionary permit (a Minor Conditional Use Permit) and as a result the construction and operation of the reservoirs is a project subject to the requirements of CEQA. Therefore, the CEQA evaluation of the project is limited to the construction and operation of the reservoirs, and the effects of planting vineyards (e.g., ground disturbance and water used for irrigation and frost protection) are not considered to be part of the proposed project. Additionally, the disking conducted to plant the vineyards on the project property occurred in August 2015, while the application for the proposed reservoirs was submitted to Planning and Development in February 2016. Therefore, the ground disturbance resulting from vineyard planting was the "baseline" condition that existed when the environmental review of the reservoir project began. Therefore, the vineyards located on the project site are not part of the reservoir project and an evaluation of impacts that may have resulted from planting the vineyard is not required by CEQA.

Sustainable Groundwater Management Act. Several comments indicated that the project should be required to implement the requirements of the Sustainable Groundwater Management Act (SGMA). SGMA took effect on January 1, 2015, and requires all groundwater basins designated as medium or high priority by the Department of Water Resource to be sustainably managed by the year 2042. The Cuyama Valley Groundwater Basin is listed as a "medium" priority basin and is also listed as a "critically overdrafted" basin. SGMA requires that a Groundwater Sustainability Plan be prepared for the Cuyama Valley Groundwater Basin by a local Groundwater Sustainability Agency (GSA), and that the plan be completed by 2020. After a Groundwater Sustainability Plan is prepared and adopted, the GSA will have the authority to conduct investigations, measure and limit groundwater extractions, require registration of water wells, and impose fees for groundwater management. The GSA for the Cuyama Valley Groundwater Basin is now in the initial stages of preparing a Groundwater Sustainability Plan. Until the Plan is prepared and adopted, there are no SGMA-related requirements for the proposed reservoir project to implement. After a Plan is prepared and adopted, the wells used to supply water to the proposed reservoirs could be subject to the adopted groundwater management and reporting requirements.

Potential for the Construction of Additional Reservoirs. Several comments indicated that there is a potential for future expansions of existing vineyard area, and that additional vineyards may require the construction of additional frost protection reservoirs. Similar to the current project, approval of a Minor CUP would be required to construct and operate additional reservoirs on the project property. Should an application be submitted by the project site property owner for additional reservoirs to serve future vineyard expansions, that application would be evaluated as an expansion of the current project and water resource impacts

(evaporative losses) would be evaluated on a project-specific basis (water losses from the additional reservoir) and a cumulative basis (the combined evaporative losses from all reservoirs). If the project-specific or cumulative evaporative losses exceed the groundwater use significance threshold of 31 acre feet per year, mitigation measures would be required to reduce losses to a level below the threshold. If feasible mitigation measures could not be identified, an EIR would be required to evaluate the project-specific and cumulative impacts of the entire reservoir project.

AB 52 Compliance. The Native American Heritage Commission submitted comments related to compliance with the requirements of AB 52 (Gatto, 2014). The Final MND has been revised to state that in compliance with the requirements of AB 52, the Barbareño/Venentureño Band of Mission Indians was formally notified of the proposed project by a letter dated March 13, 2017. No response to the notification letter has been received. Therefore, the potential for the project to result in impacts to cultural resources is not considered to be significant and no additional mitigation measures to address the potential for impacts to tribal resources are required.

Reservoir Safety. The California Department of Transportation (Caltrans) commented that a catastrophic failure of a proposed reservoir would have the potential to impact SR 166. Caltrans also stated that the reservoir project should be reviewed by the Department of Water Resources (DWR). As shown on the State Clearinghouse MND distribution letter dated July 7, 2017 (Final MND Attachment 5), the Draft MND was distributed to DWR for review and comment. No comments regarding the adequacy of the Draft MND were received from DWR.

Caltrans also requested information regarding the encroachment permit that was used for the construction of vineyard irrigation/reservoir supply pipelines beneath SR 166. The Caltrans encroachment permit obtained by the project applicant to install pipelines beneath SR 166 was Permit No. 0516 6UJ 0102.

Reservoir Liner Integrity. The interior of the proposed reservoirs would be lined with high-density polyethylene (HDPE) plastic, which would minimize the potential for stored water to seep into water containment berms and beneath the reservoirs. Comments were received that the liner would be subject to burrowing animal damage and decay due to long-term sun exposure. The project applicant has indicated that liner damage caused by burrowing animals has not been a problem in the past. The applicant also indicated that if such ground disturbances were to occur it would generally be detectable, and if necessary, correctable. HDPE plastic is generally regarded as being very durable, and as described by information included in Attachment E, HDPE material has been successfully used over long periods of time (16 years) in containment ponds located in harsh environments. Therefore, the proposed use of an HDPE liner in the proposed reservoirs appears to be adequate to minimize the infiltration of water into the reservoirs.

5.3 Comprehensive Plan Consistency

North Fork Ranch Frost Ponds Project Comprehensive Plan Policy Consistency Analysis	
REQUIREMENT	DISCUSSION
Land Use Element –Land Use Development Policies	
Land Use Development Policy 4: <i>Prior to issuance of a development permit, the County shall make the finding, based on information provided by environmental documents, staff analysis, and the applicant, that adequate public or private services and resources (i.e., water, sewer, roads, etc.) are available to serve the proposed development. The applicant shall assume full responsibility for costs incurred in service extensions or improvements that are required as a result of the proposed project. Lack of available public or private services or resources shall be grounds for denial of the project or reduction in the density otherwise indicated in the land use plan.</i>	Consistent: Adequate services are in place to serve the proposed reservoirs, and the project would not decrease the ability to provide required services for new or existing development. Water to be stored in the reservoirs would be provided from existing private wells that produce irrigation water for the existing vineyards that would be served by the reservoirs. The proposed reservoirs would not generate wastewater that require sewer disposal. Regional access to the reservoirs would be from State Route 166 and existing access roads from the highway to the reservoir sites are adequate to serve the project. The reservoirs would not generate a substantial amount of traffic. Fire service would be provided by the Santa Barbara County Fire Station #41. Therefore, adequate public services and resources are available to serve the reservoirs and the proposed project is consistent with this policy.
Land Use Element – Hillside and Watershed Protection Policies	
Hillside and Watershed Protection Policy 1: <i>Plans for development shall minimize cut and fill operations. Plans requiring excessive cutting and filling may be denied if it is determined that the development could be carried out with less alteration of the natural terrain.</i>	Consistent: The proposed reservoirs would be constructed by excavating soil below existing grade and using the excavated soil to construct berms that would impound stored water. Approximately 130,897 cubic yards of cut and 127,048 cubic yards of fill would be required. No soil would be imported or exported from the project site. Therefore, proposed grading would not be excessive and the proposed project is consistent with this policy.
Hillside and Watershed Protection Policy 2. <i>All developments shall be designed to fit the site topography, soils, geology, hydrology, and any other existing conditions and be oriented so that grading and other site preparation is kept to an absolute minimum. Natural features, landforms, and native vegetation,</i>	Consistent: The proposed reservoir sites have gentle slopes that generally range between two and six percent. Grading required to construct the reservoirs would not result in the creation of grading scars or other alterations to existing topography or vegetation that would result in a significant visual impact. The project would not

North Fork Ranch Frost Ponds Project Comprehensive Plan Policy Consistency Analysis	
REQUIREMENT	DISCUSSION
<p><i>such as trees, shall be preserved to the maximum extent feasible. Areas of the site which are not suited to development because of known soil, geologic, flood, erosion or other hazards shall remain in open space.</i></p>	<p>result in the removal of trees or other native vegetation, and required erosion control planting on the reservoir berms would help to make the appearance of the berms blend with undisturbed areas near the reservoir sites. The proposed reservoirs would be located a minimum of 100 feet from ephemeral drainages that drain to the Cuyama River. Therefore, the proposed reservoirs would be located at sites suited for their development and the proposed project is consistent with this policy.</p>
<p>Hillside and Watershed Protection Policy 3. <i>For necessary grading operations on hillsides, the smallest practical area of land shall be exposed at any one time during development, and the length of exposure shall be kept to the shortest practicable amount of time. The clearing of land should be avoided during the winter rainy season and all measures for removing sediments and stabilizing slopes should be in place before the beginning of the rainy season.</i></p> <p>Hillside and Watershed Protection Policy 5. <i>Temporary vegetation, seeding, mulching, or other suitable stabilization method shall be used to protect soils subject to erosion that have been disturbed during grading or development. All cut and fill slopes shall be stabilized as rapidly as possible with planting of native grasses and shrubs, appropriate non-native plants, or with accepted landscaping practices.</i></p>	<p>Consistent: It is estimated that it would require approximately one year to construct the three proposed reservoirs. Condition of approval No. 9 (Geo-02. Erosion and Sediment Control Plan) requires that the project prepare and implement an approved Storm Water Pollution Prevention Plan (SWPPP), Storm Water Management Plan (SWMP) and/or an Erosion and Sediment Control Plan (ESCP). Required erosion and sediment control measures must be implemented for the duration of the grading period and until graded areas have been stabilized by long-term erosion control measures or permanent landscaping. Therefore, the proposed project would not result in significant erosion or sedimentation impacts and is consistent with these policies.</p>
<p>Hillside and Watershed Protection Policy 6. <i>Provisions shall be made to conduct surface water to storm drains or suitable watercourses to prevent erosion. Drainage devices shall be designed to accommodate increased runoff resulting from modified soil and surface conditions as a result of development. Water runoff shall be retained onsite whenever possible to facilitate groundwater recharge.</i></p>	<p>Consistent: The stormwater drainage system for each of the proposed reservoirs would collect water from a limited upslope area, and water from the reservoir overflow and drainage systems would be discharged over rock energy dissipaters. After discharge over the energy dissipaters, the water would sheetflow over the ground surface, which in the vicinity of proposed discharge locations has a gradient of five percent or less. Therefore, the amount of</p>

North Fork Ranch Frost Ponds Project Comprehensive Plan Policy Consistency Analysis	
REQUIREMENT	DISCUSSION
	stormwater discharged from the drainage systems and the reservoir overflow systems would be limited and would not substantially alter existing drainage patterns, the course or direction of runoff water, or substantially increase or decrease the amount of water in the ephemeral drainages located adjacent to the reservoir sites. Therefore, the proposed project is consistent with this policy.
Hillside and Watershed Protection Policy 7. <i>Degradation of the water quality of groundwater basins, nearby streams, or wetlands shall not result from development of the site. Pollutants, such as chemicals, fuels, lubricants, raw sewage, and other harmful waste, shall not be discharged into or alongside coastal streams or wetlands either during or after construction.</i>	Consistent: Condition of approval No. 9 (Geo-02. Erosion and Sediment Control Plan) requires that the project prepare and implement an approved Storm Water Pollution Prevention Plan (SWPPP), Storm Water Management Plan (SWMP) and/or an Erosion and Sediment Control Plan (ESCP). In addition, conditions of approval 10 and 11 (WatConv-04 Equipment Storage-Construction, and Wat Conv-05 Equipment Washout-Construction) would reduce the potential for short-term construction-related water quality impacts to a less than significant level. The proposed project would not be a substantial source of pollutants. Therefore, the proposed project would not result in significant water quality-related impacts and is consistent with this policy.
Land Use Element - Visual Resources Policies	
Visual Resources Policy 2. <i>In areas designated as rural on the land use plan maps, the height, scale, and design of structures shall be compatible with the character of the surrounding natural environment, except where technical requirements dictate otherwise. Structures shall be subordinate in appearance to natural contours of the landscape; and shall be sited so as not to intrude into the skyline as seen from public viewing place.</i>	Consistent: The proposed reservoirs would be visible from public viewing locations such as State Route 166. The reservoirs would be setback from the highway by approximately 3,000, 1,200 and 1,500 feet. Due to the distances between the three reservoir sites and State Route 166, they would not be prominently visible to persons traveling on the highway. Grading required to construct the reservoirs would not result in the creation of grading scars or other alterations to existing topography or vegetation that would result in a significant visual impact. Erosion control planting on the reservoir berms would make the appearance of the berms blend with undisturbed areas near the reservoir sites. The proposed reservoir berms

North Fork Ranch Frost Ponds Project Comprehensive Plan Policy Consistency Analysis	
REQUIREMENT	DISCUSSION
	would have a maximum height of approximately 20 feet above surrounding grade and would not adversely affect existing views of the Sierra Madre Mountains to the south of the project site from public viewpoints such as State Highway 166. No nighttime lighting would be used at the project sites. Therefore, the proposed project would be consistent with this policy.
Land Use Element – Historical and Archaeological Sites Policies	
<p>Historical and Archaeological Sites Policy 2. <i>When developments are proposed for parcels where archaeological or other cultural sites are located, project design shall be required which avoids impacts to such cultural sites if possible.</i></p> <p>Historical and Archaeological Sites Policy 3. <i>When sufficient planning flexibility does not permit avoiding construction on archaeological or other types of cultural sites, adequate mitigation shall be required. Mitigation shall be designed in accord with guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission.</i></p> <p>Historical and Archaeological Sites Policy #5: <i>Native Americans shall be consulted when development proposals are submitted which impact significant archaeological or cultural sites.</i></p>	<p>Consistent: As described by the Final MND dated August 11, 2017, the proposed reservoir sites were surveyed for the presence of cultural resources. During the preparation of the survey, the Native American Heritage Commission, Santa Ynez Band of Mission Indians, Barbareño/Ventureño Band of Mission Indians, and other Native American tribes were contacted. In addition, the Barbareño/Ventureño Band of Mission Indians was contacted in compliance with the requirements of AB 52. The cultural resources evaluation did not identify any archaeological resources that would be impacted by the construction of the proposed reservoirs or associated pipelines. However, based on a previous discovery of pre-historic human remains in the vicinity of the project sites, the project area is considered sensitive for cultural resources. Conditions of approval 6, 7 and 8 (CulRes-07 Cultural Resource Monitor; CulRes-09 Stop Work at Encounter; and Special Condition: Pre-Construction Meeting) would reduce potential impacts to cultural resources should previously undetected cultural resources be encountered during the construction of the proposed reservoirs. Therefore, the proposed project would be consistent with these policies.</p>
Agricultural Element	
<p>Agricultural Element, Goal I: <i>Santa Barbara County shall assure and enhance the continuation of agriculture as a major viable production industry in Santa Barbara County.</i></p>	<p>Consistent: The proposed reservoirs would not remove any land from existing agricultural production and would support vineyards established on the project property by</p>

North Fork Ranch Frost Ponds Project Comprehensive Plan Policy Consistency Analysis	
REQUIREMENT	DISCUSSION
<i>Agriculture shall be encouraged.</i>	supplying frost protection water when it is needed. Therefore, the project is consistent with this policy.

5.4 Ordinance Consistency

The project property is located in the AG-II-100 (Agriculture, 100 acre minimum parcel size) zone district. The AG-II zone district is applied to areas appropriate for agricultural land uses on prime or non-prime agricultural lands located within the Rural Area as shown on the Comprehensive Plan maps. The intent is to preserve these lands for long-term agricultural use on large properties (a minimum of 40- to 320-acre lots) with prime and non-prime agricultural soils in the rural areas of the County, and to preserve prime and non-prime soils for long-term agricultural use.

The construction and operation of three frost pond reservoirs would be supportive of the existing vineyards on the project property. Therefore, the project is an appropriate in use in the AG-II zone district. Additionally, the project meets all minimum LUDC requirements. Approval of the reservoirs would not cause the existing development on the project site to become non-compliant with the applicable AG-II-100 zoning requirements.

5.5 Agricultural Preserve Advisory Committee:

On April 1, 2016, the Agricultural Preserve Advisory Committee unanimously found the proposed reservoir project to be consistent with the Uniform Rules and contract 95-AP-24.

6.0 APPEALS PROCEDURES

The action of the Zoning Administrator may be appealed to the Planning Commission within the 10 calendar days following the date of the Zoning Administrator's decision by the applicant or an aggrieved person. The appeal fee to the Planning Commission is \$610.06.

The action of the Planning Commission may be appealed to the Board of Supervisors within the 10 calendar days following the date of the Planning commission's decision by the applicant or an aggrieved person. The appeal fee to the Board of Supervisors is \$650.06.

7.0 ATTACHMENTS

- A. Findings
- B. Conditions of Approval with attached Departmental letter
- C. Proposed Final MND, dated August 11, 2017
- D. Project Plans
- E. HDPE Information Sheet

ATTACHMENT A: FINDINGS OF APPROVAL

1.0 CEQA FINDINGS

1.1 CONSIDERATION OF THE NEGATIVE DECLARATION AND FULL DISCLOSURE

The Zoning Administrator has considered the Mitigated Negative Declaration, 17NGD-00000-00004, together with the comments received and considered during the public review process. The Mitigated Negative Declaration reflects the independent judgment and analysis of the Zoning Administrator and has been completed in compliance with CEQA, and is adequate for this proposal.

1.2 FINDING OF NO SIGNIFICANT EFFECT

On the basis of the whole record, including the Mitigated Negative Declaration and any comments received, the Zoning Administrator finds that through feasible conditions placed upon the project, the significant impacts on the environment have been eliminated or substantially mitigated and on the basis of the whole record (including the initial study and any comments received), there is no substantial evidence that the project will have a significant effect on the environment.

1.3 LOCATION OF DOCUMENTS

The documents and other materials which constitute the record of proceedings upon which this decision is based are in the custody of the Secretary of the Zoning Administrator of the Planning and Development Department located at 624 W. Foster Road, Santa Maria, CA, 93455.

1.4 ENVIRONMENTAL REPORTING AND MONITORING PROGRAM

Public Resources Code Section 21081.6 and CEQA Guidelines Section 15074(d) require the County to adopt a reporting or monitoring program for the changes to the project that it has adopted or made a condition of approval in order to avoid or substantially lessen significant effects on the environment. The approved project description and conditions of approval, with their corresponding permit monitoring requirements, are hereby adopted as the reporting and monitoring program for this project. The monitoring program is designed to ensure compliance during project implementation.

2.0 ADMINISTRATIVE FINDINGS

2.1 Conditional Use Permits

- A. Findings required for all Conditional Use Permits.** In compliance with Subsection 35.82.060.E.1 of the County Land Use and Development Code, prior to the approval or conditional approval of an application for a Minor Conditional Use Permit the review authority shall first make all of the following findings:

- 1. The site for the proposed project is adequate in terms of location, physical characteristics, shape, and size to accommodate the type of use and level of development proposed.**

The project property (147-020-045) is approximately 6,565 acres. The proposed reservoir sites are generally level and slope gently to the east or northeast. The proposed reservoirs would be approximately 3,000, 1,200 and 1,500 feet south of State Route 166 and at least 100 feet from nearby ephemeral drainages. The proposed reservoirs would be located in areas adjacent to the vineyards they would serve and would limit the amount of required grading to the maximum extent feasible. Therefore this finding can be made.

- 2. Within the Inland area significant environmental impacts will be mitigated to the maximum extent feasible.**

The proposed reservoir sites are located within an area where San Joaquin kit fox and American badger have historically existed. However, according to the Biological Resources Assessment prepared by Kevin Merk Associates, LLC (dated February 24, 2016), the potential for these or other sensitive animal species to be located at the proposed reservoir sites is very low due to habitat conditions on and near the sites. However, to reduce the potential for the project to result in short-term construction-related impacts to these species to the maximum extent feasible, conditions of approval require preconstruction surveys and if necessary the implementation of appropriate avoidance measures.

A survey of the proposed reservoir sites (Rincon Consultants, August, 2016) did not detect evidence of archaeological resources, however, the project area is considered to be sensitive for cultural resources. Conditions of approval require that a preconstruction educational meeting be conducted with construction personnel; monitoring during construction of the reservoirs; and that if cultural resources are encountered during construction work be stopped in vicinity of the find so appropriate actions can be taken. The implementation of these conditions would reduce the potential for impacts to cultural resources to the maximum extent feasible.

Construction of the proposed reservoirs would have the potential to result in erosion and other water quality-related impacts. Conditions of approval require the preparation and implementation of approved short- and long-term water quality protection measures. The implementation of these conditions would reduce the potential for impacts to water quality to the maximum extent feasible.

The Final MND prepared for the project, dated August 11, 2017, did not identify potentially significant environmental impacts that would result from the construction or operation of the proposed reservoirs. Therefore, this finding can be made.

- 3. Streets and highways are adequate and properly designed to carry the type and quantity of traffic generated by the proposed use.**

The proposed reservoirs will take vehicular access from State Route 166. This public highway is adequate to serve the project as designed. The project will not result in a substantial increase in traffic on the highway and would not result in a significant decrease in the highway's current level of service. Therefore this finding can be made.

4. There will be adequate public services, including fire protection, police protection, sewage disposal, and water supply to serve the proposed project.

Water to be stored in the proposed reservoirs would be supplied by existing private water wells located on adjacent parcels but under the same ownership. The project would draw groundwater from the Cuyama Groundwater Basin, which is in a state of overdraft. The proposed project's water use that is subject to the County's adopted groundwater use threshold for the Cuyama Valley Groundwater Basin consists only of the reservoir's annual evaporative losses. The annual evaporative losses from the three proposed reservoirs are estimated to be approximately 26 AFY, which is below the adopted significance threshold of 31 acre feet per year. No sewage will be produced by the proposed project, therefore, no waste water disposal systems are required. The project would not have a substantial demand for fire and police protection services; therefore, adequate services are available to serve the project. Therefore this finding can be made.

5. The proposed project will not be detrimental to the comfort, convenience, general welfare, health, and safety of the neighborhood and will be compatible with the surrounding area.

The project site is located in an agricultural zone (AG-II-100) that allows for the construction of agricultural reservoirs, subject to the approval of a minor conditional use permit for reservoirs consisting of 50,000 sq. ft. or more of total development. There are no residences or other buildings located near the proposed reservoir sites. The reservoirs and associated pipeline improvements are designed to conform to all applicable County requirements to ensure that detrimental effects will not occur to the health, safety, comfort, convenience, and general welfare of the neighborhood. The project also includes fencing and safety equipment to reduce the potential for humans and animals to become trapped in the reservoirs. Therefore this finding can be made.

6. The proposed project will comply with all applicable requirements of this Development Code and the Comprehensive Plan, including any applicable community or area plan.

As discussed in Sections 5.3 and 5.4 of this staff report, dated September 8, 2017, and incorporated herein by reference, the project is consistent with the Comprehensive Plan and Land Use and Development Code. Therefore, this finding can be made.

7. Within Rural areas as designated on the Comprehensive Plan maps, the proposed use will be compatible with and subordinate to the rural and scenic character of the area.

The agricultural reservoirs have been designed in a manner that is compatible with the rural and scenic character of the area. The reservoirs would not result in grading scars, would not be prominently visible from State Route 166, and would not obstruct scenic views of the mountains located south of the project site as seen from the highway. Therefore, this finding can be made.

ATTACHMENT B: CONDITONS OF APPROVAL

**North Fork Ranch Frost Ponds
Case No. 16CUP-00000-00005**

September 25, 2017

I. PROJECT DESCRIPTION

1. **Proj Des-01 Project Description.** This Conditional Use Permit is based upon and limited to compliance with the project description, the hearing exhibits marked Attachment A-E, and all conditions of approval set forth below, including mitigation measures and specified plans and agreements included by reference, as well as all applicable County rules and regulations.

The project description is as follows:

A request of Brian Tetley, agent for Brodiaea, Inc, owner, to consider Case No. 16CUP-00000-00005. The North Fork Ranch Frost Pond project is a request to construct and operate three frost ponds (reservoirs) that would store water to be used for frost protection at the North Fork Ranch Vineyards. The project also includes the construction of new underground pipelines that would be located between each of the proposed reservoirs and the existing vineyard irrigation system.

The proposed reservoirs would serve an existing 535-acre vineyard and an additional 100-acre area that is to be planted in the future. Reservoir No. 1 would be located on the eastern portion of the vineyard adjacent to Schoolhouse Canyon Road (a private road). Reservoir No. 3 would be located on the western portion of the vineyard approximately 0.75 mile east of Cottonwood Canyon Road. Reservoir No. 2 would be located between proposed Reservoir Nos. 1 and No. 3. Access to the reservoirs would be from existing roads that connect to State Highway 166.

Frost protection would be achieved by sustained spray irrigation when frost has the potential to damage the grape vines. Frost protection would generally be required during the months of February, March and April. The reservoirs would be maintained at a full condition between February and April. A maximum of three feet of well-supplied water would be maintained in the reservoirs between May 1st through January 31st. Water above a depth of three feet contained in the reservoirs after May 1 would be distributed for vineyard irrigation.

Each reservoir would have a water storage capacity of 49 acre-feet and would be lined with a high-density polyethylene plastic liner to prevent water seepage. Each reservoir would also have an emergency overflow discharge system that would prevent stored water from over-topping the reservoir. Water to be stored in the reservoirs would be supplied by existing agricultural wells located on the north side of State Highway 166. Water from the wells would be conveyed to the reservoirs by existing vineyard irrigation pipelines that extend beneath the highway and throughout the vineyard. A six foot high fence would be installed around the exterior perimeter of each reservoir to prevent unauthorized entry. Life ring stations and floating pool ropes would also be provided for rescue purposes.

A total of approximately 257,945 cubic yards of cut and fill grading would be required to construct the three proposed reservoirs. The reservoirs would have a maximum depth of 27-28 feet, and in total would occupy an area of approximately 15.6 acres. Proposed pipelines that would convey water from the vineyard's existing irrigation system to each of the reservoirs would have a total length of 1,350 feet. Proposed pipelines that would convey water from each of the reservoirs to the vineyard's existing spray irrigation system would have a total length of 976 feet. Construction details for each of the proposed reservoirs are summarized on Table 1. It is estimated that the construction period for the three proposed reservoirs would be approximately one year.

**Table 1
North Fork Ranch Frost Ponds
Construction Characteristics**

Reservoir	Proposed Grading			Reservoir Area		Reservoir Depth			Proposed Pipelines	
	Cut (cu. yds.)	Fill (cu. yds.)	Total (cu. yds.)	Approximate Dimensions (feet)	Acres	Top of Reservoir Elevation	Bottom of Pond Elevation	Depth (feet)	Fill Line (feet)	Drain Line (feet)
No. 1	44,062	44,589	88,651	590 x 370	5.0	1,955	1,927	28	624	517
No. 2	44,064	42,205	86,269	580 X 410	5.7	1,788	1,761	27	370	202
No. 3	42,771	40,254	83,025	590 x 360	4.9	1,744	1,717	27	356	257
TOTAL	130,897	127,048 (1)	257,945	--	15.6	--	--	--	1,350	976

(1) Due to shrinkage of fill material, no soil would be exported from the project site

Surface water drainage from upslope areas adjacent to the reservoirs would be collected by proposed drainage swales. The collected water would be discharged and allowed to sheet flow at downslope locations adjacent to the reservoirs. Rock energy dissipaters would be installed at each discharge location to reduce potential erosion-related impacts. Stormwater discharge from Reservoir No. 1 would be conveyed beneath Schoolhouse Canyon Road by a proposed culvert beneath the road.

The application involves Assessor Parcel Number 147-020-045, a 6,565-acre parcel that is zoned AG-II-100.

- Proj Des-02 Project Conformity.** The grading, development, use, and maintenance of the property, the size, shape, arrangement, and location of the structures, parking areas and landscape areas, and the protection and preservation of resources shall conform to the project description above and the hearing exhibits and conditions of approval below. The property and any portions thereof shall be sold, leased or financed in compliance with this project description and the approved hearing exhibits and conditions of approval thereto. All plans (such as Landscape and Tree Protection Plans) must be submitted for review and approval and shall be implemented as approved by the County.

II. CONDITIONS INCORPORATED FROM MITIGATION MEASURES

- Special Condition: San Joaquin Kit Fox Avoidance Measures.** Project-related pre-construction / pre-activity surveys shall be conducted prior to the beginning of ground disturbance and/or construction activities, or any project activity that has the potential to impact the San Joaquin kit fox and/or American badger. Required pre-construction / pre-activity surveys and project-related

construction activities shall be conducted in accordance with the requirements of the U.S. Fish and Wildlife Service's *Standardized Recommendations for Protection of The Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (January, 2011). Similar measures and procedures shall be implemented to minimize the potential for impacts to American badger. The Standardized Recommendations are provided as Final MND (dated August 11, 2017) Attachment 3.

PLAN REQUIREMENTS AND TIMING: Prior to the start of any project-related pre-construction / pre-activity, the areas that would be affected by reservoir construction and the construction of the proposed reservoir fill and drain lines shall be marked in the field and surveyed by a qualified biologist. Project-related pre-construction / pre-activity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities. The qualified biologist shall conduct weekly site visits during site disturbance activities that proceed longer than 14 days for the purpose of monitoring compliance with the attached Standardized Recommendations. Site disturbance activities lasting up to 14 days do not require weekly monitoring by the biologist unless observations of kit fox or their dens are made on-site or the qualified biologist recommends additional monitoring. This measure shall be printed on all grading and construction plans.

MONITORING: The qualified biologist shall document the methods and results of site visits in weekly monitoring reports that are to be submitted to P&D. If incidental take of kit fox during project activities is possible, before project activities commence, the applicant must consult with the USFWS and CDFW. The results of this consultation may require the applicant to obtain a federal and/or state permit for incidental take during project activities.

4. **Bio-09 Fish and Wildlife Jurisdiction Advisory.** The project site is within the range of San Joaquin kit fox, a species listed as Endangered by the U.S. Fish and Wildlife Service, and Threatened by the California Department of Fish and Wildlife. Based upon reports prepared by Kevin Merk Associates, dated February 24, 2016 and June 24, 2016, it has been determined that the probability for San Joaquin kit fox occurrence on the site is very low. The issuance of this permit does not relieve the permit-holder of any duties, obligations, or responsibilities under the federal or California Endangered Species Act or any other law. The permit-holder shall contact the necessary jurisdictional agencies to ascertain his or her level of risk under the federal and California Endangered Species Act in implementing the project herein permitted.

Indemnity for Violation of the Endangered Species Act: The applicant shall defend, indemnify and hold harmless the County or its agents, officers and employees from any and all claims, actions, proceedings, demands, damages, costs, expenses (including attorney's fees), judgments or liabilities, against the County or its agents, offices or employees brought by any entity or person for any and all actions or omissions of the applicant or his agents, employees or other independent contractors arising out of this permit alleged to be in violation of the federal or California Endangered Species Acts (16 USC Sec. 1531 et seq.; Cal. Fish and Game Code Sec. 2050 et seq.). This permit does not authorize, approve or otherwise support a "take" of any listed species as defined under the federal or California Endangered Species Acts. Applicant shall notify County immediately of any potential violation of the federal and/or California Endangered Species Act.

5. **American Badger Avoidance and Minimization Measures.** A minimum of 14 days prior to initiation of ground disturbing activities, a survey for badger burrows shall be conducted within the disturbance footprint by an approved biologist (a biologist familiar with, including identification of,

the wildlife species in the region). Dens found within the survey area shall be mapped and monitored using a tracking medium, remote camera system, and/or spotlighting at night for a minimum of three days to assess the presence of badgers. Inactive dens shall be collapsed by hand with a shovel to prevent badgers from re-using them during construction. Active dens located within the survey area shall be avoided during the breeding season (March 1 through June 30). A minimum buffer of 50 feet around the active den within the proposed area of disturbance shall be demarcated by construction fencing. The fencing shall be installed one foot above ground to permit movement of badgers in and out of the buffer zone. Once the biologist has determined that active dens are no longer in use, the den shall be collapsed by shovel. Prior to ground disturbing activities occurring outside of the breeding season, badgers may be discouraged from using currently active dens by partially blocking the entrance of the den with sticks, debris, and soil for three (3) to five (5) days. Access to the den would be incrementally blocked to a greater degree over this period. This would cause the badger to abandon the den site and move elsewhere. After badgers have stopped using active dens within the project site, the dens would be collapsed by hand with a shovel.

Plan Requirements and Timing. The name, qualifications, scope of biological surveys and contact information for the surveying biologist must be submitted to P&D and CDFW in advance of the surveys. The above measures shall be included on all land use, grading, and building plans for the construction of the reservoirs, water pipelines, and utility line improvements. A report of the results of the badger survey shall be submitted to P&D for review and approval prior to Zoning Clearance.

Monitoring. P&D will review and approve the reports. A County-approved biologist shall be present during the initial ground-disturbing activity.

6. **CulRes-07 Cultural Resource Monitor.** The Owner/Applicant shall have all earth disturbances including scarification and placement of fill within the proposed project sites monitored by a P&D approved archaeologist and a Native American consultant in compliance with the provisions of the County Archaeological Guidelines. The duration and depth of grading below the ground surface that requires monitoring shall be determined by the approved archaeologist and Native American consultant.

TIMING: Prior to the approval of a grading permit, the Owner/Applicant shall submit for P&D review and approval, a contract or Letter of Commitment between the Owner/Applicant and the archaeologist, consisting of a project description and scope of work, and once approved, shall execute the contract. This condition shall be printed on all building and grading plans.

MONITORING: The Owner/Applicant shall provide P&D compliance monitoring staff with the name and contact information for the assigned onsite monitor(s) prior to grading permit issuance and pre-construction meeting. P&D compliance monitoring staff shall confirm monitoring by archaeologist and Native American consultant and P&D grading inspectors shall spot check field work. The P&D permit processing planner shall check plans prior to approval of all building and grading permits and P&D compliance monitoring staff shall spot check in the field.

7. **CulRes-09 Stop Work at Encounter.** The Owner/Applicant and/or their agents, representatives or contractors shall stop or redirect work immediately in the event archaeological remains are encountered during grading, construction, landscaping or other construction-related activity. The Owner/Applicant shall retain a P&D approved archaeologist and Native American representative to evaluate the significance of the find in compliance with the provisions of Phase 2 investigations of the County Archaeological Guidelines and funded by the Owner/Applicant. If remains are found to

be significant, they shall be subject to a Phase 3 mitigation program consistent with County Archaeological Guidelines and funded by the applicant.

PLAN REQUIREMENTS: This condition shall be printed on all building and grading plans.

MONITORING: The P&D permit processing planner shall check plans prior to Zone Clearance and P&D compliance monitoring staff shall spot check in the field.

8. **Special Condition: Pre-Construction Meeting.** A pre-construction meeting shall be conducted by a County-qualified archaeologist and a local Native American representative funded by the applicant. Meeting attendees shall include the applicant, archaeologist, local Chumash representative, construction supervisors, and heavy equipment operators to ensure that all parties understand the cultural resources monitoring program and their respective roles and responsibilities. All construction personnel who would work on the site during any phase of ground disturbance shall be required to attend the meeting. The names of all personnel who attend the meeting shall be recorded denoting that they have received the required training.

The meeting shall review the following: types of archaeological resources that may be uncovered; provide examples of common archaeological artifacts and other cultural materials to examine; describe why monitoring is required; what makes an archaeological resource significant; identify monitoring procedures; what would temporarily halt construction and for how long; describe a reasonable resource discovery scenario (i.e., feature or artifact); and describe reporting requirements and the responsibilities of the construction supervisor and crew. The meeting shall make attendees aware of prohibited activities, including vehicle use in protected areas, and educate construction workers about the inappropriateness of unauthorized collecting of artifacts that can result in impacts on cultural resources.

PLAN REQUIREMENTS: The pre-construction meeting requirements shall be shown on approved grading and building plans.

TIMING: The pre-construction meeting shall be conducted prior to the start of ground disturbing activities.

MONITORING: The Owner/Applicant shall provide P&D compliance monitoring staff with the names and responsibilities of persons who attended the meeting.

9. **Geo-02. Erosion and Sediment Control Plan.** Where required by the latest edition of the California Green Code and/or Chapter 14 of the Santa Barbara County Code, a Storm Water Pollution Prevention Plan (SWPPP), Storm Water Management Plan (SWMP) and/or an Erosion and Sediment Control Plan (ESCP) shall be implemented as part of the project. Grading and erosion and sediment control plans shall be designed to minimize erosion during construction and shall be implemented for the duration of the grading period and until re-graded areas have been stabilized by structures, long-term erosion control measures or permanent landscaping. The Owner/Applicant shall submit the SWPPP, SWMP or ESCP using Best Management Practices (BMP) designed to stabilize the site, protect natural watercourses/creeks, prevent erosion, convey storm water runoff to existing drainage systems keeping contaminants and sediments onsite. The SWPPP or ESCP shall be a part of the Grading Plan submittal and will be reviewed for its technical merits by P&D. Information on Erosion Control requirements can be found on the County web site re: Grading Ordinance Chapter 14

(<http://sbcountyplanning.org/building/grading.cfm>) refer to Erosion and Sediment Control Plan Requirements; and in the California Green Code for SWPPP (projects greater than 1 acre) and/or SWMP requirements.

PLAN REQUIREMENTS: The grading and SWPPP, SWMP and/or ESCP shall be submitted for review and approved by P&D prior Zoning Clearance. The plan shall be designed to address erosion, sediment and pollution control during all phases of development of the site until all disturbed areas are permanently stabilized. **TIMING:** The SWPPP requirements shall be implemented prior to the commencement of grading and throughout the year. The ESCP/SWMP requirements shall be implemented between November 1st and April 15th of each year, except pollution control measures shall be implemented year round.

MONITORING: P&D compliance monitoring staff shall perform site inspections throughout the construction phase.

10. **WatConv-04 Equipment Storage-Construction.** The Owner/Applicant shall designate a construction equipment filling and storage area(s) to contain spills, facilitate clean-up and proper disposal and prevent contamination from discharging to the storm drains, street, drainage ditches, creeks, or wetlands. The areas shall be no larger than 50 x 50 foot unless otherwise approved by P&D and shall be located at least 100 feet from any storm drain, water body or sensitive biological resources. **PLAN REQUIREMENTS:** The Owner/Applicant shall designate the P&D approved location on all plans for zoning clearance, grading and building permits. **TIMING:** The Owner/Applicant shall install the area prior to commencement of construction.

MONITORING: P&D compliance monitoring staff shall ensure compliance prior to and throughout construction.

11. **WatConv-05 Equipment Washout-Construction.** The Owner/Applicant shall designate a washout area(s) for the washing of concrete trucks, paint, equipment, or similar activities to prevent wash water from discharging to the storm drains, street, drainage ditches, creeks, or wetlands. Note that polluted water and materials shall be contained in this area and removed from the site daily. The area shall be located at least 100 feet from any storm drain, water body or sensitive biological resources. **PLAN REQUIREMENTS:** The Owner/Applicant shall designate the P&D approved location on all zoning clearance, grading and building permits. **TIMING:** The Owner/Applicant shall install the area prior to commencement of construction.

MONITORING: P&D compliance monitoring staff shall ensure compliance prior to and throughout construction.

III. COUNTY RULES AND REGULATIONS

12. **Rules-05 Acceptance of Conditions.** The Applicant's acceptance of this permit and/or commencement of use, construction and/or operations under this permit shall be deemed acceptance of all conditions of this permit by the Applicant.
13. **Rules-12 CUP Expiration.** The Applicant shall obtain the required ZONING CLEARANCE within the 18 MONTHS following the effective date of this Conditional Use Permit. If the required ZONING CLEARANCE is not issued within the 18 months following the effective date of this

Conditional Use Permit, or within such extended period of time as may be authorized in compliance with Section 35.84.030.2 of the COUNTY LAND USE AND DEVELOPMENT CODE, and an application for an extension has not been submitted to the Planning and Development Department, then Conditional Use Permit shall be considered void and of no further effect.

14. **Rules-17 CUP-Void.** This Conditional Use Permit shall become void and be automatically revoked if the development and/or authorized use allowed by this Conditional Use Permit is discontinued for a period of more than 12 months, or within such extended period of time as may be authorized in compliance with Section 35.84.030 of the COUNTY LAND USE AND DEVELOPMENT CODE. Any use authorized by this Conditional Use Permit shall immediately cease upon expiration or revocation of this Conditional Use Permit. Any ZONING CLEARANCE approved or issued pursuant to this Conditional Use Permit shall expire upon expiration or revocation of the Conditional Use Permit. Conditional Use Permit renewals must be applied for prior to expiration of the Conditional Use Permit. [LUDC §35.82.060 & §35.84.060].
15. **Rules-29 Other Dept Conditions.** Compliance with Departmental/Division letters required as follows:
 1. Air Pollution Control District letter dated June 28, 2017.
16. **Rules-31 Mitigation Monitoring Required.** The Owner/Applicant shall ensure that the project complies with all approved plans and all project conditions including those which must be monitored after the project is built and occupied. To accomplish this, the Owner/Applicant shall:
 - a. Contact P&D compliance staff as soon as possible after project approval to provide the name and phone number of the future contact person for the project and give estimated dates for future project activities;
 - b. Sign a separate Agreement to Pay for compliance monitoring costs and remit a security deposit prior to approval of a Land Use Permit as authorized by ordinance and fee schedules. Compliance monitoring costs will be invoiced monthly and may include costs for P&D to hire and manage outside consultants when deemed necessary by P&D staff (e.g. non-compliance situations, special monitoring needed for sensitive areas including but not limited to biologists, archaeologists) to assess damage and/or ensure compliance. In such cases, the Owner/Applicant shall comply with P&D recommendations to bring the project into compliance. The decision of the Director of P&D shall be final in the event of a dispute. Monthly invoices shall be paid by the due date noted on the invoice;
 - c. Note the following on each page of grading and building plans "This project is subject to Mitigation and Condition Compliance Monitoring and Reporting. All aspects of project construction shall adhere to the approved plans, conditions of approval, and mitigation measures from Mitigated Negative Declaration 17NGD-00000-00004";
 - d. Contact P&D compliance staff at least two weeks prior to commencement of construction activities to schedule an on-site pre-construction meeting to be led by P&D Compliance Monitoring staff and attended by all parties deemed necessary by P&D, including the permit issuing planner, grading and/or building inspectors, other agency staff, and key construction personnel: contractors, sub-contractors and contracted monitors among others.

17. **Rules-33 Indemnity and Separation.** The Owner/Applicant shall defend, indemnify and hold harmless the County or its agents or officers and employees from any claim, action or proceeding against the County or its agents, officers or employees, to attack, set aside, void, or annul, in whole or in part, the County's approval of this project. In the event that the County fails promptly to notify the Applicant of any such claim, action or proceeding, or that the County fails to cooperate fully in the defense of said claim, this condition shall thereafter be of no further force or effect.
18. **Rules-34 Legal Challenge.** In the event that any condition imposing a fee, exaction, dedication or other measure is challenged by the project sponsors in an action filed in a court of law or threatened to be filed therein which action is brought in the time period provided for by law, this approval shall be suspended pending dismissal of such action, the expiration of the limitation period applicable to such action, or final resolution of such action. If any condition is invalidated by a court of law, the entire project shall be reviewed by the review authority and no approval shall be issued unless substitute feasible conditions/measures are imposed.
19. **Rules-37 Time Extensions-All Projects.** The Owner / Applicant may request a time extension prior to the expiration of the permit or entitlement for development. The review authority with jurisdiction over the project may, upon good cause shown, grant a time extension in compliance with County rules and regulations, which include reflecting changed circumstances and ensuring compliance with CEQA. If the Owner / Applicant requests a time extension for this permit, the permit may be revised to include updated language to standard conditions and/or mitigation measures and additional conditions and/or mitigation measures which reflect changed circumstances or additional identified project impacts.



**Santa Barbara County
Air Pollution Control District**

Our Vision  Clean Air

June 28, 2017

Steve Rodriguez
Santa Barbara County
Planning and Development
624 W. Foster Road
Santa Maria, CA 93455

RECEIVED

JUL 05 2017

**S B COUNTY
PLANNING & DEVELOPMENT**

Re: APCD Suggested Conditions on North Fork Ranch Frost Ponds, 16CUP-00000-00005

Dear Mr. Rodriguez:

The Air Pollution Control District (APCD) has reviewed the referenced project, which consists of a request to construct and operate three frost ponds (water storage reservoirs) to provide frost protection at the North Fork Ranch Vineyard. Each reservoir would have a storage capacity of 49 acre feet and would occupy an area of approximately five acres. Grading consists of approximately 130,280 cubic yards (cy) of cut and 127,900 cy of fill to construct the three proposed reservoirs. The subject property, a 6,565-acre parcel zoned AG-II-100 and identified in the Assessor Parcel Map Book as APN 147-020-045 is located on the south side of State Highway 166, between Cottonwood Canyon Road and Schoolhouse Canyon Road about 9 miles west of the unincorporated community of New Cuyama.

Air Pollution Control District staff offers the following suggested conditions:

1. The State of California considers particulate matter emitted by diesel engines carcinogenic. Therefore, during project grading, construction, and hauling, construction contracts must specify that contractors shall adhere to the requirements listed in **Attachment B** to reduce emissions of particulate matter (as well as of ozone precursors) from diesel equipment. Recommended measures should be implemented to the maximum extent feasible.
2. All portable diesel-fired construction engines rated at 50 bhp or greater must have either statewide Portable Equipment Registration Program (PERP) certificates or APCD permits prior to grading/building permit issuance. Construction engines with PERP certificates are exempt from APCD permit, provided they will be on-site for less than 12 months.

June 28, 2017

Page 2

If you or the project applicant have any questions regarding these comments, please feel free to contact me at (805) 961-8893 or via email at NightingaleK@sbcapcd.org.

Sincerely,



Krista Nightingale,
Air Quality Specialist
Technology and Environmental Assessment Division

Attachments: Diesel Particulate and NO_x Emission Measures

cc: Brian Tetley, Urban Planning Concepts
TEA Chron File



ATTACHMENT B
DIESEL PARTICULATE AND NO_x EMISSION REDUCTION MEASURES

Particulate emissions from diesel exhaust are classified as carcinogenic by the state of California. The following is a list of regulatory requirements and control strategies that should be implemented to the maximum extent feasible.

The following measures are required by state law:

- All portable diesel-powered construction equipment shall be registered with the state's portable equipment registration program OR shall obtain an APCD permit.
- Fleet owners of mobile construction equipment are subject to the California Air Resource Board (CARB) Regulation for In-Use Off-Road Diesel Vehicles (Title 13, California Code of Regulations (CCR), §2449), the purpose of which is to reduce oxides of nitrogen (NO_x), diesel particulate matter (DPM), and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles. Off-road heavy-duty trucks shall comply with the State Off-Road Regulation. For more information, see www.arb.ca.gov/msprog/ordiesel/ordiesel.htm.
- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-Use (On-Road) Heavy-Duty Diesel-Fueled Vehicles (Title 13, CCR, §2025), the purpose of which is to reduce DPM, NO_x and other criteria pollutants from in-use (on-road) diesel-fueled vehicles. On-road heavy-duty trucks shall comply with the State On-Road Regulation. For more information, see www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.
- All commercial off-road and on-road diesel vehicles are subject, respectively, to Title 13, CCR, §2449(d)(3) and §2485, limiting engine idling time. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to five minutes; electric auxiliary power units should be used whenever possible.

The following measures are recommended:

- Diesel equipment meeting the CARB Tier 3 or higher emission standards for off-road heavy-duty diesel engines should be used to the maximum extent feasible.
- On-road heavy-duty equipment with model year 2010 engines or newer should be used to the maximum extent feasible.
- Diesel powered equipment should be replaced by electric equipment whenever feasible.
- Equipment/vehicles using alternative fuels, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel, should be used on-site where feasible.
- Catalytic converters shall be installed on gasoline-powered equipment, if feasible.
- All construction equipment shall be maintained in tune per the manufacturer's specifications.
- The engine size of construction equipment shall be the minimum practical size.
- The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time.
- Construction worker trips should be minimized by requiring carpooling and by providing for lunch onsite.

Plan Requirements: All requirements shall be shown on grading and building plans and/or as a separate information sheet listing the conditions of approval to be recorded with the map. **Timing:** Requirements shall be shown on plans prior to grading/building permit issuance and/or recorded with the map during map recordation. Conditions shall be adhered to throughout all grading and construction periods.

MONITORING: Lead Agency shall ensure measures are on project plans and/or recorded with maps. Lead Agency staff shall ensure compliance onsite. APCD inspectors will respond to nuisance complaints.



COUNTY OF SANTA BARBARA

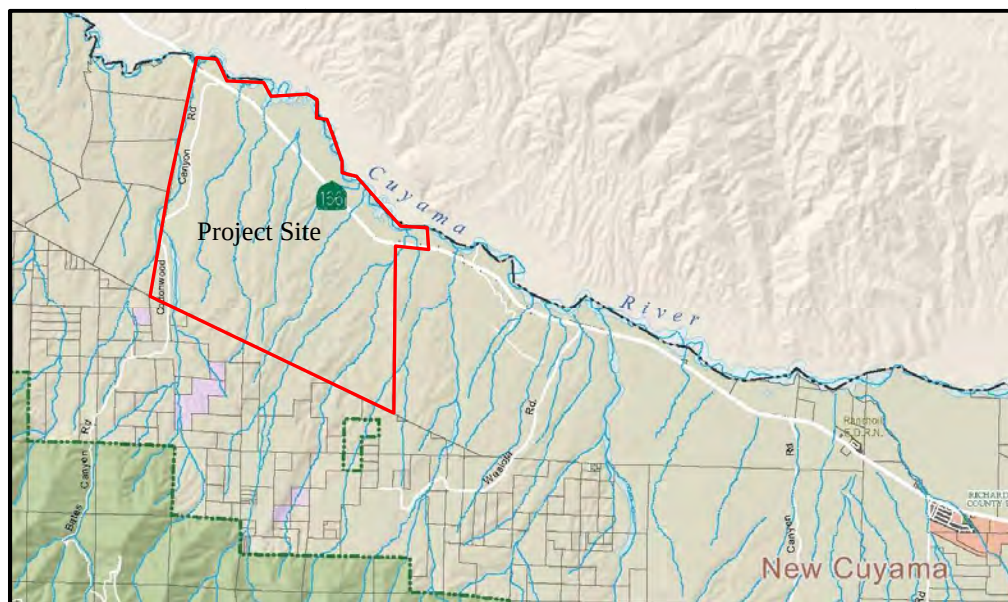
Planning and Development

www.sbcountyplanning.org

Attachment C
Final Mitigated Negative Declaration
17NGD-00000-0004

North Fork Ranch Frost Ponds
16CUP-00000-00005

August 11, 2017



Owner/Applicant

Matt Turrentine – Brodiaea, Inc.
P.O. Box 6565
Santa Maria, CA 93455

Agent

Brian A. Tetley – Urban Planning Concepts
2624 Airpark Drive
Santa Maria, CA 93455

For More Information Contact: Steve Rodriguez, Contract Planner, Development Review Division, (805) 682-3413

1.0 REQUEST/PROJECT DESCRIPTION

A request of Brian Tetley, agent for Brodiaea, Inc, owner, to consider Case No. 16CUP-00000-00005. The North Fork Ranch Frost Pond project is a request to construct and operate three frost ponds (reservoirs) that would store water to be used for frost protection at the North Fork Ranch Vineyards. The project also includes the construction of new underground pipelines that would be located between each of the proposed reservoirs and the existing vineyard irrigation system.

The proposed reservoirs would serve an existing 535-acre vineyard and an additional 100-acre area that is to be planted in the future. Reservoir No. 1 would be located on the eastern portion of the vineyard adjacent to Schoolhouse Canyon Road (a private road). Reservoir No. 3 would be located on the western portion of the vineyard approximately 0.75 mile east of Cottonwood Canyon Road. Reservoir No. 2 would be located between proposed Reservoirs Nos. 1 and No. 3. Access to the reservoirs would be from existing roads that connect to State Highway 166.

Frost protection would be achieved by sustained spray irrigation when frost has the potential to damage the grape vines. Frost protection would generally be required during the months of February, March and April. The reservoirs would be maintained at a full condition between February and April. A maximum of three feet of well-supplied water would be maintained in the reservoirs between May 1st through January 31st. Water above a depth of three feet contained in the reservoirs after May 1 would be distributed for vineyard irrigation.

Each reservoir would have a water storage capacity of 49 acre-feet and would be lined with a high-density polyethylene plastic liner to prevent water seepage. Each reservoir would also have an emergency overflow discharge system that would prevent stored water from over-topping the reservoir. Water to be stored in the reservoirs would be supplied by existing agricultural wells located on the north side of State Highway 166. Water from the wells would be conveyed to the reservoirs by existing vineyard irrigation pipelines that extend beneath the highway and throughout the vineyard. A six foot high fence would be installed around the exterior perimeter of each reservoir to prevent unauthorized entry. Life ring stations and floating pool ropes would also be provided for rescue purposes.

A total of approximately 257,945 cubic yards of cut and fill grading would be required to construct the three proposed reservoirs. The reservoirs would have a maximum depth of 27-28 feet, and in total would occupy an area of approximately 15.6 acres. Proposed pipelines that would convey water from the vineyard's existing irrigation system to each of the reservoirs would have a total length of 1,350 feet. Proposed pipelines that would convey water from each of the reservoirs to the vineyard's existing spray irrigation system would have a total length of 976 feet. Construction details for each of the proposed reservoirs are summarized on Table 1. It is estimated that the construction period for the three proposed reservoirs would be approximately one year.

Proposed project plans are provided as Attachment 1.

Table 1
North Fork Ranch Frost Ponds
Construction Characteristics

Reservoir	Proposed Grading			Reservoir Area		Reservoir Depth			Proposed Pipelines	
	Cut (cu. yds.)	Fill (cu. yds.)	Total (cu. yds.)	Approximate Dimensions (feet)	Acres	Top of Reservoir Elevation	Bottom of Pond Elevation	Depth (feet)	Fill Line (feet)	Drain Line (feet)
No. 1	44,062	44,589	88,651	590 x 370	5.0	1,955	1,927	28	624	517
No. 2	44,064	42,205	86,269	580 X 410	5.7	1,788	1,761	27	370	202
No. 3	42,771	40,254	83,025	590 x 360	4.9	1,744	1,717	27	356	257
TOTAL	130,897	127,048 (1)	257,945	--	15.6	--	--	--	1,350	976

(1) Due to shrinkage of fill material, no soil would be exported from the project site

Surface water drainage from upslope areas adjacent to the reservoirs would be collected by proposed drainage swales. The collected water would be discharged and allowed to sheet flow at downslope locations adjacent to the reservoirs. Rock energy dissipaters would be installed at each discharge location to reduce potential erosion-related impacts. Stormwater discharge from Reservoir No. 1 would be conveyed beneath Schoolhouse Canyon Road by a proposed culvert beneath the road.

The application involves Assessor Parcel Number 147-020-045, a 6,565-acre parcel that is zoned AG-II-100.

2.0 PROJECT LOCATION

The project site is on the south side of State Highway 166, between Cottonwood Canyon Road and Schoolhouse Canyon Road, approximately nine miles west of the community of New Cuyama, Fifth Supervisorial District.

2.1 Site Information	
Comprehensive Plan Designation	Agricultural Commercial (AC)
Zoning District, Ordinance	Land Use and Development Code, AG-II-100, Agriculture, 1 unit per 100 acres.
Site Size	The project property is 6,565 acres. The three proposed reservoirs would occupy a combined area of approximately 15 acres.
Present Use & Development	The proposed reservoir sites are vacant. Areas adjacent to the proposed reservoir sites are planted with vineyards.
Surrounding Uses/Zoning	North: AG-II-100, open space South: AG-II-100, open space East: AG-II-100, open space West: AG-II-100, open space
Access	State Highway 166 and existing unpaved ranch/vineyard roads

3.0 ENVIRONMENTAL SETTING

3.1 PHYSICAL SETTING

The 6,565-acre project parcel is located in the Cuyama Valley, approximately nine miles west of the community of New Cuyama. The project parcel is located on the south side of State Highway 166, and the proposed reservoir sites are approximately 4,000 to 5,000 feet south of the Cuyama River. The proposed reservoir sites are currently vacant and adjacent to existing vineyards. Irrigation lines have been installed throughout the vineyards and are located near the proposed reservoir project sites. The existing irrigation lines would also be used to deliver water to the proposed reservoirs.

Slope/Topography. The proposed reservoir sites are generally level and slope gently towards named and unnamed ephemeral drainages.

The Reservoir No. 1 project site is located on the eastern end of the project property adjacent to Schoolhouse Canyon Road. This project site ranges in elevation from approximately 1,958 feet above sea level in the southwest corner to approximately 1,938 feet in the southeast corner, which results in a slope gradient of approximately five percent. The site generally slopes to the east and is approximately 500 feet west of Schoolhouse Canyon Creek.

The Reservoir No. 2 project site is located on the central portion of the project property. This project site ranges in elevation from approximately 1,790 feet above sea level in the southwest corner to approximately 1,766 feet in the northwest corner, which results in a slope gradient of approximately six percent. The site generally slopes to the east and is approximately 100 feet west of a small ephemeral drainage.

The Reservoir No. 3 project site is located on the western end of the project property approximately one mile east of Cottonwood Canyon Road. Small ephemeral drainages are located approximately 100 feet to west and approximately 250 feet to the east of the reservoir site. This project site ranges in elevation from approximately 1,740 feet above sea level in the southeast corner to approximately 1,726 feet in the northwest corner, which results in a slope gradient of approximately two percent. The site generally slopes to the northeast towards the adjacent drainage.

Flora/Fauna. Flora and fauna conditions at and near the proposed reservoir sites are described in a report titled *Biological Resources Assessment for the Reservoir an Operations Yard Project, North Fork Ranch, Santa Barbara County, California* (February 24, 2016, Attachment 2a). The operations yard and vineyard irrigation pipelines described by this report are not part of the proposed frost pond project.

The proposed reservoir sites and surrounding areas have been historically used for cattle grazing and vegetation at and near the sites is sparse and consists predominately of non-native weeds and annual grasses. The proposed reservoir sites and areas adjacent to the sites were recently disked in preparation of planting grape vines. As a result of the disking operations conducted in 2016, much of the proposed reservoir sites are nearly devoid of vegetation. The drainages located near the proposed reservoirs are dry most of the year and generally flow briefly during the summer monsoon season and after winter rains. The drainages support patches of native habitat. 13 species of sensitive plants are known to exist in the project region, although no suitable habitat for sensitive plant species was observed at the project sites, and seasonally timed surveys conducted in 2015 did not observe any sensitive plant species in project-

related disturbance areas. Sensitive wildlife species that have the potential to occur in the project area include San Joaquin kit fox and American badger.

Vegetation coverage at the project sites is sparse and wildlife observed during site visits was limited to coyote tracks and a large flock of American crows in a disked area (KMA, 2016). 12 special status animal species are known to occur in the project region. Species that may still occur in the region include giant kangaroo rat, American badger, San Joaquin kit fox, blunt-nosed leopard lizard, California red-legged frog and prairie falcon. Due to lack of prey or habitat requirements, it is unlikely that these species would be found on the project site, however, species such as the San Joaquin kit fox, if present in the project area, could move through the project sites during foraging or migration activities.

Archaeological Sites. Archaeological resources located on or near the project site are described in a report titled *Phase 1 Cultural Resources Study for the North Fork Reservoir Project, Santa Barbara County, California* (August, 2016). The Phase 1 investigation included a survey of the proposed reservoir sites and the location of the proposed pipelines that would connect the reservoirs to existing irrigation water pipelines. The Phase 1 survey did not identify any archaeological resources within the proposed project site boundaries. The survey report does, however, state that human remains were identified during the excavation of a trench for the installation of an irrigation pipeline on the north side of State Highway 166. Due to the presence of this pre-historic burial, the proposed reservoir sites are considered to be sensitive for cultural resources.

Soils: Reservoir sites 1 and 3 are located on Pleasanton sandy loam, and reservoir site 2 is on Panoche loam. Both soil types have a land capability classification of 2e if irrigated and 3e if non-irrigated.

3.2 ENVIRONMENTAL BASELINE

The environmental baseline from which the project's impacts are measured consists of the on the ground conditions described above.

4.0 POTENTIALLY SIGNIFICANT EFFECTS CHECKLIST

The following checklist indicates the potential level of impact and is defined as follows:

Potentially Significant Impact: A fair argument can be made, based on the substantial evidence in the file, that an effect may be significant.

Less Than Significant Impact with Mitigation: Incorporation of mitigation measures has reduced an effect from a Potentially Significant Impact to a Less Than Significant Impact.

Less Than Significant Impact: An impact is considered adverse but does not trigger a significance threshold.

No Impact: There is adequate support that the referenced information sources show that the impact does not apply to the subject project.

Reviewed Under Previous Document. The analysis contained in a previously adopted/certified environmental document addresses this issue adequately for use in the current case and is summarized in the discussion below. The discussion should include reference to the previous documents, a citation of the page(s) where the information is found, and identification of mitigation measures incorporated from the previous documents.

4.1 AESTHETICS/VISUAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. With Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. The obstruction of any scenic vista or view open to the public or the creation of an aesthetically offensive site open to public view?			X		
b. Change to the visual character of an area?			X		
c. Glare or night lighting which may affect adjoining areas?			X		
d. Visually incompatible structures?			X		

Setting

Physical

State Highway 166 provides regional access through the project region and views from the highway in the project area predominately consist of fore- and mid-ground views of open space and agricultural operations. Background views available from the highway include the Caliente Mountains to the north and the Sierra Madre Mountains to the south.

The proposed reservoir sites are vacant and have little or sparse vegetation coverage. The topography of the sites generally slopes gently towards adjacent drainages. Grape vines have been recently planted in areas adjacent to the proposed reservoir sites. Proposed reservoir site Nos. 1, 2 and 3 would be approximately 3,000, 1,200, and 1,500 feet south/southeast of State Highway 166, respectively.

Regulatory

County Environmental Thresholds: The County's Visual Aesthetics Impact Guidelines classify coastal and mountainous areas, the urban fringe, and travel corridors as "especially important" visual resources. A project may have the potential to create a significantly adverse aesthetic impact if (among other potential effects) it would impact important visual resources, obstruct public views, remove significant amounts of vegetation, substantially alter the natural character of the landscape, or involve extensive grading visible from public areas. The guidelines address public, not private views.

Impact Discussion

(a-d) Less than significant impact: The proposed reservoirs would be constructed by excavating soil below existing grade and using the excavated soil to construct berms that would impound stored water. The height of the water impoundment berms would vary but in general would be approximately three to 20 feet above the adjacent ground surface. Vegetation, likely consisting of an approved erosion control seed mix, would be required on the outside surfaces of the berms for erosion control purposes. The proposed water delivery pipelines that would extend between the reservoirs and existing irrigation water pipelines would be below ground and not visible.

The proposed reservoirs would result in the construction of new above ground facilities that would be visible from public viewing locations such as State Highway 166. Due to the setback distances between the three

reservoir sites and State Highway 166 the reservoirs would not be prominently visible to persons traveling on the highway. Grading required to construct the reservoirs would not result in the creation of grading scars or other alterations to existing topography or vegetation that would result in a significant visual impact. Erosion control planting on the reservoir berms would help to make the appearance of the berms blend with undisturbed areas near the reservoir sites. The proposed reservoir berms would have a maximum height of approximately 20 feet above surrounding grade and would not adversely affect existing views of the Sierra Madre Mountains to the south of the project site from public viewpoints such as State Highway 166. No nighttime lighting would be used at the project sites. Therefore, the project would not obstruct a scenic vista, substantially change the visual character of the project sites, or result in structures that are incompatible with surrounding open space and agricultural uses. Therefore, the project's aesthetic/visual resource impacts would be **less than significant**.

Cumulative Impacts: Proposed grading to construct the three reservoirs would result in relatively minor alterations to the topography of the project sites, and the project would not result in the development of new buildings or structures that would be incompatible with surrounding land uses. Therefore, the project would not result in cumulatively considerable changes to existing aesthetic/visual resource conditions at the project sites or the project area, and would result in **less than significant** cumulative aesthetic/visual resource impacts.

Mitigation and Residual Impact: The project's impacts would be less than significant and no mitigation is required.

4.2 AGRICULTURAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. With Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Convert prime agricultural land to non-agricultural use, impair agricultural land productivity (whether prime or non-prime) or conflict with agricultural preserve programs?			X		
b. An effect upon any unique or other farmland of State or Local Importance?			X		

Background: Agricultural lands play a critical economic and environmental role in Santa Barbara County. Agriculture continues to be Santa Barbara County's major producing industry with a gross production value of almost \$1.5 billion (Santa Barbara County 2014 Crop Production Report). In addition to the creation of food, jobs, and economic value, farmland provides valuable open space and maintains the County's rural character.

Physical: The project parcel has been used for grazing in the past, and the areas near the proposed frost ponds have been recently planted with grape vines. The proposed reservoir sites would encompass a total area of approximately 15 acres. Proposed reservoir sites 1 and 3 are located on Pleasanton sandy loam, and reservoir site 2 is on Panoche loam. Both soil types have a land capability classification of 2e if irrigated and 3e if non-irrigated. Therefore, the proposed reservoir sites are considered to have prime agricultural soils if irrigated. The project sites and adjacent areas are classified as "Grazing Land" by the California Department of Conservation (Farmland Mapping and Monitoring Program, 2016). The project parcel is subject to agricultural preserve contract 95-AP-024.

Regulatory

County Thresholds Manual: The County's Agricultural Resources Guidelines (approved by the Board of Supervisors, August 1993) provide a methodology for evaluating agricultural resources. These guidelines utilize a weighted point system to serve as a preliminary screening tool for determining significance. The tool assists planners in identifying whether a previously viable agricultural parcel could potentially be subdivided into parcels that are not considered viable after division. A project that would result in the loss or impairment of a agricultural resources would result in a potentially significant impact. The proposed project does not include land subdivision, nor would it impair agricultural uses located on the project parcel. Therefore, the weighted point system was not used for this analysis.

Impact Discussion

(a - b) Less than significant impact. The proposed reservoirs would be used to provide frost protection for approximately 400 acres of grape vines that have been recently planted near the reservoir sites. The proposed reservoirs would be located on prime (if irrigated) agricultural soils, however, they would be an agricultural accessory use that supports an irrigated agriculture operation. The proposed reservoirs would not convert prime agricultural land to a non-agricultural use, or impair agricultural land productivity. The project parcel is under an agricultural preserve contract. The proposed project was reviewed by the Agricultural Preserve Advisory Committee on April 1, 2016 and found it to be compatible with the Uniform Rules for agricultural preserves. Therefore, the project would not conflict with an agricultural preserve contract, and its impacts to agricultural recourses would be **less than significant**.

Cumulative Impacts: The proposed reservoirs would support the long-term use of the project parcel for irrigated agriculture. Therefore, the project would not contribute to a cumulatively considerable loss of agricultural resources and its cumulative impacts would be **less than significant**.

Mitigation and Residual Impact: The project's impacts would be less than significant and no mitigation is required.

4.3a AIR QUALITY

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. The violation of any ambient air quality standard, a substantial contribution to an existing or projected air quality violation, or exposure of sensitive receptors to substantial pollutant concentrations (emissions from direct, indirect, mobile and stationary sources)?			X		
b. The creation of objectionable smoke, ash or odors?			X		
c. Extensive dust generation?			X		

Existing Setting: The project site is located within the South Central Coast air basin, a federal and state non-attainment area for ozone (O₃) and a state non-attainment area for particulate matter (PM₁₀). Reactive organic compounds (ROC) and nitrogen oxides (NO_x), which are precursors to ozone, are considered to be non-attainment pollutants. The major sources of ozone precursor emissions in the County are motor vehicles, the petroleum industry and solvent use. Sources of PM₁₀ include grading, road dust and vehicle exhaust.

County Environmental Thresholds: Chapter 5 of the Santa Barbara County Environmental Thresholds and Guidelines Manual addresses the subject of air quality. The thresholds provide that a proposed project will not have a significant impact on air quality if operation of the project will:

- emit (from all project sources, mobile and stationary), less than the daily trigger for offsets (55 pounds per day for NO_x and ROC, 80 pounds per day for PM₁₀);
- emit less than 25 pounds per day of oxides of nitrogen (NO_x) or reactive organic compounds (ROC) and from motor vehicle trips only;
- not cause or contribute to a violation of any California or National Ambient Air Quality Standard (except ozone);
- not exceed the APCD health risk public notification thresholds adopted by the APCD Board; and
- be consistent with the adopted federal and state Air Quality Plans.

As indicated above, long-term/operational emissions thresholds have been established to address mobile emissions (i.e., motor vehicle emissions) and stationary source emissions (i.e., stationary boilers, engines, paints, solvents, and chemical or industrial processing operations that release pollutants). No thresholds have been established for short-term impacts associated with construction activities. However, the County's Grading Ordinance and the Air pollution Control District requires standard dust control conditions for all projects involving grading activities.

Impact Discussion

(a - b) Less than significant impact. Short-term emissions of ozone precursors (NO_x and ROC) during project construction would result primarily from the use of earthmoving equipment. Project-related grading to construct the three proposed reservoirs would require approximately 130,897 cubic yards of cut, and 127,048 cubic yards of fill. Due to soil shrinkage, it is not expected that any excess soil would be exported from the project site. Minor amounts of grading (trenching) would also be required for the installation of approximately 2,326 linear feet of proposed reservoir fill and drain lines. Since short-term construction-related emissions are not considered to result in significant air quality impacts, project-related construction emissions of NO_x and ROC would be **less than significant** on a project-specific and cumulative basis. However, due to the non-attainment status of the air basin for ozone, the project would be required to implement standard conditions required by the APCD to reduce construction-related emissions of ozone precursors to the extent feasible. The implementation of these standard conditions is routinely required for all new development in the County.

The operation of the proposed reservoirs would not generate a substantial amount of traffic (Section 4.15, Transportation/Circulation) or result in substantial direct or indirect emissions from stationary sources. The project would not result in industrial or other operations that would have the potential to result in emissions of smoke, ash, or objectionable odors. Therefore, the project would not be a substantial long-term source of emissions and would result in **less than significant** project-specific and cumulative air emission impacts.

(c) Less than significant impact. Project-related grading would have the potential to be a short-term source of fugitive dust that could have the potential to impact adjacent agricultural operations. Project-related

grading would also contribute to regional emissions of PM₁₀ and PM_{2.5}. Dust emissions resulting from project-related construction would be reduced to the extent feasible through the implementation of County Grading Ordinance and the Air Pollution Control District requirements, which require the implementation of standard dust control measures. Therefore, short-term dust emissions from project-related grading would be **less than significant** under project-specific and cumulative conditions.

Mitigation and Residual Impact: The project's impacts would be less than significant and no mitigation is required.

4.3b AIR QUALITY - GREENHOUSE GAS EMISSIONS

Greenhouse Gas Emissions - Will the project:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X		
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X		

Greenhouse Gas Emissions

Existing Setting: Greenhouse gases include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). The largest source of greenhouse gas emissions from human activities in the United States is from fossil fuel combustion for electricity, heat, and transportation. Specifically, the *Inventory of U.S. Greenhouse Gasses and Sinks* (U.S. Environmental Protection Agency, 2013) states that the primary sources of greenhouse gas emissions in 2013 included electricity production (31%), transportation (27%), industry (21%), commercial and residential (12%), and agriculture (9%). This release of gases creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as “the greenhouse effect,” there is strong evidence to support that human activities have accelerated the generation of greenhouse gases beyond natural levels. The overabundance of greenhouse gases in the atmosphere has led to a warming of the earth and has the potential to severely impact the earth's climate system. For instance, Santa Barbara County is projected to experience an increase in the number of wildfires, land vulnerable to 100-year flood events, and temperature increases, even under a low-emissions scenario (California Energy Commission, 2015).

Climate change results from greenhouse gas emissions “...generated globally over many decades by a vast number of different sources” rather than from greenhouse gas emissions generated by any one project (County of Santa Barbara Planning and Development, 2008). As defined in CEQA Guidelines Section 15355 and discussed in Section 15130, “...a cumulative impact consists of an impact which is created as a result of the combination of the [proposed] project...evaluated...together with other projects causing related impacts.” Therefore, by definition, climate change under CEQA is a cumulative impact.

Environmental Threshold: CEQA Guidelines Section 15183.5(a) states,

Lead agencies may analyze and mitigate the significant effects of greenhouse gas emissions at a programmatic level, such as in...a separate plan to reduce greenhouse gas emissions. Later project-specific environmental documents may tier from...that existing programmatic review...a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan...

In May 2015, the County of Santa Barbara Board of Supervisors adopted the *Energy and Climate Action Plan* (ECAP) (County of Santa Barbara Long Range Planning Division, 2015) and certified the accompanying EIR (SCH# 20144021021) (PMC, 2015). The ECAP includes a greenhouse gas emissions forecast for unincorporated Santa Barbara County to 2035 and otherwise meets the criteria in CEQA Guidelines Section 15183.5(b) for a “plan to reduce greenhouse gas emissions.” The ECAP commits the County to reduce community-wide greenhouse gas emissions by 15 percent below 2007 levels by 2020 consistent with the California Global Warming Solutions Act of 2006 (AB 32) and the related *Climate Change Scoping Plan* (California Air Resources Board, 2008). The ECAP concludes that the County can meet this emission reduction target by implementing 53 existing and new County projects, policies, and programs (“emission reduction measures”). As a result, specific projects included in the ECAP’s emission forecast are not currently required to incorporate emission reduction measures listed in the ECAP or any other mitigation measures to reduce greenhouse gas emissions. Concurrent with the ECAP, the Board of Supervisors also adopted an amendment to the Energy Element of the Comprehensive Plan that requires the County to monitor progress meeting the emission reduction target and, as necessary, update the ECAP.

The growth estimates used in the ECAP’s greenhouse gas emissions forecast were based on the *Santa Barbara County Regional Growth Forecast 2005-2040* (Santa Barbara County Association of Governments, 2007) and the 2010 U.S. Census. The growth estimates were based on factors such as population projections, vehicle trends, and planned land uses. The sources of greenhouse gas emissions included various sectors, such as transportation, residential energy, commercial energy, off-road, solid waste, agriculture, water and wastewater, industrial energy, and aircraft. As a result, most residential and commercial projects that are consistent with the County’s zoning (in 2007) were included in the forecast. However, certain projects were not included in the emissions forecast, such as stationary source projects (e.g., large boilers, gas stations, auto body shops, dry cleaners, oil and gas production facilities, and water treatment facilities), Comprehensive Plan amendments, and community plans that exceed the County’s projected population and job growth.

A proposed project that was included in the ECAP’s emissions forecast may tier from the ECAP’s EIR for its CEQA analysis of greenhouse gas emissions. A project that tiers from the ECAP’s EIR is considered to be in compliance with the requirements in the ECAP and, therefore, its incremental contribution to a cumulative effect is not cumulatively considerable (Class III).

Impact Discussion

(a - b) Less than significant impact. The proposed reservoirs would not result in an increase in population or the development of land uses that would result in substantial long-term emissions of greenhouse gases. Therefore, long-term GHG emissions that may result from the operation of the reservoirs were included in the ECAP’s forecasted 2020 emissions as they are a conditionally permitted use in the AG-II-100 zone district and consistent with the growth projections for the County. As such, GHG emission impacts that may result from the project are mitigated by the 53 emission reduction measures specified in the ECAP.

Therefore, the impact of this individual project is **less than significant** and no mitigation measures are required.

Cumulative Impacts: The ECAP quantifies and forecasts greenhouse gas emissions for certain non-stationary sectors within unincorporated Santa Barbara County through 2020. As discussed for items “a-b” above, the proposed project was included in the ECAP’s greenhouse gas emissions forecast. As a result, the proposed project would tier from the ECAP’s certified EIR for its cumulative impact analysis of greenhouse gas emissions. The EIR contains a programmatic analysis of greenhouse gas emissions for unincorporated Santa Barbara County. The ECAP contains 53 County and community-wide programmatic emission reduction measures to achieve the 15 percent greenhouse gas emissions reduction target by 2020. The County recently created the Energy and Sustainability Initiatives Division and is taking other steps to implement and monitor the effectiveness of these measures throughout the unincorporated county. The ECAP does not require the proposed project to incorporate any project-specific emission reduction measures or any mitigation measures to reduce greenhouse gas emissions. Therefore, the project complies with the requirements of the ECAP and, as provided in CEQA Guidelines 15183.5(b), its incremental contribution to the cumulative effect is not cumulatively considerable and would have a **less than significant impact** on the environment.

Mitigation and Residual Impact: Since the proposed project would not have a significant impact on the environment, no additional mitigation is necessary. Therefore, residual impacts would be less than significant.

4.4 BIOLOGICAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
Flora					
a. A loss or disturbance to a unique, rare or threatened plant community?			X		
b. A reduction in the numbers or restriction in the range of any unique, rare or threatened species of plants?			X		
c. A reduction in the extent, diversity, or quality of native vegetation (including brush removal for fire prevention and flood control improvements)?			X		
d. An impact on non-native vegetation whether naturalized or horticultural if of habitat value?			X		
e. The loss of healthy native specimen trees?			X		
f. Introduction of herbicides, pesticides, animal life, human habitation, non-native plants or other factors that would change or hamper the existing habitat?			X		
Fauna					
g. A reduction in the numbers, a restriction in the range, or an impact to the critical habitat of any unique, rare, threatened or endangered species of animals?		X			
h. A reduction in the diversity or numbers of animals onsite (including mammals, birds, reptiles,		X			

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
amphibians, fish or invertebrates)?					
i. A deterioration of existing fish or wildlife habitat (for foraging, breeding, roosting, nesting, etc.)?			X		
j. Introduction of barriers to movement of any resident or migratory fish or wildlife species?			X		
k. Introduction of any factors (light, fencing, noise, human presence and/or domestic animals) which could hinder the normal activities of wildlife?			X		

Background and Methods

A biological resources assessment for the reservoir project (Kevin Merk Associates, February 24, 2016) was prepared for the project and is provided as Attachment 2a. This report describes the existing conditions at and near the proposed reservoir sites, identifies special-status biological resources known to exist in the project region, and includes recommendations to minimize potential impacts to sensitive wildlife that could result from the implementation of the proposed project. The February 24, 2016 report was peer reviewed and the results of that review are summarized in a memo (Dudek, March 21, 2016) provided as Attachment 2b. Responses to the peer review comments (Kevin Merk Associates, June 24, 2016) are provided as Attachment 2c.

Existing Plant and Animal Communities/Conditions

Plants. The proposed reservoir sites have historically been used for grazing and in 2016 were disked in preparation of planting grape vines in adjacent areas. Botanical surveys on the project property were conducted in April, May, June, August, and September 2015 to search for special status plants and characterize the on-site habitat types. Additional surveys were conducted in the winter and spring 2016 over large areas of the property, including the proposed reservoir sites. In general, the reservoir sites lack plant species diversity and do not support any native plants, and plants observed at the project sites in the spring and summer of 2015 consisted of a mix of non-native weeds including red-stemmed filaree and Russian thistle, and sparse non-native grasses.

The California Natural Diversity Data Base (CNDDB) identifies 13 recorded special status plant species within a five mile radius of the proposed reservoir sites. Table 1 in Attachment 2a lists the special status plants identified by the CNDDB. Based on the habitat requirements of the identified plants, existing conditions at the project sites, and the results of seasonally timed surveys in 2015, it was determined that it is unlikely that any of the identified sensitive plants are located on or near the proposed reservoir sites.

Wildlife. Wildlife observed at the proposed reservoir sites during site visits was limited to coyote tracks and a large flock of American crows in a disked area. The CNDDB identified 13 known occurrences of sensitive wildlife species within five miles of the proposed reservoir sites. Table 1 in Attachment 2a lists the special status wildlife species identified by the CNDDB. The potential for sensitive animal species to occur on or near the proposed reservoir sites is summarized below.

Giant kangaroo rat was last identified in the project area in 1979 and is now identified as “possibly extirpated” by the CNDDB. Surveys of the proposed reservoir sites did not locate any burrow complexes characteristic of the giant kangaroo rat, therefore, this species is unlikely to occur in the project areas.

No evidence (i.e., direct observations, scat or tracks) of the federally endangered San Joaquin kit fox or American badger were observed at the project sites during surveys conducted in 2015 and 2016. The project sites are within the historic range of the San Joaquin kit fox, however, agricultural activities have encroached upon suitable habitat and previous disking has reduced the potential small mammal prey base and potential den sites from the project sites. It is possible that a kit fox, if present in the region, could move through the project area during foraging and/or migration activities, although the lack of a well-developed prey base and limited suitable denning habitat within the project areas indicate a very low potential for this species to occur. The last recorded occurrences of San Joaquin kit fox in the immediate project area are from 1975, and on-going agricultural operations would have restricted any recent denning activities to either higher elevations of the project property or riverbank/terrace areas outside the proposed project footprint areas. Therefore, there is a very low potential for kit fox or American badger to occur at the reservoir project sites. However, due to suitable kit fox and badger denning and foraging habitat in the project area, those species could be a rare transient through the proposed project sites.

Designated critical habitat for California red-legged frog is located beyond the five mile CNDDDB search radius conducted for the proposed project. The ephemeral drainages on the project property do not provide suitable aquatic habitat for red-legged frog. Therefore, it is considered highly unlikely that red-legged frog is located on or near the proposed project sites.

Blunt-nosed leopard lizard (BNLL) was not identified by the CNDDDB as occurring within five miles of the project sites, BNLL has a known occurrence at a site just over five miles east of the eastern project parcel border, and well as other occurrences in the project region. Prior to disking the proposed project sites, 18 protocol-level surveys for BNLL were conducted within the highest quality potential habitat in the eastern portion of the project property. Those surveys did not detect the presence of BNLL. Additional non-protocol condition surveys were also conducted at proposed Reservoir site 2 and 3. Overall, the surveys determined that BNLL were unlikely to occur on or near the proposed reservoir sites. Based on the survey results, it was also determined that is unlikely for coast horned lizard to be present at the project sites.

Special status bird species, including raptors (long-eared owl and prairie falcon), would be expected to forage over or around the proposed project area. However, due to the lack of trees and the encroachment of agriculture, no suitable prey base or nesting habitat is present at the project sites. Therefore, these species are not expected to occur in the project area for long periods.

Other special status animal species known to occur in the project area include: crotch bumble bee, western pond turtle, Kern primrose sphinx moth, San Joaquin whipsnake, Tulare grasshopper mouse, and coast horned lizard. The biological resources assessment prepared for the proposed project concluded that these species are not expected to occur at the project sites, or are unlikely to be found at the sites due to the absence of suitable habitat, such as perennial water, suitable vegetation, and/or prey base.

County Environmental Thresholds: The County of Santa Barbara Environmental Thresholds and Guidelines Manual establishes thresholds for significant impacts to biological resources. Thresholds applicable to the proposed project include:

Other Rare Habitat Types: The Manual recognizes that not all habitat-types found in Santa Barbara County are addressed by the habitat-specific guidelines. Impacts to other habitat types or species may be considered significant, based on substantial evidence in the record, if they substantially: (1) reduce or eliminate species diversity or abundance; (2) reduce or eliminate the quality of nesting areas; (3) limit reproductive capacity through losses of individuals or habitat; (4) fragment, eliminate, or otherwise

disrupt foraging areas and/or access to food sources; (5) limit or fragment range and movement; or (6) interfere with natural processes, such as fire or flooding, upon which the habitat depends.

Impact Discussion

(a-f) Less than significant impact: The proposed reservoir sites have been extensively disturbed by historic grazing operations and recent disking in preparation of planting vineyards in adjacent areas. Vegetation coverage at the project sites is sparse and the minimal vegetation growth consists primarily of non-native weeds and grasses. The biological resources assessment prepared for the proposed project determined it is unlikely that any of the sensitive plants identified by the CNDDDB occur at or near the proposed project sites. This is due primarily to the disturbed character of the project sites and general absence of suitable habitat. In addition, no sensitive plants were observed at the project sites during seasonally appropriate surveys conducted in 2015. The CNDDDB did not identify any sensitive plant communities that are known to exist in the project area. Therefore, the project would have **less than significant** impacts related to sensitive plant communities or species, the quality or extent of native vegetation, or the habitat value of non-native vegetation.

(g - h) Less than Significant with Mitigation: The biological resources assessment prepared for the proposed project determined it is unlikely that most of the sensitive wildlife species identified by the CNDDDB exist at or near the proposed project sites. This is due primarily to the disturbed character of the project sites, absence of suitable habitat, and regular human presence. However, the assessment concluded that while unlikely, there is a potential for San Joaquin kit fox and American badger to move through the proposed project sites while in search of food or suitable denning habitat. Therefore, project-related construction activities would have the potential to result in significant impacts to San Joaquin kit fox and American badger.

In the unlikely event that San Joaquin kit fox is located at the proposed project sites, potential impacts would be reduced to a less than significant level by implementing U.S. Fish and Wildlife Service (2011) Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance avoidance measures during construction of the proposed reservoirs (Mitigation Measure No. 1). In general, these avoidance measures require surveys to identify potential kit fox habitat in proposed disturbance areas, and if necessary, additional preconstruction/pre-activity surveys. The U.S. Fish and Wildlife Service must be contacted if surveys detect an active kit fox den. If an inactive den is observed, specified measures to preclude the use of the den are to be implemented. Implementation of the proposed survey and avoidance measures would be sufficient to ensure that impacts to San Joaquin kit fox are reduced to a less than significant level. Proposed Mitigation Measure No. 3 provides requirements to reduce potential impacts to American badger to a less than significant level. In general, this measure requires preconstruction surveys to identify active dens, includes specified measures to avoid active dens and to discourage the use of inactive dens located in project-related disturbance areas. The mitigation measures for San Joaquin kit fox and American badger would also reduce the potential for less than significant impacts to common wildlife species that may also be present at the project sites by identifying species located in project areas, which would facilitate the implementation of appropriate impact avoidance and/or minimization measures.

(i - k) Less than significant impact: Vegetation at the proposed project sites is sparse and has been disturbed by disking operations. Therefore, construction of the reservoirs would not result in the removal of trees or shrubs, and would not result in the removal of potential breeding, roosting or nesting habitat. The proposed reservoirs would be at least 50 feet from the top of bank of the small ephemeral drainage channels located near the reservoir sites. Therefore, the project would not interfere with the potential use of the channels by wildlife. No lighting would be provided at the project sites and safety fencing that

would be installed around the reservoirs would not interfere with wildlife migration through the project area and would substantially reduce the potential for animals becoming trapped in the reservoirs. Operation of the reservoirs would not result in a substantial increase in noise or other conditions that would result in significant long-term habitat quality impacts to areas at or near the project sites. Therefore, the project would have **less than significant** impacts related to habitat deterioration.

Cumulative Impacts: The proposed project sites have been extensively disturbed and it is unlikely that the sites contain or support sensitive plant or wildlife species. Although unlikely, project-related construction activities would have the potential to result in significant short-term effects to sensitive wildlife. Those temporary impacts would be reduced to a less than significant level with the implementation of proposed mitigation measures. The long-term operation of the proposed reservoirs would not significantly impact biological resources located on or near the project sites. Therefore the project would not have a cumulatively considerable effect on biological resources and the project's contribution to biological resource impacts would be **less than significant**.

Mitigation and Residual Impact

Implementation of the following mitigation measure would reduce the project's short-term impacts to San Joaquin kit fox in the unlikely event that it inhabits the project site. The required pre-construction surveys would also reduce potential impacts to American badger. Implementation of this measure would reduce potential impacts to San Joaquin kit fox and American badger to a **less than significant** level (Class II). Residual impacts would be less than significant.

- 1. Special Condition: San Joaquin Kit Fox Avoidance Measures.** Project-related pre-construction / pre-activity surveys shall be conducted prior to the beginning of ground disturbance and/or construction activities, or any project activity that has the potential to impact the San Joaquin kit fox and/or American badger. Required pre-construction / pre-activity surveys and project-related construction activities shall be conducted in accordance with the requirements of the U.S. Fish and Wildlife Service's *Standardized Recommendations for Protection of The Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (January, 2011). Similar measures and procedures shall be implemented to minimize the potential for impacts to American badger. The Standardized Recommendations are provided as Attachment 3.

PLAN REQUIREMENTS AND TIMING: Prior to the start of any project-related pre-construction / pre-activity, the areas that would be affected by reservoir construction and the construction of the proposed reservoir fill and drain lines shall be marked in the field and surveyed by a qualified biologist. Project-related pre-construction / pre-activity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities. The qualified biologist shall conduct weekly site visits during site disturbance activities that proceed longer than 14 days for the purpose of monitoring compliance with the attached Standardized Recommendations. Site disturbance activities lasting up to 14 days do not require weekly monitoring by the biologist unless observations of kit fox or their dens are made on-site or the qualified biologist recommends additional monitoring. This measure shall be printed on all grading and construction plans.

MONITORING: The qualified biologist shall document the methods and results of site visits in weekly monitoring reports that are to be submitted to P&D. If incidental take of kit fox during project activities is possible, before project activities commence, the applicant must consult with the USFWS and CDFW. The results of this consultation may require the applicant to obtain a federal and/or state permit for incidental take during project activities.

- 2. Bio-09 Fish and Wildlife Jurisdiction Advisory.** The project site is within the range of San Joaquin kit fox, a species listed as Endangered by the U.S. Fish and Wildlife Service, and Threatened by the California Department of Fish and Wildlife. Based upon reports prepared by Kevin Merk Associates, dated February 24, 2016 and June 24, 2016, it has been determined that the probability for San Joaquin kit fox occurrence on the site is very low. The issuance of this permit does not relieve the permit-holder of any duties, obligations, or responsibilities under the federal or California Endangered Species Act or any other law. The permit-holder shall contact the necessary jurisdictional agencies to ascertain his or her level of risk under the federal and California Endangered Species Act in implementing the project herein permitted.

Indemnity for Violation of the Endangered Species Act: The applicant shall defend, indemnify and hold harmless the County or its agents, officers and employees from any and all claims, actions, proceedings, demands, damages, costs, expenses (including attorney's fees), judgments or liabilities, against the County or its agents, offices or employees brought by any entity or person for any and all actions or omissions of the applicant or his agents, employees or other independent contractors arising out of this permit alleged to be in violation of the federal or California Endangered Species Acts (16 USC Sec. 1531 et seq.; Cal. Fish and Game Code Sec. 2050 et seq.). This permit does not authorize, approve or otherwise support a "take" of any listed species as defined under the federal or California Endangered Species Acts. Applicant shall notify County immediately of any potential violation of the federal and/or California Endangered Species Act.

- 3. American Badger Avoidance and Minimization Measures.** A minimum of 14 days prior to initiation of ground disturbing activities, a survey for badger burrows shall be conducted within the disturbance footprint by an approved biologist (a biologist familiar with, including identification of, the wildlife species in the region). Dens found within the survey area shall be mapped and monitored using a tracking medium, remote camera system, and/or spotlighting at night for a minimum of three days to assess the presence of badgers. Inactive dens shall be collapsed by hand with a shovel to prevent badgers from re-using them during construction. Active dens located within the survey area shall be avoided during the breeding season (March 1 through June 30). A minimum buffer of 50 feet around the active den within the proposed area of disturbance shall be demarcated by construction fencing. The fencing shall be installed one foot above ground to permit movement of badgers in and out of the buffer zone. Once the biologist has determined that active dens are no longer in use, the den shall be collapsed by shovel. Prior to ground disturbing activities occurring outside of the breeding season, badgers may be discouraged from using currently active dens by partially blocking the entrance of the den with sticks, debris, and soil for three (3) to five (5) days. Access to the den would be incrementally blocked to a greater degree over this period. This would cause the badger to abandon the den site and move elsewhere. After badgers have stopped using active dens within the project site, the dens would be collapsed by hand with a shovel.

Plan Requirements and Timing. The name, qualifications, scope of biological surveys and contact information for the surveying biologist must be submitted to P&D and CDFW in advance of the surveys. The above measures shall be included on all land use, grading, and building plans for the construction of the reservoirs, water pipelines, and utility line improvements. A report of the results of the badger survey shall be submitted to P&D for review and approval prior to Zoning Clearance. **Monitoring.** P&D will review and approve the reports. A County-approved biologist shall be present during the initial ground-disturbing activity.

4.5 CULTURAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
Archaeological Resources					
a. Disruption, alteration, destruction, or adverse effect on a recorded prehistoric or historic archaeological site (note site number below)?		X			
b. Disruption or removal of human remains?		X			
c. Increased potential for trespassing, vandalizing, or sabotaging archaeological resources?		X			
d. Ground disturbances in an area with potential cultural resource sensitivity based on the location of known historic or prehistoric sites?		X			
Ethnic Resources					
e. Disruption of or adverse effects upon a prehistoric or historic archaeological site or property of historic or cultural significance to a community or ethnic group?			X		
f. Increased potential for trespassing, vandalizing, or sabotaging ethnic, sacred, or ceremonial places?			X		
g. The potential to conflict with or restrict existing religious, sacred, or educational use of the area?			X		

Setting

For at least the past 10,000 years, the area that is now Santa Barbara County has been inhabited by Chumash Indians and their ancestors. A Phase 1 investigation (*Phase 1 Cultural Resources Study for the North Fork Reservoir Project, Santa Barbara County, California*, Rincon Consultants, 2016) of the proposed reservoir and pipeline construction sites was conducted. The survey did not identify any archaeological resources. However, prior to the preparation of the Phase 1 investigation, human remains were identified during the excavation of an irrigation pipeline at a location on the north side of Highway 166. Based on the previous discovery of the burial, the project site is considered sensitive for cultural resources.

County Environmental Thresholds: The County Environmental Thresholds and Guidelines Manual contains guidelines for identification, significance determination, and mitigation of impacts to important cultural resources. Chapter 8 of the Manual, the *Archaeological Resources Guidelines: Archaeological, Historic and Ethnic Element*, specifies that if a resource cannot be avoided, it must be evaluated for importance under CEQA. CEQA Section 15064.5 contains the criteria for evaluating the importance of archaeological and historical resources. For archaeological resources, the criterion usually applied is: (D), “Has yielded, or may be likely to yield, information important in prehistory or history.” A project that may cause a substantial adverse effect on an archaeological resource may have a significant effect on the environment.

Impact Discussion

(a-d) Less than significant with mitigation: Background research and the survey of the project sites did not identify any archaeological resources that would be impacted by the construction of the proposed reservoirs or associated pipelines. Therefore, the project would not impact any recorded cultural resource sites. However, based on the previous discovery of pre-historic human remains in the vicinity of the project sites, the project area is considered sensitive for cultural resources. Therefore, there is a potential for unanticipated discoveries of cultural resources during project construction. Mitigation measure No. 4 requires that an archaeological monitor and Native American representative be present during initial ground disturbance at each of the proposed reservoir and pipeline installation sites. Mitigation measure No. 5 describes actions to be implemented in the event that previously unidentified cultural resources are discovered during site development; and mitigation measure No. 6 requires that construction workers be informed about the cultural resources sensitivity of the project area. The proposed mitigation measures would reduce impacts to cultural resources to a **less than significant** level.

(e-g) Less than significant impact. Based on the Phase 1 investigation there is no indication that the proposed reservoir sites are religiously important or that the project site is a sacred site. In addition, under the requirements of AB 52 (Gatto, 2014), the Barbareño/Venentureño Band of Mission Indians was formally notified of the proposed project by a letter dated March 13, 2017. No response to this notification has been received. The use of the proposed reservoirs would not increase the number of people located on the project property or increase the potential for the collection or vandalizing ethnic resources. As a result, impacts would be **less than significant**.

Cumulative Impacts: The project would have a low potential to encounter previously undetected cultural resources during project construction. However, if the project were to result in the disturbance of previously undetected resources, that impact would be reduced to a less than significant level with the implementation of proposed project-specific mitigation measures. Therefore, the project would not have a cumulative considerable effect on the County's cultural resources and its cumulative cultural resource impacts would be **less than significant**.

Mitigation and Residual Impact: Implementation of the following measures would reduce the project's potential impacts to cultural resources to a less than significant level (Class II). Residual impacts would be less than significant.

4. **CulRes-07 Cultural Resource Monitor.** The Owner/Applicant shall have all earth disturbances including scarification and placement of fill within the proposed project sites monitored by a P&D approved archaeologist and a Native American consultant in compliance with the provisions of the County Archaeological Guidelines. The duration and depth of grading below the ground surface that requires monitoring shall be determined by the approved archaeologist and Native American consultant.

TIMING: Prior to the approval of a grading permit, the Owner/Applicant shall submit for P&D review and approval, a contract or Letter of Commitment between the Owner/Applicant and the archaeologist, consisting of a project description and scope of work, and once approved, shall execute the contract. This condition shall be printed on all building and grading plans.

MONITORING: The Owner/Applicant shall provide P&D compliance monitoring staff with the name and contact information for the assigned onsite monitor(s) prior to grading permit issuance

and pre-construction meeting. P&D compliance monitoring staff shall confirm monitoring by archaeologist and Native American consultant and P&D grading inspectors shall spot check field work. The P&D permit processing planner shall check plans prior to approval of all building and grading permits and P&D compliance monitoring staff shall spot check in the field.

5. **CulRes-09 Stop Work at Encounter.** The Owner/Applicant and/or their agents, representatives or contractors shall stop or redirect work immediately in the event archaeological remains are encountered during grading, construction, landscaping or other construction-related activity. The Owner/Applicant shall retain a P&D approved archaeologist and Native American representative to evaluate the significance of the find in compliance with the provisions of Phase 2 investigations of the County Archaeological Guidelines and funded by the Owner/Applicant. If remains are found to be significant, they shall be subject to a Phase 3 mitigation program consistent with County Archaeological Guidelines and funded by the applicant.

PLAN REQUIREMENTS: This condition shall be printed on all building and grading plans.

MONITORING: The P&D permit processing planner shall check plans prior to Zone Clearance and P&D compliance monitoring staff shall spot check in the field.

6. **Special Condition: Pre-Construction Meeting.** A pre-construction meeting shall be conducted by a County-qualified archaeologist and a local Native American representative funded by the applicant. Meeting attendees shall include the applicant, archaeologist, local Chumash representative, construction supervisors, and heavy equipment operators to ensure that all parties understand the cultural resources monitoring program and their respective roles and responsibilities. All construction personnel who would work on the site during any phase of ground disturbance shall be required to attend the meeting. The names of all personnel who attend the meeting shall be recorded denoting that they have received the required training.

The meeting shall review the following: types of archaeological resources that may be uncovered; provide examples of common archaeological artifacts and other cultural materials to examine; describe why monitoring is required; what makes an archaeological resource significant; identify monitoring procedures; what would temporarily halt construction and for how long; describe a reasonable resource discovery scenario (i.e., feature or artifact); and describe reporting requirements and the responsibilities of the construction supervisor and crew. The meeting shall make attendees aware of prohibited activities, including vehicle use in protected areas, and educate construction workers about the inappropriateness of unauthorized collecting of artifacts that can result in impacts on cultural resources.

PLAN REQUIREMENTS: The pre-construction meeting requirements shall be shown on approved grading and building plans.

TIMING: The pre-construction meeting shall be conducted prior to the start of ground disturbing activities.

MONITORING: The Owner/Applicant shall provide P&D compliance monitoring staff with the names and responsibilities of persons who attended the meeting.

Residual impacts would be less than significant with the implementation of proposed mitigation measures.

4.6 ENERGY

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Substantial increase in demand, especially during peak periods, upon existing sources of energy?			X		
b. Requirement for the development or extension of new sources of energy?			X		

Setting

The County has not identified significance thresholds for electrical and/or natural gas service impacts (Thresholds and Guidelines Manual). Private electrical and natural gas utility companies provide service to customers in Central and Southern California, including the unincorporated areas of Santa Barbara County.

(a-b) Less than significant impact: The proposed project would result in the construction and operation of three water reservoirs. It is not anticipated that energy use to operate the reservoirs would result in a substantial increase in demand for energy; use energy in a wasteful manner; or require the development of new energy sources. Therefore, project-related energy use would be **less than significant**.

Cumulative Impacts: The project's contribution to the regional demand for energy would not be cumulatively considerable and its cumulative effect would be **less than significant**.

Mitigation and Residual Impact: Project-related energy demand would be less than significant. Therefore, no mitigation measures are required.

4.7 FIRE PROTECTION

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Introduction of development into an existing high fire hazard area?			X		
b. Project-caused high fire hazard?			X		
c. Introduction of development into an area without adequate water pressure, fire hydrants or adequate access for fire fighting?			X		
d. Introduction of development that will hamper fire prevention techniques such as controlled burns or backfiring in high fire hazard areas?			X		
e. Development of structures beyond safe Fire Dept. response time?			X		

Setting

Physical: The project site is located within a designated High Fire Hazard area (CalFire, 2007). Vegetation at the project sites is sparse and vegetation near the project sites predominately consists of irrigated vineyards and non-native grasses. Fire protection and suppression services for the project would be provided by Santa Barbara County Fire Station 41 (41 Newsome Street, New Cuyama), which is approximately 9-12 miles from the proposed reservoir sites.

Impact Discussion

(a - e) Less than significant impact: The proposed reservoir project would not result in the construction of habitable or combustible structures, would not increase the population of the area, would not restrict future wildfire suppression activities, and would not result in a substantial demand for fire protection services. Therefore, the project would have a **less than significant** impact on fire protection services.

Cumulative Impacts: The proposed project would not result in a cumulatively considerable increase in the demand for fire protection services and would have a **less than significant** cumulative fire protection impact.

Mitigation and Residual Impact

No mitigation is required. Residual impacts would be less than significant.

4.8 GEOLOGIC PROCESSES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Exposure to or production of unstable earth conditions such as landslides, earthquakes, liquefaction, soil creep, mudslides, ground failure (including expansive, compressible, collapsible soils), or similar hazards?			X		
b. Disruption, displacement, compaction or overcovering of the soil by cuts, fills or extensive grading?			X		
c. Exposure to or production of permanent changes in topography, such as bluff retreat or sea level rise?			X		
d. The destruction, covering or modification of any unique geologic, paleontologic or physical features?			X		
e. Any increase in wind or water erosion of soils, either on or off the site?		X			
f. Changes in deposition or erosion of beach sands or dunes, or changes in siltation, deposition or erosion which may modify the channel of a river, or stream, or the bed of the ocean, or any bay, inlet or lake?		X			

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
g. The placement of septic disposal systems in impermeable soils with severe constraints to disposal of liquid effluent?				X	
h. Extraction of mineral or ore?				X	
i. Excessive grading on slopes of over 20%?			X		
j. Sand or gravel removal or loss of topsoil?				X	
k. Vibrations, from short-term construction or long-term operation, which may affect adjoining areas?				X	
l. Excessive spoils, tailings or over-burden?			X		

Setting

Regulatory/Physical

The proposed reservoir sites are generally level and have gentle slopes of approximately six (6) percent or less. Borings conducted at each of the proposed reservoir sites (*Geotechnical Investigation, North Fork Vineyards, Highway 166, New Cuyama, California*, GSI Soils Inc., January 2016) did not encounter standing groundwater at a depth 20 feet below the ground surface. There are no known faults located in the project area (*2016 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan*).

County Environmental Thresholds: Pursuant to the County's Adopted Thresholds and Guidelines Manual, impacts related to geological resources may have the potential to be significant if the proposed project involves any of the following characteristics:

1. The project site or any part of the project is located on land having substantial geologic constraints, as determined by P&D or PWD. Areas constrained by geology include parcels located near active or potentially active faults and property underlain by rock types associated with compressible/collapsible soils or susceptible to landslides or severe erosion. "Special Problems" areas designated by the Board of Supervisors have been established based on geologic constraints, flood hazards and other physical limitations to development.
2. The project results in potentially hazardous geologic conditions such as the construction of cut slopes exceeding a grade of 1.5 horizontal to 1 vertical.
3. The project proposes construction of a cut slope over 15 feet in height as measured from the lowest finished grade.
4. The project is located on slopes exceeding 20% grade.

Impact Discussion

(a, b, c, i, l) Less than significant impact: Construction of the proposed reservoirs would result in the excavation of approximately 130,897 cubic yards of excavation and 127,048 cubic yards of fill, for a total of 257,945 cubic yards of grading. The excavated soil would be used to construct the proposed reservoir's water impoundment berms, which would be approximately three to 20 feet above surrounding grade. Due to soil compaction and shrinkage, no excess soil would be exported from the project site.

Graded slopes and water impoundment berms would have a gradient of 2.5:1. The geotechnical investigation prepared for the project (GSI, 2016) concluded that instability of the proposed slopes is anticipated to be negligible due to the shear strength and cohesion properties of the native soils and the compactability of these materials. The geotechnical evaluation also concluded that based on a preliminary evaluation of on-site soil and groundwater conditions, the potential for liquefaction at the project sites is low. There are no known faults at the project sites, and the geotechnical evaluation prepared for the project identifies seismic design parameters that comply with building code requirements. All proposed project-related design parameters would be reviewed and included in the grading permit required by the Building and Safety Division for the project. Implementation of requirements included in approved grading plans and adherence to the requirements set forth in the Santa Barbara County Code, Chapter 14 Grading Ordinance would reduce potential seismic and soil-related impacts to a **less than significant** level.

(d) Less than significant impact. There are no unique geologic features at the proposed reservoir sites and proposed modifications to the topography of the project property would not be extensive. Therefore, impacts to unique features would be **less than significant**.

(e, f,) Less than significant with mitigation: The topography of the project site is generally level with gentle slopes. Grading to construct the proposed reservoirs would have the potential to result in significant short- and long-term erosion-related impacts to nearby ephemeral drainages that drain to the Cuyama River, which in general is approximately 4,000 feet northeast of the proposed reservoir sites. The Santa Barbara County Code, Chapter 14 Grading Ordinance (2010) contains the minimum standards and procedures necessary to minimize grading-related hazards. The Ordinance also addresses compliance with the National Pollutant Discharge Elimination System Phase II storm water regulations and sets forth local storm water requirements for project that disturb more than one acre. The implementation of these requirements would reduce the potential for the project to result in erosion- and sedimentation-related impacts to water resources. Mitigation Measure No. 7 provides specific erosion control requirements that would reduce the project's potential erosion-related impacts to a **less than significant** level.

(g, h, j, k) No impact. The project would not require the use of septic systems and would not result in mining operations. The project would not result in construction operations that would be a substantial source of vibrations (i.e., pile driving) and no sensitive vibration receptors are located near the project site.

Cumulative Impacts: Geologic impacts are generally project-specific in nature and addressed based on the characteristics of individual project site. However, erosion and off-site sedimentation from a project site may contribute to off-site water quality and other sedimentation-related impacts. With the implementation of proposed project-specific mitigation, the project would not result in significant short- or long-term erosion impacts and the project's geologic impacts would not be cumulatively considerable and its cumulative effect would be less than significant.

Mitigation and Residual Impact

The following mitigation measure would reduce the project's potential erosion- and sedimentation-related impacts to a less than significant level.

7. **Geo-02. Erosion and Sediment Control Plan.** Where required by the latest edition of the California Green Code and/or Chapter 14 of the Santa Barbara County Code, a Storm Water Pollution Prevention Plan (SWPPP), Storm Water Management Plan (SWMP) and/or an Erosion and Sediment Control Plan (ESCP) shall be implemented as part of the project. Grading and erosion and sediment control plans shall be designed to minimize erosion during construction and

shall be implemented for the duration of the grading period and until re-graded areas have been stabilized by structures, long-term erosion control measures or permanent landscaping. The Owner/Applicant shall submit the SWPPP, SWMP or ESCP using Best Management Practices (BMP) designed to stabilize the site, protect natural watercourses/creeks, prevent erosion, convey storm water runoff to existing drainage systems keeping contaminants and sediments onsite. The SWPPP or ESCP shall be a part of the Grading Plan submittal and will be reviewed for its technical merits by P&D. Information on Erosion Control requirements can be found on the County web site re: Grading Ordinance Chapter 14 (<http://sbcountyplanning.org/building/grading.cfm>) refer to Erosion and Sediment Control Plan Requirements; and in the California Green Code for SWPPP (projects greater than 1 acre) and/or SWMP requirements.

PLAN REQUIREMENTS: The grading and SWPPP, SWMP and/or ESCP shall be submitted for review and approved by P&D prior Zoning Clearance. The plan shall be designed to address erosion, sediment and pollution control during all phases of development of the site until all disturbed areas are permanently stabilized. **TIMING:** The SWPPP requirements shall be implemented prior to the commencement of grading and throughout the year. The ESCP/SWMP requirements shall be implemented between November 1st and April 15th of each year, except pollution control measures shall be implemented year round.

MONITORING: P&D staff shall perform site inspections throughout the construction phase.

4.9 HAZARDOUS MATERIALS/RISK OF UPSET

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. In the known history of this property, have there been any past uses, storage or discharge of hazardous materials (e.g., fuel or oil stored in underground tanks, pesticides, solvents or other chemicals)?			X		
b. The use, storage or distribution of hazardous or toxic materials?			X		
c. A risk of an explosion or the release of hazardous substances (e.g., oil, gas, biocides, bacteria, pesticides, chemicals or radiation) in the event of an accident or upset conditions?			X		
d. Possible interference with an emergency response plan or an emergency evacuation plan?			X		
e. The creation of a potential public health hazard?			X		
f. Public safety hazards (e.g., due to development near chemical or industrial activity, producing oil wells, toxic disposal sites, etc.)?			X		
g. Exposure to hazards from oil or gas pipelines or oil well facilities?			X		
h. The contamination of a public water supply?			X		

Setting

The areas that would be used for the construction of the proposed reservoirs are vacant and have been used for grazing in the past. According to the SWRCB Geotracker website (accessed March 30, 2017) there are no known contamination or permitted hazardous waste sites located on the project property, and there are no active contamination or remediation sites near the project property.

County Environmental Threshold:

Pursuant to the County's Adopted Thresholds and Guidelines Manual, the County's safety threshold addresses involuntary public exposure from projects involving significant quantities of hazardous materials. The threshold addresses the likelihood and severity of potential accidents to determine whether the safety risks of a project exceed significant levels.

Impact Discussion:

(a-h) Less than Significant Impact. The proposed project would result in the development and operation of three water storage reservoirs. The construction and operation of the reservoirs would not result in or require the use of hazardous materials at levels that would have the potential to result in a significant hazard to human health or the environment. Minor amounts of traffic that may be generated by the project would generally be for maintenance-related purposes, and project-related traffic would not substantially interfere with emergency response capabilities to the project site or to other properties in the project area. Therefore, the project's potential hazard-related impacts would be **less than significant**.

Cumulative Impacts

The project would not result in significant impacts with respect to hazardous materials and/or risk of upset. Therefore, the project would not have a cumulatively considerable effect on safety within the County and the project's cumulative impact would be **less than significant**.

Mitigation and Residual Impact: No impacts are identified. No mitigations are necessary.

4.10 HISTORIC RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Adverse physical or aesthetic impacts on a structure or property at least 50 years old and/or of historic or cultural significance to the community, state or nation?				X	
b. Beneficial impacts to an historic resource by providing rehabilitation, protection in a conservation/open easement, etc.?				X	

Existing Setting:

The project property does not contain any structural development that could be considered historical.

County Environmental Threshold

Environmental Threshold: Historic Resource impacts are determined through use of the County's Cultural Resources Guidelines. A significant resource a) possesses integrity of location, design, workmanship, material, and/or setting; b) is at least fifty years old, and c) is associated with an important contribution, was designed or built by a person who made an important contribution, is associated with an important and particular architectural style, or embodies elements demonstrating outstanding attention to detail, craftsmanship, use of materials, or construction methods.

Impact Discussion

(a,b) No Impact: The proposed project site does not include any structures that could be considered historical, and the project would not alter the contextual nature of the site. As a result, **no impacts** to historic resources would result.

Cumulative Impacts: The proposed project would not affect any historic structures and its cumulative impacts to historic resources would not be significant.

Mitigation and Residual Impact: No mitigation is required. Residual impacts would be less than significant.

4.11 LAND USE

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Structures and/or land use incompatible with existing land use?			X		
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X		
c. The induction of substantial growth or concentration of population?			X		
d. The extension of sewer trunk lines or access roads with capacity to serve new development beyond this proposed project?			X		
e. Loss of existing affordable dwellings through demolition, conversion or removal?				X	
f. Displacement of substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X	
g. Displacement of substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X	
h. The loss of a substantial amount of open space?			X		

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
i. An economic or social effect that would result in a physical change? (i.e. Closure of a freeway ramp results in isolation of an area, businesses located in the vicinity close, neighborhood degenerates, and buildings deteriorate. Or, if construction of new freeway divides an existing community, the construction would be the physical change, but the economic/social effect on the community would be the basis for determining that the physical change would be significant.)			X		
j. Conflicts with adopted airport safety zones?				X	

Setting

The project site is located approximately nine miles west of the community of New Cuyama, and is south of and adjacent to Highway 166. The 6,565-acre project property is zoned AG-II-100 and is mostly open space, although the area near the proposed reservoirs was recently planted with grape vines. The proposed reservoirs would be approximately 1,200 to 3,000 feet south of Highway 166, and approximately 4,000 to 5,000 feet south of the Cuyama River.

County Environmental Threshold

The Thresholds and Guidelines Manual contains no specific thresholds for land use. Generally, a potentially significant impact can occur if a project would result in substantial growth inducing effects.

Impact Discussion

(a, b) Less than significant: Land uses on and adjacent to the proposed reservoir sites are open space and agriculture, and the project property is zoned AG-II-100. The reservoirs are a conditionally permitted use by the zoning of the project site, and would not result in land use conflicts with nearby land uses. Therefore, the proposed project would result in **less than significant** land use conflicts with existing land uses and land use requirements.

(c, d) Less than significant: The project would not result in an extension of urban services that could serve new development beyond the proposed project, and would not result in an increase in the population of the project area. Therefore, potential growth inducing impacts would be **less than significant**.

(e, f, g) No impact: The project would not result in the removal of any housing or the displacement of any people. Therefore, the project would have **no impact** to existing housing supplies.

(h) Less than significant: The proposed reservoirs would occupy approximately 15.6 acres of the 6,565-acre project property, and would be used to support an existing agricultural operation. Therefore, impacts to open space would be **less than significant**.

(i) Less than significant: Construction of the proposed reservoirs would not result in adverse economic or social effects that would have the potential to result in physical changes to existing environmental

conditions on the project sites or in the project area. Operation of the reservoirs would require the use of groundwater and the project's contribution to existing groundwater overdraft conditions in the Cuyama Valley would result from evaporative losses of water from the reservoirs. It is estimated the project would result in evaporative losses of approximately 26 acre feet per year. This water loss would not result in a significant project-specific or cumulative water use impact based on the County's adopted groundwater use thresholds (Section 4.16, Water Resources/Flooding). Due to the relatively minor increase in groundwater use that would result from the operation of the reservoirs, the proposed project would not result in substantial economic or social changes in the project area, and the project-related physical change in existing groundwater conditions would result in a **less than significant** land use impact.

(j) No Impact: There are no airports in the project area. Therefore, the project would have **no impact** on airport operations.

Cumulative Impacts: The project would not result in any significant project-specific land use impacts. The project would be consistent with the zoning of the project site and would be compatible with surrounding land uses and development. The project's contribution to cumulative land use impacts would not be cumulatively considerable and its cumulative impacts would be **less than significant**.

Mitigation and Residual Impact: No mitigation is required. Residual impacts would be less than significant.

4.12 NOISE

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Long-term exposure of people to noise levels exceeding County thresholds (e.g. locating noise sensitive uses next to an airport)?			X		
b. Short-term exposure of people to noise levels exceeding County thresholds?			X		
c. Project-generated substantial increase in the ambient noise levels for adjoining areas (either day or night)?			X		

Setting/Threshold: Noise is generally defined as unwanted or objectionable sound which is measured on a logarithmic scale and expressed in decibels (dB(A)). The duration of noise and the time period at which it occurs are important values in determining impacts on noise-sensitive land uses. The Community Noise Equivalent Level (CNEL) and Day-Night Average Level (L_{dn}) are noise indices which account for differences in intrusiveness between day- and night-time uses. County noise thresholds are: 1) 65 dB(A) CNEL maximum for exterior exposure, and 2) 45 dB(A) CNEL maximum for interior exposure of noise-sensitive uses. Noise-sensitive land uses include: residential dwellings; transient lodging; hospitals and other long-term care facilities; public or private educational facilities; libraries, churches; and places of public assembly.

Highway 166 is the major noise source in the project area. No other roadways, public facilities, airport approach and take-off zones, or other land uses that are substantial noise sources are located in the project area. No noise-sensitive uses (i.e., residences) are located in the vicinity of the project site.

Impact Discussion

(a, c) Less than significant: The operation of the proposed reservoirs would not result in the generation of noise that would have the potential to result in significant noise impacts to persons or uses located on or near the proposed reservoir sites. Minor amounts of traffic that may be generated by the project would generally be for periodic maintenance-related purposes, and such traffic would not substantially increase existing noise conditions along Highway 166. Therefore, the project's potential long-term noise impacts would be **less than significant**.

(b) Less than significant: The construction of proposed reservoirs would result in a temporary increase in noise levels at the construction sites. However, no construction activities would occur within 1,600 feet of residences or other sensitive receptors located on or adjacent to the project sites. Therefore, the project's potential short-term noise impacts would be **less than significant**.

Cumulative Impacts: The project would not be a substantial source of noise. Therefore, the project's noise impacts would not be cumulatively considerable and its cumulative impacts would be **less than significant**.

Mitigation and Residual Impact: No mitigation is required. Residual impacts would be less than significant.

4.13 PUBLIC FACILITIES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. A need for new or altered police protection and/or health care services?				X	
b. Student generation exceeding school capacity?				X	
c. Significant amounts of solid waste or breach any national, state, or local standards or thresholds relating to solid waste disposal and generation (including recycling facilities and existing landfill capacity)?				X	
d. A need for new or altered sewer system facilities (sewer lines, lift-stations, etc.)?				X	
e. The construction of new storm water drainage or water quality control facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X		

Setting:

The proposed project site does not contain any structural development or any public facilities.

County Environmental Thresholds

Schools: A significant level of school impacts is generally considered to occur when a project would generate a sufficient number of students to require an additional classroom.

Solid Waste: A project is considered to result in significant impacts to landfill capacity if it would generate 196 tons per year of solid waste. This volume represents 5% of the expected average annual increase in waste generation, and is therefore considered a significant portion of the remaining landfill capacity. In addition, construction and demolition waste from remodels and rebuilds is considered significant if it exceeds 350 tons. Waste generation of 40 tons per year is considered a potentially significant contribution to cumulative waste generation.

Impact Discussion

(a-d) No impact: The proposed project would not result in the development of habitable structures and would not increase population on the project site or in the project area. The project would not result in a demand for law enforcement, generate additional school-age children, generate solid waste, or be a source of sewage generation. Therefore, the project would have **no impact** on these services.

(e) Less than significant: Stormwater runoff from slopes south of and adjacent to Reservoir No. 1 (the eastern-most reservoir) would be collected in a proposed drainage swale located adjacent to the southern end of the reservoir. The swale would extend to the east away from the reservoir, and when it reaches Schoolhouse Canyon Road, which is east of and adjacent to the reservoir site, the swale would convey collected runoff beneath the roadway through a proposed culvert. The runoff would then be discharged over a proposed rock energy dissipater at a site approximately 50 feet east of the road and allowed to sheet flow across native soil towards Schoolhouse Canyon Creek. The proposed drainage culvert beneath Schoolhouse Canyon Road would not substantially alter existing runoff characteristics or result in significant impacts to Schoolhouse Canyon Road. Therefore, the project would have a **less than significant** impact on stormwater drainage facilities.

Cumulative Impacts: The proposed project would not result in a population increase that would contribute to significant public facilities impacts. Solid waste generation would be below the County threshold of 40 tons per year for a significant cumulative impact. The project would not result in a substantial increase in impermeable surfaces at the project sites that would substantially increase runoff water volumes. Therefore, the project's contribution to public facility impacts would not be cumulatively considerable and its cumulative effects would be **less than significant**.

Mitigation and Residual Impact

No mitigation is required. Residual impacts would be less than significant.

4.14 RECREATION

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Conflict with established recreational uses of the area?				X	
b. Conflict with biking, equestrian and hiking trails?				X	
c. Substantial impact on the quality or quantity of existing recreational opportunities (e.g., overuse of an area with constraints on numbers of people, vehicles, animals, etc. which might safely use the area)?				X	

Setting

There are no recreation facilities on or near the project sites.

County Environmental Thresholds: The Thresholds and Guidelines Manual contains no threshold for park and recreation impacts. However, the Board of Supervisors has established a minimum standard ratio of 4.7 acres of recreation/open space per 1,000 people to meet the needs of a community. The Santa Barbara County Parks Department maintains more than 900 acres of parks and open spaces, as well as 84 miles of trails and coastal access easements. The County's Comprehensive Plan, Land Use Element, Parks/Recreation Policies state, in part: "Opportunities for hiking and equestrian trails should be preserved, improved, and expanded wherever compatible with surrounding uses."

Impact Discussion

(a-c) No impact. There are no parks or public trails located on or near the project sites, and the project would not result in a population increase that would contribute to significant impacts to recreation facilities. Therefore, the project would have **no impact** on existing recreational facilities or increase the demand for recreation opportunities.

Cumulative Impacts: The proposed project would not result in an increase in population in the project area and would not directly or indirectly impact any existing recreation facilities. Therefore, the project's contribution to cumulative recreation impacts would not be cumulatively considerable and its cumulative impacts would be **less than significant**.

Mitigation and Residual Impact: No mitigation is required. Residual impacts would be less than significant.

4.15 TRANSPORTATION/CIRCULATION

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Generation of substantial additional vehicular movement (daily, peak-hour, etc.) in relation to existing traffic load and capacity of the street system?			X		
b. A need for private or public road maintenance, or need for new road(s)?			X		
c. Effects on existing parking facilities, or demand for new parking?			X		
d. Substantial impact upon existing transit systems (e.g. bus service) or alteration of present patterns of circulation or movement of people and/or goods?				X	
e. Alteration to waterborne, rail or air traffic?				X	
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians (including short-term construction and long-term operational)?			X		
g. Inadequate sight distance?			X		
ingress/egress?			X		
general road capacity?			X		
emergency access?			X		
h. Impacts to Congestion Management Plan system?			X		

Setting

Regional access to the proposed reservoir sites is provided by State Highway 166. Access to the Reservoir No. 1 project site is provided by Schoolhouse Canyon Road. Access to the Reservoir Nos. 2 and 3 sites is provided by existing ranch roads.

County Environmental Thresholds: The Public Works Department, Roads Division's general standards governs all project proposals within the County. In addition, according to the County's Environmental Thresholds and Guidelines Manual, a significant traffic impact would occur when:

- a. The addition of project traffic to an intersection increases the volume to capacity (V/C) ratio by the value provided below, or sends at least 15, 10 or 5 trips to an intersection operating at LOS D, E or F.

LEVEL OF SERVICE (including project)	INCREASE IN VOLUME/CAPACITY RATIO GREATER THAN
A	0.20
B	0.15
C	0.10
	Or the addition of:
D	15 trips
E	10 trips
F	5 trips

- b. Project access to a major road or arterial road would require a driveway that would create an unsafe situation, or would require a new traffic signal or major revisions to an existing traffic signal.
- c. Project adds traffic to a roadway that has design features (e.g., narrow width, road side ditches, sharp curves, poor sight distance, inadequate pavement structure) or receives use which would be incompatible with substantial increases in traffic (e.g. rural roads with use by farm equipment, livestock, horseback riding, or residential roads with heavy pedestrian or recreational use, etc.) that will become potential safety problems with the addition of project or cumulative traffic. Exceeding the roadway capacity designated in the Circulation Element may indicate the potential for the occurrence of the above impacts.
- d. Project traffic would utilize a substantial portion of an intersection(s) capacity where the intersection is currently operating at acceptable levels of service (A-C) but with cumulative traffic would degrade to or approach LOS D (V/C 0.81) or lower. Substantial is defined as a minimum change of 0.03 for intersections which would operate from 0.80 to 0.85 and a change of 0.02 for intersections which would operate from 0.86 to 0.90, and 0.01 for intersections operating at anything lower.

Impact Discussion

(a-c, f-h) Less than significant impact: Short-term traffic generated by the proposed project would be primarily from the transportation of construction equipment and materials to and from the reservoir site sites, and by construction workers commuting to and from the project sites. Long-term traffic would likely result from periodic maintenance activities. Overall, traffic generated by the project would be very low and would not adversely affect the operation of State Highway 166 or substantially increase the need for road maintenance. Adequate area would be available adjacent to the proposed reservoir sites to accommodate construction and maintenance vehicle parking. Adequate sight distance is provided along State Highway 166 to accommodate project-related vehicles that would enter and leave the project sites. The small amount of traffic generated by the project would result in **less than significant** traffic-related impacts.

(d, e) No impact: The proposed project would not result in an increased demand for transit services, and would have no effect air, rail, or waterborne traffic. Therefore, the project would have **no impact** on these services.

Cumulative Impacts: Long-term traffic generated by the proposed project would primarily be for periodic maintenance of the reservoirs. Therefore, the traffic generated by the project would not cumulatively considerable and the project's cumulative traffic-related impacts would be less than significant.

Mitigation and Residual Impact: No mitigation required. Residual impacts would be less than significant.

4.16 WATER RESOURCES/FLOODING

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Changes in currents, or the course or direction of water movements, in either marine or fresh waters?			X		
b. Changes in percolation rates, drainage patterns or the rate and amount of surface water runoff?			X		
c. Change in the amount of surface water in any water body?			X		
d. Discharge, directly or through a storm drain system, into surface waters (including but not limited to wetlands, riparian areas, ponds, springs, creeks, streams, rivers, lakes, estuaries, tidal areas, bays, ocean, etc) or alteration of surface water quality, including but not limited to temperature, dissolved oxygen, turbidity, or thermal water pollution?			X		
e. Alterations to the course or flow of flood water or need for private or public flood control projects?				X	
f. Exposure of people or property to water related hazards such as flooding (placement of project in 100 year flood plain), accelerated runoff or tsunamis, sea level rise, or seawater intrusion?				X	
g. Alteration of the direction or rate of flow of groundwater?			X		
h. Change in the quantity of groundwater, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations or recharge interference?			X		
i. Overdraft or over-commitment of any groundwater basin? Or, a significant increase in the existing overdraft or over-commitment of any groundwater basin?			X		
j. The substantial degradation of groundwater quality including saltwater intrusion?			X		
k. Substantial reduction in the amount of water otherwise available for public water supplies?			X		
l. Introduction of storm water pollutants (e.g., oil, grease, pesticides, nutrients, sediments, pathogens, etc.) into groundwater or surface water?		X			

Setting:

A series of ephemeral drainages that are tributaries to the Cuyama River bisect the project property in a primarily south to north direction. The largest of these drainages are Cottonwood Creek on the western portion of the project property, and Schoolhouse Canyon Creek on the eastern side. The on-site drainages are dry for most of the year and convey periodic/flashy flow during monsoonal rain events and the winter rain season. The proposed Reservoir No. 1 project site is approximately 500 feet west of Schoolhouse

Canyon Creek, and small unnamed drainage channels are a minimum of approximately 50 feet to the east and west of the project site. The Reservoir No. 2 project site is approximately 100 feet west and approximately 1,000 feet east of small unnamed drainage channels. The Reservoirs No. 3 project site is approximately 250 feet west and 100 feet east of small unnamed drainage channels, and is approximately one mile east of Cottonwood Canyon Creek.

The proposed reservoir sites are located in the western portion of the Cuyama Valley Groundwater Basin. The 2014 Groundwater Basins Status Report (Santa Barbara County Water Agency, 2014) indicates that groundwater level measurements in the Cuyama Valley Groundwater Basin show substantial declines throughout history and over the last three years. In some areas, historical groundwater level declines exceed 400 feet. The County of Santa Barbara Environmental Thresholds and Guidelines Manual (1992) indicates that groundwater overdraft in the Cuyama Valley Groundwater Basin is 28,525 acre feet per year (AFY). The 2014 Groundwater Basins Status Report indicates that long-term overdraft within the basin is estimated to be nearly 30,000 acre feet per year (AFY). In 2015, the Santa Barbara County Water Agency reported that under recent conditions (2000 -2010) total annual net recharge for the Basin is 33,400 acre feet and net discharge (outflow from springs, subsurface flow out of the basin, and groundwater pumping) is 68,300 acre feet, resulting in a difference or “imbalance” of -34,900 acre feet per year (Santa Barbara County Water Agency, *Cuyama Groundwater Basin Balance Summary*, July 13, 2015).

County Environmental Thresholds: A project is determined to have a significant effect on water resources if it would exceed established threshold values which have been set for each overdrafted groundwater basin. These values were determined based on an estimation of a basin’s remaining life of available water storage. If the project’s net new consumptive water use [total consumptive demand adjusted for recharge less discontinued historic use] exceeds the threshold adopted for the basin, the project’s impacts on water resources are considered significant. The water demand threshold for the Cuyama Valley Groundwater Basin is 31 AFY. The adopted threshold applies only to projects subject to discretionary review by the County, and do not apply to uses, such as agricultural operations, that do not require approval of a discretionary permit.

Water Quality Thresholds: A significant water quality impact is presumed to occur if the project:

- Is located within an urbanized area of the county and the project construction or redevelopment individually or as a part of a larger common plan of development or sale would disturb one (1) or more acres of land;
- Increases the amount of impervious surfaces on a site by 25% or more;
- Results in channelization or relocation of a natural drainage channel;
- Results in removal or reduction of riparian vegetation or other vegetation (excluding non-native vegetation removed for restoration projects) from the buffer zone of any streams, creeks or wetlands;
- Is an industrial facility that falls under one or more of categories of industrial activity regulated under the NPDES Phase I industrial storm water regulations (facilities with effluent limitation; manufacturing; mineral, metal, oil and gas, hazardous waste, treatment or disposal facilities; landfills; recycling facilities; steam electric plants; transportation facilities; treatment works; and light industrial activity);

- Discharges pollutants that exceed the water quality standards set forth in the applicable NPDES permit, the Regional Water Quality Control Board's (RWQCB) Basin Plan or otherwise impairs the beneficial uses¹ of a receiving water body;
- Results in a discharge of pollutants into an "impaired" water body that has been designated as such by the State Water Resources Control Board or the RWQCB under Section 303 (d) of the Federal Water Pollution Prevention and Control Act (i.e., the Clean Water Act); or
- Results in a discharge of pollutants of concern to a receiving water body, as identified by the RWQCB.

Impact Discussion

Each of the proposed reservoirs would impound up to 49 acre feet of water between February 1st and April 30th, would impound a maximum of three feet of water between May 1st and January 31st, and would include an emergency overflow system that would discharge water from the reservoir in the event that a precipitation event or mechanical malfunction results in excess water in a reservoir. A maximum of three feet of water would be stored in the reservoirs between May 1st and January 31st to prevent air from entering the pumps and to provide the minimum amount of hydraulic head necessary to operate the pumps (Tetley, August 9, 2017).

Stormwater drainage from upslope areas adjacent to the reservoirs would be collected by proposed drainage swales. Collected stormwater runoff and discharges from the reservoir's overflow control system would be discharged over rock energy dissipaters and allowed to sheet flow at downslope locations adjacent to the reservoirs. Each reservoir would be lined with a high-density polyethylene plastic liner to prevent water seepage beneath the reservoirs and into the reservoir's water impoundment berms.

(a-d) Less than significant impact: Each of the proposed reservoir's stormwater drainage systems would collect water from a limited area upslope of the reservoirs, and water from the reservoir overflow and stormwater drainage systems would be discharged over rock energy dissipaters. After discharge over the energy dissipaters, the water would sheetflow over the ground surface, which in the vicinity of proposed discharge locations has a gradient of five percent or less. Therefore, the amount of stormwater discharged from the drainage systems and the reservoir overflow systems would be limited and would not substantially alter existing drainage patterns, the course or direction of runoff water, or substantially increase or decrease the amount of water in the ephemeral drainages located adjacent to the reservoir sites. With the use of rock energy dissipaters and due to the presence of gentle slope gradients below proposed discharge locations, the proposed water discharges would not be a substantial source of erosion (turbidity) that would have the potential to adversely affect the water quality of the drainages near the reservoirs, which are tributaries to the Cuyama River. The interior of the reservoirs would be provided with an impermeable liner and precipitation that falls within the reservoirs would be retained and would not percolate into the ground. However, most of the retained precipitation would eventually be used for crop production, either for frost protection or irrigation after the end of the frost season. Therefore, the retained precipitation would ultimately be returned to the ground surface and not result in substantial long-term changes to percolation conditions at or near the project

¹ Beneficial uses for Santa Barbara County are identified by the Regional Water Quality Control Board in the Water Quality Control Plan for the Central Coastal Basin, or Basin Plan, and include (among others) recreation, agricultural supply, groundwater recharge, fresh water habitat, estuarine habitat, support for rare, threatened or endangered species, preservation of biological habitats of special significance.

sites. Overall, the project would have **less than significant** impacts on existing drainage conditions at the project site.

(e-f) No impact: The proposed reservoir sites are not located in within the 100-year floodplain for the Cuyama River, and proposed Reservoir Nos. 2 and 3 would be located near but not within the 100-year floodplains identified for tributaries to the Cuyama River (Flood Insurance Rate Maps 06083C0115G and 06083C0305G). The proposed project would be required to comply with County Grading Ordinance requirements, which would ensure that the proposed reservoir berms are structurally adequate to contain the water impounded by the reservoirs. Therefore, the project would have **no impact** related to flood-related hazards.

(g-k) Less than significant: Water that would be impounded in the proposed reservoirs would be supplied by existing agricultural wells located on the north side of State Highway 166. Water would be delivered to the reservoirs by existing irrigation pipelines that extend beneath the highway towards the project sites, and proposed pipelines that would connect the reservoirs to the existing irrigation pipelines.

The County of Santa Barbara Environmental Thresholds Manual states that all projects subject to discretionary review by the County are subject to the water use thresholds included in the Manual. Projects that would use more water than the applicable threshold identified by the Manual would result in a significant water use impact. The water use threshold for projects in the Cuyama Valley Groundwater Basin is 31 AFY.

Agricultural operations conducted on properties with agricultural zoning are an allowed use and no land use entitlements are required for such uses (LUDC Section 35.21.030). The existing vineyard operations that the proposed water storage reservoirs would support are located on property with agricultural zoning (AG-II-100). Therefore, the vineyard operations and water used by the vineyards do not require any discretionary land use entitlements from the County, and water impounded in the proposed reservoirs that would be used to support (i.e., provide frost protection) the existing vineyards is not subject to the water use threshold established for the Cuyama Valley Groundwater Basin.

The proposed water storage reservoirs are a conditionally permitted use in the AG-II-100 zone and require the approval of a discretionary Minor Conditional Use Permit. Therefore, water impounded in the reservoirs that is not directly or indirectly used in support of the existing vineyards is subject to the water use thresholds of the Environmental Thresholds Manual. Water impounded in the reservoirs that would not be directly or indirectly used in support of the vineyards would be the water that evaporates from reservoirs. As proposed, the reservoirs would be maintained in a full condition during the months of February, March and April, which is the part of the year when frost would have the greatest potential to result in damage to the existing vineyards, and a maximum of three feet of water would be maintained in the reservoirs during the months of May through January. If the amount of water that evaporates from the proposed reservoirs throughout the year exceeds the threshold of 31 AFY, the project would result in a significant water use impact.

Evaporation from the reservoirs was estimated by a report titled *North Fork Vineyards Frost Protection Reservoirs #1, #2 & #3 – Analysis of Reservoir Evaporative Losses* (Monsoon Consultants, August 10, 2017), and the report is provided in Attachment 4. In summary, the report estimated net evaporative losses from the reservoirs based on a variety of factors, including the months of the year that the reservoirs would be maintained in a full condition; the months of the year that the reservoirs would contain three feet of water; precipitation that occurs throughout the year; and evaporative losses. Data regarding precipitation rates were obtained from the New Cuyama Fire Station records, and evaporative losses were based on data from California Irrigation Management Information System. Please refer to

Attachment 4 for additional information regarding the data used to calculate project-related evaporation losses. It was estimated that the combined average annual net evaporative losses from all three proposed reservoirs would be approximately 26.28 AFY. Therefore, net evaporative losses from the reservoirs would not exceed the water use threshold of 31 AFY and the project would result in a **less than significant** water use impact.

(l) Less than significant with mitigation: Grading and construction activities could result in temporary runoff, erosion, and the use of concrete and other substances that have the potential to result in short-term water quality impacts. To mitigate the project's potential short-term impacts to runoff and water quality, the project proposes to implement a variety of erosion/sedimentation control Best Management Practices. These measures include the use of silt fences and straw bales, and the maintenance of proposed erosion control measures throughout the rainy season (October 15 through April 15). In addition, proposed Mitigation Measure No. 7 requires the preparation and implementation of a Storm Water Pollution Prevention Plan, and proposed Mitigation Measure Nos. 8 and 9 include additional requirements to provide designated construction equipment washout and equipment storage areas. With implementation of these measures, potential short-term water quality impacts would be **less than significant**.

The operation of the proposed reservoirs would not require the use of fertilizers, pesticides or other substances that would have the potential to result in significant water quality impacts. The project would not result in the use of an on-site wastewater disposal system that could have the potential to contribute to the degradation of groundwater quality. Long-term erosion from proposed reservoir water impoundment berms would have the potential to result in erosion and sediment impacts to drainage channels adjacent to the project sites, however, this potential impact would be reduced to a less than significant level by complying with Grading Ordinance requirements and proposed Mitigation Measure No. 7, which requires the preparation and implementation of a Stormwater Management Plan and/or Erosion and Sediment Control Plan. Therefore, potential long-term erosion impacts of the project would be reduced to a **less than significant with mitigation**.

Cumulative Impacts: The proposed project would result in the use of approximately 26 acre feet of water that is subject to adopted water use thresholds. The project's water use would contribute to overdraft conditions in the Cuyama Valley and the general lowering of groundwater levels that have been documented. However, the adopted significance threshold of 31 AFY is also the point at which a project's use of water is determined to be a cumulatively considerable impact. Therefore, the project's use of groundwater would not be cumulatively considerable and the proposed project would result in an adverse but **less than significant** cumulative impact.

Mitigation and Residual Impact

The following mitigation measures would reduce the project's water resource impacts to a less than significant level:

8. **WatConv-04 Equipment Storage-Construction.** The Owner/Applicant shall designate a construction equipment filling and storage area(s) to contain spills, facilitate clean-up and proper disposal and prevent contamination from discharging to the storm drains, street, drainage ditches, creeks, or wetlands. The areas shall be no larger than 50 x 50 foot unless otherwise approved by P&D and shall be located at least 100 feet from any storm drain, water body or sensitive biological resources. **PLAN REQUIREMENTS:** The Owner/Applicant shall designate the P&D approved location on all plans for zoning clearance, grading and building permits. **TIMING:** The Owner/Applicant shall install the area prior to commencement of construction.

MONITORING: P&D compliance monitoring staff shall ensure compliance prior to and throughout construction.

9. **WatConv-05 Equipment Washout-Construction.** The Owner/Applicant shall designate a washout area(s) for the washing of concrete trucks, paint, equipment, or similar activities to prevent wash water from discharging to the storm drains, street, drainage ditches, creeks, or wetlands. Note that polluted water and materials shall be contained in this area and removed from the site daily. The area shall be located at least 100 feet from any storm drain, water body or sensitive biological resources. **PLAN REQUIREMENTS:** The Owner/Applicant shall designate the P&D approved location on all zoning clearance, grading and building permits. **TIMING:** The Owner/Applicant shall install the area prior to commencement of construction.

MONITORING: P&D compliance monitoring staff shall ensure compliance prior to and throughout construction.

5.0 INFORMATION SOURCES

5.1 County Departments Consulted

Police, Fire, Public Works, Flood Control, Parks, Environmental Health, Air Pollution Control District, LAFCO, Special Districts, Regional Programs, Other :

5.2 Comprehensive Plan:

☒ Seismic Safety/Safety Element	☐ Conservation Element
☐ Open Space Element	☐ Noise Element
☐ Coastal Plan and Maps	☐ Circulation Element
☐ ERME	
☐	☐

5.3 Other Sources

☒ Field work	☐ Ag Preserve maps
☒ Calculations	☒ Flood Control maps
☒ Project plans	☒ Other technical references
☐ Traffic studies	(reports, survey, etc.)
☐ Records	☒ Planning files, maps, reports
☒ Grading plans	☐ Zoning maps
☐ Elevation, architectural renderings	☒ Soils maps/reports
☒ Published geological map/reports	☒ Plant maps
☐ Topographical maps	☒ Archaeological maps and reports
	☐ Other
	☐
	☐

6.0 PROJECT SPECIFIC (*short- and long-term*) AND CUMULATIVE IMPACT SUMMARY

The proposed project does not have potential impacts that cannot be feasibly mitigated to less than significant levels.

- I. Project-Specific Impacts which are of unavoidable significance levels (Class I): None
- II. Project-Specific Impacts which are potentially significant but can be mitigated to less than significant levels (Class II): Biological Resources (short-term), Cultural Resources (short-term), Geologic Processes, Water Resources/Flooding (short-term).
- III. No potentially significant adverse cumulative impacts have been identified.

7.0 MANDATORY FINDINGS OF SIGNIFICANCE

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
1. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, contribute significantly to greenhouse gas emissions or significantly increase energy consumption, or eliminate important examples of the major periods of California history or prehistory?		X			
2. Does the project have the potential to achieve short-term to the disadvantage of long-term environmental goals?			X		
3. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects and the effects of probable future projects.)			X		
4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X		
5. Is there disagreement supported by facts, reasonable assumptions predicated upon facts and/or expert opinion supported by facts over the significance of an effect which would warrant investigation in an EIR ?			X		

Compliance with required mitigation measures would reduce potentially significant short-term, construction-related impacts to San Joaquin kit fox and American badger to a less than significant level. Compliance with required mitigation would avoid significant impacts to cultural resources that may be encountered during construction activities. The project's effects on air quality, traffic, water demand, and public services would be below adopted thresholds of significance.

8.0 PROJECT ALTERNATIVES

Not applicable.

9.0 INITIAL REVIEW OF PROJECT CONSISTENCY WITH APPLICABLE SUBDIVISION, ZONING AND COMPREHENSIVE PLAN REQUIREMENTS

Zoning

The proposed project is consistent with the requirements of the Santa Barbara County Land Use and Development Code (Inland Zoning Ordinance). The proposed AG-II-100 zoning of the site allows for the development of reservoirs more than 50,000 square feet in area with the approval of a Minor Conditional Use Permit.

Comprehensive Plan

The project will be subject to all applicable requirements and policies under the Santa Barbara County Land Use and Development Code, and the County's Comprehensive Plan. This analysis will be provided in the forthcoming Staff Report. The following policies will be addressed, among others:

1. Land Use Development Policy #4
2. Hillside & Watershed Protection policy # 1, 2, 3, 5, 6, 7
3. Historical and Archaeological Policy # 2, 3, 5
4. Visual Resources Policy # 2
5. Agricultural Element Goal 1.

10.0 RECOMMENDATION BY P&D STAFF

On the basis of the Initial Study, the staff of Planning and Development:

- Finds that the proposed project WILL NOT have a significant effect on the environment and, therefore, recommends that a Negative Declaration (ND) be prepared.
- X Finds that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures incorporated into the REVISED PROJECT DESCRIPTION would successfully mitigate the potentially significant

impacts. Staff recommends the preparation of an ND. The ND finding is based on the assumption that mitigation measures will be acceptable to the applicant; if not acceptable a revised Initial Study finding for the preparation of an EIR may result.

____ Finds that the proposed project MAY have a significant effect on the environment, and recommends that an EIR be prepared.

____ Finds that from existing documents (previous EIRs, etc.) that a subsequent document (containing updated and site-specific information, etc.) pursuant to CEQA Sections 15162/15163/15164 should be prepared.

Potentially significant unavoidable adverse impact areas:

 X With Public Hearing Without Public Hearing

PREVIOUS DOCUMENT:

PROJECT EVALUATOR: Steve Rodriguez **DATE:** May 26, 2017

11.0 DETERMINATION BY ENVIRONMENTAL HEARING OFFICER

 X I agree with staff conclusions. Preparation of the appropriate document may proceed.

____ I DO NOT agree with staff conclusions. The following actions will be taken:

____ I require consultation and further information prior to making my determination.

SIGNATURE: _____ **INITIAL STUDY DATE:** April 10, 2017 _____

SIGNATURE: _____ **NEGATIVE DECLARATION DATE:** May 26, 2017 _

SIGNATURE: _____ **REVISION DATE:** _____

SIGNATURE: _____ **FINAL NEGATIVE DECLARATION DATE:** August 11, 2017

12.0 ATTACHMENTS

1. Project Plans
- 2a. Biological Resources Assessment, February 24, 2016
- 2b. Peer Review of the Biological Resources Assessment, March 1, 2016
- 2c. Supplemental Biological Resources Information, June 24, 2016
3. San Joaquin Kit Fox Avoidance Measures
4. Analysis of Reservoir Evaporative Losses, August 10, 2017
5. Draft MND Comment Letters
 - State Clearinghouse
 - Native American Heritage Commissions
 - California Department of Transportation
 - California Department of Fish and Wildlife
 - Roberta Jaffee and Stephen Gliessman
 - Joe Haslett
 - Robert Ryan

Attachments 1 through 5 that were attached to this the Mitigated Negative Declaration dated August 11, 2017 have been removed and are now attached to the Proposed Final MND dated August 1, 2018, which is Attachment D of the Planning Commission Staff Report dated September 4, 2018.

- All grading shall conform to Santa Barbara County Code Chapter 14 and standards and requirements pertaining thereto, these construction drawings and the recommendations of the soils engineer and engineering geologist.
- Contractor to notify the county grading inspector and soils laboratory at least 48 hours before start of grad work or any pre-construction meeting.
- Contractor shall employ all labor, equipment and methods required to prevent his operations from producing dust in amounts damaging to adjacent property, cultivated vegetation and domestic animals or causing a nuisance to persons occupying buildings in the vicinity of the job site. Contractor shall be responsible for damage caused by dust from his grading operation.
- Before beginning work requiring exporting or importing of materials, the contractor shall obtain approval from Public Works Road Division for haul routes used and methods provided to minimize the deposit of soils on county roads. Grading/road inspectors shall monitor this requirement with the contractor.
- The Geotechnical Engineer shall provide observation and testing during grading operations in the field and shall submit a final report stating that all earth work was properly completed and is in substantial conformance with the requirements of the grading ordinance.
- Areas to be graded shall be cleared of all vegetation including roots and other unsuitable materials for a structural fill, then scarified to a depth of 6" prior to placing any fill. Call grading inspector for initial inspection.
- A thorough search shall be made for all abandoned man-made facilities such as septic tank systems, fuel or water storage tanks, and pipelines or conduits. Any such facilities encountered shall be removed and the depression properly filled and compacted under observation of the geotechnical engineer.
- Areas with existing slopes which are to receive fill materials shall be keyed and benched. The design and installation of the roadway shall be per the geotechnical engineer's recommendation or per County Standard Detail No. G-13.
- Fill materials shall be spread in lifts not exceeding 6" in compacted thickness, moistened or dried as necessary to near optimum moisture content and compacted by an approved method. Fill materials shall be compacted to a minimum of 90% maximum density as determined by 1957 ASTM D-1557-01 modified proctor (ASHO) test or similar approved methods. Some fill areas may require compaction to a greater density if called for in the construction documents. Soil tests shall be conducted at not less than one test for each 18" of fill and/or for each 500 cubic yards of fill placed.
- Cut slopes shall not exceed a grade of 1 1/2 horizontal to 1 vertical. Fill and combination fill and cut slopes shall not exceed 2 horizontal to 1 vertical. Slopes over three feet in vertical height shall be planted with approved perennial or treated with equally approved erosion control measures prior to final inspection.
- Surface drainage shall be provided a minimum of 2% for 5 feet away from the foundation line of any structure.
- All trees that are to remain on site shall be temporarily fenced and protected around the drip line during grading.
- An erosion and sediment control plan shall be required as part of the grading plan and permit requirements.
- "Best Management Practices for Construction Activities: Eroded sediments and other pollutants must be retained on-site and must not be transported from the site via sheet flow swales, area drains, natural drainage courses, or wind. Stockpiles of earth and other construction related materials must be protected from being transported from the site by forces of wind or water. Fuels, oils, solvents, and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills may not be washed into the drainage system. Excess or waste concrete may not be washed into public way or any other drainage system. Provisions must be made to retain concrete wastes on site until they can be disposed as solid waste. Trash and construction related solid waste must be deposited into a covered waste receptacle to prevent contamination of rainwater and dispersal by wind. Sediments and other material may not be tracked from the site by vehicular traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental deposition shall be swept up immediately and may not be washed down by rain or other means. Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to minimize erosion by wind and water."
- If grading occurs during Nov 1 through Apr 15, no grading shall occur unless approved erosion and sediment control measures are in place. Discharges of sediment from the project site may result in a Stop Work Order.
- All earthwork on hillsides, sloping or mountainous terrain shall be stabilized to protect and prevent loss of soils, as necessary, year-round.

Earthwork Estimates

Cut: 130,280 C.Y. Fill: 127,900 C.Y. Import: 0 C.Y. Export: 0 C.Y. Quantities based on 30% shrinkage

Erosion Control Notes

- Erosion control measures shall be implemented on all projects and shall include source control, including protection of stockpiles, protection of slopes, protection of all disturbed areas, and protection of accesses. In addition, perimeter containment measures shall be placed prior to the commencement of grading and site disturbance activities unless the Public Works Department determines measures to be unnecessary based upon location, site characteristics or time of year. The intent of erosion control measures shall be to keep all sediment from entering a swale, drainage way, watercourse or onto adjacent properties.
- Site inspections and appropriate maintenance of erosion control devices shall be conducted and documented prior to, during, and after rain events.
- The developer shall be responsible for the placement and maintenance of all erosion control devices as specified by the approved plan until such time that the project is accepted as complete by the Public Works Department. Erosion control devices may be relocated, deleted or added as necessary during the project. Erosion control devices shall be maintained. Additional erosion control devices shall be placed at the discretion of the Engineer of Work, County Inspector, SWPPP Monitor, or RWQCB Inspector. Guidelines for determining appropriate erosion control devices are included in the appendix of the Public Improvement Standards.
- All erosion control devices shall be the first order of work and shall be in place between Oct 15 and April 15 or anytime when the rain probability exceeds 30%. This work shall be installed or applied after each area is graded and no later than five (5) working days after the completion of each area.
- The Engineer of Work and the Public Works Department shall be notified before October 15 for inspection of installed erosion control devices.
- A standby crew for emergency work shall be available at all times during the rainy season (October 15 through April 15). Necessary materials shall be available and stock piled at convenient locations to facilitate rapid construction or maintenance of temporary devices when rain is imminent.
- Permanent erosion control shall be placed and established with 90% coverage on all disturbed surfaces other than paved or gravel surfaces, prior to final inspection. Permanent erosion control shall be fully established prior to final acceptance. Temporary erosion control measures shall remain in place until permanent measures are established.
- In the event of a failure, the developer and/or his representative shall be responsible for cleanup and all associated costs or damages.
- All projects involving site disturbance of one acre or greater shall comply with the requirements of the National Pollutant Discharge Elimination System (NPDES). The developer shall submit a Notice of Intent (NOI) to comply with the General Permit for Construction Activity with the Regional Water Quality Control Board (RWQCB). The developer shall provide the County with the Waste Discharge Identification Number (WDID #) or with verification that an exemption has been granted by RWQCB.

- WDID# _____
- Person to contact 24 hours a day in the event there is an erosion control/sedimentation problem (Storm Water Compliance Officer):

Name Kevin Merrill

Local Phone Number 310-3989

Project Air Quality Control Notes:

During Construction the contractor shall designate a person or persons to monitor the Dust Control Program and to order increases measures as necessary to prevent the transport of dust off-site. Their duties shall include holiday and weekend periods when work may or may not be in progress. The name and telephone number for such persons shall be provided to the APCD prior to the commencement of construction.

The measures for dust control are as follows but not limited to:

Reduce the amount of disturbed area where possible,

- Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever wind speeds exceed 15mph. Reclaimed (non-potable) water should be used whenever possible.
- All dirt stockpile areas shall be sprayed daily as needed.
- Exposed ground areas that are planned to be reworked at dates later than one month after initial grading should be seeded with a fast germinating native grass seed and watered until vegetation is established.
- All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the ACCD.
- All external slopes shall be hydroseeded as soon as possible upon completion.
- Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
- All trucks hauling dirt, sand, soil, or other loose material are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114.
- Install wheel washers where vehicles enter and exit paved roads and streets, or wash off trucks and equipment leaving the site.
- Prior to final inspection all disturbed areas shall be vegetated with a fast-growing, native seed mix.

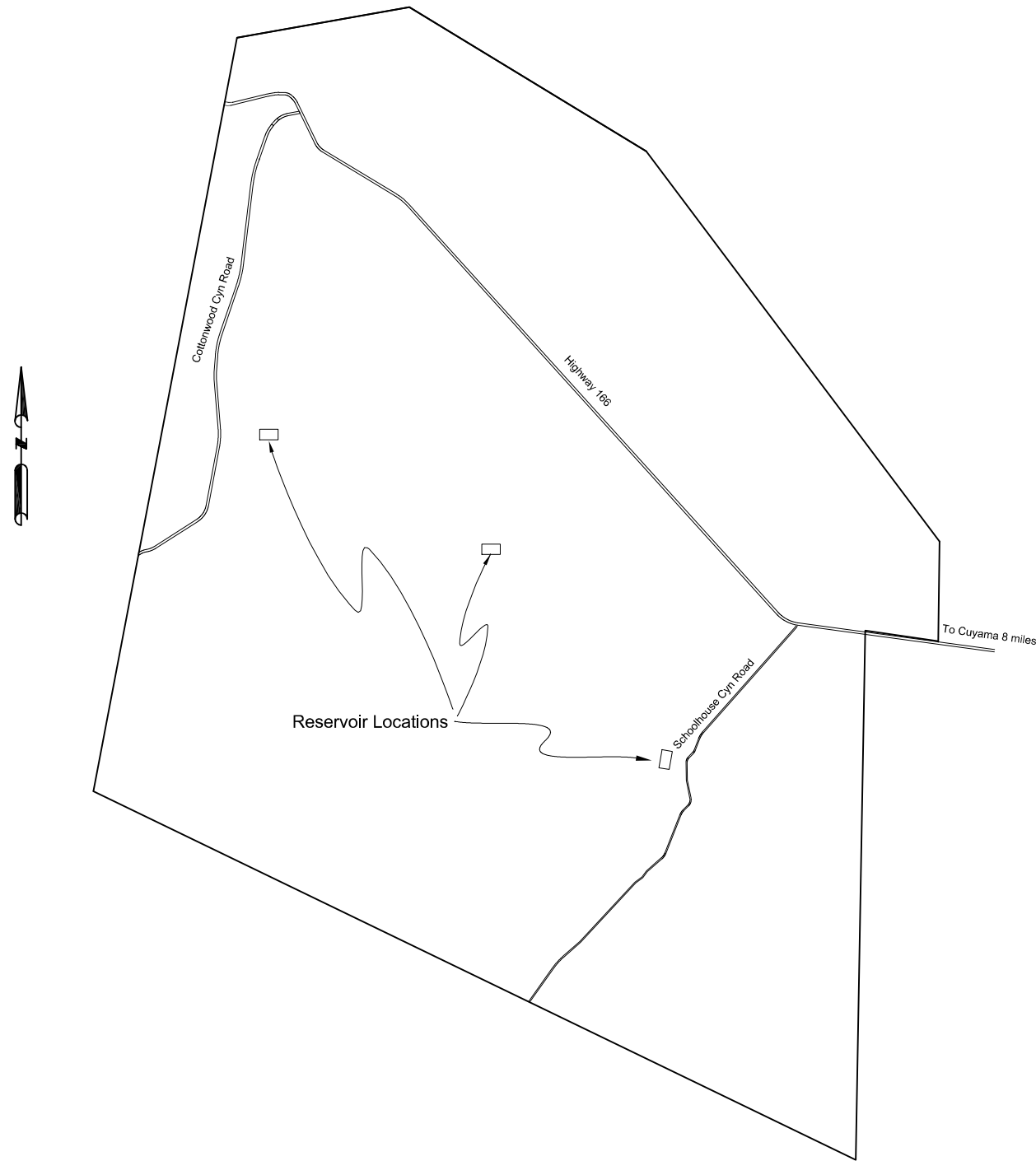
General Notes

- No construction shall be started without plans approved by the County Planning Department. The Planning Department shall be notified at least 24 hours prior to the start of construction and the time and location for the preconstruction conference.
- All construction work and installations shall conform to the County Standards and Specifications.
- Soils tests shall be done in accordance with the County Standards. The test results shall clearly indicate the location and source of materials.
- Compaction tests shall be made on all embankment materials, subgrades and ditch backfill.
- There will be no need for special concrete inspection. Concrete for the anchor pad shall be 2000 psi. The rebar shall be inspected prior to the placement of the concrete. All concrete and the two sack slurry for the anti-seep collars and ditch backfill where shown shall be properly vibrated.
- The Design Engineer shall inspect the installation of the HDPE Liner. The liner shall be installed by a contractor specializing in lining ponds.
- The Engineer of Record shall certify that the improvements when completed are in accordance to the plans prior to the request for Final Inspection. As-built plans are to be prepared after construction is completed. The Engineer certifying the improvements shall be present at the Final Inspection.
- Final Reports for grading and earthwork shall be prepared in accordance with the requirements of the UBC, Chapter 33.
- Upon completion of the work, the Geotechnical Engineer shall submit to the Engineer of Record a complete summary of all testing done during the project.
- The Construction Contractor shall maintain a current, complete and accurate record of all changes which deviate from the approved plans. No changes shall be made without the prior approval of the Engineer of Record and the County.

North Fork Reservoirs #1-3

APN 147-020-045

Vicinity Map



Scope of Work

The work consists of constructing three new lined reservoirs for irrigation purposes. All areas to receive fill shall be excavated a minimum of three feet, the exposed surface scarified and moisture conditioned, then recompacted to 90% relative compaction. The intent is to balance the earthwork with no import or export. The completed interior slopes shall be fine graded and all rocks removed, then rolled with a smooth drum roller. A 40 mil HDPE geomembrane liner will then be installed on the slopes and bottom. The liner will be installed per manufacturer's recommendations by a company specializing in liner installation. A five foot by twenty three foot by eight inch reinforced concrete pad for anchoring the liner shall be constructed around the pump inlet pipes. No special inspection for the concrete work shall be required. A 6 foot non-climb fence will be built around the exterior perimeter. Coast Guard Approved buoys with a minimum of 90 feet of line shall be placed at no more than 200 foot intervals around the top interior slope of the reservoirs. The sources of water are pvc waterlines from existing wells and no surface water shall enter the reservoir. Valving, filters and pumps will be installed after the reservoirs are constructed by the Irrigation Contractor and are not part of this permit. This contract is for stubbing inlet pipes through the exterior slope for future connection to the fill and transfer lines by an Irrigation Contractor. These pipes shall have 2 sack concrete slurry anti-seep collars. A 15" PVC Drop Pipe Outlet Structure will serve as an emergency overflow in the event the high water limit switch fails and is sized to prevent the reservoir from overtopping. Access to the reservoir is by existing dirt farm roads. No driveways will be constructed. The existing farm fields sheet flow gently across the locations and earthen swales will be constructed around the perimeters where necessary to keep any surface flow away from the toe of the fill slopes. No electrical work is included in this permit.

Benchmark and Basis of Bearing

Benchmark is a 2 1/2" aluminum disc, stamped h-2,
Cal-Trans Monument sb166 pm-55.01
elevation = 1824.55 NAVD88

Basis of Bearing is GPS established true north from NAD
83(92) from Cal-Trans Monuments
sb166 pm-55.01 and sb166 pm-55.43

Project Information

Address: Hwy 166, Cuyama Valley

APN 147-020-045

Zoning AG

Project Description: Construct three 49 ac-ft Reservoirs for irrigation and frost protection purposes

Pre-Construction Meeting

Prior to construction a pre-construction meeting is required with the inspector to go over the special inspection reporting requirements, final and progress reports, & erosion control. E-mail inspection-North@countyofsb.org

Contacts:

Owner:

Grapevine Land Management

Matt Turrentine
444 Higuera St Suite 202
San Luis Obispo, CA 93401
805 312-1828

Engineer:

Tom A Howell

1812 N Vine
Santa Maria, CA 93454
805 925-5311

Geotechnical Engineer: GSI Soils, Inc

Rick Amero
524 East Chapel
Santa Maria, CA 93454
805 349-0140

Sheet Index

Sheet 1: Front sheet, notes and title

Sheet 2: Overall Layout & Existing Contours

Sheet 3: Overall Site Piping Layout

Sheet 4: Reservoir #1 Grading Plan

Sheet 5: Reservoir #1 Details

Sheet 6: Reservoir #2 Grading Plan

Sheet 7: Reservoir #2 Details

Sheet 8: Reservoir #3 Grading Plan

Sheet 9: Reservoir #3 Details

Sheet 10: Common Details

Sheet 11: Erosion and Sedimentation Control Plan

Sheet 12: BMP Details

Engineer's Certificate

I, Tom A Howell, RCE 27037, Engineer of Record, hereby certify that these plans are in accordance with the following codes: _____ Date: _____

2013 California Bldg Code (0112 IBC), Appdx Chp 33, 1997 UBC

2013 California Electric Code (2011 NEC)

2013 California Mechanical Code (2012 IAMPO UMC)

2013 California Plumbing Code (2012 IAMPO UPC)

California Title 24: 2011 California Energy Code and Accesibility Standards

County Ordinance(s) Title 19 (Building), (Inland)

Geotechnical Engineer's Certificate

I have reviewed the plans and specifications and have found them to be in

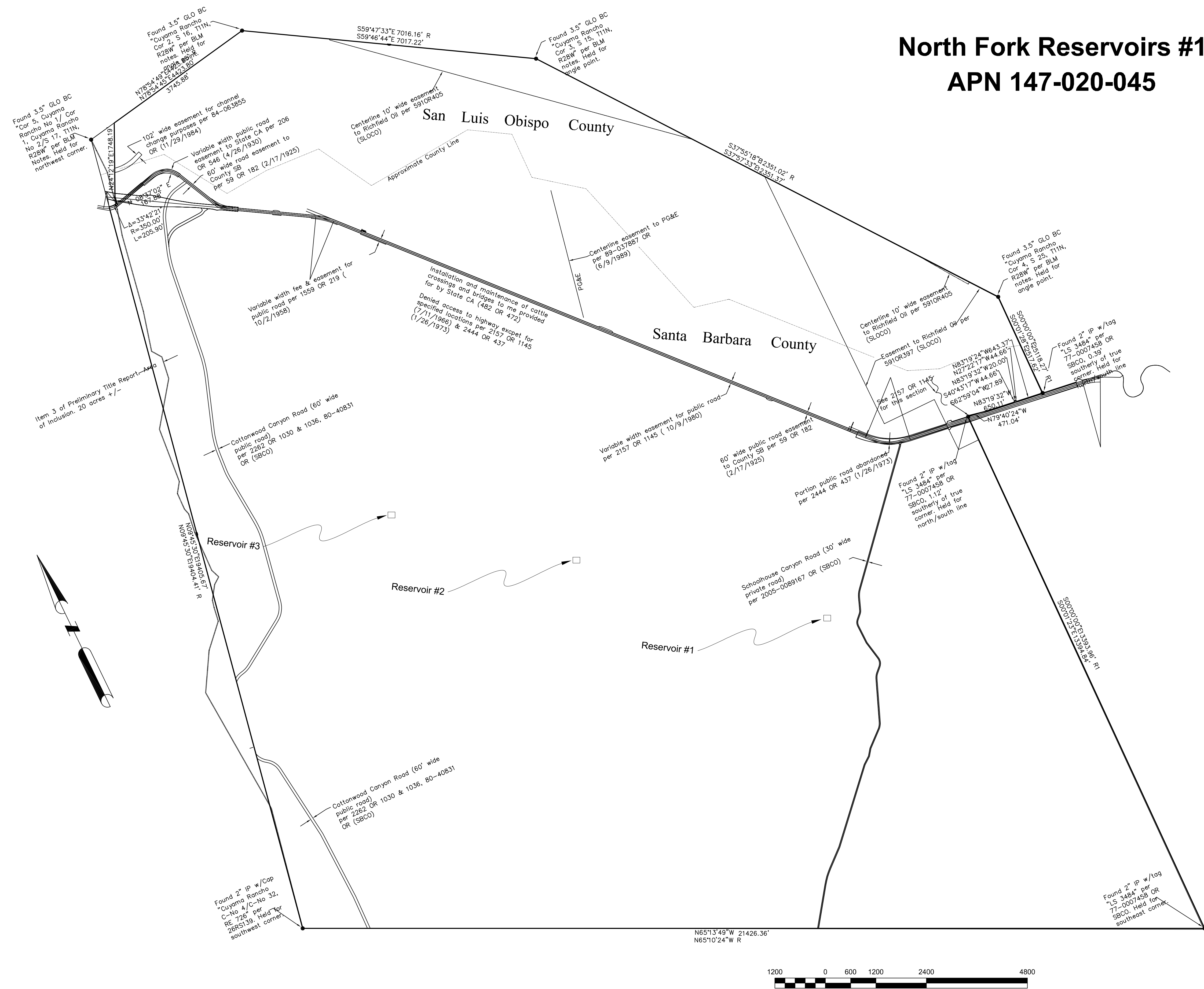
substantial conformance with the recommendations as found in my Soll Investigation.

Date: _____



North Fork Vineyards		
DRAWN <i>TH</i>	DATE <i>1/09/17</i>	<i>49 Ac-ft Reservoirs</i> <i>Hwy 166</i> <i>Cuyama, CA</i>
APPROVED	DATE	<i>Cover Sheet</i>
SCALE <i>Varies</i>	SHEET <i>1 of 12</i>	PROJECT NO. <i>101715-6233</i>

North Fork Reservoirs #1-3
APN 147-020-045



North Fork Vineyards		
DRAWN TH	DATE 1/09/17	49 Ac-ft Reservoirs Hwy 166 Cuyama, CA Overall Property
APPROVED	DATE	PROJECT NO. 101715-6233
SCALE 1"=1200'	SHEET 2 of 12	

North Fork Vineyard Frost Protection Overall Site Plan



North Fork Vineyards		
DRAWN	DATE	Reservoirs #1-3
TH	1/09/17	Overall Piping Plan
APPROVED	DATE	Existing Piping
SCALE	SHEET	PROJECT NO.
1"=600'	3 of 12	101715-6233

Reservoir # 1 Grading Plan

Pond #1 Report

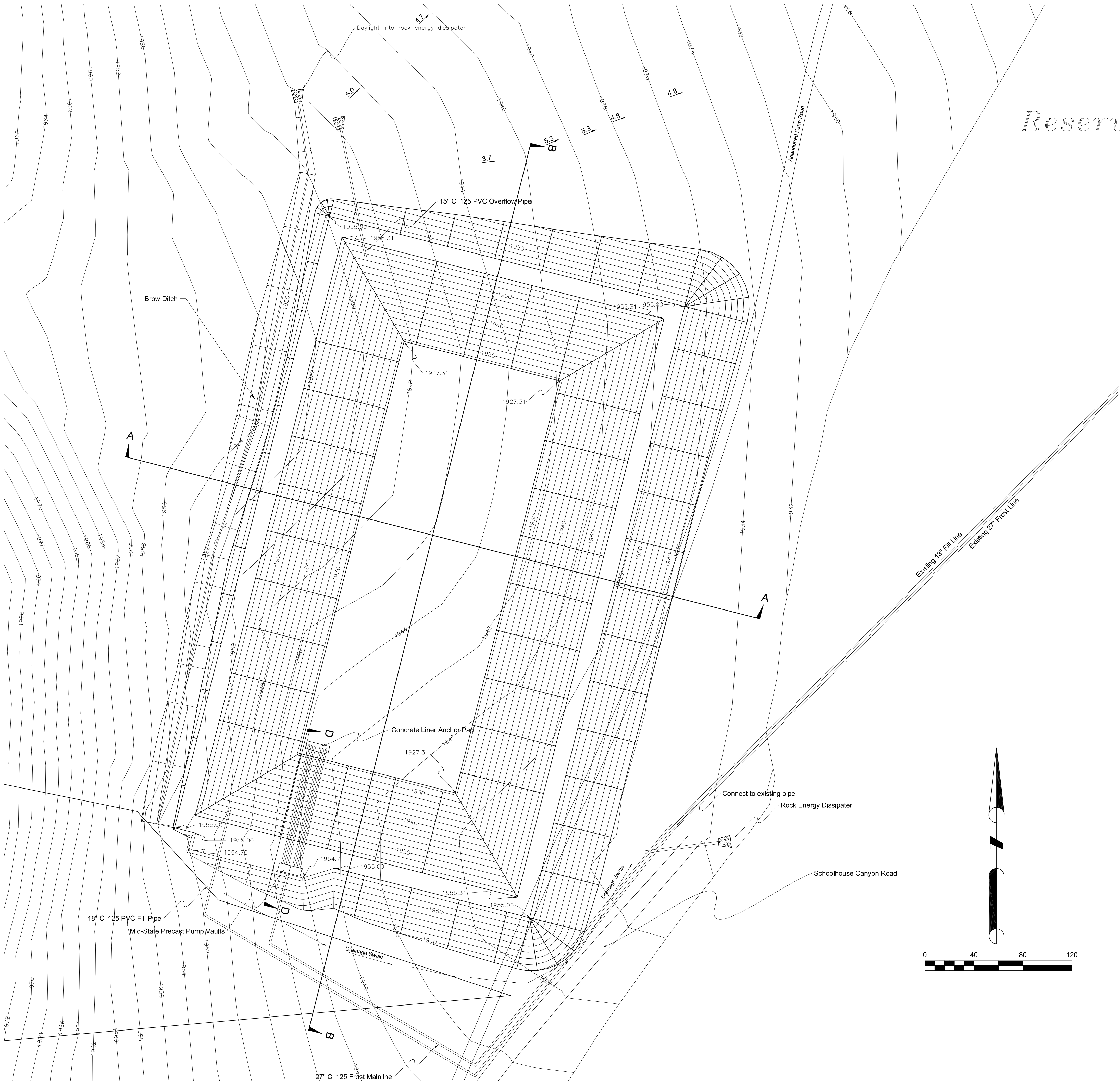
Top of dam elevation: 1955.3
Bottom of pond elevation: 1927.3
Top of dam width: 14.0
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50:1

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 44,062 C.Y.
Total fill: 44,589 C.Y.
Total Disturbed Area: 4.85 Acres

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1927.31	0.00	1.046
1929.31	2.20	1.158
1931.31	4.63	1.274
1933.31	7.30	1.395
1935.31	10.21	1.520
1937.31	13.38	1.650
1939.31	16.81	1.784
1941.31	20.52	1.923
1943.31	24.51	2.066
1945.31	28.79	2.214
1947.31	33.37	2.366
1949.31	38.26	2.523
1951.31	43.46	2.684
1953.31	49.00	2.850
1955.31	54.87	3.020



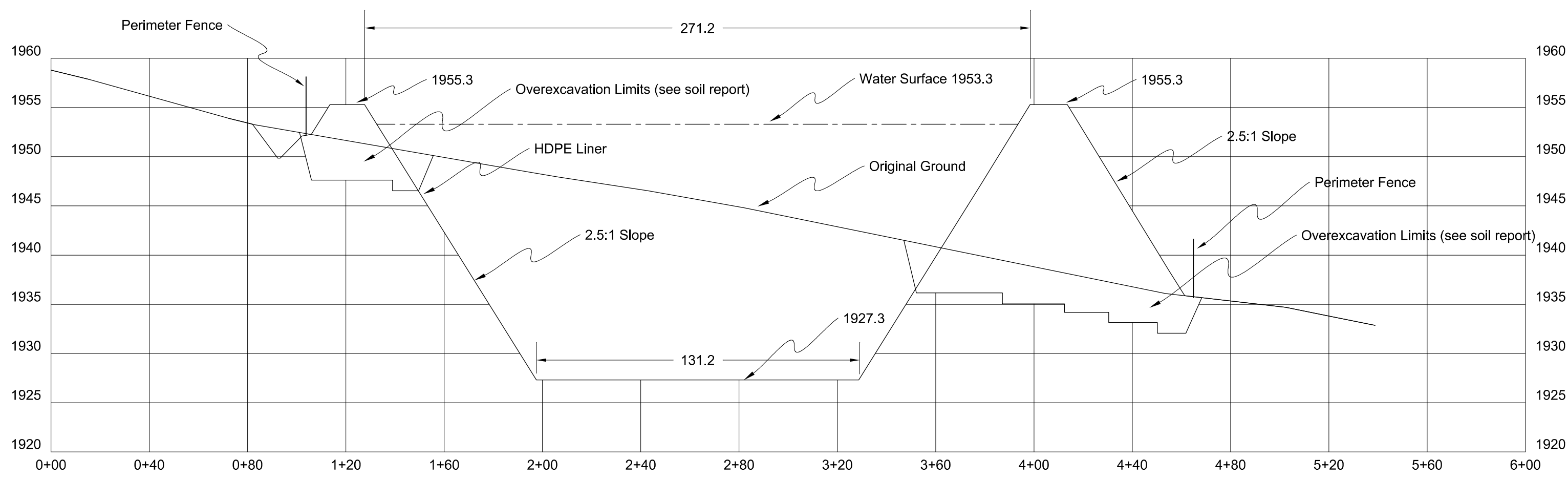
Revisions:
1/03/2017 Added 15" CMP Culvert
Moved Outlet Pipe
Lengthened Drainage Swales

North Fork Vineyards

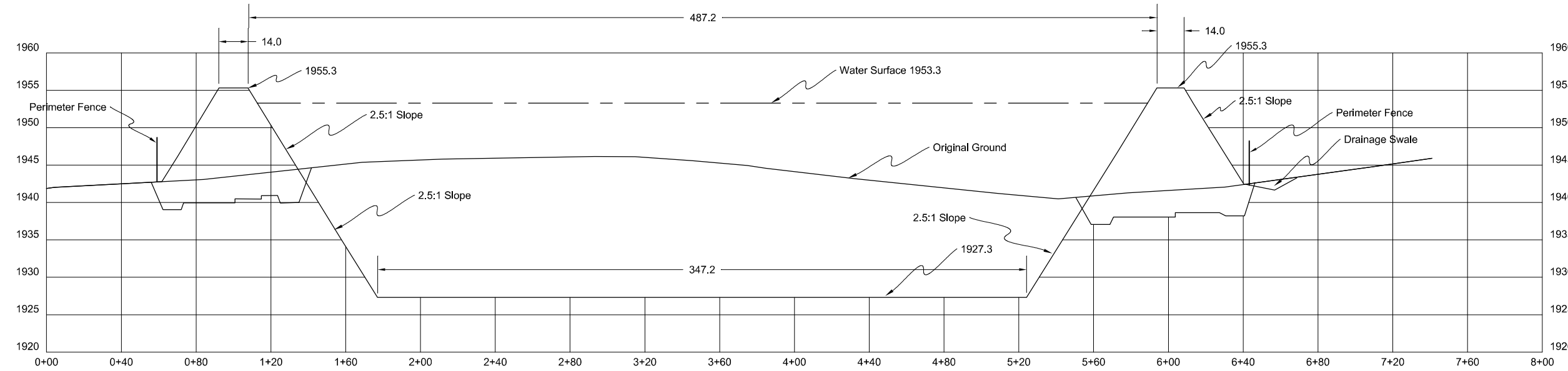
DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #1 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 4 of 12	PROJECT NO. 101715-6233

Reservoir #1 Details

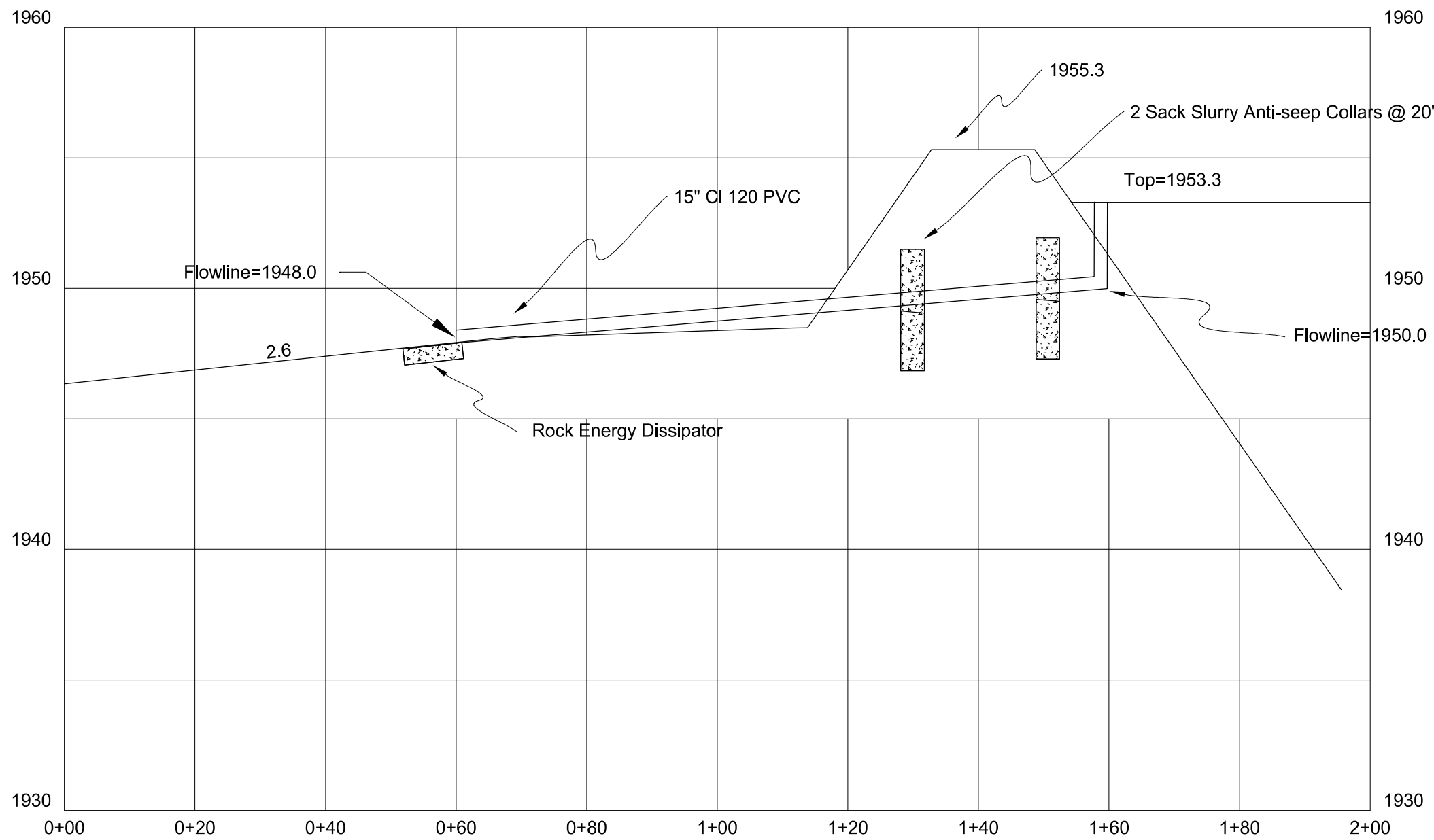
Reservoir #2 Section A-A



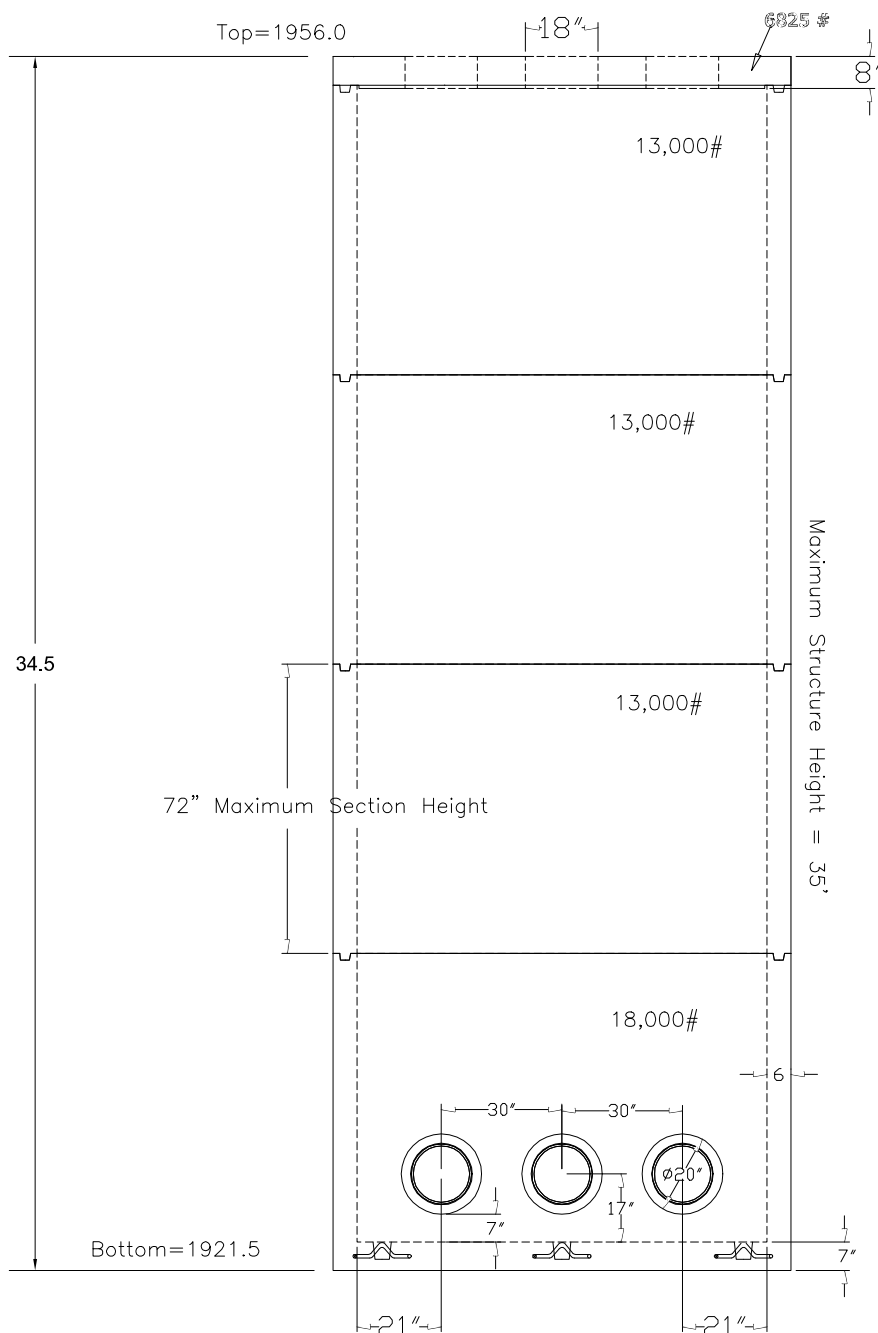
Reservoir #1 Section B-B



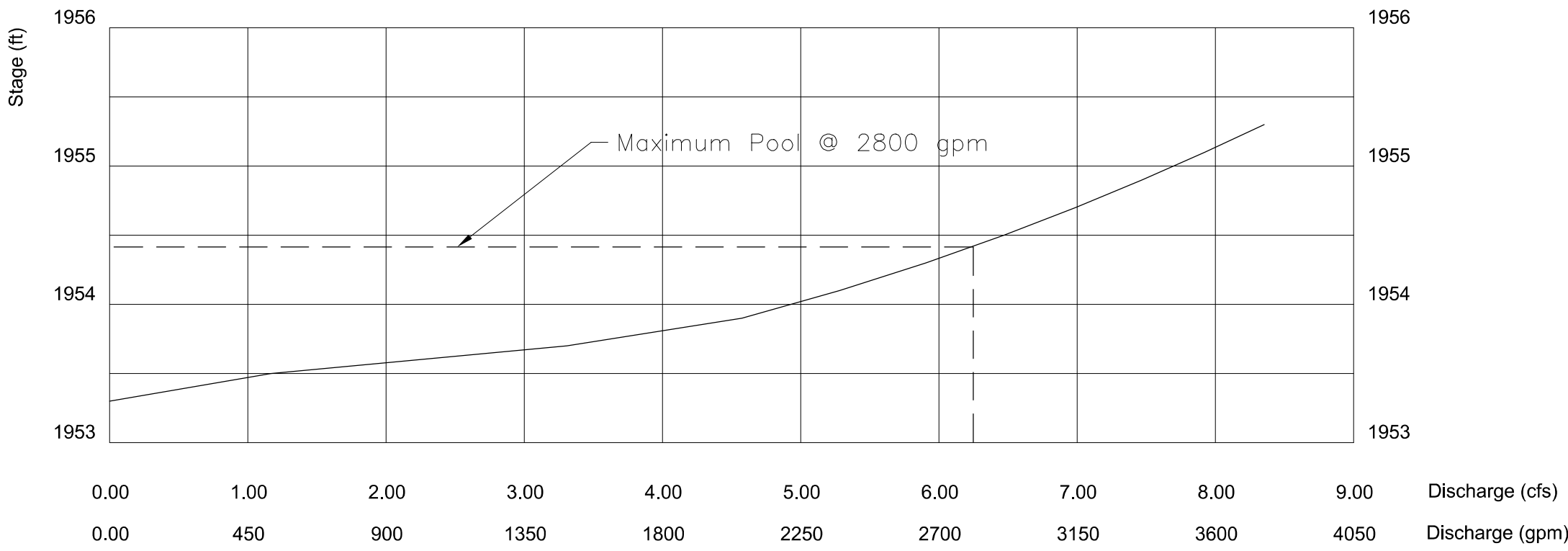
Reservoir #1 Overflow Detail



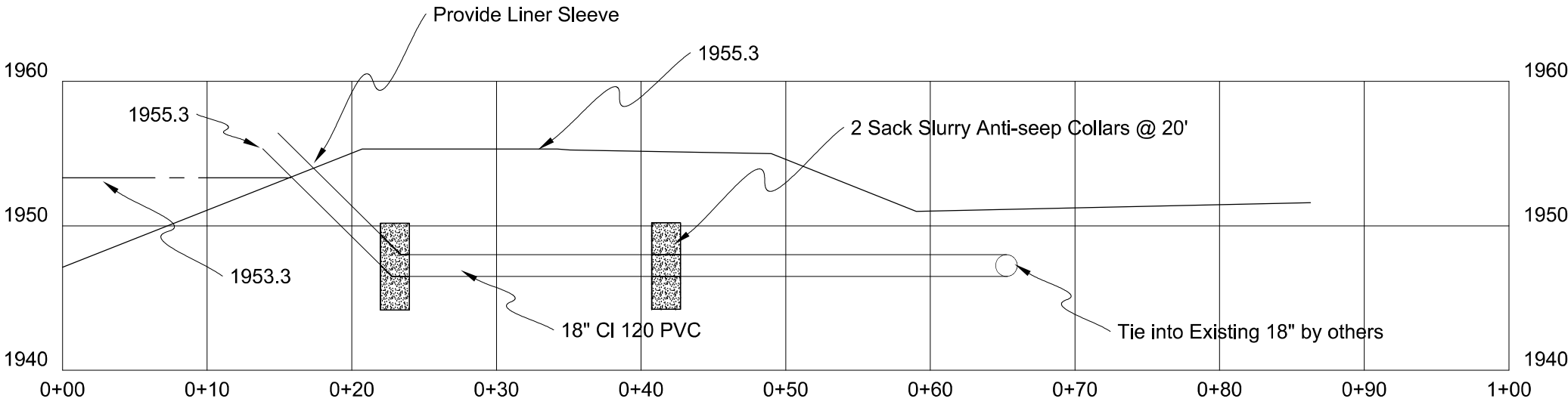
Mid-State Concrete Products
Pump Housing Vault Reservoir #1



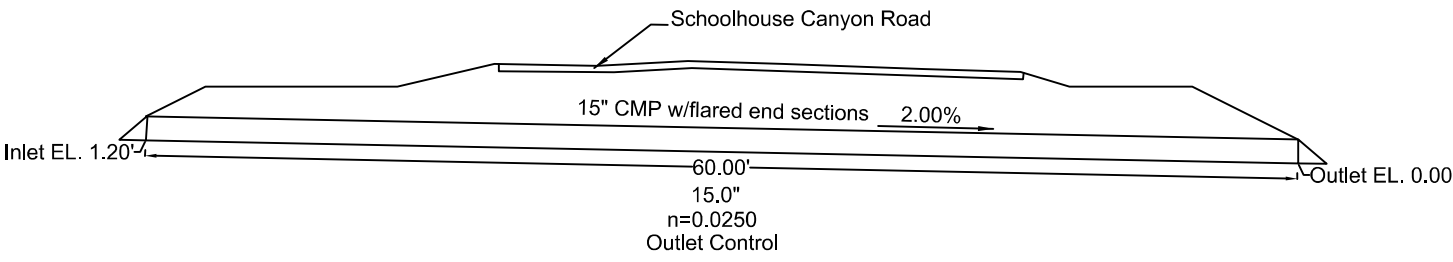
Pond #1 Stage-Storage



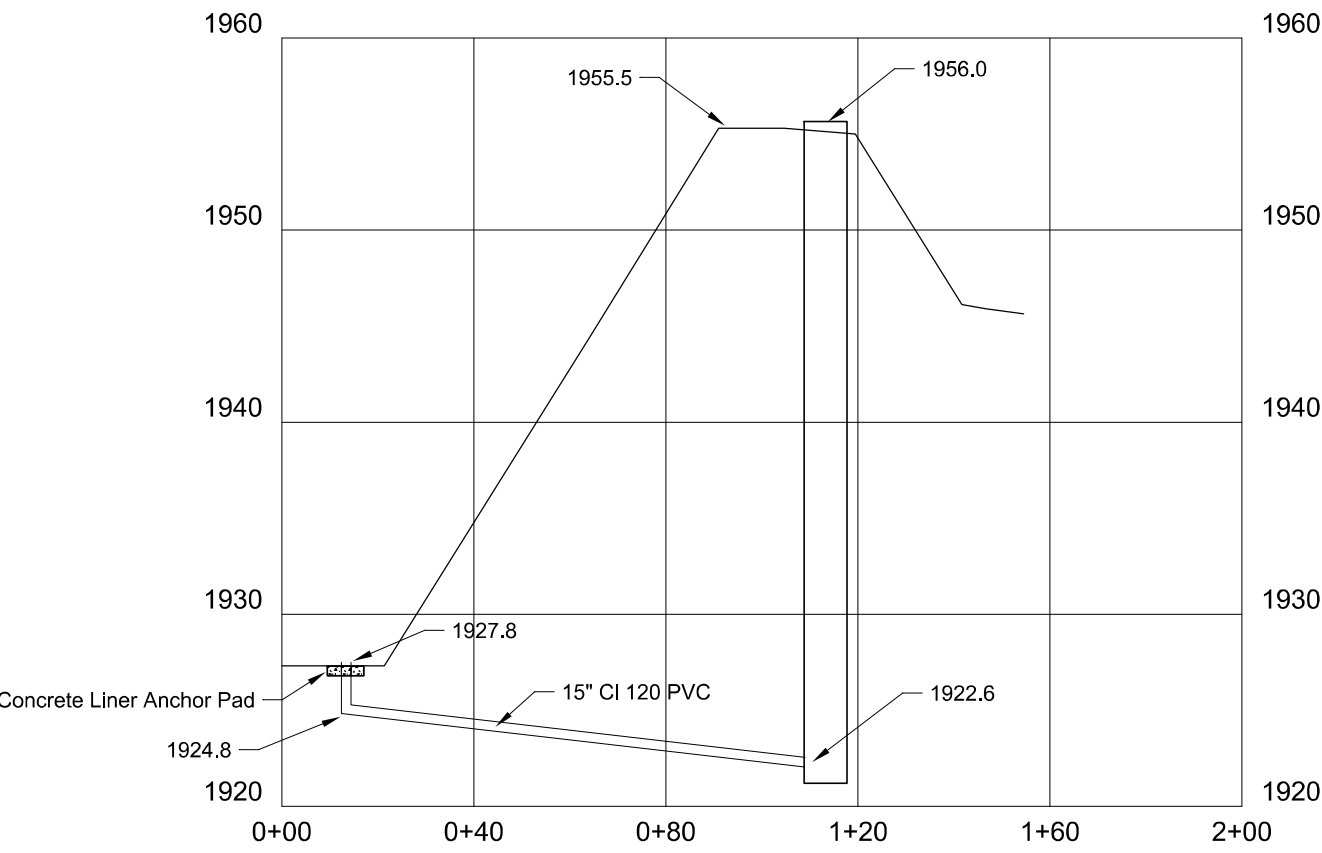
Reservoir #1 Filler Pipe



15" CMP Under Schoolhouse Road



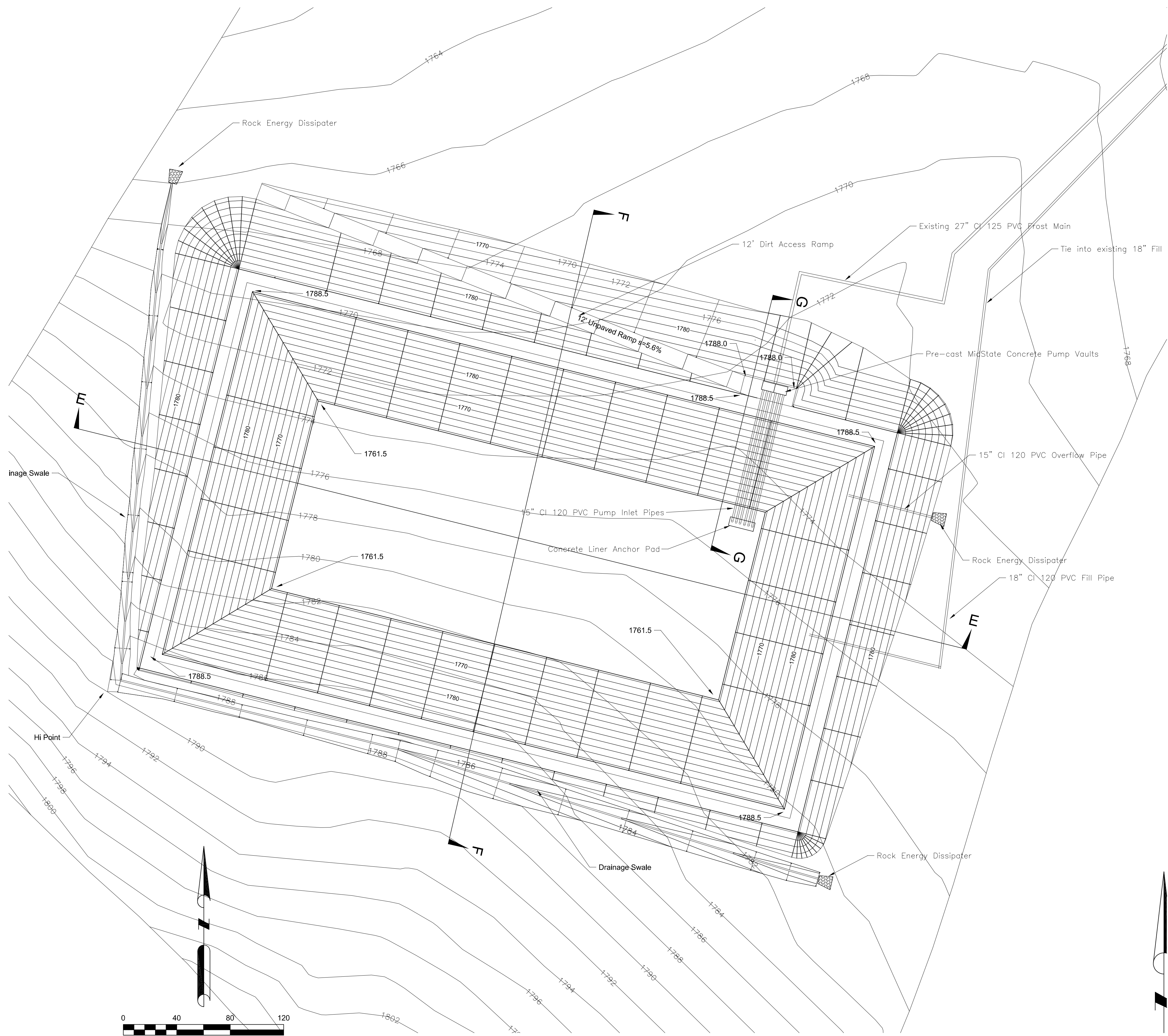
Reservoir #1 Pump Inlet



Revisions:
1/03/2017 Added 15" CMP Culvert Detail
Revised Stage-Storage Diagram
Revised Outlet Pipe Detail

North Fork Vineyards		
DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #1 Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 5 of 12	PROJECT NO. 101715-6233

Reservoir #2 Grading Plan



Pond Report

Tue Oct 20 14:36:54 2015

Top of dam elevation: 1788.50
Bottom of pond elevation: 1761.50
Top of dam width: 14.00
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50:1
Existing Surface: C:\Carlson Projects\North Fork\Reservoir 2B OG.tin

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 44,064.35 C.Y.
Total fill: 1 42,205.16 C.Y.

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1761.50	0.00	1.146
1763.50	2.40	1.259
1765.50	5.04	1.378
1767.50	7.91	1.502
1769.50	11.05	1.630
1771.50	14.44	1.762
1773.50	18.10	1.899
1775.50	22.03	2.040
1777.50	26.26	2.186
1779.50	30.73	2.336
1781.50	35.60	2.490
1783.50	40.74	2.649
1785.50	46.20	2.813
1787.50	52.00	2.981
1788.50	55.02	3.067

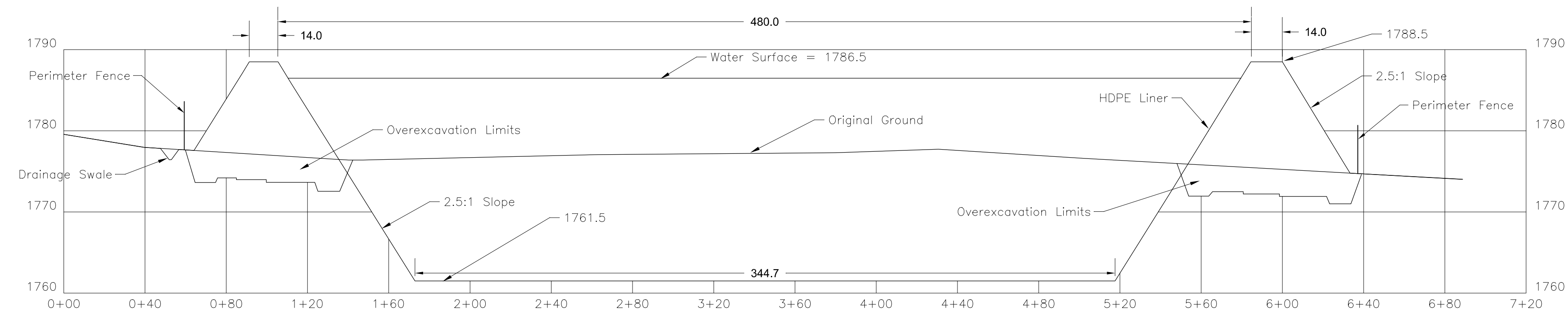
Area in Cut : 148,297.1 S.F.
Area in Fill: 186,122.7 S.F.



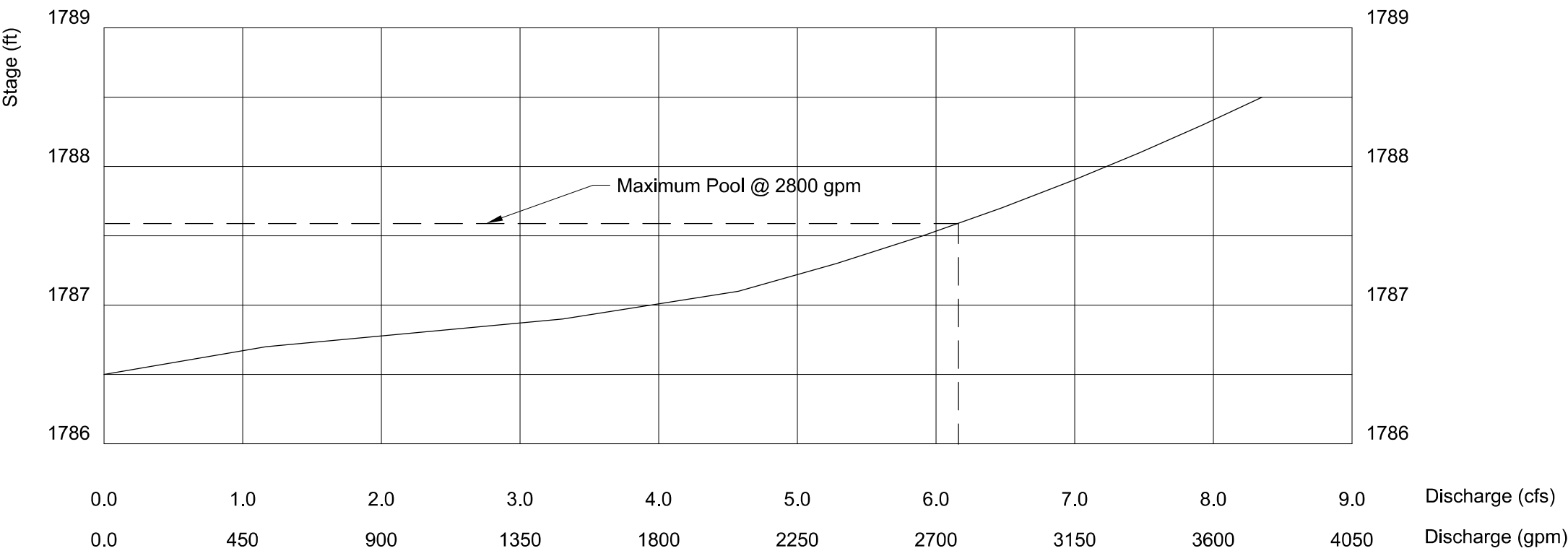
North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #2 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 6 of 12	PROJECT NO. 101715-6233

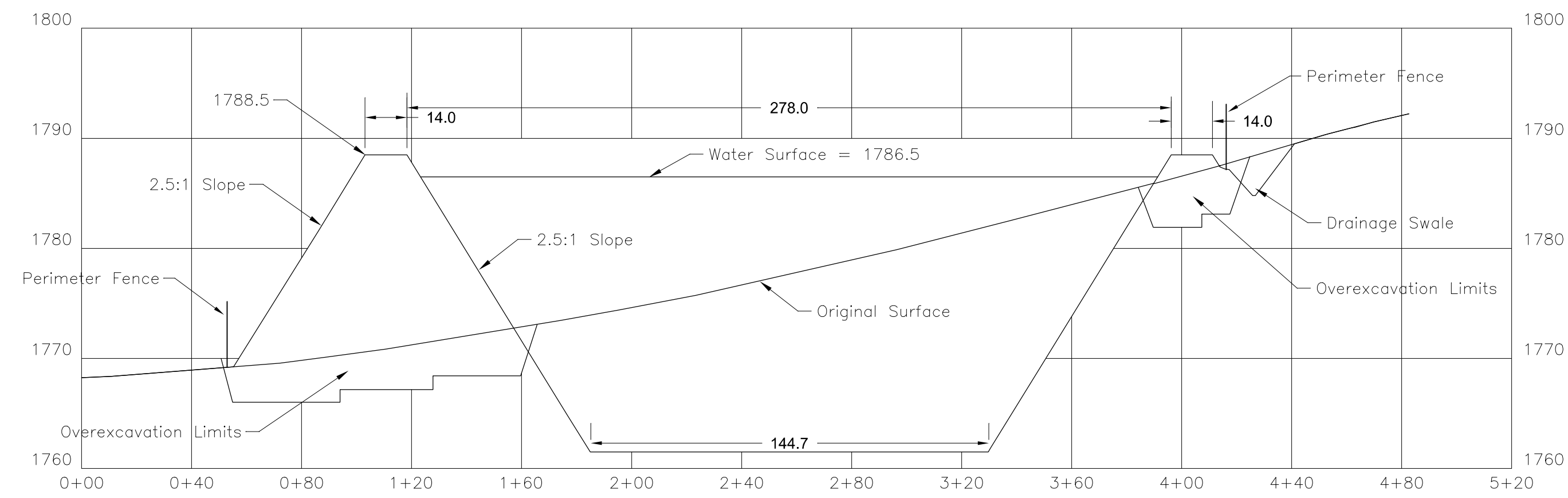
Reservoir #2 Section E-E



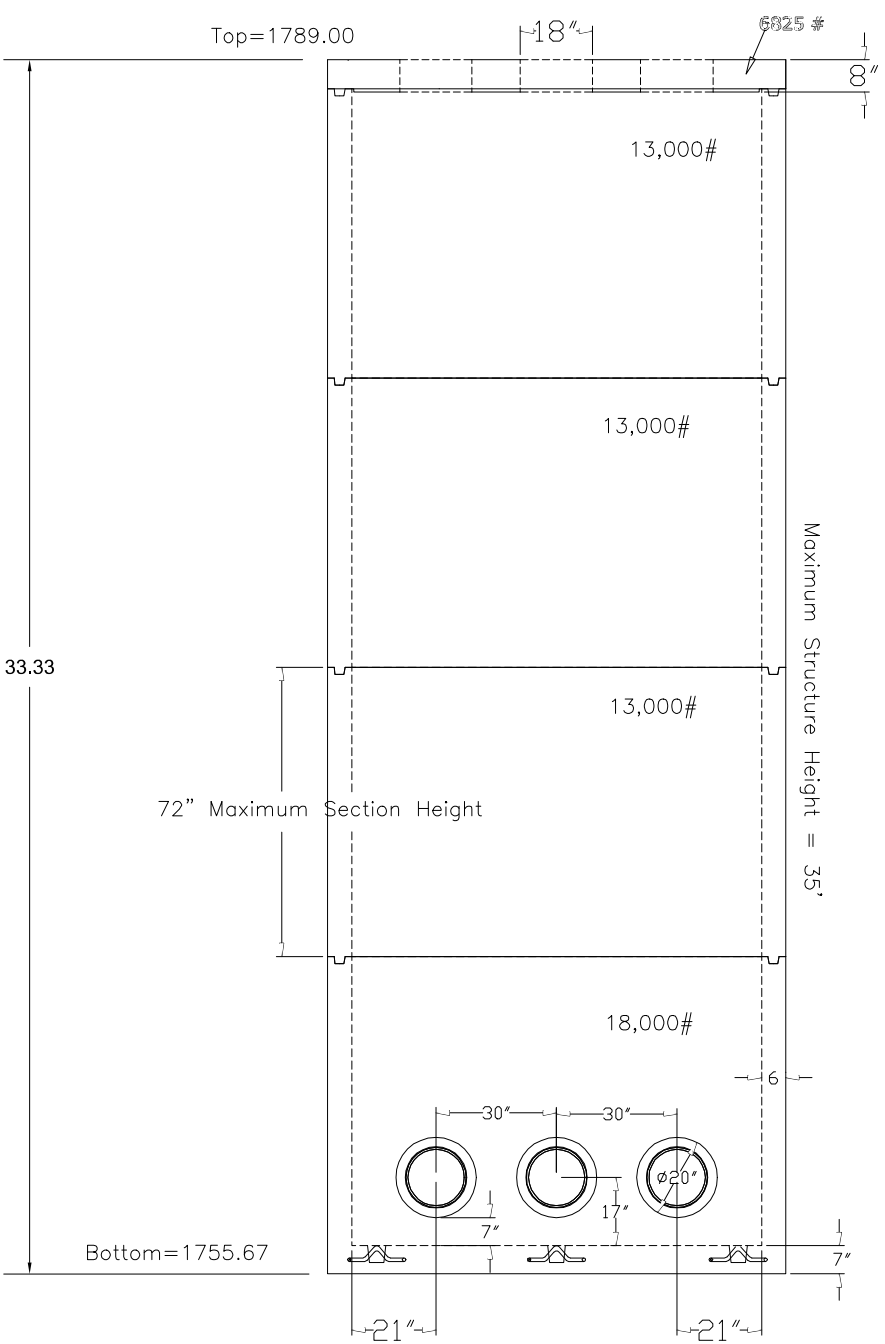
Reservoir #2 Stage Storage



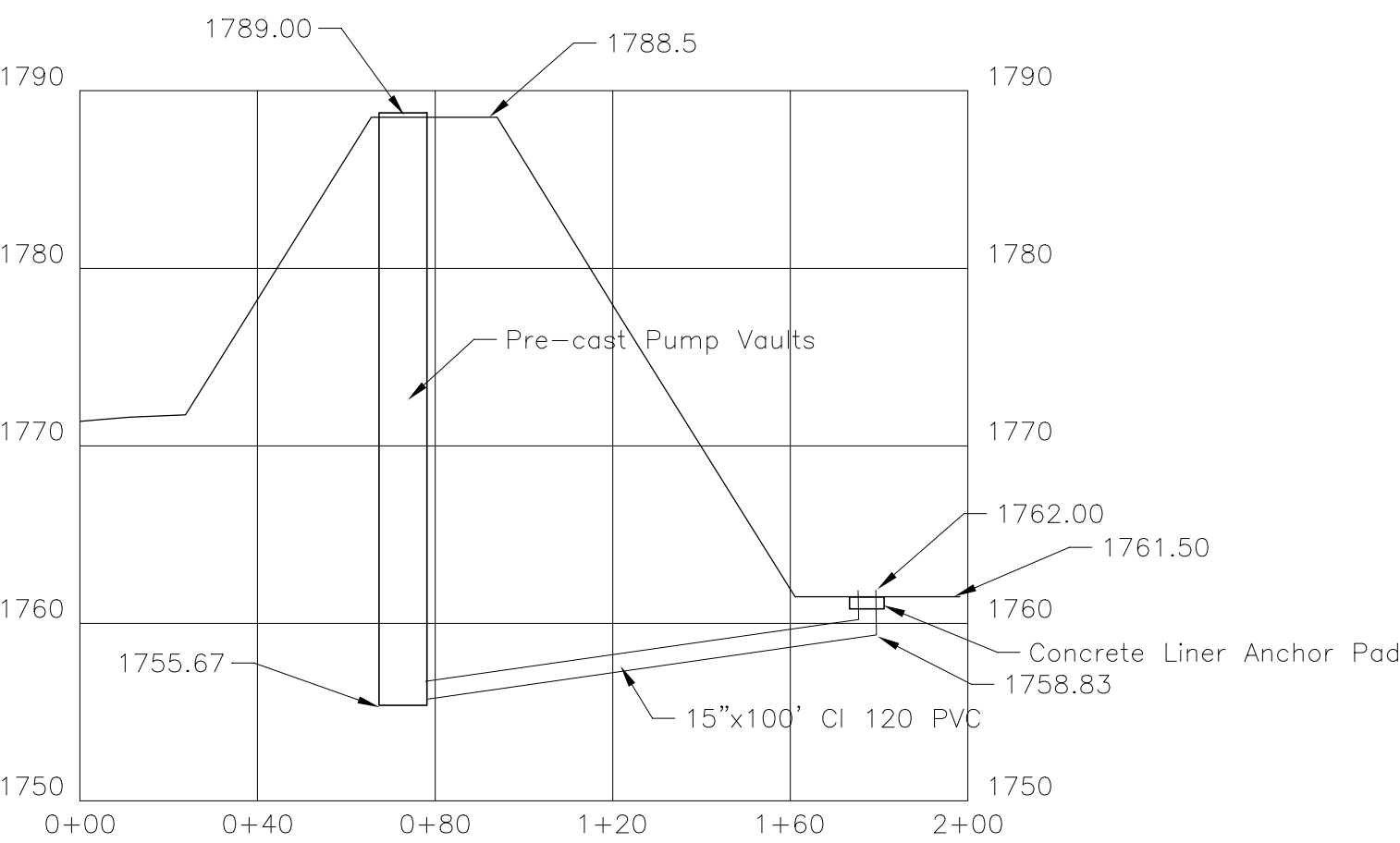
Reservoir #2 Section F-F



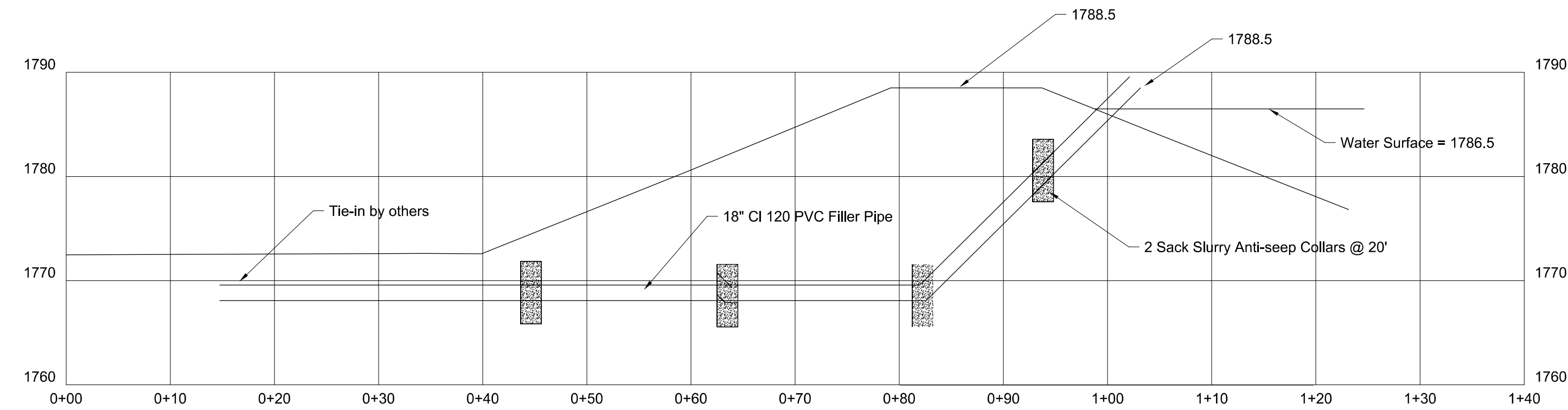
Reservoir #2 Pump Vaults



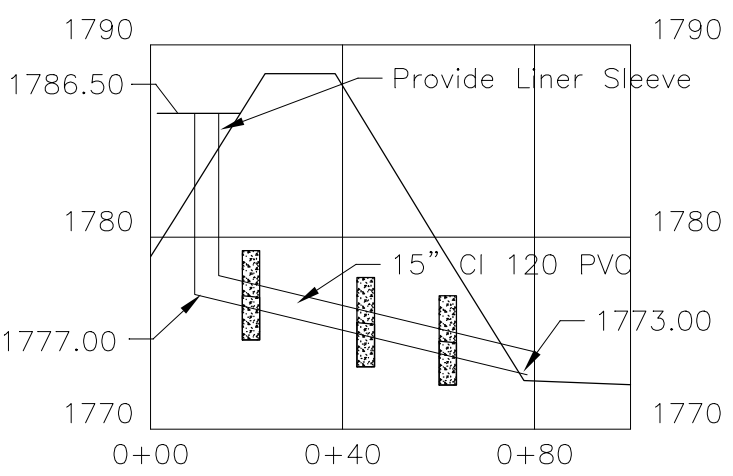
Reservoir #2 Pump Vaults Section G-G



Reservoir #2 Inlet Detail



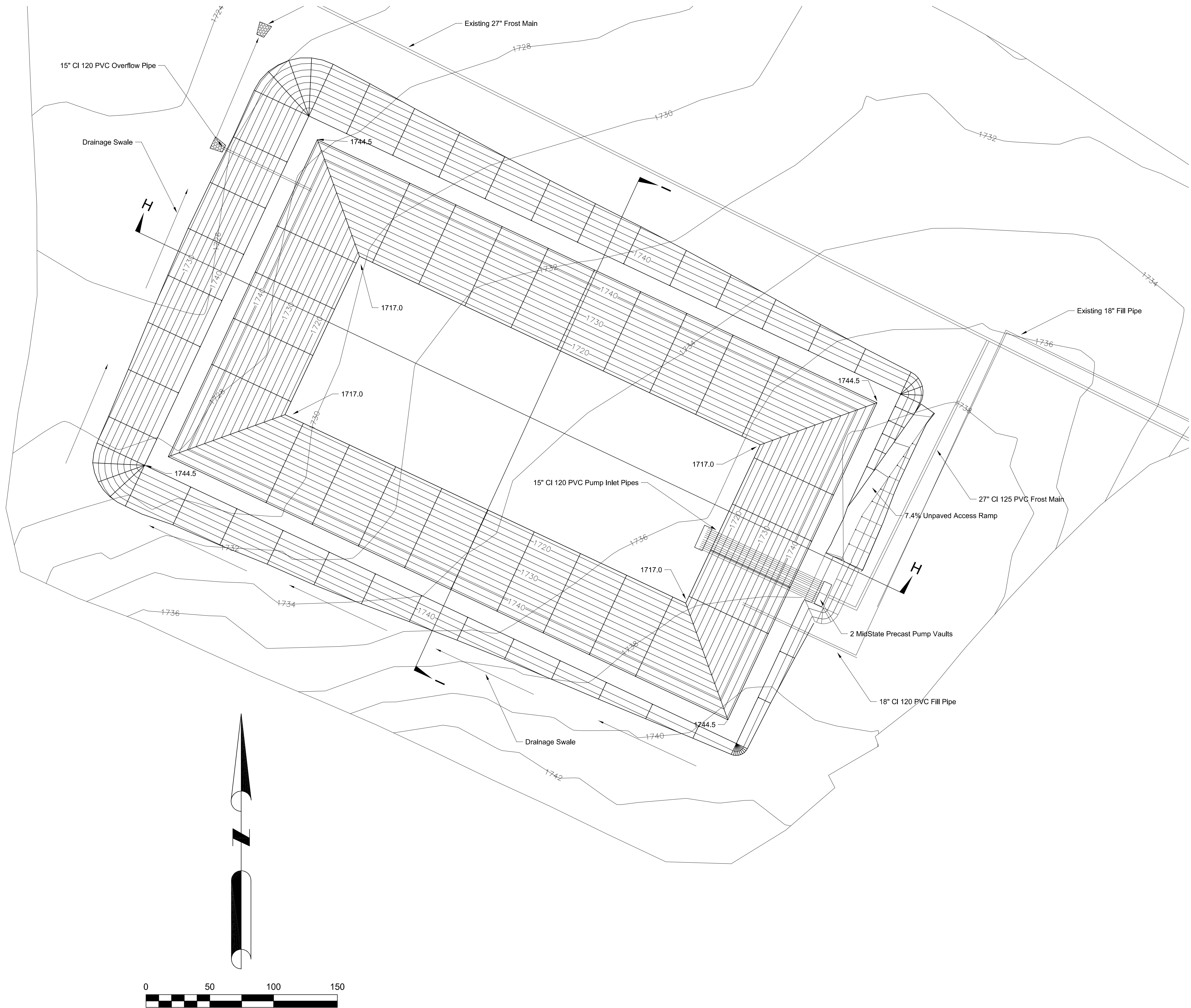
Reservoir #2 Overflow



North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #2 Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 7 of 12	PROJECT NO. 101715-6233

Reservoir #3 Grading Plan



Pond Report

Top of dam elevation: 1744.50
Bottom of pond elevation: 1717.00
Top of dam width: 14.00
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 42,770.71 C.Y.
Total fill: 40,253.87 C.Y.

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1717.00	0.00	1.093
1719.00	2.29	1.206
1721.00	4.82	1.323
1723.00	7.59	1.445
1725.00	10.60	1.571
1727.00	13.87	1.701
1729.00	17.41	1.835
1731.00	21.22	1.973
1733.00	25.30	2.116
1735.00	29.68	2.263
1737.00	34.36	2.414
1739.00	39.34	2.570
1741.00	44.64	2.729
1743.00	50.26	2.893
1744.50	54.70	3.019



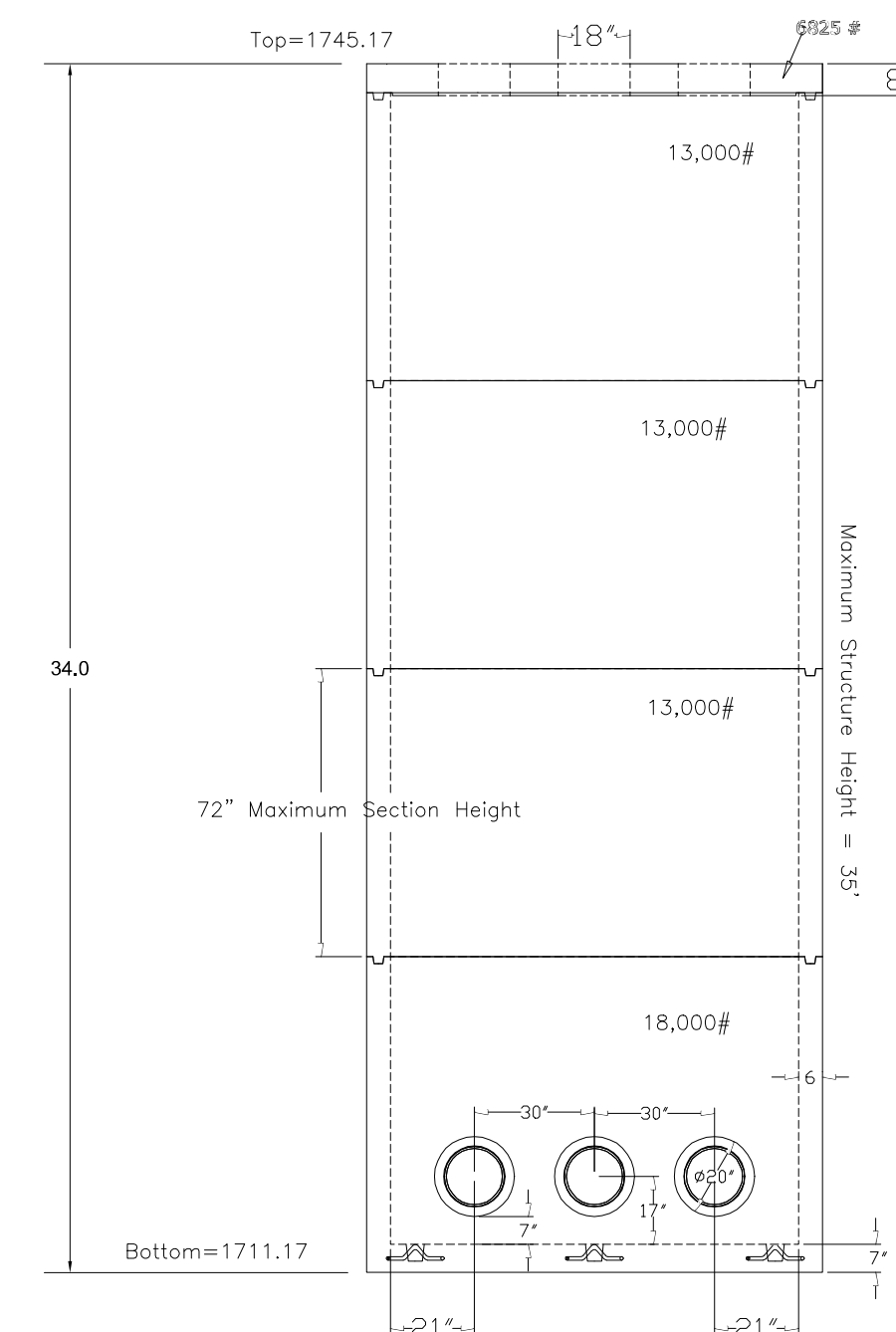
North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #3 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 8 of 12	PROJECT NO. 101715-6233

Mid-State Concrete Products
Pump Housing Vault Reservoir #3

The diagram illustrates the cross-section of a proposed waterway. Key features include:

- Water Surface:** Indicated by a dashed line at an elevation of 1742.5.
- Original Ground:** Shown as a solid line representing the existing terrain.
- HDPE Liner:** A liner placed below the original ground to prevent seepage.
- Slopes:** Both sides of the waterway are designed with a 2.5:1 slope.
- Exterior Fence:** Located on the left side of the waterway.
- Overexcavation Limits:** Indicated by vertical lines on the slopes, showing the boundaries for excavation.
- Dimensions:**
 - Total length of the section: 485.0.
 - Width at the water surface: 14.0.
 - Width at the base of the excavation: 16.0.
 - Horizontal distance from the exterior fence to the start of the excavation: 14.0.
 - Horizontal distance from the end of the excavation to the exterior fence: 14.0.
- Elevations:** The vertical axis ranges from 1710 to 1750.
- Stationing:** The horizontal axis shows stationing from 0+00 to 7+20.



The diagram illustrates the cross-section of a proposed road structure. It features two trapezoidal sections with 2.5:1 slopes. The top width of each section is 14.0m, and the bottom width is 136.0m. The total width of the structure is 275.0m. The diagram includes labels for 'Exterior Fence', 'Overexcavation Limits', 'Original Ground', 'HDPE Liner', and '2.5:1 Slope'. Elevation markers range from 1710 to 1750 on the left and 1710 to 1750 on the right. Stationing markers range from 0+00 to 5+20 along the bottom.

The graph shows the relationship between Stage (ft) and Discharge (cfs) for a culvert. The y-axis represents Stage in feet, ranging from 1742 to 1745. The x-axis represents Discharge in cubic feet per second (cfs), ranging from 0 to 4050. A solid curve represents the culvert's performance. A horizontal dashed line at approximately 1743.5 ft is labeled "Maximum Pool @ 2800 gpm". A vertical dashed line at 2700 cfs intersects the curve at the maximum pool stage.

Discharge (cfs)	Stage (ft)
0	1742.5
450	1742.7
900	1742.8
1350	1742.9
1800	1743.0
2250	1743.1
2700	1743.5
3150	1743.8
3600	1744.1
4050	1744.4

Profile view of the proposed 24-inch concrete sewer main. The profile shows the ground surface (dashed line) and the sewer pipe (solid line). The sewer pipe is shown in two segments: a 100-foot segment from station 0+00 to 1+00, and a 120-foot segment from station 1+00 to 2+20. The sewer pipe is shown with a 0.5% slope. The profile also shows the existing 24-inch concrete sewer main (dashed line) and the existing 18-inch concrete sewer main (dashed line). The profile is labeled with stationing and elevations.

Station	Ground Surface Elevation (ft)	Proposed Sewer Pipe Elevation (ft)	Existing Sewer Pipe Elevation (ft)
0+00	1742.5	1714.33	1714.33
0+40	1742.5	1717.0	1717.0
0+80	1744.5	1734.0	1734.0
1+00	1744.5	1744.5	1744.5
1+20	1745.17	1745.17	1745.17
1+60	1745.17	1712.33	1712.33
2+00	1745.17	1711.17	1711.17
2+20	1745.17	1711.17	1711.17

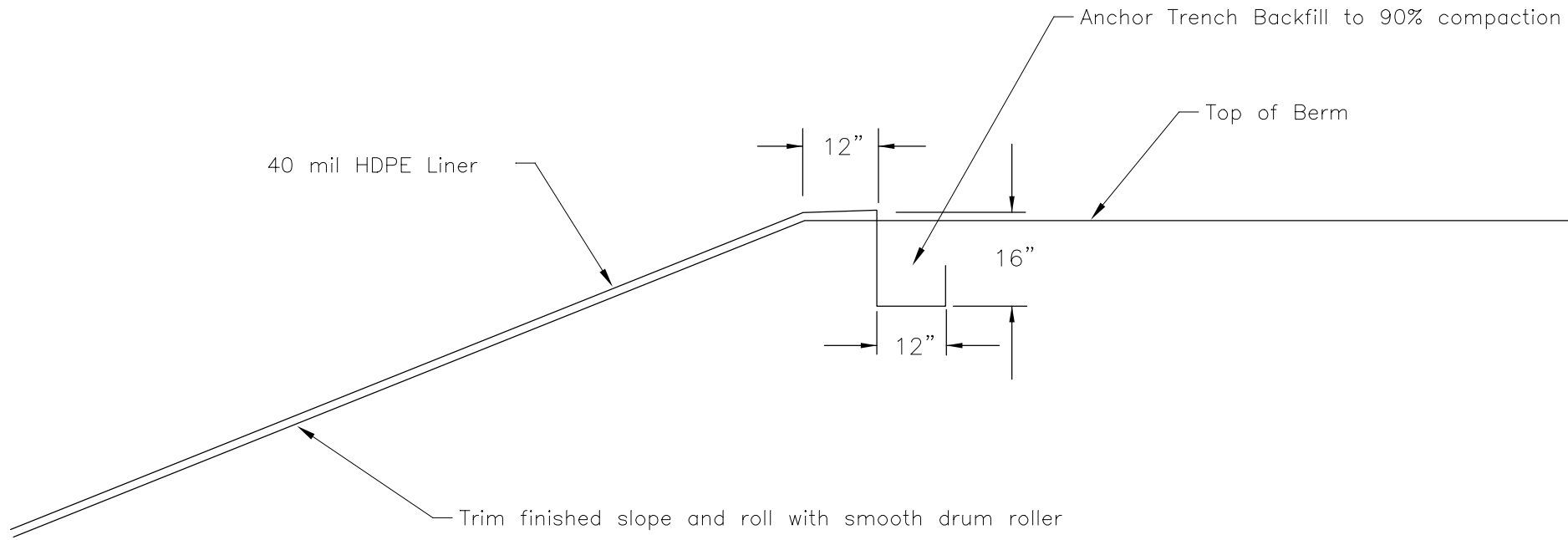
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North Fork Vineyards

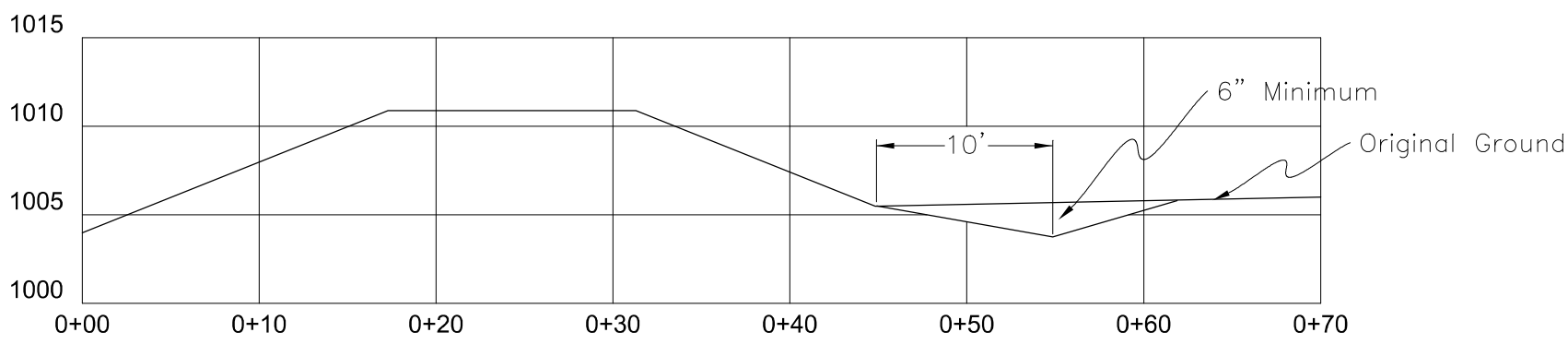
DRAWN <i>TH</i>	DATE <i>1/09/17</i>	<i>Reservoir #3 Details</i>
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET <i>9 of 12</i>	PROJECT NO. <i>101715-6233</i>

Details Common to All Reservoirs

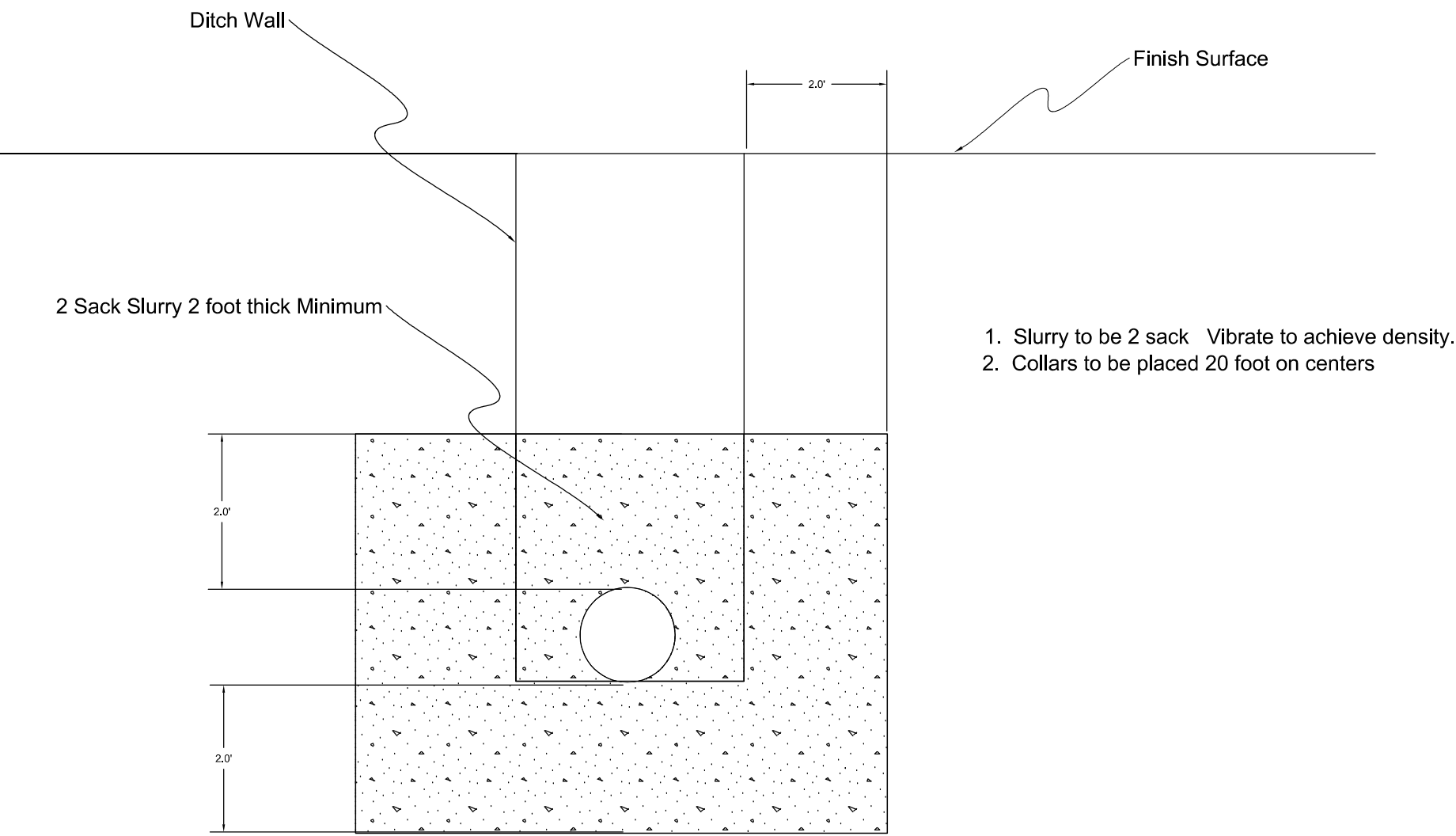
HDPE Liner Anchor Trench



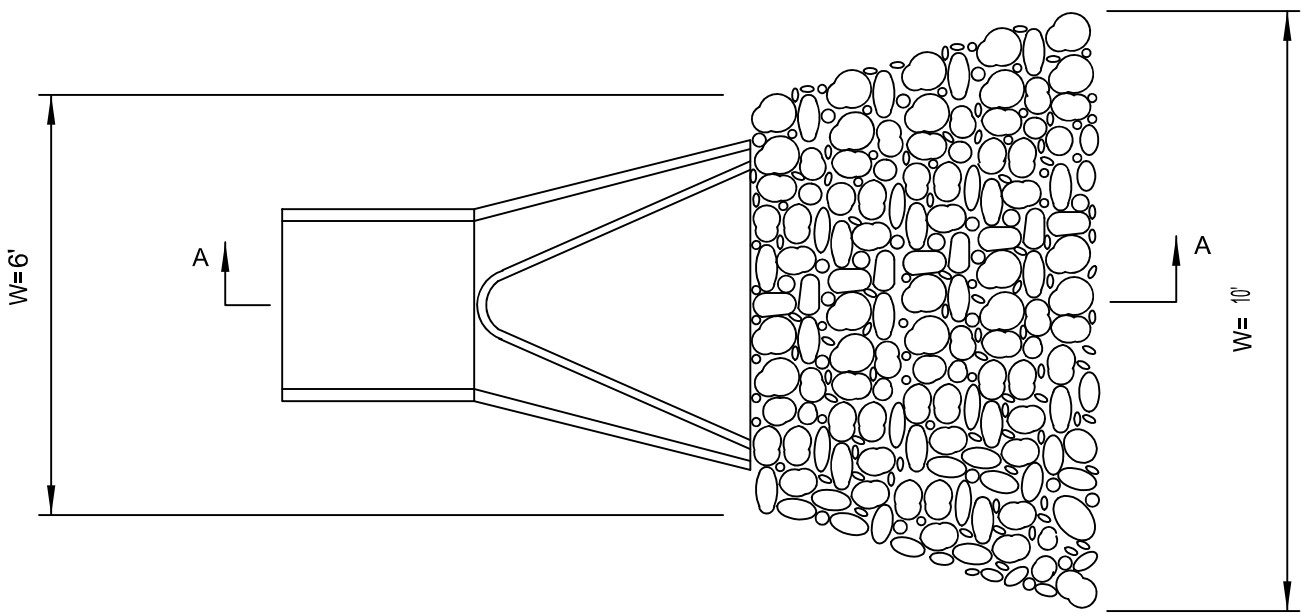
Drainage Swale Detail



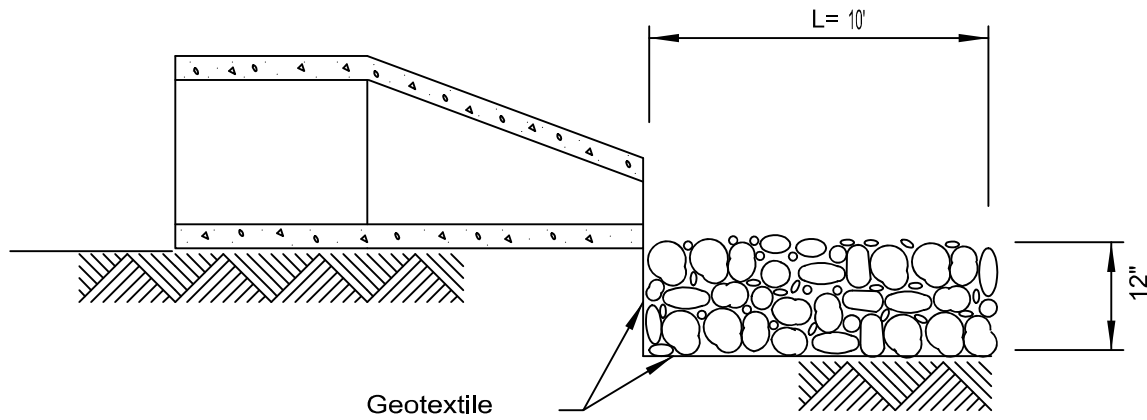
Anti-seep Collar Detail



Rock Energy Dissipater



PLAN



SECTION A-A

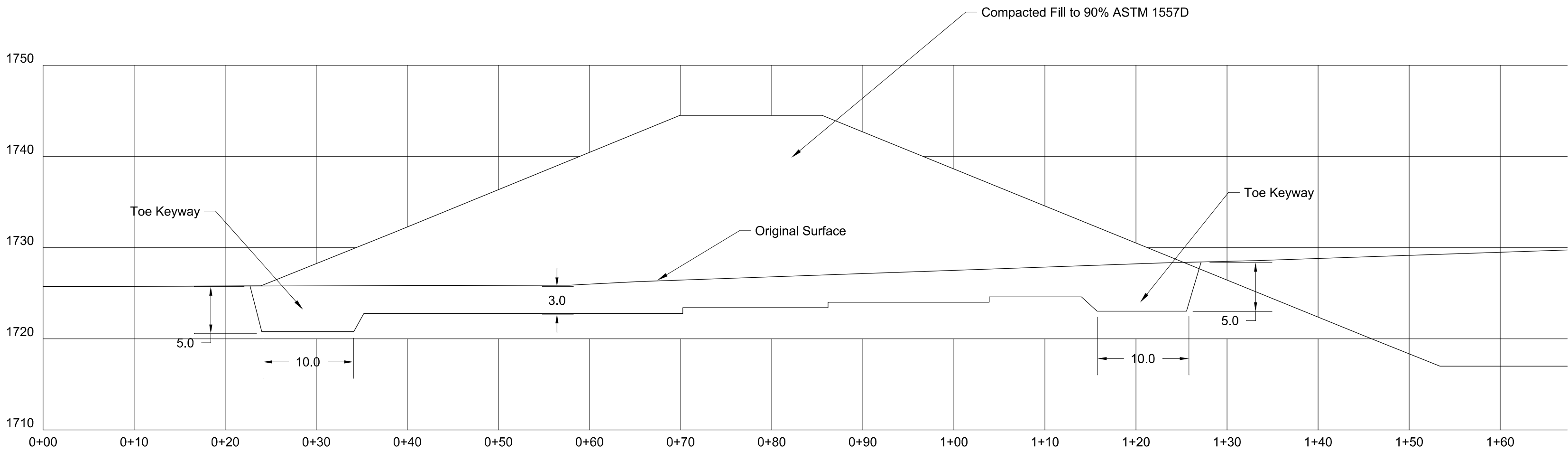
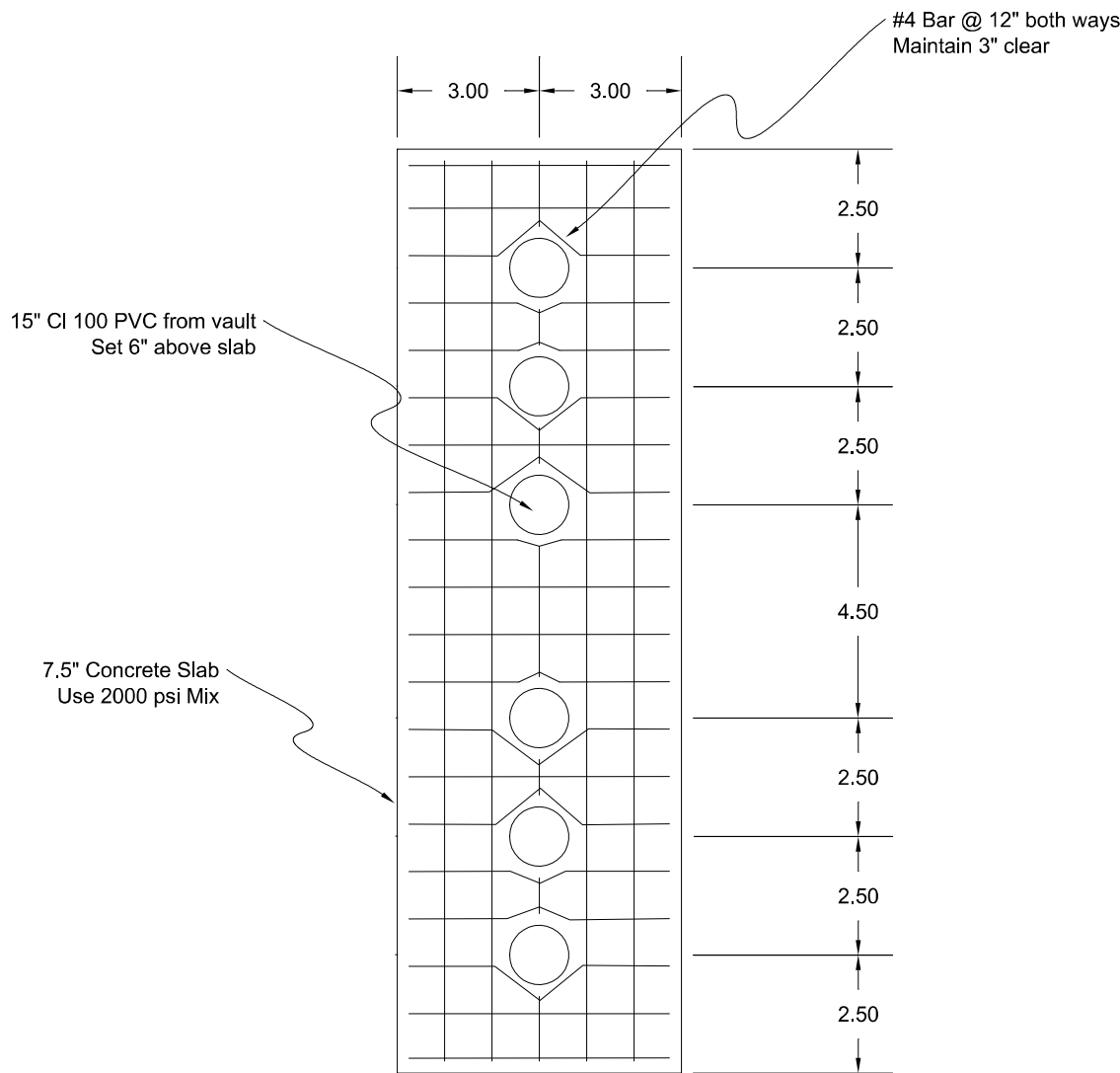
Notes:

1. Rock shall be 6" to 12" diameter
2. Minimum diminsion shall be 6' x 10' x 12"

General Notes:

1. All grading shall conform to the Soil Report prepared by GSI Soils for this project dated January 4, 2016.
2. All slopes shall be overfilled than trimmed to finish grade to provide firm surfaces.
3. Finished slopes and the bottom surface shall be rolled with a smooth drum roller prior to placing fabric. The Engineer of Record shall inspect the surfaces to assure they are rock free and to the proper lines and grades before fabric shall be installed.
4. The liner shall be placed by a contractor specializing in pond liners and all pipes extending through the liner shall have sleeves and stainless bands to prevent leakage.
5. A 6 foot high non-climb fence shall be installed around the exterior perimeter of the reservoir. The fabric shall have 10 guage top and bottom wires with 12 1/2 guage 2x4 mesh filler fabric. Tee Posts shall be at 8 feet spacings and shall be heavy weight a minimum of 8 feet long.
6. The finished pond shall be surveyed by the Engineer of Record and the storage volume calculated. The 15" PVC Overflow Pipe shall be adjusted as necessary to ensure that the retained volume below the outflow inlet is no more than 49 acre feet and that there is a minimum of two feet of freeboard to the top of berm at the lowest point.

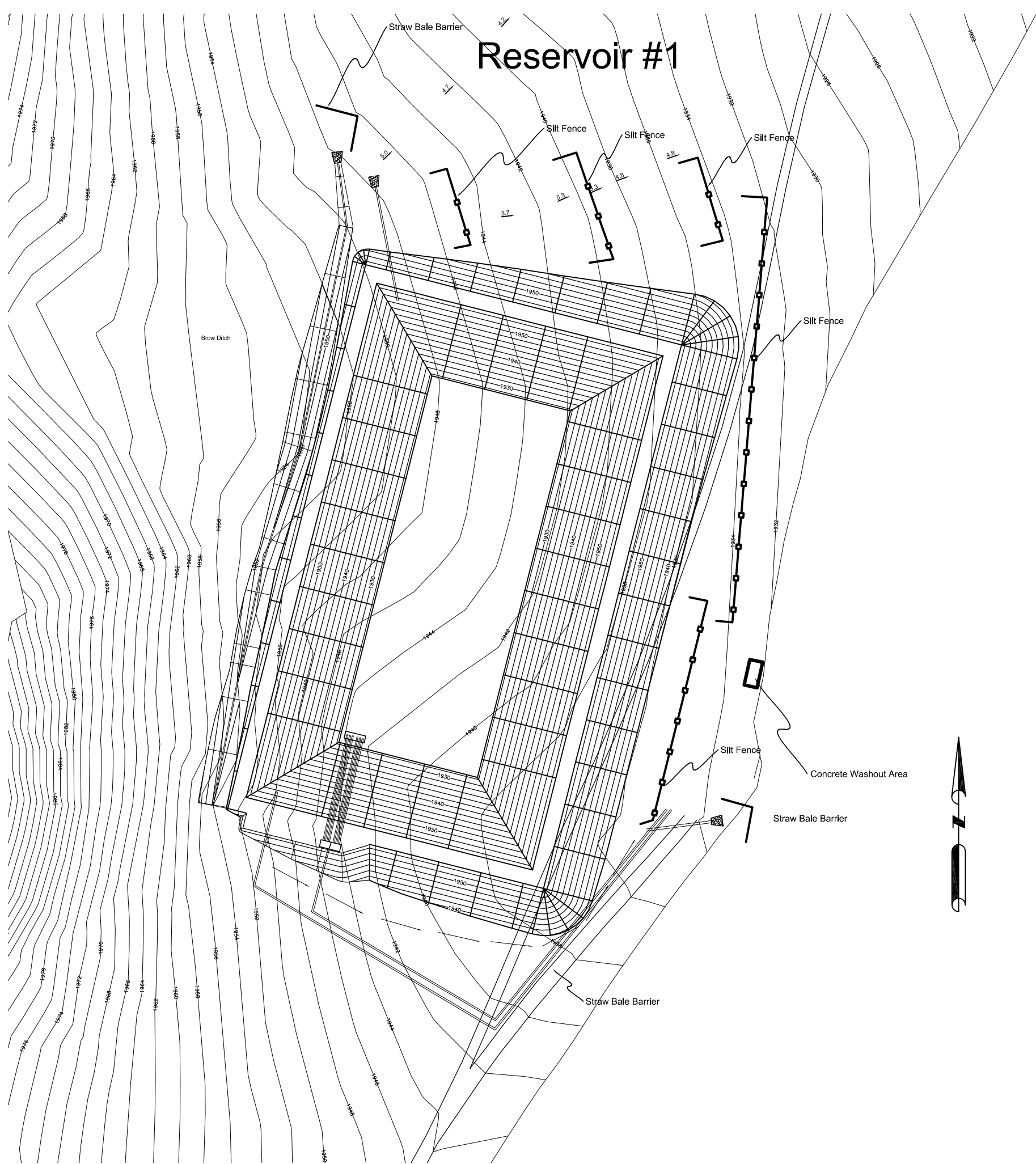
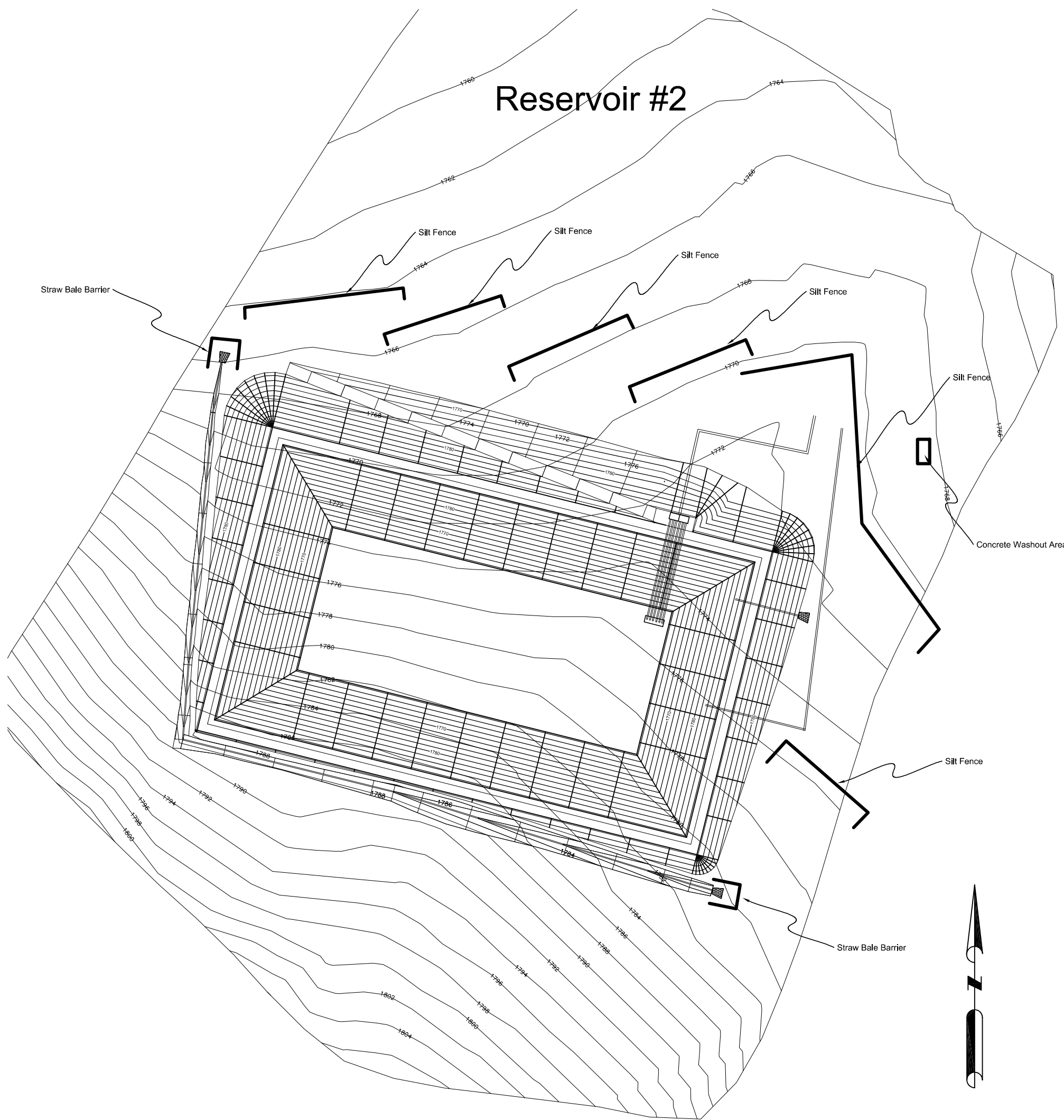
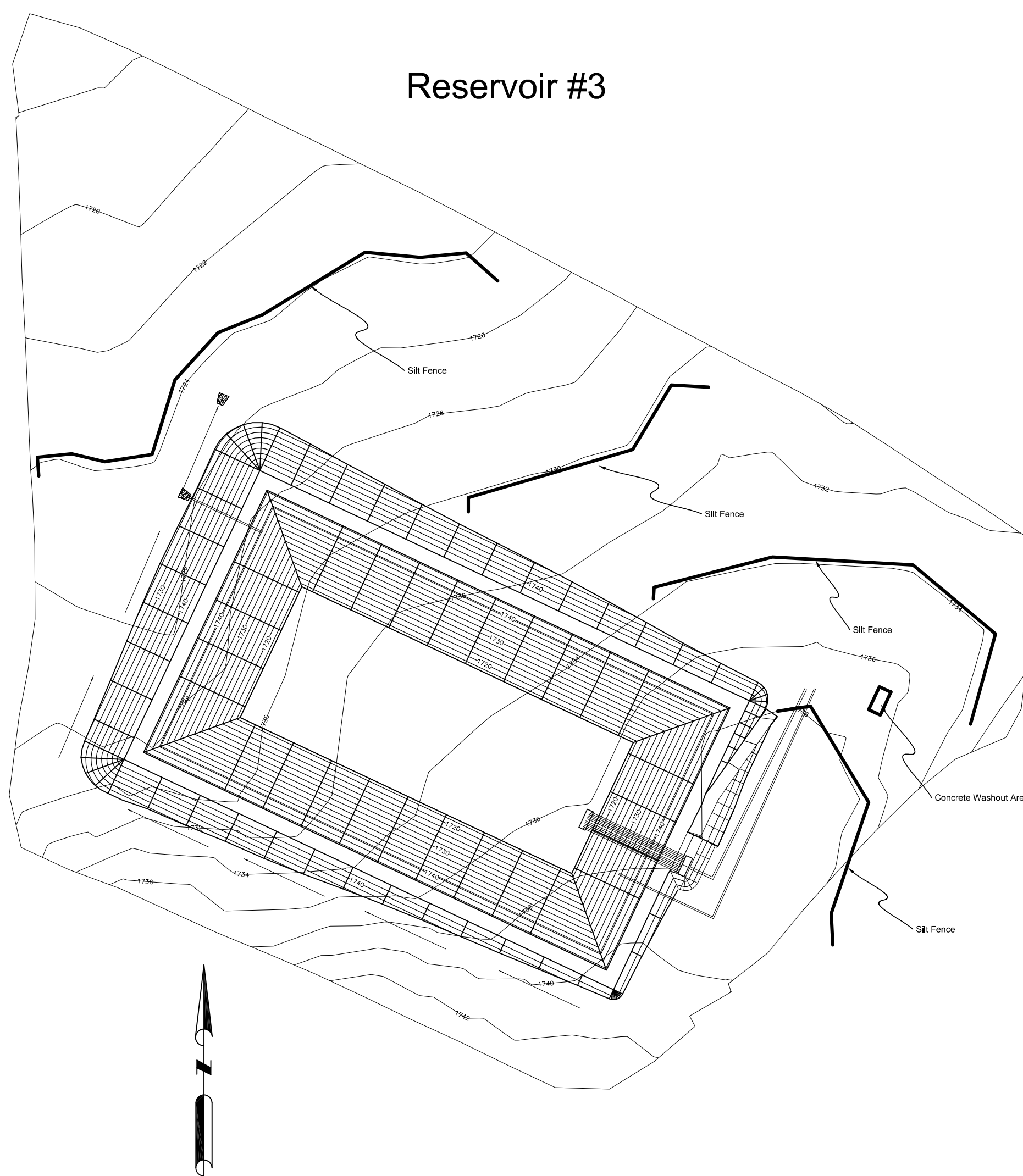
Overexcavation and Keyway Details per Figure 3 of Soil Report



North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoirs #1-3 Common Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 10 of 12	PROJECT NO. 101715-6233

Erosion and Sedimentation Control Plan



Erosion Control Notes:

- Erosion control measures shall be implemented on all projects and shall include source control, including protection of stockpiles, protection of slopes, protection of all disturbed areas, and protection of accesses. In addition, perimeter containment measures shall be placed prior to the commencement of grading and site disturbance activities unless the Engineer determines temporary measures to be unnecessary based upon location, site characteristics or time of year. The intent of the erosion control measures shall be to keep all sediment from entering a swale, drainage way, watercourse or onto adjacent properties. An approved Erosion Control and Sedimentation Control Plan will require County approval
- Site Inspections and appropriate maintenance of erosion control devices shall be conducted and documented prior to, during, and after rain events.
- The developer shall be responsible for the placement and maintenance of all erosion control devices as specified by the approved plan until such time that the project is accepted as complete by the Engineer. Erosion control devices may be relocated, deleted or additional items may be required depending on the actual soil conditions encountered. Additional erosion control shall be placed at the discretion of the Engineer of Work, Engineer, SWPPP Monitor or RWQCB Inspector. Guidelines for determining appropriate erosion control devices are included in the appendix of the Public Improvement Standards.
- All erosion control devices shall be the first order of work and shall be in place between October 15 and April 15 or anytime when the rain probability exceeds 30%. This work shall be installed or applied after each area is graded and no longer than five (5) working days after the completion of each area.
- The Engineer of Work and the Engineer shall be notified before October 15 for inspection of installed erosion control devices.
- A standby crew for emergency work shall be available at all times during the rainy season (October 15 through April 15). Necessary materials shall be available and stockpiled at convenient locations to facilitate rapid construction or maintenance of temporary devices when rain is imminent.
- Permanent erosion control shall be placed and established with 70% coverage on all disturbed surfaces other than paved or gravel surfaces prior to final inspection. Permanent erosion control shall be fully established prior to final inspection. Temporary erosion control measures shall remain in place until permanent measures are established. A water truck shall be used to water areas hydroseeded until the planting is established.
- In the event of a failure, the developer and/or his representative shall be responsible for cleanup and all associated costs or damages.
- Slurry Mix: The slurry mix shall be composed of the following materials:

Bromus mollis - Blando Brome (95%, 85%)	20 pounds per acre
Festuca megalura - Zorro Fescue (85%, 80%)	8
Trifolium hirtum "Hykon" - Rose Clover (95%, 90%)	30
inoculated with appropriate bacteria	3
Eschscholzia californica - California Poppy (95%, 75%)	3
Lupinus nanus - Sky Lupine (95%, 75%)	4

(Seed available at S&S Seeds (805) 684-0436)

Other Materials:

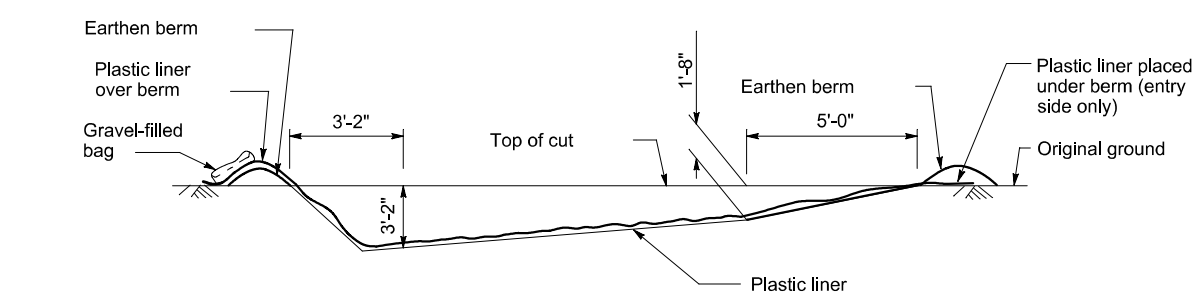
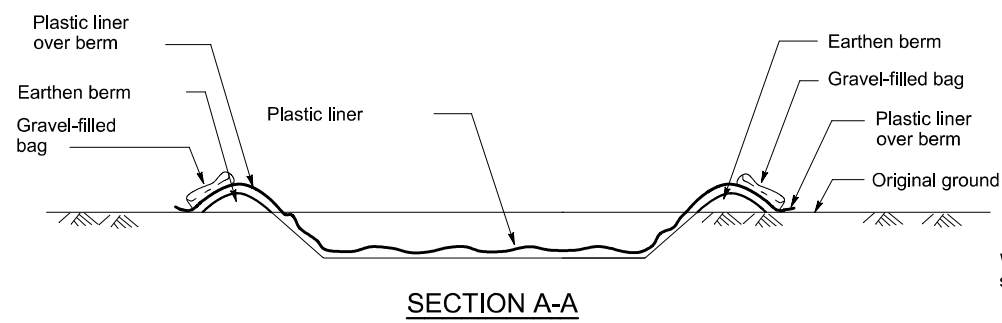
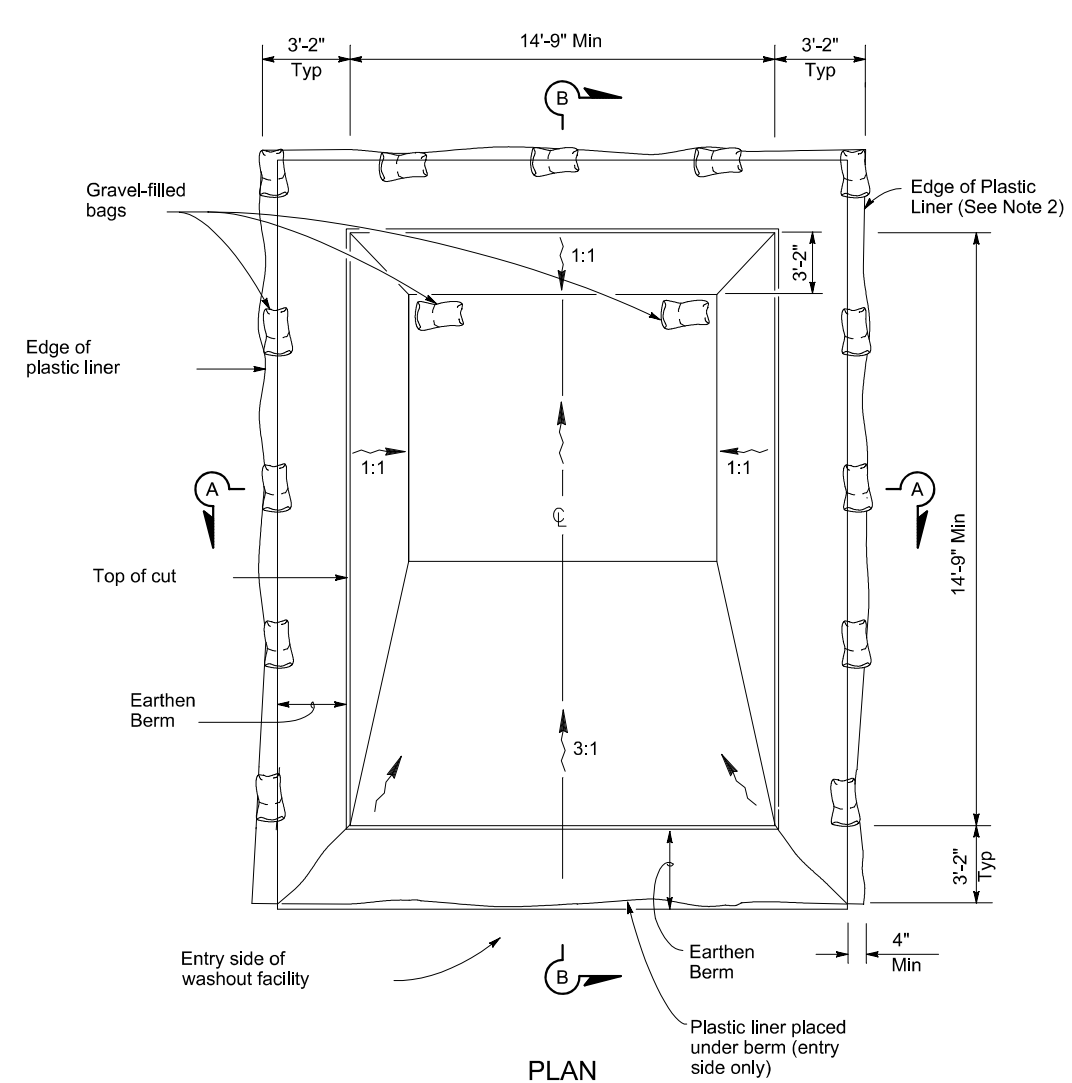
100% Wood fiber mulch (green)	1600 pounds per acre
Commercial Fertilizer (16-20-0)	400
"M-Binder" (stabilizing emulsion) or equal	120
Water (as needed for application and as specified by manufacturer)	
- Application: The slurry preparation shall take place at the site and in the presence of the Engineer. Spraying of the slurry shall be done by an experienced hydroseeding company and commence within five minutes after all the materials have been mixed thoroughly.
- The hydroseeded areas shall be watered with a fine mist periodically until the seed begins to germinate then every other day until the roots are established and 70% of the area is covered. Do not use the side spray of a watertruck but instead use a nozzle adjusted to spray a fine mist attached to a hose.
- BMP's to be constructed include but are not limited to:
 - Silt Fence
 - Straw bale barrier
 - Concrete washout area



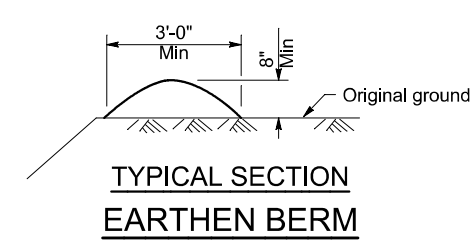
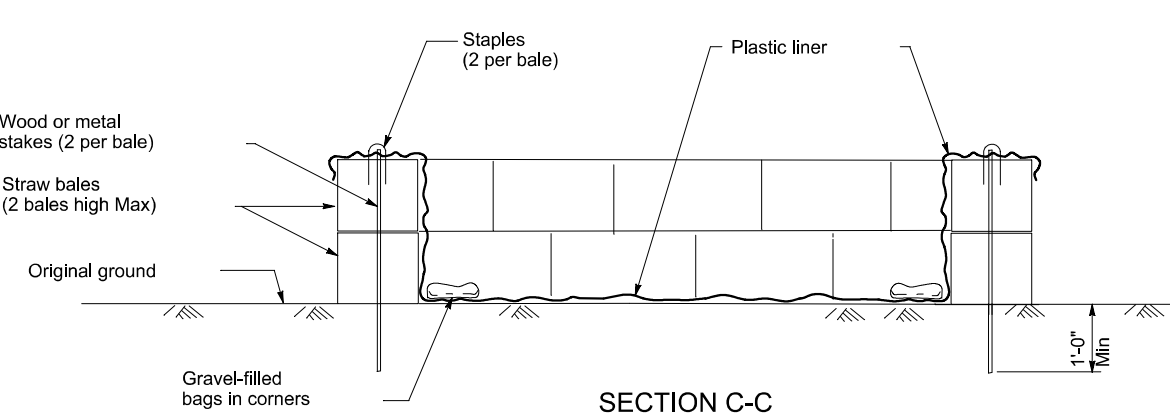
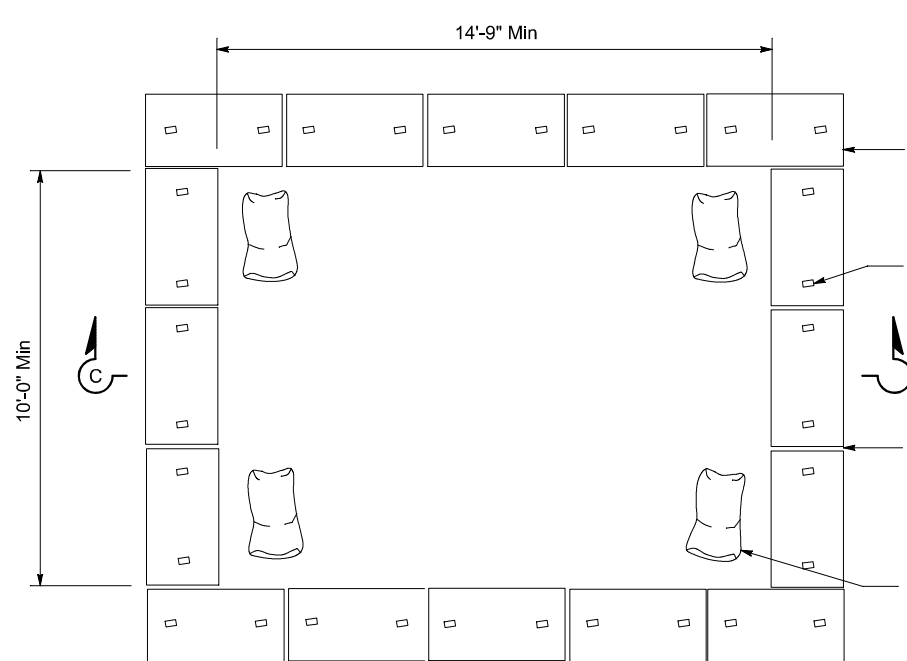
North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoirs #1-3 Erosion & Sedimentation Control
APPROVED	DATE	
SCALE 1"=100'	SHEET 11 of 12	PROJECT NO. 101715-6233

Erosion Control BMP Details



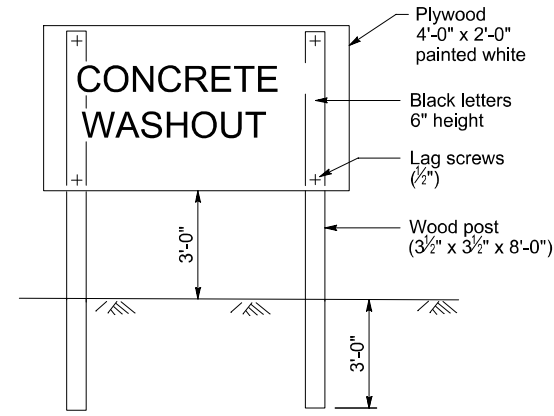
TEMPORARY CONCRETE WASHOUT FACILITY



TEMPORARY CONCRETE WASHOUT FACILITY

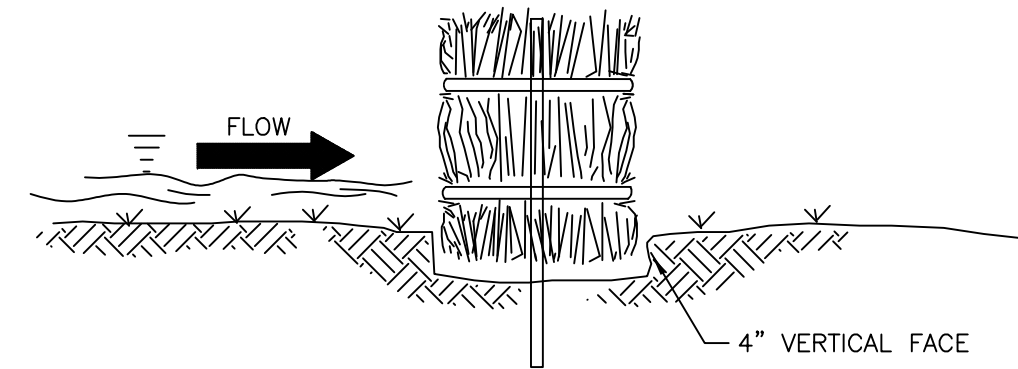
NOTES:

1. The concrete washout sign shall be installed within 32'-10" of the temporary concrete washout facility.
2. Plastic liner shall be anchored with gravel-filled bags for below grade concrete washout facility.

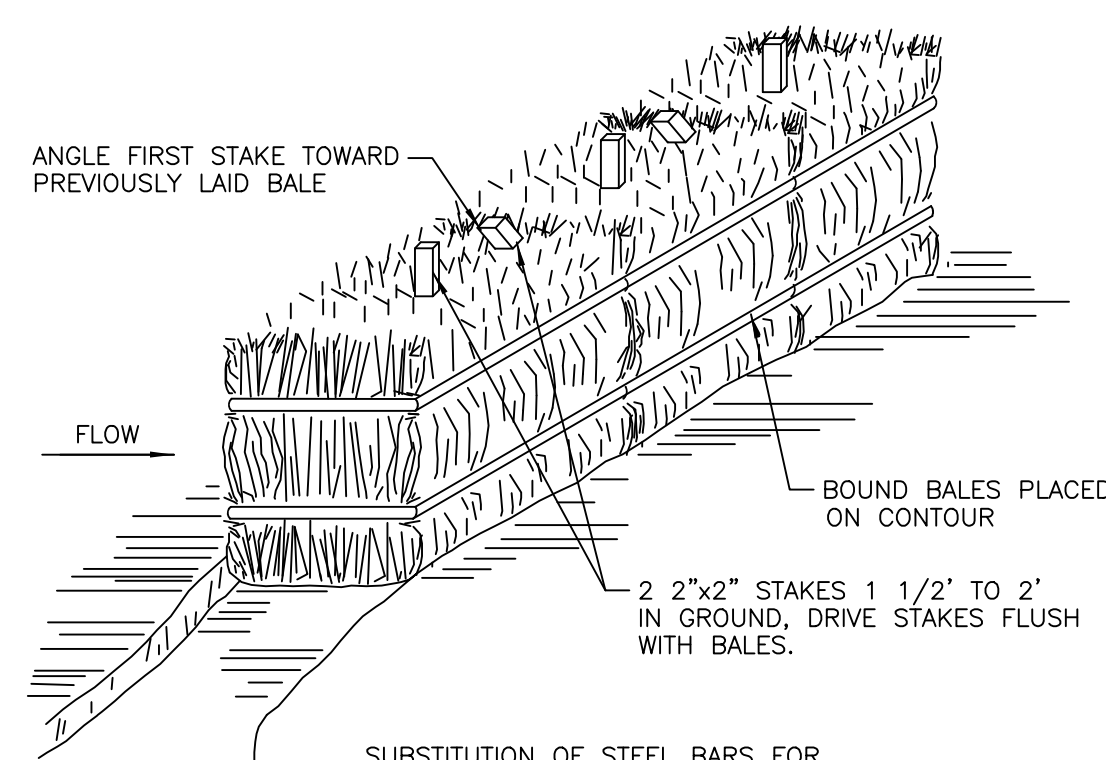


CONCRETE WASHOUT
SIGN DETAIL

NO SCALE

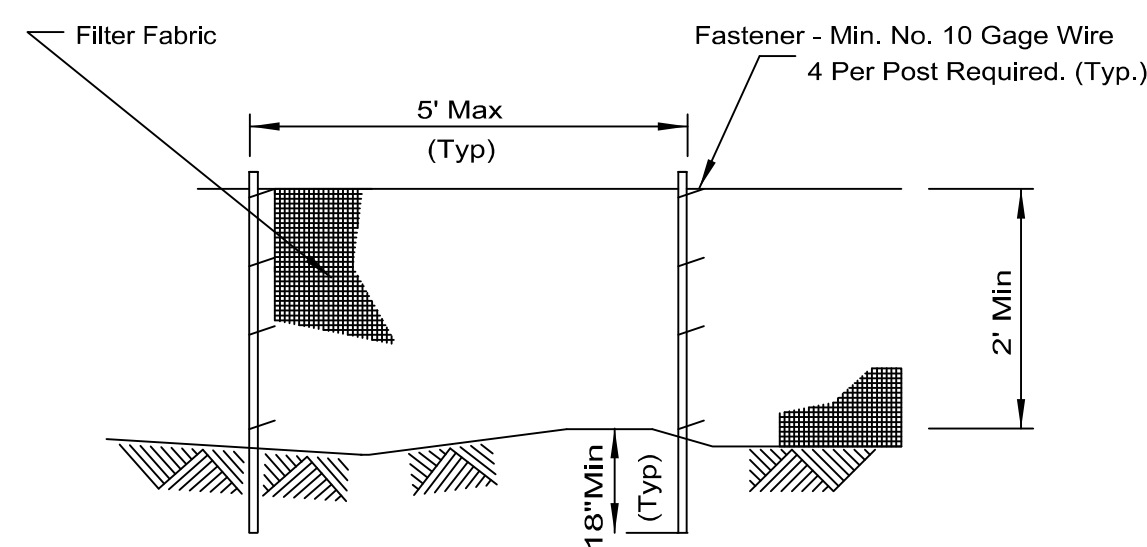
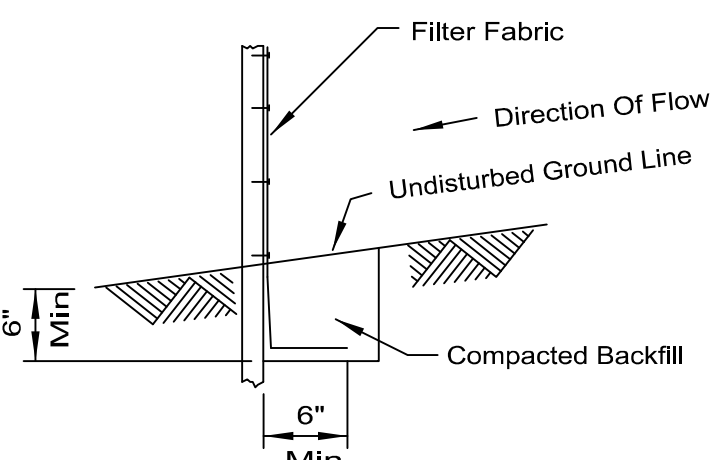


* PROMOTES ON SITE SEDIMENTATION
BY CREATING A TEMPORARY POND.



STRAW BALE BARRIERS

SILT FENCE PLAN



NOTES:

1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class with equivalent opening size of at least 30 for nonwoven and 50 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.



North Fork Vineyards

DRAWN TH	DATE 1/09/17	Reservoirs #1-3 BMP Details
APPROVED	DATE	
SCALE Varies	SHEET 12 of 12	PROJECT NO. 101715-6233

ERDENET COPPER DUMP LEACH PAD

ERDENET, MONGOLIA

[DURABILITY RUNS DEEP]

GSE Geomembrane Still Performing After 16 Years of Exposure to Harsh Weather

Owner:

Erdmin Company, Ltd.

Engineers:

BKS Consulting Engineers
EMC Design Department

Geosynthetics Installer:

Stroyinvest



Technical Description:

Product: GSE Geomembrane

Description: 2.0 mm Smooth HDPE

Quantity: 100,000 m²

Case Study

Background

Mongolia is a mineral-rich, landlocked country located in East-Central Asia, with large reserves of coal, copper, and gold. The mining city of Erdenet, located 371 kilometers Northwest of the capital, was built in 1974 to exploit Asia's largest deposit of copper ore, and it is the location of the fourth largest copper mine in the world. Erdenet Mining Corporation (EMC), a joint venture between the governments of Mongolia and Russia, and RMC of the United States agreed to build a pilot plant to manufacture pure copper cathode by using a weakened solution of sulfuric acid from low grade ore piles. Construction began in 1997, and 4 months later, the plant, registered under the name Erdmin Co., Ltd., started producing copper by dump leach process.

Challenge

Mongolia experiences extremely harsh weather conditions, with long cold winters and short summers, during which most precipitation falls. The altitude of Erdenet is 1,400 m, and the city receives stronger sunlight radiation than the plain areas. Historical weather records show the average yearly temperatures can range from 21°C to -26°C, while some years have seen temperatures fluctuate up to 69 degrees between the highest and lowest recorded thermometer readings. These conditions create a challenge for the design engineers to find a geomembrane material that can perform when continually exposed to such extreme temperatures and UV radiation.

The Solution

BKS Consulting Engineers and the design department of EMC specified 2.0 mm thick GSE High Density Polyethylene Smooth geomembrane for the bottom lining of the dump leach pad and 8 attached solution ponds. It

continued...



was a single liner system, utilizing a geotextile layer under the geomembrane for added protection from any sharp rocks or protruding objects in the compacted tailings subgrade. In total, 100,000 m² of liner were installed by Stroyinvest, a joint venture between Russian and local construction firms. At the time of installation, it was the first job of this kind in Mongolia and included a 56 meter high dump leach pad, four pregnant solution ponds connecting with geomembrane lined ditches, two raffinate ponds, and a waste impoundment. The typical side slope angles for the ponds were 2:1 and the average depth was 4-6 meters. Due to different seasons, the water level of the ponds varied and a large portion of the geomembrane was exposed to weather conditions and UV radiation over long periods of time. Installation was completed within 4 months during the spring and summer of 1997.

The Result

On a visit to the site in 2013, GSE engineers removed exposed samples of the liner that had been in service for 16 years and performed evaluation testing as per current GRI-GM 13 specifications. The laboratory evaluation on the exhumed samples revealed no significant reduction in the physical and mechanical properties (density, tensile, tear, puncture, carbon black content and dispersion). The liner showed a reduction in OIT values due to depletion of the antioxidant over time, but the levels are still relatively high and well within the specification of GRI-GM 13. Based on calculations, this geomembrane is expected to continue working in its desired function for another 141 years. Erdmin monitors the underground water quality two times a month, and no contamination has been detected so far. In addition, the quality of cathode copper manufactured in this plant has been confirmed by independent evaluators Alex Steward Assayers to meet the "A" grade quality requirements of the London Metal Exchange.

"We are very satisfied with the performance of the geomembrane applied in our dump leach pad. It helps us maintain a normal and effective operation in the facility," acknowledged Mr. J. Baatar, General Director of Erdmin Co., Ltd.



North America 800.435.2008

Europe & Africa 49.40.767420

Asia Pacific 66.2.937.0091

South America 56.2.595.4200

Middle East 20.23828.8888

For more information on this product and others, please visit us at GSEworld.com, call 800.435.2008 or contact your local sales office.

GSEworld.com

GSE is a leading manufacturer and marketer of geosynthetic lining products and services. We've built a reputation of reliability through our dedication to providing consistency of product, price and protection to our global customers.

Our commitment to innovation, our focus on quality and our industry expertise allow us the flexibility to collaborate with our clients to develop a custom, purpose-fit solution.

[DURABILITY RUNS DEEP]

For more information on this product and others, please visit us at GSEworld.com, call 800.435.2008 or contact your local sales office.





COUNTY OF SANTA BARBARA

Planning and Development

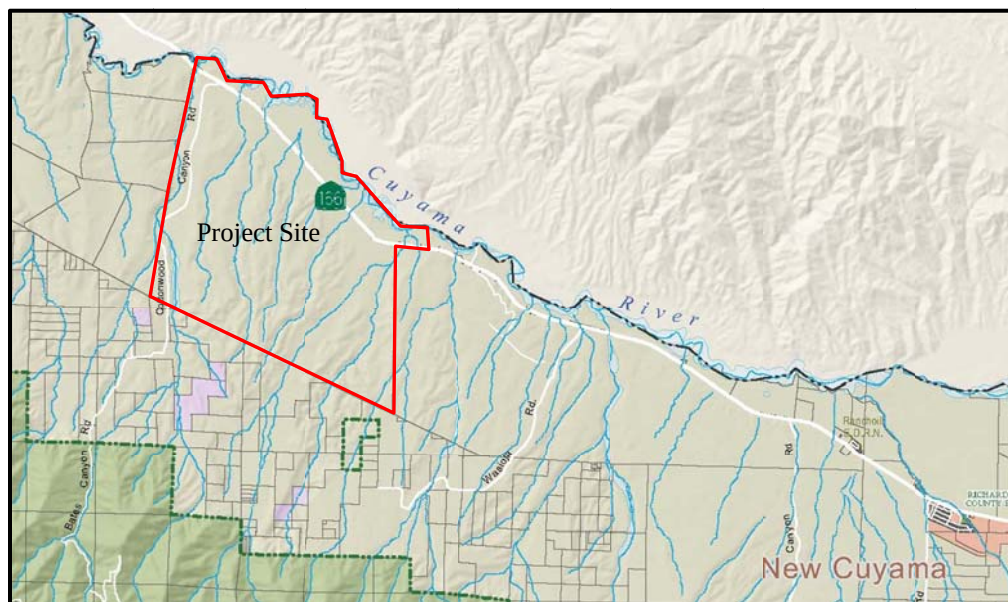
www.sbcountyplanning.org

Attachment D

Final Mitigated Negative Declaration 17NGD-00000-0004

North Fork Ranch Frost Ponds 16CUP-00000-00005

August 1, 2018



Owner/Applicant

Matt Turrentine – Brodiaea, Inc.
P.O. Box 6565
Santa Maria, CA 93455

Agent

Brian A. Tetley – Urban Planning Concepts
2624 Airpark Drive
Santa Maria, CA 93455

For More Information Contact: Steve Rodriguez, Contract Planner, Development Review Division, (805) 682-3413

1.0 REQUEST/PROJECT DESCRIPTION

A request of Brian Tetley, agent for Brodiaea, Inc, owner, to consider Case No. 16CUP-00000-00005. The North Fork Ranch Frost Pond project is a request to construct and operate three frost ponds (reservoirs) that would store water to be used for frost protection at the North Fork Ranch Vineyards. The project also includes the construction of new underground pipelines that would extend between each of the proposed reservoirs and the existing vineyard irrigation system.

The proposed reservoirs would serve approximately 1,000 acres of existing vineyards. ~~an existing 535-acre vineyard and an additional 100-acre area that is to be planted in the future.~~ Reservoir No. 1 would be located on the eastern portion of the project site adjacent to Schoolhouse Canyon Road (a private road). Reservoir No. 2 would be located in the central portion of the project site, and Reservoir No. 3 would be located on the western portion of the project site approximately 0.75 mile east of Cottonwood Canyon Road. Access to the reservoirs would be from existing roads that connect to State Highway 166.

Frost protection would be achieved by sustained spray irrigation when frost has the potential to damage the grape vines. Frost protection would generally be required during the months of February, March and April. The reservoirs would be maintained at a full condition between February and April. A maximum of three feet of well-supplied water would be maintained in the reservoirs between May 1st through January 31st. ~~and would be emptied of well-supplied water between May and January.~~ Water above a depth of three feet contained in the reservoirs after May 1 would be distributed for vineyard irrigation.

Each reservoir would have a water storage capacity of 49 acre-feet and would be lined with a high-density polyethylene plastic liner to prevent water seepage. Each reservoir would also have an emergency overflow discharge system that would prevent stored water from over-topping the reservoir. Water to be stored in the reservoirs would be supplied by existing agricultural wells located on the project parcel and on the north side of State Highway 166. Water from the wells would be conveyed to the reservoirs by existing vineyard irrigation pipelines that extend beneath the highway and throughout the vineyard. A six foot high fence would be installed around the exterior perimeter of each reservoir to prevent unauthorized entry. Life ring stations and floating pool ropes would also be provided for rescue purposes.

A total of approximately 257,945 cubic yards of cut and fill grading would be required to construct the three proposed reservoirs. The reservoirs would have a maximum depth of 27-28 feet, and in total would occupy an area of approximately 15.6 acres. Proposed pipelines that would convey water from the vineyard's existing irrigation system to each of the reservoirs would have a total length of 1,350 feet. Proposed pipelines that would convey water from each of the reservoirs to the vineyard's existing spray irrigation system would have a total length of 976 feet. Construction details for each of the proposed reservoirs are summarized on Table 1. It is estimated that the construction period for the three proposed reservoirs would be approximately one year.

Proposed project plans are provided as Attachment 1.

Table 1
North Fork Ranch Frost Ponds
Construction Characteristics

Reservoir	Proposed Grading			Reservoir Area		Reservoir Depth			Proposed Pipelines	
	Cut (cu. yds.)	Fill (cu. yds.)	Total (cu. yds.)	Approximate Dimensions (feet)	Acres	Top of Reservoir Elevation	Bottom of Pond Elevation	Depth (feet)	Fill Line (feet)	Drain Line (feet)
No. 1	44,062	44,589	88,651	590 x 370	5.0	1,955	1,927	28	624	517
No. 2	44,064	42,205	86,269	580 X 410	5.7	1,788	1,761	27	370	202
No. 3	42,771	40,254	83,025	590 x 360	4.9	1,744	1,717	27	356	257
TOTAL	130,897	127,048 (1)	257,945	--	15.6	--	--	--	1,350	976

(1) Due to shrinkage of fill material, no soil would be exported from the project site

Surface water drainage from upslope areas adjacent to the reservoirs would be collected by proposed drainage swales. The collected water would be discharged and allowed to sheet flow at downslope locations adjacent to the reservoirs. Rock energy dissipaters would be installed at each discharge location to reduce potential erosion-related impacts. Stormwater discharge from Reservoir No. 1 would be conveyed beneath Schoolhouse Canyon Road by a proposed culvert beneath the road.

The application involves Assessor Parcel Number 147-020-045, a 6,565-acre parcel that is zoned AG-II-100.

2.0 PROJECT LOCATION

The project site is on the south side of State Highway 166, between Cottonwood Canyon Road and Schoolhouse Canyon Road, approximately nine miles west of the community of New Cuyama, Fifth Supervisorial District.

2.1 Site Information	
Comprehensive Plan Designation	Agricultural Commercial (AC)
Zoning District, Ordinance	Land Use and Development Code, AG-II-100, Agriculture, 1 unit per 100 acres.
Site Size	The project property is 6,565 acres. The three proposed reservoirs would occupy a combined area of approximately 15 acres.
Present Use & Development	The proposed reservoir sites are vacant. Areas adjacent to the proposed reservoir sites are planted with vineyards.
Surrounding Uses/Zoning	North: AG-II-100, open space South: AG-II-100, open space East: AG-II-100, open space West: AG-II-100, open space
Access	State Highway 166 and existing unpaved ranch/vineyard roads

3.0 ENVIRONMENTAL SETTING

3.1 PHYSICAL SETTING

The 6,565-acre project parcel is located in the Cuyama Valley, approximately nine miles west of the community of New Cuyama. The project parcel is located on the south side of State Highway 166, and the proposed reservoir sites are approximately 4,000 to 5,000 feet south of the Cuyama River. The proposed reservoir sites are currently vacant and adjacent to existing vineyards. Irrigation lines have been installed throughout the vineyards and are located near the proposed reservoir project sites. The existing irrigation lines would also be used to deliver water to the proposed reservoirs.

Slope/Topography. The proposed reservoir sites are generally level and slope gently towards named and unnamed ephemeral drainages.

The Reservoir No. 1 project site is located on the eastern end of the project property adjacent to Schoolhouse Canyon Road. This project site ranges in elevation from approximately 1,958 feet above sea level in the southwest corner to approximately 1,938 feet in the southeast corner, which results in a slope gradient of approximately five percent. The site generally slopes to the east and is approximately 500 feet west of Schoolhouse Canyon Creek.

The Reservoir No. 2 project site is located on the central portion of the project property. This project site ranges in elevation from approximately 1,790 feet above sea level in the southwest corner to approximately 1,766 feet in the northwest corner, which results in a slope gradient of approximately six percent. The site generally slopes to the east and is approximately 100 feet west of a small ephemeral drainage.

The Reservoir No. 3 project site is located on the western end of the project property approximately one mile east of Cottonwood Canyon Road. Small ephemeral drainages are located approximately 100 feet to west and approximately 250 feet to the east of the reservoir site. This project site ranges in elevation from approximately 1,740 feet above sea level in the southeast corner to approximately 1,726 feet in the northwest corner, which results in a slope gradient of approximately two percent. The site generally slopes to the northeast towards the adjacent drainage.

Flora/Fauna. Flora and fauna conditions at and near the proposed reservoir sites are described in a report titled *Biological Resources Assessment for the Reservoir and Operations Yard Project, North Fork Ranch, Santa Barbara County, California* (February 24, 2016, Attachment 2a). The operations yard and vineyard irrigation pipelines described by this report are not part of the proposed frost pond project.

The proposed reservoir sites and surrounding areas have been historically used for cattle grazing and vegetation at and near the sites is sparse and consists predominately of non-native weeds and annual grasses. The proposed reservoir sites and areas adjacent to the sites were recently disked in preparation of planting grape vines. As a result of the disking operations conducted in 2016, much of the proposed reservoir sites are nearly devoid of vegetation. The drainages located near the proposed reservoirs are dry most of the year and generally flow briefly during the summer monsoon season and after winter rains. The drainages support patches of native habitat. 13 species of sensitive plants are known to exist in the project region, although no suitable habitat for sensitive plant species was observed at the project sites, and seasonally timed surveys conducted in 2015 did not observe any sensitive plant species in project-

related disturbance areas. Sensitive wildlife species that have the potential to occur in the project area include San Joaquin kit fox and American badger.

Vegetation coverage at the project sites is sparse and wildlife observed during site visits was limited to coyote tracks and a large flock of American crows in a disked area (KMA, 2016). 12 special status animal species are known to occur in the project region. Species that may still occur in the region include giant kangaroo rat, American badger, San Joaquin kit fox, blunt-nosed leopard lizard, California red-legged frog and prairie falcon. Due to lack of prey or habitat requirements, it is unlikely that these species would be found on the project site, however, species such as the San Joaquin kit fox, if present in the project area, could move through the project sites during foraging or migration activities.

Archaeological Sites. Archaeological resources located on or near the project site are described in a report titled *Phase 1 Cultural Resources Study for the North Fork Reservoir Project, Santa Barbara County, California* (August, 2016). The Phase 1 investigation included a survey of the proposed reservoir sites and the location of the proposed pipelines that would connect the reservoirs to existing irrigation water pipelines. The Phase 1 survey did not identify any archaeological resources within the proposed project site boundaries. The survey report does, however, state that human remains were identified during the excavation of a trench for the installation of an irrigation pipeline on the north side of State Highway 166. Due to the presence of this pre-historic burial, the proposed reservoir sites are considered to be sensitive for cultural resources.

Soils: Reservoir sites 1 and 3 are located on Pleasanton sandy loam, and reservoir site 2 is on Panoche loam. Both soil types have a land capability classification of 2e if irrigated and 3e if non-irrigated.

3.2 ENVIRONMENTAL BASELINE

The environmental baseline from which the project's impacts are measured consists of the on the ground conditions described above.

4.0 POTENTIALLY SIGNIFICANT EFFECTS CHECKLIST

The following checklist indicates the potential level of impact and is defined as follows:

Potentially Significant Impact: A fair argument can be made, based on the substantial evidence in the file, that an effect may be significant.

Less Than Significant Impact with Mitigation: Incorporation of mitigation measures has reduced an effect from a Potentially Significant Impact to a Less Than Significant Impact.

Less Than Significant Impact: An impact is considered adverse but does not trigger a significance threshold.

No Impact: There is adequate support that the referenced information sources show that the impact does not apply to the subject project.

Reviewed Under Previous Document. The analysis contained in a previously adopted/certified environmental document addresses this issue adequately for use in the current case and is summarized in the discussion below. The discussion should include reference to the previous documents, a citation of the page(s) where the information is found, and identification of mitigation measures incorporated from the previous documents.

4.1 AESTHETICS/VISUAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. With Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. The obstruction of any scenic vista or view open to the public or the creation of an aesthetically offensive site open to public view?			X		
b. Change to the visual character of an area?			X		
c. Glare or night lighting which may affect adjoining areas?			X		
d. Visually incompatible structures?			X		

Setting

Physical

State Highway 166 provides regional access through the project region and views from the highway in the project area predominately consist of fore- and mid-ground views of open space and agricultural operations. Background views available from the highway include the Caliente Mountains to the north and the Sierra Madre Mountains to the south.

The proposed reservoir sites are vacant and have little or sparse vegetation coverage. The topography of the sites generally slopes gently towards adjacent drainages. Grape vines have been recently planted in areas adjacent to the proposed reservoir sites. Proposed reservoir site Nos. 1, 2 and 3 would be approximately 3,000, 1,200, and 1,500 feet south/southeast of State Highway 166, respectively.

Regulatory

County Environmental Thresholds: The County's Visual Aesthetics Impact Guidelines classify coastal and mountainous areas, the urban fringe, and travel corridors as "especially important" visual resources. A project may have the potential to create a significantly adverse aesthetic impact if (among other potential effects) it would impact important visual resources, obstruct public views, remove significant amounts of vegetation, substantially alter the natural character of the landscape, or involve extensive grading visible from public areas. The guidelines address public, not private views.

Impact Discussion

(a-d) Less than significant impact: The proposed reservoirs would be constructed by excavating soil below existing grade and using the excavated soil to construct berms that would impound stored water. The height of the water impoundment berms would vary but in general would be approximately three to 20 feet above the adjacent ground surface. Vegetation, likely consisting of an approved erosion control seed mix, would be required on the outside surfaces of the berms for erosion control purposes. The proposed water delivery pipelines that would extend between the reservoirs and existing irrigation water pipelines would be below ground and not visible.

The proposed reservoirs would result in the construction of new above ground facilities that would be visible from public viewing locations such as State Highway 166. Due to the setback distances between the three

reservoir sites and State Highway 166 the reservoirs would not be prominently visible to persons traveling on the highway. Grading required to construct the reservoirs would not result in the creation of grading scars or other alterations to existing topography or vegetation that would result in a significant visual impact. Erosion control planting on the reservoir berms would help to make the appearance of the berms blend with undisturbed areas near the reservoir sites. The proposed reservoir berms would have a maximum height of approximately 20 feet above surrounding grade and would not adversely affect existing views of the Sierra Madre Mountains to the south of the project site from public viewpoints such as State Highway 166. No nighttime lighting would be used at the project sites. Therefore, the project would not obstruct a scenic vista, substantially change the visual character of the project sites, or result in structures that are incompatible with surrounding open space and agricultural uses. Therefore, the project's aesthetic/visual resource impacts would be **less than significant**.

Cumulative Impacts: Proposed grading to construct the three reservoirs would result in relatively minor alterations to the topography of the project sites, and the project would not result in the development of new buildings or structures that would be incompatible with surrounding land uses. Therefore, the project would not result in cumulatively considerable changes to existing aesthetic/visual resource conditions at the project sites or the project area, and would result in **less than significant** cumulative aesthetic/visual resource impacts.

Mitigation and Residual Impact: The project's impacts would be less than significant and no mitigation is required.

4.2 AGRICULTURAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. With Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Convert prime agricultural land to non-agricultural use, impair agricultural land productivity (whether prime or non-prime) or conflict with agricultural preserve programs?			X		
b. An effect upon any unique or other farmland of State or Local Importance?			X		

Background: Agricultural lands play a critical economic and environmental role in Santa Barbara County. Agriculture continues to be Santa Barbara County's major producing industry with a gross production value of almost \$1.5 billion (Santa Barbara County 2014 Crop Production Report). In addition to the creation of food, jobs, and economic value, farmland provides valuable open space and maintains the County's rural character.

Physical: The project parcel has been used for grazing in the past, and the areas near the proposed frost ponds have been recently planted with grape vines. The proposed reservoir sites would encompass a total area of approximately 15 acres. Proposed reservoir sites 1 and 3 are located on Pleasanton sandy loam, and reservoir site 2 is on Panoche loam. Both soil types have a land capability classification of 2e if irrigated and 3e if non-irrigated. Therefore, the proposed reservoir sites are considered to have prime agricultural soils if irrigated. The project sites and adjacent areas are classified as "Grazing Land" by the California Department of Conservation (Farmland Mapping and Monitoring Program, 2016). The project parcel is subject to agricultural preserve contract 95-AP-024.

Regulatory

County Thresholds Manual: The County's Agricultural Resources Guidelines (approved by the Board of Supervisors, August 1993) provide a methodology for evaluating agricultural resources. These guidelines utilize a weighted point system to serve as a preliminary screening tool for determining significance. The tool assists planners in identifying whether a previously viable agricultural parcel could potentially be subdivided into parcels that are not considered viable after division. A project that would result in the loss or impairment of a agricultural resources would result in a potentially significant impact. The proposed project does not include land subdivision, nor would it impair agricultural uses located on the project parcel. Therefore, the weighted point system was not used for this analysis.

Impact Discussion

(a - b) Less than significant impact. The proposed reservoirs would be used to provide frost protection for approximately 400 acres of grape vines that have been recently planted near the reservoir sites. The proposed reservoirs would be located on prime (if irrigated) agricultural soils, however, they would be an agricultural accessory use that supports an irrigated agriculture operation. The proposed reservoirs would not convert prime agricultural land to a non-agricultural use, or impair agricultural land productivity. The project parcel is under an agricultural preserve contract. The proposed project was reviewed by the Agricultural Preserve Advisory Committee on April 1, 2016 and found it to be compatible with the Uniform Rules for agricultural preserves. Therefore, the project would not conflict with an agricultural preserve contract, and its impacts to agricultural resources would be **less than significant**.

Cumulative Impacts: The proposed reservoirs would support the long-term use of the project parcel for irrigated agriculture. Therefore, the project would not contribute to a cumulatively considerable loss of agricultural resources and its cumulative impacts would be **less than significant**.

Mitigation and Residual Impact: The project's impacts would be less than significant and no mitigation is required.

4.3a AIR QUALITY

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. The violation of any ambient air quality standard, a substantial contribution to an existing or projected air quality violation, or exposure of sensitive receptors to substantial pollutant concentrations (emissions from direct, indirect, mobile and stationary sources)?			X		
b. The creation of objectionable smoke, ash or odors?			X		
c. Extensive dust generation?			X		

Existing Setting: The project site is located within the South Central Coast air basin, a federal and state non-attainment area for ozone (O₃) and a state non-attainment area for particulate matter (PM₁₀). Reactive organic compounds (ROC) and nitrogen oxides (NO_x), which are precursors to ozone, are considered to be non-attainment pollutants. The major sources of ozone precursor emissions in the County are motor vehicles, the petroleum industry and solvent use. Sources of PM₁₀ include grading, road dust and vehicle exhaust.

County Environmental Thresholds: Chapter 5 of the Santa Barbara County Environmental Thresholds and Guidelines Manual addresses the subject of air quality. The thresholds provide that a proposed project will not have a significant impact on air quality if operation of the project will:

- emit (from all project sources, mobile and stationary), less than the daily trigger for offsets (55 pounds per day for NO_x and ROC, 80 pounds per day for PM₁₀);
- emit less than 25 pounds per day of oxides of nitrogen (NO_x) or reactive organic compounds (ROC) and from motor vehicle trips only;
- not cause or contribute to a violation of any California or National Ambient Air Quality Standard (except ozone);
- not exceed the APCD health risk public notification thresholds adopted by the APCD Board; and
- be consistent with the adopted federal and state Air Quality Plans.

As indicated above, long-term/operational emissions thresholds have been established to address mobile emissions (i.e., motor vehicle emissions) and stationary source emissions (i.e., stationary boilers, engines, paints, solvents, and chemical or industrial processing operations that release pollutants). No thresholds have been established for short-term impacts associated with construction activities. However, the County's Grading Ordinance and the Air pollution Control District requires standard dust control conditions for all projects involving grading activities.

Impact Discussion

(a - b) Less than significant impact. Short-term emissions of ozone precursors (NO_x and ROC) during project construction would result primarily from the use of earthmoving equipment. Project-related grading to construct the three proposed reservoirs would require approximately 130,897 cubic yards of cut, and 127,048 cubic yards of fill. Due to soil shrinkage, it is not expected that any excess soil would be exported from the project site. Minor amounts of grading (trenching) would also be required for the installation of approximately 2,326 linear feet of proposed reservoir fill and drain lines. Since short-term construction-related emissions are not considered to result in significant air quality impacts, project-related construction emissions of NO_x and ROC would be **less than significant** on a project-specific and cumulative basis. However, due to the non-attainment status of the air basin for ozone, the project would be required to implement standard conditions required by the APCD to reduce construction-related emissions of ozone precursors to the extent feasible. The implementation of these standard conditions is routinely required for all new development in the County.

The operation of the proposed reservoirs would not generate a substantial amount of traffic (Section 4.15, Transportation/Circulation) or result in substantial direct or indirect emissions from stationary sources. The project would not result in industrial or other operations that would have the potential to result in emissions of smoke, ash, or objectionable odors. Therefore, the project would not be a substantial long-term source of emissions and would result in **less than significant** project-specific and cumulative air emission impacts.

(c) Less than significant impact. Project-related grading would have the potential to be a short-term source of fugitive dust that could have the potential to impact adjacent agricultural operations. Project-related

grading would also contribute to regional emissions of PM₁₀ and PM_{2.5}. Dust emissions resulting from project-related construction would be reduced to the extent feasible through the implementation of County Grading Ordinance and the Air Pollution Control District requirements, which require the implementation of standard dust control measures. Therefore, short-term dust emissions from project-related grading would be **less than significant** under project-specific and cumulative conditions.

Mitigation and Residual Impact: The project's impacts would be less than significant and no mitigation is required.

4.3b AIR QUALITY - GREENHOUSE GAS EMISSIONS

Greenhouse Gas Emissions - Will the project:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X		
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X		

Greenhouse Gas Emissions

Existing Setting: Greenhouse gases include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). The largest source of greenhouse gas emissions from human activities in the United States is from fossil fuel combustion for electricity, heat, and transportation. Specifically, the *Inventory of U.S. Greenhouse Gasses and Sinks* (U.S. Environmental Protection Agency, 2013) states that the primary sources of greenhouse gas emissions in 2013 included electricity production (31%), transportation (27%), industry (21%), commercial and residential (12%), and agriculture (9%). This release of gases creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as “the greenhouse effect,” there is strong evidence to support that human activities have accelerated the generation of greenhouse gases beyond natural levels. The overabundance of greenhouse gases in the atmosphere has led to a warming of the earth and has the potential to severely impact the earth's climate system. For instance, Santa Barbara County is projected to experience an increase in the number of wildfires, land vulnerable to 100-year flood events, and temperature increases, even under a low-emissions scenario (California Energy Commission, 2015).

Climate change results from greenhouse gas emissions “...generated globally over many decades by a vast number of different sources” rather than from greenhouse gas emissions generated by any one project (County of Santa Barbara Planning and Development, 2008). As defined in CEQA Guidelines Section 15355 and discussed in Section 15130, “...a cumulative impact consists of an impact which is created as a result of the combination of the [proposed] project...evaluated...together with other projects causing related impacts.” Therefore, by definition, climate change under CEQA is a cumulative impact.

Environmental Threshold: CEQA Guidelines Section 15183.5(a) states,

Lead agencies may analyze and mitigate the significant effects of greenhouse gas emissions at a programmatic level, such as in...a separate plan to reduce greenhouse gas emissions. Later project-specific environmental documents may tier from...that existing programmatic review...a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan...

In May 2015, the County of Santa Barbara Board of Supervisors adopted the *Energy and Climate Action Plan* (ECAP) (County of Santa Barbara Long Range Planning Division, 2015) and certified the accompanying EIR (SCH# 20144021021) (PMC, 2015). The ECAP includes a greenhouse gas emissions forecast for unincorporated Santa Barbara County to 2035 and otherwise meets the criteria in CEQA Guidelines Section 15183.5(b) for a “plan to reduce greenhouse gas emissions.” The ECAP commits the County to reduce community-wide greenhouse gas emissions by 15 percent below 2007 levels by 2020 consistent with the California Global Warming Solutions Act of 2006 (AB 32) and the related *Climate Change Scoping Plan* (California Air Resources Board, 2008). The ECAP concludes that the County can meet this emission reduction target by implementing 53 existing and new County projects, policies, and programs (“emission reduction measures”). As a result, specific projects included in the ECAP’s emission forecast are not currently required to incorporate emission reduction measures listed in the ECAP or any other mitigation measures to reduce greenhouse gas emissions. Concurrent with the ECAP, the Board of Supervisors also adopted an amendment to the Energy Element of the Comprehensive Plan that requires the County to monitor progress meeting the emission reduction target and, as necessary, update the ECAP.

The growth estimates used in the ECAP’s greenhouse gas emissions forecast were based on the *Santa Barbara County Regional Growth Forecast 2005-2040* (Santa Barbara County Association of Governments, 2007) and the 2010 U.S. Census. The growth estimates were based on factors such as population projections, vehicle trends, and planned land uses. The sources of greenhouse gas emissions included various sectors, such as transportation, residential energy, commercial energy, off-road, solid waste, agriculture, water and wastewater, industrial energy, and aircraft. As a result, most residential and commercial projects that are consistent with the County’s zoning (in 2007) were included in the forecast. However, certain projects were not included in the emissions forecast, such as stationary source projects (e.g., large boilers, gas stations, auto body shops, dry cleaners, oil and gas production facilities, and water treatment facilities), Comprehensive Plan amendments, and community plans that exceed the County’s projected population and job growth.

A proposed project that was included in the ECAP’s emissions forecast may tier from the ECAP’s EIR for its CEQA analysis of greenhouse gas emissions. A project that tiers from the ECAP’s EIR is considered to be in compliance with the requirements in the ECAP and, therefore, its incremental contribution to a cumulative effect is not cumulatively considerable (Class III).

Impact Discussion

(a - b) Less than significant impact. The proposed reservoirs would not result in an increase in population or the development of land uses that would result in substantial long-term emissions of greenhouse gases. Therefore, long-term GHG emissions that may result from the operation of the reservoirs were included in the ECAP’s forecasted 2020 emissions as they are a conditionally permitted use in the AG-II-100 zone district and consistent with the growth projections for the County. As such, GHG emission impacts that may result from the project are mitigated by the 53 emission reduction measures specified in the ECAP.

Therefore, the impact of this individual project is **less than significant** and no mitigation measures are required.

Cumulative Impacts: The ECAP quantifies and forecasts greenhouse gas emissions for certain non-stationary sectors within unincorporated Santa Barbara County through 2020. As discussed for items “a-b” above, the proposed project was included in the ECAP’s greenhouse gas emissions forecast. As a result, the proposed project would tier from the ECAP’s certified EIR for its cumulative impact analysis of greenhouse gas emissions. The EIR contains a programmatic analysis of greenhouse gas emissions for unincorporated Santa Barbara County. The ECAP contains 53 County and community-wide programmatic emission reduction measures to achieve the 15 percent greenhouse gas emissions reduction target by 2020. The County recently created the Energy and Sustainability Initiatives Division and is taking other steps to implement and monitor the effectiveness of these measures throughout the unincorporated county. The ECAP does not require the proposed project to incorporate any project-specific emission reduction measures or any mitigation measures to reduce greenhouse gas emissions. Therefore, the project complies with the requirements of the ECAP and, as provided in CEQA Guidelines 15183.5(b), its incremental contribution to the cumulative effect is not cumulatively considerable and would have a **less than significant impact** on the environment.

Mitigation and Residual Impact: Since the proposed project would not have a significant impact on the environment, no additional mitigation is necessary. Therefore, residual impacts would be less than significant.

4.4 BIOLOGICAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
Flora					
a. A loss or disturbance to a unique, rare or threatened plant community?			X		
b. A reduction in the numbers or restriction in the range of any unique, rare or threatened species of plants?			X		
c. A reduction in the extent, diversity, or quality of native vegetation (including brush removal for fire prevention and flood control improvements)?			X		
d. An impact on non-native vegetation whether naturalized or horticultural if of habitat value?			X		
e. The loss of healthy native specimen trees?			X		
f. Introduction of herbicides, pesticides, animal life, human habitation, non-native plants or other factors that would change or hamper the existing habitat?			X		
Fauna					
g. A reduction in the numbers, a restriction in the range, or an impact to the critical habitat of any unique, rare, threatened or endangered species of animals?		X			
h. A reduction in the diversity or numbers of animals onsite (including mammals, birds, reptiles,		X			

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
amphibians, fish or invertebrates)?					
i. A deterioration of existing fish or wildlife habitat (for foraging, breeding, roosting, nesting, etc.)?			X		
j. Introduction of barriers to movement of any resident or migratory fish or wildlife species?			X		
k. Introduction of any factors (light, fencing, noise, human presence and/or domestic animals) which could hinder the normal activities of wildlife?			X		

Background and Methods

A biological resources assessment for the reservoir project (Kevin Merk Associates, February 24, 2016) was prepared for the project and is provided as Attachment 2a. This report describes the existing conditions at and near the proposed reservoir sites, identifies special-status biological resources known to exist in the project region, and includes recommendations to minimize potential impacts to sensitive wildlife that could result from the implementation of the proposed project. The February 24, 2016 report was peer reviewed and the results of that review are summarized in a memo (Dudek, March 21, 2016) provided as Attachment 2b. Responses to the peer review comments (Kevin Merk Associates, June 24, 2016) are provided as Attachment 2c.

Existing Plant and Animal Communities/Conditions

Plants. The proposed reservoir sites have historically been used for grazing and in 2016 were disked in preparation of planting grape vines in adjacent areas. Botanical surveys on the project property were conducted in April, May, June, August, and September 2015 to search for special status plants and characterize the on-site habitat types. Additional surveys were conducted in the winter and spring 2016 over large areas of the property, including the proposed reservoir sites. In general, the reservoir sites lack plant species diversity and do not support any native plants, and plants observed at the project sites in the spring and summer of 2015 consisted of a mix of non-native weeds including red-stemmed filaree and Russian thistle, and sparse non-native grasses.

The California Natural Diversity Data Base (CNDDB) identifies 13 recorded special status plant species within a five mile radius of the proposed reservoir sites. Table 1 in Attachment 2a lists the special status plants identified by the CNDDB. Based on the habitat requirements of the identified plants, existing conditions at the project sites, and the results of seasonally timed surveys in 2015, it was determined that it is unlikely that any of the identified sensitive plants are located on or near the proposed reservoir sites.

Wildlife. Wildlife observed at the proposed reservoir sites during site visits was limited to coyote tracks and a large flock of American crows in a disked area. The CNDDB identified 13 known occurrences of sensitive wildlife species within five miles of the proposed reservoir sites. Table 1 in Attachment 2a lists the special status wildlife species identified by the CNDDB. The potential for sensitive animal species to occur on or near the proposed reservoir sites is summarized below.

Giant kangaroo rat was last identified in the project area in 1979 and is now identified as “possibly extirpated” by the CNDDB. Surveys of the proposed reservoir sites did not locate any burrow complexes characteristic of the giant kangaroo rat, therefore, this species is unlikely to occur in the project areas.

No evidence (i.e., direct observations, scat or tracks) of the federally endangered San Joaquin kit fox or American badger were observed at the project sites during surveys conducted in 2015 and 2016. The project sites are within the historic range of the San Joaquin kit fox, however, agricultural activities have encroached upon suitable habitat and previous disking has reduced the potential small mammal prey base and potential den sites from the project sites. It is possible that a kit fox, if present in the region, could move through the project area during foraging and/or migration activities, although the lack of a well-developed prey base and limited suitable denning habitat within the project areas indicate a very low potential for this species to occur. The last recorded occurrences of San Joaquin kit fox in the immediate project area are from 1975, and on-going agricultural operations would have restricted any recent denning activities to either higher elevations of the project property or riverbank/terrace areas outside the proposed project footprint areas. Therefore, there is a very low potential for kit fox or American badger to occur at the reservoir project sites. However, due to suitable kit fox and badger denning and foraging habitat in the project area, those species could be a rare transient through the proposed project sites.

Designated critical habitat for California red-legged frog is located beyond the five mile CNDDDB search radius conducted for the proposed project. The ephemeral drainages on the project property do not provide suitable aquatic habitat for red-legged frog. Therefore, it is considered highly unlikely that red-legged frog is located on or near the proposed project sites.

Blunt-nosed leopard lizard (BNLL) was not identified by the CNDDDB as occurring within five miles of the project sites, BNLL has a known occurrence at a site just over five miles east of the eastern project parcel border, and well as other occurrences in the project region. Prior to disking the proposed project sites, 18 protocol-level surveys for BNLL were conducted within the highest quality potential habitat in the eastern portion of the project property. Those surveys did not detect the presence of BNLL. Additional non-protocol condition surveys were also conducted at proposed Reservoir site 2 and 3. Overall, the surveys determined that BNLL were unlikely to occur on or near the proposed reservoir sites. Based on the survey results, it was also determined that is unlikely for coast horned lizard to be present at the project sites.

Special status bird species, including raptors (long-eared owl and prairie falcon), would be expected to forage over or around the proposed project area. However, due to the lack of trees and the encroachment of agriculture, no suitable prey base or nesting habitat is present at the project sites. Therefore, these species are not expected to occur in the project area for long periods.

Other special status animal species known to occur in the project area include: crotch bumble bee, western pond turtle, Kern primrose sphinx moth, San Joaquin whipsnake, Tulare grasshopper mouse, and coast horned lizard. The biological resources assessment prepared for the proposed project concluded that these species are not expected to occur at the project sites, or are unlikely to be found at the sites due to the absence of suitable habitat, such as perennial water, suitable vegetation, and/or prey base.

County Environmental Thresholds: The County of Santa Barbara Environmental Thresholds and Guidelines Manual establishes thresholds for significant impacts to biological resources. Thresholds applicable to the proposed project include:

Other Rare Habitat Types: The Manual recognizes that not all habitat-types found in Santa Barbara County are addressed by the habitat-specific guidelines. Impacts to other habitat types or species may be considered significant, based on substantial evidence in the record, if they substantially: (1) reduce or eliminate species diversity or abundance; (2) reduce or eliminate the quality of nesting areas; (3) limit reproductive capacity through losses of individuals or habitat; (4) fragment, eliminate, or otherwise

disrupt foraging areas and/or access to food sources; (5) limit or fragment range and movement; or (6) interfere with natural processes, such as fire or flooding, upon which the habitat depends.

Impact Discussion

(a-f) Less than significant impact: The proposed reservoir sites have been extensively disturbed by historic grazing operations and recent disking in preparation of planting vineyards in adjacent areas. Vegetation coverage at the project sites is sparse and the minimal vegetation growth consists primarily of non-native weeds and grasses. The biological resources assessment prepared for the proposed project determined it is unlikely that any of the sensitive plants identified by the CNDDDB occur at or near the proposed project sites. This is due primarily to the disturbed character of the project sites and general absence of suitable habitat. In addition, no sensitive plants were observed at the project sites during seasonally appropriate surveys conducted in 2015. The CNDDDB did not identify any sensitive plant communities that are known to exist in the project area. Therefore, the project would have **less than significant** impacts related to sensitive plant communities or species, the quality or extent of native vegetation, or the habitat value of non-native vegetation.

(g - h) Less than Significant with Mitigation: The biological resources assessment prepared for the proposed project determined it is unlikely that most of the sensitive wildlife species identified by the CNDDDB exist at or near the proposed project sites. This is due primarily to the disturbed character of the project sites, absence of suitable habitat, and regular human presence. However, the assessment concluded that while unlikely, there is a potential for San Joaquin kit fox and American badger to move through the proposed project sites while in search of food or suitable denning habitat. Therefore, project-related construction activities would have the potential to result in significant impacts to San Joaquin kit fox and American badger.

In the unlikely event that San Joaquin kit fox is located at the proposed project sites, potential impacts would be reduced to a less than significant level by implementing U.S. Fish and Wildlife Service (2011) Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance avoidance measures during construction of the proposed reservoirs (Mitigation Measure No. 1). In general, these avoidance measures require surveys to identify potential kit fox habitat in proposed disturbance areas, and if necessary, additional preconstruction/pre-activity surveys. The U.S. Fish and Wildlife Service must be contacted if surveys detect an active kit fox den. If an inactive den is observed, specified measures to preclude the use of the den are to be implemented. Implementation of the proposed survey and avoidance measures would be sufficient to ensure that impacts to San Joaquin kit fox are reduced to a less than significant level. Proposed Mitigation Measure No. 3 provides requirements to reduce potential impacts to American badger to a less than significant level. In general, this measure requires preconstruction surveys to identify active dens, includes specified measures to avoid active dens and to discourage the use of inactive dens located in project-related disturbance areas. The mitigation measures for San Joaquin kit fox and American badger would also reduce the potential for less than significant impacts to common wildlife species that may also be present at the project sites by identifying species located in project areas, which would facilitate the implementation of appropriate impact avoidance and/or minimization measures.

(i - k) Less than significant impact: Vegetation at the proposed project sites is sparse and has been disturbed by disking operations. Therefore, construction of the reservoirs would not result in the removal of trees or shrubs, and would not result in the removal of potential breeding, roosting or nesting habitat. The proposed reservoirs would be at least 50 feet from the top of bank of the small ephemeral drainage channels located near the reservoir sites. Therefore, the project would not interfere with the potential use of the channels by wildlife. No lighting would be provided at the project sites and safety fencing that

would be installed around the reservoirs would not interfere with wildlife migration through the project area and would substantially reduce the potential for animals becoming trapped in the reservoirs. Operation of the reservoirs would not result in a substantial increase in noise or other conditions that would result in significant long-term habitat quality impacts to areas at or near the project sites. Therefore, the project would have **less than significant** impacts related to habitat deterioration.

Cumulative Impacts: The proposed project sites have been extensively disturbed and it is unlikely that the sites contain or support sensitive plant or wildlife species. Although unlikely, project-related construction activities would have the potential to result in significant short-term effects to sensitive wildlife. Those temporary impacts would be reduced to a less than significant level with the implementation of proposed mitigation measures. The long-term operation of the proposed reservoirs would not significantly impact biological resources located on or near the project sites. Therefore the project would not have a cumulatively considerable effect on biological resources and the project's contribution to biological resource impacts would be **less than significant**.

Mitigation and Residual Impact

Implementation of the following mitigation measure would reduce the project's short-term impacts to San Joaquin kit fox in the unlikely event that it inhabits the project site. The required pre-construction surveys would also reduce potential impacts to American badger. Implementation of this measure would reduce potential impacts to San Joaquin kit fox and American badger to a **less than significant** level (Class II). Residual impacts would be less than significant.

- 1. Special Condition: San Joaquin Kit Fox Avoidance Measures.** Project-related pre-construction / pre-activity surveys shall be conducted prior to the beginning of ground disturbance and/or construction activities, or any project activity that has the potential to impact the San Joaquin kit fox and/or American badger. Required pre-construction / pre-activity surveys and project-related construction activities shall be conducted in accordance with the requirements of the U.S. Fish and Wildlife Service's *Standardized Recommendations for Protection of The Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (January, 2011). Similar measures and procedures shall be implemented to minimize the potential for impacts to American badger. The Standardized Recommendations are provided as Attachment 3.

PLAN REQUIREMENTS AND TIMING: Prior to the start of any project-related pre-construction / pre-activity, the areas that would be affected by reservoir construction and the construction of the proposed reservoir fill and drain lines shall be marked in the field and surveyed by a qualified biologist. Project-related pre-construction / pre-activity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities. The qualified biologist shall conduct weekly site visits during site disturbance activities that proceed longer than 14 days for the purpose of monitoring compliance with the attached Standardized Recommendations. Site disturbance activities lasting up to 14 days do not require weekly monitoring by the biologist unless observations of kit fox or their dens are made on-site or the qualified biologist recommends additional monitoring. This measure shall be printed on all grading and construction plans.

MONITORING: The qualified biologist shall document the methods and results of site visits in weekly monitoring reports that are to be submitted to P&D. If incidental take of kit fox during project activities is possible, before project activities commence, the applicant must consult with the USFWS and CDFW. The results of this consultation may require the applicant to obtain a federal and/or state permit for incidental take during project activities.

- 2. Bio-09 Fish and Wildlife Jurisdiction Advisory.** The project site is within the range of San Joaquin kit fox, a species listed as Endangered by the U.S. Fish and Wildlife Service, and Threatened by the California Department of Fish and Wildlife. Based upon reports prepared by Kevin Merk Associates, dated February 24, 2016 and June 24, 2016, it has been determined that the probability for San Joaquin kit fox occurrence on the site is very low. The issuance of this permit does not relieve the permit-holder of any duties, obligations, or responsibilities under the federal or California Endangered Species Act or any other law. The permit-holder shall contact the necessary jurisdictional agencies to ascertain his or her level of risk under the federal and California Endangered Species Act in implementing the project herein permitted.

Indemnity for Violation of the Endangered Species Act: The applicant shall defend, indemnify and hold harmless the County or its agents, officers and employees from any and all claims, actions, proceedings, demands, damages, costs, expenses (including attorney's fees), judgments or liabilities, against the County or its agents, offices or employees brought by any entity or person for any and all actions or omissions of the applicant or his agents, employees or other independent contractors arising out of this permit alleged to be in violation of the federal or California Endangered Species Acts (16 USC Sec. 1531 et seq.; Cal. Fish and Game Code Sec. 2050 et seq.). This permit does not authorize, approve or otherwise support a "take" of any listed species as defined under the federal or California Endangered Species Acts. Applicant shall notify County immediately of any potential violation of the federal and/or California Endangered Species Act.

- 3. American Badger Avoidance and Minimization Measures.** A minimum of 14 days prior to initiation of ground disturbing activities, a survey for badger burrows shall be conducted within the disturbance footprint by an approved biologist (a biologist familiar with, including identification of, the wildlife species in the region). Dens found within the survey area shall be mapped and monitored using a tracking medium, remote camera system, and/or spotlighting at night for a minimum of three days to assess the presence of badgers. Inactive dens shall be collapsed by hand with a shovel to prevent badgers from re-using them during construction. Active dens located within the survey area shall be avoided during the breeding season (March 1 through June 30). A minimum buffer of 50 feet around the active den within the proposed area of disturbance shall be demarcated by construction fencing. The fencing shall be installed one foot above ground to permit movement of badgers in and out of the buffer zone. Once the biologist has determined that active dens are no longer in use, the den shall be collapsed by shovel. Prior to ground disturbing activities occurring outside of the breeding season, badgers may be discouraged from using currently active dens by partially blocking the entrance of the den with sticks, debris, and soil for three (3) to five (5) days. Access to the den would be incrementally blocked to a greater degree over this period. This would cause the badger to abandon the den site and move elsewhere. After badgers have stopped using active dens within the project site, the dens would be collapsed by hand with a shovel.

Plan Requirements and Timing. The name, qualifications, scope of biological surveys and contact information for the surveying biologist must be submitted to P&D and CDFW in advance of the surveys. The above measures shall be included on all land use, grading, and building plans for the construction of the reservoirs, water pipelines, and utility line improvements. A report of the results of the badger survey shall be submitted to P&D for review and approval prior to Zoning Clearance.

Monitoring. P&D will review and approve the reports. A County-approved biologist shall be present during the initial ground-disturbing activity.

4.5 CULTURAL RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
Archaeological Resources					
a. Disruption, alteration, destruction, or adverse effect on a recorded prehistoric or historic archaeological site (note site number below)?		X			
b. Disruption or removal of human remains?		X			
c. Increased potential for trespassing, vandalizing, or sabotaging archaeological resources?		X			
d. Ground disturbances in an area with potential cultural resource sensitivity based on the location of known historic or prehistoric sites?		X			
Ethnic Resources					
e. Disruption of or adverse effects upon a prehistoric or historic archaeological site or property of historic or cultural significance to a community or ethnic group?			X		
f. Increased potential for trespassing, vandalizing, or sabotaging ethnic, sacred, or ceremonial places?			X		
g. The potential to conflict with or restrict existing religious, sacred, or educational use of the area?			X		

Setting

For at least the past 10,000 years, the area that is now Santa Barbara County has been inhabited by Chumash Indians and their ancestors. A Phase 1 investigation (*Phase 1 Cultural Resources Study for the North Fork Reservoir Project, Santa Barbara County, California*, Rincon Consultants, 2016) of the proposed reservoir and pipeline construction sites was conducted. The survey did not identify any archaeological resources. However, prior to the preparation of the Phase 1 investigation, human remains were identified during the excavation of an irrigation pipeline at a location on the north side of Highway 166. Based on the previous discovery of the burial, the project site is considered sensitive for cultural resources.

County Environmental Thresholds: The County Environmental Thresholds and Guidelines Manual contains guidelines for identification, significance determination, and mitigation of impacts to important cultural resources. Chapter 8 of the Manual, the *Archaeological Resources Guidelines: Archaeological, Historic and Ethnic Element*, specifies that if a resource cannot be avoided, it must be evaluated for importance under CEQA. CEQA Section 15064.5 contains the criteria for evaluating the importance of archaeological and historical resources. For archaeological resources, the criterion usually applied is: (D), “Has yielded, or may be likely to yield, information important in prehistory or history.” A project that may cause a substantial adverse effect on an archaeological resource may have a significant effect on the environment.

Impact Discussion

(a-d) Less than significant with mitigation: Background research and the survey of the project sites did not identify any archaeological resources that would be impacted by the construction of the proposed reservoirs or associated pipelines. Therefore, the project would not impact any recorded cultural resource sites. However, based on the previous discovery of pre-historic human remains in the vicinity of the project sites, the project area is considered sensitive for cultural resources. Therefore, there is a potential for unanticipated discoveries of cultural resources during project construction. Mitigation measure No. 4 requires that an archaeological monitor and Native American representative be present during initial ground disturbance at each of the proposed reservoir and pipeline installation sites. Mitigation measure No. 5 describes actions to be implemented in the event that previously unidentified cultural resources are discovered during site development; and mitigation measure No. 6 requires that construction workers be informed about the cultural resources sensitivity of the project area. The proposed mitigation measures would reduce impacts to cultural resources to a **less than significant** level.

(e-g) Less than significant impact. Based on the Phase 1 investigation there is no indication that the proposed reservoir sites are religiously important or that the project site is a sacred site. In addition, under the requirements of AB 52 (Gatto, 2014), the Barbareño/Venentureño Band of Mission Indians was formally notified of the proposed project by a letter dated March 13, 2017. No response to this notification has been received. The use of the proposed reservoirs would not increase the number of people located on the project property or increase the potential for the collection or vandalizing ethnic resources. As a result, impacts would be **less than significant**.

Cumulative Impacts: The project would have a low potential to encounter previously undetected cultural resources during project construction. However, if the project were to result in the disturbance of previously undetected resources, that impact would be reduced to a less than significant level with the implementation of proposed project-specific mitigation measures. Therefore, the project would not have a cumulative considerable effect on the County's cultural resources and its cumulative cultural resource impacts would be **less than significant**.

Mitigation and Residual Impact: Implementation of the following measures would reduce the project's potential impacts to cultural resources to a less than significant level (Class II). Residual impacts would be less than significant.

4. **CulRes-07 Cultural Resource Monitor.** The Owner/Applicant shall have all earth disturbances including scarification and placement of fill within the proposed project sites monitored by a P&D approved archaeologist and a Native American consultant in compliance with the provisions of the County Archaeological Guidelines. The duration and depth of grading below the ground surface that requires monitoring shall be determined by the approved archaeologist and Native American consultant. Ground-disturbing construction work within native soils shall be monitored by a County-qualified archaeologist and a Native American monitor during construction to a depth of 10 feet below the ground surface.

TIMING: Prior to the approval of a grading permit, the Owner/Applicant shall submit for P&D review and approval, a contract or Letter of Commitment between the Owner/Applicant and the archaeologist, consisting of a project description and scope of work, and once approved, shall execute the contract. This condition shall be printed on all building and grading plans.

MONITORING: The Owner/Applicant shall provide P&D compliance monitoring staff with the name and contact information for the assigned onsite monitor(s) prior to grading permit issuance and pre-construction meeting. P&D compliance monitoring staff shall confirm monitoring by archaeologist and Native American consultant and P&D grading inspectors shall spot check field work. The P&D permit processing planner shall check plans prior to approval of all building and grading permits and P&D compliance monitoring staff shall spot check in the field.

5. **CulRes-09 Stop Work at Encounter.** The Owner/Applicant and/or their agents, representatives or contractors shall stop or redirect work immediately in the event archaeological remains are encountered during grading, construction, landscaping or other construction-related activity. The Owner/Applicant shall retain a P&D approved archaeologist and Native American representative to evaluate the significance of the find in compliance with the provisions of Phase 2 investigations of the County Archaeological Guidelines and funded by the Owner/Applicant. If remains are found to be significant, they shall be subject to a Phase 3 mitigation program consistent with County Archaeological Guidelines and funded by the applicant.

PLAN REQUIREMENTS: This condition shall be printed on all building and grading plans.

MONITORING: The P&D permit processing planner shall check plans prior to the issuance of a Zoning Zone Clearance and P&D compliance monitoring staff shall spot check in the field.

6. **Special Condition: Pre-Construction Meeting.** A pre-construction meeting shall be conducted by a County-qualified archaeologist and a local Native American representative funded by the applicant. Meeting attendees shall include the applicant, archaeologist, local Chumash representative, construction supervisors, and heavy equipment operators to ensure that all parties understand the cultural resources monitoring program and their respective roles and responsibilities. All construction personnel who would work on the site during any phase of ground disturbance shall be required to attend the meeting. The names of all personnel who attend the meeting shall be recorded denoting that they have received the required training.

The meeting shall review the following: types of archaeological resources that may be uncovered; provide examples of common archaeological artifacts and other cultural materials to examine; describe why monitoring is required; what makes an archaeological resource significant; identify monitoring procedures; what would temporarily halt construction and for how long; describe a reasonable resource discovery scenario (i.e., feature or artifact); and describe reporting requirements and the responsibilities of the construction supervisor and crew. The meeting shall make attendees aware of prohibited activities, including vehicle use in protected areas, and educate construction workers about the inappropriateness of unauthorized collecting of artifacts that can result in impacts on cultural resources.

PLAN REQUIREMENTS: The pre-construction meeting requirements shall be shown on approved grading and building plans.

TIMING: The pre-construction meeting shall be conducted prior to the start of ground disturbing activities.

MONITORING: The Owner/Applicant shall provide P&D compliance monitoring staff with the names and responsibilities of persons who attended the meeting.

Residual impacts would be less than significant with the implementation of proposed mitigation measures.

4.6 ENERGY

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Substantial increase in demand, especially during peak periods, upon existing sources of energy?			X		
b. Requirement for the development or extension of new sources of energy?			X		

Setting

The County has not identified significance thresholds for electrical and/or natural gas service impacts (Thresholds and Guidelines Manual). Private electrical and natural gas utility companies provide service to customers in Central and Southern California, including the unincorporated areas of Santa Barbara County.

(a-b) Less than significant impact: The proposed project would result in the construction and operation of three water reservoirs. It is not anticipated that energy use to operate the reservoirs would result in a substantial increase in demand for energy; use energy in a wasteful manner; or require the development of new energy sources. Therefore, project-related energy use would be **less than significant**.

Cumulative Impacts: The project's contribution to the regional demand for energy would not be cumulatively considerable and its cumulative effect would be **less than significant**.

Mitigation and Residual Impact: Project-related energy demand would be less than significant. Therefore, no mitigation measures are required.

4.7 FIRE PROTECTION

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Introduction of development into an existing high fire hazard area?			X		
b. Project-caused high fire hazard?			X		
c. Introduction of development into an area without adequate water pressure, fire hydrants or adequate access for fire fighting?			X		
d. Introduction of development that will hamper fire prevention techniques such as controlled burns or backfiring in high fire hazard areas?			X		
e. Development of structures beyond safe Fire Dept. response time?			X		

Setting

Physical: The project site is located within a designated High Fire Hazard area (CalFire, 2007). Vegetation at the project sites is sparse and vegetation near the project sites predominately consists of irrigated vineyards and non-native grasses. Fire protection and suppression services for the project would be provided by Santa Barbara County Fire Station 41 (41 Newsome Street, New Cuyama), which is approximately 9-12 miles from the proposed reservoir sites.

Impact Discussion

(a - e) Less than significant impact: The proposed reservoir project would not result in the construction of habitable or combustible structures, would not increase the population of the area, would not restrict future wildfire suppression activities, and would not result in a substantial demand for fire protection services. Therefore, the project would have a **less than significant** impact on fire protection services.

Cumulative Impacts: The proposed project would not result in a cumulatively considerable increase in the demand for fire protection services and would have a **less than significant** cumulative fire protection impact.

Mitigation and Residual Impact

No mitigation is required. Residual impacts would be less than significant.

4.8 GEOLOGIC PROCESSES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Exposure to or production of unstable earth conditions such as landslides, earthquakes, liquefaction, soil creep, mudslides, ground failure (including expansive, compressible, collapsible soils), or similar hazards?			X		
b. Disruption, displacement, compaction or overcovering of the soil by cuts, fills or extensive grading?			X		
c. Exposure to or production of permanent changes in topography, such as bluff retreat or sea level rise?			X		
d. The destruction, covering or modification of any unique geologic, paleontologic or physical features?			X		
e. Any increase in wind or water erosion of soils, either on or off the site?		X			
f. Changes in deposition or erosion of beach sands or dunes, or changes in siltation, deposition or erosion which may modify the channel of a river, or stream, or the bed of the ocean, or any bay, inlet or lake?		X			

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
g. The placement of septic disposal systems in impermeable soils with severe constraints to disposal of liquid effluent?				X	
h. Extraction of mineral or ore?				X	
i. Excessive grading on slopes of over 20%?			X		
j. Sand or gravel removal or loss of topsoil?				X	
k. Vibrations, from short-term construction or long-term operation, which may affect adjoining areas?				X	
l. Excessive spoils, tailings or over-burden?			X		

Setting

Regulatory/Physical

The proposed reservoir sites are generally level and have gentle slopes of approximately six (6) percent or less. Borings conducted at each of the proposed reservoir sites (*Geotechnical Investigation, North Fork Vineyards, Highway 166, New Cuyama, California*, GSI Soils Inc., January 2016) did not encounter standing groundwater at a depth 20 feet below the ground surface. There are no known faults located in the project area (*2016 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan*).

County Environmental Thresholds: Pursuant to the County's Adopted Thresholds and Guidelines Manual, impacts related to geological resources may have the potential to be significant if the proposed project involves any of the following characteristics:

1. The project site or any part of the project is located on land having substantial geologic constraints, as determined by P&D or PWD. Areas constrained by geology include parcels located near active or potentially active faults and property underlain by rock types associated with compressible/collapsible soils or susceptible to landslides or severe erosion. "Special Problems" areas designated by the Board of Supervisors have been established based on geologic constraints, flood hazards and other physical limitations to development.
2. The project results in potentially hazardous geologic conditions such as the construction of cut slopes exceeding a grade of 1.5 horizontal to 1 vertical.
3. The project proposes construction of a cut slope over 15 feet in height as measured from the lowest finished grade.
4. The project is located on slopes exceeding 20% grade.

Impact Discussion

(a, b, c, i, l) Less than significant impact: Construction of the proposed reservoirs would result in the excavation of approximately 130,897 cubic yards of excavation and 127,048 cubic yards of fill, for a total of 257,945 cubic yards of grading. The excavated soil would be used to construct the proposed reservoir's water impoundment berms, which would be approximately three to 20 feet above surrounding grade. Due to soil compaction and shrinkage, no excess soil would be exported from the project site.

Graded slopes and water impoundment berms would have a gradient of 2.5:1. The geotechnical investigation prepared for the project (GSI, 2016) concluded that instability of the proposed slopes is anticipated to be negligible due to the shear strength and cohesion properties of the native soils and the compactability of these materials. The geotechnical evaluation also concluded that based on a preliminary evaluation of on-site soil and groundwater conditions, the potential for liquefaction at the project sites is low. There are no known faults at the project sites, and the geotechnical evaluation prepared for the project identifies seismic design parameters that comply with building code requirements. All proposed project-related design parameters would be reviewed and included in the grading permit required by the Building and Safety Division for the project. Implementation of requirements included in approved grading plans and adherence to the requirements set forth in the Santa Barbara County Code, Chapter 14 Grading Ordinance would reduce potential seismic and soil-related impacts to a **less than significant** level.

(d) Less than significant impact. There are no unique geologic features at the proposed reservoir sites and proposed modifications to the topography of the project property would not be extensive. Therefore, impacts to unique features would be **less than significant**.

(e, f,) Less than significant with mitigation: The topography of the project site is generally level with gentle slopes. Grading to construct the proposed reservoirs would have the potential to result in significant short- and long-term erosion-related impacts to nearby ephemeral drainages that drain to the Cuyama River, which in general is approximately 4,000 feet northeast of the proposed reservoir sites. The Santa Barbara County Code, Chapter 14 Grading Ordinance (2010) contains the minimum standards and procedures necessary to minimize grading-related hazards. The Ordinance also addresses compliance with the National Pollutant Discharge Elimination System Phase II storm water regulations and sets forth local storm water requirements for project that disturb more than one acre. The implementation of these requirements would reduce the potential for the project to result in erosion- and sedimentation-related impacts to water resources. Mitigation Measure No. 7 provides specific erosion control requirements that would reduce the project's potential erosion-related impacts to a **less than significant** level.

(g, h, j, k) No impact. The project would not require the use of septic systems and would not result in mining operations. The project would not result in construction operations that would be a substantial source of vibrations (i.e., pile driving) and no sensitive vibration receptors are located near the project site.

Cumulative Impacts: Geologic impacts are generally project-specific in nature and addressed based on the characteristics of individual project site. However, erosion and off-site sedimentation from a project site may contribute to off-site water quality and other sedimentation-related impacts. With the implementation of proposed project-specific mitigation, the project would not result in significant short- or long-term erosion impacts and the project's geologic impacts would not be cumulatively considerable and its cumulative effect would be less than significant.

Mitigation and Residual Impact

The following mitigation measure would reduce the project's potential erosion- and sedimentation-related impacts to a less than significant level.

7. **Geo-02. Erosion and Sediment Control Plan.** Where required by the latest edition of the California Green Code and/or Chapter 14 of the Santa Barbara County Code, a Storm Water Pollution Prevention Plan (SWPPP), Storm Water Management Plan (SWMP) and/or an Erosion and Sediment Control Plan (ESCP) shall be implemented as part of the project. Grading and erosion and sediment control plans shall be designed to minimize erosion during construction and

shall be implemented for the duration of the grading period and until re-graded areas have been stabilized by structures, long-term erosion control measures or permanent landscaping. The Owner/Applicant shall submit the SWPPP, SWMP or ESCP using Best Management Practices (BMP) designed to stabilize the site, protect natural watercourses/creeks, prevent erosion, convey storm water runoff to existing drainage systems keeping contaminants and sediments onsite. The SWPPP or ESCP shall be a part of the Grading Plan submittal and will be reviewed for its technical merits by P&D. Information on Erosion Control requirements can be found on the County web site re: Grading Ordinance Chapter 14 (<http://sbcountyplanning.org/building/grading.cfm>) refer to Erosion and Sediment Control Plan Requirements; and in the California Green Code for SWPPP (projects greater than 1 acre) and/or SWMP requirements.

PLAN REQUIREMENTS: The grading and SWPPP, SWMP and/or ESCP shall be submitted for review and approved by P&D prior Zoning Clearance. The plan shall be designed to address erosion, sediment and pollution control during all phases of development of the site until all disturbed areas are permanently stabilized. **TIMING:** The SWPPP requirements shall be implemented prior to the commencement of grading and throughout the year. The ESCP/SWMP requirements shall be implemented between November 1st and April 15th of each year, except pollution control measures shall be implemented year round.

MONITORING: P&D staff shall perform site inspections throughout the construction phase.

4.9 HAZARDOUS MATERIALS/RISK OF UPSET

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. In the known history of this property, have there been any past uses, storage or discharge of hazardous materials (e.g., fuel or oil stored in underground tanks, pesticides, solvents or other chemicals)?			X		
b. The use, storage or distribution of hazardous or toxic materials?			X		
c. A risk of an explosion or the release of hazardous substances (e.g., oil, gas, biocides, bacteria, pesticides, chemicals or radiation) in the event of an accident or upset conditions?			X		
d. Possible interference with an emergency response plan or an emergency evacuation plan?			X		
e. The creation of a potential public health hazard?			X		
f. Public safety hazards (e.g., due to development near chemical or industrial activity, producing oil wells, toxic disposal sites, etc.)?			X		
g. Exposure to hazards from oil or gas pipelines or oil well facilities?			X		
h. The contamination of a public water supply?			X		

Setting

The areas that would be used for the construction of the proposed reservoirs are vacant and have been used for grazing in the past. According to the SWRCB Geotracker website (accessed March 30, 2017) there are no known contamination or permitted hazardous waste sites located on the project property, and there are no active contamination or remediation sites near the project property.

County Environmental Threshold:

Pursuant to the County's Adopted Thresholds and Guidelines Manual, the County's safety threshold addresses involuntary public exposure from projects involving significant quantities of hazardous materials. The threshold addresses the likelihood and severity of potential accidents to determine whether the safety risks of a project exceed significant levels.

Impact Discussion:

(a-h) Less than Significant Impact. The proposed project would result in the development and operation of three water storage reservoirs. The construction and operation of the reservoirs would not result in or require the use of hazardous materials at levels that would have the potential to result in a significant hazard to human health or the environment. Minor amounts of traffic that may be generated by the project would generally be for maintenance-related purposes, and project-related traffic would not substantially interfere with emergency response capabilities to the project site or to other properties in the project area. Therefore, the project's potential hazard-related impacts would be **less than significant**.

Cumulative Impacts

The project would not result in significant impacts with respect to hazardous materials and/or risk of upset. Therefore, the project would not have a cumulatively considerable effect on safety within the County and the project's cumulative impact would be **less than significant**.

Mitigation and Residual Impact: No impacts are identified. No mitigations are necessary.

4.10 HISTORIC RESOURCES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Adverse physical or aesthetic impacts on a structure or property at least 50 years old and/or of historic or cultural significance to the community, state or nation?				X	
b. Beneficial impacts to an historic resource by providing rehabilitation, protection in a conservation/open easement, etc.?				X	

Existing Setting:

The project property does not contain any structural development that could be considered historical.

County Environmental Threshold

Environmental Threshold: Historic Resource impacts are determined through use of the County's Cultural Resources Guidelines. A significant resource a) possesses integrity of location, design, workmanship, material, and/or setting; b) is at least fifty years old, and c) is associated with an important contribution, was designed or built by a person who made an important contribution, is associated with an important and particular architectural style, or embodies elements demonstrating outstanding attention to detail, craftsmanship, use of materials, or construction methods.

Impact Discussion

(a,b) No Impact: The proposed project site does not include any structures that could be considered historical, and the project would not alter the contextual nature of the site. As a result, **no impacts** to historic resources would result.

Cumulative Impacts: The proposed project would not affect any historic structures and its cumulative impacts to historic resources would not be significant.

Mitigation and Residual Impact: No mitigation is required. Residual impacts would be less than significant.

4.11 LAND USE

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Structures and/or land use incompatible with existing land use?			X		
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X		
c. The induction of substantial growth or concentration of population?			X		
d. The extension of sewer trunk lines or access roads with capacity to serve new development beyond this proposed project?			X		
e. Loss of existing affordable dwellings through demolition, conversion or removal?				X	
f. Displacement of substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X	
g. Displacement of substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X	
h. The loss of a substantial amount of open space?			X		

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
i. An economic or social effect that would result in a physical change? (i.e. Closure of a freeway ramp results in isolation of an area, businesses located in the vicinity close, neighborhood degenerates, and buildings deteriorate. Or, if construction of new freeway divides an existing community, the construction would be the physical change, but the economic/social effect on the community would be the basis for determining that the physical change would be significant.)			X		
j. Conflicts with adopted airport safety zones?				X	

Setting

The project site is located approximately nine miles west of the community of New Cuyama, and is south of and adjacent to Highway 166. The 6,565-acre project property is zoned AG-II-100 and is mostly open space, although the area near the proposed reservoirs was recently planted with grape vines. The proposed reservoirs would be approximately 1,200 to 3,000 feet south of Highway 166, and approximately 4,000 to 5,000 feet south of the Cuyama River.

County Environmental Threshold

The Thresholds and Guidelines Manual contains no specific thresholds for land use. Generally, a potentially significant impact can occur if a project would result in substantial growth inducing effects.

Impact Discussion

(a, b) Less than significant: Land uses on and adjacent to the proposed reservoir sites are open space and agriculture, and the project property is zoned AG-II-100. The reservoirs are a conditionally permitted use by the zoning of the project site, and would not result in land use conflicts with nearby land uses. Therefore, the proposed project would result in **less than significant** land use conflicts with existing land uses and land use requirements.

(c, d) Less than significant: The project would not result in an extension of urban services that could serve new development beyond the proposed project, and would not result in an increase in the population of the project area. Therefore, potential growth inducing impacts would be **less than significant**.

(e, f, g) No impact: The project would not result in the removal of any housing or the displacement of any people. Therefore, the project would have **no impact** to existing housing supplies.

(h) Less than significant: The proposed reservoirs would occupy approximately 15.6 acres of the 6,565-acre project property, and would be used to support an existing agricultural operation. Therefore, impacts to open space would be **less than significant**.

(i) Less than significant: Construction of the proposed reservoirs would not result in adverse economic or social effects that would have the potential to result in physical changes to existing environmental

conditions on the project sites or in the project area. Operation of the reservoirs would require the use of groundwater and the project's contribution to existing groundwater overdraft conditions in the Cuyama Valley would result from evaporative losses of water from the reservoirs. It is estimated the project would result in evaporative losses of approximately ~~eight (8)~~ 26 acre feet per year. This water loss would not result in a significant project-specific or cumulative water use impact based on the County's adopted groundwater use thresholds (Section 4.16, Water Resources/Flooding). Due to the relatively minor increase in groundwater use that would result from the operation of the reservoirs, the proposed project would not result in substantial economic or social changes in the project area, and the project-related physical change in existing groundwater conditions would result in a **less than significant** land use impact.

(j) No Impact: There are no airports in the project area. Therefore, the project would have **no impact** on airport operations.

Cumulative Impacts: The project would not result in any significant project-specific land use impacts. The project would be consistent with the zoning of the project site and would be compatible with surrounding land uses and development. The project's contribution to cumulative land use impacts would not be cumulatively considerable and its cumulative impacts would be **less than significant**.

Mitigation and Residual Impact: No mitigation is required. Residual impacts would be less than significant.

4.12 NOISE

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Long-term exposure of people to noise levels exceeding County thresholds (e.g. locating noise sensitive uses next to an airport)?			X		
b. Short-term exposure of people to noise levels exceeding County thresholds?			X		
c. Project-generated substantial increase in the ambient noise levels for adjoining areas (either day or night)?			X		

Setting/Threshold: **Setting/Threshold:** Noise is generally defined as unwanted or objectionable sound which is measured on a logarithmic scale and expressed in decibels (dB(A)). The duration of noise and the time period at which it occurs are important values in determining impacts on noise-sensitive land uses. The Community Noise Equivalent Level (CNEL) and Day-Night Average Level (L_{dn}) are noise indices which account for differences in intrusiveness between day- and night-time uses. County noise thresholds are: 1) 65 dB(A) CNEL maximum for exterior exposure, and 2) 45 dB(A) CNEL maximum for interior exposure of noise-sensitive uses. Noise-sensitive land uses include: residential dwellings; transient lodging; hospitals and other long-term care facilities; public or private educational facilities; libraries, churches; and places of public assembly.

Highway 166 is the major noise source in the project area. No other roadways, public facilities, airport approach and take-off zones, or other land uses that are substantial noise sources are located in the project area. No noise-sensitive uses (i.e., residences) are located in the vicinity of the project site.

Impact Discussion

(a, c) Less than significant: The operation of the proposed reservoirs would not result in the generation of noise that would have the potential to result in significant noise impacts to persons or uses located on or near the proposed reservoir sites. Minor amounts of traffic that may be generated by the project would generally be for periodic maintenance-related purposes, and such traffic would not substantially increase existing noise conditions along Highway 166. Therefore, the project's potential long-term noise impacts would be **less than significant**.

(b) Less than significant: The construction of proposed reservoirs would result in a temporary increase in noise levels at the construction sites. However, no construction activities would occur within 1,600 feet of residences or other sensitive receptors located on or adjacent to the project sites. Therefore, the project's potential short-term noise impacts would be **less than significant**.

Cumulative Impacts: The project would not be a substantial source of noise. Therefore, the project's noise impacts would not be cumulatively considerable and its cumulative impacts would be **less than significant**.

Mitigation and Residual Impact: No mitigation is required. Residual impacts would be less than significant.

4.13 PUBLIC FACILITIES

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. A need for new or altered police protection and/or health care services?				X	
b. Student generation exceeding school capacity?				X	
c. Significant amounts of solid waste or breach any national, state, or local standards or thresholds relating to solid waste disposal and generation (including recycling facilities and existing landfill capacity)?				X	
d. A need for new or altered sewer system facilities (sewer lines, lift-stations, etc.)?				X	
e. The construction of new storm water drainage or water quality control facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X		

Setting:

The proposed project site does not contain any structural development or any public facilities.

County Environmental Thresholds

Schools: A significant level of school impacts is generally considered to occur when a project would generate a sufficient number of students to require an additional classroom.

Solid Waste: A project is considered to result in significant impacts to landfill capacity if it would generate 196 tons per year of solid waste. This volume represents 5% of the expected average annual increase in waste generation, and is therefore considered a significant portion of the remaining landfill capacity. In addition, construction and demolition waste from remodels and rebuilds is considered significant if it exceeds 350 tons. Waste generation of 40 tons per year is considered a potentially significant contribution to cumulative waste generation.

Impact Discussion

(a-d) No impact: The proposed project would not result in the development of habitable structures and would not increase population on the project site or in the project area. The project would not result in a demand for law enforcement, generate additional school-age children, generate solid waste, or be a source of sewage generation. Therefore, the project would have **no impact** on these services.

(e) Less than significant: Stormwater runoff from slopes south of and adjacent to Reservoir No. 1 (the eastern-most reservoir) would be collected in a proposed drainage swale located adjacent to the southern end of the reservoir. The swale would extend to the east away from the reservoir, and when it reaches Schoolhouse Canyon Road, which is east of and adjacent to the reservoir site, the swale would be convey collected runoff beneath the roadway through a proposed culvert. The runoff would then be discharged over a proposed rock energy dissipater at a site approximately 50 feet east of the road and allowed to sheet flow across native soil towards Schoolhouse Canyon Creek. The proposed drainage culvert beneath Schoolhouse Canyon Road would not substantially alter existing runoff characteristics or result in significant impacts to Schoolhouse Canyon Road. Therefore, the project would have a **less than significant** impact on stormwater drainage facilities.

Cumulative Impacts: The proposed project would not result in a population increase that would contribute to significant public facilities impacts. Solid waste generation would be below the County threshold of 40 tons per year for a significant cumulative impact. The project would not result in a substantial increase in impermeable surfaces at the project sites that would substantially increase runoff water volumes. Therefore, the project's contribution to public facility impacts would not be cumulatively considerable and its cumulative effects would be **less than significant**.

Mitigation and Residual Impact

No mitigation is required. Residual impacts would be less than significant.

4.14 RECREATION

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Conflict with established recreational uses of the area?				X	
b. Conflict with biking, equestrian and hiking trails?				X	
c. Substantial impact on the quality or quantity of existing recreational opportunities (e.g., overuse of an area with constraints on numbers of people, vehicles, animals, etc. which might safely use the area)?				X	

Setting

There are no recreation facilities on or near the project sites.

County Environmental Thresholds: The Thresholds and Guidelines Manual contains no threshold for park and recreation impacts. However, the Board of Supervisors has established a minimum standard ratio of 4.7 acres of recreation/open space per 1,000 people to meet the needs of a community. The Santa Barbara County Parks Department maintains more than 900 acres of parks and open spaces, as well as 84 miles of trails and coastal access easements. The County's Comprehensive Plan, Land Use Element, Parks/Recreation Policies state, in part: "Opportunities for hiking and equestrian trails should be preserved, improved, and expanded wherever compatible with surrounding uses."

Impact Discussion

(a-c) No impact. There are no parks or public trails located on or near the project sites, and the project would not result in a population increase that would contribute to significant impacts to recreation facilities. Therefore, the project would have **no impact** on existing recreational facilities or increase the demand for recreation opportunities.

Cumulative Impacts: The proposed project would not result in an increase in population in the project area and would not directly or indirectly impact any existing recreation facilities. Therefore, the project's contribution to cumulative recreation impacts would not be cumulatively considerable and its cumulative impacts would be **less than significant**.

Mitigation and Residual Impact: No mitigation is required. Residual impacts would be less than significant.

4.15 TRANSPORTATION/CIRCULATION

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Generation of substantial additional vehicular movement (daily, peak-hour, etc.) in relation to existing traffic load and capacity of the street system?			X		
b. A need for private or public road maintenance, or need for new road(s)?			X		
c. Effects on existing parking facilities, or demand for new parking?			X		
d. Substantial impact upon existing transit systems (e.g. bus service) or alteration of present patterns of circulation or movement of people and/or goods?				X	
e. Alteration to waterborne, rail or air traffic?				X	
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians (including short-term construction and long-term operational)?			X		
g. Inadequate sight distance?			X		
ingress/egress?			X		
general road capacity?			X		
emergency access?			X		
h. Impacts to Congestion Management Plan system?			X		

Setting

Regional access to the proposed reservoir sites is provided by State Highway 166. Access to the Reservoir No. 1 project site is provided by Schoolhouse Canyon Road. Access to the Reservoir Nos. 2 and 3 sites is provided by existing ranch roads.

County Environmental Thresholds: The Public Works Department, Roads Division's general standards governs all project proposals within the County. In addition, according to the County's Environmental Thresholds and Guidelines Manual, a significant traffic impact would occur when:

- a. The addition of project traffic to an intersection increases the volume to capacity (V/C) ratio by the value provided below, or sends at least 15, 10 or 5 trips to an intersection operating at LOS D, E or F.

LEVEL OF SERVICE (including project)	INCREASE IN VOLUME/CAPACITY RATIO GREATER THAN
A	0.20
B	0.15
C	0.10
	Or the addition of:
D	15 trips
E	10 trips
F	5 trips

- b. Project access to a major road or arterial road would require a driveway that would create an unsafe situation, or would require a new traffic signal or major revisions to an existing traffic signal.
- c. Project adds traffic to a roadway that has design features (e.g., narrow width, road side ditches, sharp curves, poor sight distance, inadequate pavement structure) or receives use which would be incompatible with substantial increases in traffic (e.g. rural roads with use by farm equipment, livestock, horseback riding, or residential roads with heavy pedestrian or recreational use, etc.) that will become potential safety problems with the addition of project or cumulative traffic. Exceeding the roadway capacity designated in the Circulation Element may indicate the potential for the occurrence of the above impacts.
- d. Project traffic would utilize a substantial portion of an intersection(s) capacity where the intersection is currently operating at acceptable levels of service (A-C) but with cumulative traffic would degrade to or approach LOS D (V/C 0.81) or lower. Substantial is defined as a minimum change of 0.03 for intersections which would operate from 0.80 to 0.85 and a change of 0.02 for intersections which would operate from 0.86 to 0.90, and 0.01 for intersections operating at anything lower.

Impact Discussion

(a-c, f-h) Less than significant impact: Short-term traffic generated by the proposed project would be primarily from the transportation of construction equipment and materials to and from the reservoir site sites, and by construction workers commuting to and from the project sites. Long-term traffic would likely result from periodic maintenance activities. Overall, traffic generated by the project would be very low and would not adversely affect the operation of State Highway 166 or substantially increase the need for road maintenance. Adequate area would be available adjacent to the proposed reservoir sites to accommodate construction and maintenance vehicle parking. Adequate sight distance is provided along State Highway 166 to accommodate project-related vehicles that would enter and leave the project sites. The small amount of traffic generated by the project would result in **less than significant** traffic-related impacts.

(d, e) No impact: The proposed project would not result in an increased demand for transit services, and would have no effect air, rail, or waterborne traffic. Therefore, the project would have **no impact** on these services.

Cumulative Impacts: Long-term traffic generated by the proposed project would primarily be for periodic maintenance of the reservoirs. Therefore, the traffic generated by the project would not cumulatively considerable and the project's cumulative traffic-related impacts would be less than significant.

Mitigation and Residual Impact: No mitigation required. Residual impacts would be less than significant.

4.16 WATER RESOURCES/FLOODING

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
a. Changes in currents, or the course or direction of water movements, in either marine or fresh waters?			X		
b. Changes in percolation rates, drainage patterns or the rate and amount of surface water runoff?			X		
c. Change in the amount of surface water in any water body?			X		
d. Discharge, directly or through a storm drain system, into surface waters (including but not limited to wetlands, riparian areas, ponds, springs, creeks, streams, rivers, lakes, estuaries, tidal areas, bays, ocean, etc) or alteration of surface water quality, including but not limited to temperature, dissolved oxygen, turbidity, or thermal water pollution?			X		
e. Alterations to the course or flow of flood water or need for private or public flood control projects?				X	
f. Exposure of people or property to water related hazards such as flooding (placement of project in 100 year flood plain), accelerated runoff or tsunamis, sea level rise, or seawater intrusion?				X	
g. Alteration of the direction or rate of flow of groundwater?			X		
h. Change in the quantity of groundwater, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations or recharge interference?			X		
i. Overdraft or over-commitment of any groundwater basin? Or, a significant increase in the existing overdraft or over-commitment of any groundwater basin?			X		
j. The substantial degradation of groundwater quality including saltwater intrusion?			X		
k. Substantial reduction in the amount of water otherwise available for public water supplies?			X		
l. Introduction of storm water pollutants (e.g., oil, grease, pesticides, nutrients, sediments, pathogens, etc.) into groundwater or surface water?		X			

Setting:

A series of ephemeral drainages that are tributaries to the Cuyama River bisect the project property in a primarily south to north direction. The largest of these drainages are Cottonwood Creek on the western portion of the project property, and Schoolhouse Canyon Creek on the eastern side. The on-site drainages are dry for most of the year and convey periodic/flashy flow during monsoonal rain events and the winter rain season. The proposed Reservoir No. 1 project site is approximately 500 feet west of Schoolhouse

Canyon Creek, and small unnamed drainage channels are a minimum of approximately 50 feet to the east and west of the project site. The Reservoir No. 2 project site is approximately 100 feet west and approximately 1,000 feet east of small unnamed drainage channels. The Reservoirs No. 3 project site is approximately 250 feet west and 100 feet east of small unnamed drainage channels, and is approximately one mile east of Cottonwood Canyon Creek.

The proposed reservoir sites are located in the western portion of the Cuyama Valley Groundwater Basin. The 2014 Groundwater Basins Status Report (Santa Barbara County Water Agency, 2014) indicates that groundwater level measurements in the Cuyama Valley Groundwater Basin show substantial declines throughout history and over the last three years. In some areas, historical groundwater level declines exceed 400 feet. The County of Santa Barbara Environmental Thresholds and Guidelines Manual (1992) indicates that groundwater overdraft in the Cuyama Valley Groundwater Basin is 28,525 acre feet per year (AFY). The 2014 Groundwater Basins Status Report indicates that long-term overdraft within the basin is estimated to be nearly 30,000 acre feet per year (AFY). In 2015, the Santa Barbara County Water Agency reported that under recent conditions (2000 -2010) total annual net recharge for the Basin is 33,400 acre feet and net discharge (outflow from springs, subsurface flow out of the basin, and groundwater pumping) is 68,300 acre feet, resulting in a difference or “imbalance” of -34,900 acre feet per year (Santa Barbara County Water Agency, Cuyama Groundwater Basin Balance Summary, July 13, 2015).

County Environmental Thresholds: A project is determined to have a significant effect on water resources if it would exceed established threshold values which have been set for each overdrafted groundwater basin. These values were determined based on an estimation of a basin’s remaining life of available water storage. If the project’s net new consumptive water use [total consumptive demand adjusted for recharge less discontinued historic use] exceeds the threshold adopted for the basin, the project’s impacts on water resources are considered significant. The water demand threshold for the Cuyama Valley Groundwater Basin is 31 AFY. The adopted threshold applies only to projects subject to discretionary review by the County, and do not apply to uses, such as agricultural operations, that do not require approval of a discretionary permit.

Water Quality Thresholds: A significant water quality impact is presumed to occur if the project:

- Is located within an urbanized area of the county and the project construction or redevelopment individually or as a part of a larger common plan of development or sale would disturb one (1) or more acres of land;
- Increases the amount of impervious surfaces on a site by 25% or more;
- Results in channelization or relocation of a natural drainage channel;
- Results in removal or reduction of riparian vegetation or other vegetation (excluding non-native vegetation removed for restoration projects) from the buffer zone of any streams, creeks or wetlands;
- Is an industrial facility that falls under one or more of categories of industrial activity regulated under the NPDES Phase I industrial storm water regulations (facilities with effluent limitation; manufacturing; mineral, metal, oil and gas, hazardous waste, treatment or disposal facilities; landfills; recycling facilities; steam electric plants; transportation facilities; treatment works; and light industrial activity);

- Discharges pollutants that exceed the water quality standards set forth in the applicable NPDES permit, the Regional Water Quality Control Board's (RWQCB) Basin Plan or otherwise impairs the beneficial uses¹ of a receiving water body;
- Results in a discharge of pollutants into an "impaired" water body that has been designated as such by the State Water Resources Control Board or the RWQCB under Section 303 (d) of the Federal Water Pollution Prevention and Control Act (i.e., the Clean Water Act); or
- Results in a discharge of pollutants of concern to a receiving water body, as identified by the RWQCB.

Impact Discussion

Each of the proposed reservoirs would impound up to 49 acre feet of water between February 1st and April 30th, and would impound a maximum of three feet of water between May 1st and January 31st, -and would include an emergency overflow system that would discharge water from the reservoir in the event that a precipitation event or mechanical malfunction results in excess water in a reservoir. A maximum of three feet of water would be stored in the reservoirs between May 1st and January 31st to prevent air from entering the pumps and to provide the minimum amount of hydraulic head necessary to operate the pumps (Tetley, August 9, 2017).

Stormwater drainage from upslope areas adjacent to the reservoirs would be collected by proposed drainage swales. Collected stormwater runoff and discharges from the reservoir's overflow control system would be discharged over rock energy dissipaters and allowed to sheet flow at downslope locations adjacent to the reservoirs. Each reservoir would be lined with a high-density polyethylene plastic liner to prevent water seepage beneath the reservoirs and into the reservoir's water impoundment berms.

(a-d) Less than significant impact: Each of the proposed reservoir's stormwater drainage systems would collect water from a limited area upslope of the reservoirs, and water from the reservoir overflow and stormwater drainage systems would be discharged over rock energy dissipaters. After discharge over the energy dissipaters, the water would sheetflow over the ground surface, which in the vicinity of proposed discharge locations has a gradient of five percent or less. Therefore, the amount of stormwater discharged from the drainage systems and the reservoir overflow systems would be limited and would not substantially alter existing drainage patterns, the course or direction of runoff water, or substantially increase or decrease the amount of water in the ephemeral drainages located adjacent to the reservoir sites. With the use of rock energy dissipaters and due to the presence of gentle slope gradients below proposed discharge locations, the proposed water discharges would not be a substantial source of erosion (turbidity) that would have the potential to adversely affect the water quality of the drainages near the reservoirs, which are tributaries to the Cuyama River. The interior of the reservoirs would be provided with an impermeable liner and precipitation that falls within the reservoirs would be retained and would not percolate into the ground. However, most of the retained precipitation would eventually be used for crop production, either for frost protection or irrigation after the end of the frost season. Therefore, the retained precipitation would ultimately be returned to the ground surface and not result in substantial long-term changes to percolation conditions at or near the project

¹ Beneficial uses for Santa Barbara County are identified by the Regional Water Quality Control Board in the Water Quality Control Plan for the Central Coastal Basin, or Basin Plan, and include (among others) recreation, agricultural supply, groundwater recharge, fresh water habitat, estuarine habitat, support for rare, threatened or endangered species, preservation of biological habitats of special significance.

sites. Overall, the project would have **less than significant** impacts on existing drainage conditions at the project site.

(e-f) No impact: The proposed reservoir sites are not located in within the 100-year floodplain for the Cuyama River, and proposed Reservoir Nos. 2 and 3 would be located near but not within the 100-year floodplains identified for tributaries to the Cuyama River (Flood Insurance Rate Maps 06083C0115G and 06083C0305G). The proposed project would be required to comply with County Grading Ordinance requirements, which would ensure that the proposed reservoir berms are structurally adequate to contain the water impounded by the reservoirs. Therefore, the project would have **no impact** related to flood-related hazards.

(g-k) Less than significant: Water that would be impounded in the proposed reservoirs would be supplied by existing agricultural wells located on the north side of State Highway 166. Water would be delivered to the reservoirs by existing irrigation pipelines that extend beneath the highway towards the project sites, and proposed pipelines that would connect the reservoirs to the existing irrigation pipelines.

The County of Santa Barbara Environmental Thresholds Manual states that all projects subject to discretionary review by the County are subject to the water use thresholds included in the Manual. Projects that would use more water than the applicable threshold identified by the Manual would result in a significant water use impact. The water use threshold for projects in the Cuyama Valley Groundwater Basin is 31 AFY.

Agricultural operations conducted on properties with agricultural zoning are an allowed use and no land use entitlements are required for such uses (LUDC Section 35.21.030). The existing vineyard operations that the proposed water storage reservoirs would support are located on property with agricultural zoning (AG-II-100). Therefore, the vineyard operations and water used by the vineyards do not require any discretionary land use entitlements from the County, and water impounded in the proposed reservoirs that would be used to support (i.e., provide frost protection) the existing vineyards is not subject to the water use threshold established for the Cuyama Valley Groundwater Basin.

The amount of water that may be used for vineyard frost protection can vary substantially each year depending on the number, duration, and severity of frost events. The project applicant has indicated that during a frost event, water would be sprayed on the vines at a rate of 45 gallons per minute per acre; typically the vines would be sprayed for a duration of two to three hours; and not all frost events require that the entire vineyard be sprayed. If it is assumed that a frost event required the entire 1,000-acre vineyard to be sprayed for three hours, approximately 8.29 acre feet of frost protection water would be used per hour² and approximately 25 acre feet of water would be used during the three hour frost event. As indicated above, however, the use of water for frost protection supports an allowed agricultural use and is not subject to the water use threshold established for the Cuyama Valley Groundwater Basin.

The proposed water storage reservoirs are a conditionally permitted use in the AG-II-100 zone and require the approval of a discretionary Minor Conditional Use Permit. Therefore, water impounded in the reservoirs that is not directly or indirectly used in support of the existing vineyards is subject to the water use thresholds of the Environmental Thresholds Manual. Water impounded in the reservoirs that would not be directly or indirectly used in support of the vineyards would be the water that evaporates from

²

$$\frac{1,000 \text{ acres} \times 45 \text{ gallons/minute} \times 60 \text{ minutes/hour}}{325,851 \text{ gallons/acre foot}} = 8.29 \text{ acre feet/hour}$$

reservoirs. As proposed, ~~water would be stored in the reservoirs~~ would be maintained in a full condition during the months of February, March and April, which is the part of the year when frost would have the greatest potential to result in damage to the existing vineyards, and a maximum of three feet of water would be maintained in the reservoirs during the months of May through January. If the amount of water that evaporates from the proposed reservoirs ~~during the proposed three month storage period~~ throughout the year exceeds the threshold of 31 AFY, the project would result in a significant water use impact.

Evaporation from the reservoirs was estimated by a report titled *North Fork Vineyards Frost Protection Reservoirs #1, #2 & #3 – Analysis of Reservoir Evaporative Losses* (Monsoon Consultants, August 10, 2017), and the report is provided in Attachment 4. In summary, the report estimated net evaporative losses from the reservoirs based on a variety of factors, including the months of the year that the reservoirs would be maintained in a full condition; the months of the year that the reservoirs would contain three feet of water; precipitation that occurs throughout the year; ~~when the reservoirs are being used for water storage;~~ and evaporative losses. Data regarding precipitation rates were obtained from the New Cuyama Fire Station records, and evaporative losses were based on data from California Irrigation Management Information System. Please refer to Attachment 4 for additional information regarding the data used to calculate project-related evaporation losses. It was estimated that the combined average annual net evaporative losses from all three proposed reservoirs would be approximately ~~8.14~~ 26.28 AFY. Therefore, net evaporative losses from the reservoirs would not exceed the water use threshold of 31 AFY and the project would result in a **less than significant** water use impact.

(I) Less than significant with mitigation: Grading and construction activities could result in temporary runoff, erosion, and the use of concrete and other substances that have the potential to result in short-term water quality impacts. To mitigate the project's potential short-term impacts to runoff and water quality, the project proposes to implement a variety of erosion/sedimentation control Best Management Practices. These measures include the use of silt fences and straw bales, and the maintenance of proposed erosion control measures throughout the rainy season (October 15 through April 15). In addition, proposed Mitigation Measure No. 7 requires the preparation and implementation of a Storm Water Pollution Prevention Plan, and proposed Mitigation Measure Nos. 8 and 9 include additional requirements to provide designated construction equipment washout and equipment storage areas. With implementation of these measures, potential short-term water quality impacts would be **less than significant**.

The operation of the proposed reservoirs would not require the use of fertilizers, pesticides or other substances that would have the potential to result in significant water quality impacts. The project would not result in the use of an on-site wastewater disposal system that could have the potential to contribute to the degradation of groundwater quality. Long-term erosion from proposed reservoir water impoundment berms would have the potential to result in erosion and sediment impacts to drainage channels adjacent to the project sites, however, this potential impact would be reduced to a less than significant level by complying with Grading Ordinance requirements and proposed Mitigation Measure No. 7, which requires the preparation and implementation of a Stormwater Management Plan and/or Erosion and Sediment Control Plan. Therefore, potential long-term erosion impacts of the project would be reduced to a **less than significant with mitigation**.

Cumulative Impacts: The proposed project would result in the use of approximately ~~eight (8)~~ 26 acre feet of water that is subject to adopted water use thresholds. The project's water use would contribute to overdraft conditions in the Cuyama Valley and the general lowering of groundwater levels that have been documented. However, the adopted significance threshold of 31 AFY is also the point at which a project's use of water is determined to be a cumulatively considerable impact. Therefore, the project's use of groundwater would not be cumulatively considerable and the proposed project would result in an adverse but **less than significant** cumulative impact.

Mitigation and Residual Impact

The following mitigation measures would reduce the project's water resource impacts to a less than significant level:

8. **WatConv-04 Equipment Storage-Construction.** The Owner/Applicant shall designate a construction equipment filling and storage area(s) to contain spills, facilitate clean-up and proper disposal and prevent contamination from discharging to the storm drains, street, drainage ditches, creeks, or wetlands. The areas shall be no larger than 50 x 50 foot unless otherwise approved by P&D and shall be located at least 100 feet from any storm drain, water body or sensitive biological resources. **PLAN REQUIREMENTS:** The Owner/Applicant shall designate the P&D approved location on all plans for zoning clearance, grading and building permits. **TIMING:** The Owner/Applicant shall install the area prior to commencement of construction.

MONITORING: P&D compliance monitoring staff shall ensure compliance prior to and throughout construction.

9. **WatConv-05 Equipment Washout-Construction.** The Owner/Applicant shall designate a washout area(s) for the washing of concrete trucks, paint, equipment, or similar activities to prevent wash water from discharging to the storm drains, street, drainage ditches, creeks, or wetlands. Note that polluted water and materials shall be contained in this area and removed from the site daily. The area shall be located at least 100 feet from any storm drain, water body or sensitive biological resources. **PLAN REQUIREMENTS:** The Owner/Applicant shall designate the P&D approved location on all zoning clearance, grading and building permits. **TIMING:** The Owner/Applicant shall install the area prior to commencement of construction.

MONITORING: P&D compliance monitoring staff shall ensure compliance prior to and throughout construction.

5.0 INFORMATION SOURCES

5.1 County Departments Consulted

Police, Fire, Public Works, Flood Control, Parks, Environmental Health, Air Pollution Control District, LAFCO, Special Districts, Regional Programs, Other :

5.2 Comprehensive Plan:

☒ Seismic Safety/Safety Element	☐ Conservation Element
☐ Open Space Element	☐ Noise Element
☐ Coastal Plan and Maps	☐ Circulation Element
☐ ERME	
☐	☐

5.3 Other Sources

☒ Field work	☐ Ag Preserve maps
☒ Calculations	☒ Flood Control maps

☒	Project plans	☒	Other technical references (reports, survey, etc.)
☐	Traffic studies	☒	Planning files, maps, reports
☐	Records	☐	Zoning maps
☒	Grading plans	☒	Soils maps/reports
☐	Elevation, architectural renderings	☒	Plant maps
☒	Published geological map/reports	☒	Archaeological maps and reports
☐	Topographical maps	☐	Other

6.0 PROJECT SPECIFIC (*short- and long-term*) AND CUMULATIVE IMPACT SUMMARY

The proposed project does not have potential impacts that cannot be feasibly mitigated to less than significant levels.

- I. Project-Specific Impacts which are of unavoidable significance levels (Class I): None
- II. Project-Specific Impacts which are potentially significant but can be mitigated to less than significant levels (Class II): Biological Resources (short-term), Cultural Resources (short-term), Geologic Processes, Water Resources/Flooding (short-term).
- III. No potentially significant adverse cumulative impacts have been identified.

7.0 MANDATORY FINDINGS OF SIGNIFICANCE

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
1. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, contribute significantly to greenhouse gas emissions or significantly increase energy consumption, or eliminate important examples of the major periods of California history or prehistory?		X			
2. Does the project have the potential to achieve short-term to the disadvantage of long-term environmental goals?			X		

Will the proposal result in:	Poten. Signif.	Less than Signif. with Mitigation	Less Than Signif.	No Impact	Reviewed Under Previous Document
3. Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects and the effects of probable future projects.)			X		
4. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X		
5. Is there disagreement supported by facts, reasonable assumptions predicated upon facts and/or expert opinion supported by facts over the significance of an effect which would warrant investigation in an EIR ?			X		

Compliance with required mitigation measures would reduce potentially significant short-term, construction-related impacts to San Joaquin kit fox and American badger to a less than significant level. Compliance with required mitigation would avoid significant impacts to cultural resources that may be encountered during construction activities. The project’s effects on air quality, traffic, water demand, and public services would be below adopted thresholds of significance.

8.0 PROJECT ALTERNATIVES

Not applicable.

9.0 INITIAL REVIEW OF PROJECT CONSISTENCY WITH APPLICABLE SUBDIVISION, ZONING AND COMPREHENSIVE PLAN REQUIREMENTS

Zoning

The proposed project is consistent with the requirements of the Santa Barbara County Land Use and Development Code (Inland Zoning Ordinance). The proposed AG-II-100 zoning of the site allows for the development of reservoirs more than 50,000 square feet in area with the approval of a Minor Conditional Use Permit.

Comprehensive Plan

The project will be subject to all applicable requirements and policies under the Santa Barbara County Land Use and Development Code, and the County's Comprehensive Plan. This analysis will be provided in the forthcoming Staff Report. The following policies will be addressed, among others:

1. Land Use Development Policy #4
2. Hillside & Watershed Protection policy # 1, 2, 3, 5, 6, 7
3. Historical and Archaeological Policy # 2, 3, 5
4. Visual Resources Policy # 2, 5
5. Agricultural Element Goal 1.

10.0 RECOMMENDATION BY P&D STAFF

On the basis of the Initial Study, the staff of Planning and Development:

☐ Finds that the proposed project WILL NOT have a significant effect on the environment and, therefore, recommends that a Negative Declaration (ND) be prepared.

☒ Finds that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures incorporated into the REVISED PROJECT DESCRIPTION would successfully mitigate the potentially significant impacts. Staff recommends the preparation of an ND. The ND finding is based on the assumption that mitigation measures will be acceptable to the applicant; if not acceptable a revised Initial Study finding for the preparation of an EIR may result.

☐ Finds that the proposed project MAY have a significant effect on the environment, and recommends that an EIR be prepared.

☐ Finds that from existing documents (previous EIRs, etc.) that a subsequent document (containing updated and site-specific information, etc.) pursuant to CEQA Sections 15162/15163/15164 should be prepared.

Potentially significant unavoidable adverse impact areas:

☒ With Public Hearing ☐ Without Public Hearing

PREVIOUS DOCUMENT:

PROJECT EVALUATOR: Steve Rodriguez **DATE:** May 26, 2017

11.0 DETERMINATION BY ENVIRONMENTAL HEARING OFFICER

☒ I agree with staff conclusions. Preparation of the appropriate document may proceed.

☐ I DO NOT agree with staff conclusions. The following actions will be taken:

☐ I require consultation and further information prior to making my determination.

SIGNATURE: _____ INITIAL STUDY DATE: April 10, 2017 _____

SIGNATURE: _____ NEGATIVE DECLARATION DATE: May 26, 2017 _

SIGNATURE: _____ REVISION DATE: 8/9/2017 _____

SIGNATURE: _____ FINAL NEGATIVE DECLARATION DATE: August 1, 2018

12.0 ATTACHMENTS

1. Project Plans
- 2a. Biological Resources Assessment, February 24, 2016
- 2b. Peer Review of the Biological Resources Assessment, March 1, 2016
- 2c. Supplemental Biological Resources Information, June 24, 2016
3. San Joaquin Kit Fox Avoidance Measures
4. Analysis of Reservoir Evaporative Losses, ~~January~~ August 10, 2017
5. Draft MND Comment Letters
 - State Clearinghouse
 - Native American Heritage Commissions
 - California Department of Transportation
 - California Department of Fish and Wildlife
 - Roberta Jaffee and Stephen Gliessman
 - Joe Haslett
 - Robert Ryan

1. All grading shall conform to Santa Barbara County Code Chapter 14 and standards and requirements pertaining thereto, these construction drawings and the recommendations of the soils engineer and engineering geologist.
2. Contractor to notify the county grading inspector and soils laboratory at least 48 hours before start of grad work or any pre-construction meeting.
3. Contractor shall employ all labor, equipment and methods required to prevent his operations from producing dust in amounts damaging to adjacent property, cultivated vegetation and domestic animals or causing a nuisance to persons occupying buildings in the vicinity of the job site. Contractor shall be responsible for damage caused by dust from his grading operation.
4. Before beginning work requiring exporting or importing of materials, the contractor shall obtain approval from Public Works Road Division for haul routes used and methods provided to minimize the deposit of soils on county roads. Grading/road inspectors shall monitor this requirement with the contractor.
5. The Geotechnical Engineer shall provide observation and testing during grading operations in the field and shall submit a final report stating that all earth work was properly completed and is in substantial conformance with the requirements of the grading ordinance.
6. Areas to be graded shall be cleared of all vegetation including roots and other unsuitable materials for a structural fill, then scarified to a depth of 6" prior to placing any fill. Call grading inspector for initial inspection.
7. A thorough search shall be made for all abandoned man-made facilities such as septic tank systems, fuel or water storage tanks, and pipelines or conduits. Any such facilities encountered shall be removed and the depression properly filled and compacted under observation of the geotechnical engineer.
8. Areas with existing slopes which are to receive fill materials shall be keyed and benched. The design and installation of the roadway shall be per the geotechnical engineer's recommendation or per County Standard Detail No. G-13.
9. Fill materials shall be spread in lifts not exceeding 6" in compacted thickness, moistened or dried as necessary to near optimum moisture content and compacted by an approved method. Fill materials shall be compacted to a minimum of 90% maximum density as determined by 1957 ASTM D-1557-01 modified proctor (ASHO) test or similar approved methods. Some fill areas may require compaction to a greater density if called for in the construction documents. Soil tests shall be conducted at not less than one test for each 18" of fill and/or for each 500 cubic yards of fill placed.
10. Cut slopes shall not exceed a grade of 1 1/2 horizontal to 1 vertical. Fill and combination fill and cut slopes shall not exceed 2 horizontal to 1 vertical. Slopes over three feet in vertical height shall be planted with approved perennial or treated with equally approved erosion control measures prior to final inspection.
11. Surface drainage shall be provided a minimum of 2% for 5 feet away from the foundation line of any structure.
12. All trees that are to remain on site shall be temporarily fenced and protected around the drip line during grading.
13. An erosion and sediment control plan shall be required as part of the grading plan and permit requirements.
14. "Best Management Practices for Construction Activities: Eroded sediments and other pollutants must be retained on-site and must not be transported from the site via sheet flow swales, area drains, natural drainage courses, or wind. Stockpiles of earth and other construction related materials must be protected from being transported from the site by forces of wind or water. Fuels, oils, solvents, and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills may not be washed into the drainage system. Excess or waste concrete may not be washed into public way or any other drainage system. Provisions must be made to retain concrete wastes on site until they can be disposed as solid waste. Trash and construction related solid waste must be deposited into a covered waste receptacle to prevent contamination of rainwater and dispersal by wind. Sediments and other material may not be tracked from the site by vehicular traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental deposition shall be swept up immediately and may not be washed down by rain or other means. Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to minimize erosion by wind and water."
15. If grading occurs during Nov 1 through Apr 15, no grading shall occur unless approved erosion and sediment control measures are in place. Discharges of sediment from the project site may result in a Stop Work Order.
16. All earthwork on hillsides, sloping or mountainous terrain shall be stabilized to protect and prevent loss of soils, as necessary, year-round.

Earthwork Estimates

Cut: 130,280 C.Y. Fill: 127,900 C.Y. Import: 0 C.Y. Export: 0 C.Y. Quantities based on 30% shrinkage

Erosion Control Notes

1. Erosion control measures shall be implemented on all projects and shall include source control, including protection of stockpiles, protection of slopes, protection of all disturbed areas, and protection of accesses. In addition, perimeter containment measures shall be placed prior to the commencement of grading and site disturbance activities unless the Public Works Department determines measures to be unnecessary based upon location, site characteristics or time of year. The intent of erosion control measures shall be to keep all sediment from entering a swale, drainage way, watercourse or onto adjacent properties.
2. Site inspections and appropriate maintenance of erosion control devices shall be conducted and documented prior to, during, and after rain events.
3. The developer shall be responsible for the placement and maintenance of all erosion control devices as specified by the approved plan until such time that the project is accepted as complete by the Public Works Department. Erosion control devices may be relocated, deleted or not installed if deemed unnecessary by the Engineer of Work, County Inspector, SWPPP Monitor, or RWQCB Inspector. Guidelines for determining appropriate erosion control devices are included in the appendix of the Public Improvement Standards.
4. All erosion control devices shall be the first order of work and shall be in place between Oct 15 and April 15 or anytime when the rain probability exceeds 30%. This work shall be installed or applied after each area is graded and no later than five (5) working days after the completion of each area.
5. The Engineer of Work and the Public Works Department shall be notified before October 15 for inspection of installed erosion control devices.
6. A standby crew for emergency work shall be available at all times during the rainy season (October 15 through April 15). Necessary materials shall be available and stock piled at convenient locations to facilitate rapid construction or maintenance of temporary devices when rain is imminent.
7. Permanent erosion control shall be placed and established with 90% coverage on all disturbed surfaces other than paved or gravel surfaces, prior to final inspection. Permanent erosion control shall be fully established prior to final acceptance. Temporary erosion control measures shall remain in place until permanent measures are established.
8. In the event of a failure, the developer and/or his representative shall be responsible for cleanup and all associated costs or damages.
9. All projects involving site disturbance of one acre or greater shall comply with the requirements of the National Pollutant Discharge Elimination System (NPDES). The developer shall submit a Notice of Intent (NOI) to comply with the General Permit for Construction Activity with the Regional Water Quality Control Board (RWQCB). The developer shall provide the County with the Waste Discharge Identification Number (WDID #) or with verification that an exemption has been granted by RWQCB.

WDID# _____
10. Person to contact 24 hours a day in the event there is an erosion control/sedimentation problem (Storm Water Compliance Officer):
Name Kevin Merrill
Local Phone Number 310-3989

Project Air Quality Control Notes:

During Construction the contractor shall designate a person or persons to monitor the Dust Control Program and to order increases measures as necessary to prevent the transport of dust off-site. Their duties shall include holiday and weekend periods when work may or may not be in progress. The name and telephone number for such persons shall be provided to the APCD prior to the commencement of construction. The measures for dust control are as follows but not limited to:

Reduce the amount of disturbed area where possible,

1. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever wind speeds exceed 15mph. Reclaimed (non-potable) water should be used whenever possible.
2. All dirt stockpile areas shall be sprayed daily as needed.
3. Exposed ground areas that are planned to be reworked at dates later than one month after initial grading should be seeded with a fast germinating native grass seed and watered until vegetation is established.
4. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD.
5. All external slopes shall be hydroseeded as soon as possible upon completion.
6. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
7. All trucks hauling dirt, sand, soil, or other loose material are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114.
8. Install wheel washers where vehicles enter and exit paved roads and streets, or wash off trucks and equipment leaving the site.
9. Prior to final inspection all disturbed areas shall be vegetated with a fast-growing, native seed mix.

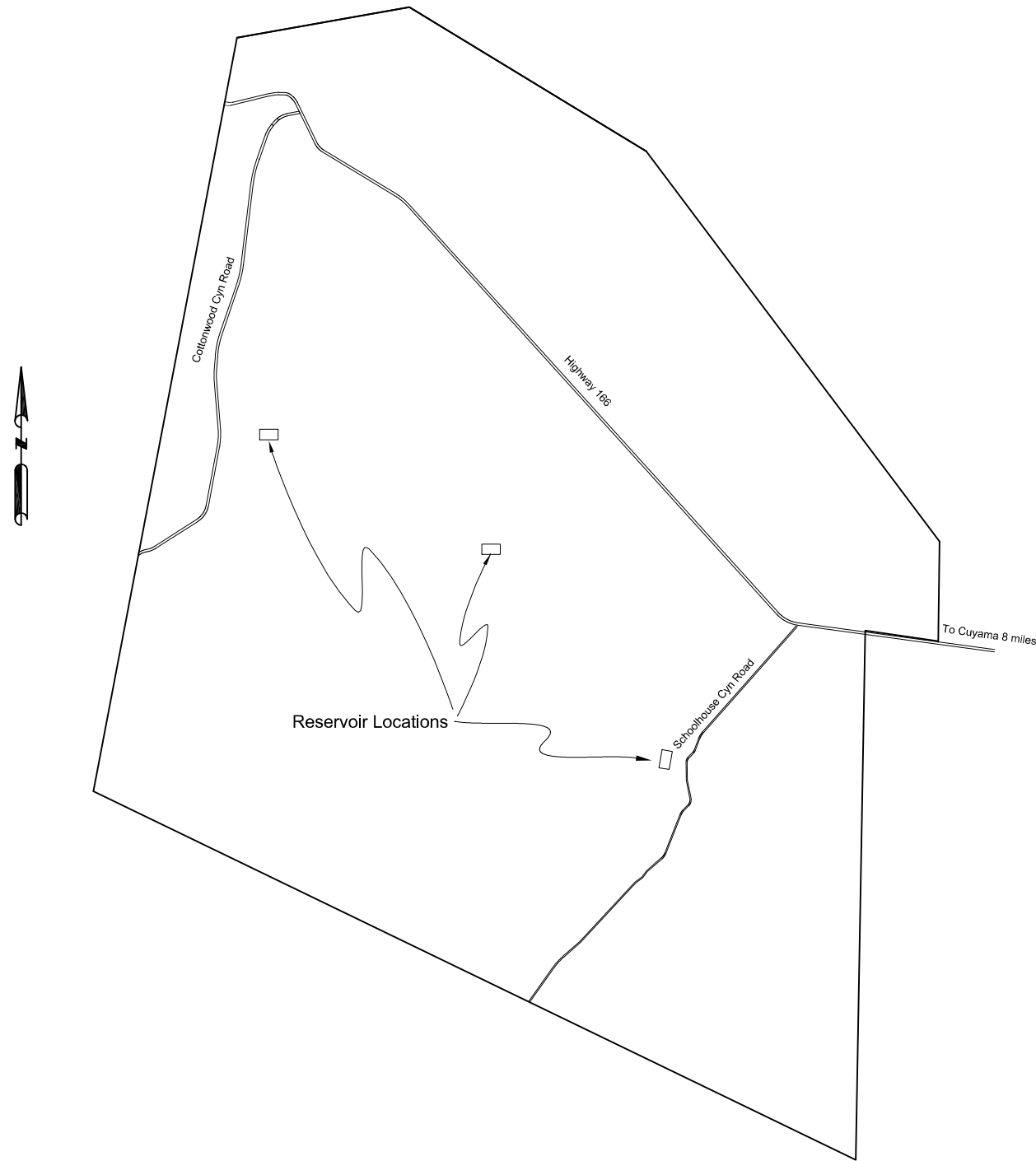
General Notes

1. No construction shall be started without plans approved by the County Planning Department. The Planning Department shall be notified at least 24 hours prior to the start of construction and the time and location for the preconstruction conference.
2. All construction work and installations shall conform to the County Standards and Specifications.
3. Soils tests shall be done in accordance with the County Standards. The test results shall clearly indicate the location and source of materials.
4. Compaction tests shall be made on all embankment materials, subgrades and ditch backfill.
5. There will be no need for special concrete inspection. Concrete for the anchor pad shall be 2000 psi. The rebar shall be inspected prior to the placement of the concrete. All concrete and the two sack slurry for the anti-seep collars and ditch backfill where shown shall be properly vibrated.
6. The Design Engineer shall inspect the installation of the HDPE Liner. The liner shall be installed by a contractor specializing in lining ponds.
7. The Engineer of Record shall certify that the improvements when completed are in accordance to the plans prior to the request for Final Inspection. As-built plans are to be prepared after construction is completed. The Engineer certifying the improvements shall be present at the Final Inspection.
8. Final Reports for grading and earthwork shall be prepared in accordance with the requirements of the UBC, Chapter 33.
9. Upon completion of the work, the Geotechnical Engineer shall submit to the Engineer of Record a complete summary of all testing done during the project.
10. The Construction Contractor shall maintain a current, complete and accurate record of all changes which deviate from the approved plans. No changes shall be made without the prior approval of the Engineer of Record and the County.

North Fork Reservoirs #1-3

APN 147-020-045

Vicinity Map



Scope of Work

The work consists of constructing three new lined reservoirs for irrigation purposes. All areas to receive fill shall be excavated a minimum of three feet, the exposed surface scarified and moisture conditioned, then recompacted to 90% relative compaction. The intent is to balance the earthwork with no import or export. The completed interior slopes shall be fine graded and all rocks removed, then rolled with a smooth drum roller. A 40 mil HDPE geomembrane liner will then be installed on the slopes and bottom. The liner will be installed per manufacturer's recommendations by a company specializing in liner installation. A five foot by twenty three foot by eight inch reinforced concrete pad for anchoring the liner shall be constructed around the pump inlet pipes. No special inspection for the concrete work shall be required. A 6 foot non-climb fence will be built around the exterior perimeter. Coast Guard Approved buoys with a minimum of 90 feet of line shall be placed at no more than 200 foot intervals around the top interior slope of the reservoirs. The sources of water are pvc waterlines from existing wells and no surface water shall enter the reservoir. Valving, filters and pumps will be installed after the reservoirs are constructed by the Irrigation Contractor and are not part of this permit. This contract is for stubbing inlet pipes through the exterior slope for future connection to the fill and transfer lines by an Irrigation Contractor. These pipes shall have 2 sack concrete slurry anti-seep collars. A 15" PVC Drop Pipe Outlet Structure will serve as an emergency overflow in the event the high water limit switch fails and is sized to prevent the reservoir from overtopping. Access to the reservoir is by existing dirt farm roads. No driveways will be constructed. The existing farm fields sheet flow gently across the locations and earthen swales will be constructed around the perimeters where necessary to keep any surface flow away from the toe of the fill slopes. No electrical work is included in this permit.

Benchmark and Basis of Bearing

Benchmark is a 2 1/2" aluminum disc, stamped h-2, Cal-Trans Monument sb166 pm-55.01 elevation = 1824.55 NAVD88

Basis of Bearing is GPS established true north from NAD 83(92) from Cal-Trans Monuments sb166 pm-55.01 and sb166 pm-55.43

Project Information

Address: Hwy 166, Cuyama Valley

APN 147-020-045

Zoning AG

Project Description: Construct three 49 ac-ft Reservoirs for irrigation and frost protection purposes

Pre-Construction Meeting

Prior to construction a pre-construction meeting is required with the inspector to go over the special inspection reporting requirements, final and progress reports, & erosion control. E-mail inspection-North@countyofsb.org

Contacts:

Owner: Grapevine Land Management

Matt Turrentine
444 Higuera St Suite 202
San Luis Obispo, CA 93401
805 312-1828

Engineer: Tom A Howell

1812 N Vine
Santa Maria, CA 93454
805 925-5311

Geotechnical Engineer: GSI Soils, Inc

Rick Amero
524 East Chapel
Santa Maria, CA 93454
805 349-0140

Sheet Index

Sheet 1: Front sheet, notes and title

Sheet 2: Overall Layout & Existing Contours

Sheet 3: Overall Site Piping Layout

Sheet 4: Reservoir #1 Grading Plan

Sheet 5: Reservoir #1 Details

Sheet 6: Reservoir #2 Grading Plan

Sheet 7: Reservoir #2 Details

Sheet 8: Reservoir #3 Grading Plan

Sheet 9: Reservoir #3 Details

Sheet 10: Common Details

Sheet 11: Erosion and Sedimentation Control Plan

Sheet 12: BMP Details

Engineer's Certificate

I, Tom A Howell, RCE 27037, Engineer of Record, hereby certify that these plans are in accordance with the following codes: _____ Date: _____

2013 California Bldg Code (0112 IBC), Appdx Chp 33, 1997 UBC

2013 California Electric Code (2011 NEC)

2013 California Mechanical Code (2012 IAMPO UMC)

2013 California Plumbing Code (2012 IAMPO UPC)

California Title 24: 2011 California Energy Code and Accesibility Standards

County Ordinance(s) Title 19 (Building), (Inland)

Geotechnical Engineer's Certificate

I have reviewed the plans and specifications and have found them to be in

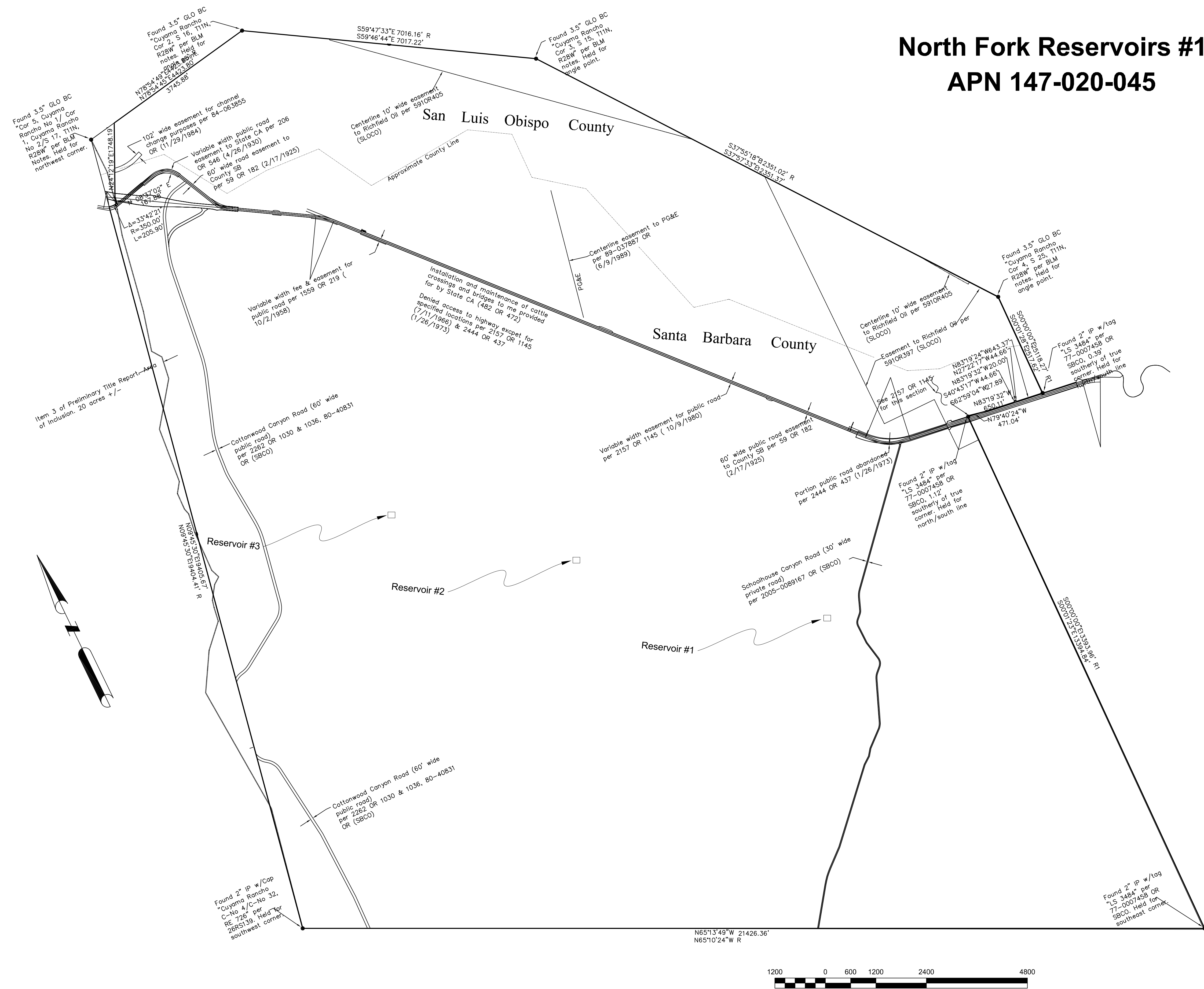
substantial conformance with the recommendations as found in my Soil Investigation.

Date: _____



North Fork Vineyards		
DRAWN <i>TH</i>	DATE <i>1/09/17</i>	<i>49 Ac-ft Reservoirs</i> <i>Hwy 166</i>
APPROVED	DATE	<i>Cuyama, CA</i> <i>Cover Sheet</i>
SCALE <i>Varies</i>	SHEET <i>1 of 12</i>	PROJECT NO. <i>101715-6233</i>

North Fork Reservoirs #1-3
APN 147-020-045



North Fork Vineyards

DRAWN TH	DATE 1/09/17	49 Ac-ft Reservoirs Hwy 166 Cuyama, CA Overall Property
APPROVED	DATE	
SCALE 1"=1200'	SHEET 2 of 12	PROJECT NO. 101715-6233

North Fork Vineyard Frost Protection Overall Site Plan



North Fork Vineyards		
DRAWN	DATE	Reservoirs #1-3
TH	1/09/17	Overall Piping Plan
APPROVED	DATE	Existing Piping
SCALE	SHEET	PROJECT NO.
1"=600'	3 of 12	101715-6233

Reservoir # 1 Grading Plan

Pond #1 Report

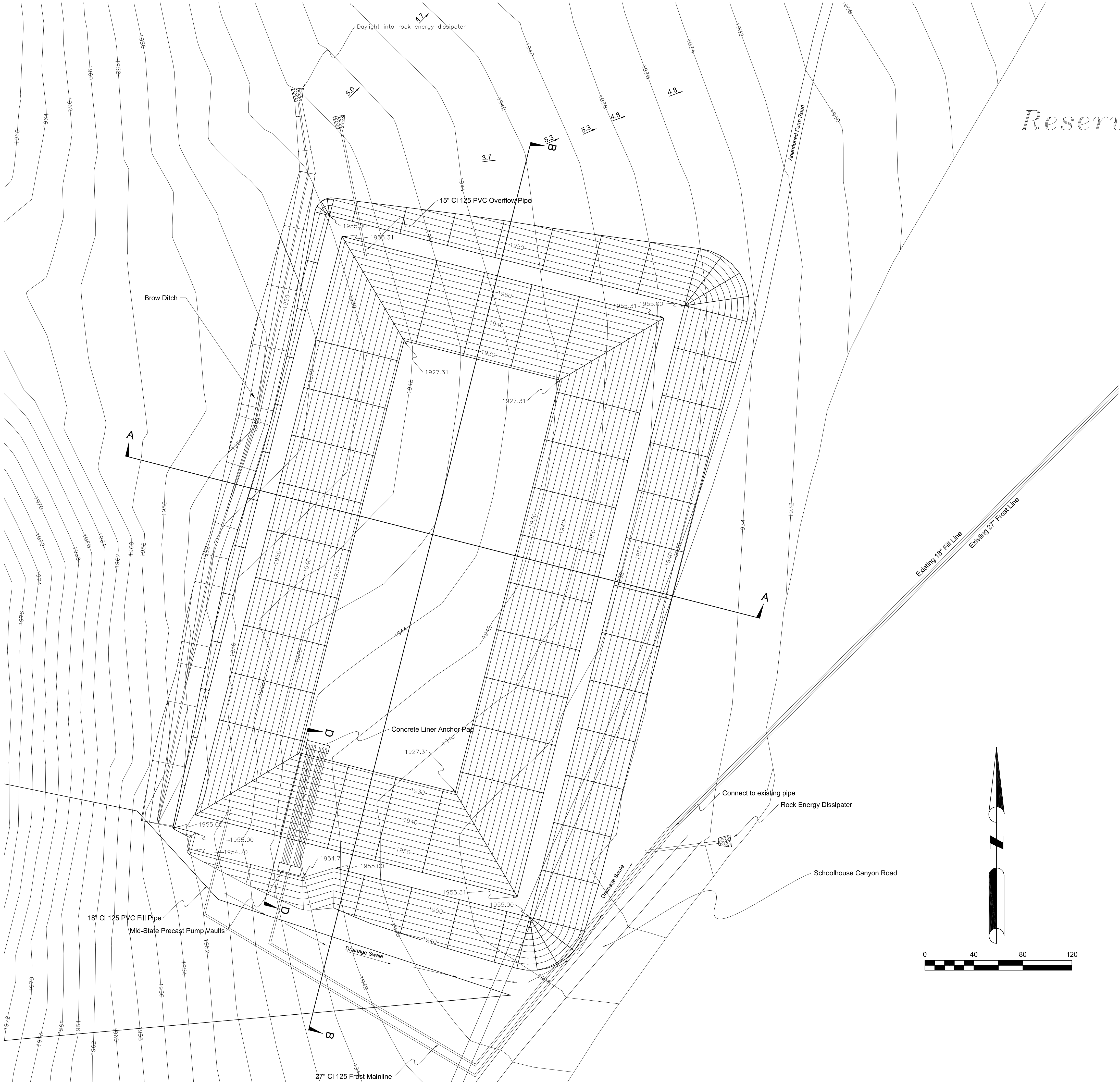
Top of dam elevation: 1955.3
Bottom of pond elevation: 1927.3
Top of dam width: 14.0
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50:1

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 44,062 C.Y.
Total fill: 44,589 C.Y.
Total Disturbed Area: 4.85 Acres

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1927.31	0.00	1.046
1929.31	2.20	1.158
1931.31	4.63	1.274
1933.31	7.30	1.395
1935.31	10.21	1.520
1937.31	13.38	1.650
1939.31	16.81	1.784
1941.31	20.52	1.923
1943.31	24.51	2.066
1945.31	28.79	2.214
1947.31	33.37	2.366
1949.31	38.26	2.523
1951.31	43.46	2.684
1953.31	49.00	2.850
1955.31	54.87	3.020



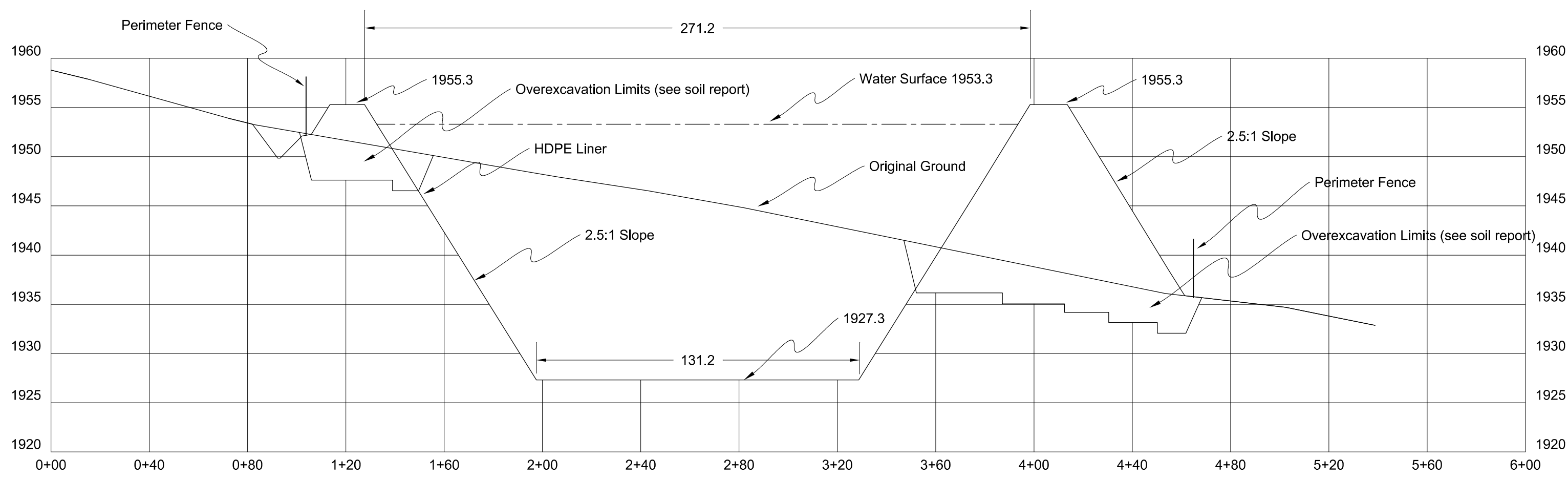
Revisions:
1/03/2017 Added 15" CMP Culvert
Moved Outlet Pipe
Lengthened Drainage Swales

North Fork Vineyards

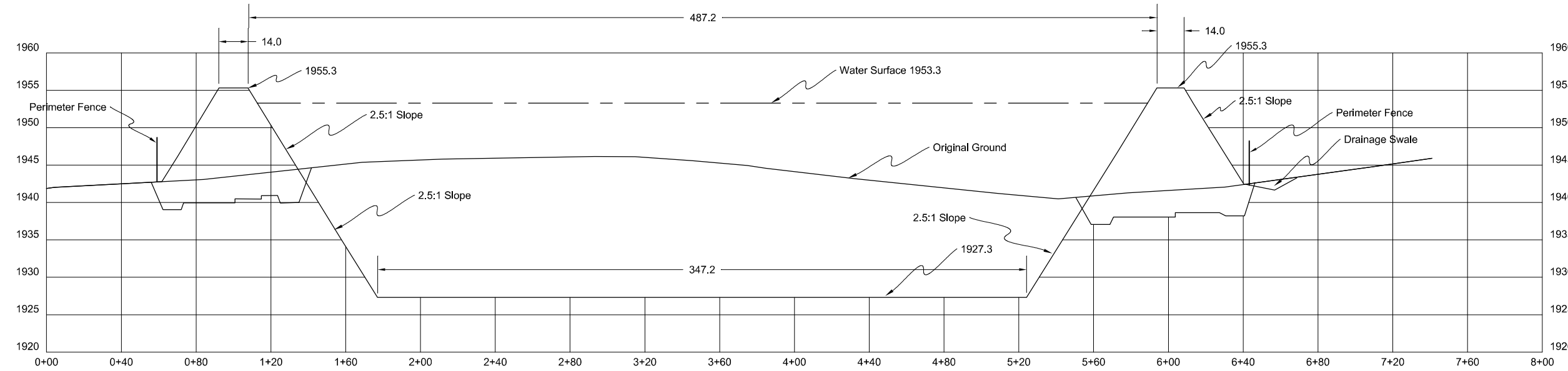
DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #1 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 4 of 12	PROJECT NO. 101715-6233

Reservoir #1 Details

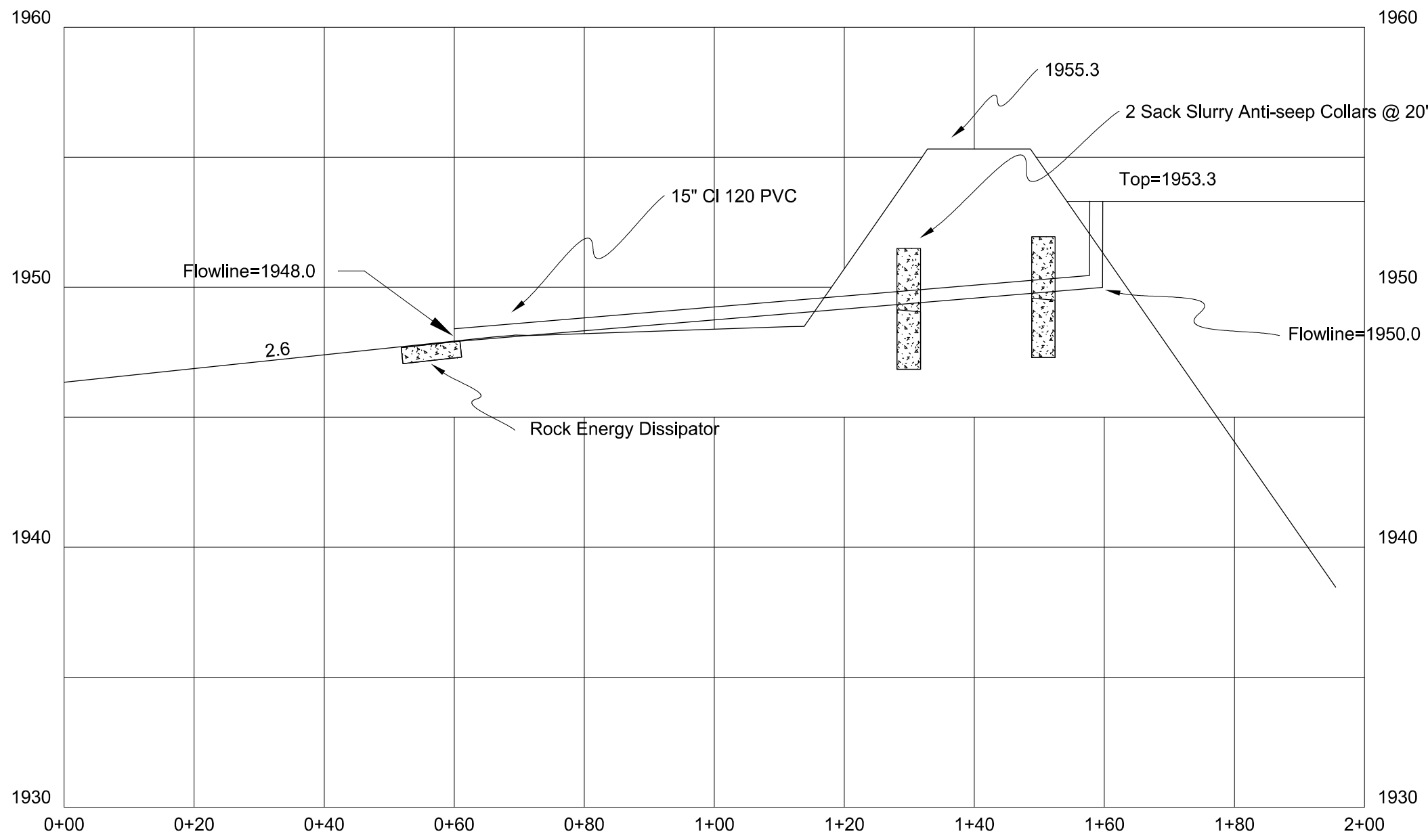
Reservoir #2 Section A-A



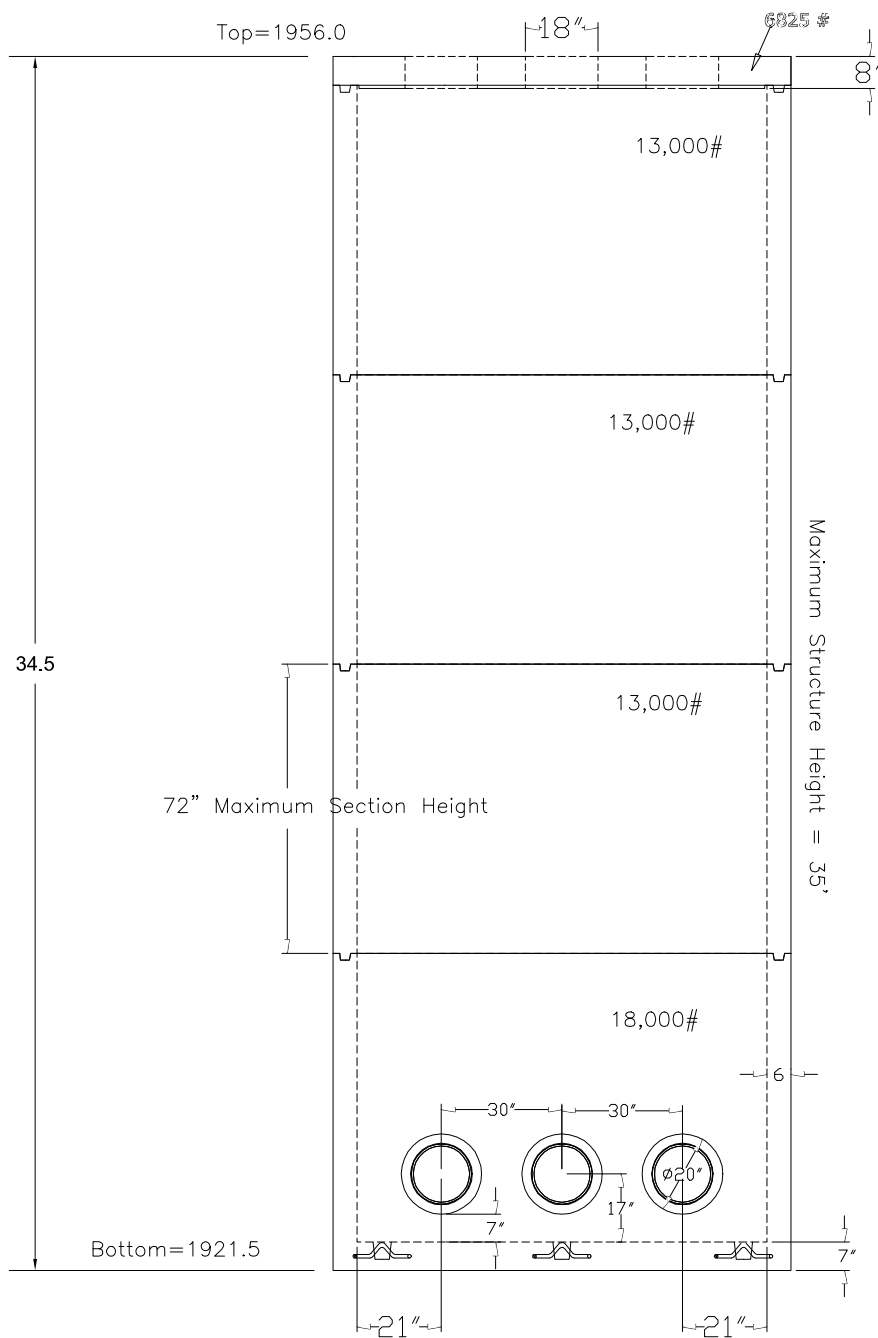
Reservoir #1 Section B-B



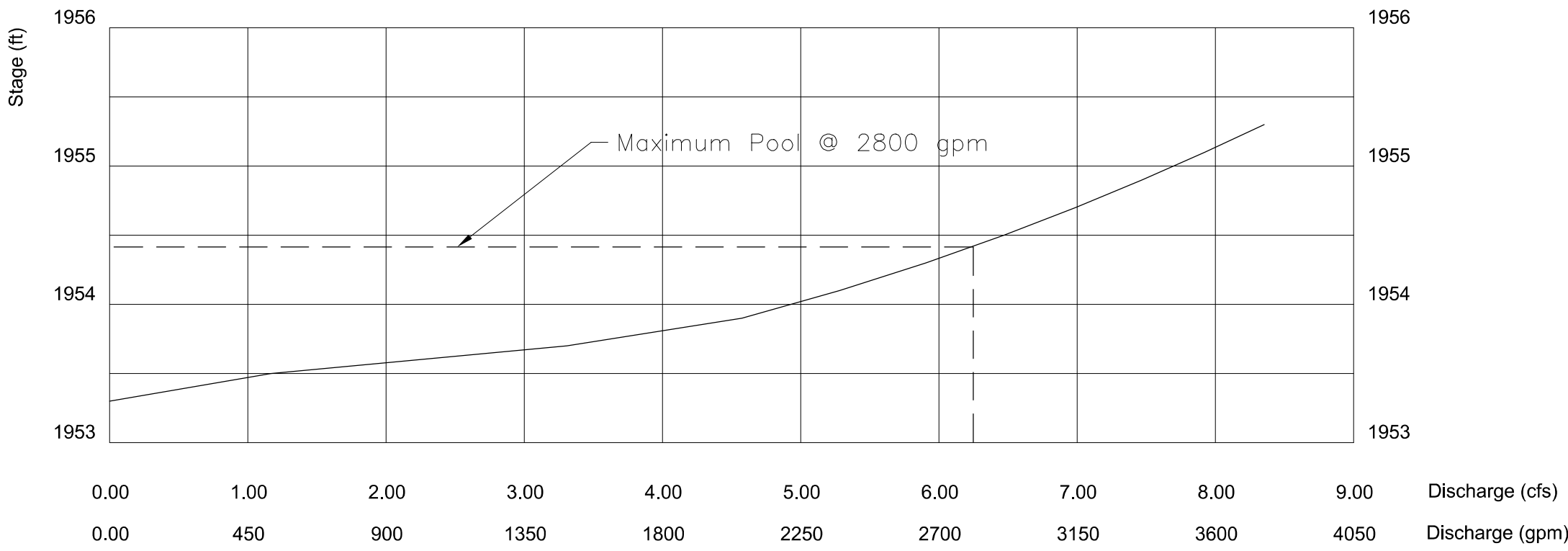
Reservoir #1 Overflow Detail



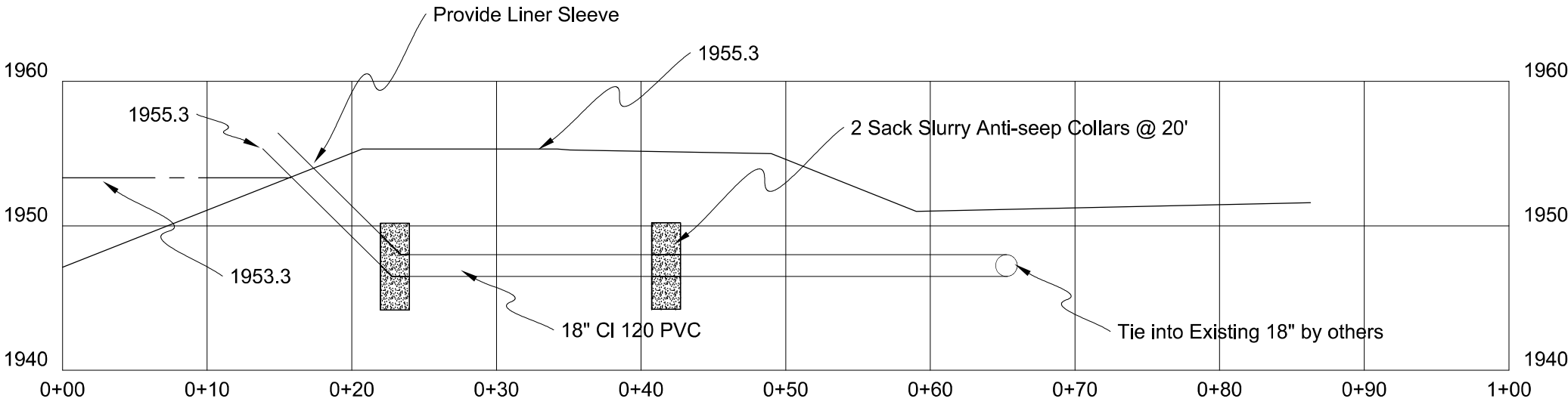
Mid-State Concrete Products
Pump Housing Vault Reservoir #1



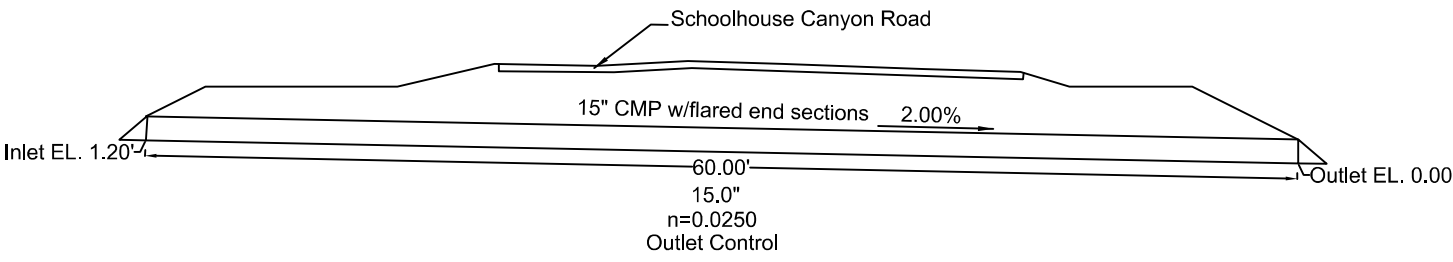
Pond #1 Stage-Storage



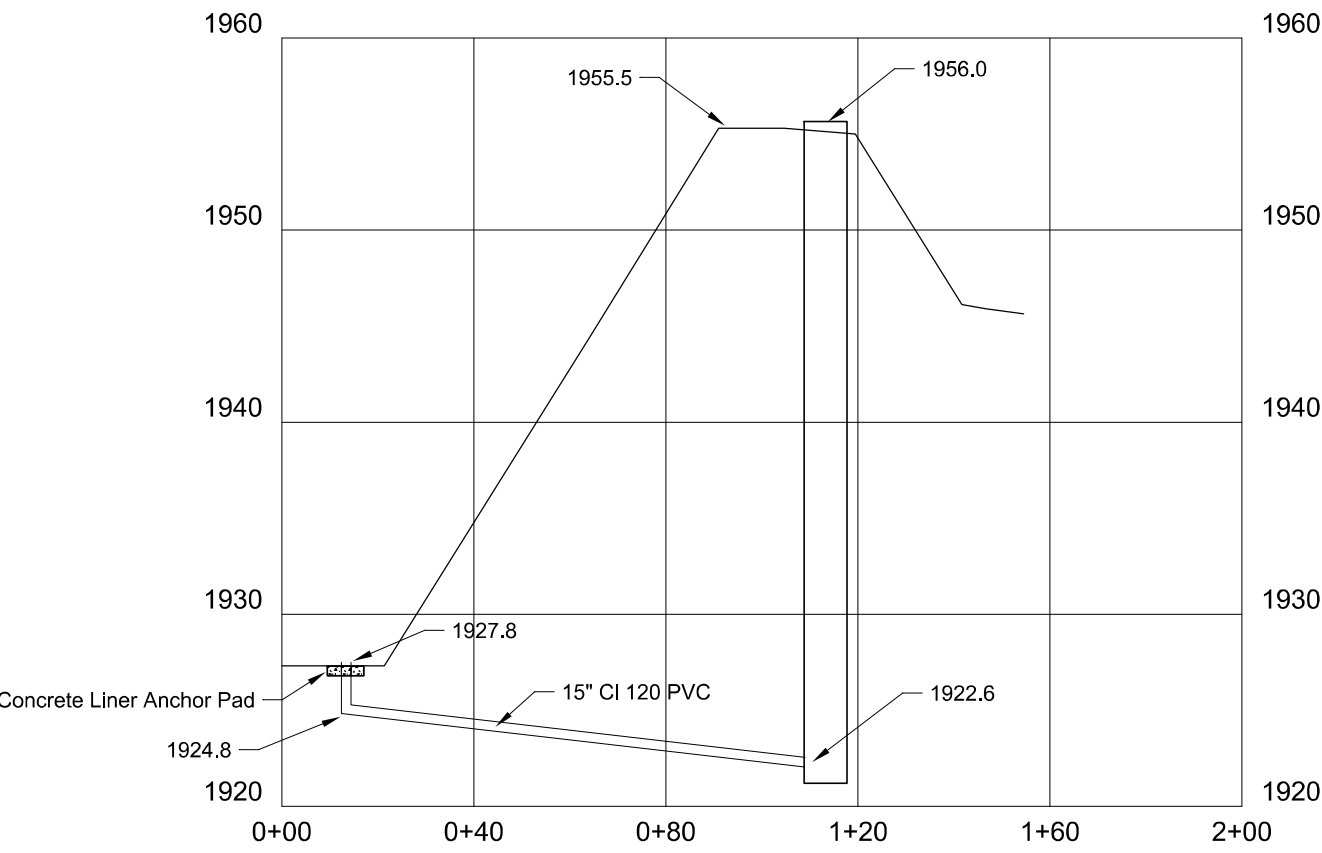
Reservoir #1 Filler Pipe



15" CMP Under Schoolhouse Road



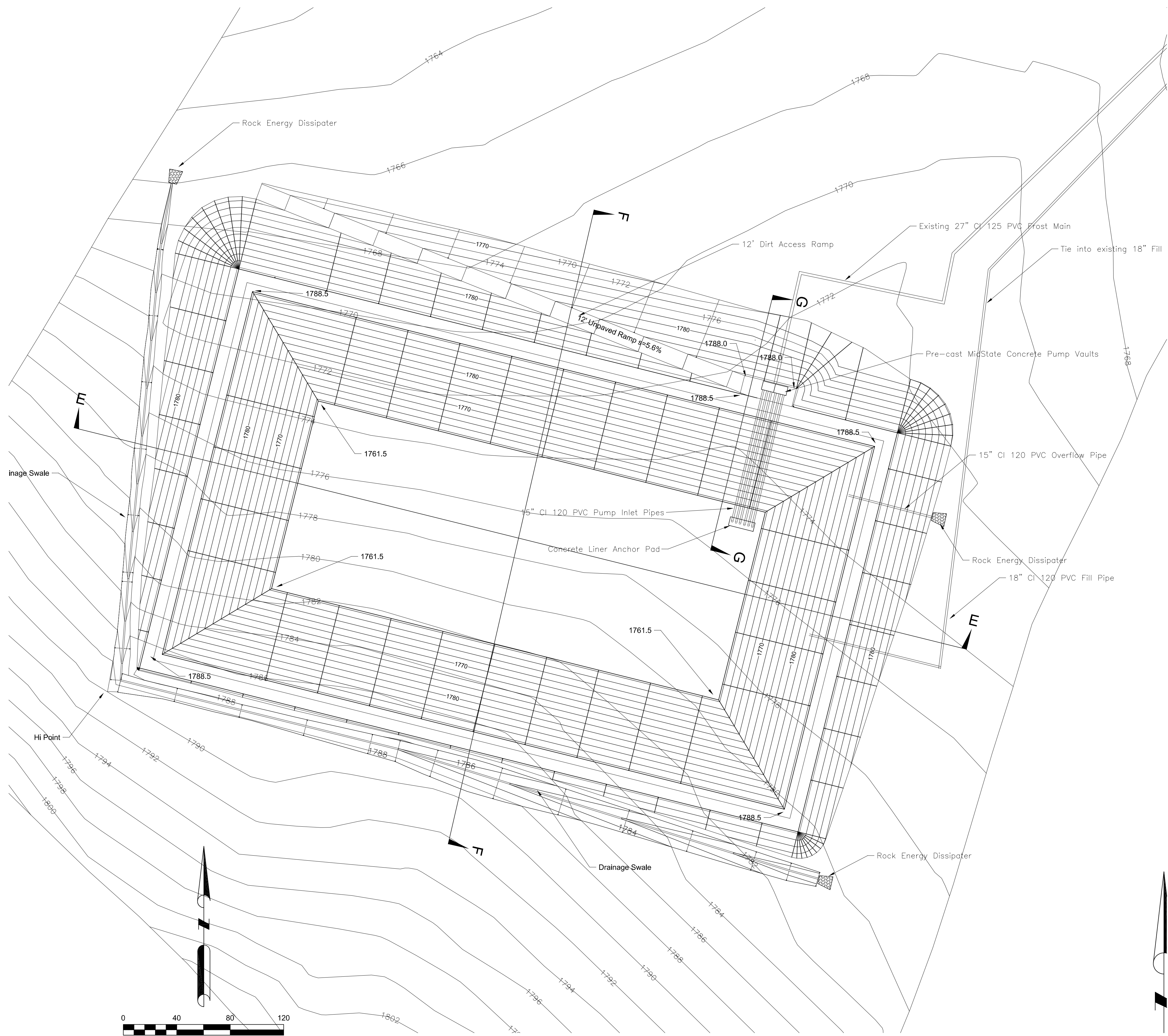
Reservoir #1 Pump Inlet



Revisions:
1/03/2017 Added 15" CMP Culvert Detail
Revised Stage-Storage Diagram
Revised Outlet Pipe Detail

North Fork Vineyards		
DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #1 Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 5 of 12	PROJECT NO. 101715-6233

Reservoir #2 Grading Plan



Pond Report

Tue Oct 20 14:36:54 2015

Top of dam elevation: 1788.50
Bottom of pond elevation: 1761.50
Top of dam width: 14.00
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50:1
Existing Surface: C:\Carlson Projects\North Fork\Reservoir 2B OG.tin

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 44,064.35 C.Y.
Total fill: 1 42,205.16 C.Y.

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1761.50	0.00	1.146
1763.50	2.40	1.259
1765.50	5.04	1.378
1767.50	7.91	1.502
1769.50	11.05	1.630
1771.50	14.44	1.762
1773.50	18.10	1.899
1775.50	22.03	2.040
1777.50	26.26	2.186
1779.50	30.73	2.336
1781.50	35.60	2.490
1783.50	40.74	2.649
1785.50	46.20	2.813
1787.50	52.00	2.981
1788.50	55.02	3.067

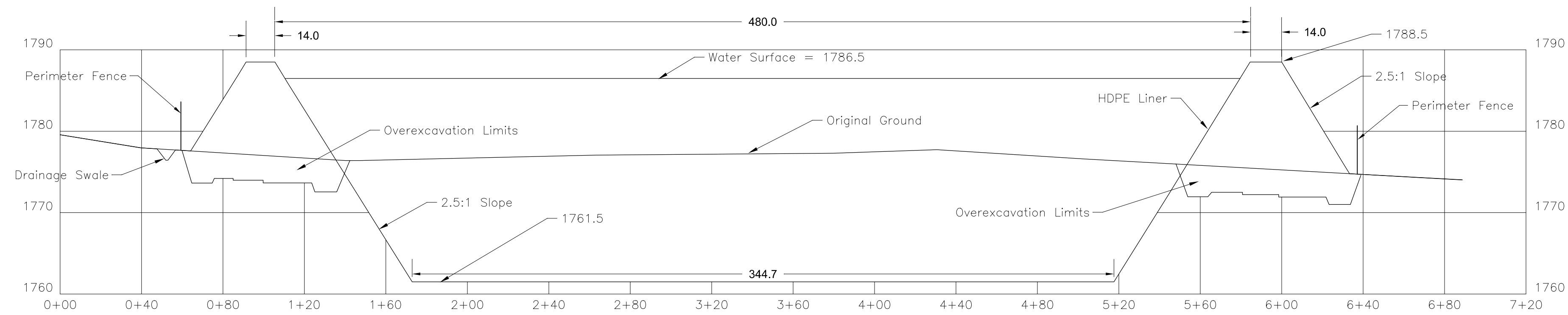
Area in Cut : 148,297.1 S.F.
Area in Fill: 186,122.7 S.F.



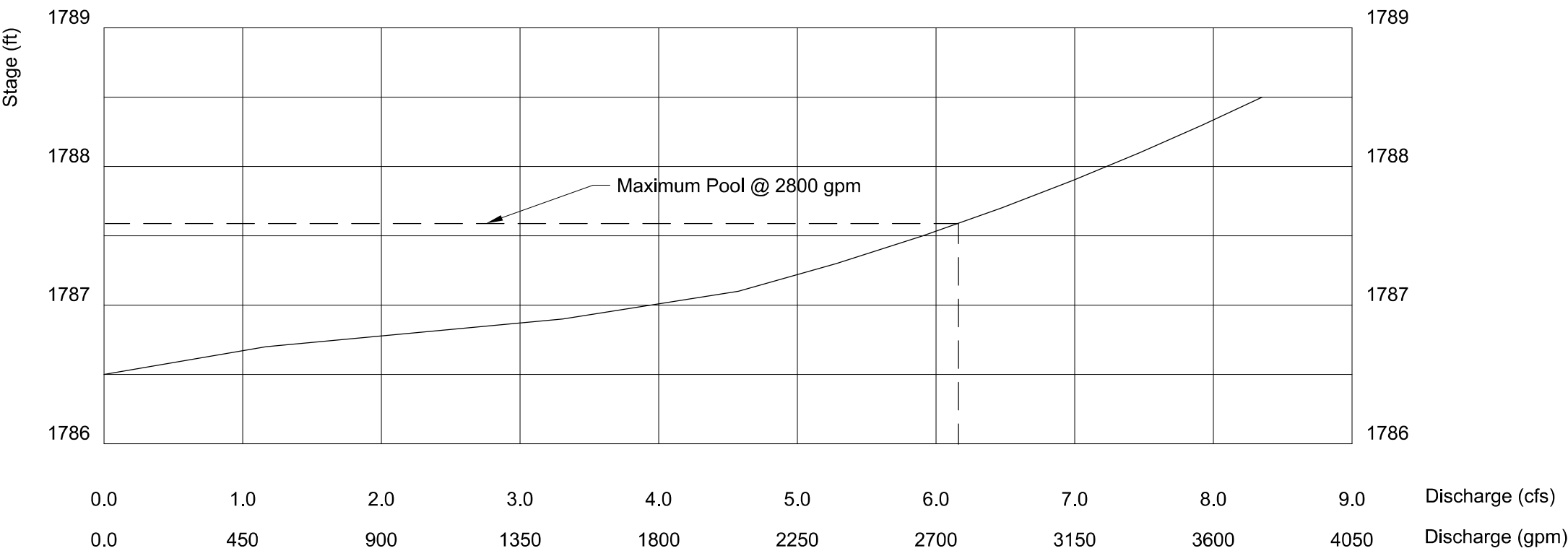
North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #2 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 6 of 12	PROJECT NO. 101715-6233

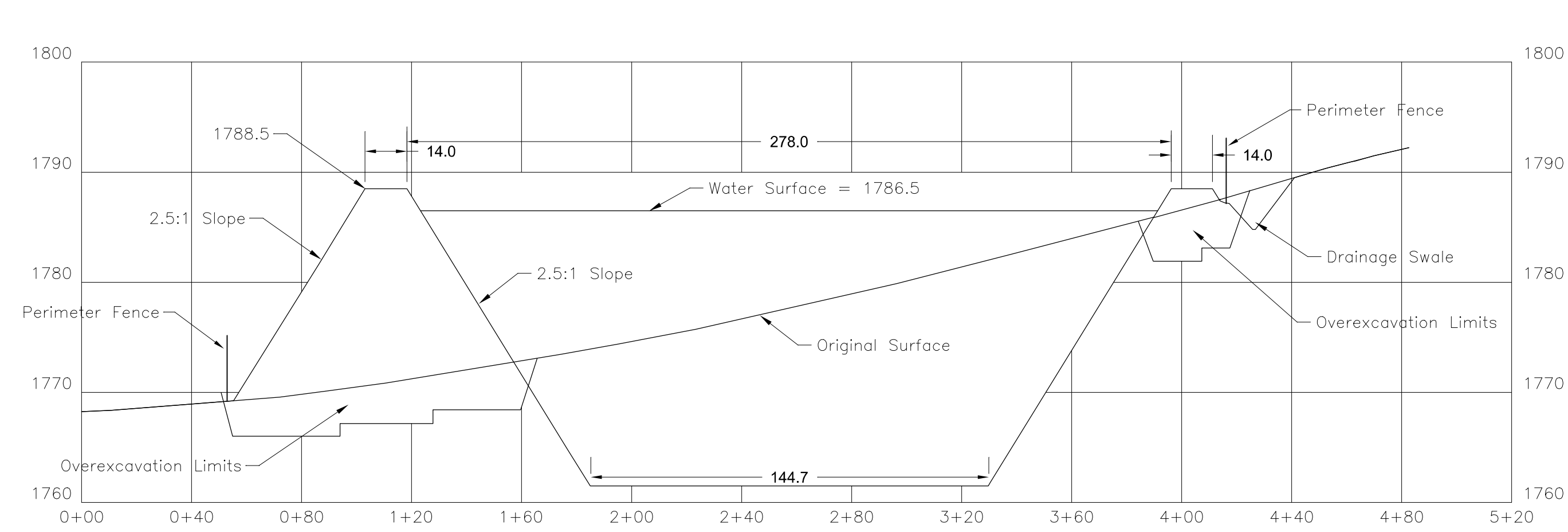
Reservoir #2 Section E-E



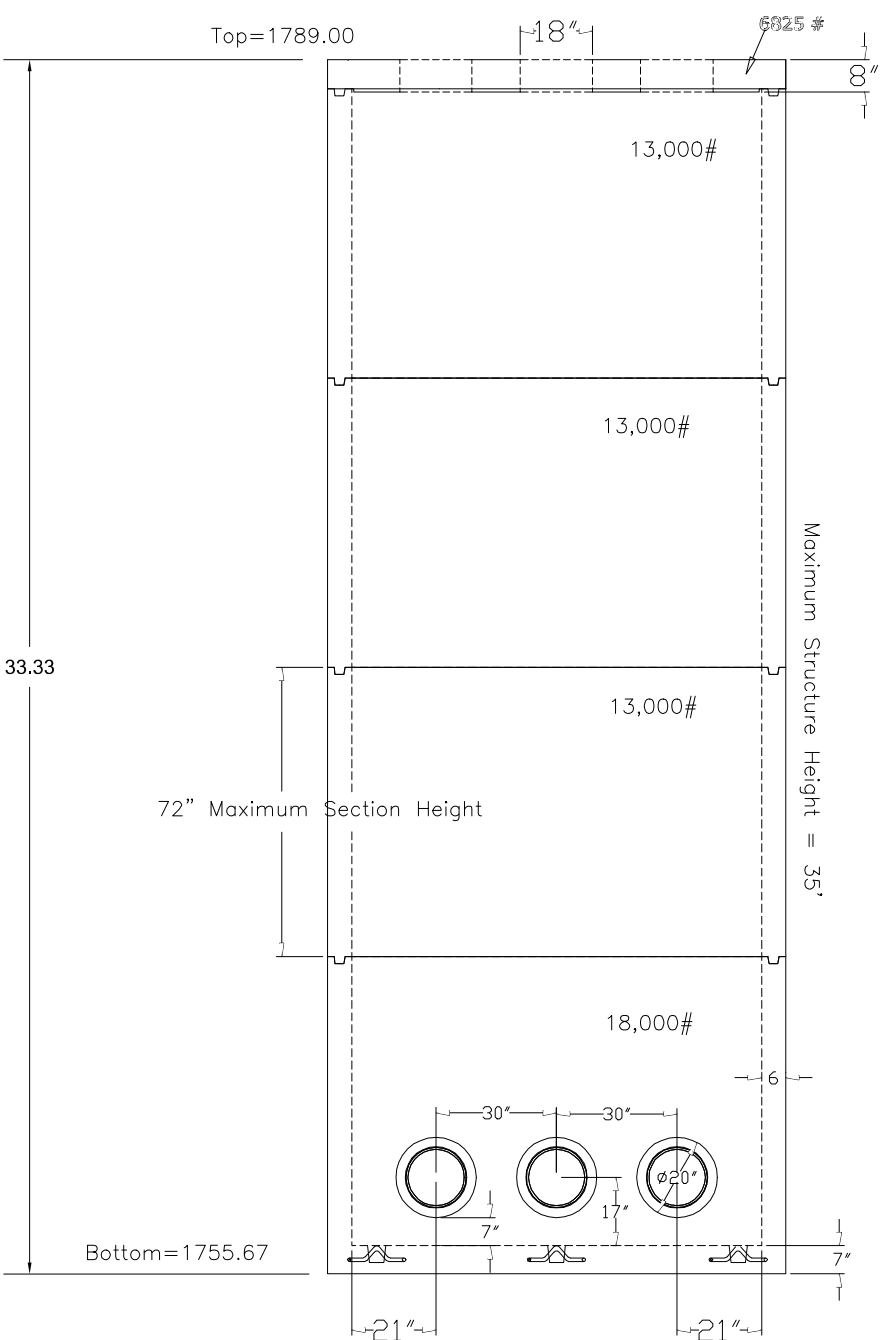
Reservoir #2 Stage Storage



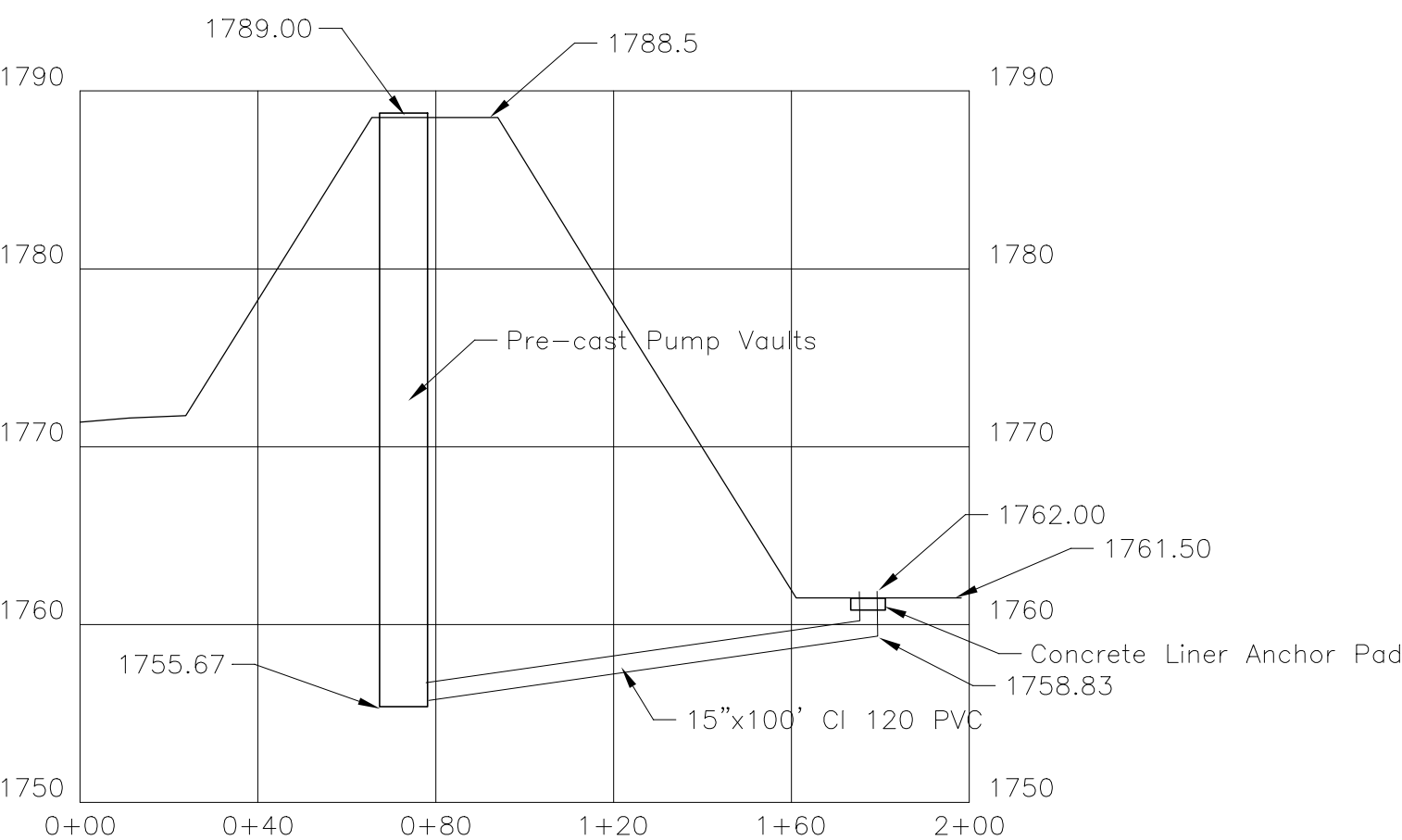
Reservoir #2 Section F-F



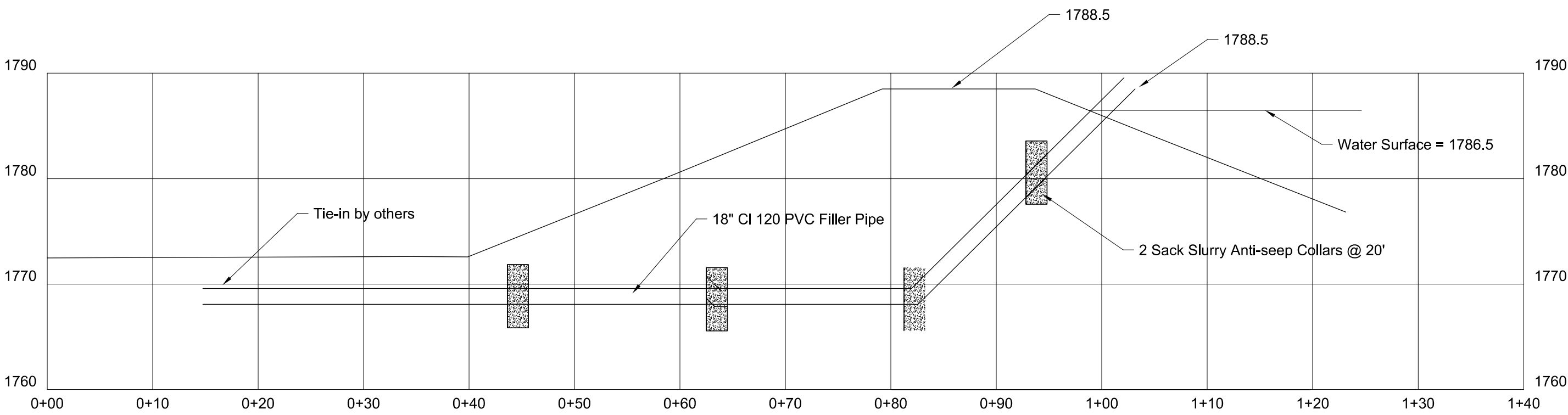
Reservoir #2 Pump Vaults



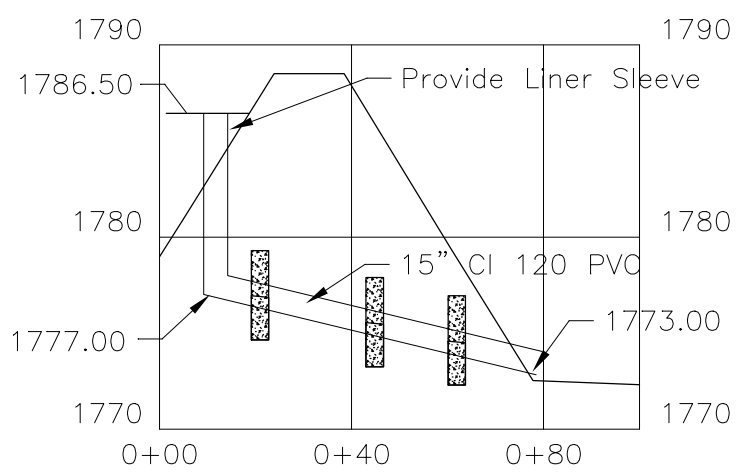
Reservoir #2 Pump Vaults Section G-G



Reservoir #2 Inlet Detail



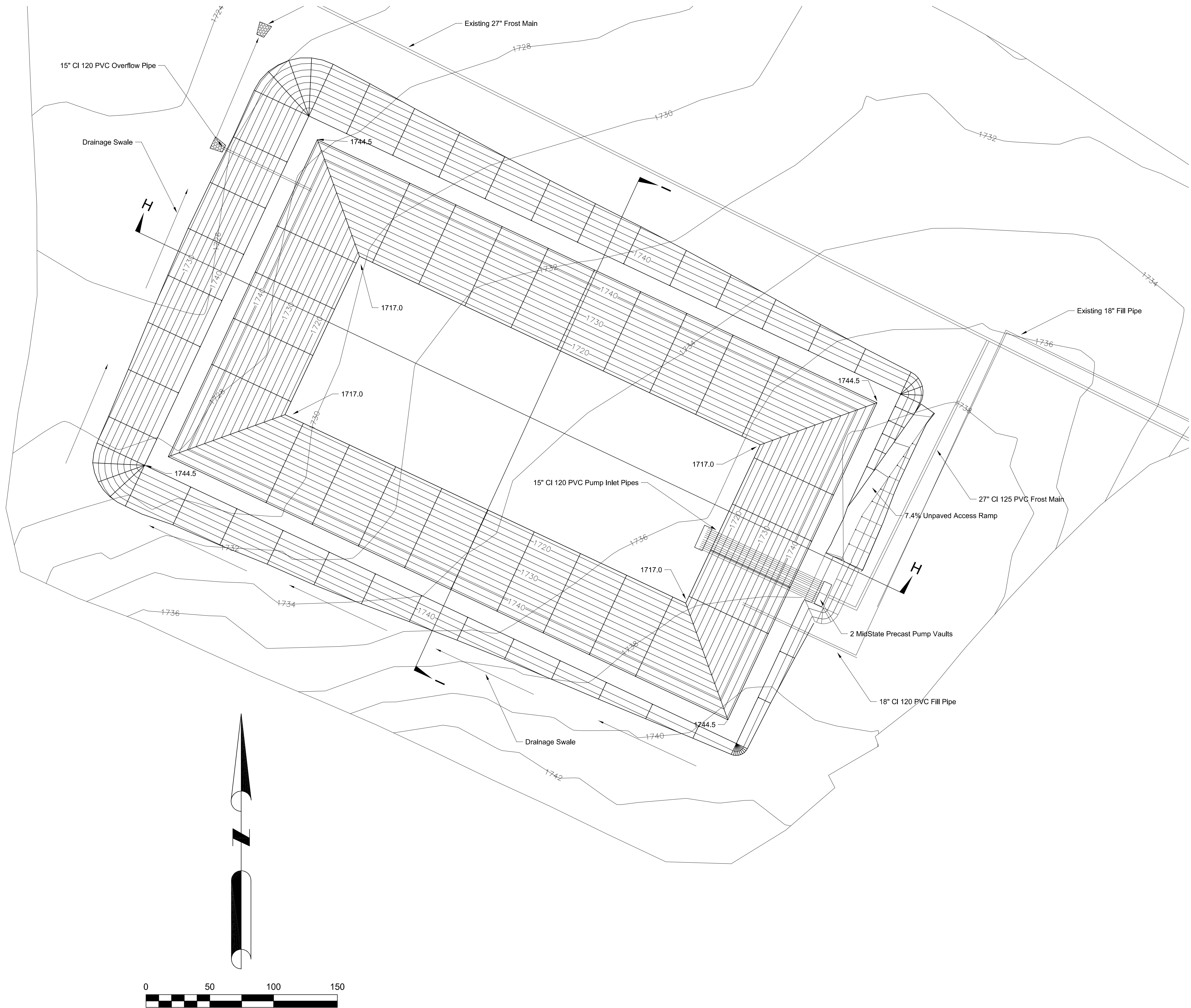
Reservoir #2 Overflow



North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #2 Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 7 of 12	PROJECT NO. 101715-6233

Reservoir #3 Grading Plan



Pond Report

Top of dam elevation: 1744.50
Bottom of pond elevation: 1717.00
Top of dam width: 14.00
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 42,770.71 C.Y.
Total fill: 40,253.87 C.Y.

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1717.00	0.00	1.093
1719.00	2.29	1.206
1721.00	4.82	1.323
1723.00	7.59	1.445
1725.00	10.60	1.571
1727.00	13.87	1.701
1729.00	17.41	1.835
1731.00	21.22	1.973
1733.00	25.30	2.116
1735.00	29.68	2.263
1737.00	34.36	2.414
1739.00	39.34	2.570
1741.00	44.64	2.729
1743.00	50.26	2.893
1744.50	54.70	3.019



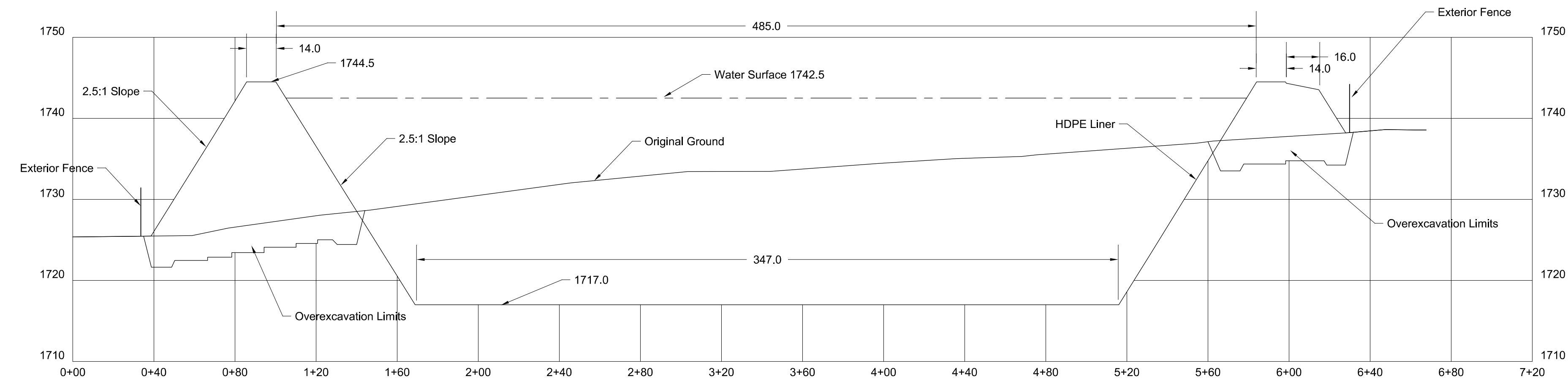
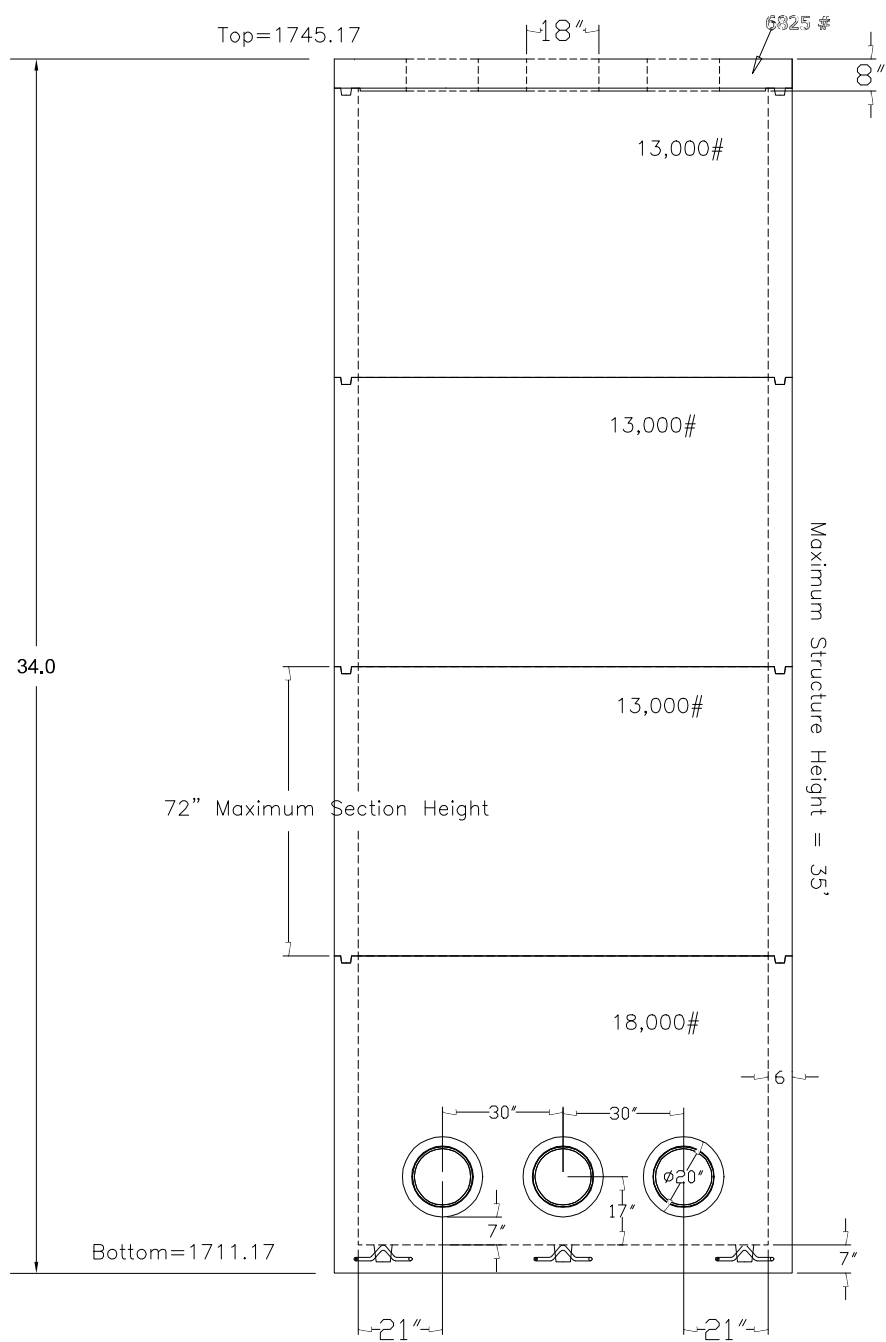
North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #3 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 8 of 12	PROJECT NO. 101715-6233

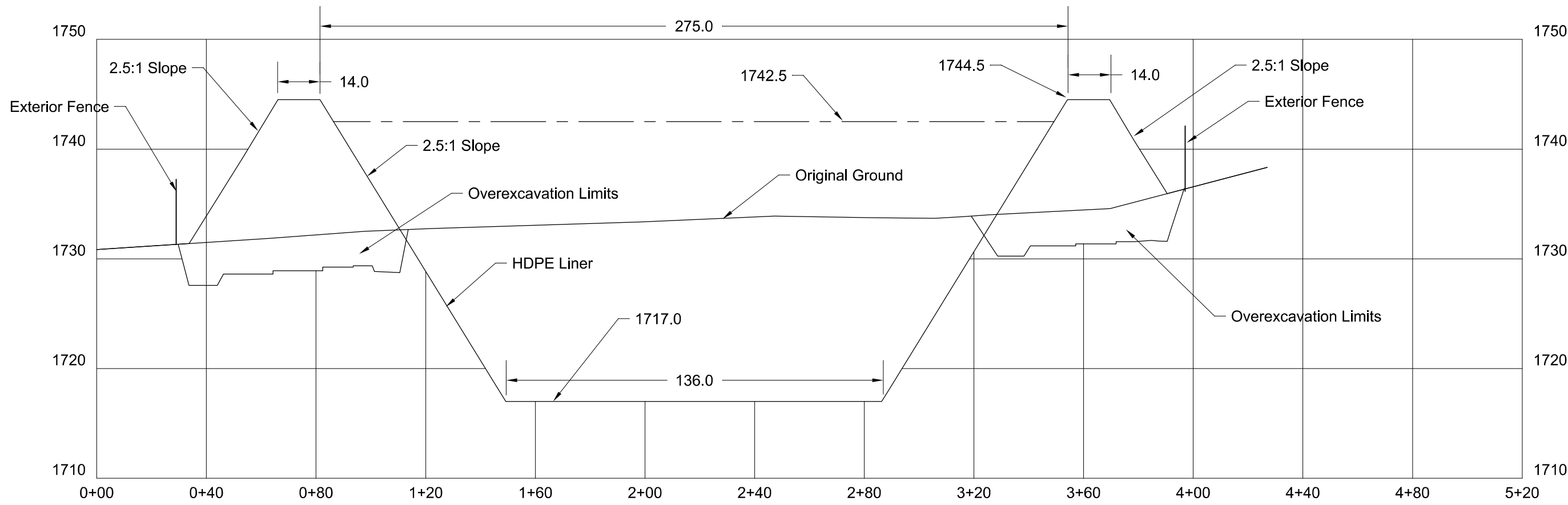
Reservoir #3 Details

Mid-State Concrete Products
Pump Housing Vault Reservoir #3

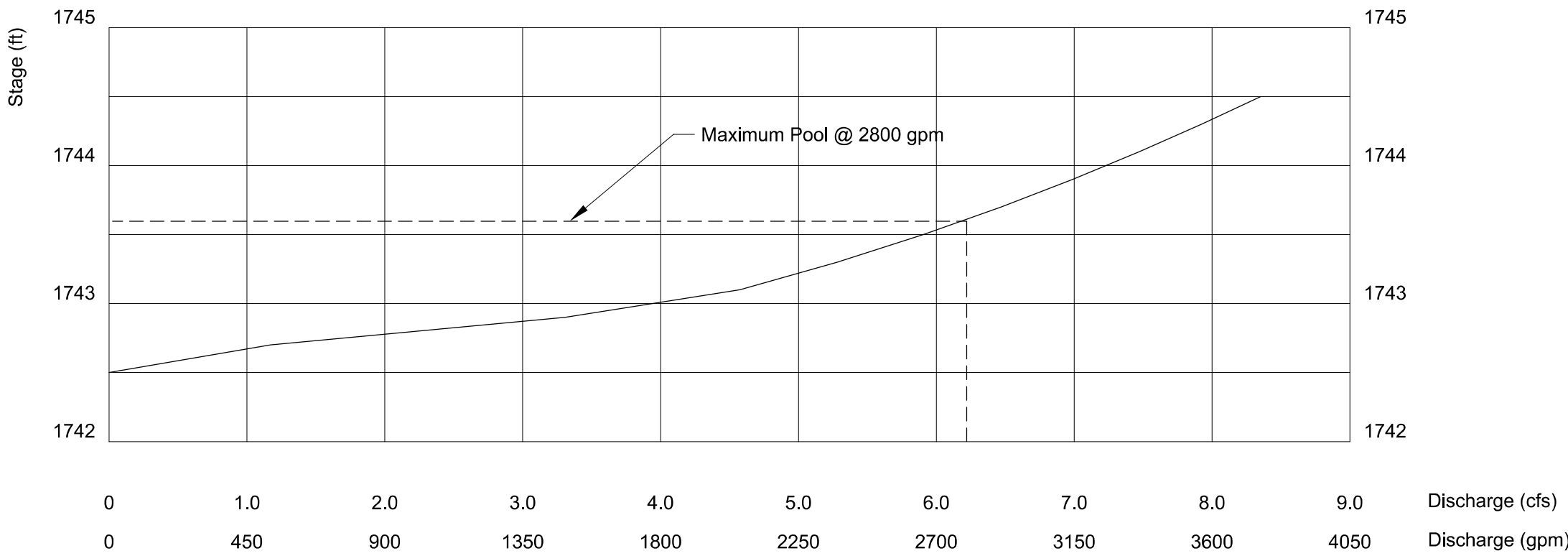
Reservoir #3 Section H-H



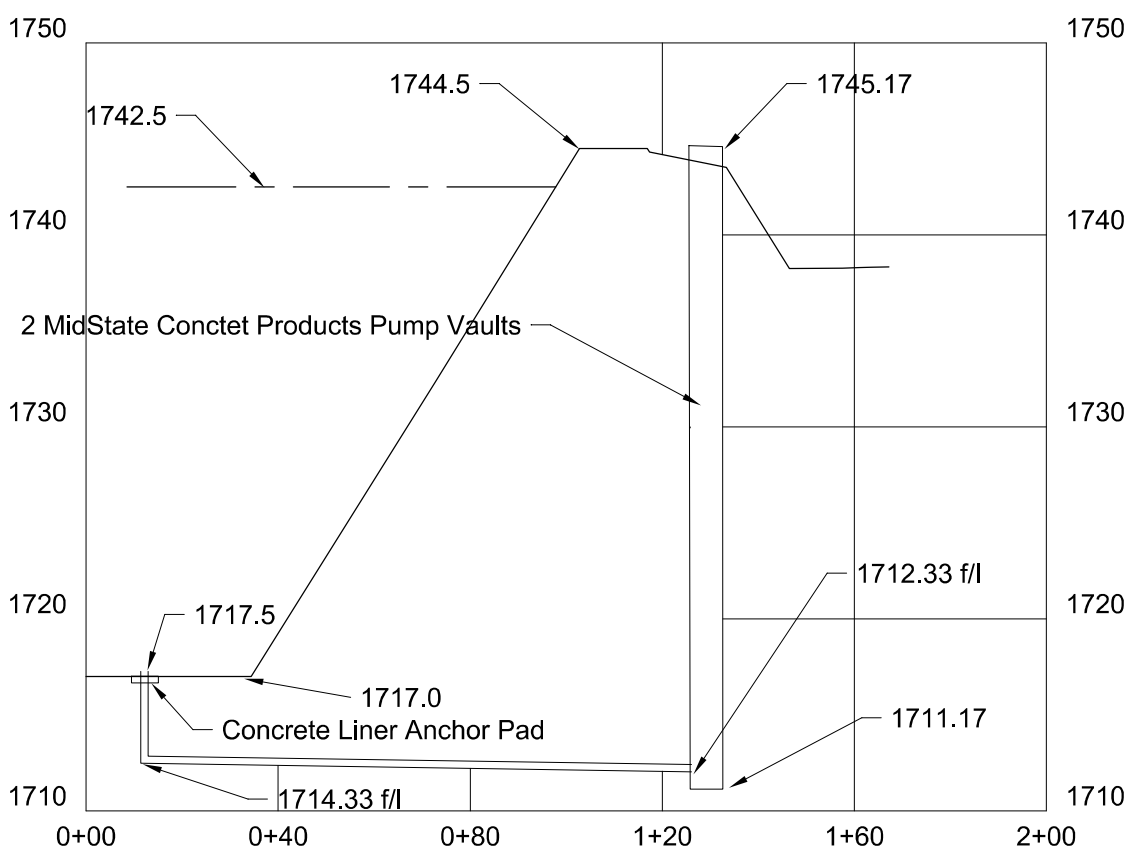
Reservoir #3 Section I-I



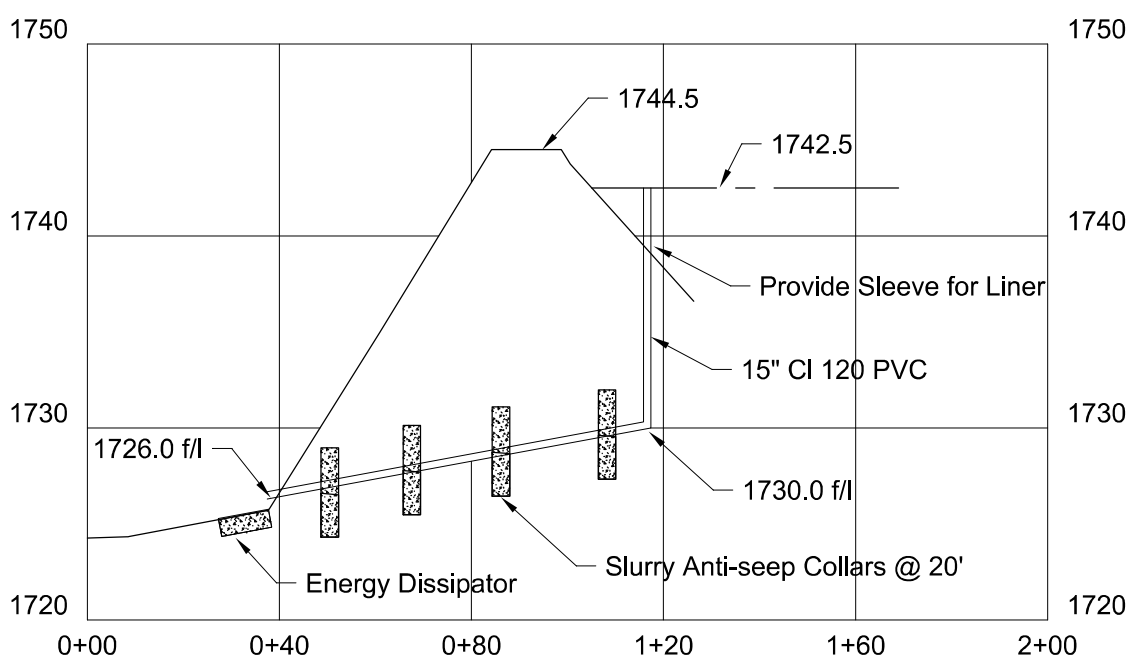
Reservoir #3 Stage Storage



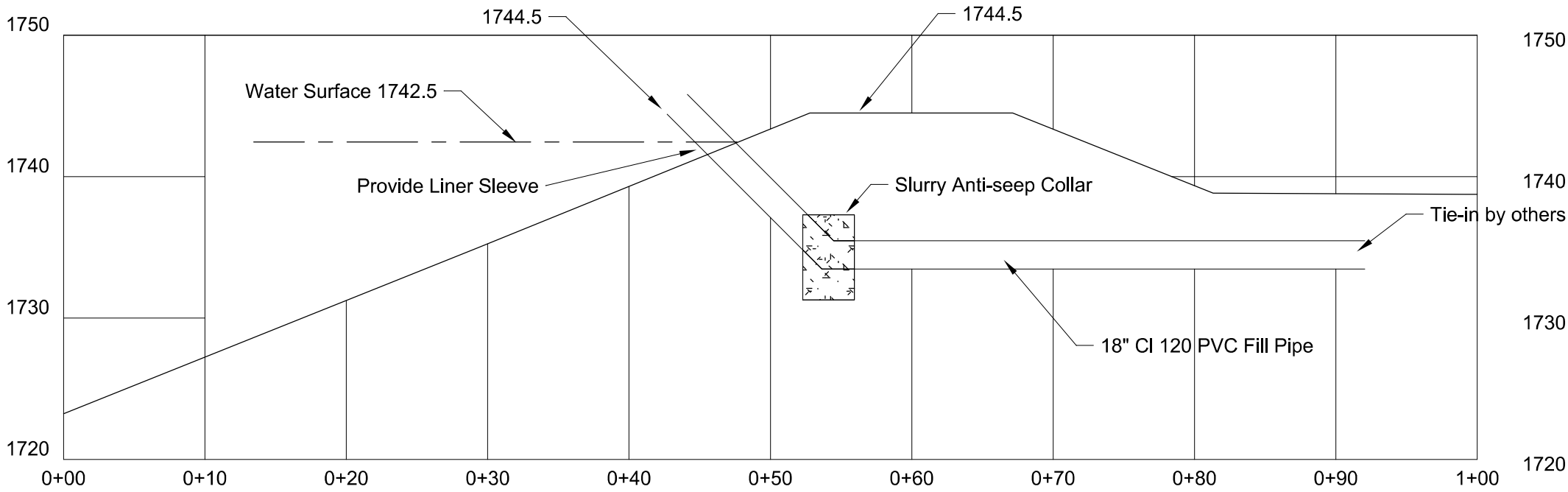
Reservoir #3 Pump Vaults



Reservoir #3 Overflow



Reservoir #3 18" Fill Pipe

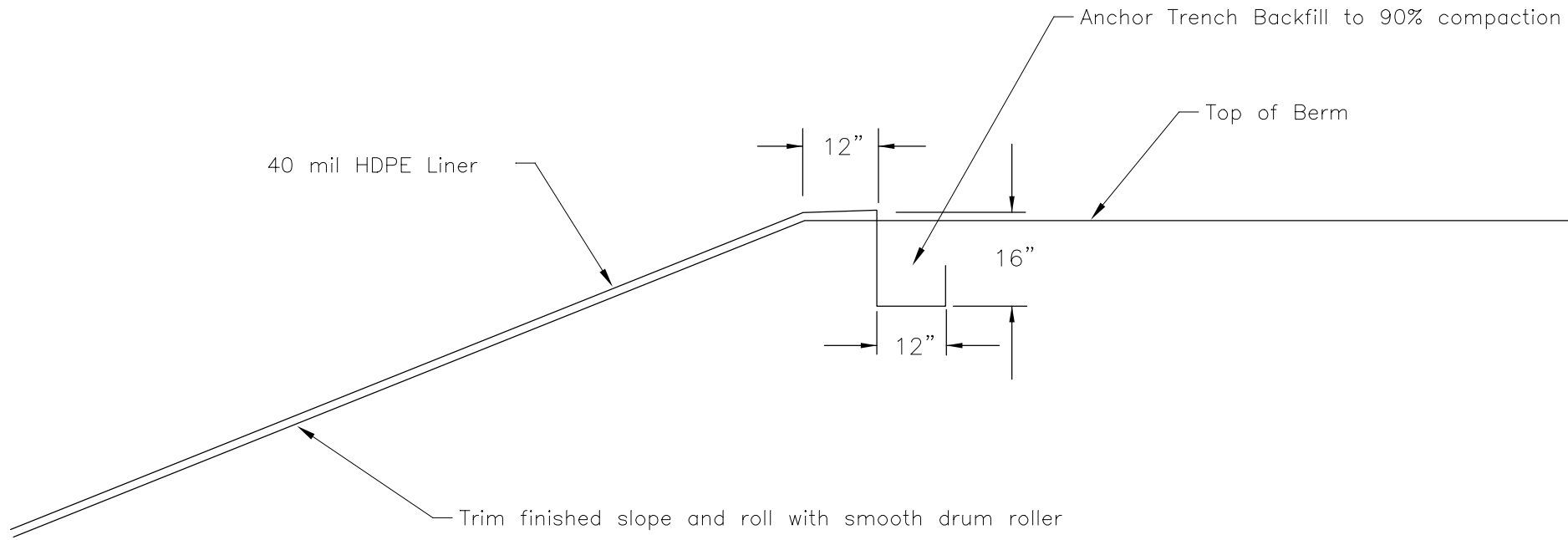


North Fork Vineyards

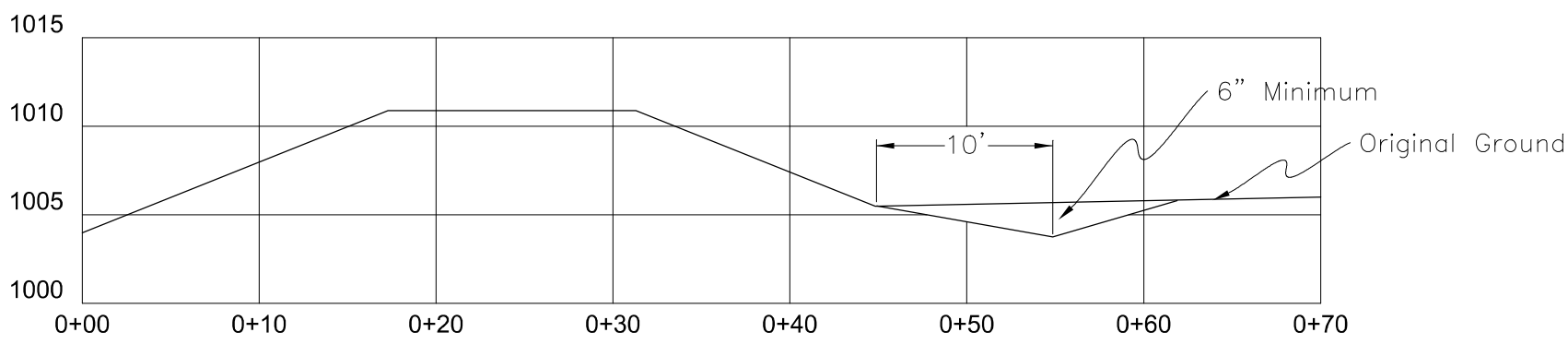
DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #3 Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 9 of 12	PROJECT NO. 101715-6233

Details Common to All Reservoirs

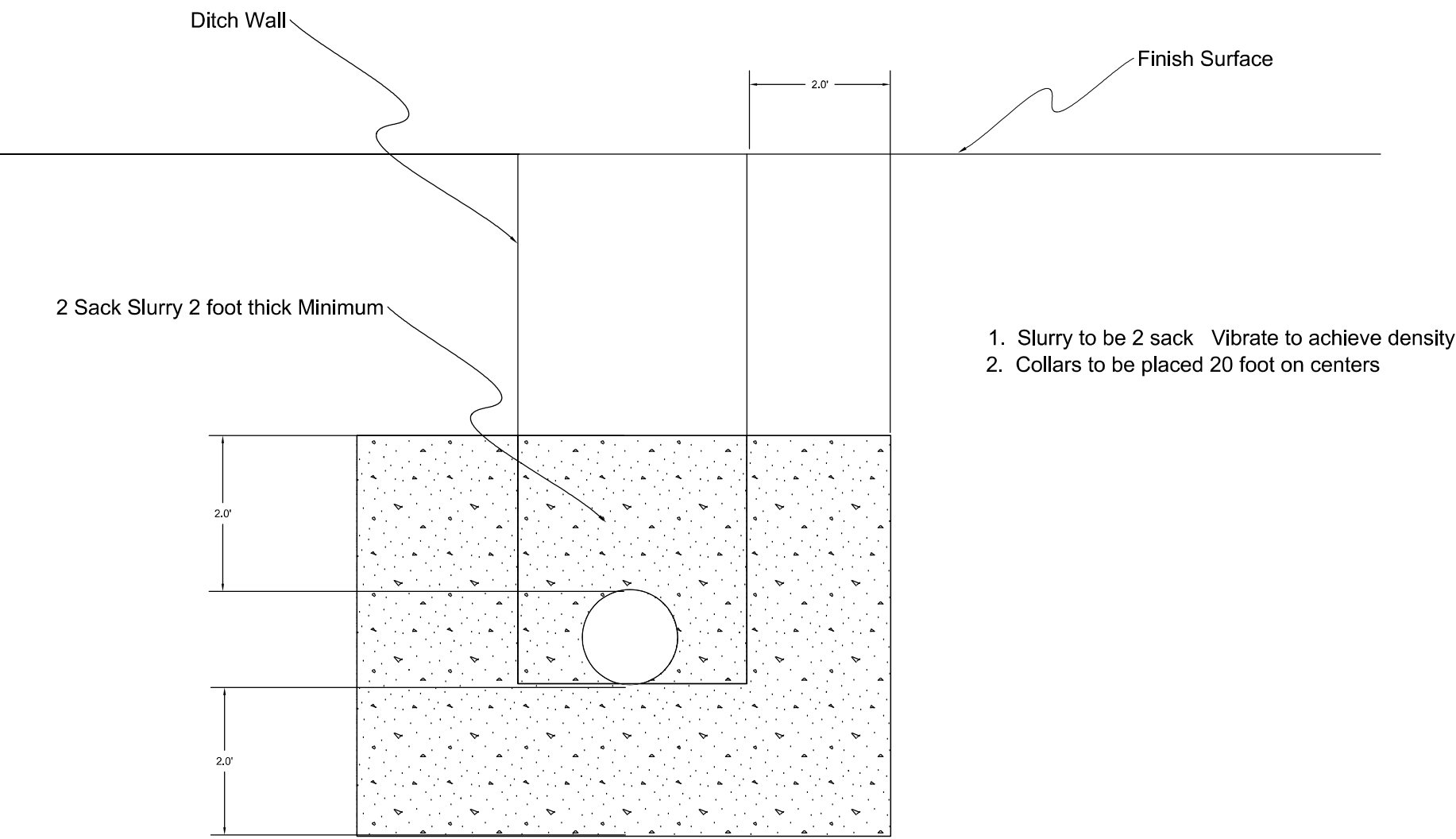
HDPE Liner Anchor Trench



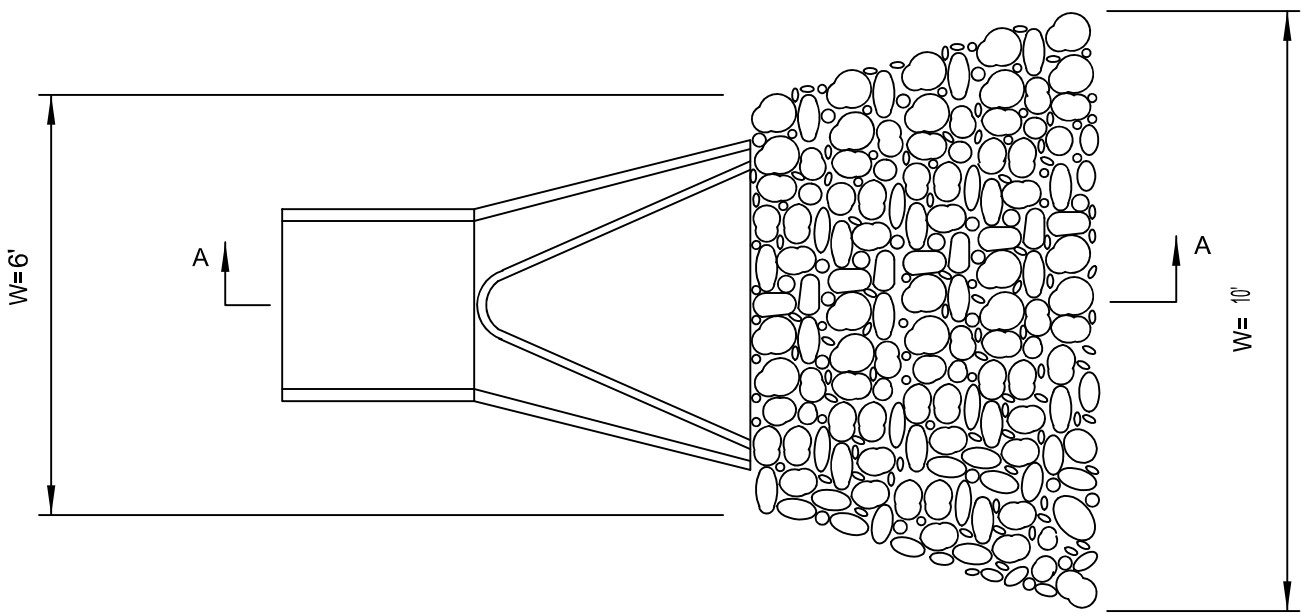
Drainage Swale Detail



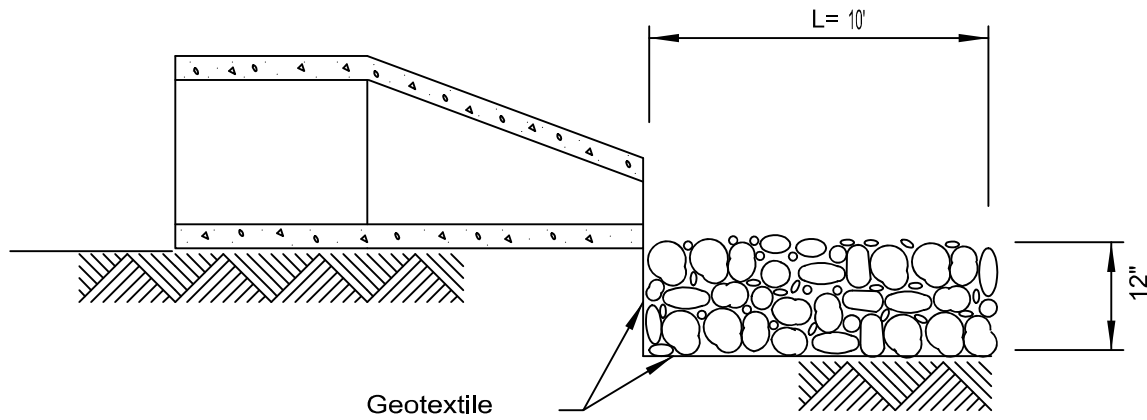
Anti-seep Collar Detail



Rock Energy Dissipater



PLAN



SECTION A-A

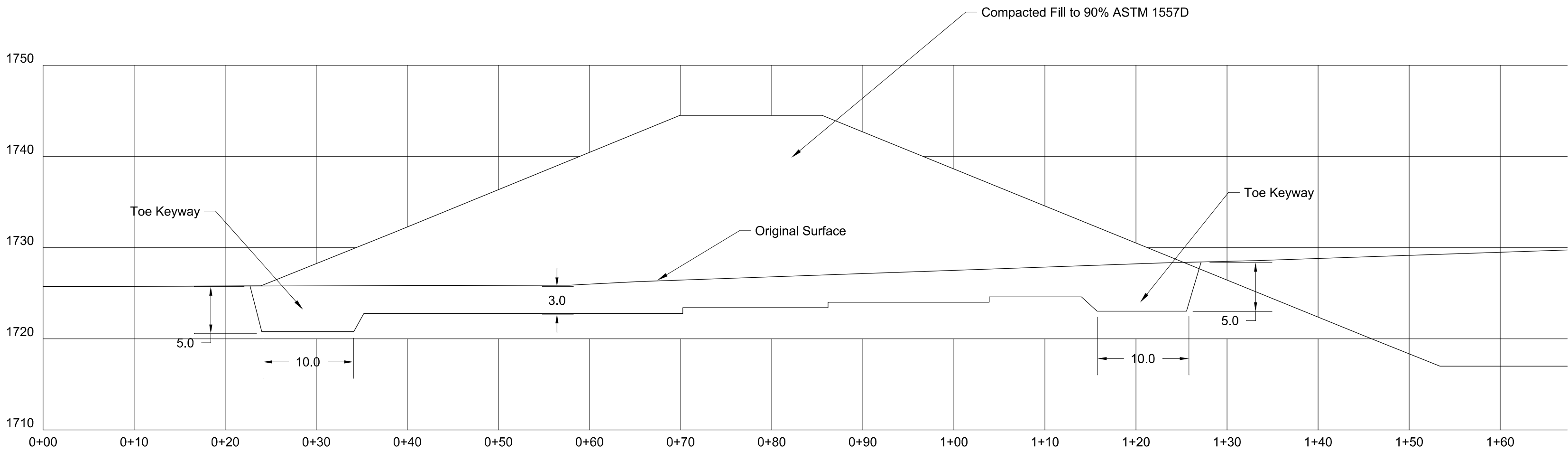
Notes:

1. Rock shall be 6" to 12" diameter
2. Minimum dimension shall be 6' x 10' x 12"

General Notes:

1. All grading shall conform to the Soil Report prepared by GSI Soils for this project dated January 4, 2016.
2. All slopes shall be overfilled than trimmed to finish grade to provide firm surfaces.
3. Finished slopes and the bottom surface shall be rolled with a smooth drum roller prior to placing fabric. The Engineer of Record shall inspect the surfaces to assure they are rock free and to the proper lines and grades before fabric shall be installed.
4. The liner shall be placed by a contractor specializing in pond liners and all pipes extending through the liner shall have sleeves and stainless bands to prevent leakage.
5. A 6 foot high non-climb fence shall be installed around the exterior perimeter of the reservoir. The fabric shall have 10 guage top and bottom wires with 12 1/2 guage 2x4 mesh filler fabric. Tee Posts shall be at 8 feet spacings and shall be heavy weight a minimum of 8 feet long.
6. The finished pond shall be surveyed by the Engineer of Record and the storage volume calculated. The 15" PVC Overflow Pipe shall be adjusted as necessary to ensure that the retained volume below the outflow inlet is no more than 49 acre feet and that there is a minimum of two feet of freeboard to the top of berm at the lowest point.

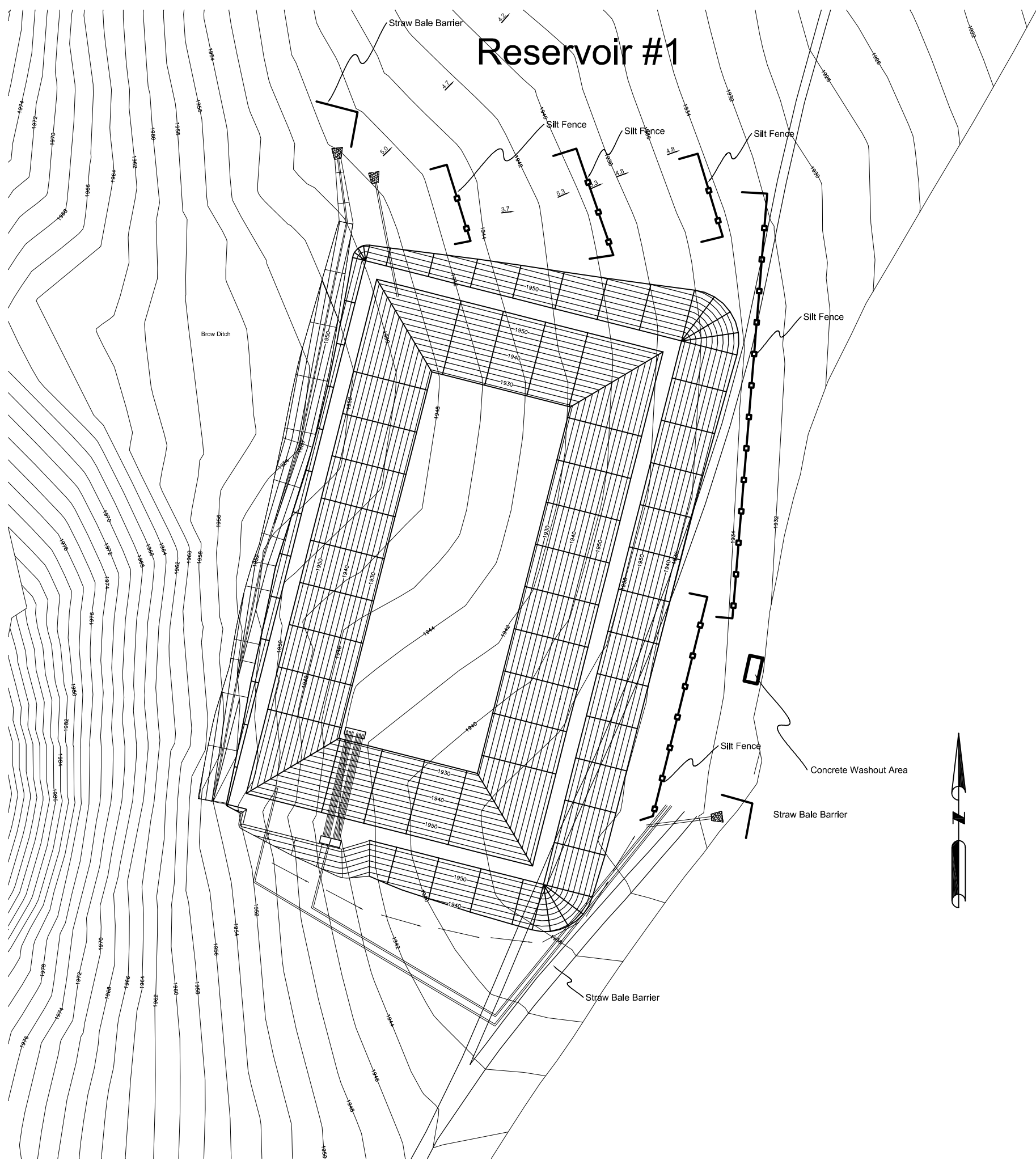
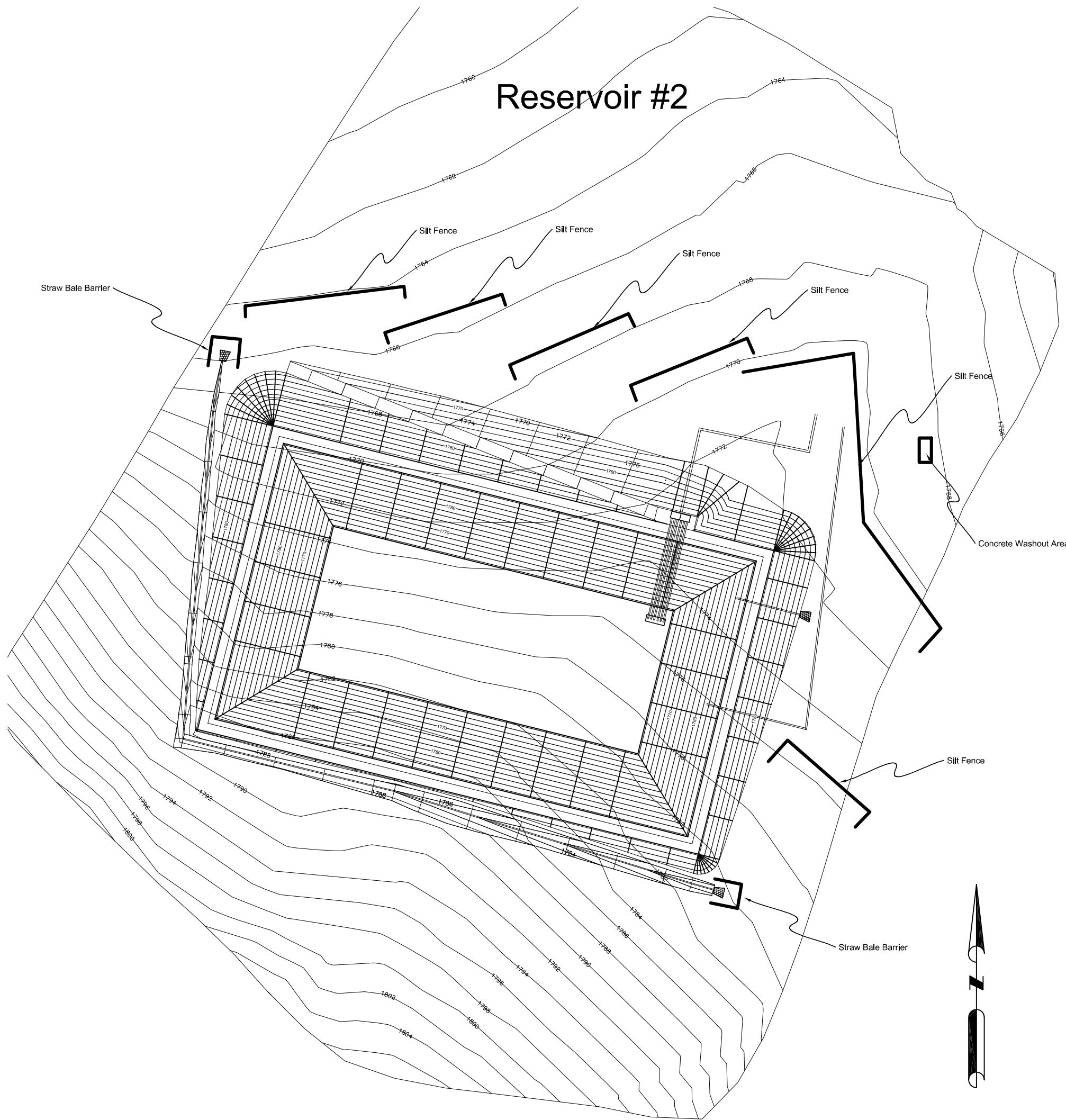
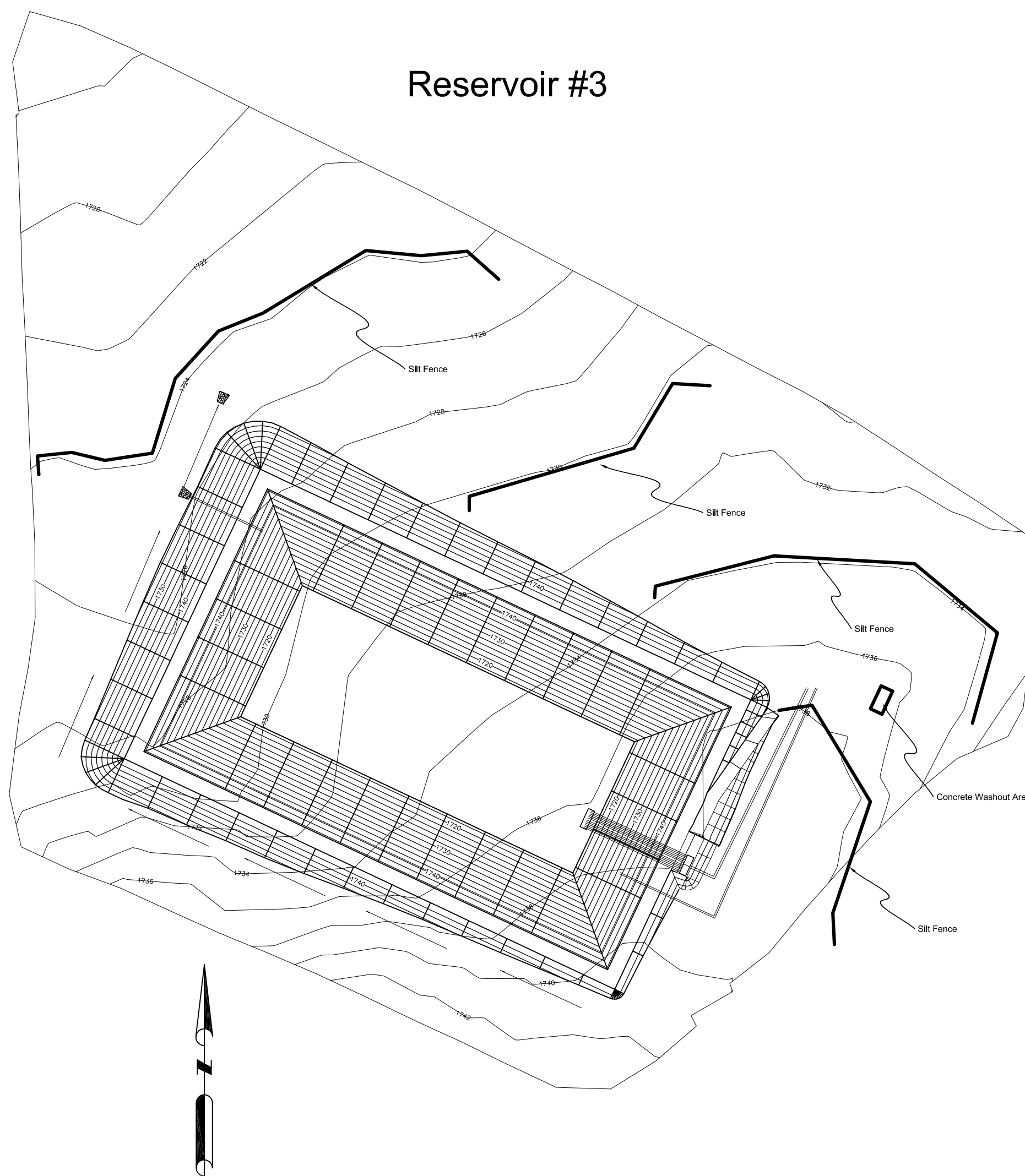
Overexcavation and Keyway Details per Figure 3 of Soil Report



North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoirs #1-3 Common Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 10 of 12	PROJECT NO. 101715-6233

Erosion and Sedimentation Control Plan



Erosion Control Notes:

- Erosion control measures shall be implemented on all projects and shall include source control, including protection of stockpiles, protection of slopes, protection of all disturbed areas, and protection of accesses. In addition, perimeter containment measures shall be placed prior to the commencement of grading and site disturbance activities unless the Engineer determines temporary measures to be unnecessary based upon location, site characteristics or time of year. The intent of the erosion control measures shall be to keep all sediment from entering a swale, drainage way, watercourse or onto adjacent properties. An approved Erosion Control and Sedimentation Control Plan will require County approval
- Site Inspections and appropriate maintenance of erosion control devices shall be conducted and documented prior to, during, and after rain events.
- The developer shall be responsible for the placement and maintenance of all erosion control devices as specified by the approved plan until such time that the project is accepted as complete by the Engineer. Erosion control devices may be relocated, deleted or additional items may be required depending on the actual soil conditions encountered. Additional erosion control shall be placed at the discretion of the Engineer of Work, Engineer, SWPPP Monitor or RWQCB Inspector. Guidelines for determining appropriate erosion control devices are included in the appendix of the Public Improvement Standards.
- All erosion control devices shall be the first order of work and shall be in place between October 15 and April 15 or anytime when the rain probability exceeds 30%. This work shall be installed or applied after each area is graded and no longer than five (5) working days after the completion of each area.
- The Engineer of Work and the Engineer shall be notified before October 15 for inspection of installed erosion control devices.
- A standby crew for emergency work shall be available at all times during the rainy season (October 15 through April 15). Necessary materials shall be available and stockpiled at convenient locations to facilitate rapid construction or maintenance of temporary devices when rain is imminent.
- Permanent erosion control shall be placed and established with 70% coverage on all disturbed surfaces other than paved or gravel surfaces prior to final inspection. Permanent erosion control shall be fully established prior to final inspection. Temporary erosion control measures shall remain in place until permanent measures are established. A water truck shall be used to water areas hydroseeded until the planting is established.
- In the event of a failure, the developer and/or his representative shall be responsible for cleanup and all associated costs or damages.
- Slurry Mix: The slurry mix shall be composed of the following materials:

Bromus mollis - Blando Brome (95%, 85%)	20 pounds per acre
Festuca megalura - Zorro Fescue (85%, 80%)	8
Trifolium hirtum "Hykon" - Rose Clover (95%, 90%)	30
inoculated with appropriate bacteria	3
Eschscholzia californica - California Poppy (95%, 75%)	3
Lupinus nanus - Sky Lupine (95%, 75%)	4

(Seed available at S&S Seeds (805) 684-0436)

Other Materials:

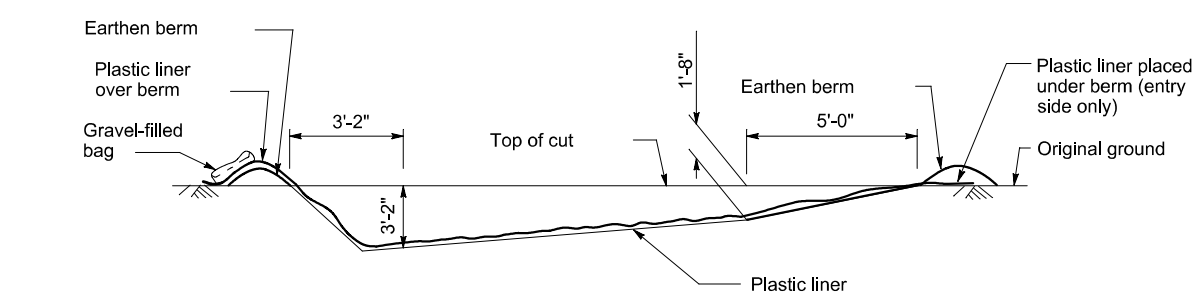
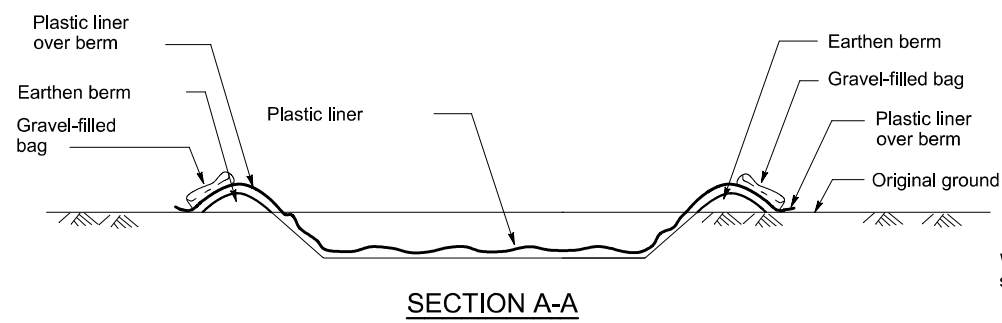
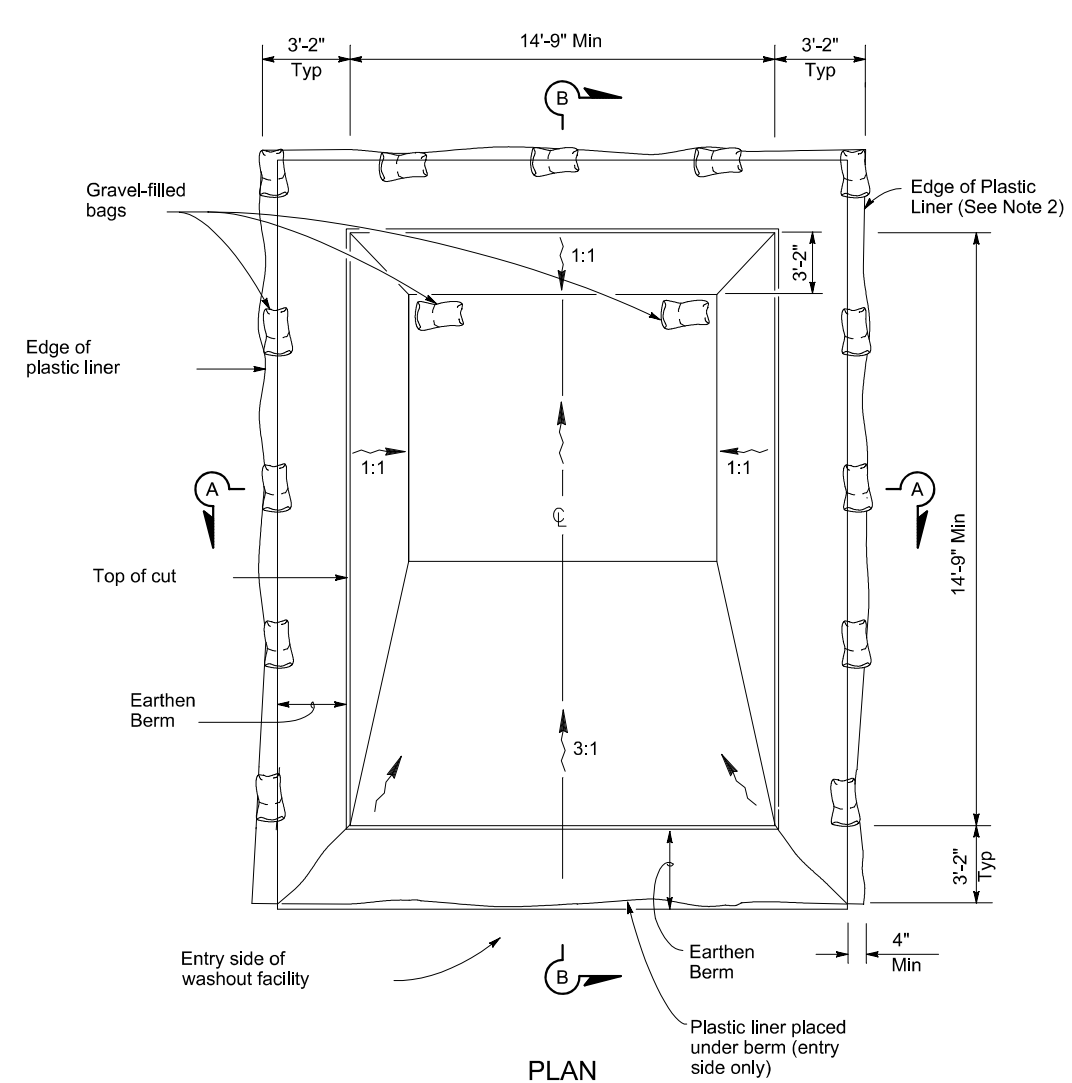
100% Wood fiber mulch (green)	1600 pounds per acre
Commercial Fertilizer (16-20-0)	400
"M-Binder" (stabilizing emulsion) or equal	120
Water (as needed for application and as specified by manufacturer)	
- Application: The slurry preparation shall take place at the site and in the presence of the Engineer. Spraying of the slurry shall be done by an experienced hydroseeding company and commence within five minutes after all the materials have been mixed thoroughly.
- The hydroseeded areas shall be watered with a fine mist periodically until the seed begins to germinate then every other day until the roots are established and 70% of the area is covered. Do not use the side spray of a watertruck but instead use a nozzle adjusted to spray a fine mist attached to a hose.
- BMP's to be constructed include but are not limited to:
 - Silt Fence
 - Straw bale barrier
 - Concrete washout area



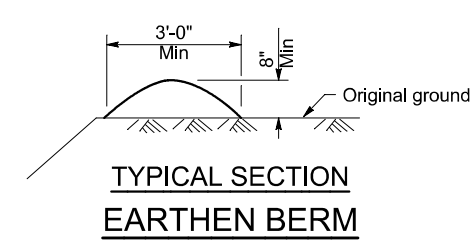
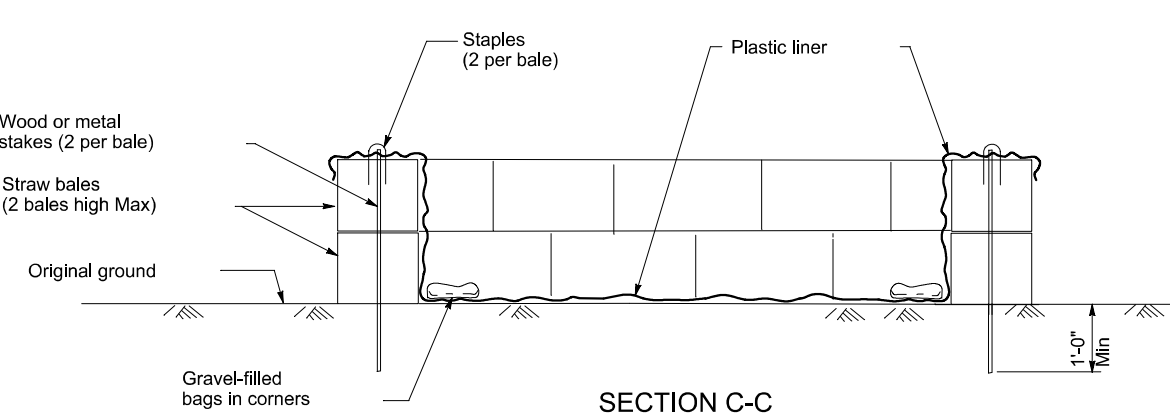
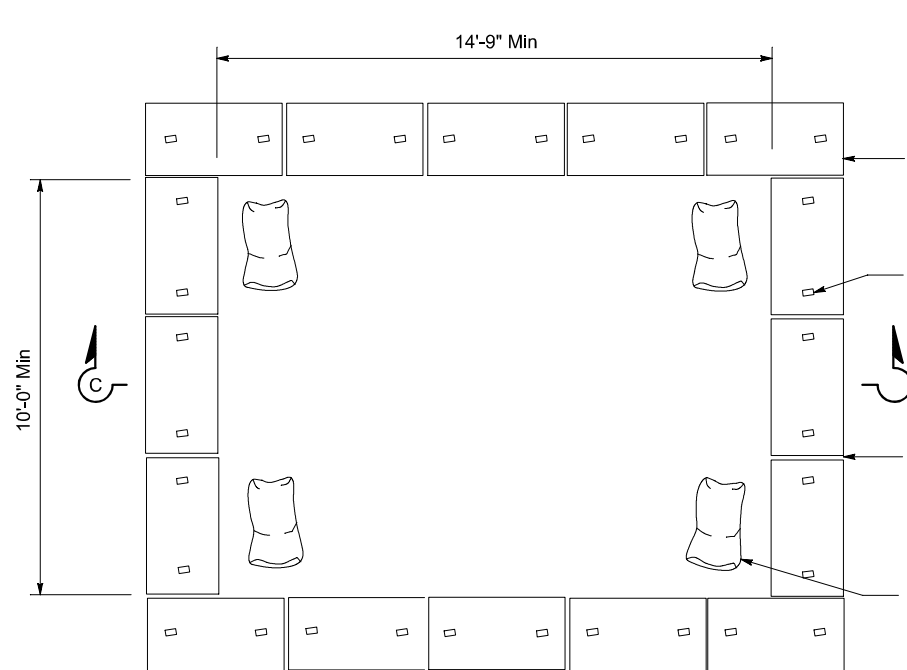
North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoirs #1-3 Erosion & Sedimentation Control
APPROVED	DATE	
SCALE 1"=100'	SHEET 11 of 12	PROJECT NO. 101715-6233

Erosion Control BMP Details



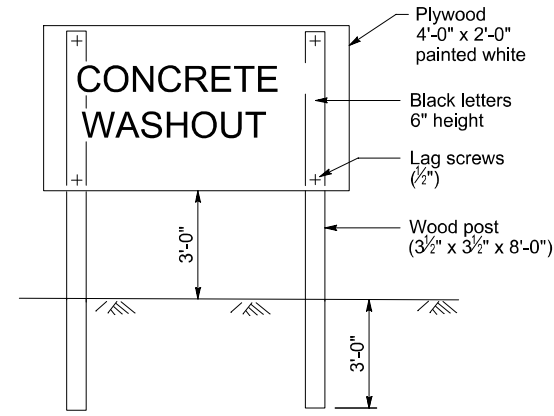
TEMPORARY CONCRETE WASHOUT FACILITY



TEMPORARY CONCRETE WASHOUT FACILITY

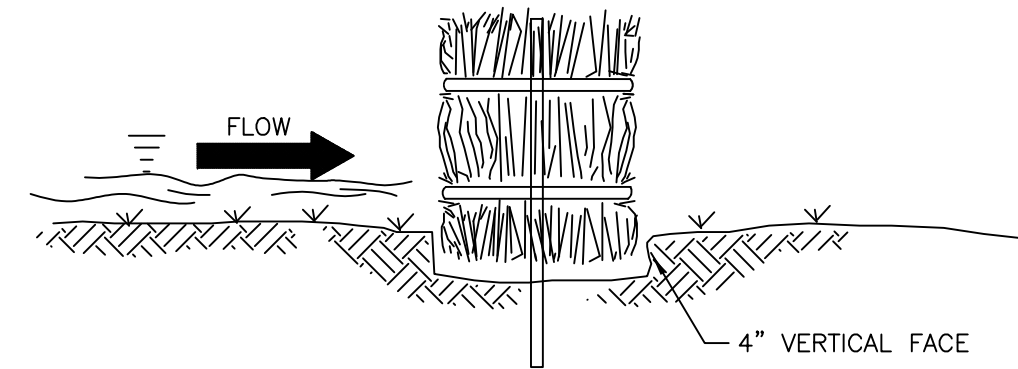
NOTES:

1. The concrete washout sign shall be installed within 32'-10" of the temporary concrete washout facility.
2. Plastic liner shall be anchored with gravel-filled bags for below grade concrete washout facility.

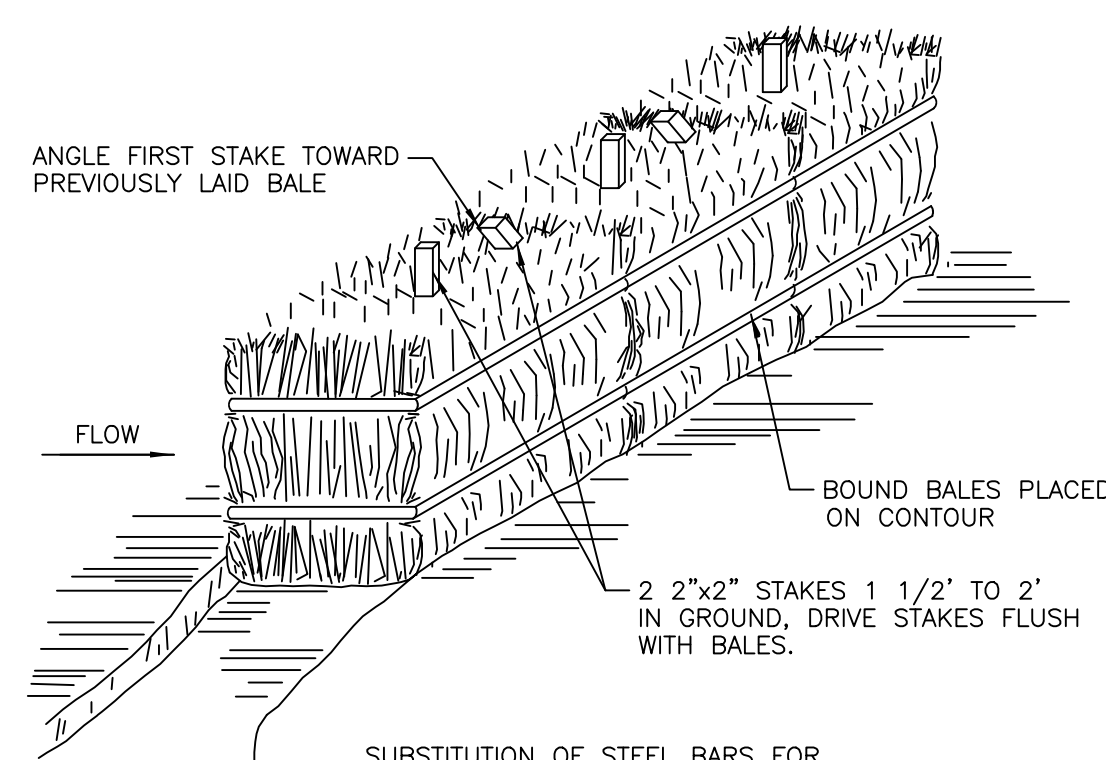


CONCRETE WASHOUT
SIGN DETAIL

NO SCALE

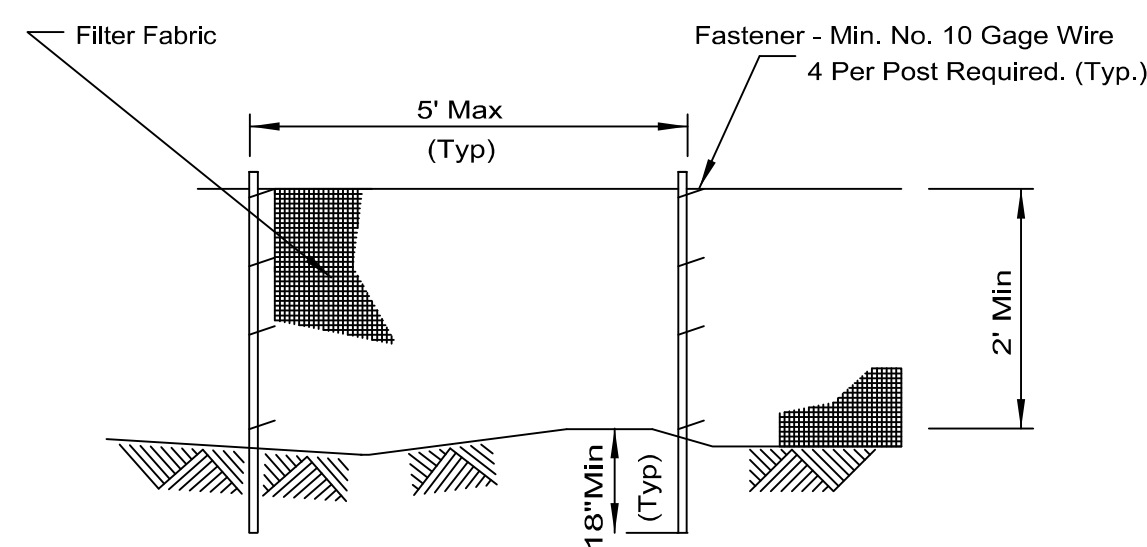
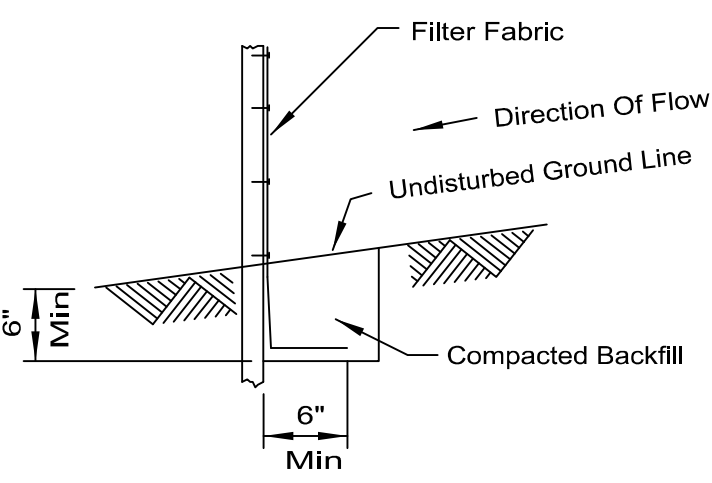


* PROMOTES ON SITE SEDIMENTATION
BY CREATING A TEMPORARY POND.



STRAW BALE BARRIERS

SILT FENCE PLAN



NOTES:

1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class with equivalent opening size of at least 30 for nonwoven and 50 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.



North Fork Vineyards

DRAWN TH	DATE 1/09/17	Reservoirs #1-3 BMP Details
APPROVED	DATE	
SCALE Varies	SHEET 12 of 12	PROJECT NO. 101715-6233



Attachment 2a

Kevin Merk Associates, LLC P.O. Box 318, San Luis Obispo, CA 93406 805-748-5837(o)/439-1616(f)

February 24, 2016

Mr. Kevin Merrill
Mesa Vineyard Management
P.O. Box 789
Templeton, California 93465

**Subject: Biological Resources Assessment for the Reservoir and Operations Yard
Project, North Fork Ranch, Santa Barbara County, California**

Dear Mr. Merrill:

Kevin Merk Associates, LLC (KMA), at your request, conducted an assessment of the biological resources at three reservoir sites and an operations yard proposed on a portion of the North Fork Ranch in Santa Barbara County, California. The North Fork Ranch is located approximately 10 miles west of New Cuyama, along the Highway 166 corridor. While the entire North Fork Ranch is roughly 8,400 acres, and is situated in both San Luis Obispo and Santa Barbara Counties, the four sites included in this assessment are located on the gentle to flat slopes on the south side of Highway 166 in Santa Barbara County.

Based on the review of site plans provided by your engineer, Mr. Thomas Howell (2015), the project consists of creating three agricultural reservoirs covering approximately five acres each. An operations yard area of approximately five acres is also included. The biological assessment examined existing conditions at and adjacent to the four proposed project areas, and evaluated the potential for rare or special status species and habitats to be present or affected by reservoir and operations yard construction. As such, the project study area covered by this report consists of a total of approximately 20 acres of land disturbance. Access to the sites would use existing ranch roads that originate from Highway 166. Please refer to attached Figures 1 and 2 for site location and an aerial overview of the study area. The following discussion provides the methods and results of our investigation.

METHODS

Prior to conducting field work, KMA biologists reviewed pertinent background information from the general area, including historic aerial photographs from Google Earth, the U.S. Geological Survey (USGS, 2015), and the Environmental Site Assessment prepared by the RCC Group (2014). Other environmental documents obtained online from the County of Santa Barbara (i.e.: August 2009 E&B Natural Resources Management Production Plan and September 2014 Cuyama Solar Facility Final EIR) were also reviewed to identify special status resources in the region.

The California Natural Diversity Database (updated December 2015; CNDDDB) maintained by the California Department of Fish and Wildlife (CDFW), was searched for special status biological resources documented within the following eight USGS 7.5-minute topographic quadrangles: Manzanita Mountain, Miranda Pine Mountain, Taylor Canyon, Bates Canyon, Caliente Mountain,

Peak Mountain, Wells Ranch, and New Cuyama. A search of this size was conducted to ensure that any new information regarding special-status species and plant community occurrences was included in the assessment. The Central Coast Center for Plant Conservation's Rare Plants of Santa Barbara County List (V2, November 1, 2012) was also reviewed to ensure full coverage of local plant species.

KMA Principal Biologist Kevin Merk conducted numerous site investigations on the North Fork Ranch in the spring and summer of 2015 prior to agricultural activities. General botanical and biological surveys were conducted in April, May, June, July, September and October of 2015 in addition to CDFW protocol level surveys for the blunt nose leopard lizard (*Gambelia sila*). KMA Senior Biologist Bob Sloan and Environmental Scientist, Jaryd Block, also assisted with surveys conducted in September and October 2015 to delineate top of bank buffers along onsite drainages to ensure agricultural activities onsite were setback from natural drainage features.

A detailed survey of the reservoir sites and operations was conducted by Bob Sloan on January 4, 2016. Using the project plans prepared by project engineer, Mr. Thomas Howell, the sites and surrounding areas were surveyed on foot to characterize existing conditions, habitats, and species presence. Existing plant communities and other observations were mapped on an aerial photograph obtained from Google Earth dated 2015. Vegetation classification generally followed Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (1986) and was cross-referenced with *A Manual of California Vegetation, Second Edition* (Sawyer et al., 2009) for consistency. Plant taxonomy followed the *Jepson Manual, Second Edition* (Baldwin et al., 2012).

The Web Soil Survey (websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx) was reviewed to determine the soil mapping units present within the sites (U.S. Department of Agriculture 2015). The U. S. Fish and Wildlife Service's online Critical Habitat Mapper (<http://criticalhabitat.fws.gov/crithab/>) was reviewed to evaluate the extent of designated critical habitat defined in the region. The National Wetland Inventory was also queried to identify drainage features and potential wetlands documented onsite and in the region.

For the purpose of this report, special status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (ESA); those listed or proposed for listing as Rare, Threatened, or Endangered by the California Department of Fish and Wildlife (CDFW) under the California Endangered Species Act (CESA); animals designated as "Species of Special Concern," "Fully Protected," or "Watch List" by the CDFW; and plants occurring on California Rare Plant Rank lists 1, 2, 3 and 4 developed by the CDFW working in concert with the California Native Plant Society. The specific Rare Plant Rank code definitions are as follows:

- *List 1A = Plants presumed extinct in California;*
- *List 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat);*
- *List 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened);*

- *List 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known);*
- *List 2 = Rare, threatened or endangered in California, but more common elsewhere;*
- *List 3 = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA);*
- *List 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80% occurrences threatened); and*
- *List 4.3= Plants of limited distribution (watch list), not very endangered in California.*

The evaluation of special status plant and animal species and identification of habitat that could support these species was based on field observations to aid in the development of a habitat suitability analysis. KMA staff spent many hours surveying the lower elevation portions of the ranch along the Highway 166 corridor over the last year, and became very familiar with site conditions and species present. Definitive surveys for the presence or absence of the species such as the San Joaquin kit fox (*Vulpes macrotis mutica*) that may be present in the greater region were not conducted on the sites. Definitive or protocol-level surveys for special status wildlife species generally require specific survey methods with extensive field survey time to be conducted at specific times of the year. Therefore, we relied on existing information and known occurrence records in the region coupled with site-specific observations to make presence/absence determinations for special status species potentially occurring within the four project areas.

RESULTS

The North Fork Ranch is a large property with varied topography and habitats located west of New Cuyama along the northern flank of the Sierra Madre Mountains. The northern property is bisected in an east to west direction by Highway 166, and also includes the Cuyama River and its associated flat terraces. Please refer to the attached Figures 1 and 2 for site location and aerial overview maps. The three proposed reservoir sites and operations yard are located in the gentle slopes and flat areas of the North Fork Ranch, on the south side of Highway 166. All four sites are similar in size and shape, and were accessed by existing ranch roads. Elevations in the project areas range from approximately 1,700 to 1,900 feet above mean sea level.

Numerous drainage features that are tributaries to the Cuyama River bisect the property in a primarily south to north direction. The largest features, Cottonwood Canyon Creek in the west and Schoolhouse Canyon Creek in the east are large washes that are dry for most of the year. They contain periodic ("flashy") flow during the summer monsoon season as well as the winter rain season. The ranch was used to graze cattle for many years, and as a result, the gently-sloped terraces and hills were dominated by non-native weeds. Review of aerial imagery dating back to 1950's showed little change in the distribution/location of drainage features and vegetation formations (i.e.: herbaceous, shrub, tree habitats) onsite. Soils on the ranch in the study area are generally sandy in nature.

The attached Figures 3, 4, and 5 provide close-up views of existing conditions at each project site.

Figure 6 is a CNDDDB Map illustrating the recorded special status species occurrences within a five-mile radius of the study area. Also included as an attachment, Table 1 provides a list of all special status species and plant communities identified in the CNDDDB search area, and a determination of whether or not they are expected to occur in or adjacent to the four sites. Additional attachments include a photo plate to help document conditions at the four project sites, and the USFWS's *Standardized Recommendations for San Joaquin Kit Fox* to avoid impacts to this species during development of the reservoirs and operations yard. Existing conditions observed within the four sites are discussed further below.

Reservoir Site #1

Reservoir Site #1 is located in the eastern portion of the ranch, immediately adjacent to Schoolhouse Canyon Road, west of Schoolhouse Canyon Creek. The site slopes gently to the northeast, and supported a mix of non-native weeds growing on sandy loam soils. Plants observed during the spring and summer of 2015 included red-stemmed filaree (*Erodium cicutarium*) and Russian thistle (*Salsola tragus*). Further upslope on steeper hills were occurrences of California juniper (*Juniperus californicus*) and other scrub species. A small ephemeral drainage channel was present to the north of the proposed reservoir site, and the reservoir construction footprint has been set back over 100 feet from this feature to ensure it will not be disturbed during construction. The recent 2016 survey occurred when site preparation activities such as disking and deep ripping were taking place. The site was nearly devoid of vegetation when the site visit was conducted. Numerous coyote (*Canis latrans*) tracks were noted in the disked area. A large flock of American crows (*Corvus brachyrhynchos*) were present in disked areas south of the reservoir site. Nearby areas outside the disking footprint were dominated by red-stemmed filaree with sparse occurrences of annual grasses beginning to sprout in response to recent rains, which is consistent with observations made in the spring and summer 2015.

Reservoir Site #2

Reservoir Site #2 is located in the middle portion of the study area. The site slopes gently to the northeast, and consisted of non-native weeds growing on sandy soils, which was nearly identical to the conditions observed at Reservoir Site #1. Spring and summer 2015 surveys identified red-stemmed filaree growing as a monoculture with patches of bare soils at this site. The 2016 survey occurred during preparation for vineyard planting, and the site was disked with little to no vegetation present. The reservoir (and nearby operations yard) was sited in the upland area to avoid impacts to the unnamed drainage feature to the east. The proposed operations yard is located further east on the other side of the unnamed drainage feature.

Reservoir Site #3

Reservoir Site #3 is located in the western portion of the study area, approximately 0.75 mile east of Cottonwood Canyon Road. The proposed reservoir is located between two ephemeral drainage features, and was sited in upland areas with a minimum 50 foot setback from the drainages top of banks. Similar to observations made during the spring and summer 2015 at the other reservoir sites, the proposed disturbance area was dominated by red-stemmed filaree with patches of Russian thistle. During the 2016 survey, the area was being disked, and the southwestern half

consisted of a dense cover of red-stemmed filaree. Numerous Russian thistle seedlings were also observed, and a barbed wire fence present in the upper southern portion of the site had trapped numerous dry tumbleweeds (Russian thistle plants) from last year's crop.

Operations Yard

The proposed operations yard is located east of Reservoir Site #2 on the other side of the unnamed drainage feature. The site consists of an area previously used as a staging area for the former cattle grazing operation. During the 2016 survey, it consisted of a large flat area covered with gravel/road base. An existing dirt road connects the operations yard to Highway 166. During the 2015 surveys, the site contained a predominance of bare soils as a result of equipment storage along with patchy occurrences of red-stemmed filaree and Russian thistle. In addition, two small windrows visible in the aerial imagery were no longer present at the time the 2016 survey was conducted.

Habitat Types

During surveys conducted on the property in 2015, the gently sloping areas along the south side of Highway 166 were dominated by non-native weeds characteristic of the non-native grassland habitat described by Holland (1986). Due to the many years of grazing cattle coupled with the ongoing drought, vegetation was patchy and consisted almost entirely of red-stemmed filaree with patches of Russian thistle. Herbaceous alliances dominated by red-stemmed filaree with occurrences of Russian thistle are not described by Sawyer et al (2009). Areas of juniper shrubs were present at higher elevations on slopes outside the proposed disturbance footprints. The sparsely vegetated areas within the four proposed project sites lacked species diversity and did not support any native plants. Patches of native habitat were observed in the unnamed ephemeral drainage features that bisect the ranch in a primarily south to north direction connecting with the Cuyama River to the north of Highway 166. The highest quality native habitat areas were observed in the Schoolhouse Canyon and Cottonwood Canyon corridors and along the Cuyama River, which are outside the proposed project footprints.

Soils

Prior to field investigation, the Web Soil Survey was queried to determine soil composition and the related potential for the site to support special status species. The Soil Survey identified the project areas as composed of primarily sandy loam soils. Reservoir sites 1 and 3 are located on Pleasanton sandy loam (2-9 % slopes), while the operations yard and Reservoir 2 sites are located on Panoche sandy loam (2-9 % slopes).

Drainage Features

A series of ephemeral drainage features that are tributaries to the Cuyama River bisect the ranch in a primarily south to north direction. The largest features, Cottonwood Canyon Creek to the west and Schoolhouse Canyon Creek to the east, are large washes that are dry for most of the year, and contain periodic/flashy flow only during monsoonal rain events and the winter rain season. No areas of in channel ponds were observed in the study area. As we understand, the natural drainage

features will not be impacted or altered by construction at the proposed reservoir and operations yard sites. All work is proposed to occur outside a minimum 50-foot setback established from the top of bank of all drainages on the site.

Special Status Biological Resources

As part of our investigation, a search of the CNDDDB was performed within a five-mile radius of the North Fork Ranch property limits (refer to the attached Figure 6). The CNDDDB records coupled with our knowledge of the area identified thirteen (13) special status plant species and twelve (12) special status animal species known to occur within the general region. No special status plant communities were identified in the CNDDDB within the five-mile radius. Most of these special status species have highly specific habitat requirements that are not present onsite, and therefore are not expected to occur within the proposed project sites. Please refer to Table 1 for more information on these species. The CNDDDB contained special status species observations from the subject property, many of which are over 25 years old. Please refer to the attached Figure 6 and Table 1, Special Status Species Potentially Occurring on the Site, for specific information pertaining to each species listing status, habitat requirements and the potential to occur within the four sites.

The CNDDDB records included sightings of special status plants such as round-leaved filaree (*California macrophylla*), Blakely's spineflower (*Chorizanthe blakelyi*), Kern mallow (*Eremalche kernensis*), pale yellow layia (*Layia heterotricha*), and San Joaquin woolly threads (*Monolopia congdonii*) from the general project area, including within the greater ranch property boundaries. Other species identified are known to occur in higher elevations in the Caliente and Sierra Madre Mountains to the north and south of the project areas. No suitable habitat was observed in the project footprints for rare plants, and seasonally timed surveys conducted in 2015 did not locate these species in the proposed disturbance footprints. As stated above, the proposed reservoirs and operations yard will be constructed in disturbed areas away from the natural drainage features, and therefore, would be unlikely to adversely affect any special status plants.

Special status wildlife identified in the CNDDDB and through our background information review included a range of species, many of which could still occur in the region. Species such as the giant kangaroo rat (*Dipodomys ingens*), however, may no longer be present in the general area (CNDDDB, 2015). The giant kangaroo rat occurrence documented in the northwest corner of the ranch along the Cuyama River was dated 1979, and is currently listed as "possibly extirpated" in the CNDDDB occurrence report. This general area was visited on several instances in the spring and summer 2015 and no burrow complexes typical of the giant kangaroo rat were evident. Surveys of the four project sites did not locate any burrow complexes characteristic of the giant kangaroo rat, and therefore this species is unlikely to occur in the project areas.

Although no potential SJKF den sites or small mammal prey base were observed on the four project sites, highly mobile species such as the SJKF and American badger (*Taxidea taxus*) could potentially move through the ranch and four project areas in search of food or suitable denning habitat. No recent observations of SJKF or badger were identified on or adjacent to the proposed project sites, but both species are known to occur in the larger Cuyama Valley region. It is uncertain if SJKFs are currently present in the general project area. The CNDDDB recorded occurrences of this species on the eastern part of the ranch in the Cottonwood Canyon vicinity are from 1975. Suitable SJKF

denning and foraging habitat are present on the larger ranch, but the four project sites are located in disturbed areas with regular human presence and little to no small mammal prey base. It is possible that a SJKF, if present in the area, could move through the sites during foraging or migration activities, but the lack of a well-developed prey base and no suitable denning habitat within the four sites indicate a very low potential for this species to occur. Moreover, no evidence (i.e.: direct observation of an individual, scat or tracks) of SJKF or American badger presence was observed during surveys conducted by KMA in 2015 and 2016.

Although not included in the five-mile radius search results, the federal and state endangered blunt-nosed leopard lizard (BNLL) has a known occurrence located just over five miles to the east of the eastern property border. Numerous other occurrences are documented in the Carrizo Plain area and in the Cuyama Valley to the east. The closest known occurrence (#414 in the CNDDb) was documented by Caltrans biologists conducting surveys for Highway 166 improvements. Two BNLLs were located on the south side of Highway 166 close to New Cuyama in a large wash with sparse annual grassland habitat. Other biological studies conducted in the general region were completed for oil and gas exploration and solar farms further to the east of the site closer to known and historic occurrences of the species. These studies did not locate BNLL in their respective study areas. The reservoir and operations yard project sites are in the outer limits of the known range for the species.

Prior to disking and agricultural site preparation, KMA conducted a series of 18 protocol-level surveys for BNLL in areas of the highest quality habitat in the eastern part of the ranch. Surveys occurred within the onsite portion of Schoolhouse Canyon and adjacent Cuyama River terraces in the spring, summer and fall 2015. No BNLL were observed in these portions of the site (KMA, 2015). Additional portions of the ranch, including Reservoirs 2 and 3 and the operations yard were also visited during the surveys, but not under protocol conditions (i.e.: either the temperatures were too hot, the wind too strong, or it was too late in the afternoon to meet protocol requirements). A reference site in the Carrizo Plain area was also located and visited on separate occasions (on June 24, July 3 and September 7, 2015) during the protocol surveys to confirm BNLLs were above ground, active and in identifiable condition. The area of the recorded occurrence #414 east of the property was also visited on these occasions to characterize habitat in this area for comparison with habitats on the study area, as well as search for BNLL using binoculars from property margins. Therefore, it was determined that BNLL were unlikely to occur on or in the vicinity of the four project sites. In addition, species of special concern such as the coast horned lizard (*Phrynosoma blainvilli*) is unlikely to occur in the four project sites due to a lack of suitable habitat.

Designated Critical Habitat for the federally threatened California red-legged frog (*Rana draytonii*) is located outside the five-mile radius, to the west of the project, and CRLF have been observed in the Cuyama River further west of the ranch study area. The ephemeral drainages on the site do not provide suitable habitat for this highly aquatic species, and its presence onsite is considered highly unlikely. Similarly, other highly aquatic species such as the western pond turtle (*Emys marmorata*) would not be expected to occur in the project area due to lack of suitable habitat.

A number of birds including species of special concern would be expected to forage over or around the four sites, but no suitable prey base or nesting habitat was present for special status birds

including raptors. Of interest, the four sites are covered by a CNDDDB overlay indicating presence of the prairie falcon (*Falco mexicanus*) within the USGS Caliente Mountain quadrangle. Suitable nesting habitat for the prairie falcon is located in the mountains to the north and south of the project sites, and as such, this species and other birds protected under the Migratory Bird Treaty Act and California Fish and Game Code would not be expected to occur within the project footprints and be adversely affected by the proposed project.

Please note that this evaluation included multiple site visits over the course of numerous months. Although drought conditions prevailed, enough rain fell in the spring to initiate germination and growth of herbaceous vegetation allowing the determination that special status plants are unlikely to occur in the four project footprints. The biological investigation included direct observation and evaluation of onsite and adjacent habitat conditions, and review of CNDDDB records documenting occurrence data from the area. Special status plants would have been observed if they were present within the four project sites. Although the sandy soil types present on-site are suitable for several of the special status plant species known to occur in the area, the disturbed conditions of the four sites dominated by non-native weedy plants would not be suitable to support these species. Higher elevation areas of the North Fork Ranch, and areas not subject to the historic intense grazing pressure would provide more opportunity for these species to be present. For special status wildlife, the habitat suitability analysis was used to determine whether a particular species had potential to be present in the project area. The investigation determined that it is highly unlikely that the four project sites support any special status plant or wildlife.

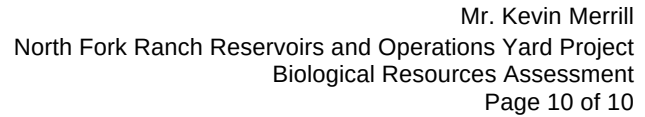
CONCLUSION AND RECOMMENDATIONS

The four project sites are located in areas disturbed by historic ranching operations within or adjacent to proposed vineyard plantings. Field surveys in 2015 and 2016 of the project sites observed disturbed areas dominated by non-native weeds such as red-stemmed filaree and Russian thistle. The sites are currently disked with an annual cover crop as part of agricultural improvements on the property. No special status biological resources (i.e., plant communities, plants, or animals) were observed on the four sites, and given the disturbed site conditions, it is unlikely that any are present.

Based on this evaluation, performance of additional biological investigation such as floristic or focused wildlife surveys on the sites is not recommended. The proposed projects are not expected to adversely affect any special status biological resources since they would occur in disturbed annual grasslands or previously disturbed areas of the ranch. However, due to historic sightings of San Joaquin kit fox in the area and potential that this species along with the American badger could still occur in the greater region and be a rare transient through the site at some point in time, we recommend that the SJKF avoidance measures included as an attachment to this report be implemented prior to and during construction. Implementation of the recommended avoidance measures would be sufficient to ensure the SJKF and American badger, as well as other common wildlife that may be present, are not adversely affected by construction of the three reservoirs and operations yard.

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Kennzeichen

Robert Sloan

Attachments

- Figure 1 - Site Location Map*
- Figure 2 – Aerial Overview Map*
- Figure 3 – Reservoir Site 1*
- Figure 4 - Reservoir Site 2 and Operations Yard*
- Figure 5 – Reservoir Site 3*
- Figure 6 – CNDDB Occurrence Map*
- Table 1 – Special Status Species Potentially Occurring on the Site*
- Photo Plate*
- SJKF Avoidance Measures*



Property Boundary

Operations Yard (~5 acres)

Proposed Irrigation Reservoir (~15 acres)

Drainage Centerline



 Proposed Irrigation Reservoir 1 (4.87 acres)

Unnamed Drainage Feature

Schoolhouse Canyon Road

Unnamed Drainage Feature

Source(s) : Tom A. Howell, PE



1 in = 400 ft

North Fork Ranch
Mesa Vineyard Management

Figure 3
Reservoir 1

- Operations Yard (~5 acres)
- Proposed Irrigation Reservoir 2 (5.42 acres)

Unnamed Drainage Feature

CA-166

Source(s) : ESRI and its data providers ; Tom A. Howell, PE



 Proposed Irrigation Reservoir 3 (4.73 acres)

Unnamed Drainage Feature



Unnamed Drainage Feature

Source(s) : ESRI and its data providers ; Tom A. Howell, PE



1 in = 400 ft

North Fork Ranch
Mesa Vineyard Management

Figure 5
Reservoir 3

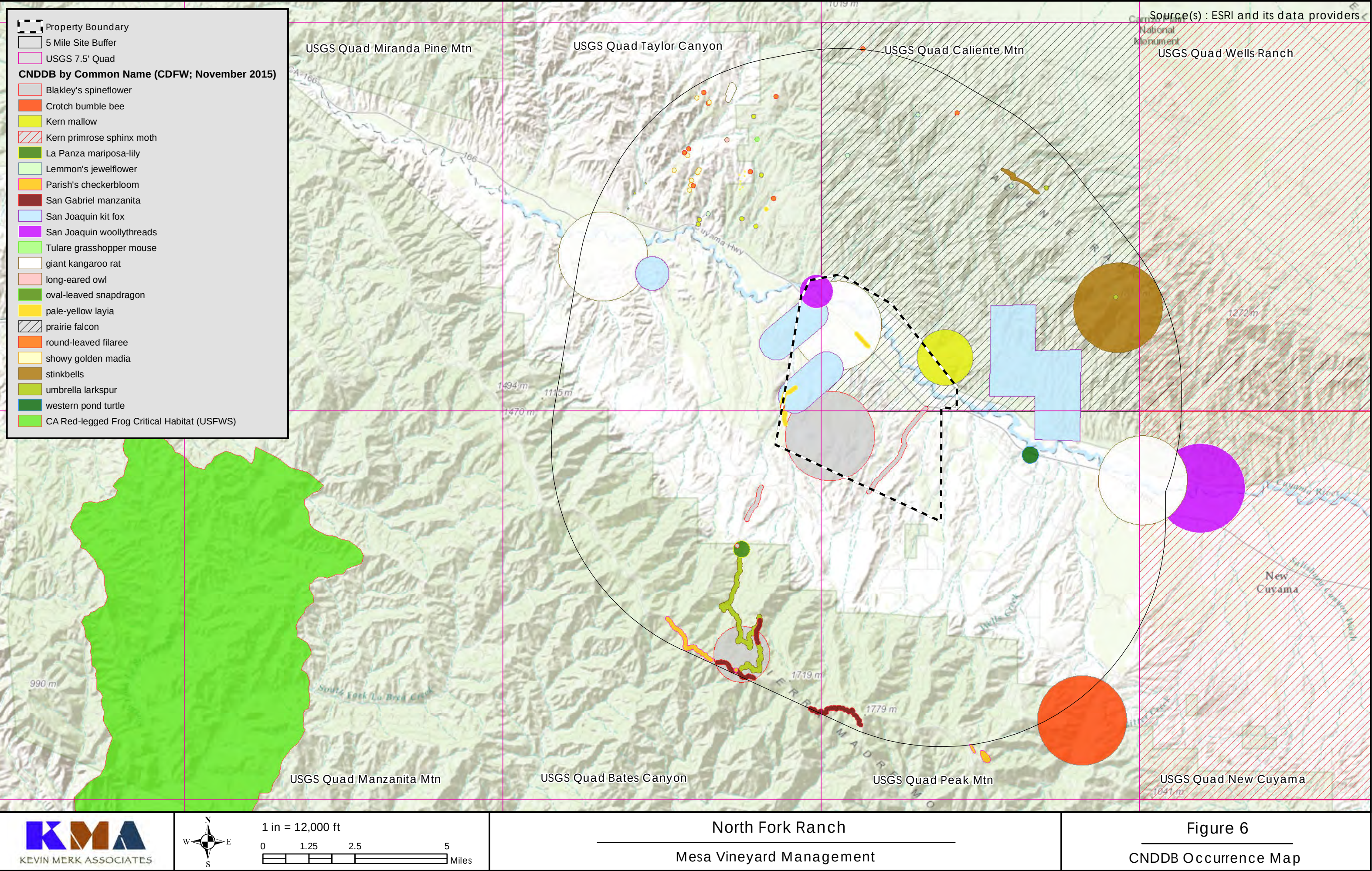


Table 1. Special Status Species Potentially Occurring On-Site

Scientific Name	Common Name	Listing Status*			Habitat Requirements	Probability of Occurrence / Site Suitability / Observations
		Fed	CA	DFW		
PLANTS						
1) <i>Antirrhinum ovatum</i>	oval-leaved snapdragon	--	--	4.2	Annual herb; chaparral, cismontane woodland, pinyon & juniper woodlands, valley & foothill grassland; 200-1000 meters; blooms May to November.	Unlikely. Suitable chaparral, woodland or grassland habitats are not present in the project areas. Not observed during surveys conducted in spring and summer 2015.
2) <i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i>	San Gabriel manzanita	--	--	1B.2	Perennial shrub found in chaparral on granitic soils, 950-2000 meters in elevation. Blooms January through April.	Not expected. Suitable chaparral habitat on granitic soils is not present in the project areas. Perennial shrub would have been identifiable during surveys.
3) <i>California macrophylla</i>	round-leaved filaree	--	--	1B.1	Annual herb commonly found on clay soils in cismontane woodland and valley and foothill grassland at elevations ranging from 15 to 1200 meters. Blooms March to May.	Unlikely. Suitable clay soils and woodland or grassland habitats are not present in the project areas. Species is known to occur in the region and was documented in the Cottonwood Canyon corridor. It was not observed during surveys conducted of the project sites in spring 2015. The four sites were dominated by the non-native red-stemmed filaree.
4) <i>Calochortus simulans</i>	La Panza mariposa-lily	--	--	1.B.3	Perennial bulbiferous herb; chaparral, cismontane woodland, and grasslands in decomposed granite; 395-1100 meters in elevation; blooms April to June.	Unlikely. Suitable chaparral, woodland or grassland habitats with granitic soils are not present in the project areas. Not observed during surveys conducted in spring 2015. Known occurrences in the area are in steeper terrain.
5) <i>Caulanthus lemmonii</i>	Lemmon's jewel-flower	--	--	1B.2	Annual herb; pinyon and juniper woodland, valley and foothill grassland; 80 to 1,220 meters elevation; blooms March to May.	Unlikely. Suitable woodland or grassland habitats are not present in the project areas. Grasslands onsite are impacted from overgrazing and were dominated by weeds. Not observed during surveys conducted in spring 2015. Known occurrences are located in the hills to the north.

Scientific Name	Common Name	Listing Status*			Habitat Requirements	Probability of Occurrence / Site Suitability / Observations
		Fed	CA	DFW		
6) <i>Chorizanthe blakleyi</i>	Blakley's spineflower	--	--	1.B.3	Annual spineflower known to occur in pinyon and juniper woodland areas with a typical elevation of 600 to 1,600 meters. Blooms April to June.	Unlikely. Suitable woodland habitats are not present in the project areas. Not observed during surveys conducted in spring 2015. Known to occur in upper elevation areas south of the property.
7) <i>Delphinium umbraculorum</i>	umbrella larkspur	--	--	1B.3	Perennial herb; found in granite of cismontane woodlands, chaparral, and coastal scrub; 85-1,035 meters in elevation; blooms May to July.	Unlikely. Suitable granite soils and woodland, chaparral, or coastal scrub habitats are not present in the project areas. Not observed during surveys conducted in spring 2015.
8) <i>Eremalche kernensis</i>	Kern mallow	E	--	1.B1	Chenopod scrub, valley and foothill grassland. On dry, open sandy to clayey soils; usually within valley saltbush scrub; often at edge of balds. 70-1290 meters.	Unlikely. Suitable sandy soils are present on the property, but valley saltbush scrub habitats are not present in the specific project areas. Not observed during surveys conducted in spring 2015. Common <i>E. parryi</i> ssp. <i>parryi</i> observed in Schoolhouse Canyon outside disturbance footprints.
9) <i>Fritillaria agrestis</i>	stinkbells	--	--	4.2	Chaparral, valley grassland, foothill woodland, and wetland riparian areas with an elevation of 10 to 1,555 meters. Blooms March to June.	Unlikely. Suitable wetland, riparian, woodland, or grassland habitats are not present in the project areas. Not observed during surveys conducted in spring and summer 2015.
10) <i>Layia heterotricha</i>	pale-yellow layia	--	--	1B.1	Annual herb; alkaline, clay and sandy soils in scrub, cismontane woodland, pinyon-juniper woodland, and valley and foothill grassland; 270-1,365 meters; blooms March to June.	Unlikely. Suitable chaparral, woodland or grassland habitats are not present in the project sites. Project areas impacted from overgrazing and were dominated by weeds. Not observed during surveys conducted in spring 2015.
11) <i>Madia radiata</i>	showy golden madia	--	--	1B.1	Chenopod scrub, valley and foothill grassland, and cismontane woodland areas. Found mostly on adobe clay in grassland or among shrubs with an elevation of 25-1125 meters. Blooms March to May.	Unlikely. Suitable clay soils and woodland or grassland habitats are not present in the project areas. Not observed during surveys conducted in spring 2015.

Scientific Name	Common Name	Listing Status*			Habitat Requirements	Probability of Occurrence / Site Suitability / Observations
		Fed	CA	DFW		
12) <i>Monolopia condonii</i>	San Joaquin woolly-threads	E	--	1B.2	Chenopod scrub, valley and foothill grassland. Alkaline or loamy plains; sandy soils, often with grasses and within chenopod scrub. 60-800 meters.	Unlikely. Disturbed grassland habitat and sandy soils are present, but chenopod scrub habitat is not present in the project areas. Only common <i>Monolopia lanceolata</i> observed on the larger study area outside project disturbance footprints.
13) <i>Sidalcea hickmanii</i> ssp. <i>parishii</i>	Parish's checker-bloom	--	R	1B.2	Chaparral, cismontane woodland, lower montane coniferous forest. Disturbed burned or cleared areas on dry, rocky slopes, in fuel breaks & fire roads along the mtn. summits. 1000-2500 meters.	Unlikely. Chaparral, cismontane woodland, and coniferous forest habitats are not present, and the sites are located on deep alluvial soils, not dry rocky slopes. Not observed during surveys conducted in spring and summer 2015.
ANIMALS						
1) <i>Asio otus</i>	Long-eared owl	--	--	SSC	Winters throughout the Central Valley and southeastern California. Nests in abandoned nests (crow, hawk, or magpie), usually in dense stands of willows, cottonwoods, live oaks, or conifers.	Unlikely. Disturbed grassland habitat suitable for foraging is present, but no nesting habitat is present in the project areas.
2) <i>Bombus crotchii</i>	<i>Crotch</i> bumble bee	--	--	--	Open grassland and scrub habitats from central California to Baja California del Norte, Mexico, including the western edges of the deserts and the Central Valley. Not found in the mountains or cool north coastal areas of California	Unlikely. Sites appear to lack sufficient pollen sources and the general vegetative diversity to attract or support the species.
3) <i>Dipodomys ingens</i>	giant kangaroo rat	E	E	--	Annual grasslands on the western side of the San Joaquin Valley, extending into Carizzo Plain and Cuyama Valley areas. Typically occurs in grasslands but can use alkali scrub. Needs level terrain & sandy loam soils for burrowing.	Not expected. Disturbed grassland habitat on sandy soils is present in the general area, but no typical burrow complexes observed in the project areas. CNDDDB record from Cuyama River is from surveys conducted in 1979 and 1982 and states "possibly extirpated" from this site. General location with alkali scrub/grassland mix visited in the spring and summer 2015 and no burrow complexes typical of this species were observed.

Scientific Name	Common Name	Listing Status*			Habitat Requirements	Probability of Occurrence / Site Suitability / Observations
		Fed	CA	DFW		
4) <i>Emys marmorata</i>	western pond turtle	--	--	SSC	Permanent or nearly permanent water bodies in many habitats.	Not expected. Project sites consist of disturbed upland areas. Ephemeral drainages on the site lack perennial water sources needed for this species to occur in the general area.
5) <i>Euproserpinus euterpe</i>	Kern primrose sphinx moth	T	--	--	Highly localized species found in the Walker Basin, Kern County, and several other scattered locations (Carrizo Plain, Pinnacles National Monument). Host plant is <i>Camissonia contorta epilobioides</i> (evening primrose) that typically grows in washes with loose alluvial soils.	Unlikely. Project sites are located in upland areas away from onsite drainage features. Host plant not observed on the study area during surveys conducted in spring and summer 2015. Prior to farming activities, non-native filaree was the dominant plant growing throughout the project sites, which is known to adversely affect this species.
6) <i>Falco mexicanus</i>	prairie falcon	--	--	WL	Catches prey in air and in open ground in grasslands, Nests in cliffs overlooking large areas; resident, breeding migrant.	Unlikely. Disturbed grassland habitat suitable for foraging is present in the vicinity, but no nesting habitat is present in or near the project areas. CNDDDB records cover the entire USGS quadrangle map and are not specific to this site.
7) <i>Gambelia sila</i>	blunt-nosed leopard lizard	E	E	--	Resident of sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief. Seeks cover in mammal burrows, under shrubs or structures such as fence posts; they do not excavate their own burrows.	Unlikely. Disturbed grassland habitat does not provide sufficient cover and food resources in the project areas to support the species. Very few small mammal burrows (mostly gopher) observed prior to farming activities. Protocol BNLL surveys conducted in 2015 in higher quality habitat areas along Schoolhouse Canyon and Cuyama River did not find the species.
8) <i>Masticophis flagellum ruddocki</i>	San Joaquin whipsnake	--	--	SSC	Occurs in open, dry valley grasslands and saltbush scrub habitats with little or no tree cover. While known from the San Joaquin Valley, species also occurs in western Kern County and eastern San Luis Obispo County. Requires mammal burrows for refuge and egg laying.	Unlikely. Very few small mammal burrows were observed during surveys of the reservoir and operation yard sites. Suitable habitat present in the larger drainage corridors such as Cottonwood Canyon and Schoolhouse Canyon and along the Cuyama River terraces, but no suitable habitat present in the project sites.

Scientific Name	Common Name	Listing Status*			Habitat Requirements	Probability of Occurrence / Site Suitability / Observations
		Fed	CA	DFW		
9) <i>Onychomys torridus tularensis</i>	Tulare grasshopper mouse	--	--	SSC	Inhabits shrubland communities in hot, arid grassland and shrubland associations, including blue oak woodlands, upper Sonoran subshrub scrub, alkali sink and mesquite associations, and grasslands on the sloping margins of the San Joaquin Valley and Carrizo Plain regions.	Unlikely. Disturbed grassland habitat composed of red-stemmed filaree and bare soils is present, but vegetative density and diversity in the project areas is not sufficient to support populations of this species.
10) <i>Phrynosoma blainvilli</i>	Coast horned lizard	--	--	SSC	Frequents a wide variety of habitat including sandy washes with scattered shrubs and open areas for sunning. Loose soils for burial.	Unlikely. Larger property contains drainages including Cuyama River and associated terraces that could support this species. While soils onsite are predominantly sandy, species is unlikely to occur in project footprints due to lack of shrub cover and a prey base.
11) <i>Taxidea taxus</i>	American badger			SSC	Open grasslands and the edge of scrub and woodland habitats; requires dry loose soils for burrowing and shelter and feeds on a variety of small mammals such as California ground squirrel and pocket gopher.	Potential. Suitable habitat present throughout the ranch. Known to occur in the general area. No potential den sites observed during surveys, and no sufficient small mammal prey base in project footprints. Could occur as a transient moving through the area, especially along the larger drainage corridors. Sites are now disked with no suitable habitat present.
12) <i>Vulpes macrotis mutica</i>	San Joaquin kit fox	E	T	--	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.	Potential. Suitable foraging habitat and migration corridors are present throughout the site, especially along drainage corridors. No dens or sign (scat tracks, etc.) were observed in project footprint. CNDDDB records are from 1970's. Could occur as a rare transient moving through the area.

*FE – listed as Endangered under federal Endangered Species Act; SE – listed as Endangered under California Endangered Species Act; SR – listed as Rare under California Endangered Species Act; ST – listed as Threatened under California Endangered Species Act; SSC – DFW Species of Special Concern; WL – List of Birds of Conservation Concern; 1A = Plants presumed extinct in California; 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat); 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened); 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known); 2 = Rare, threatened or endangered in California, but more common elsewhere; 3 = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA); 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80% occurrences threatened); and 4.3= Plants of limited distribution (watch list), not very endangered in California.

Photo Plate

Photo 1. View of Reservoir 1 site looking northwest. Stake marks southeast corner of the reservoir. Surveys occurred prior to and after disking and site preparation activities.



Photo 2. Overview of Reservoir 1 site, looking north toward Highway 166. Schoolhouse Canyon Road is located to the right of the picture. Area was composed of non-native weeds and bare soil that was being disked.



Photo 3. View of Operations Yard site looking northeast toward Highway 166.



Photo 4. Easterly view of Operations Yard.



Photo 5. View of Reservoir #2 looking east. Stake marks western corner of the grading limits.



Photo 6. View of Reservoir #2 looking north. Stake marks eastern corner of the grading limits.



Photo 7. View of Reservoir #3 looking east. The site consisted of non-native weeds and bare soils prior to disking and site preparation. Russian thistle was also present and tumbleweeds can be seen along fenceline.



Photo 8. Closeup view of Reservoir #3 looking east. Photo taken prior to disking and site preparation activities showing dominant cover of non-native plants (primarily red-stemmed filaree) and bare soils.

San Joaquin Kit Fox Avoidance Measures

1. Prior to issuance of grading and/or construction permits, the applicant should have a qualified biologist perform the following monitoring activities:
 - a. Prior to issuance of grading and/or construction permits and within 30 days prior to initiation of site disturbance and/or construction, the biologist shall conduct a pre-activity (i.e. pre-construction) survey for known or potential kit fox dens and document in a report the date the survey was conducted, the survey protocol, survey results, and what measures were necessary (and completed), as applicable, to address any kit fox activity within the project limits.
 - b. The qualified biologist shall conduct weekly site visits during site-disturbance activities (i.e. grading, excavation, stock piling of dirt, etc.) that proceed longer than 14 days, for the purpose of monitoring compliance with the below avoidance measures. Site disturbance activities lasting up to 14 days do not require weekly monitoring by the biologist unless observations of kit fox or their dens are made on-site or the qualified biologist recommends monitoring for some other reason (see BR-1-d3). When weekly monitoring is required, the biologist shall document the methods and results of site visits in weekly monitoring reports.
 - c. Prior to or during project activities, if any observations are made of San Joaquin Kit fox, or any known or potential San Joaquin kit fox dens are discovered within the project limits, the qualified biologist shall re-assess the probability of incidental take (e.g. harm or death) to kit fox. If an active den is discovered within 150 feet of construction activities, the qualified biologist shall contact the USFWS and the CDFW for guidance on possible additional kit fox avoidance measures to implement and whether or not a federal and/or state incidental take permit is needed. If a potential den is encountered within 150 feet during construction, work shall stop in that specific area until such time the USFWS and/or CDFW determines it is appropriate to resume work.

If incidental take of kit fox during project activities is possible, before project activities commence, the applicant must consult with the USFWS and the CDFW. The results of this consultation may require the applicant to obtain a federal and/or state permit for incidental take during project activities.
- d. In addition, the qualified biologist shall implement the following measures:
 1. Within 30 days prior to initiation of site disturbance and/or construction, fenced exclusion zones shall be established around all known and potential kit fox dens. Exclusion zone fencing shall consist of either large flagged stakes connected by rope or cord, or survey laths or wooden stakes prominently flagged with survey ribbon. Each exclusion zone shall be roughly circular in configuration with a radius of the following distance measured outward from the den or burrow entrances:
 - a) Potential kit fox den: 50 feet
 - b) Known or active kit fox den: 100 feet
 - c) Kit fox pupping den: 150 feet
 2. All foot and vehicle traffic, as well as all construction activities, including storage of supplies and equipment, shall remain outside of exclusion zones. Exclusion zones shall

- be maintained until all project-related disturbances have been terminated, and then shall be removed.
3. If kit foxes or known or potential kit fox dens are found on site, daily monitoring during ground disturbing activities shall be required by a qualified biologist.
 2. Prior to issuance of grading and/or construction permits, the applicant shall clearly delineate in the field and note on the project plans, that: "Speed limit of 25 mph (or lower) shall be required for all construction traffic to minimize the probability of road mortality of the San Joaquin kit fox". Speed limit signs shall be installed on the project site within 30 days prior to initiation of site disturbance and/or construction. In addition, prior to initiation of any ground disturbing activities, conditions BRc 3 through BRc 9 shall be reviewed with all construction personnel and delineated on project plans.
 3. During the site disturbance phase, grading and construction activities after dusk shall be prohibited unless coordinated through the County, during which additional kit fox measures may be required.
 4. Prior to issuance of grading and/or construction permit and within 30 days prior to initiation of site disturbance and/or construction, all personnel associated with the project shall attend a worker education training program, conducted by a qualified biologist, to avoid impacts on sensitive biological resources such as the San Joaquin kit fox. At a minimum, as the program relates to the kit fox, the training shall include the kit fox's life history, all avoidance measures contained herein, as well as any related biological information prepared for the project. A kit fox fact sheet shall also be prepared prior to the training program, and distributed at the training program to all contractors, employers and other personnel involved with the construction of the project.
 5. During the site disturbance and/or construction phase, to prevent entrapment of the San Joaquin kit fox and other wildlife, all excavation, steep walled holes or trenches in excess of two feet in depth shall be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Trenches shall also be inspected for entrapped kit fox and wildlife each morning prior to onset of field activities and immediately prior to covering with plywood at the end of each working day. Before such holes or trenches are filled, they shall be thoroughly inspected for entrapped animals. Any kit fox discovered shall be allowed to escape before field activities resume, or removed from the trench or hole by a qualified biologist and allowed to escape unimpeded.
 6. During the site disturbance and/or construction phase, any pipes, culverts, or similar structures with a diameter of four (4) inches or greater, stored overnight at the project site shall be thoroughly inspected for trapped San Joaquin kit foxes before the subject pipe is subsequently buried, capped, or otherwise used or moved in any way. If during the construction phase a kit fox is discovered inside a pipe, that section of pipe will not be moved, or if necessary, be moved only once to remove it from the path of activity, until the kit fox has escaped.
 7. During the site disturbance and/or construction phase, all food related trash items such as wrappers, cans, bottles, and food scraps generated shall be disposed of in closed containers only and regularly removed from the site. Food items may attract San Joaquin kit foxes and

other wildlife onto the project site, consequently exposing such animals to increased risk of injury or mortality. No deliberate feeding of wildlife shall be allowed.

8. Prior to, during and after the site-disturbance and/or construction phase, use of pesticides or herbicides shall be in compliance with all local, State and Federal regulations. This is necessary to minimize the probability of primary or secondary poisoning of wildlife utilizing adjacent habitats, and the depletion of prey upon which San Joaquin kit foxes depend.

9. During the site-disturbance and/or construction phase, any contractor or employee that inadvertently kills or injures a San Joaquin kit fox or who finds any such animal either dead, injured, or entrapped shall be required to report the incident immediately to the applicant. In the event that any observations are made of injured or dead kit fox, the applicant shall immediately notify the USFWS and CDFW by telephone. In addition, formal notification shall be provided in writing within three working days of the finding of any such animal(s). Notification shall include the date, time, location and circumstances of the incident. Any threatened or endangered species found dead or injured shall be turned over immediately to CDFW for care, analysis, or disposition.

Attachment 2b

MEMORANDUM

To: Steve Rodriquez, Rodriquez Consulting, Inc.
From: John H. Davis IV, Dudek, Senior Ecologist
Subject: Peer Review of the Biological Resources Assessment for the Reservoir and Operations Yard Project, Santa Barbara County, California
Date: March 21, 2016
Cc: John Zoro, County of Santa Barbara
Attachments: Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 2000)
Approved Survey Methodology for the Blunt-Nosed Leopard Lizard (CDFG 2004)
Standard Recommendations for the Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011)

This peer review was prepared at the request of the County of Santa Barbara (County) (Case No. 16CUP-00000-00005) for the Biological Resources Assessment for the Reservoir and Operations Yard Project, North Fork Ranch, Santa Barbara County, California (report; Kevin Merk Associates, LLC 2016) in unincorporated Santa Barbara County, California. The report consists of basic methods, results, and conclusion and recommendation, and references sections. Attachments include six figures (site, vicinity, three project figures, and a CNDDDB result), a potential to occur table, photo plate, and San Joaquin kit fox avoidance measures. All report sections and attachments were reviewed per County of Santa Barbara standards for preparation of technical biological reports for proposed projects (County 1994a, revised 2015, including Appendix A (County 1994b)) and other agency survey requirements.

It is my understanding from page 1 of the report, that the proposed project includes the following:

- Three agricultural reservoirs (approximately 5 acres each)
- An operations yard (approximately 5 acres)

These proposed project features are displayed together in the report on the attached Figure 2 (vicinity map) and separately on Figures 3, 4, and 5 (reservoirs 1, 2, and 3, respectively). No details of the proposed project are described beyond Kevin Merk Associates, LLC (KMA) identification of a project study area where biological surveys covered, which included the

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approximately “20 acres of land disturbance” (page 1, paragraph 2). The project study area apparently also covered segments of the “on-site drainages” near the proposed reservoirs to delineate top of bank (page 2, paragraph 1). Again, no project specific information is provided in the report, however, KMA disclosed in the report (page 5, paragraph 4) that the Applicant confirmed that the ephemeral streams will not be impacted by development of the proposed project and that a 50-foot no impact buffer would be respected. Dudek did not receive civil plan set or similar or, as mentioned, a formal project description as part of the report for review.

KMA conducted the following biological surveys within the project survey area (report, pages 1 and 2):

- General botanical and biological surveys
- Blunt-Nosed Leopard Lizard Surveys (CDFG 2004)
- Stream Delineation (top of bank)

In general, the report contains the basic level of information to initiate a review; however, the report itself deviates from the *County of Santa Barbara Environmental Thresholds and Guidelines Manual* (County 1994a, revised 2015) for guidance on reporting details, impact discussion, and mitigation and Appendix A. *Santa Barbara County Planning and Development Department Biological Resources Guidelines Technical Background Document* (County 1994b). Surveys conducted and documented in the report also appear to deviate from protocol and/or guidelines established by state and federal resource agencies. Therefore, additional information is requested to complete the review of the report.

The following are a list of specific comments on the biological report that require further action(s). Comments may include several related items in which one or more actions may be required to rectify the perceived discrepancy:

Comment 1. Project Description. The proposed project, in its entirety, does not appear to be displayed fully and accurately on Figure 2, 3, 4, and 5. Generally, all areas of temporary and permanent project impacts shall be described and displayed.

Action 1.1. Please include in a revised report the complete project description and representation of the proposed project, including all areas of temporary and permanent impacts, including access routes, staging area(s), soil stockpile(s) location(s), and water delivery systems.

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Comment 2. Survey Documentation. On page 2, paragraph 2, KMA indicated that numerous site investigations occurred in the spring and summer of 2015, yet the report is without proper documentation of the surveys. Additionally, protocol blunt-nosed leopard lizard surveys (CDFG 2004) were conducted, which have strict survey requirements and again, no documentation was presented in the report. Furthermore, KMA disclosed that surveys proceeded outside of protocol conditions for reservoir 2 and 3 and the operations yard. Lastly, KMA conducted reference or voucher inspections on June 24, July 3, and September 7, 2015 to confirm that the blunt-nosed leopard lizard is active, but is unclear if voucher visits preceded the initiation of protocol surveys for both adult and juvenile blunt-nosed leopard lizard survey periods as required by the approved survey methodology (CDFG 2004).

Action 2.1. Revise the report to include a table summarizing the dates/times, weather conditions, focus of the surveys, specific location of surveys, and observations.

Action 2.2. Provide data sheets or summarize in a table the 18 blunt-nosed leopard lizard surveys in the revised report, including which areas were surveyed on specific days in protocol conditions, survey observations (lizards and prey observed), and confirm the area(s) of the project study area in which protocol surveys for the blunt-nosed leopard lizard were completed. In addition to the information requested in *Action 2.1*, please indicate the Level II and Level I surveyors and provide blunt-nosed leopard lizard specific resumes. Note, per the BNLL protocol (CDFG 2004), “[BNLL] surveys will be accepted [by CDFW] for one year from the date of completion.”

Action 2.3. Confirm that a BNLL reference or voucher survey was conducted at the Elkhorn Plain Ecological Reserve to confirm BNLL activity prior to the onset of surveys for the proposed project.

Comment 3. Vegetation Community Mapping. On page 2, paragraph 3, KMA stated that existing plant communities and observations were mapped on an aerial photograph from Google Earth dated 2015, however, a vegetation community map singularly or combined with a biological survey map with observations were not included in the report.

Action 3.1. Revise the report to include a vegetation community/habitat map with biological observations of sensitive biological resources, special-status species, or any protected biological resource present on-site, including the top-of-bank of ephemeral streams and their buffers.

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Comment 4. Floristic Surveys. KMA conducted general botanical and biology surveys of the project study area. However, it is unclear if focused floristic surveys were performed per standard accepted guidelines (CDFG 2000). On page 5, paragraph 2 (Habitat Types), KMA noted that cattle grazing coupled with drought conditions created patchy area of non-native or naturalized forbs and that no native plant species were observed within the project study area. The photographs appear to substantiate this claim. However, the environmental conditions during the survey year (i.e., fourth year of drought) and the lack of reference population visit to ensure target special-status plant species were in bloom at the time of the surveys or even germinated during drought conditions, questions the validity of the results. Additionally, the CNDDDB has occurrences of special-status plant species, albeit 25 years old, on the property as acknowledged by KMA. It is uncertain if an attempt to confirm their existence prior to or during botanical surveys was made in an effort to support the reports results and conclusions.

Action 4.1. Conduct full coverage seasonally-appropriate floristic surveys over the entire project site addressing all proposed project components (refer to Comment 1.). Two to three surveys may be necessary. Please revisit and ensure the floristic surveys conform to CNPS *Botanical Survey Guidelines* (CNPS 2001); *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (CDFG 2000); and *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 1996). Reference populations need to be visited and documented. A list of all plants observed on-site is required for floristic surveys. Include the observed plant list within the revised report or as an attachment.

Comment 5. Stream Delineation. KMA delineated top of bank of ephemeral stream channels to determine buffers from reservoirs. This was a good approach for KMA and the Applicant in siting the reservoirs. Unfortunately, the delineation and buffers were not displayed on any of the figures for review. Additionally, beyond the extent of the reservoirs, it is unclear if any proposed project components encroached within the buffer or sensitive biological resources that could be jurisdictional by the California Department of Fish and Wildlife (CDFW) and possibly other agencies. It is KMA understanding is that the ephemeral streams will not be impacted or altered by the proposed project.

Action 5.1. Include the delineated top of bank and buffer for the ephemeral streams on to Figures 2, 3, 4, and 5, as appropriate, in the revised report.

Action 5.2. If any proposed project component occurs within, above, or adjacent to the ephemeral stream (i.e., potential impacts may occur), an approved jurisdictional

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determination shall be prepared per U.S. Army Corps of Engineer standards and guidelines, including jurisdictional boundaries of the CDFW and Regional Water Quality Control Board.

Comment 6. Giant Kangaroo Rat. In the report (page 6, paragraph 3), KMA noted that the CNDDDB documented occurrence of the giant kangaroo rat (*Dipodomys ingens*) in the northwest portion of the ranch was possibly extirpated and confirmed the absence of burrow complexes typical of giant kangaroo rats over several visits. While I don't dispute KMA findings or assessment, the drought has had a severe effect on giant kangaroo rat populations, which exhibit a boom or bust population trend (Dr. Dave Germano, personal communication). The potential of giant kangaroo rats to occur on-site might be unlikely, however, since a historic record occurs on-site and the surveys were conducted during the fourth year of drought, a pre-construction measure is warranted to ensure the absence of giant kangaroo rats within the project study area.

Action 6.1. Include a mitigation measure in the revised report that states a pre-construction survey for the giant kangaroo rat will occur in late spring to search for sign (appropriate sized horizontal and vertical burrows, haystacks, seed caches, scat, tracks, etc.). If sign is observed, the U.S. Fish and Wildlife Service (USFWS) and CDFW shall be contacted to determine if trapping surveys are required for the giant kangaroo rat.

Comment 7. San Joaquin kit fox. In the report, KMA indicated that while protocol surveys for the San Joaquin kit fox (*Vulpes macrotis mutica*) were not conducted (page 3, paragraph 1), no potential kit fox den sites were observed in the project study area. KMA also notes that the absence of a small mammal prey base and the disturbed conditions of the study area reduces the quality of habitat for the kit foxes (i.e., low potential to occur), thereby, only providing movement possibilities by transient foxes. Although this assessment, as it stated in the report, appears valid to me, it is uncertain if any informal CDFW or USFWS coordination occurred on the subject to confirm that no San Joaquin kit fox habitat occurs on the project study area or surrounding area.

Additionally, KMA includes, as an attachment, their San Joaquin kit fox avoidance measures, based on the Standard Recommendations for the Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011). One noticeable discrepancy between the attachment and the USFWS (2011) recommendations is KMA measure for a 150 foot buffer around a kit fox pupping den. The USFWS (2011) requires that they are to be contacted in this situation.

Action 7.1. An early evaluation for the San Joaquin kit fox required per the 1994 USFWS protocol for the fox. Once completed, it is recommended that the USFWS and CDFW be

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contacted and concur with KMA evaluation findings. Please include the evaluation and any agency coordination in the revised report.

Action 7.2. Please revise the attached avoidance measures to identically reflect the USFWS (2011) standard recommendations or attach the standard recommendations in its entirety to the revised report.

Lastly, in revising the report, please refer to the County of Santa Barbara Environmental Thresholds and Guidelines Manual (County 1995, updated 2008) for guidance on reporting details, impact discussion, and mitigation. See also Appendix A *Santa Barbara County Planning and Development Department Biological Resources Guidelines Technical Background Document*. Please reference the “Thresholds” in the Biological Assessment.

REFERENCES

California Department of Fish and Game (CDFG). 2000. Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities.

CDFG. 2004. Approved Survey Methodology for the Blunt-Nosed Leopard Lizard.

County of Santa Barbara. 1994a (revised 2015). Environmental Thresholds and Guideline Manual.

County of Santa Barbara. 1994b. Biological Resources Guidelines Technical Background Document September 1994. Appendix A. to the Environmental Thresholds and Guidelines Manual.

United States Fish and Wildlife Service (USFWS). 1999. San Joaquin Kit Fox Survey Protocol for the Norther Range.

USFWS. 2011. Standard Recommendations for the Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance.

Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities

State of California
THE RESOURCES AGENCY
Department of Fish and Game
December 9, 1983
Revised May 8, 2000

The following recommendations are intended to help those who prepare and review environmental documents determine **when** a botanical survey is needed, **who** should be considered qualified to conduct such surveys, **how** field surveys should be conducted, and **what** information should be contained in the survey report. The Department may recommend that lead agencies not accept the results of surveys that are not conducted according to these guidelines.

1. Botanical surveys are conducted in order to determine the environmental effects of proposed projects on all rare, threatened, and endangered plants and plant communities. Rare, threatened, and endangered plants are not necessarily limited to those species which have been "listed" by state and federal agencies but should include any species that, based on all available data, can be shown to be rare, threatened, and/or endangered under the following definitions:

A species, subspecies, or variety of plant is "endangered" when the prospects of its survival and reproduction are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, over-exploitation, predation, competition, or disease. A plant is "threatened" when it is likely to become endangered in the foreseeable future in the absence of protection measures. A plant is "rare" when, although not presently threatened with extinction, the species, subspecies, or variety is found in such small numbers throughout its range that it may be endangered if its environment worsens.

Rare natural communities are those communities that are of highly limited distribution. These communities may or may not contain rare, threatened, or endangered species. The most current version of the California Natural Diversity Database's List of California Terrestrial Natural Communities may be used as a guide to the names and status of communities.

2. It is appropriate to conduct a botanical field survey to determine if, or to the extent that, rare, threatened, or endangered plants will be affected by a proposed project when:

- a. Natural vegetation occurs on the site, it is unknown if rare, threatened, or endangered plants or habitats occur on the site, and the project has the potential for direct or indirect effects on vegetation; or
- b. Rare plants have historically been identified on the project site, but adequate information for impact assessment is lacking.

3. Botanical consultants should possess the following qualifications:

- a. Experience conducting floristic field surveys;
- b. Knowledge of plant taxonomy and plant community ecology;
- c. Familiarity with the plants of the area, including rare, threatened, and endangered species;
- d. Familiarity with the appropriate state and federal statutes related to plants and plant collecting; and,
- e. Experience with analyzing impacts of development on native plant species and communities.

4. Field surveys should be conducted in a manner that will locate any rare, threatened, or endangered species that may be present. Specifically, rare, threatened, or endangered plant surveys should be:

- a. Conducted in the field at the proper time of year when rare, threatened, or endangered species are both evident and identifiable. Usually, this is when the plants are flowering.

When rare, threatened, or endangered plants are known to occur in the type(s) of habitat present in the project area, nearby accessible occurrences of the plants (reference sites) should be observed to determine that the species are identifiable at the time of the survey.

- b. Floristic in nature. A floristic survey requires that every plant observed be identified to the extent necessary to determine its rarity and listing status. In addition, a sufficient number of visits spaced throughout the growing season are necessary to accurately determine what plants exist on the site. In order to properly characterize the site and document the completeness of the survey, a complete list of plants observed on the site should be included in every botanical survey report.
 - c. Conducted in a manner that is consistent with conservation ethics. Collections (voucher specimens) of rare, threatened, or endangered species, or suspected rare, threatened, or endangered species should be made only when such actions would not jeopardize the continued existence of the population and in accordance with applicable state and federal permit requirements. A collecting permit from the Habitat Conservation Planning Branch of DFG is required for collection of state-listed plant species. Voucher specimens should be deposited at recognized public herbaria for future reference. Photography should be used to document plant identification and habitat whenever possible, but especially when the population cannot withstand collection of voucher specimens.
 - d. Conducted using systematic field techniques in all habitats of the site to ensure a thorough coverage of potential impact areas.
 - e. Well documented. When a rare, threatened, or endangered plant (or rare plant community) is located, a California Native Species (or Community) Field Survey Form or equivalent written form, accompanied by a copy of the appropriate portion of a 7.5 minute topographic map with the occurrence mapped, should be completed and submitted to the Natural Diversity Database. Locations may be best documented using global positioning systems (GPS) and presented in map and digital forms as these tools become more accessible.
5. Reports of botanical field surveys should be included in or with environmental assessments, negative declarations and mitigated negative declarations, Timber Harvesting Plans (THPs), EIR's, and EIS's, and should contain the following information:
- a. Project description, including a detailed map of the project location and study area.
 - b. A written description of biological setting referencing the community nomenclature used and a vegetation map.
 - c. Detailed description of survey methodology.
 - d. Dates of field surveys and total person-hours spent on field surveys.
 - e. Results of field survey including detailed maps and specific location data for each plant population found. Investigators are encouraged to provide GPS data and maps documenting population boundaries.
 - f. An assessment of potential impacts. This should include a map showing the distribution of plants in relation to proposed activities.
 - g. Discussion of the significance of rare, threatened, or endangered plant populations in the project area considering nearby populations and total species distribution.
 - h. Recommended measures to avoid impacts.
 - i. A list of all plants observed on the project area. Plants should be identified to the taxonomic level necessary to determine whether or not they are rare, threatened or endangered.
 - j. Description of reference site(s) visited and phenological development of rare, threatened, or endangered plant(s).
 - k. Copies of all California Native Species Field Survey Forms or Natural Community Field Survey Forms.
 - l. Name of field investigator(s).
 - m. References cited, persons contacted, herbaria visited, and the location of voucher specimens.

May 2004

Dear Blunt-nosed Leopard Lizard Surveyor,

Attached is the revised survey methodology for the blunt-nosed leopard lizard (*Gambelia sila*). The protocol was developed by the San Joaquin Valley Southern Sierra Region (SVSSR) of the California Department of Fish and Game (DFG) with input from the United States Fish and Wildlife Service, the Bureau of Land Management and various species experts. This protocol supercedes previous versions of DFG survey protocols for the blunt-nosed leopard lizard. The range-wide decline of population numbers in the past decade has provided the impetus for development of a more rigorous methodology to detect species presence. Additionally, since DFG is not able to issue any form of "take" permit for the blunt-nosed leopard lizard due to its status as a fully-protected animal under the California Fish and Game Code **§5050**, detection of species presence on a project site is crucial.

This standard methodology has been developed to provide consultants, local, state and federal agencies with minimum acceptable standards for surveys conducted to determine the status of this State and federally endangered species. The survey methods described within this protocol were designed to optimize the likelihood of detecting the presence of blunt-nosed leopard lizards should they occur on a project site.

When the presence of blunt-nosed leopard lizards is detected, we request that you notify the Department's local Permitting and Project Review staff for further instructions of what additional information will be needed to assess the project's potential impact on the species. This will assist in expediting the review of the project and help control the project sponsor's biological survey costs. Additionally, the USFWS should be contacted for further advice since this is also a federally-listed species. Use of this protocol and notification of the Department does not exempt you from consultation with the USFWS.

The Department is willing to cooperate with surveyors who have circumstances or needs not addressed by this protocol and who may wish to propose alternative methods to comply with State law prohibiting take of BNLL. If you have any questions or comments regarding this methodology or if you want to propose the use of a different methodology, please the SVSSR Habitat Conservation Planning staff at (559) 243-4014 (Fresno, Merced, Madera, Kings, Tulare, and Kern Counties) or (805) 528-8670 (San Benito and San Luis Obispo Counties).

CALIFORNIA DEPARTMENT OF FISH AND GAME

APPROVED SURVEY METHODOLOGY FOR THE BLUNT-NOSED LEOPARD LIZARD MAY 2004

Blunt-nosed leopard lizard, *Gambelia sila* = (*Gambelia silus*)

STATUS: SE, FE, DFG fully protected

This protocol has been developed to provide a minimum level of protection for blunt-nosed leopard lizards (BNLL) when projects or maintenance activities are scheduled to occur within potential BNLL habitat. Disturbing activities should not proceed until appropriate surveys are conducted to determine if the species is present on the site. Surveys conducted according to the following protocol by qualified researchers provide a reasonable, although not conclusive, indication of BNLL presence at a particular site and yield critical information needed to prevent mortality and minimize impacts to the species. Researchers conducting the surveys are expected to understand the basic biological requirements of the species and have the ability to recognize potential BNLL habitat. This protocol satisfies the Department of Fish and Game requirements when it is determined that formal BNLL surveys are needed. [Note: This protocol is appropriate for pre-project BNLL surveys, however, population monitoring over time on a site is best conducted using a permanent survey grid, such as described in Tollestrup (1976).]

METHODS:

A minimum of two researchers, walking in parallel on adjacent transects, should conduct a BNLL survey. Optimum BNLL activity periods occur when air temperature is between 25C-35C (77F-95F) (Tollestrup 1976; USFWS 1985, 1998). Surveys must be conducted when the air temperature falls within the optimal range. Surveys may begin after sunrise as soon as the minimum air temperature criterion is met, and must end by 1400 hours or when the maximum temperature is reached, whichever occurs first (Tollestrup 1976). Time of day and air temperature should be recorded at the start and end of each survey. Air temperature should be periodically checked to ensure that the maximum has not been exceeded. Air temperature should be measured at 1-2 cm above the ground over a surface most representative of the area being surveyed. The researcher must shade the thermometer from direct sunlight while taking the reading. Other factors that affect BNLL activity such as soil temperature (measured at 1cm below soil surface with a shaded thermometer) and weather conditions must be recorded at the start and end of each survey. Surveys should not be conducted on overcast days (cloud cover > 90%) or when sustained wind velocity exceeds 10 mph (force > 3 on Beaufort wind scale) (Montanucci 1965; Tollestrup 1976; J. Vance, pers. comm.).

Surveys must be conducted on foot, and researchers must survey all areas with potential BNLL habitat. BNLL are often difficult to detect, particularly in areas where shrubs are fairly numerous (>30% cover) and/or the herbaceous vegetation is tall (>30 cm). In such conditions, 10 meter wide transects should be walked at a slow pace. In areas with few shrubs and shorter herbaceous vegetation (<15 cm), transects as wide as 30 meters are acceptable. When feasible, transects should be walked in a north-south orientation to minimize glare from the sun. The surveyor should stop periodically and scan the transect for BNLL using close-focusing binoculars (minimum 7X35 magnification). In addition to recording the location of all BNLL observed (must provide UTM coordinates), the presence of habitat features important for BNLL (washes, playas, relative abundance of small mammal burrows) should also be recorded for each transect. Streambeds, washes, roads, etc., should be walked in addition to transect lines since BNLL are often seen in these areas.

TIMING AND LENGTH OF SURVEY:

Survey intensity should be commensurate with the anticipated level of disturbance to the BNLL habitat. The primary concern for BNLL when disturbance occurs during maintenance activities is direct mortality from equipment or personnel. Removal of intact BNLL habitat has a much greater potential for “take” due to direct impact on animals aboveground as well as any hibernating animals or eggs underground. A longer survey effort including both spring adult surveys and fall hatchling surveys is therefore required for activities that cause impacts to undisturbed BNLL habitat. The more intensive survey effort increases the chances of observing the species, even if the population is small. Once a BNLL has been observed, surveys may cease and consultation with the Department must begin regarding avoidance measures. If BNLL are observed incidentally while conducting surveys for other species, specific surveys for BNLL are not required. Surveys will be accepted for one year from the date of completion.

Disturbances for Maintenance Activities

Examples of maintenance activities include grading existing roads, grass mowing on roadsides, and maintaining existing structures. BNLL are active and above ground from April through September, but optimum activity periods for adults occur between April 15 and July 15 (Montanucci 1965; Tollestrup 1979; USFWS 1985, 1998). BNLL surveys should be conducted for a total of 8 days over the course of the 90-day time span. A minimum of 3 survey days should be conducted consecutively, with a maximum of 6 days completed within any 30-day time period. Fall hatchling surveys are not required for activities in this category.

Disturbances Leading to Habitat Removal

Examples of disturbances that impact intact habitat include establishment of new roads or structures, housing subdivisions, and changes in historic land use. BNLL surveys should be conducted for 12 days over the course of the 90-day

adult optimal survey period (April 15 to July 15), with a maximum of 4 survey days per week and 8 days within any 30-day time period. At least one survey session should be conducted for 4 consecutive days, weather permitting. BNLL hatchlings and subadults are most commonly observed from August 1 to September 15, along with a few adults that are still active above ground (Montanucci 1965; Tollestrup 1979; USFWS 1985, 1998). In addition to the 12 days of adult BNLL surveys required for activities in this category, 5 more survey days are required during the hatchling optimal survey period for a total of 17 survey days overall.

QUALIFICATIONS OF RESEARCHERS:

An acceptable BNLL survey crew should consist of no more than 3 Level I researchers for every Level II researcher. This restriction should reduce the number of incorrect/missed identifications. The names and affiliations of all researchers must be recorded for each survey day.

Level I: Researcher has demonstrated the ability to distinguish BNLL from other common lizard species that may inhabit the area;

Level II: Researcher has demonstrated the ability to distinguish BNLL from other common lizard species that may inhabit the area and has participated in at least 50 survey days for BNLL (or 25 survey days and a BNLL identification course recognized by/acceptable to the Department of Fish and Game). Researcher has made at least one confirmed* field sighting of a BNLL.

REPORTING

All BNLL observations should be reported to the California Natural Diversity Database within 30 days. A sample form is attached. Additional forms can be obtained at <http://www.dfg.ca.gov/whdab/html/animals.html>.

SPECIAL REQUIREMENT FOR SURVEYS IN DFG CENTRAL COAST REGION (San Luis Obispo County)

Lands with potential BNLL habitat in the Department's Central Coast Region (CCR) have different conditions compared to the San Joaquin Valley Southern Sierra Region (SJVSSR). The sites with habitat in the CCR tend to be at higher elevations, where nighttime temperatures can remain low even though daytime temperatures meet minimum survey criteria. In such conditions, BNLL activity is likely to be low and surveys conducted at this time could result in non-detection of the species even though they are present. As such, an additional requirement of a visit to a known voucher site to check for BNLL activity applies to surveys conducted in this region. Once the species has been observed at the voucher site, formal surveys can begin. The Elkhorn Plain ER has been selected as the voucher site for the CCR.

LITERATURE CITED

- Montanucci, R.R., 1965. Observations of the San Joaquin leopard lizard, *Crotaphytus wislizenii silus* Stejneger. *Herpetologica* 21(4): 270-283.
- Tollestrup, K. 1976. A standardized method of obtaining an index of densities of blunt-nosed leopard lizards, *Crotaphytus silus*. Unpub. Rpt. U. S. Fish and Wildlife Service, Sacramento, CA. 11pp + Appendices.
- Tollestrup, K. 1979. The ecology, social structure, and foraging behavior of two closely-related leopard lizards, *Gambelia silus* and *Gambelia wislizenii*. PhD Dissertation, University of California Berkeley.
- United States Fish and Wildlife Service. 1985. Revised blunt-nosed leopard lizard recovery plan. United States Fish and Wildlife Service. Region 1, Portland, OR. 85 pp.
- United States Fish and Wildlife Service. 1998. Recovery plan for upland species of the San Joaquin Valley, California. United States Fish and Wildlife Service. Region 1, Portland, OR. 319 pp.

PERSONAL COMMUNICATIONS

Julie Vance, California Department of Water Resources, San Joaquin District, 3374 E. Shields Ave, Fresno, California, 93726.

*A minimum of one confirmed field sighting must be documented for each Level II researcher and be available to the Department upon request. As with all BNLL sightings, it should also be submitted to the California Natural Diversity Database. Information to be included in documentation of BNLL sighting: Name of researcher, date of survey, location of survey, names of accompanying researchers who can confirm the sighting, and details of sighting (distance, BNLL activity, etc).

CONTACT INFORMATION

California Department of Fish and Game

San Joaquin Valley Southern Sierra Region
Habitat Conservation Planning
1234 Shaw Ave
Fresno, CA 93710
559/243-4005

Central Coast Region
Habitat Conservation Planning
P.O. Box 47
Yountville, CA 94599
805/528-8670

.....
The Department is willing to cooperate with researchers who have circumstances or needs not addressed by this protocol and who may wish to propose alternative methods to comply with State law prohibiting take of BNLL.

**U.S. FISH AND WILDLIFE SERVICE
STANDARDIZED RECOMMENDATIONS
FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX
PRIOR TO OR DURING GROUND DISTURBANCE**

Prepared by the Sacramento Fish and Wildlife Office
January 2011

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. **However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act) and does not preclude the need for section 7 consultation or a section 10 incidental take permit for the proposed project.** Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). These protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

IS A PERMIT NECESSARY?

Certain acts need a permit from the Service which includes destruction of any known (occupied or unoccupied) or natal/pupping kit fox dens. Determination of the presence or absence of kit foxes and /or their dens should be made during the environmental review process.

All surveys and monitoring described in this document must be conducted by a qualified biologist and these activities do not require a permit. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, the biologist(s) must be able to identify coyote, red fox,

gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount. Resumes of biologists should be submitted to the Service for review and approval prior to any survey or monitoring work occurring.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints, of approximately one acre or less, such as an individual in-fill oil well, communication tower, or bridge repairs. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features and utilize this information as guidance to situate the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then surveys should be conducted and the Service should be contacted for technical assistance to determine the extent of possible take.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Kit foxes change dens four or five times during the summer months, and change natal dens one or two times per month (Morrell 1972). Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol). Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities.

If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If the take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping den which may not be destroyed while occupied. A take authorization/permit is required to destroy these dens even after they are vacated. Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: Linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project and those requirements supersede any requirements found in this document.

EXCLUSION ZONES

In order to avoid impacts, construction activities must avoid their dens. The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances due to the length of dens underground. The following distances are **minimums**, and if they cannot be followed the Service must be contacted. Adult and pup kit foxes are known to sometimes rest and play near the den entrance in the afternoon, but most above-ground activities begin near sunset and continue sporadically throughout the night. Den definitions are attached as Exhibit A.

Potential den**	50 feet
Atypical den**	50 feet
Known den*	100 feet
Natal/pupping den (occupied <u>and</u> unoccupied)	Service must be contacted

***Known den:** To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, orange construction fencing or other fencing as approved by the Service as long as it has openings for kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

****Potential and Atypical dens:** Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited or greatly restricted within the exclusion zones.

DESTRUCTION OF DENS

Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection.

Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service.

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use.

If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities.

The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities shall cease and the Service shall be notified immediately.

CONSTRUCTION AND ON-GOING OPERATIONAL REQUIREMENTS

Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities should be minimized by adhering to the following activities. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting achievement of project goals. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.
2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.
3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is

discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.
5. No firearms shall be allowed on the project site.
6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.
7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.
8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.
9. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.
10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be

re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance.
12. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.
13. The Sacramento Fish and Wildlife Office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFG contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.
14. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600

EXHIBIT “A” - DEFINITIONS

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means " . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Popping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/popping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the popping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposes of this definition either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.



Attachment 2c

Kevin Merk Associates, LLC P.O. Box 318, San Luis Obispo, CA 93406 805-748-5837(o)/439-1616(f)

June 24, 2016

Mr. Kevin Merrill
Mesa Vineyard Management
P.O. Box 789
Templeton, California 93465

Subject: Supplemental Biological Resources Information for the Reservoir and Operations Yard Project (Case No. 16CUP-00000-00005), North Fork Ranch, Santa Barbara County, California

Dear Mr. Merrill:

At your request, Kevin Merk Associates, LLC (KMA) prepared a biological resources assessment for three reservoir sites and an operations yard proposed on a portion of the North Fork Ranch in Santa Barbara County, California. Our analysis utilized project plans prepared by Thomas Howell (2015) showing only the extent of the reservoirs. The County of Santa Barbara during their review of the project application materials requested additional biological information such as the locations of water supply pipelines and details as to how they would cross onsite drainage features. Please refer to the Determination of Application Incompleteness (March 16, 2016) from the County of Santa Barbara and the Peer Review Memorandum (March 21, 2016) from Dudek.

The following information addresses each Comment and the associated Action Items outlined in the Peer Review. In order to supply this information, the Vineyard Irrigation Reservoir Fill Lines prepared by Ag-Ideas LLC (April, 2016) was provided to us showing the pipeline routes from onsite wells to the proposed reservoirs. The project team also provided additional project description information to help in the impact analysis. This included additional site plans showing the location of pressure mainlines that will run from the reservoirs to vineyard blocks. Subsequent site visits were conducted by KMA biologists to assess the proposed pipeline routes and the potential impacts to onsite drainage features and areas outside the farming footprint. The pipeline routes originating from wells on the north side of Highway 166 and all proposed drainage crossings were inspected for special status biological resources including species of rare plants and animals.

The plans provided by Ag Ideas LLC identified reservoir fill lines and pressure mainlines crossing onsite drainage features. The proposed installation methodology, as we understand, is to have the underground pipe "daylight" outside the drainage feature's top of bank of bank and a removable flexible pipe would then be attached to the main pipe and laid across the channel connecting to a similar structure on the opposite side. It is our understanding that the flexible pipe would span the active stream channel using a stand or support structure to avoid U.S. Army Corps of Engineers (USACE) Clean Water Act jurisdictional areas. The flexible pipe would be removed from the channel prior to rain events that have the potential to create flows through the site. Since the pipelines are proposed to cross the drainage features, early consultation with the California Department of Fish and Wildlife (CDFW) and USACE occurred to review the extent of each agency's jurisdiction over the proposed project. A site visit was conducted by CDFW representative, Ms.

Sarah Rains, on April 15, 2016 to inspect the proposed crossings, and consultation with USACE Project Manager, Ian Bordenave, occurred to evaluate the extent of Clean Water Act requirements for the project. The following provides the supplemental biological resources information requested from the County of Santa Barbara.

Peer Review Comments, Actions, and Responses

Comment 1. Project Description.

Action 1.1. Please include in a revised report the complete project description and representation of the proposed project, including all areas of temporary and permanent impacts, including access routes, staging area(s), soil stockpile(s) location(s), and water delivery systems.

Action 1.1 Response: The revised project description is presented below.

The project consists of constructing three agricultural reservoirs covering approximately five acres each, on existing agricultural lands south of Highway 166. The reservoirs will be connected to agricultural wells on the north side of Highway 166 by water lines. Additional pressure main lines will extend from the reservoirs to feed the vineyard drip irrigation system. An operations yard area of approximately five acres will also be constructed on agricultural land, and will be used for materials and equipment storage, and staging during reservoir and water line construction. Temporary soil stockpiles will occur in agricultural areas at each reservoir location, and along pipeline routes. Access to the reservoirs, well sites, and operations yard will use existing ranch roads that originate from Highway 166. Pipeline routes estimated at approximately 10 feet wide will primarily follow existing dirt ranch roads, and will cross agricultural lands to reach the reservoirs. Where the pipelines cross the onsite drainages, flexible High Density Polyethylene (HDPE) flexible pipes will be laid overland to avoid impacts to non-native annual grassland habitat. Six small ephemeral drainage channels on the south side of Highway 166 will be crossed by water lines suspended above the active channel.

The project will result in approximately 20 acres permanently disturbed by reservoir and operations yard construction, and roughly 11 acres temporarily disturbed by reservoir fill and pressure main waterline installation. Of this total impact area, the majority of the impacted area is within existing agricultural areas and ranch roads. Small areas of annual grassland within the drainage setback areas and along road edges will be temporarily disturbed during pipeline installation. Please refer to the attached Figure 7 illustrating onsite habitat conditions, proposed water pipeline routes and drainage crossing locations, and reservoir/operations yard sites. Figure 7 also shows the drainage corridors and minimum 50-foot setback established from the top of banks where vineyard planting blocks will be sited. For detailed information regarding the extent of regulatory agency jurisdiction and associated vineyard setbacks from the top of banks, please refer to Figures 8, 9 and 10 attached to this report. Photographs of the six drainage crossing locations and proposed pipeline configuration crossing the drainages are also provided as an attachment.

As shown on project maps, Reservoir 1 is located in the eastern portion of the ranch, immediately adjacent to Schoolhouse Canyon Road. Reservoir 2 is located in the middle portion, and Reservoir 3 is located in the western portion, approximately 0.75 mile east of Cottonwood Canyon Road. The

operations yard is located east of Reservoir 2, on a site previously used as a staging area for the former cattle grazing operation. Although Reservoirs 1 and 2 appear to extend into annual grassland habitat, their footprints are within currently disked and dry farmed wheat fields. Please refer to the attached photo plate.

Reservoir fill lines from agricultural wells will cross under Highway 166 in two locations: at Schoolhouse Canyon Road, and directly northeast of Reservoir 2 in the center of the site. The highway crossings will be accomplished by horizontal boring, and installation of casing pipes under the roadway. The reservoir fill lines will primarily follow existing ranch roads and agricultural areas. Where drainage crossings are proposed, the underground waterline will “daylight” and flexible High Density Polyethylene (HDPE) pipe will be attached and run overland to span the active stream channel. Small areas of annual grassland within the drainage corridors may be temporarily affected. The pressure main lines will also be located within existing agricultural lands except where annual grassland habitat is present at drainage crossing locations. The reservoir fill lines will cross three ephemeral drainages on the south side of Highway 166. Pressure main lines will extend from the reservoirs to vineyard blocks, and will cross a total of six drainage features. Three of these pressure line crossings are located in conjunction with the three fill line crossings to minimize impact areas. Of the six proposed waterline drainage crossings, four are located within or immediately adjacent to existing road crossings. Please refer to the attached photo plate for additional information.

The crossing pipelines will consist of flexible temporary HDPE piping laid on the ground from outside the top of banks down into the channel. The lower active channel areas will be spanned by an approximate 20-foot long section of steel pipe (roughly two to five feet wide depending on pipe width), supported at each end by a metal stand keyed into the slope within the top of bank but outside the Ordinary High Water Mark (OHWM). The steel pipe sections will be elevated above the OHWM, with no dredge or fill placement or effect on water flow within Clean Water Act Section 404 jurisdictional areas. Each support stand will consist of a 24x48-inch flat metal foot placed on the ground surface, with a central metal riser extending to cradle each end of the pipe. Please refer to Photo 12 included in the photo plate for additional detail. Minor excavation using hand tools may be required in some locations to create a level surface for the support stands, and all excavated soil will be recontoured around the span supports or removed from the channel. No large mechanized equipment such as a bulldozer or excavator will be required to enter the channel, and no concrete or other materials will be used.

Following the regulatory agency early consultation process, it was determined that a Streambed Alteration Agreement from the CDFW will be required for the six drainages to be crossed by waterlines on the south side of Highway 166. All supports, pipe materials, soil disturbance, and associated impacts proposed within the top of bank of each drainage will be quantified in the Streambed Alteration Agreement currently being prepared for the project. During a meeting between Dave Swenk of Urban Planning Concepts and USACE Project Manager Ian Bordenave on June 2, 2016, Mr. Bordenave stated that a Clean Water Act Section 404 permit would not be required based on the proposed crossing method that avoids placement of dredge or fill material within the OHWM. A formal letter from USACE documenting this decision is pending, and upon receipt will be submitted to the County for placement in the project file.

Comment 2. Survey Documentation.

Action 2.1. Revise the report to include a table summarizing the dates/times, weather conditions, focus of the surveys, specific location of surveys, and observations.

Action 2.1 Response: As stated in the Biological Resources Assessment prepared in February 2016, general and focused biological surveys occurred during the spring, summer and fall 2015 to help agricultural development of the property avoid impacts to special status resources such as the onsite drainages. In April 2016 following receipt of the Ag-Ideas LLC reservoir pipeline map, additional field work was conducted to search for special status plants and wildlife focused along the pipeline route and reservoir sites. Stream delineation also occurred to make sure pipeline installation avoided impacts to the active channel. A table summarizing biological survey efforts covering the Phase I farming activities including the proposed reservoir and operations yard project is presented below. Included as an attachment is a table summarizing the survey data from the blunt-nosed leopard lizard (*Gambelia sila*) protocol surveys conducted in the spring, summer and fall 2015.

General Biological Survey Data Summary Table*

Survey Date, Time, and Location	Survey Focus	Weather Conditions and Species Observations	Survey Personnel
February 29, 2015 8:00AM to 12:00PM Proposed agricultural areas on terraces between Schoolhouse and Cottonwood Canyons.	General Botany and Wildlife	Dense ground fog clearing through the morning; light winds, spring bloom period underway	Merk
April 26, 2016 9:30AM to 1:30PM Carrizo/Elkhorn Plain, agricultural areas and Schoolhouse Canyon Road in the east of the site	General Botany and Wildlife; BNLL reference site visit	Clear, 70-79 degrees F, BNLL on Elkhorn Plain	Merk
April 29, 2015 8:30AM to 4PM Proposed agricultural areas on terraces, Cuyama River, Schoolhouse and Cottonwood Canyons	General Botany and Wildlife, BNLL during suitable conditions	Sunny, 80-95 degrees F (warm), light winds. Horned lizard observed in Schoolhouse Canyon.	Merk, Kirschenstein
May 28, 2015 8:30AM to 4PM Proposed agricultural areas on terraces, Cuyama River, Schoolhouse and Cottonwood Canyons	General Botany and Wildlife, BNLL during suitable conditions	Sunny and warm, light winds. Heerman's K-rat sign observed on river terraces.	Merk, Kirschenstein

Survey Date, Time, and Location	Survey Focus	Weather Conditions and Species Observations	Survey Personnel
June 8, 2015 8:45AM to 4PM Proposed agricultural areas on terraces, Cuyama River, Schoolhouse and Cottonwood Canyons	General Botany and Wildlife, BNLL during suitable conditions	Mostly sunny and warm, light wind.	Merk, Kirschenstein
June 24, 2015 8:45AM to 4PM Proposed agricultural areas on terraces, Cuyama River, Schoolhouse and Cottonwood Canyons	General Botany and Wildlife, BNLL during suitable conditions	Sunny and warm, light wind. Horned lizards and Heerman's K-rat sign observed on Cuyama river terrace	Merk, Kirschenstein
September 29, 2015 9AM to 2:30PM Agricultural areas south of 166	General Botany, Wildlife, Vegetation Mapping, Stream Delineation	Sunny and warm, light wind. No sensitive species observed.	Merk, Sloan
September 30, 2015 8AM-4:30PM Stream corridors south of 166	Stream Delineation and Setback Mapping, General Botany and Wildlife	Sunny and warm, light wind, cloudy, light rain Oct 1. No sensitive species observed.	Sloan, Block
October 1, 2015 8AM-4:30PM Stream corridors south of 166	Stream Delineation and Setback Mapping, General Botany and Wildlife	Sunny and warm, light wind, cloudy, light rain Oct 1. No sensitive species observed.	Sloan, Block
January 4, 2016 8:30AM to 4:30PM Reservoir and Operations Yard Sites	General Botany and Wildlife	Sunny, cool (58 degrees F), no wind. No sensitive species observed.	Sloan
April 6, 2016 8:30AM to 4:30PM Reservoir Pipeline Routes	General Botany and Wildlife, Stream Crossing Locations, CNDDDB Reference Locations	Sunny and warm, light wind. No sensitive species observed.	Merk, Sloan
April 15, 2016 8:30AM to 4:30PM Reservoir Pipeline Routes	General Botany and Wildlife, Stream Crossing Assessment with CDFW	Sunny and warm, light wind. No sensitive species observed.	Merk

Survey Date, Time, and Location	Survey Focus	Weather Conditions and Species Observations	Survey Personnel
June 7, 2016 9AM to 3:30PM Reservoir Pipeline Crossings	General Botany and Wildlife, Stream Crossings	Sunny and hot (95-100 degrees F), winds 10+mph in afternoon. No sensitive species observed.	Sloan

*refer to attached Table 1 for the blunt nose leopard lizard survey information.

Action 2.2 Provide data sheets or summarize in a table the 18 blunt-nosed leopard lizard surveys in the revised report, including which areas were surveyed on specific days in protocol conditions, survey observations (lizards and prey observed), and confirm the area(s) of the project study area in which protocol surveys for the blunt-nosed leopard lizard were completed. In addition to the information requested in Action 2.1, please indicate the Level II and Level I surveyors and provide blunt-nosed leopard lizard specific resumes.

Action 2.2 Response: The North Fork Ranch BNLL Phase I Survey Data Summary Table, and resumes for the two surveyors are attached. Protocol surveys were conducted by Mr. Jason Kirschenstein (Level II) and Kevin Merk (Level I), and covered approximately 390 acres of suitable BNLL habitat on the lower terraces and wash habitat in the portion of Schoolhouse Canyon on the property extending north into the Cuyama River. An additional roughly 130-acre area along the lower Cuyama River terraces north of Highway 166 near the Cottonwood Canyon confluence was also surveyed after 1400 hours or when the temperature was too hot to meet protocol requirements. Additional walking surveys and spot checks were conducted within onsite drainages and other areas of the ranch outside the agricultural footprint containing what was identified as low potential BNLL habitat based on steep slopes, dense grassland vegetation cover and lack of burrows. Please note that the surveys covered additional parts of the ranch outside the agricultural footprint and proposed reservoir/operations yard disturbance areas.

Action 2.3 Confirm that a BNLL reference or voucher survey was conducted at the Elkhorn Plain Ecological Reserve to confirm BNLL activity prior to the onset of surveys for the proposed project.

Action 2.3 Response: As documented in the 2015 Biological Resources Assessment (page 7, 3rd paragraph), a BNLL reference site in the Carrizo Plain area was visited on several occasions (June 24 and July 3, 2015) during the spring-summer surveys and again on September 7, 2015 during the fall hatchling surveys during the course of the study to confirm BNLLs were above ground, active and identifiable. Prior to the start of the surveys, the same reference site was visited on the Carrizo Plain on 4/26/16 to confirm BNLL were active and above ground. The area of the recorded BNLL occurrence #414 (from 2007) east of the property was also visited on two occasions to characterize habitat in this area for comparison with habitats on the study area, as well as search for BNLL using binoculars from property margins. A BNLL was observed at the Carrizo Plain reference site during each visit, but was not observed at the occurrence #414 site.

Comment 3. Vegetation Community Mapping.

Action 3.1. Revise the report to include a vegetation community/habitat map with biological observations of sensitive biological resources, special-status species, or any protected biological resource present on-site, including the top-of-bank of ephemeral streams and their buffers.

Action 3.1 Response: The attached Figure 7 contains vegetation community/habitat information and current project details as shown on the Ag-Ideas 2016 map, including the drainage setbacks in relation to the vineyard blocks shown as Agriculture. Figures 8, 9, and 10, also attached to this report, show the limits of CDFW jurisdiction (i.e.: top of bank to top of bank) and USACE jurisdiction (i.e.: the extent of active stream channel with an observable OHWM) at each crossing location. Please note the pipeline crossing location is identified as a solid blue line that is approximately five (5) feet wide, which represents the width of two 24-inch HDPE pipes and steel structure that will support the pipes to span the stream channel.

Comment 4. Floristic Surveys.

Action 4.1. Conduct full coverage seasonally-appropriate floristic surveys over the entire project site addressing all proposed project components (refer to Comment 1.). Two to three surveys may be necessary. Please revisit and ensure the floristic surveys conform to CNPS Botanical Survey Guidelines (CNPS 2001); Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities (CDFG 2000); and Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants (USFWS 1996). Reference populations need to be visited and documented. A list of all plants observed on-site is required for floristic surveys. Include the observed plant list within the revised report or as an attachment.

Action 4.1 Response: As documented in the Biological Resources Assessment Report prepared in February 2016, and summarized in the Survey Table presented in Action 2.1 above, botanical surveys were conducted in April, May, June, August, and September 2015 to search for special status plants and characterize the onsite habitat types. Additional surveys were conducted in the winter and spring 2016, over large areas of the property, including the reservoir and operations yard locations, ranch access roads, drainage setback areas, and agricultural and grassland areas. Subsequent botanical surveys conducted in April and June 2016 along the proposed water line routes and associated roadways on both sides of Highway 166 provided additional field observations confirming special status plants were not present within the agricultural footprint or the proposed pipeline disturbance area.

The surveys were floristic in nature, covered suitable habitat areas within the study area and were conducted by qualified biologists, consistent with the CNPS, CDFW and USFWS botanical survey guidelines. This two-year survey effort covered the blooming periods of the special status species potentially present in the project area and in adjacent areas. The April 6 and 15, 2016 surveys included visits to recorded occurrences of pale yellow layia (*Layia heterotricha*) and round-leaf filaree (*California macrophylla*) along Cottonwood Canyon Road outside the project area, and were unable to relocate these occurrences. Personal communication with Mr. Dave Hacker with CDFW also occurred to discuss past observations of special status species in this area. In addition, surveys

of historic occurrences of San Joaquin woolly threads (*Monolopia congdonii*) along the old Highway 166 right of way at the northwest corner of the Ranch near the confluence of Cottonwood Canyon Creek and the Cuyama River were conducted and the species was not observed. It is important to note that the study area was visited on multiple occasions and no special status plants were observed within the agricultural footprint or areas proposed for waterline, reservoir and operations yard construction. A list of plants observed on site in 2015 and 2016 is included as an attachment.

Comment 5. Stream Delineation.

Action 5.1 Include the delineated top of bank and buffer for the ephemeral streams on Figures 2, 3, 4, and 5, as appropriate, in the revised report.

Action 5.1 Response: The buffer zones for all drainages on the southern side of the Highway are shown on Figure 7 as Annual Grassland habitat separating the agricultural blocks from the stream channels. As stated in the Biological Resources Assessment Report, KMA delineated top of banks along the onsite drainages, and established a minimum 50-foot buffer or setback along the entire length of each of the drainages. The top of bank line identified by KMA followed the top of bank definition presented in Section 15B -2 of the *Santa Barbara County Public Works Water Course Setback Ordinance*, and was based on field observation of a defined hinge point where the dominant topographic relief changed from generally level to an uninterrupted slope leading to the active portion of the channel. Using a 50-foot tape, stakes were set and numbered at intervals along each drainage to delineate the outer edge of the 50-foot buffer. Stake locations were surveyed by professional land surveyor Steve Fleming, and the survey results were used by the vineyard development team to establish the limits of agricultural uses as shown on project plans.

Subsequent field work was conducted in the spring of 2016 to delineate the jurisdictional boundaries within each proposed drainage crossing location, and the results of those surveys were reviewed in the field with CDFW in April 2016 to confirm the identification of the top of banks was consistent with their Streambed Alteration Agreement notification requirements. KMA biologists used a Trimble Geo XH 6000 GPS unit capable of decimeter accuracy to delineate the top of bank and extent of OHWM associated with the active stream channel. Boundary mapping followed the general methods outlined in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0; U.S. Army Corps of Engineers 2008), and the *Corps of Engineers 2008 Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States*. The top of bank line was identified and mapped as described above. The jurisdictional boundaries at the six crossing points are shown on Figures 8, 9, and 10 attached to this letter. Based on the early consultation process with CDFW and USACE, the proposed drainage crossings using HDPE flexible pipe laid over ground and supported by steel supports to span the active stream channel would not require a Clean Water Act permit, but will require notifying the CDFW through the preparation of a Streambed Alteration Agreement application.

***Action 5.2** If any proposed project component occurs within, above, or adjacent to the ephemeral stream (i.e., potential impacts may occur), an approved jurisdictional determination shall be prepared per U.S. Army Corps of Engineer standards and guidelines, including jurisdictional boundaries of the CDFW and Regional Water Quality Control Board.*

Action 5.2 Response: As shown on Figure 7, no jurisdictional impacts are proposed for the reservoir/operations yard portion of the project. The reservoir and operations yard locations are in upland areas outside the banks of the drainages. The top of bank and the OHWM were delineated at each of the six waterline crossing sites per the methodology described in response to Action 5.1 above. Based on a site visit with CDFW representative Sarah Rains in April 2016, CDFW requires notification of the pipe being laid across the channel, and as such, a Streambed Alteration Agreement application will be submitted for the six waterline crossings south of Highway 166. The applicant will use a steel support structure to span or elevate the HDPE flexible pipe over the active stream channel, and therefore, no impacts are proposed within the OHWM of the drainages. A U.S. Army Corps of Engineers formal jurisdictional delineation and permitting pursuant to Section 404 of the Clean Water Act are not required based on the early consultation process with USACE Project Manager Ian Bordenave (personal communication with Mr. Bordenave and David Swenk of UPC). Still, USACE delineation methodologies were used to collect field data and prepare the attached Figures 8, 9 and 10.

Comment 6. Giant Kangaroo Rat.

***Action 6.1** Include a mitigation measure in the revised report that states a pre-construction survey for the giant kangaroo rat will occur in late spring to search for sign (appropriate sized horizontal and vertical burrows, haystacks, seed caches, scat, tracks, etc.). If sign is observed, the U.S. Fish and Wildlife Service (USFWS) and CDFW shall be contacted to determine if trapping surveys are required for the giant kangaroo rat.*

Action 6.1 Response: Surveys conducted within the project area in 2015-2016 did not find evidence of giant kangaroo rat (GKR). The recent surveys of the irrigation line routes on the north and south sides of Highway 166 conducted in April 2016 did not observe haystack caches or burrow precincts typical of this species. Furthermore, historic occurrence records to the northwest of the study area from 1979 and 1986 were also visited, and no sign of GKR was observed. Surveys did observe sign of Heermann's kangaroo rat (*Dipodomys heermanni*) and common pocket gopher (*Thomomys bottae*) in select areas along the lower river terraces north of Highway 166. The pressure main line routes either follow the reservoir fill line routes, or are within disturbed agricultural lands. The three pressure line drainage crossings not associated with irrigation line crossings were surveyed in June 2016 during jurisdictional delineation efforts. No sign of GKR was observed in these three areas, two of which are immediately adjacent to existing road crossings.

The agricultural activities onsite have removed all potential habitat for GKR from the reservoir sites and operations yard, as well as the majority of the proposed waterline corridor. In addition, laying the HDPE pipes above ground and spanning the drainage features is not expected to adversely impact GKR if they were present since the lines will be installed by farm personnel on foot and no earth disturbance other than keying the span support into the slope with hand tools is proposed.

Still, a condition could be included that requires a preconstruction survey immediately prior to earth disturbing activities in annual grassland habitat associated with the waterlines spanning the drainage features on the south side of Highway 166. As stated above, based on the analysis to date, it appears highly unlikely that GKR are present within the proposed project area, and would not be expected to be impacted by the reservoir and operations yard project since the area is being actively farmed.

Comment 7. San Joaquin Kit Fox.

Action 7.1 An early evaluation for the San Joaquin kit fox is required per the 1994 USFWS protocol for the fox. Once completed, it is recommended that the USFWS and CDFW be contacted and concur with KMA evaluation findings. Please include the evaluation and any agency coordination in the revised report.

Action 7.1 Response: As discussed in the Biological Resources Assessment Report, repeated surveys did not observe evidence of SJKF presence or potential SJKF den sites in or near the project area. The project site is within the historic range of the species, and it is possible that a SJKF, if present in the region, could move through the project area during foraging or migration activities. The lack of a well-developed prey base and no suitable denning habitat within the project area (i.e.: the agricultural activities have removed all suitable habitat and the disking removes potential small mammal prey base and potential den sites), however, indicate a very low potential for this species to occur. The last recorded occurrences of this species in the immediate area are from 1975, and ongoing agricultural operations would have restricted any recent denning activities to either higher elevations of the property or riverbank/terrace areas outside the proposed disturbance footprint. Therefore, the early evaluation process was determined to not be necessary for implementation of this project. It is assumed that SJKF could potentially occur in the greater area, and implementation of the USFWS recommended avoidance measures is considered sufficient to ensure that SJKF is not adversely affected by project construction and long-term agricultural activities on the property.

Action 7.2 Please revise the attached avoidance measures to identically reflect the USFWS (2011) standard recommendations or attach the standard recommendations in its entirety to the revised report.

Action 7.2 Response: The USFWS 2011 Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance are included as an attachment to this report.



Thank you for the opportunity to provide environmental consulting services for this project. If you have any questions regarding the above findings, please contact Kevin Merk directly by phone at 805-748-5837 or via email at kmerk@kevinmerkassociates.com.

Sincerely,

KEVIN MERK ASSOCIATES, LLC

A handwritten signature in blue ink, appearing to read "Kevin Merk".

Kevin B. Merk
Principal Biologist

A handwritten signature in blue ink, appearing to read "Robert Sloan".

Robert Sloan
Senior Biologist

*Attachments Figure 7 – Project Details and Habitats
 Figures 8, 9, and 10 - Jurisdictional Boundaries at Crossing Locations
 Photo Plate of Crossing Sites and Proposed Pipe Crossings
 List of Plants Observed During Surveys of the Site
 BNLL Survey Summary Table
 BNLL Surveyor Resumes
 USFWS Standardized Recommendations for San Joaquin Kit Fox*

Property Boundary

Proposed Irrigation Reservoirs

Proposed Reservoir Fill Lines

Proposed Pressure Mains

Drainage Centerline

Well Location

Habitat

Agriculture

Annual Grassland

Mixed Oak Woodland

Riparian Scrub

Ruderal/Disturbed

The map displays the North Fork Ranch area, bounded by a dashed black line. Key features include the Cuyama River flowing along the top, CA-166 running horizontally across the center, and Cottonwood Canyon Rd and Scholhouse Canyon Rd on the left and right respectively. Three reservoirs are marked: Reservoir 1 (~4.9 acres) at the bottom right, Reservoir 2 (~5.4 acres) in the center, and Reservoir 3 (~4.7 acres) on the left. Six crossings are labeled from Crossing 1 to Crossing 6. A network of blue lines represents proposed reservoir fill lines and pressure mains. Blue dots indicate well locations. The map is overlaid with habitat zones: Agriculture (brown), Annual Grassland (tan), Mixed Oak Woodland (dark green), Riparian Scrub (light green), and Ruderal/Disturbed (grey). An Operations Yard (~5 acres) is located near Crossing 3.

KMA
KEVIN MERK ASSOCIATES

1 in = 2,000 ft

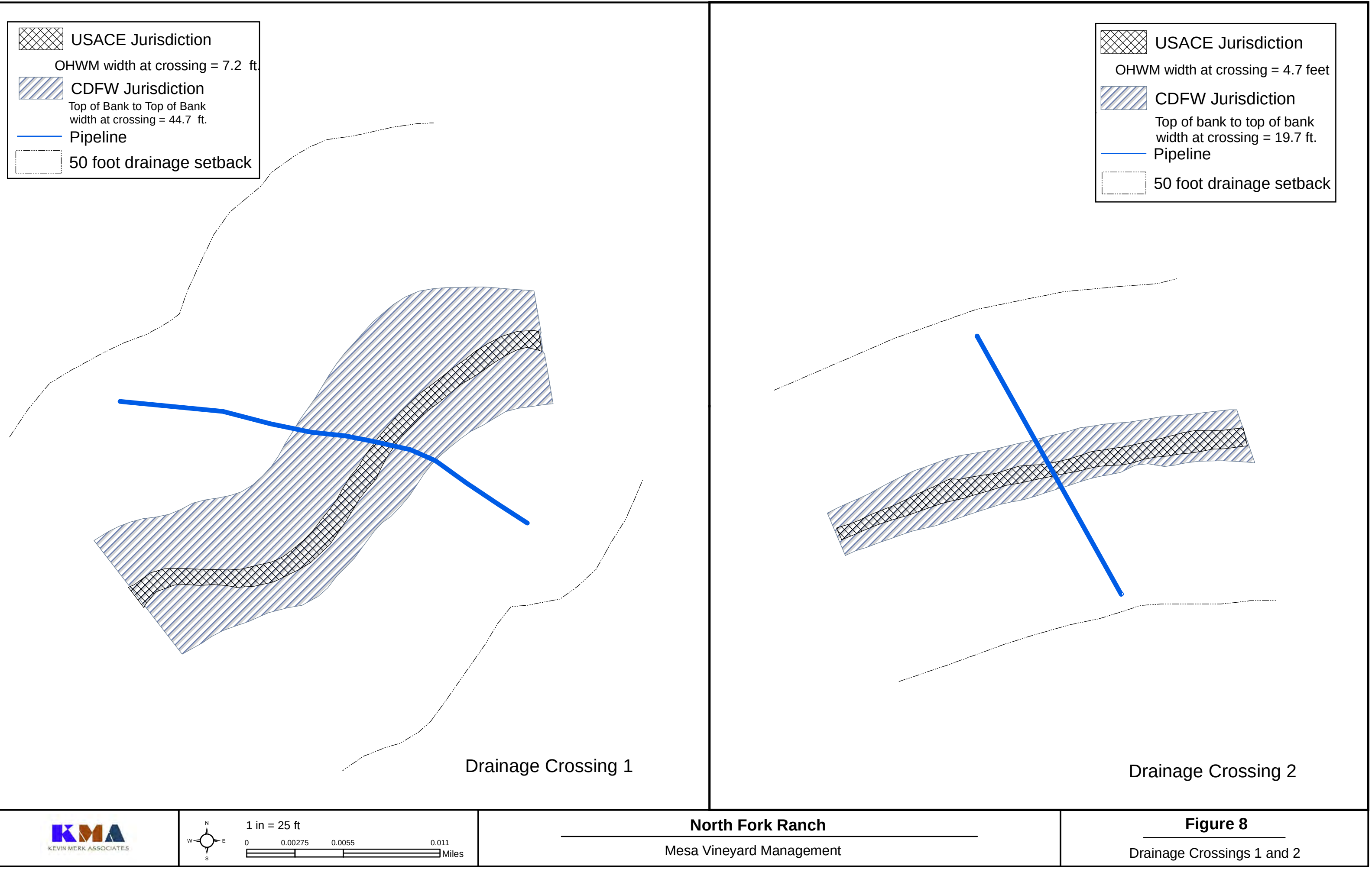
0 1,250 2,500 5,000
Feet

North Fork Ranch

Mesa Vineyard Management

Figure 7

Project Details and Habitats



 USACE Jurisdiction

OHWM width at crossing = 7.2 ft.

 CDFW Jurisdiction

Top of Bank to Top of Bank
width at crossing = 44.7 ft.

 Pipeline

 50 foot drainage setback

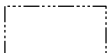
 USACE Jurisdiction

OHWM width at crossing = 4.7 feet

 CDFW Jurisdiction

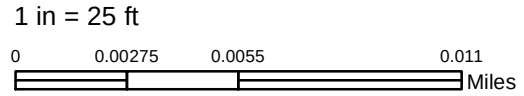
Top of bank to top of bank
width at crossing = 19.7 ft.

 Pipeline

 50 foot drainage setback

Drainage Crossing 1

Drainage Crossing 2

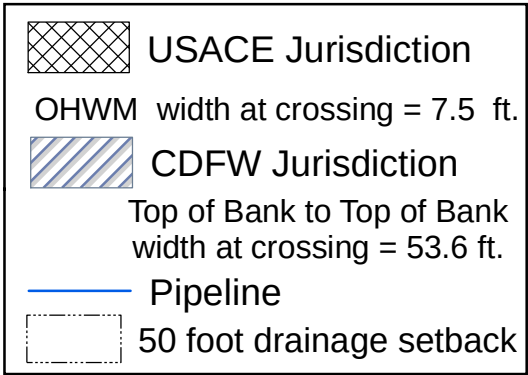
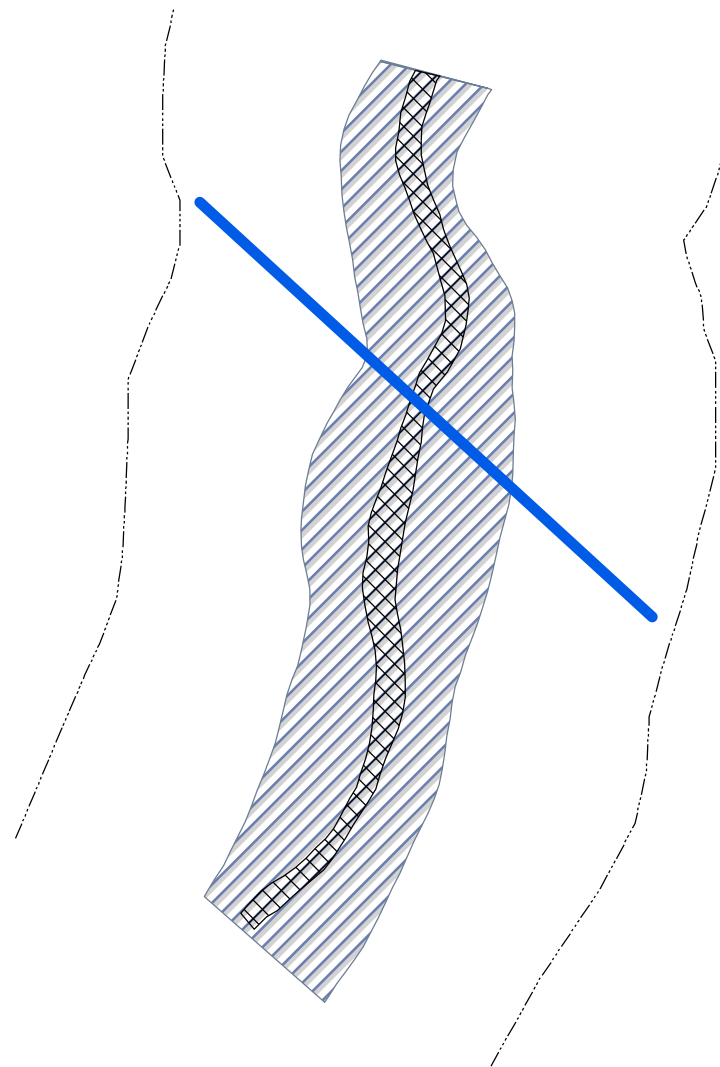


North Fork Ranch

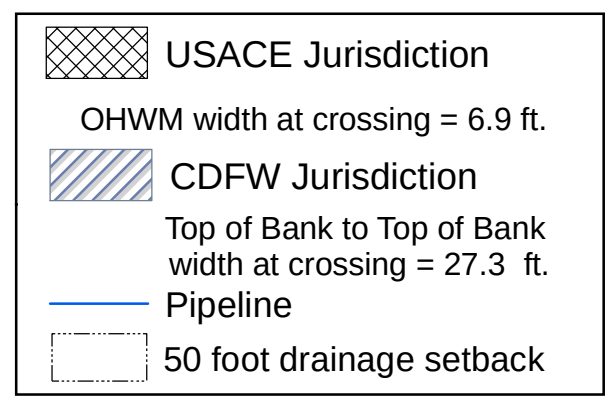
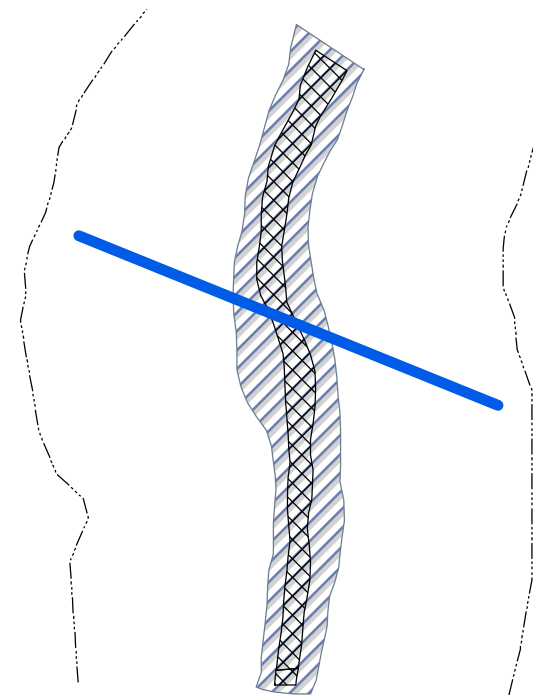
Mesa Vineyard Management

Figure 8

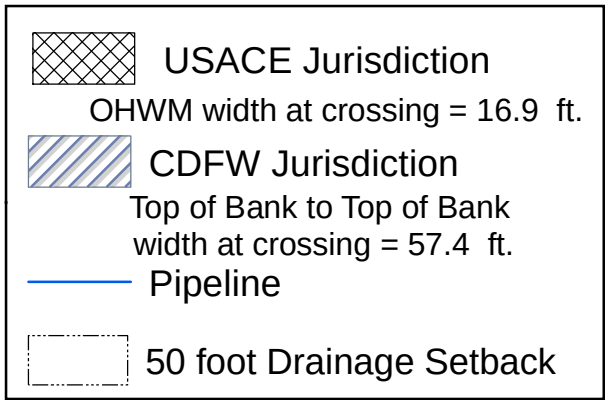
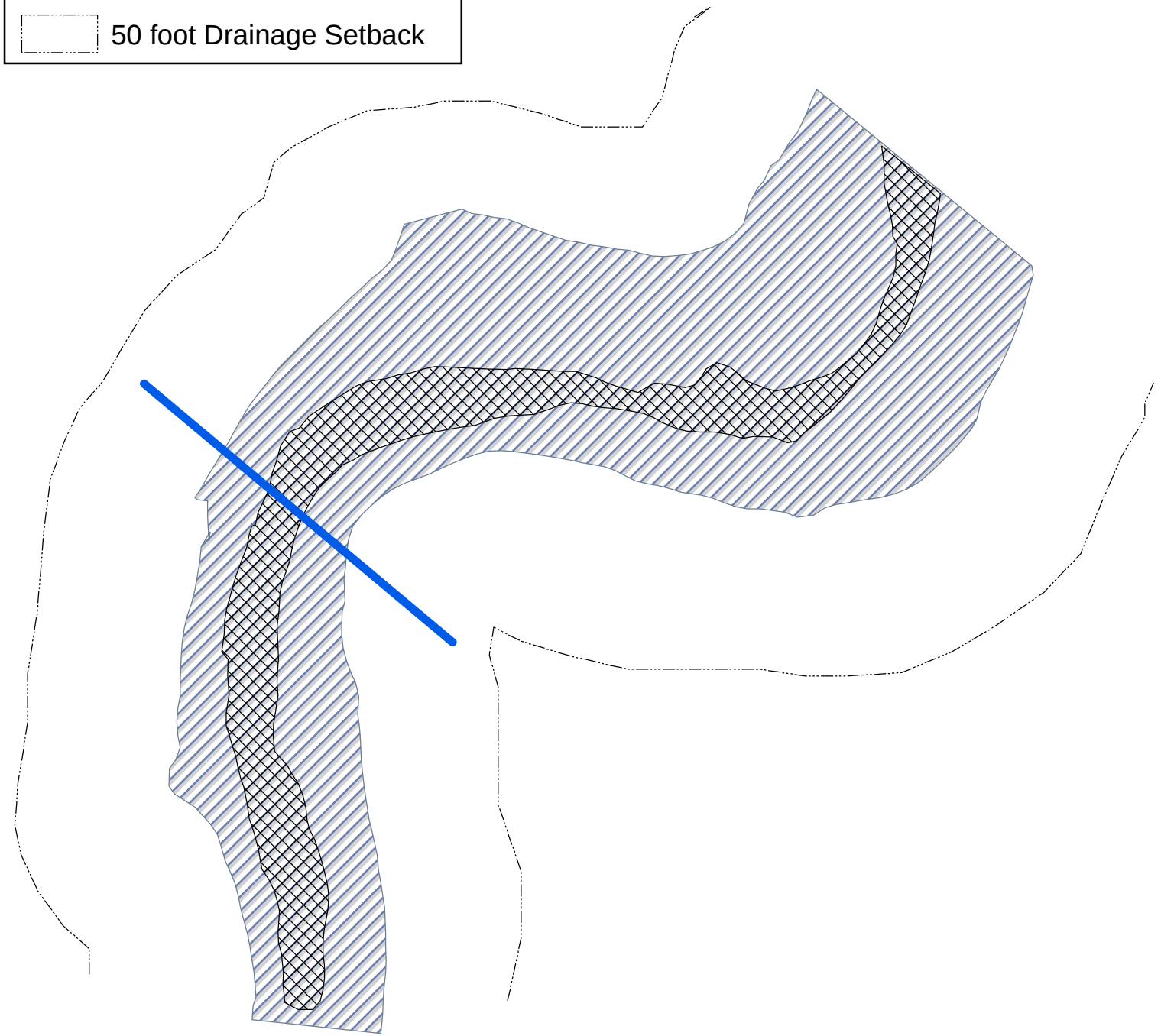
Drainage Crossings 1 and 2



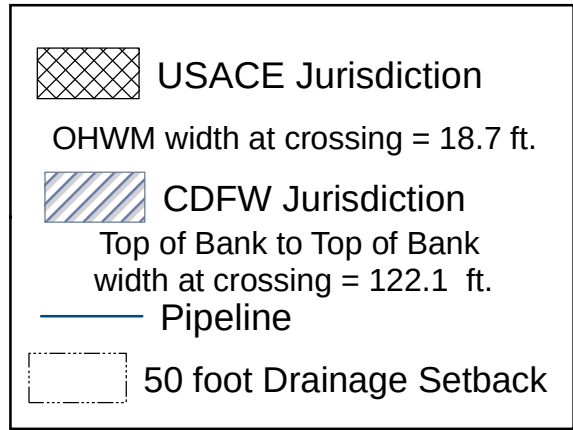
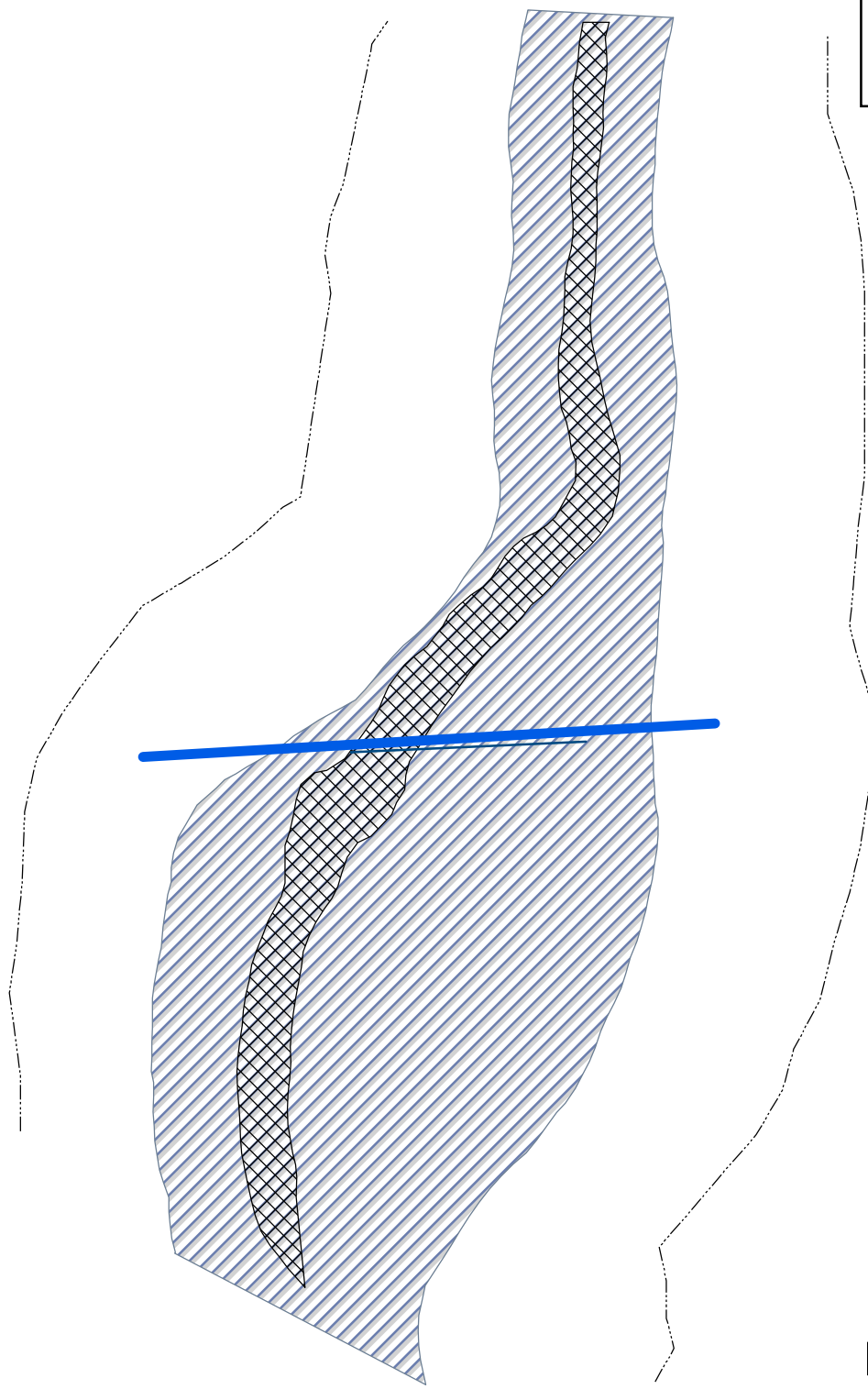
Drainage Crossing 3



Drainage Crossing 4



Drainage Crossing 5



Drainage Crossing 6

Photo Plate

Photo 1. View of Crossing #1, looking upstream. Note narrow active channel section to be avoided by suspending waterlines above the banks.



Photo 2. View of Crossing #2, looking upstream. Crossing alignment will be at downstream edge of road. Note flat, shallow channel configuration at this location.



Photo 3. View of Crossing #3, looking upstream. Crossing alignment will be at downstream edge of road.



Photo 4. View of Crossing #4, looking upstream. Crossing alignment will be at downstream edge of road.



Photo 5. View of Crossing #5, looking upstream. Note flat, shallow active channel area and steep upper bank configuration.



Photo 6. View of Crossing #6, looking upstream. Crossing alignment will be at downstream edge of road.



Photo 7. Overview of planted cover crop surrounding proposed Reservoir 2 with operations yard in the distance.



Photo 8. Overview of proposed Reservoir 3 (visible as bare soil area) with planted cover crop in flats and annual grassland on the slope in the foreground. Schoolhouse Canyon Road is visible in the distance.



Photo 9. Representative photo from another site showing the flexible HDPE pipe to be laid above ground over the drainage features.



Photo 10. Representative photo of how waterline with valves will “daylight” outside top of bank of drainages. Flexible HDPE pipe will be attached and then run overland at drainage crossings.



Photo 11. Representative photo illustrating connection of HDPE pipe and underground pipe.

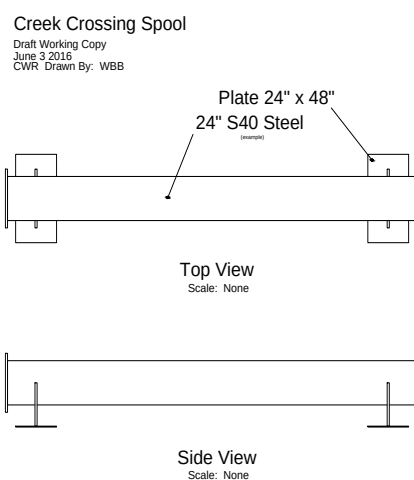


Photo 12. HDPE pipes will span active stream channels using the 20' long steel supports shown above.

List of Plants Observed During 2015 and 2016 Field Surveys.

Scientific Name	Common Name
<i>Amsinckia intermedia</i>	Common fiddleneck
<i>Atriplex lentiformis</i>	Brewer's saltbush
<i>Atriplex spinifera</i>	Spinescale saltbush
<i>Astragalus douglasii</i>	Douglas's milkvetch
<i>Avena barbata</i> *	Slender wild oats
<i>Baccharis pilularis</i>	Coyote brush
<i>Bromus madritensis</i> *	Red brome
<i>Carduus pycnocephalus</i> *	Italian thistle
<i>Castilleja exserta</i>	Owl's clover
<i>Chaenactis glabriuscula</i>	Yellow pincushion
<i>Chenopodium album</i> *	Goosefoot
<i>Cucurbita palmata</i>	Coyote melon
<i>Delphinium parryi</i> ssp. <i>parryi</i>	Parry's larkspur
<i>Dichelostemma capitatum</i>	Blue dicks
<i>Encelia californica</i>	Bush sunflower
<i>Eriodictyon tomentosum</i>	Wooly yerba santa
<i>Eriogonum gracile</i>	Slender buckwheat
<i>Eriophyllum confertiflorum</i>	Golden yarrow
<i>Erodium cicutarium</i> *	Red-stemmed filaree
<i>Hirschfeldia incana</i> *	Summer mustard
<i>Hordeum murinum</i> *	Foxtail
<i>Juniperus californicus</i>	California juniper
<i>Lasthenia gracilis</i>	Needle goldfields
<i>Layia platyglossa</i>	Tidy tips
<i>Lepidium nitidum</i>	Pepper grass
<i>Lepidospartum squamatum</i>	California broomsage
<i>Malva parviflora</i> *	Cheeseweed
<i>Marrubium vulgare</i>	White horehound
<i>Medicago polymorpha</i> *	Bur clover
<i>Monolopia lanceolata</i>	Common monolopia
<i>Phacelia distans</i>	Common phacelia
<i>Plagiobothrys canescens</i>	Valley popcorn flower
<i>Platanus racemosa</i>	Western sycamore (planted as windrow)
<i>Pluchea sericea</i>	Arrow weed
<i>Poa secunda</i>	Bluegrass
<i>Populus fremontii</i>	Fremont cottonwood (Cottonwood Cyn and in windrow)
<i>Quercus douglasii</i>	Blue oak
<i>Quercus john-tuckeri</i>	Tucker oak
<i>Salsola tragus</i> *	Russian thistle
<i>Sambucus nigra</i> ssp. <i>caerulea</i>	Blue elderberry
<i>Schismus arabicus</i> *	Arabian schismus
<i>Silene gallica</i> *	Common catchfly
<i>Sisymbrium altissimum</i> *	Tumble mustard
<i>Sonchus asper</i> *	Prickly sow thistle
<i>Stanleya pinnata</i>	Prince's plume
<i>Tamarix ramosissima</i> *	Saltcedar
<i>Thysanocarpus laciniatus</i>	Narrow-leaved lacepod

*Asterisk identifies non-native species.

TABLE 1: North Fork Ranch BNLL Phase I Survey Data Summary Table

Survey Number and Date	Survey Time Start / End (2400 hrs)	Air Temp Start / End (°F)	Ground Temp Start / End (°F)	Wind Speed Start / End (mph)	Cloud Cover Start / End (%)	BNLL Observed	Other Reptile Observations	BNLL Surveyor / Level
Spring – Summer Surveys								
1) 04/29/15	1000/1320	80.0/95.2	82/101.8	5.0/5.0	0/0	None	6x <i>Uta stansburiana</i> 4x <i>Aspidoscelis tigris</i> 1x <i>Thamnophis sirtalis</i> 1x <i>Phrynosoma blainvillii</i>	K. Merk / I J. Kirschenstein / II
2) 05/28/15	0930/1400	77.0/89.0	74.0/94.6	6.0/3.0	0/0	None	14x <i>Uta stansburiana</i> 3x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
3) 06/08/15	0845/1200	87.8/95.5	86.9/101.3	2.8/6.5	5/0	None	8x <i>Uta stansburiana</i>	K. Merk / I J. Kirschenstein / II
4) 06/12/15	0815/1215	79.0/95.0	78.6/99.6	3.0/4.5	0/0	None	7x <i>Uta stansburiana</i> 5x <i>Aspidoscelis tigris</i> 1x <i>Thamnophis sirtalis</i>	K. Merk / I J. Kirschenstein / II
5) 06/24/15	0845/1245	77.9/92.5	80.0/96.0	3.0/2.0	0/0	None	10x <i>Uta stansburiana</i> 1x <i>Phrynosoma blainvillii</i>	K. Merk / I J. Kirschenstein / II
6) 06/26/15	0815/1130	77.4/95.0	72.0/98.0	3.0/5.0	10/5	None	8x <i>Uta stansburiana</i> 7x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
7) 07/03/15	0800/1130	77.0/95.5	72.5/99.8	0/3.0	0/0	None	9x <i>Uta stansburiana</i> 3x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
8) 07/06/15	0900/1400	78.2/94.0	74.0/98.5	2.0/5.0	<5/0	None	8x <i>Uta stansburiana</i> 8x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
9) 07/08/15	0915/1345	77.3/86.0	72.0/90.5	3.0/4.5	<5/5	None	10x <i>Uta stansburiana</i> 5x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
10) 07/10/15	1000/1400	77.0/84.0	72.0/87.5	5.0/7.0	20/15	None	9x <i>Uta stansburiana</i> 2x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
11) 07/14/15	0900/1330	77.5/89.0	73.5/93.2	3.0/5.0	5/0	None	12x <i>Uta stansburiana</i> 3x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
12) 07/15/15	0950/1345	77.0/86.2	73.4/91.5	3.0/7.0	5/5	None	14x <i>Uta stansburiana</i> 1x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II



Survey Number and Date	Survey Time Start / End (2400 hrs)	Air Temp Start / End (°F)	Ground Temp Start / End (°F)	Wind Speed Start / End (mph)	Cloud Cover Start / End (%)	BNLL Observed	Other Reptile Observations	BNLL Surveyor / Level
Fall Hatchling Surveys								
13) 09/01/15	0950/1330	77.0/86.0	68.0/89.5	3.0/6.5	0/<5	None	36x <i>Uta stansburiana</i> 1x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
14) 09/07/15	0900/1215	77.0/95.0	73.0/99.0	5.5/3.0	<5/5	None	32x <i>Uta stansburiana</i> 1x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
15) 09/11/15	0900/1230	80.0/95.3	76.0/101.3	3.5/5.0	30/20	None	31x <i>Uta stansburiana</i>	K. Merk / I J. Kirschenstein / II
16) 09/13/15	0845/1350	77.0/93.5	71.5/98.8	3.0/7.0	20/15	None	31x <i>Uta stansburiana</i> 1x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
17) 09/14/15	1215/1400	77.0/86.0	75.0/82.5	6.0/7.5	60/70	None	36x <i>Uta stansburiana</i> 2x <i>Aspidoscelis tigris</i>	K. Merk / I J. Kirschenstein / II
18) 09/15/15	1130/1330	77.0/84.2	86.0/87.8	4.0/7.0	20/30	None	35x <i>Uta stansburiana</i>	K. Merk / I J. Kirschenstein / II
General Notes: Black-tailed jackrabbit, elk, coyote, bobcat, American badger, kangaroo rat, California ground squirrel, gopher, raccoon, lark sparrow, mourning dove, California quail, and common raven individuals and/or sign also observed within the survey area.								



Kevin Merk Associates, LLC

KEVIN B. MERK

Principal Biologist

Kevin Merk is the founding principal of Kevin Merk Associates, LLC. With over 20 years of environmental consulting experience, Kevin has directed, managed, and conducted hundreds of natural resource and environmental studies throughout California. Mr. Merk has a diverse background in the biological sciences with expertise in plant taxonomy, quantitative vegetation analysis, habitat classification/evaluation procedures, surveys for special status species, habitat restoration and biotechnical erosion control. His work experience includes general biological and species-specific surveys, U.S. Army Corps of Engineers and California Coastal Commission wetland delineations, as well as permit acquisition and regulatory compliance. He has prepared, implemented and monitored Habitat Conservation Plans and habitat mitigation/restoration projects throughout California. Mr. Merk is a well-versed regulatory specialist that provides a balance between rigorous scientific documentation, environmental regulatory requirements and project development goals and objectives.

TECHNICAL CAPABILITIES

- Mr. Merk has an in-depth knowledge of the California flora and protocols for surveying rare, threatened and endangered plant species.
- He has conducted floristic surveys and mapped vegetation communities for private, state and local government clients including California State Parks, California State University System, Fort Ord Reuse Authority, Cities and Counties of Monterey, San Luis Obispo, and Santa Barbara, and Cities of Arroyo Grande, Lompoc, Sand City, Santa Maria and Scotts Valley.
- Mr. Merk has also conducted rare wildlife surveys throughout California for species such as the California tiger salamander, California red-legged frog, western spadefoot toad, legless lizard, horned lizard, burrowing owl and other raptors and nesting birds.
- Mr. Merk has conducted multi-parameter wetland delineations throughout the state including within the Coastal Zone, and is an expert in environmental regulation compliance (e.g., Endangered Species Act, Clean Water Act, Coastal Development Act, California Department of Fish and Game Code, Porter-Cologne Act).

EDUCATION, CERTIFICATIONS, REGISTRATIONS

B.A. Biology (Plant Sciences), University of California, Santa Cruz

40 Hour OSHA HAZWOPER Training and 8 eight-hour annual refresher courses

Hydrogeomorphic Approach to Functional Assessment of Riverine Waters/Wetlands in the South Coast Region of Santa Barbara County

Biology and Handling Trainings for California red-legged frog, California tiger salamander, and Santa Cruz long-toed salamander

U.S. Army Corps of Engineers Wetland Delineation Training

California Native Plant Society

California Botanical Society

California Invasive Plant Council

Society for Ecological Restoration

American Public Works Association

International Erosion Control Association

Wildlife Society, Western Chapter

EMPLOYMENT HISTORY

Kevin Merk Associates, LLC, Founding Principal Biologist (2011 through present)
Rincon Consultants, Inc., Biological Program Manager (2000-2011)
Zander Associates, Senior Botanist/Restoration Ecologist (1995 through 2000)
University of California, Santa Cruz Natural Resource Assessment Group, Botanist (1993-1995)
Greening Associates, Restoration Ecologist (1991-1992)

REPRESENTATIVE PROJECT EXPERIENCE*Conservation Planning*

- North of Playa Habitat Conservation Plan for the Smith's blue butterfly, Sand City.
- Mahoney Ranch Habitat Conservation Plan for the California tiger salamander (CTS) and California red-legged frog (CRLF), Santa Maria.
- Highway 46 Corridor Improvement Section 7 and 2081 Authorization for San Joaquin kit fox, San Luis Obispo County.
- Rancho Larios Subdivision Section 7 Consultation for CTS and CRLF, San Benito County.
- Union Valley Parkway Section 7 Consultation for CTS and CRLF on the Union Valley Parkway Project, Santa Maria.
- Salinas Road Interchange Section 7 Consultation for CTS and CRLF, Monterey County.
- Silver Creek Valley Country Club Section 7 Consultation for Bay checkerspot butterfly, San Jose.

Biological Resources Assessments

- Froom Ranch, mapped/classified vegetation, conducted rare plant and CRLF surveys, delineated USACE wetlands and CDFW jurisdictional areas, supporting design team during planning and CEQA review process, San Luis Obispo.
- More Mesa, conducted rare plant surveys, mapped vegetation communities and delineated USACE and Coastal Commission wetlands, Santa Barbara County.
- May Family Trust Property, mapped/classified vegetation, conducted rare plant surveys, delineated USACE wetlands, and assisted design team during planning and CEQA review process, San Luis Obispo County.
- Harmony Ranch, mapped/classified vegetation, conducted rare plant and California red-legged frog surveys, delineated USACE and Coastal Commission wetlands, and assisted design team during development planning process, San Luis Obispo County.
- Mormann Property, mapped/classified vegetation and conducted rare plant surveys, San Luis Obispo County.
- Laetitia Winery Improvement Project, rare plant surveys, CRLF surveys, and USACE wetland delineation, San Luis Obispo County.
- Santa Rosa Creek Trail, rare plant surveys and habitat assessments for California red-legged frog, pond turtle, steelhead and tidewater goby, Cambria.
- Pecho Valley Road Property vegetation classification, rare plant surveys and USFWS protocol Morro shoulderband snail surveys, Los Osos, San Luis Obispo County.

Focused Botanical Surveys

- Bradley Ranch Botanical Inventory and Wetland Delineation, Santa Maria.
- Entrada de Paso Robles Botanical Inventory, Paso Robles.
- Pismo Lake Ecological Reserve Botanical Inventory, San Luis Obispo County.
- Harmony Headlands Botanical Inventory, California State Parks.
- Sheridan Lane Botanical Inventory, San Luis Obispo County.

- Chevron Estero Marine Terminal Rare Plant Surveys and Wetland Delineation, San Luis Obispo County.
- Biddle Ranch Rare Plant Surveys and Wetland Delineation, San Luis Obispo County.
- Tract 1998 Rare Plant Surveys (Pismo Clarkia), Arroyo Grande.
- James Way Fuel Modification Project Rare Plant Surveys, Arroyo Grande.
- Highland Ranch Rare Plant Surveys, San Luis Obispo County.
- San Miguel Ranch Rare Plant Surveys and Wetland Delineation, San Luis Obispo County.
- Continental Vineyards Rare Plant Surveys and Wetland Delineation, San Luis Obispo County.
- Chandler Ranch Rare Plant Surveys, Paso Robles.
- Focused surveys for the rare Morro Manzanita in Los Osos.

Focused Animal Surveys

- SoCalGas Lines 300 and 90 Pipeline Removal Project Protocol Blunt-Nosed Leopard Lizard Surveys, Avenal, Kings County.
- SoCalGas Lincoln Street Pipeline Replacement Project Protocol Blunt-Nosed Leopard Lizard Surveys, Kern County.
- Tulare County Property Protocol Blunt-Nosed Leopard Lizard Surveys, Tulare County.
- North Fork Ranch Protocol Blunt-Nosed Leopard Lizard Surveys, San Luis Obispo and Santa Barbara Counties.
- Salinas Road Interchange Project, Caltrans Designated Biologist conducted California red-legged frog and California tiger salamander aquatic surveys. Captured and relocated over 10,000 life stages of California red-legged frog during construction, Monterey County.
- Santa Maria Integrated Waste Management Facility, USFWS protocol Vernal Pool Branchiopod and CTS Surveys (upland and aquatic) on 1,770-acre site, northern Santa Barbara County.
- Mahoney Ranch USFWS protocol California red-legged frog and California tiger salamander surveys, Santa Maria, Santa Barbara County.
- Biddle Ranch USFWS CRLF surveys and CTS habitat assessment, San Luis Obispo County
- Union Valley Parkway USFWS CRLF and CTS surveys (upland and aquatic), Santa Maria.
- Monarch butterfly annual population censusing surveys in Santa Cruz County, UCSC.
- Birch Street Project, USFWS CRLF surveys and Monarch butterfly habitat assessment, and riparian restoration plan in support of Coastal Development Permit, Cayucos.
- San Joaquin Kit Fox Habitat Evaluations and USFWS protocol surveys for numerous projects (winery expansion, residential subdivisions, linear utilities and transportation, telecommunication), northern San Luis Obispo County and southern Monterey County.

CEQA and NEPA Compliance Documents (primary author of Biological Resources Sections)

- Ahmanson Ranch General Plan Amendment and Specific Plan EIR, Ventura County.
- Rancho Maria Estates EIR Biological Resources Section, Santa Barbara County.
- Union Valley Parkway EIR/EA, City of Santa Maria.
- Santa Maria Integrated Waste Management Facility EIR, City of Santa Maria.
- Santa Maria Airport Specific Plan EIR, City of Santa Maria.
- Mahoney Ranch Environmental Assessment (EA), City of Santa Maria.
- Tract 1998 Rancho Grande EIR and supplements, City of Arroyo Grande.
- Biddle Ranch Agricultural Cluster Subdivision EIR, San Luis Obispo County.
- General Plan Land Use and Conservation Element Update EIR, City of San Luis Obispo.
- Chevron Estero Marine Terminal Source Removal Project EIR, San Luis Obispo County.
- Downtown Specific Plan EIR, City of Scotts Valley, Santa Cruz County.

Restoration Ecology and Regulatory Compliance Monitoring

- Los Angeles International Airport, prepared and implemented Ecological Landscape Plan for Coastal Development Permit to allow street removal and coastal dune habitat restoration in the northern El Segundo Dunes, Los Angeles World Airports.
- Surfer's Point Shoreline Retreat Project, prepared Coastal Dune Habitat Restoration Plan in support of Coastal Development Permit acquisition, City of Ventura.
- Cross Creek Bridge Replacement, prepared and implemented riparian habitat restoration plan, monitored construction and restoration activities in support of Coastal Development Permit, Malibu, Los Angeles County.
- Cherry Creek Residential Development, conducted USACE wetland delineation, prepared USACE, CDFG, and RWQCB permit applications including riparian and wetland habitat restoration plan, and provided biological monitoring during construction, Arroyo Grande
- California State University, Channel Islands, biological studies and wetland delineation, prepared riparian and wetland habitat mitigation program as part of USACE, CDFG and RWQCB permit applications, monitored construction, implemented habitat mitigation program and provided annual monitoring for five years, Ventura County.
- Damon Garcia Sports Complex Project, conducted focused studies including CRLF surveys and wetland delineation, prepared riparian/wetland habitat mitigation program as part of USACE, CDFG and RWQCB permit applications, monitored construction and implemented habitat mitigation program (i.e.: weed abatement and planting), City of San Luis Obispo.
- Bret Harte Unified High School District Sports Fields Complex, conducted wetland delineation, prepared riparian/wetland habitat mitigation plan as part of USACE, CDFG and RWQCB permit applications, Calaveras County.
- Salinas Regional Sports Authority Soccer Complex Project, conducted wetland delineation and prepared riparian and wetland habitat mitigation plan, City of Salinas.
- Highway 46 East Improvement Project, Senior Biologist overseeing environmental permit compliance during construction, Caltrans , San Luis Obispo County.
- Union Valley Parkway, prepared EIR/EA, BA, facilitated ESA Section 7 Consultation, and then was the Designated Biologist overseeing environmental permit compliance during construction, Caltrans/City of Santa Maria Local Assistance Project.
- Biddle Ranch Agricultural Cluster Subdivision Project, County of San Luis Obispo designated environmental monitor overseeing construction of roads and infrastructure improvements.
- Santa Maria River Mining, CDFW and Department of Conservation permit acquisition, riparian habitat restoration plan preparation and annual monitoring and permit compliance reporting, City of Santa Maria.

Teaching

- Workshop Instructor - California Native Plant Society Rare Plants and Habitats of San Luis Obispo County (separated into coastal and inland sections).
- Workshop Instructor/Field Coordinator - Elkhorn Slough Coastal Training Program's Management and Conservation of Coastal Grasslands.
- Guest lecturer – CalPoly San Luis Obispo Natural Resource Management and Landscape Architecture Departments.
- Lab Instructor - Ecology of California Flora, Plant Anatomy, Plant Taxonomy, Plant Physiology, Mycology, and Plants and Human Affairs, University of California, Santa Cruz.
- Presenter - Association of Environmental Professionals state and national conferences; Society of Ecological Restoration annual conferences, and International Erosion Control Association conferences.

Professional Resume

Jason Kirschenstein

Principal Biologist, Vice President

EMPLOYMENT HISTORY

2003 to present

Principal Biologist / Vice President
Sage Institute, Inc.

1998 to 2003

Biologist / Project Manager
Rincon Consultants, Inc.

2000 to 2002

Dendrology Instructor
California Polytechnic State University

1995 to 1998

Research Assistant
California Polytechnic State University

EDUCATION, AFFILIATIONS,

PERMITS

B.S., Forestry and Natural Resource Management / Wildlife Biology, California Polytechnic State University, San Luis Obispo

Association of Environmental Professionals, Audubon Society, Wildlife Society

Southwestern Willow Flycatcher Workshop and Certification

CDFW Blunt-Nosed Leopard Lizard Identification Workshop and Certification (Level II surveyor)

Giant Kangaroo Rat Identification/Handling Workshop and Certification

USFWS-approved monitor for various San Joaquin Valley listed species, CA Red-Legged Frog, steelhead, Southwestern Willow Flycatcher, and Least Bell's Vireo

State Rare, Threatened, Endangered plant collection permit

Venomous and non-Venomous snake handling training and certification, 2015

FERC Environmental Review and Compliance Training Certification

Santa Barbara County and San Luis Obispo County pre-approved biological resources consultant.

Morro Shoulderband Snail Protocol Survey Training

Jason Kirschenstein serves as a Principal Biologist and Vice President for Sage Institute, Inc. (SII). Mr. Kirschenstein is highly experienced in general and special-status wildlife and vegetation surveys, mitigation planning, regulatory compliance, Geographic Information System (GIS) applications, and environmental impact analysis. Mr. Kirschenstein is well versed in the planning process, and has successfully performed as an integral member on planning and design teams. He has provided biological and regulatory compliance services for local agencies, utilities, and private development projects.

Mr. Kirschenstein has conducted numerous biological surveys and is experienced in preparing biological assessments related to flora, fauna, endangered species, and sensitive habitats. Mr. Kirschenstein is well versed in construction and mitigation monitoring and habitat restoration design / implementation.

Mr. Kirschenstein has extensive experience in the preparation of permit packages for Clean Water Act Section 404 U.S. Army Corps of Engineers permits, CWA Section 401 Certifications from the Regional Water Quality Control Board, and California Department of Fish and Wildlife Section 1602 Streamed Alteration Agreements. Mr. Kirschenstein has also managed the preparation of U.S. Fish and Wildlife Service Section 7 and Section 10 documentation per the Federal Endangered Species Act and CDFW Section 2081 take authorization documentation per the California Endangered Species Act. Mr. Kirschenstein has worked closely with local agencies on permitting and environmental compliance projects, and is proficient in CEQA and NEPA analysis.

With over sixteen years of experience working with various GIS applications, Mr. Kirschenstein's capabilities range from habitat suitability mapping to performing complex constraints analyses. He has worked closely with various public agencies and private interests to obtain and properly manage GIS data. Mr. Kirschenstein's proficiency with advanced GPS technology, AutoCAD applications, image processing software, database management, and other GIS-related equipment enhances his overall GIS production and management capabilities.

SELECTED PROJECT EXPERIENCE

- **Sempra Energy (Southern CA Gas Company / San Diego Gas and Electric)** – Clean Water Act, Endangered Species Act, SWPPP, and local agency environmental compliance for operation, maintenance, capital, and Pipeline Integrity projects (2003 – ongoing).
 - Programmatic Compliance Efforts: Programmatic permit compliance efforts in Southern California, San Joaquin Valley, California Desert, and Coastal California. Performed as key team member for regional Biological Opinion and HCP planning and implementation efforts.
 - Transmission, Distribution, PSEP, and PIP Services: Biological impact assessments, permit facilitation, agency negotiations, construction monitoring, site restoration, and compliance assistance for State and Federal Endangered Species Acts, Sections 401 and 404 of the Clean Water Act, and CDFW 1600.
 - Construction Monitoring: Lead construction monitor for various Capital Improvement and maintenance (Transmission, Distribution, and Pipeline Integrity) projects. Duties include permit compliance oversight and construction monitor coordination and reporting.
- **Southern California Gas Company, San Joaquin Valley Programmatic Compliance Efforts and Draft Habitat Conservation Plan (2003-ongoing)**. Assisted SoCalGas for over 12 years in implementing, amending, and reporting for a San Joaquin Valley Biological Opinion covering operations and maintenance (O&M), and new construction activities on its natural gas pipeline system within Kern, Tulare, Fresno, Kings, San Luis Obispo, Santa Barbara, and Ventura counties. Services include project specific Biological Assessments, special-status plant and wildlife surveys, construction monitoring, and general regulatory compliance services. In 2014/2015 assisted in preparation of draft Habitat Conservation Plan for a 30-year FESA take permit covering 21 species in the San Joaquin Valley, including development of a comprehensive predictive species GIS model.
- **SoCalGas, Line 300 and Line 90 Pipeline Removal Project, Avenal and Kings Counties (March 2013 – December 2013)**. Protocol blunt-nosed leopard lizard surveys for 1.5-mile pipeline abandonment and removal project in the Kettleman Hills. Surveys also included presence / absence for San Joaquin kit fox, San Joaquin antelope squirrel, burrowing owl, and special-status plants including California jewelflower and San Joaquin woollythreads. Serviced as lead construction monitor, conducted San Joaquin kit fox den closure along project alignment, and assisted with field effort and coordinated giant kangaroo rat trapping efforts.
- **Southern CA Gas Company, Line 85 Pipeline Replacement Project, Kern and Los Angeles Counties (2003-2004)** Lead biological construction monitor for 20+ mile pipeline replacement project extending from the southern San Joaquin Valley to Frazier Park. Duties included conducting focused surveys for blunt-nosed leopard lizard, San Joaquin kit fox, rare plants, and nesting birds.
- **Southern CA Gas Company, Line 119 PIP Pipeline Replacement Project, Angeles National Forest (June 2012 – October 2014)**. Regulatory compliance and permitting, construction monitoring and post-construction permit compliance reporting. Included field GPS data collection along the 1.5 mile project alignment adjacent to Pyramid Lake.
- **Southern CA Gas Company, Lincoln Street Pipeline Replacement, Kern County (April 2013 – May 2014; SoCalGas Contact Johnny Grady)**. Regulatory compliance and permitting, general biological surveys and protocol blunt-nosed leopard lizard and San Joaquin antelope squirrel surveys.
- **Southern CA Gas Company, Avenal Creek Exposure Repair, Kings County (February 2012 – February 2014; SoCalGas Contact Johnny Grady)**. Regulatory compliance and permitting, protocol blunt-nosed leopard lizard, San Joaquin kit fox, giant kangaroo rat (assisted), rare plant surveys, construction monitoring.
- **Southern CA Gas Company, San Julian Ranch, Santa Barbara County (April 2009 – December 2012; SoCalGas Contact Johnny Grady)**. Regulatory compliance and permitting, USFWS protocol surveys for Least Bell's vireo and southwestern willow flycatcher. Approved California red-legged frog, steelhead, least Bell's vireo, and southwestern willow flycatcher monitor. Lead construction monitor for multiple HDD's within occupied California red-legged frog and steelhead habitat.
- **Southern CA Gas Company, L3003/407 Sullivan Canyon ROW Maintenance, City of Los Angeles (2005 – ongoing; SoCalGas Contact Johnny Grady)**. Regulatory compliance and permitting lead for long-term maintenance Corps 404 Individual Permit, RWQCB 401 Certification, CDFW Streambed Alteration Agreement, City of L.A. Tree Permit. Includes restoration design, implementation, and monitoring along approximately 4-miles of ROW within riparian habitat.

**U.S. FISH AND WILDLIFE SERVICE
STANDARDIZED RECOMMENDATIONS
FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX
PRIOR TO OR DURING GROUND DISTURBANCE**

Prepared by the Sacramento Fish and Wildlife Office
January 2011

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. **However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act) and does not preclude the need for section 7 consultation or a section 10 incidental take permit for the proposed project.** Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). These protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

IS A PERMIT NECESSARY?

Certain acts need a permit from the Service which includes destruction of any known (occupied or unoccupied) or natal/pupping kit fox dens. Determination of the presence or absence of kit foxes and /or their dens should be made during the environmental review process.

All surveys and monitoring described in this document must be conducted by a qualified biologist and these activities do not require a permit. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, the biologist(s) must be able to identify coyote, red fox,

gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount. Resumes of biologists should be submitted to the Service for review and approval prior to any survey or monitoring work occurring.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints, of approximately one acre or less, such as an individual in-fill oil well, communication tower, or bridge repairs. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features and utilize this information as guidance to situate the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then surveys should be conducted and the Service should be contacted for technical assistance to determine the extent of possible take.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Kit foxes change dens four or five times during the summer months, and change natal dens one or two times per month (Morrell 1972). Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol). Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities.

If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If the take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping den which may not be destroyed while occupied. A take authorization/permit is required to destroy these dens even after they are vacated. Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: Linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project and those requirements supersede any requirements found in this document.

EXCLUSION ZONES

In order to avoid impacts, construction activities must avoid their dens. The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances due to the length of dens underground. The following distances are **minimums**, and if they cannot be followed the Service must be contacted. Adult and pup kit foxes are known to sometimes rest and play near the den entrance in the afternoon, but most above-ground activities begin near sunset and continue sporadically throughout the night. Den definitions are attached as Exhibit A.

Potential den**	50 feet
Atypical den**	50 feet
Known den*	100 feet
Natal/pupping den (occupied <u>and</u> unoccupied)	Service must be contacted

***Known den:** To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, orange construction fencing or other fencing as approved by the Service as long as it has openings for kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

****Potential and Atypical dens:** Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited or greatly restricted within the exclusion zones.

DESTRUCTION OF DENS

Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection.

Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service.

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use.

If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities.

The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities shall cease and the Service shall be notified immediately.

CONSTRUCTION AND ON-GOING OPERATIONAL REQUIREMENTS

Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities should be minimized by adhering to the following activities. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting achievement of project goals. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.
2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.
3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is

discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.
5. No firearms shall be allowed on the project site.
6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.
7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.
8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.
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10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be

re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

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13. The Sacramento Fish and Wildlife Office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFG contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.
14. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600

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"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

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"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

Attachment 3

STANDARD RECOMMENDATIONS

1

U.S. FISH AND WILDLIFE SERVICE STANDARDIZED RECOMMENDATIONS FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX PRIOR TO OR DURING GROUND DISTURBANCE

Prepared by the Sacramento Fish and Wildlife Office
January 2011

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. **However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act) and does not preclude the need for section 7 consultation or a section 10 incidental take permit for the proposed project.** Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). These protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

IS A PERMIT NECESSARY?

Certain acts need a permit from the Service which includes destruction of any known (occupied or unoccupied) or natal/pupping kit fox dens. Determination of the presence or absence of kit foxes and /or their dens should be made during the environmental review process.

All surveys and monitoring described in this document must be conducted by a qualified biologist and these activities do not require a permit. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, the biologist(s) must be able to identify coyote, red fox,

gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount. Resumes of biologists should be submitted to the Service for review and approval prior to any survey or monitoring work occurring.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints, of approximately one acre or less, such as an individual in-fill oil well, communication tower, or bridge repairs. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features and utilize this information as guidance to situate the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then surveys should be conducted and the Service should be contacted for technical assistance to determine the extent of possible take.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Kit foxes change dens four or five times during the summer months, and change natal dens one or two times per month (Morrell 1972). Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol). Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities.

If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If the take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping den which may not be destroyed while occupied. A take authorization/permit is required to destroy these dens even after they are vacated. Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: Linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project and those requirements supersede any requirements found in this document.

EXCLUSION ZONES

In order to avoid impacts, construction activities must avoid their dens. The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances due to the length of dens underground. The following distances are **minimums**, and if they cannot be followed the Service must be contacted. Adult and pup kit foxes are known to sometimes rest and play near the den entrance in the afternoon, but most above-ground activities begin near sunset and continue sporadically throughout the night. Den definitions are attached as Exhibit A.

Potential den**	50 feet
Atypical den**	50 feet
Known den*	100 feet
Natal/pupping den (occupied <u>and</u> unoccupied)	Service must be contacted

***Known den:** To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, orange construction fencing or other fencing as approved by the Service as long as it has openings for kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

****Potential and Atypical dens:** Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited or greatly restricted within the exclusion zones.

DESTRUCTION OF DENS

Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection.

Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service.

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use.

If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities.

The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities shall cease and the Service shall be notified immediately.

CONSTRUCTION AND ON-GOING OPERATIONAL REQUIREMENTS

Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities should be minimized by adhering to the following activities. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting achievement of project goals. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.
2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.
3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is

discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.
5. No firearms shall be allowed on the project site.
6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.
7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.
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Revised Attachment 4



MONSOON CONSULTANTS

**P.O. Box 151 San Luis Obispo, California 93406 Tel 805-280-1051
breely@monsoonconsultants.com**

August 10, 2017

Mr. Kevin Merrill
Mesa Vineyard Management, Inc.
P.O Box 789
Templeton, California 93465
Tel: 805-434-4100

**Re: NORTH FORK VINEYARDS FROST PROTECTION RESERVOIRS #1, #2 & #3 –
ANALYSIS OF RESERVOIR EVAPORATIVE LOSSES**

Dear Mr. Merrill:

Per your request Monsoon Consultants (Monsoon) has been retained by Mesa Vineyard Management, Inc. (MESA) to provide hydrologic consulting services for the referenced project. Our specific scope of services is related to the estimation of net evaporative losses from the three (3) proposed agricultural reservoirs. The proposed reservoirs are planned to be constructed for frost protection at the North Fork Vineyards, which is located approximately 9-miles west of the community of New Cuyama in Santa Barbara County, California. The approximate coordinates of the subject property are Latitude: 35.014835 Longitude: -119.861751. The project includes APN 147-020-045 and 147-020-146. Monsoon has performed the requested evaporation analyses and the corresponding results are presented below.

HYDROLOGIC ANALYSIS

The owners of North Fork Vineyards are proposing to construct three (3) agricultural reservoirs which will be utilized for water storage for frost protection of the vines.

CIVIL ENGINEERS / HYDROLOGISTS

The vines are particularly vulnerable to damage from frost events during the months of February, March and April. When not needed for frost protection, frost pond water will be metered out for vineyard irrigation. In an effort to minimize the amount of evaporation that will occur from the subject agricultural reservoirs, MESA plans to maintain water levels in the reservoirs as follows:

- May 1st – January 31st - Reservoirs will be maintained with a water depth of 3-feet from well supplied water.
- February 1st – April 30th - Reservoirs will be maintained at a full condition for potential frost protection.

For the purposes of estimating the magnitude of monthly net evaporative losses from each of the subject frost protection reservoirs, Monsoon obtained and analyzed historic precipitation and evapotranspiration data from existing climatologic recording gage sites which are in close proximity to the North Fork Vineyards property. Specifically, we utilized average monthly precipitation data from the recording station located at the New Cuyama Fire Station. This data set is maintained by the Western Regional Climate Center and includes recorded data between 1974 and 2016. A copy of the summary data is included as an attachment to this report.

In addition to the precipitation analysis, Monsoon also developed an estimate of the average monthly evaporative losses which will occur within each of the subject reservoirs. For the purposes of this estimate, Monsoon reviewed monthly reference evapotranspiration (ET_o) data from the California Irrigation Management Information System (CIMIS) for the period between January 1, 2000 and December 31, 2016 which was obtained from the CIMIS station in Cuyama (CIMIS Station #88). During the referenced time frame, the average monthly ET_o for the Cuyama CIMIS site ranged from a minimum of 3.13-inches in December to a maximum of 14.45 inches in July. Pan evaporation was estimated by applying the conversion: $ET_o / 0.6 = \text{Pan Evaporation}$. Pan evaporation was then converted to lake evaporation by applying a factor of 0.75. A copy of the summary evaporation calculations is included as an attachment to this report.

Based on the results of our analysis, the average monthly lake evaporation rate for each of the North Fork Vineyards Reservoirs ranges from approximately 2.35-inches in December to a maximum of 10.84-inches in July. Based on our review of the design drawings for the

subject reservoirs, which were prepared by Tom A. Howell (CA CE 27037), it was determined that the surface area, at full conditions, is approximately 2.8 acres for each of the sites. This is the condition that will be maintained during the months of February, March and April for frost protection. During the remainder of the year, when there will be 3-feet of water in each of the reservoirs, the pond surface area is approximately 1.2 – 1.3 acres in the reservoirs.

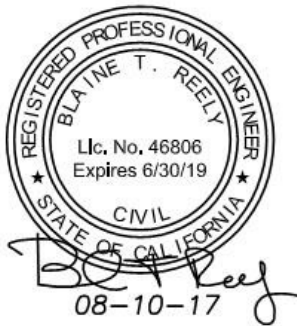
Through the implementation of the reservoir management strategy described above, the total average annual net evaporative losses, from each of the subject reservoirs, is summarized below. The combined average annual estimated net evaporative losses from all three reservoirs, is approximately 26.28 AC-FT. A summary of the hydrologic analysis is attached.

ANNUAL NET EVAPORATIVE LOSSES (AC-FT)

RESERVOIR #1	8.50
RESERVOIR #2	9.04
RESERVOIR #3	8.74

If you have any questions or require additional information, please do not hesitate to call.

Sincerely,



Monsoon Consultants

Blaine T. Reely, PhD, PE
Principal Engineer

attachments

CIVIL ENGINEERS / HYDROLOGISTS

**NORTH FORK VINEYARDS - RESERVOIR #1
FROST PROTECTION RESERVOIR
ANNUAL EVAPORATION PROFILE
POND MINIMUM: MAY - JAN
(AVERAGE CONDITIONS)**

IRRIGATION RESERVOIR EVAPORATION ANALYSIS

MONTH	AVG. MONTHLY PAN EVAPORATION (IN)	AVG. MONTHLY LAKE EVAPORATION (IN)	AVG. MONTHLY PRECIPITATION (IN)	RESERVOIR #1 MONTHLY NET EVAPORATION LOSSES (AC-FT)	CONDITION OF THE IRRIGATION RESERVOIR #1
JAN	3.57	2.68	1.45	0.12	3' OF WATER IN POND
FEB	4.22	3.16	1.68	0.35	POND FULL
MAR	6.92	5.19	1.62	0.85	
APR	9.02	6.77	0.47	1.50	
MAY	12.07	9.05	0.24	0.89	3' OF WATER IN POND
JUN	13.89	10.41	0.04	1.05	
JUL	14.45	10.84	0.08	1.09	
AUG	13.30	9.98	0.10	1.00	
SEP	10.21	7.66	0.35	0.74	
OCT	7.02	5.27	0.30	0.50	
NOV	4.31	3.23	0.55	0.27	
DEC	3.13	2.35	1.03	0.13	
TOTAL ANNUAL EVAP. LOSSES (AC-FT)				8.50	

NOTE 1: CONVERSION: 1 AC-FT/AC/YR = 892.7 GAL/DAY

NOTE 2: WATER SURFACE AREA ESTIMATES FOR EVAPORATION LOSS ESTIMATES: Reservoir #1 = 2.85 AC (RESERVOIR FULL)

NOTE 2: WATER SURFACE AREA ESTIMATES FOR EVAPORATION LOSS ESTIMATES: Reservoir #1 = 1.216 AC (3' OF WATER IN RESERVOIR)

NOTE 4: RESERVOIR WATER STORAGE CAPACITY ESTIMATE (MAXIMUM): RESERVOIR #1 = 49.0 AC-FT

NOTE 5: AVERAGE MONTHLY PRECIPITATION DATA SOURCE = WESTERN REGIONAL CLIMATE CENTER WEBSITE / NEW CUYAMA STATION (1974-2016)

NOTE 6: AVERAGE MONTHLY EVAPORATION DATA SOURCE = CALIFORNIA IRRIGATION MANAGEMENT INFORMATION SYSTEM (CIMIS) WEBSITE / CUYAMA STATION (2000-2016)

**NORTH FORK VINEYARDS - RESERVOIR #2
FROST PROTECTION RESERVOIR
ANNUAL EVAPORATION PROFILE
POND MINIMUM: MAY - JAN
(AVERAGE CONDITIONS)**

IRRIGATION RESERVOIR EVAPORATION ANALYSIS

MONTH	AVG. MONTHLY PAN EVAPORATION (IN)	AVG. MONTHLY LAKE EVAPORATION (IN)	AVG. MONTHLY PRECIPITATION (IN)	RESERVOIR #1	CONDITION OF THE IRRIGATION RESERVOIR #2
				MONTHLY NET EVAPORATION LOSSES (AC-FT)	
JAN	3.57	2.68	1.45	0.13	3' OF WATER IN POND
FEB	4.22	3.16	1.68	0.36	POND FULL
MAR	6.92	5.19	1.62	0.86	
APR	9.02	6.77	0.47	1.52	3' OF WATER IN POND
MAY	12.07	9.05	0.24	0.97	
JUN	13.89	10.41	0.04	1.14	
JUL	14.45	10.84	0.08	1.18	
AUG	13.30	9.98	0.10	1.09	
SEP	10.21	7.66	0.35	0.80	
OCT	7.02	5.27	0.30	0.55	
NOV	4.31	3.23	0.55	0.29	
DEC	3.13	2.35	1.03	0.14	
TOTAL ANNUAL EVAP. LOSSES (AC-FT)				9.04	

NOTE 1: CONVERSION: 1 AC-FT/AC/YR = 892.7 GAL/DAY

NOTE 2: WATER SURFACE AREA ESTIMATES FOR EVAPORATION LOSS ESTIMATES: Reservoir #2 = 2.897 AC (RESERVOIR FULL)

NOTE 2: WATER SURFACE AREA ESTIMATES FOR EVAPORATION LOSS ESTIMATES: Reservoir #2 = 1.319 AC (3' OF WATER IN RESERVOIR)

NOTE 4: RESERVOIR WATER STORAGE CAPACITY ESTIMATE (MAXIMUM): RESERVOIR #2 = 49.1 AC-FT

NOTE 5: AVERAGE MONTHLY PRECIPITATION DATA SOURCE = WESTERN REGIONAL CLIMATE CENTER WEBSITE / NEW CUYAMA STATION (1974-2016)

NOTE 6: AVERAGE MONTHLY EVAPORATION DATA SOURCE = CALIFORNIA IRRIGATION MANAGEMENT INFORMATION SYSTEM (CIMIS) WEBSITE / CUYAMA STATION (2000-2016)

**NORTH FORK VINEYARDS - RESERVOIR #3
FROST PROTECTION RESERVOIR
ANNUAL EVAPORATION PROFILE
POND MINIMUM: MAY - JAN
(AVERAGE CONDITIONS)**

IRRIGATION RESERVOIR EVAPORATION ANALYSIS

MONTH	AVG. MONTHLY PAN EVAPORATION (IN)	AVG. MONTHLY LAKE EVAPORATION (IN)	AVG. MONTHLY PRECIPITATION (IN)	RESERVOIR #1	CONDITION OF THE IRRIGATION RESERVOIR #3
				MONTHLY NET EVAPORATION LOSSES (AC-FT)	
JAN	3.57	2.68	1.45	0.13	3' OF WATER IN POND
FEB	4.22	3.16	1.68	0.35	POND FULL
MAR	6.92	5.19	1.62	0.85	
APR	9.02	6.77	0.47	1.50	3' OF WATER IN POND
MAY	12.07	9.05	0.24	0.93	
JUN	13.89	10.41	0.04	1.09	
JUL	14.45	10.84	0.08	1.13	
AUG	13.30	9.98	0.10	1.04	
SEP	10.21	7.66	0.35	0.77	
OCT	7.02	5.27	0.30	0.52	
NOV	4.31	3.23	0.55	0.28	
DEC	3.13	2.35	1.03	0.14	
TOTAL ANNUAL EVAP. LOSSES (AC-FT)				8.74	

NOTE 1: CONVERSION: 1 AC-FT/AC/YR = 892.7 GAL/DAY

NOTE 2: WATER SURFACE AREA ESTIMATES FOR EVAPORATION LOSS ESTIMATES: Reservoir #3 = 2.852 AC (RESERVOIR FULL

NOTE 2: WATER SURFACE AREA ESTIMATES FOR EVAPORATION LOSS ESTIMATES: Reservoir #3 = 1.265 AC (3' OF WATER IN RESERVOIR

NOTE 4: RESERVOIR WATER STORAGE CAPACITY ESTIMATE (MAXIMUM): RESERVOIR #1 = 48.9 AC-FT

NOTE 5: AVERAGE MONTHLY PRECIPITATION DATA SOURCE = WESTERN REGIONAL CLIMATE CENTER WEBSITE / NEW CUYAMA STATION (1974-2016)

NOTE 6: AVERAGE MONTHLY EVAPORATION DATA SOURCE = CALIFORNIA IRRIGATION MANAGEMENT INFORMATION SYSTEM (CIMIS) WEBSITE / CUYAMA STATION (2000-2016)

NOTE:
To print data frame (right side), click on right frame before printing.

1981- 2010

- [Daily Temp. & Precip.](#)
- [Daily Tabular data \(-23 KB\)](#)
- [Monthly Tabular data \(-1 KID](#)
- [NCDC 1981-2010 Normals HKB\)](#)

1971- 2000

- [Daily Temp. & Precip.](#)
- [Daily Tabular data \(-23 KB\)](#)
- [Monthly Tabular data \(-1 KID](#)
- [NCDC 1971-2000 Normals HKB\)](#)

1961-1990

- [Daily Temp. & Precip.](#)
- [Daily Tabular data \(-23 KB\)](#)
- [Monthly Tabular data \(-1 KR\)](#)

NEW CUYAMA FIRE STN, CALIFORNIA (046154)

Period of Record Monthly Climate Summary

Period of Record: 01/01/1974 to 06/09/2016

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	60.9	61.8	65.1	70.5	79.6	88.2	94.3	93.3	87.6	77.7	66.4	60.8	75.5
Average Min. Temperature (F)	32.4	34.2	36.5	38.6	44.3	50.8	55.8	54.7	50.9	43.0	35.3	31.5	42.3
Average Total Precipitation (in.)	1.44	1.68	1.59	0.46	0.24	0.04	0.08	0.10	0.35	0.30	0.55	1.03	7.84
Average Total Snowfall (in.)	0.1	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 94.1% Min. Temp.: 94.3% Precipitation: 96.4% Snowfall: 95.8% Snow Depth: 95.9%
Check [Station Metadata](#) or [Metadata graphics](#) for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

CUVAMA
CIMIS STATION#88
REFERENCE EVAPOTRANSPIRATION DATA
2000=2016

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Average Eto (IN)	Average Pan Evaporation (IN)	Average Lake Evaporation (IN)
2.13	2.35	1.97	1.87	1.87	2.28	1.82	2.44	1.97	2.24	2.52	2.08	3.08	2.29	1.7	2.14	3.57	2.68
3.06	1.95	2.14	2.08	2.75	2.43	2.57	2.36	2.08	2.52	2.82	2.78	2.88	3.11	3.26	2.53	4.22	3.16
4.2	3.91	4.86	3.65	2.79	4.83	3.9	4.27	4.13	3.49	4.21	4.47	4.64	4.96	4.4	4.15	6.92	5.19
5.53	4.26	6.12	5.12	4.02	5.82	5.45	5.85	4.77	5.25	5.21	6.36	6.12	6.38	5.66	5.41	9.02	6.77
7.79	6.84	7.82	7	6.76	8.03	6.97	6.61	6.89	6.82	7.61	7.75	8.2	7.06	6.81	7.24	12.07	9.05
8.81	8.47	8.38	8.06	7.87	8.59	7.84	7.67	8.46	7.87	8.54	8.62	9.07	8.35	8.97	8.33	13.89	10.41
8.85	8.8	8.65	9.14	8.48	8.19	8.43	9.44	9.09	8.78	8.68	8.97	8.8	8.16	9.42	8.67	14.45	10.84
8.42	8.02	7.43	8.26	7.87	6.75	7.56	7.95	8.35	8.23	8.32	8.05	8.16	8.14	8.46	7.98	13.30	9.98
6.31	6.54	5.93	5.57	6.19	5.35	5.65	6.69	6.38	6.17	6.38	6.2	6.16	6.24	6.24	6.13	10.21	7.66
4.21	5.19	3.56	4.07	3.84	3.96	4.73	4.34	3.61	4.19	4.24	4.47	4.67	4.02	4.12	4.21	7.02	5.27
2.77	2.26	2.25	2.68	2.53	2.67	2.63	2.76	2.62	2.4	2.64	2.81	2.72	2.53	2.78	2.59	4.31	3.23
1.63	1.84	2.09	1.82	2.08	2.05	1.89	1.78	1.71	2.17	1.52	2.36	1.62	1.82	1.68	1.88	3.13	2.35
															61.26	102.11	76.58

Attachment 5



Edmund G. Brown Jr.
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit



Ken Alex
Director

July 7, 2017

Steve Rodriguez
Santa Barbara County
624 W. Foster Rd
Santa Barbara, CA 93455

Subject: North Fork Ranch Frost Ponds
SCH#: 2017061009

Dear Steve Rodriguez:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on July 6, 2017, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Morgan".

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

**Document Details Report
State Clearinghouse Data Base**

SCH# 2017061009
Project Title North Fork Ranch Frost Ponds
Lead Agency Santa Barbara County

Type MND Mitigated Negative Declaration
Description A request of Brian Tetley, agent for Brodiaea, inc, owner, to consider Case No. 16CUP-00000-00005. The North Fork Ranch Frost Pond project is a request to construct and operate three frost ponds that would store water to be used for frost protection at the North Fork Ranch Vineyards. The project also includes the construction of new underground pipelines that would extend between each of the proposed reservoirs and the existing vineyard irrigation system.

Lead Agency Contact

Name Steve Rodriguez
Agency Santa Barbara County
Phone 805-682-3413
email
Address 624 W. Foster Rd
City Santa Barbara
Fax
State CA **Zip** 93455

Project Location

County Santa Barbara
City
Region
Lat / Long
Cross Streets HWY 166
Parcel No. 147-020-045
Township

Range **Section** **Base**

Proximity to:

Highways SR 166
Airports
Railways
Waterways Cuyama River
Schools
Land Use LU: Rural area, ag commercial; Z:AG-II-100

Project Issues Archaeologic-Historic; Biological Resources; Geologic/Seismic; Soil Erosion/Compaction/Grading; Water Quality; Wildlife

Reviewing Agencies Resources Agency; Department of Conservation; Department of Fish and Wildlife, Region 5; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 5; Regional Water Quality Control Board, Region 3; State Water Resources Control Board, Division of Drinking Water, District 6; State Water Resources Control Board, Division of Drinking Water; Native American Heritage Commission; State Lands Commission

Date Received 06/07/2017 **Start of Review** 06/07/2017 **End of Review** 07/06/2017

STATE OF CALIFORNIA

NATIVE AMERICAN HERITAGE COMMISSION

Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710
Fax (916) 373-5471

Edmund G. Brown Jr., Governor



July 3, 2017

Steve Rodriguez
Santa Barbara County Planning and Development
624 W. Foster Road
Santa Maria, CA 93455

Sent via e-mail: rodriguezaicp@aol.com

Re: SCH# 2017061009, North Fork Ranch Frost Ponds Project, Community of New Cuyama; Santa Barbara County, California

Dear Mr. Rodriguez:

The Native American Heritage Commission (NAHC) has reviewed the Mitigated Negative Declaration prepared for the project referenced above. The review included the Introduction and Project Description, and the Potentially Significant Effects Checklist prepared by Rincon for the Santa Barbara County Planning and Development. We have the following concerns:

1. There is no documentation of **government-to-government consultation by the lead agency** under AB-52 with Native American tribes traditionally and culturally affiliated to the project area as required by statute, or that mitigation measures were developed in consultation with the tribes. Discussions under AB-52 may include the type of document prepared; avoidance, minimization of damage to resources; and proposed mitigation. Contact by consultants during the Cultural Resources Assessments is not formal consultation.
2. While Archaeological Mitigation includes a Native American Monitor, there are no mitigation measures specifically addressing Tribal Cultural Resources separately. Mitigation measures must take Tribal Cultural Resources into consideration as required under AB-52, **with or without consultation** occurring. Mitigation language for archaeological resources is not always appropriate for or similar to measures specifically for handling Tribal Cultural Resources.

The California Environmental Quality Act (CEQA)¹, specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment.² If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared.³ In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended in 2014 by Assembly Bill 52. (AB 52).⁴ **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** AB 52 created a separate category for "tribal cultural resources"⁵, that now includes "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment."⁶ Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.⁷ Your project may also be subject to **Senate Bill 18 (SB 18)** (Burton, Chapter 905, Statutes of 2004), Government Code 65352.3, if it also involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space. **Both SB 18 and AB 52 have tribal consultation requirements.** Additionally, if your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966⁸ may also apply.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

Agencies should be aware that AB 52 does not preclude agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52. For that reason, we urge you

¹ Pub. Resources Code § 21000 et seq.

² Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b); CEQA Guidelines Section 15064.5 (b)

³ Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1); CEQA Guidelines § 15064 (a)(1)

⁴ Government Code 65352.3

⁵ Pub. Resources Code § 21074

⁶ Pub. Resources Code § 21084.2

⁷ Pub. Resources Code § 21084.3 (a)

⁸ 16 U.S.C. 300101, 36 C.F.R. § 800 et seq.

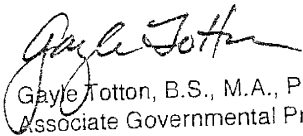
to continue to request Native American Tribal Consultation Lists and Sacred Lands File searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>. Additional information regarding AB 52 can be found online at http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf, entitled "Tribal Consultation Under AB 52: Requirements and Best Practices".

The NAHC recommends lead agencies consult with all California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources.

A brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments is also attached.

Please contact me at gayle.totton@nahc.ca.gov or call (916) 373-3710 if you have any questions.

Sincerely,



Gayle Totton, B.S., M.A., Ph.D
Associate Governmental Project Analyst

Attachment

cc: State Clearinghouse

Pertinent Statutory Information:

Under AB 52:

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a **lead agency** shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice.

A **lead agency** shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.⁹ and **prior to the release of a negative declaration, mitigated negative declaration or environmental impact report.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18).¹⁰

The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- a. Alternatives to the project.
- b. Recommended mitigation measures.
- c. Significant effects.¹¹

1. The following topics are discretionary topics of consultation:

- a. Type of environmental review necessary.
- b. Significance of the tribal cultural resources.
- c. Significance of the project's impacts on tribal cultural resources.

If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency.¹²

With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process **shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10.** Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.¹³

If a project may have a significant impact on a tribal cultural resource, **the lead agency's environmental document shall discuss both of the following:**

- a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
- b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource.¹⁴

Consultation with a tribe shall be considered concluded when either of the following occurs:

- a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
- b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.¹⁵

Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 **shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program,** if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable.¹⁶

If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, **the lead agency shall consider feasible mitigation** pursuant to Public Resources Code section 21084.3 (b).¹⁷

An environmental impact report **may not be certified,** nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

- a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
- b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

⁹ Pub. Resources Code § 21080.3.1, subds. (d) and (e)

¹⁰ Pub. Resources Code § 21080.3.1 (b)

¹¹ Pub. Resources Code § 21080.3.2 (a)

¹² Pub. Resources Code § 21080.3.2 (a)

¹³ Pub. Resources Code § 21082.3 (c)(1)

¹⁴ Pub. Resources Code § 21082.3 (b)

¹⁵ Pub. Resources Code § 21080.3.2 (b)

¹⁶ Pub. Resources Code § 21082.3 (a)

¹⁷ Pub. Resources Code § 21082.3 (e)

- c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days.¹⁸
This process should be documented in the Tribal Cultural Resources section of your environmental document.

Under SB 18:

Government Code § 65352.3 (a) (1) requires consultation with Native Americans on general plan proposals for the purposes of "preserving or mitigating impacts to places, features, and objects described § 5097.9 and § 5091.993 of the Public Resources Code that are located within the city or county's jurisdiction. Government Code § 65560 (a), (b), and (c) provides for consultation with Native American tribes on the open-space element of a county or city general plan for the purposes of protecting places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code.

- SB 18 applies to **local governments** and requires them to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf
- **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.**¹⁹
- There is no Statutory Time Limit on Tribal Consultation under the law.
- **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research,²⁰ the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction.²¹
- **Conclusion Tribal Consultation:** Consultation should be concluded at the point in which:
 - The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
 - Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation.²²

NAHC Recommendations for Cultural Resources Assessments:

- Contact the NAHC for:
 - A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
 - A Native American Tribal Contact List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
 - The request form can be found at <http://nahc.ca.gov/resources/forms/>.
- Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
 - If part or the entire APE has been previously surveyed for cultural resources.
 - If any known cultural resources have been already been recorded on or adjacent to the APE.
 - If the probability is low, moderate, or high that cultural resources are located in the APE.
 - If a survey is required to determine whether previously unrecorded cultural resources are present.
- If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
 - The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

¹⁸ Pub. Resources Code § 21082.3 (d)

¹⁹ (Gov. Code § 65352.3 (a)(2)).

²⁰ pursuant to Gov. Code section 65040.2,

²¹ (Gov. Code § 65352.3 (b)).

²² (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Examples of Mitigation Measures That May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

- Avoidance and preservation of the resources in place, including, but not limited to:
 - Planning and construction to avoid the resources and protect the cultural and natural context.
 - Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - Protecting the cultural character and integrity of the resource.
 - Protecting the traditional use of the resource.
 - Protecting the confidentiality of the resource.
- Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed.²³
- Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated.²⁴

The lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

- Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources.²⁵ In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
- Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
- Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

²³ (Civ. Code § 815.3 (c)).

²⁴ (Pub. Resources Code § 5097.991).

²⁵ per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)).

DEPARTMENT OF TRANSPORTATION

50 HIGUERA STREET
SAN LUIS OBISPO, CA 93401-5415
PHONE (805) 549-3111



*Serious drought.
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July 7, 2017

SB 166 PM 53.72
SCH# 2017061009

Steve Rodriguez
Planning and Development
County of Santa Barbara
123 E. Anapamu Street
Santa Barbara, CA 93101

RE: DRAFT MITIGATED NEGATIVE DECLARATION – NORTH FORK RANCH FROST PONDS

Dear Mr. Rodriguez:

The California Department of Transportation (Caltrans) District 5, Local Development-Intergovernmental Review (LD-IGR) Branch, appreciates the opportunity to review the draft Mitigated Negative Declaration (MND) for a conditional use permit (16CUP-00000-00005) to construct and operate a 147-acre-foot reservoir for an existing vineyard along State Route (SR) 166. The project site is located approximately nine miles west of the unincorporated community of New Cuyama. Caltrans offers the following comments in response to the project's evaluation of potential impacts to the state highway system as discussed in the draft MND:

Water Resources/Flooding

The document states that the proposed project would be required to comply with County Grading Ordinance requirements to ensure that the proposed reservoir berms are structurally adequate to contain the water impounded by the reservoirs. The document concludes that the project would have **no impact** related to flood-related hazards. However, Caltrans notes that the potential exists for catastrophic failure of the berms and inundation of SR 166 resulting in potentially significant impacts to state facilities. Caltrans is concerned regarding the adequacy of the County Grading Ordinance requirements, and recommends the incorporation of a mitigation measures to require review and approval of the berms by the California Department of Water Resources in order to ensure structural integrity and adequacy and reduce potential impacts to **less than significant with mitigation**.

Encroachment Permits and Irrigation Lines

The project details state that water from wells conveyed to the reservoir will utilize existing vineyard irrigation pipelines extending beneath SR 166. Please provide more information regarding these irrigation lines so they can be positively located. Caltrans notes that there is a record of an encroachment permit (0589 NMC 0256) for a three-inch galvanized steel waterline crossing under SR 166 on the floor of a cattle pass structure located at Post Mile (PM) 53.7 (actual cattle pass is at PM 53.5). However, without positive location Caltrans is not able to verify that these are the same irrigation line being proposed for use by the project. Please be aware that any project-related activities

North Fork Ranch Frost Ponds
July 7, 2017
Page 2

(e.g., construction, maintenance, general operations, etc.) that would occur within the Caltrans right-of-way will require an approved encroachment permit.

If you have any questions, or need further clarification on items discussed above, please don't hesitate to contact me directly at Michael.Hollier@dot.ca.gov or (805) 549-3131.

Sincerely,



MICHAEL D. HOLLIER
Transportation Planner
Development Review Coordinator
District 5, LD-IGR South Branch

cc: none

Subj: **North Fork Ranch Frost Ponds Project draft Mitigated Negative Declaration, Santa Barbara County SCH# 2017061009**
 Date: 7/6/2017 3:45:28 P.M. Pacific Daylight Time
 From: Martin.Potter@wildlife.ca.gov
 To: Rodriguezaicp@aol.com
 CC: Christine.Found-Jackson@wildlife.ca.gov, Christine.Thompson@wildlife.ca.gov,
Bob.Stafford@wildlife.ca.gov, Sarah.Rains@wildlife.ca.gov

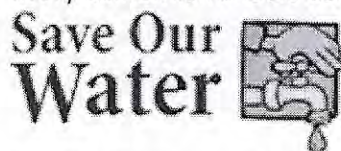
Dear Mr. Rodriguez,

The Department has reviewed the above Subject Mitigated Negative Declaration (MND) for impacts to biological resources. The proposed project includes the construction of 3 five-acre frost ponds, with associated pipelines between ponds, to facilitate the growing of grapes. The proposed project site is 6,565 acres located in the Cuyama Valley and is within the range of several special status plant and animal species, including the Federal Endangered San Joaquin woollythreads (*Monolopia congdonii*), the Federal and State Endangered and Fully Protected blunt-nosed leopard lizard (*Gambelia sila*), the Federal Endangered and State Threatened San Joaquin kit fox (*Vulpes macrotis mutica*), and the Federal and State Endangered giant kangaroo rat (*Dipodomys ingens*). Surveys were conducted for these listed species, using Department-recognized protocols. No listed species or their habitats were observed on the proposed project site. However, Department staff observed in November, 2015 approximately 1,000 acres of the project site (that portion in which the frost ponds would be constructed) had been recently deep-ripped and disked. According to the MND, the disking was done in preparation for the planting of grape vines. The disking would have had the potential to destroy the habitats of the above listed species. According to the MND, surveys for special status species were conducted prior to disking. There was some indication in the MND that disking was routinely performed on the project site, but this was not clear.

CEQA requires the whole of the action to be considered when assessing the significance of impacts from a project (CEQA Guidelines §15063(a)(1), §15378). The Department is concerned that the construction of frost ponds could be considered, along with the disking of the project site and planting of grapes, to be parts of one project which should have been analyzed for significant impacts under CEQA. The Department therefore recommends a more comprehensive analysis of impacts from the proposed project, together with measures proposed to mitigate significant impacts, be presented in a revised and re-circulated MND. Please contact me if you have questions or require clarification of these issues. Thank you.

Martin Potter
 Senior Environmental Scientist (Specialist)
 California Department of Fish and Wildlife
 South Coast Region
 P.O. Box 1797 Ojai, CA 93024
 Phone/Fax (805) 640-3677
 email: Martin.Potter@wildlife.ca.gov

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Dear Mr. Rodriguez,

Once again we would like to thank you for holding the June 26th meeting on the draft NMD in New Cuyama. As you witnessed there was an excellent community turnout expressing concern for the NMD and asking the Planning Department to take into consideration the whole project in this review. Furthermore since the Cuyama Valley is identified as one of the critically overdrafted water basins and subject to SGMA, we want to encourage the Planning Department to use this opportunity to bring the review of this project in compliance with SGMA regulations, since it appears that the Threshold data used for the Cuyama Valley is out of date.

Attached you will find our letter to the Zoning Administrator that we ask you to include with the North Fork Frost Pond application as part of the review.

Please do not hesitate to contact us with any questions.

Sincerely,

Roberta Jaffe & Stephen Gliessman
Condor's Hope Ranch
Cuyama Valley
Santa Barbara County
www.condorshope.com

To: Ms. Linda Liu, Santa Barbara County Zoning Administrator
From: Roberta Jaffe and Stephen Gliessman, residents and farmers
Cottonwood Canyon, Cuyama Valley
Contact: condor@condorshope.com

Re: North Fork Ranch Frost Ponds Project (17NGD-00000-00004)

Date: June 29, 2017

These are comments in regards to the application of Brodiaea, Inc. to install 3 – 49 acre foot reservoirs (total 147 acre-feet) in their newly planted vineyard in the Cuyama Valley, a designated critically overdrafted water basin by the California Department of Water Resources.

We along with approximately 25 other concerned citizens attended the June 26th meeting in New Cuyama on the Mitigated Negative Declaration draft for this project. As residents and farmers on the western end of the Cuyama Valley we want to express our strong concerns about the prepared NMD and opposition to this project.

(1) The MND is based on outdated data

The MND is based on the Santa Barbara County Environmental Thresholds and Guidelines Manual published October 2008 and last revised in July 2015. Specifically, the groundwater table section was last updated in 1992. (p.73)

The NMD also states that agriculture is not regulated in Santa Barbara County: from p. 36: County Environmental Thresholds: "A project is determined to have a significant effect on water resources if it would exceed established threshold values which have been set for each overdrafted groundwater basin. These values were determined based on an estimation of a basin's remaining life of available water storage. If the project's net new consumptive water use [total consumptive demand adjusted for recharge less discontinued historic use] exceeds the threshold adopted for the basin, the project's impacts on water resources are considered significant." The (outdated) water demand threshold for the Cuyama Valley Groundwater Basin is 31 AFY. The MND states: "The adopted threshold applies only to projects subject to discretionary review by the County, and do not apply to uses, such as agricultural operations, that do not require approval of a discretionary permit."

So, if this were not an agricultural project, groundwater pumpage to fill these reservoirs would exceed the established threshold. Because it is an agricultural project, the amount of groundwater that will be potentially pumped multiple times in a season to fill the reservoirs is not being considered.

Since the last update of the Threshold document:

- USGS completed a 5-year study of the Cuyama Valley in May 2015

While the Threshold document estimated the Groundwater Gross Pumpage for the Cuyama Valley at 48,000 AFY; the USGS study listed the gross pumpage at 68,300 AFY for the period of 2000-2010 for the Cuyama Valley study area.

- And CA passed the Sustainable Groundwater Management Act (SGMA) in September 2014. DWR identified the Cuyama Valley as defined by its current Bulletin 118

boundaries (which includes the vineyard parcel) as one of 21 water basins in the state in critical overdraft (July, 2015).

There is no mention of SGMA or the USGS study in the Environmental Thresholds document. The county document that determines what is significant does not comply with SGMA. Even so, the reservoir project will increase pumpage beyond the threshold amount identified as 31 AFY.

Both the USGS study and SGMA point clearly to the need to balance agricultural use of groundwater, and that the Cuyama Valley is already in overdraft from the direct impacts of water intensive agriculture.

Quote from USGS study 2014 Hansen et al:

“Simulated changes in storage over time showed that significant withdrawals from storage generally occurred not only during drought years (1976–77 and 1988–92) but also during the early stages of industrial agriculture, which was initially dominated by alfalfa production. Since the 1990s, agriculture has shifted to more water-intensive crops. Measured and simulated groundwater levels indicated substantial declines in selected subregions, mining of groundwater that is thousands to tens of thousands of years old, increased groundwater storage depletion, and land subsidence. Most of the recharge occurs in the upland regions of Ventucopa and Sierra Madre Foothills, and the largest fractions of pumpage and storage depletion occur in the Main subregion. The long-term imbalance between inflows and outflows resulted in simulated overdraft (groundwater withdrawals in excess of natural recharge) of the groundwater basin over the 61-year period of 1949–2010.”

The Cuyama Valley Groundwater Sustainability Agency was just approved by the Board of Supervisors in accordance with SGMA. It is beginning its work to develop a Groundwater Sustainability Plan (GSP) for the Cuyama Valley that includes developing a balanced water budget for all uses of groundwater including agriculture. The NMD is outdated in not considering SGMA and the legal requirement to develop a Cuyama Valley GSP that takes into account agricultural use of groundwater. This project will further push the groundwater into over-pumpage and be detrimental to the sustainability of the Cuyama Valley. The proposed reservoirs will add significantly to the amount of groundwater being extracted from the Basin and will need to be accounted for in this budget.

- (2) The NMD by reviewing only the 3 reservoirs is only considering a small part of the project and not taking into consideration what has occurred on this parcel since 2015 nor what future plans will be for this parcel.

This 6565 acre parcel started being converted from non-irrigated rangeland to intensively irrigated vineyards in 2015. After the passage of SGMA and Cuyama Valley being identified as a critically overdrafted basin, Santa Barbara County permitted the new owners, Brodiaea, Inc., to drill 11 new agricultural wells. The proposed 3x 49-acre foot reservoirs were most likely part of Brodiaea, Inc.'s vineyard initial development plan. Evidence of this is the way the vineyard infrastructure included underground lines and overhead sprinklers for frost protection, even though no permit for reservoirs had been obtained. Thus this MND is looking at part of the project, not the whole project. When a project gets piecemealed like this it slips through regulations. If we were to look at the amount of water the 11 agricultural wells North Fork/Brodiaea were

allowed to drill post-SGMA, it seems they would definitely be withdrawing more than 31 AFY to fill 3- 49 AF reservoirs in an area that is subject to multiple late spring frosts. The reservoirs are not a stand-alone project, but are part of the vineyard development. Therefore the impact of the whole project should be analyzed, not just a part of the project.

This vineyard is located in a cold pocket and is highly susceptible to late spring frosts. Farmers who use overhead sprinklers to protect from frost damage report needing to water 10 hours per event. Thus for a 1000 planted acres, Brodiaea will deplete all 3 reservoirs for one event. Mr. Rodriguez stated at the meeting that his research showed there can be between zero and twenty frost events in the months of March and April.

Furthermore, since less than a 1000 acres of the 6565 acre parcel are currently planted, shouldn't Planning and Development be asking what the overall plan for vineyard development on this parcel is and how many reservoirs are in the overall plan?

This is an opportunity for the Planning and Development Department to look at the whole project and not just a small piece of it. It is also an opportunity for Planning and Development to align itself with the new regulations of SGMA which are crucial to any land use development, whether agriculture or not, in the Cuyama Valley.

- (3) Santa Barbara County has just begun the process of monitoring wells on the west end of the Valley including those of the North Fork Ranch vineyards, and the impact and groundwater flow is not clear. This study needs to be completed before any new impacts on groundwater are permitted for the western Cuyama Valley.

As of June 12th, a SB County hydrologist reported: "There's been a lot of variation in well recovery throughout the western basin and the different drainages. In Cottonwood Canyon, there appears to be a difference between the western wells and the eastern wells. Western wells have actually dropped since the fall 2016 measurements; while wells in the eastern Cottonwood Canyon drainage have increased."

(4) Concerns regarding draining reservoirs in May.

The application states that the frost ponds will only be filled January through April and used for frost events mainly in March and April. In May the water left in the reservoirs will be released to irrigate the vineyard. At the June 26th meeting on the NMD we were told that there will be no monitoring of this by the County and even if they did keep the ponds full, there are really no consequences. It seems there needs to be a monitoring system in place to make sure the reservoirs are depleted in May so that there is not excessive summer evaporation. In addition, at the meeting there was concern that if the reservoirs emptied over the summer months the polyethylene liner would both decay as well as be damaged by rodents; thus potentially creating an annual need to replace the liners at a great expense and be a significant addition to the landfill.

In conclusion, we do not think the NMD considers the full impact of the proposed reservoirs and request that the Zoning Administration require a more extensive environmental review that takes into account the impacts of the whole vineyard project.

Furthermore this project provides the Planning and Development Department an opportunity to include the new regulations of California's Sustainable Groundwater Management Act (SGMA) when reviewing projects that affect the groundwater in critically overdrafted water basins. We are not out of drought. Predictions for the southwestern US is that drought will continue. When Santa Barbara County reviews projects for critically overdrafted basins, whether agricultural projects or not, this long-term climatic situation should be considered. We appreciate your review of our concerns of the NMD which we consider to be an incomplete environmental review.

Thank you for your consideration.

Steve,

Hello,

Thank you for the opportunity to comment on the "Vineyard Frost Pond Project" in Cuyama Valley. I attended the meeting on Monday, June 26th for the discussion concerning the environmental impacts of the project, per you and your colleague, the description and the mitigations all seemed reasonable, for a project in a different climate and water supply situation and still may be appropriate for this situation if managed appropriately. What I took away from the meeting and discussion was that there is a glaring lack of oversight for a project that has the potential to be utilized for more than the purpose described in the request by the applicant. The explanation of mitigating a miss use of the "frost ponds" was weak at best, primarily because a violation would need to be reported and since water in the ponds will not be visible from a public view point, how would a violation be detected? There are questions that I would raise with the applicant, how will they reconcile water accumulation in the ponds for frost protection with early irrigation requirements during low rainfall years? Will the "Frost" water be used to overhead irrigate the vineyard in low rain fall years, as done in the Los Alamos area that the same vineyard management company practices, to wet the soil profile as rain would provide. What will be the cultural practices, such as the timing of pruning to mitigate the need for frost protection and mowing of cover crop early to assist cold air drainage. I believe the vineyard has installed standard impact sprinklers to use for frost protection, if so, these use more water than more efficient "micro mist" style fixtures that can provide the same protection with less water volume. What is the recharge rate of the wells supplying the water to the ponds, is it sustainable to pump enough water to keep the ponds full for a long term frost event and with a 1000 acre final planting will these ponds be sufficient to provide enough coverage or will more reservoirs be needed? The construction methods of the Ponds also comes into question, if the ponds are to be dry for nine months out of the year how are they going to be maintained during that time, especially to keep the integrity of the liner intact, an important environmental consideration is the altitude, light intensity and humidity of the climate, all detrimental to a pond liner holding up over time, frankly the best way to keep a liner in good shape is to keep water in the pond, what if the applicant decides to do so? Also, there can be a problem with the liner floating up when there is not enough water kept in place as the weight of the water holds the liner down. A concrete material covering may be required to line the ponds to avoid the potential hazards of a nine month dry period.

To conclude I want to recommend that the entire property be certified by the Sustainable In Practice program conducted by the Vineyard Team group, through this program I would suggest that the oversight of the "Frost Pond Water" utilization be incorporated into the required certification process, this would provide a 3rd party to be involved so that the Frost Ponds are only used for the intended purpose. The SIP program holds a very high degree of respect in the Agricultural community and will provide a credible program to insure that the whole property be managed on a sustainable basis. This area has a delicate ecosystem and is on the edge between regional influences, the rainfall patterns are dramatically different in a short distance, with the weather stations the applicant has in place they know what they have to work with and should be considered as part of a decision making process. I would also suggest a quarterly community access visit to view the ponds and be updated on the SIP program. The last thing will be to participate in the groundwater plans in the coming future, to be part of the solution so that the vineyard that is being developed now will be a continuing part of the agricultural community in the years ahead.

I want to finish by stating that I am a fan of the overall project and I am hopeful that it will be successful, this vineyard has the potential to bring credibility to the area as a quality wine grape growing region, as a grape grower in the area I believe it will be helpful to all growers, current and future, but it must be managed in a way that will last, we have altered our vineyard practices over time from the common beliefs of vineyard management to the conditions we are faced with, it works but you have to be engaged in what you are doing. If the project fails or creates problems then the opposite could happen, nobody wants that. I have a high degree of respect for the vineyard management company, they are good farmers and I am sure they are learning what the conditions are and will respond appropriately and it will bode well for everyone. I strongly support the Agricultural Right to Farm philosophy of the county, it is important to encourage farming and give farmers the ability to be good stewards of the land.

These comments are my own, I do not represent anyone other than myself.

Thank you for your attention.

Joe Haslett
2875 Cottonwood Canyon Road
Cuyama Valley, CA
805-748-4033

Mr. Rodriguez,

Please include this letter at the hearing of the above subject.

Thank you.

Robert Ryan
(805) 441-0958

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Picture a tall glass of water and next to it, a bottle of wine.

The water comes from my well. The wine hypothetically will come from Brodiaea Inc.

Geologically we share the same ground water.

My concern is that you, a governing/planning body will allow a project that could potentially cause over draught.

In May 2015 the USGS released its 5 year study of the Cuyama Valley, one of 21 California groundwater basins experiencing extreme over draught. Subsequent well testing for water levels has been underway in the Cottonwood Canyon area, just west of the Brodiaea Inc. project. Together, this information can be helpful.

1. All grading shall conform to Santa Barbara County Code Chapter 14 and standards and requirements pertaining thereto, these construction drawings and the recommendations of the soils engineer and engineering geologist.
2. Contractor to notify the county grading inspector and soils laboratory at least 48 hours before start of grad work or any pre-construction meeting.
3. Contractor shall employ all labor, equipment and methods required to prevent his operations from producing dust in amounts damaging to adjacent property, cultivated vegetation and domestic animals or causing a nuisance to persons occupying buildings in the vicinity of the job site. Contractor shall be responsible for damage caused by dust from his grading operation.
4. Before beginning work requiring exporting or importing of materials, the contractor shall obtain approval from Public Works Road Division for haul routes used and methods provided to minimize the deposit of soils on county roads. Grading/road inspectors shall monitor this requirement with the contractor.
5. The Geotechnical Engineer shall provide observation and testing during grading operations in the field and shall submit a final report stating that all earth work was properly completed and is in substantial conformance with the requirements of the grading ordinance.
6. Areas to be graded shall be cleared of all vegetation including roots and other unsuitable materials for a structural fill, then scarified to a depth of 6" prior to placing any fill. Call grading inspector for initial inspection.
7. A thorough search shall be made for all abandoned man-made facilities such as septic tank systems, fuel or water storage tanks, and pipelines or conduits. Any such facilities encountered shall be removed and the depression properly filled and compacted under observation of the geotechnical engineer.
8. Areas with existing slopes which are to receive fill materials shall be keyed and benched. The design and installation of the roadway shall be per the geotechnical engineer's recommendation or per County Standard Detail No. G-13.
9. Fill materials shall be spread in lifts not exceeding 6" in compacted thickness, moistened or dried as necessary to near optimum moisture content and compacted by an approved method. Fill materials shall be compacted to a minimum of 90% maximum density as determined by 1957 ASTM D-1557-01 modified proctor (ASHO) test or similar approved methods. Some fill areas may require compaction to a greater density if called for in the construction documents. Soil tests shall be conducted at not less than one test for each 18" of fill and/or for each 500 cubic yards of fill placed.
10. Cut slopes shall not exceed a grade of 1 1/2 horizontal to 1 vertical. Fill and combination fill and cut slopes shall not exceed 2 horizontal to 1 vertical. Slopes over three feet in vertical height shall be planted with approved perennial or treated with equally approved erosion control measures prior to final inspection.
11. Surface drainage shall be provided a minimum of 2% for 5 feet away from the foundation line of any structure.
12. All trees that are to remain on site shall be temporarily fenced and protected around the drip line during grading.
13. An erosion and sediment control plan shall be required as part of the grading plan and permit requirements.
14. "Best Management Practices for Construction Activities: Eroded sediments and other pollutants must be retained on-site and must not be transported from the site via sheet flow swales, area drains, natural drainage courses, or wind. Stockpiles of earth and other construction related materials must be protected from being transported from the site by forces of wind or water. Fuels, oils, solvents, and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills may not be washed into the drainage system. Excess or waste concrete may not be washed into public way or any other drainage system. Provisions must be made to retain concrete wastes on site until they can be disposed as solid waste. Trash and construction related solid waste must be deposited into a covered waste receptacle to prevent contamination of rainwater and dispersal by wind. Sediments and other material may not be tracked from the site by vehicular traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental deposition shall be swept up immediately and may not be washed down by rain or other means. Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to minimize erosion by wind and water."
15. If grading occurs during Nov 1 through Apr 15, no grading shall occur unless approved erosion and sediment control measures are in place. Discharges of sediment from the project site may result in a Stop Work Order.
16. All earthwork on hillsides, sloping or mountainous terrain shall be stabilized to protect and prevent loss of soils, as necessary, year-round.

Earthwork Estimates

Cut: 130,280 C.Y. Fill: 127,900 C.Y. Import: 0 C.Y. Export: 0 C.Y. Quantities based on 30% shrinkage

Erosion Control Notes

1. Erosion control measures shall be implemented on all projects and shall include source control, including protection of stockpiles, protection of slopes, protection of all disturbed areas, and protection of accesses. In addition, perimeter containment measures shall be placed prior to the commencement of grading and site disturbance activities unless the Public Works Department determines measures to be unnecessary based upon location, site characteristics or time of year. The intent of erosion control measures shall be to keep all sediment from entering a swale, drainage way, watercourse or onto adjacent properties.
2. Site inspections and appropriate maintenance of erosion control devices shall be conducted and documented prior to, during, and after rain events.
3. The developer shall be responsible for the placement and maintenance of all erosion control devices as specified by the approved plan until such time that the project is accepted as complete by the Public Works Department. Erosion control devices may be relocated, deleted or added as needed depending on the actual soil conditions encountered. Additional erosion control devices shall be placed at the discretion of the Engineer of Work, County Inspector, SWPPP Monitor, or RWQCB Inspector. Guidelines for determining appropriate erosion control devices are included in the appendix of the Public Improvement Standards.
4. All erosion control devices shall be the first order of work and shall be in place between Oct 15 and April 15 or anytime when the rain probability exceeds 30%. This work shall be installed or applied after each area is graded and no later than five (5) working days after the completion of each area.
5. The Engineer of Work and the Public Works Department shall be notified before October 15 for inspection of installed erosion control devices.
6. A standby crew for emergency work shall be available at all times during the rainy season (October 15 through April 15). Necessary materials shall be available and stock piled at convenient locations to facilitate rapid construction or maintenance of temporary devices when rain is imminent.
7. Permanent erosion control shall be placed and established with 90% coverage on all disturbed surfaces other than paved or gravel surfaces, prior to final inspection. Permanent erosion control shall be fully established prior to final acceptance. Temporary erosion control measures shall remain in place until permanent measures are established.
8. In the event of a failure, the developer and/or his representative shall be responsible for cleanup and all associated costs or damages.
9. All projects involving site disturbance of one acre or greater shall comply with the requirements of the National Pollutant Discharge Elimination System (NPDES). The developer shall submit a Notice of Intent (NOI) to comply with the General Permit for Construction Activity with the Regional Water Quality Control Board (RWQCB). The developer shall provide the County with the Waste Discharge Identification Number (WDID #) or with verification that an exemption has been granted by RWQCB.

WDID# _____
10. Person to contact 24 hours a day in the event there is an erosion control/sedimentation problem (Storm Water Compliance Officer):
Name Kevin Merrill
Local Phone Number 310-3989

Project Air Quality Control Notes:

During Construction the contractor shall designate a person or persons to monitor the Dust Control Program and to order increases measures as necessary to prevent the transport of dust off-site. Their duties shall include holiday and weekend periods when work may or may not be in progress. The name and telephone number for such persons shall be provided to the APCD prior to the commencement of construction. The measures for dust control are as follows but not limited to:

Reduce the amount of disturbed area where possible,

1. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever wind speeds exceed 15mph. Reclaimed (non-potable) water should be used whenever possible.
2. All dirt stockpile areas shall be sprayed daily as needed.
3. Exposed ground areas that are planned to be reworked at dates later than one month after initial grading should be seeded with a fast germinating native grass seed and watered until vegetation is established.
4. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD.
5. All external slopes shall be hydroseeded as soon as possible upon completion.
6. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
7. All trucks hauling dirt, sand, soil, or other loose material are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114.
8. Install wheel washers where vehicles enter and exit paved roads and streets, or wash off trucks and equipment leaving the site.
9. Prior to final inspection all disturbed areas shall be vegetated with a fast-growing, native seed mix.

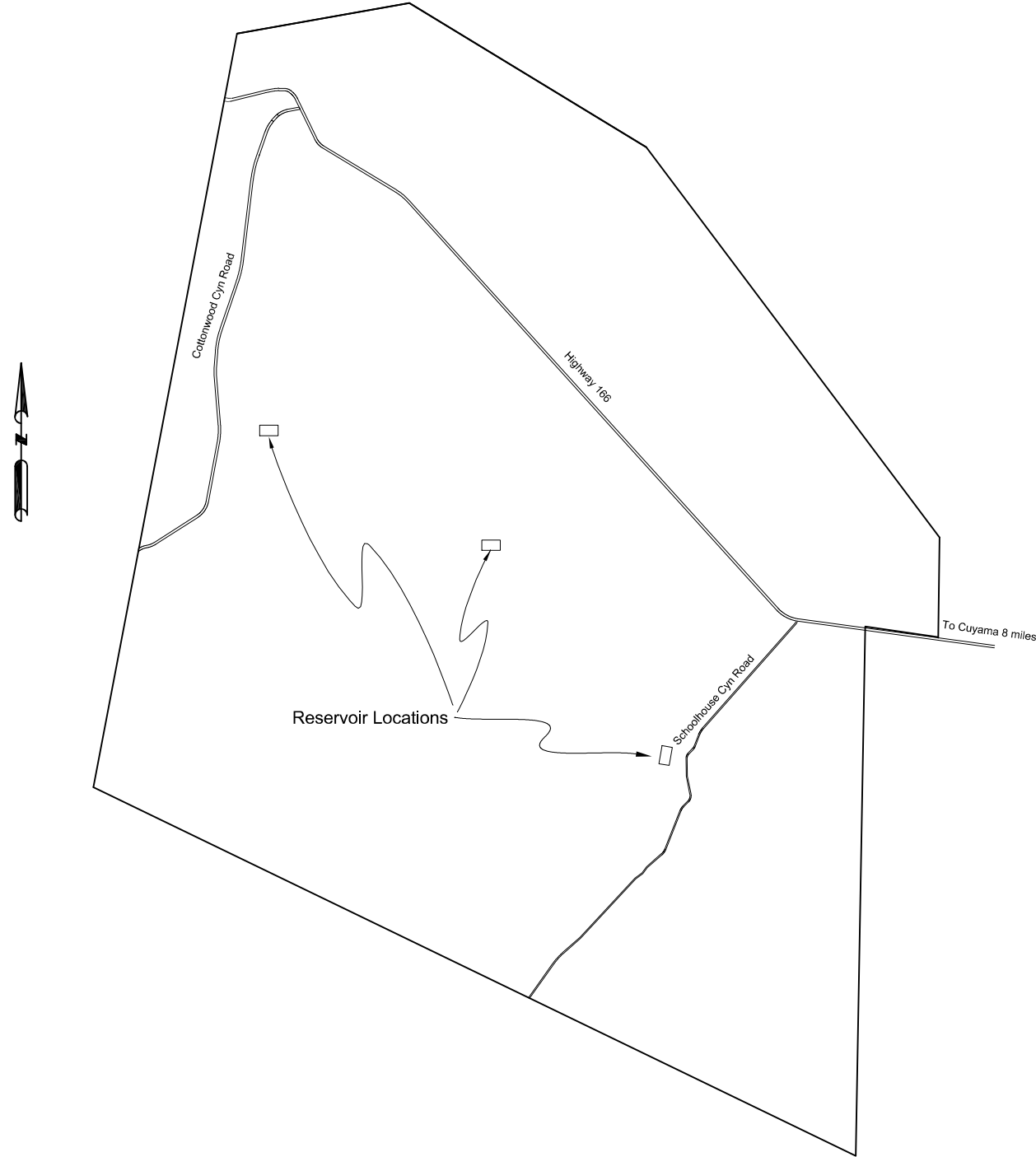
General Notes

1. No construction shall be started without plans approved by the County Planning Department. The Planning Department shall be notified at least 24 hrs prior to the start of construction and the time and location for the preconstruction conference.
2. All construction work and installations shall conform to the County Standards and Specifications.
3. Soils tests shall be done in accordance with the County Standards. The test results shall clearly indicate the location and source of materials.
4. Compaction tests shall be made on all embankment materials, subgrades and ditch backfill.
5. There will be no need for special concrete inspection. Concrete for the anchor pad shall be 2000 psi. The rebar shall be inspected prior to the placement of the concrete. All concrete and the two sack slurry for the anti-seep collars and ditch backfill where shown shall be properly vibrated.
6. The Design Engineer shall inspect the installation of the HDPE Liner. The liner shall be installed by a contractor specializing in lining ponds.
7. The Engineer of Record shall certify that the improvements when completed are in accordance to the plans prior to the request for Final Inspection. As-built plans are to be prepared after construction is completed. The Engineer certifying the improvements shall be present at the Final Inspection.
8. Final Reports for grading and earthwork shall be prepared in accordance with the requirements of the UBC, Chapter 33.
9. Upon completion of the work, the Geotechnical Engineer shall submit to the Engineer of Record a complete summary of all testing done during the project.
10. The Construction Contractor shall maintain a current, complete and accurate record of all changes which deviate from the approved plans. No changes shall be made without the prior approval of the Engineer of Record and the County.

North Fork Reservoirs #1-3

APN 147-020-045

Vicinity Map



Scope of Work

The work consists of constructing three new lined reservoirs for irrigation purposes. All areas to receive fill shall be excavated a minimum of three feet, the exposed surface scarified and moisture conditioned, then recompacted to 90% relative compaction. The intent is to balance the earthwork with no import or export. The completed interior slopes shall be fine graded and all rocks removed, then rolled with a smooth drum roller. A 40 mil HDPE geomembrane liner will then be installed on the slopes and bottom. The liner will be installed per manufacturer's recommendations by a company specializing in liner installation. A five foot by twenty three foot by eight inch reinforced concrete pad for anchoring the liner shall be constructed around the pump inlet pipes. No special inspection for the concrete work shall be required. A 6 foot non-climb fence will be built around the exterior perimeter. Coast Guard Approved buoys with a minimum of 90 feet of line shall be placed at no more than 200 foot intervals around the top interior slope of the reservoirs. The sources of water are pvc waterlines from existing wells and no surface water shall enter the reservoir. Valving, filters and pumps will be installed after the reservoirs are constructed by the Irrigation Contractor and are not part of this permit. This contract is for stubbing inlet pipes through the exterior slope for future connection to the fill and transfer lines by an Irrigation Contractor. These pipes shall have 2 sack concrete slurry anti-seep collars. A 15" PVC Drop Pipe Outlet Structure will serve as an emergency overflow in the event the high water limit switch fails and is sized to prevent the reservoir from overtopping. Access to the reservoir is by existing dirt farm roads. No driveways will be constructed. The existing farm fields sheet flow gently across the locations and earthen swales will be constructed around the perimeters where necessary to keep any surface flow away from the toe of the fill slopes. No electrical work is included in this permit.

Benchmark and Basis of Bearing

Benchmark is a 2 1/2" aluminum disc, stamped h-2, Cal-Trans Monument sb166 pm-55.01 elevation = 1824.55 NAVD88

Basis of Bearing is GPS established true north from NAD 83(92) from Cal-Trans Monuments sb166 pm-55.01 and sb166 pm-55.43

Project Information

Address: Hwy 166, Cuyama Valley

APN 147-020-045

Zoning AG

Project Description: Construct three 49 ac-ft Reservoirs for irrigation and frost protection purposes

Pre-Construction Meeting

Prior to construction a pre-construction meeting is required with the inspector to go over the special inspection reporting requirements, final and progress reports, & erosion control. E-mail inspection-North@countyofsb.org

Contacts:

Owner:

Grapevine Land Management

Matt Turrentine
444 Higuera St Suite 202
San Luis Obispo, CA 93401
805 312-1828

Engineer:

Tom A Howell

1812 N Vine
Santa Maria, CA 93454
805 925-5311

Geotechnical Engineer: GSI Soils, Inc

Rick Amero
524 East Chapel
Santa Maria, CA 93454
805 349-0140

Sheet Index

Sheet 1: Front sheet, notes and title

Sheet 2: Overall Layout & Existing Contours

Sheet 3: Overall Site Piping Layout

Sheet 4: Reservoir #1 Grading Plan

Sheet 5: Reservoir #1 Details

Sheet 6: Reservoir #2 Grading Plan

Sheet 7: Reservoir #2 Details

Sheet 8: Reservoir #3 Grading Plan

Sheet 9: Reservoir #3 Details

Sheet 10: Common Details

Sheet 11: Erosion and Sedimentation Control Plan

Sheet 12: BMP Details

Engineer's Certificate

I, Tom A Howell, RCE 27037, Engineer of Record, hereby certify that these plans are in accordance with the following codes: _____ Date: _____

2013 California Bldg Code (0112 IBC), Appdx Chp 33, 1997 UBC

2013 California Electric Code (2011 NEC)

2013 California Mechanical Code (2012 IAMPO UMC)

2013 California Plumbing Code (2012 IAMPO UPC)

California Title 24: 2011 California Energy Code and Accesibility Standards

County Ordinance(s) Title 19 (Building), (Inland)

Geotechnical Engineer's Certificate

I have reviewed the plans and specifications and have found them to be in

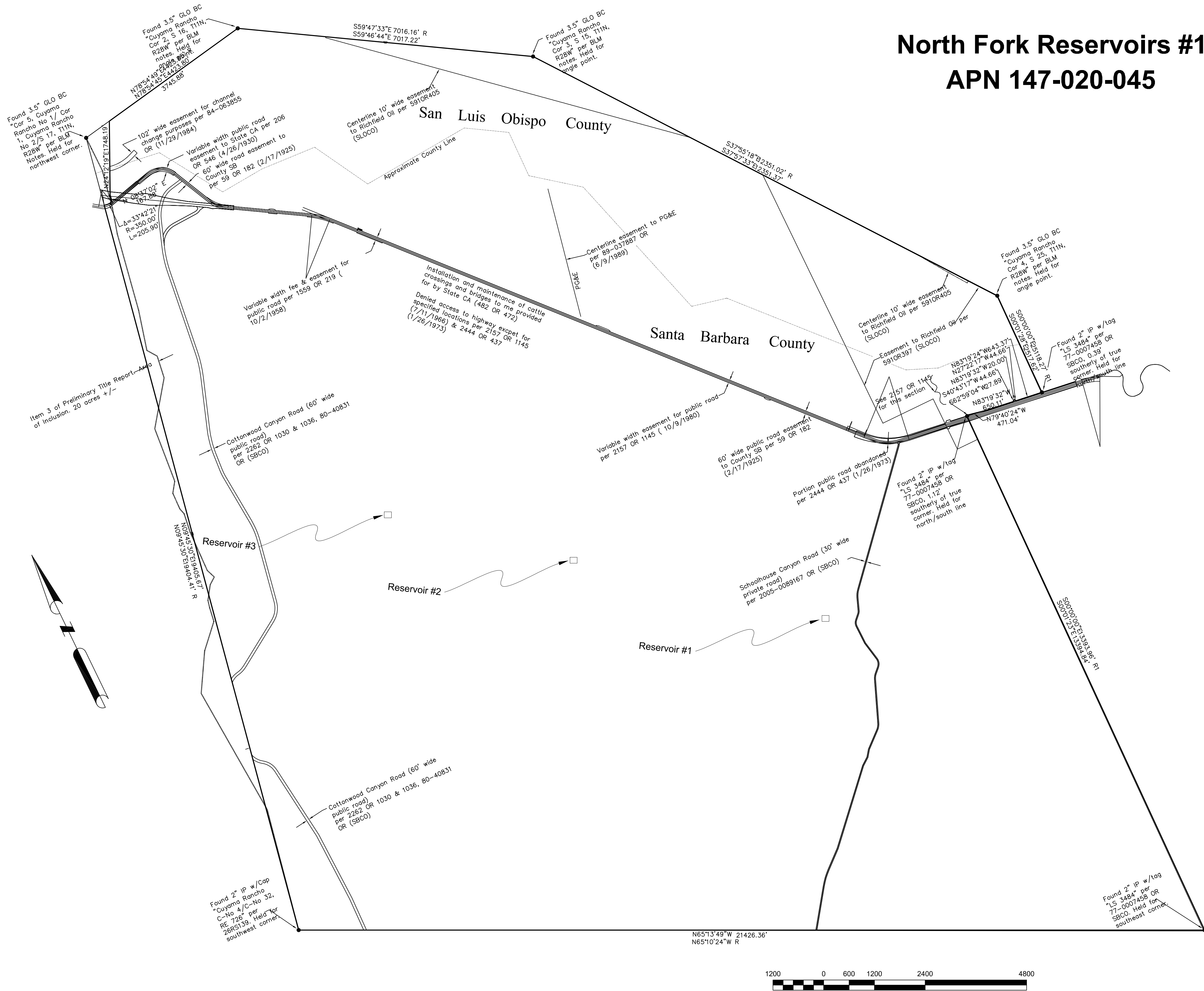
substantial conformance with the recommendations as found in my Soll Investigation.

Date: _____



North Fork Vineyards		
DRAWN <i>TH</i>	DATE <i>1/09/17</i>	<i>49 Ac-ft Reservoirs</i> <i>Hwy 166</i>
APPROVED	DATE	<i>Cuyama, CA</i> <i>Cover Sheet</i>
SCALE <i>Varies</i>	SHEET <i>1 of 12</i>	PROJECT NO. <i>101715-6233</i>

North Fork Reservoirs #1-3
APN 147-020-045



North Fork Vineyards

DRAWN TH	DATE 1/09/17	49 Ac-ft Reservoirs Hwy 166 Cuyama, CA Overall Property
APPROVED	DATE	
SCALE 1"=1200'	SHEET 2 of 12	PROJECT NO. 101715-6233

North Fork Vineyard Frost Protection Overall Site Plan



North Fork Vineyards		
DRAWN	DATE	Reservoirs #1-3
TH	1/09/17	Overall Piping Plan
APPROVED	DATE	Existing Piping
SCALE	SHEET	PROJECT NO.
1"=600'	3 of 12	101715-6233

Reservoir # 1 Grading Plan

Pond #1 Report

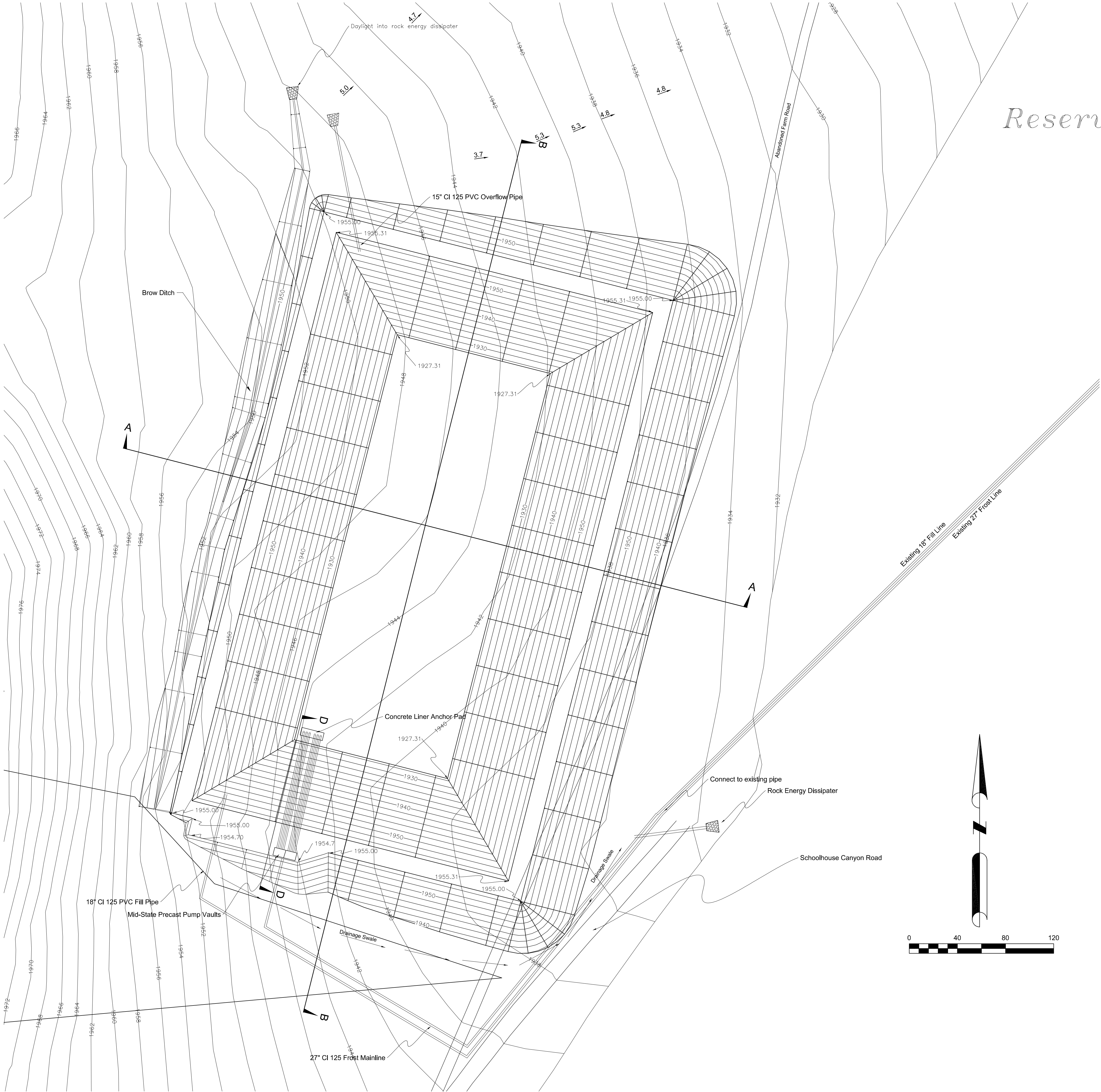
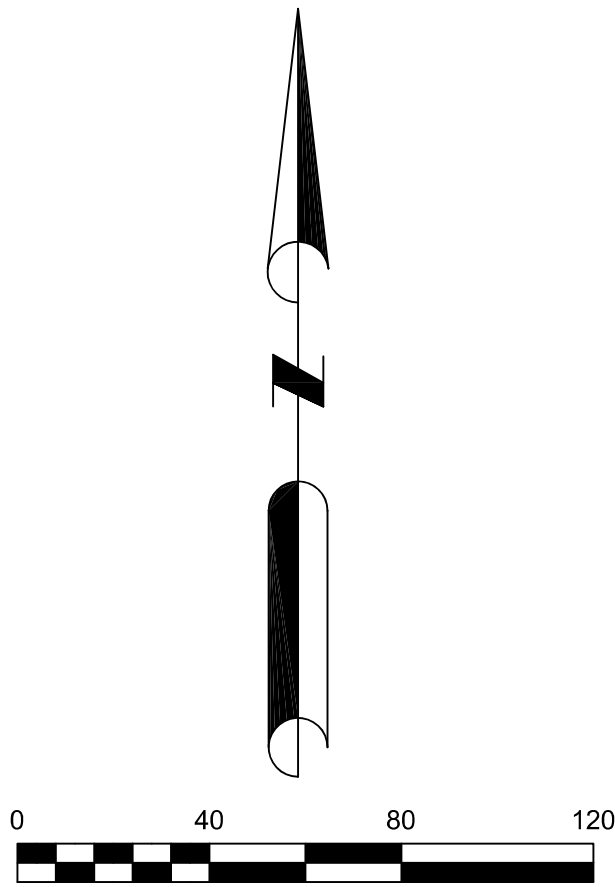
Top of dam elevation: 1955.3
Bottom of pond elevation: 1927.3
Top of dam width: 14.0
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50:1

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 44,062 C.Y.
Total fill: 44,589 C.Y.
Total Disturbed Area: 4.85 Acres

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1927.31	0.00	1.046
1929.31	2.20	1.158
1931.31	4.63	1.274
1933.31	7.30	1.395
1935.31	10.21	1.520
1937.31	13.38	1.650
1939.31	16.81	1.784
1941.31	20.52	1.923
1943.31	24.51	2.066
1945.31	28.79	2.214
1947.31	33.37	2.366
1949.31	38.26	2.523
1951.31	43.46	2.684
1953.31	49.00	2.850
1955.31	54.87	3.020



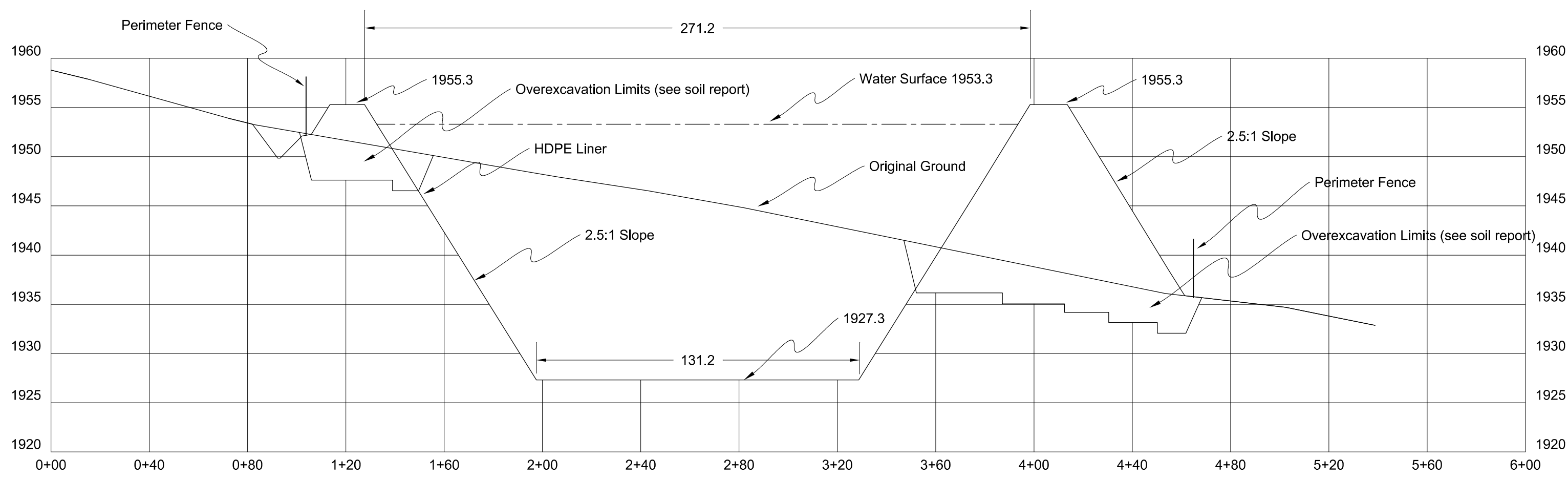
Revisions:
1/03/2017 Added 15" CMP Culvert
Moved Outlet Pipe
Lengthened Drainage Swales

North Fork Vineyards

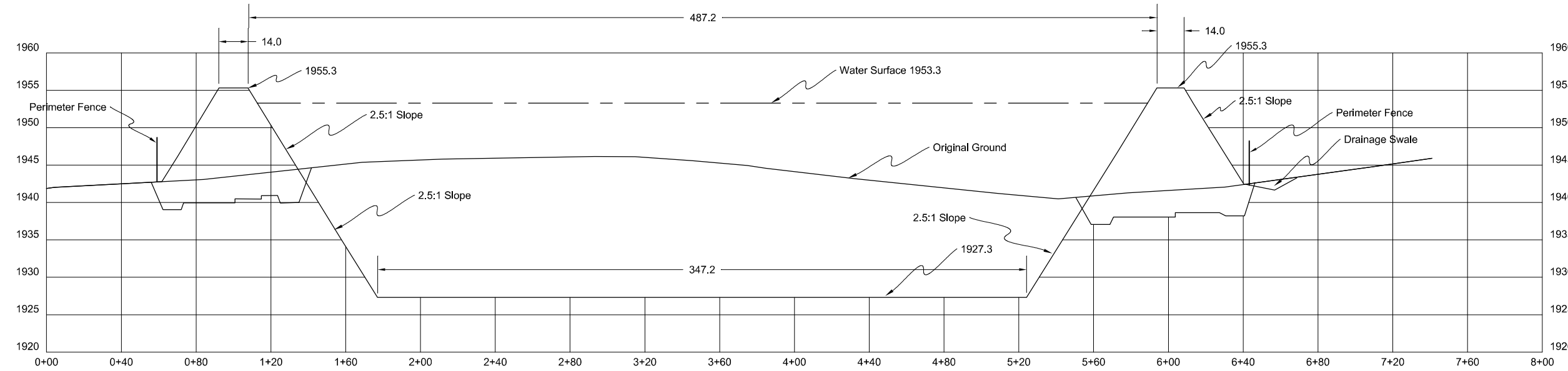
DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #1 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 4 of 12	PROJECT NO. 101715-6233

Reservoir #1 Details

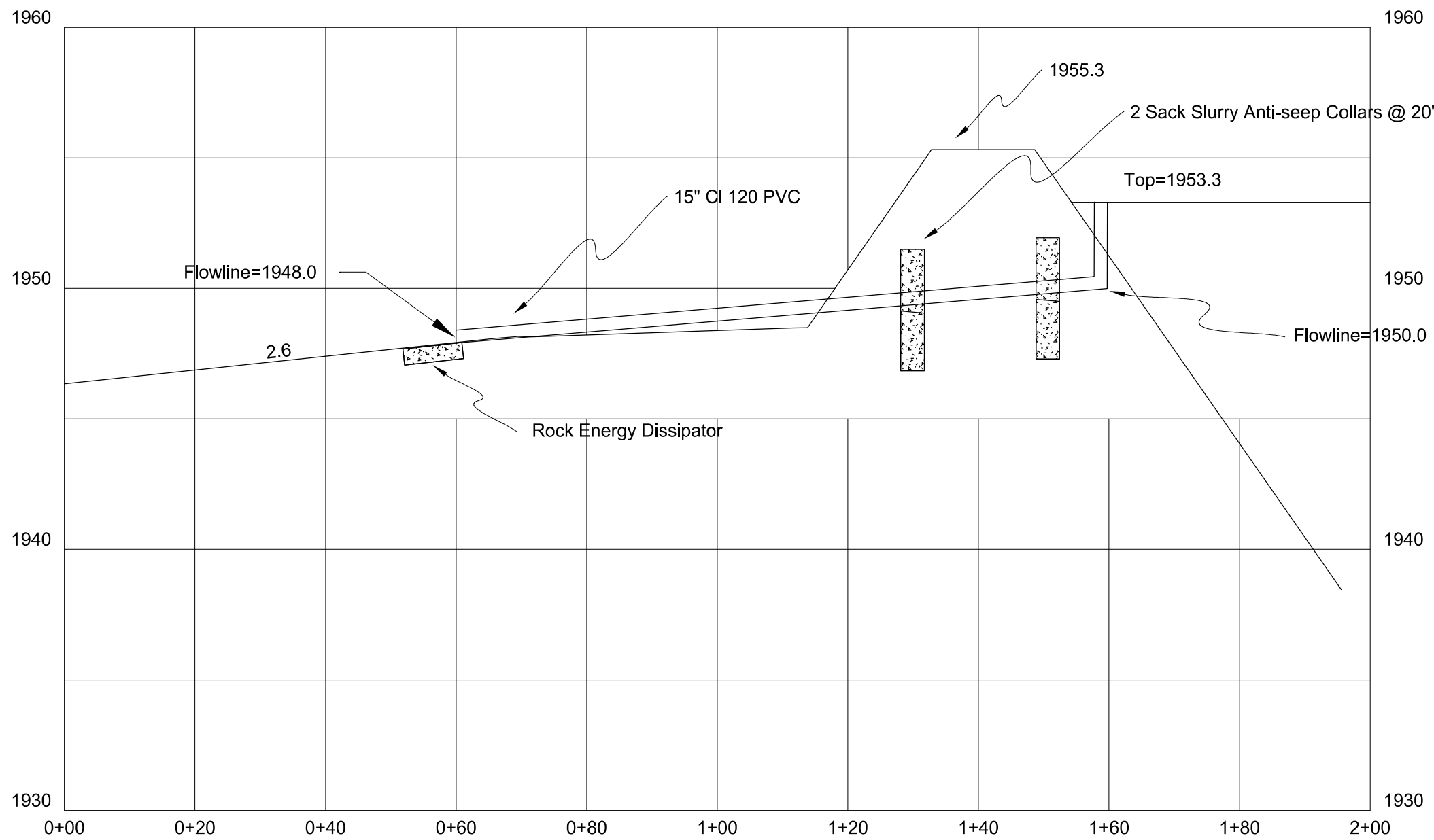
Reservoir #2 Section A-A



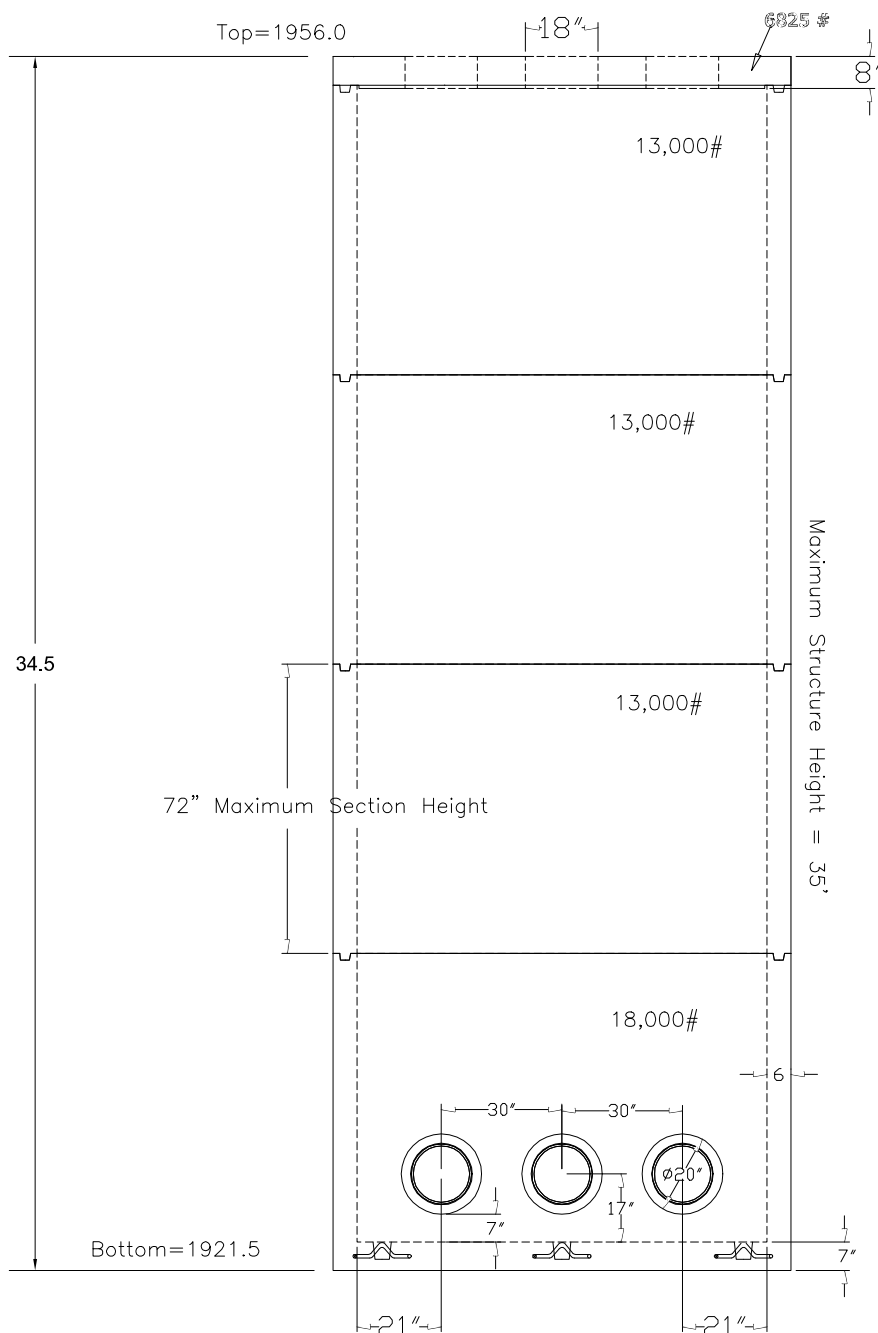
Reservoir #1 Section B-B



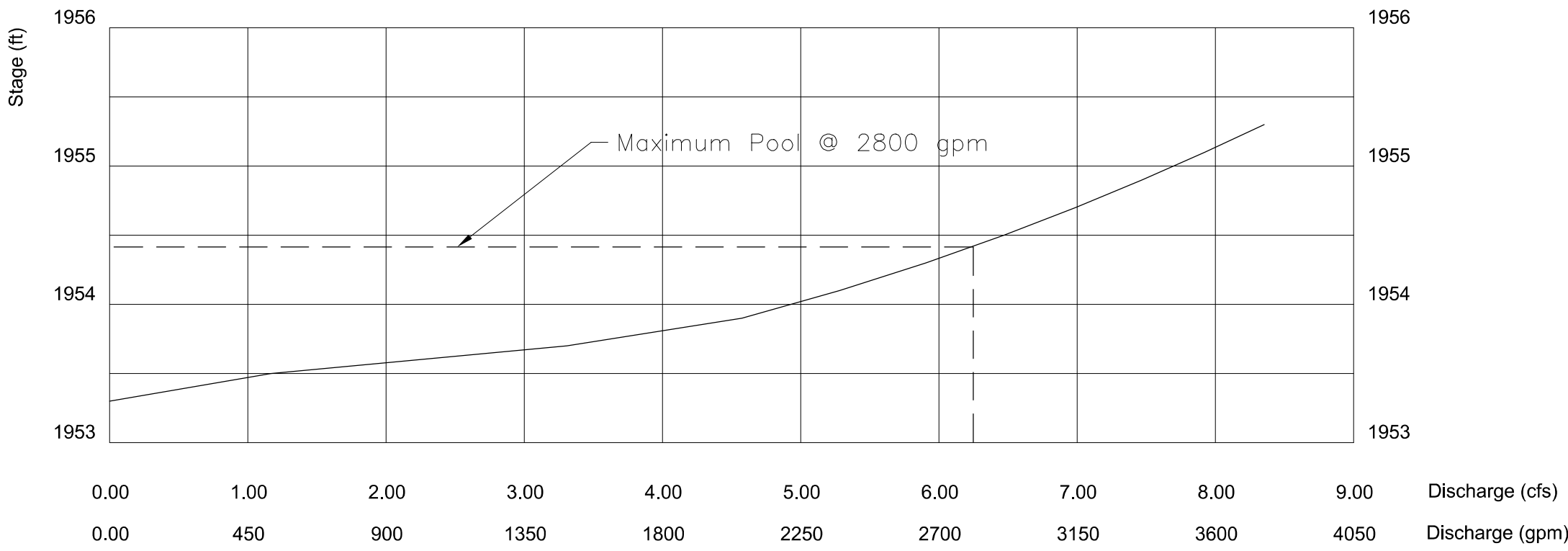
Reservoir #1 Overflow Detail



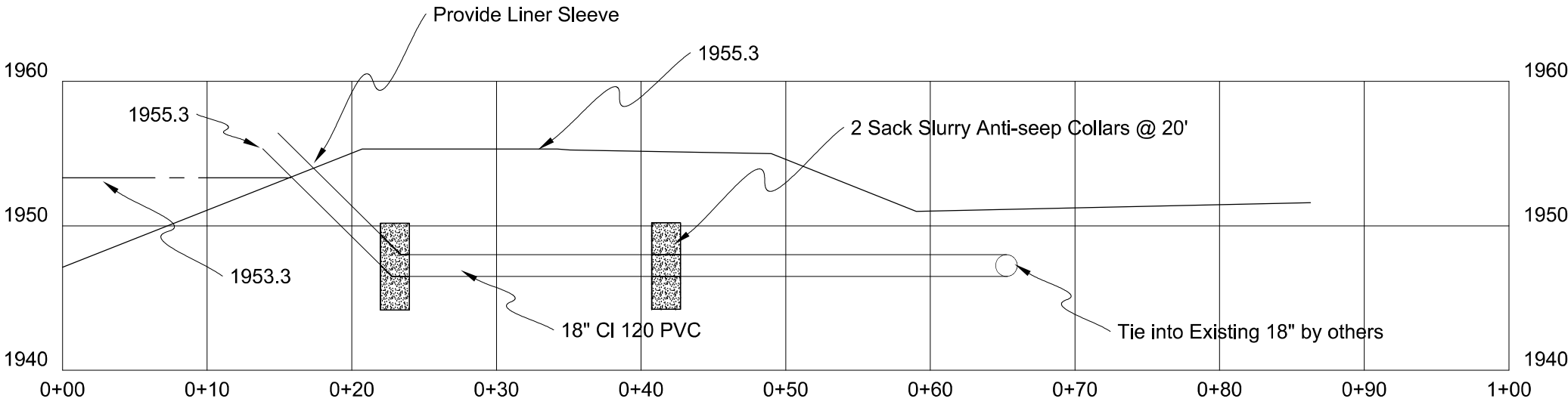
Mid-State Concrete Products
Pump Housing Vault Reservoir #1



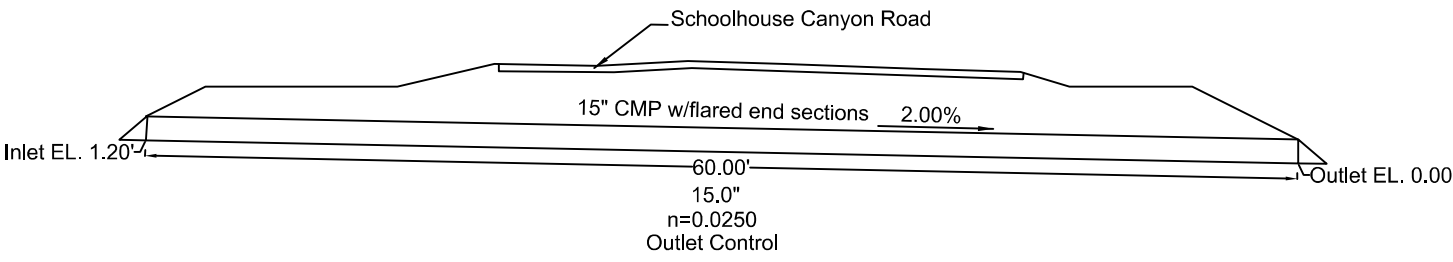
Pond #1 Stage-Storage



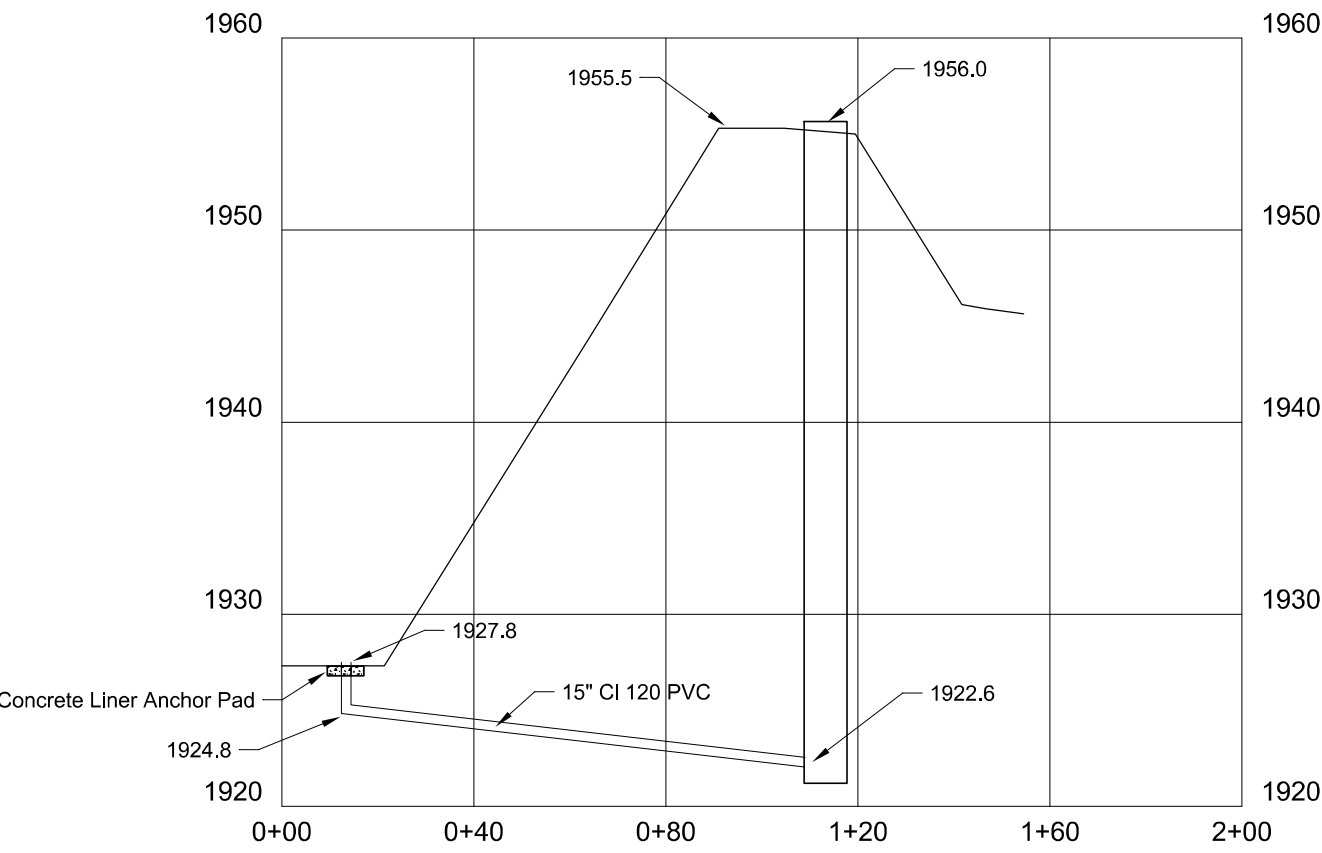
Reservoir #1 Filler Pipe



15" CMP Under Schoolhouse Road



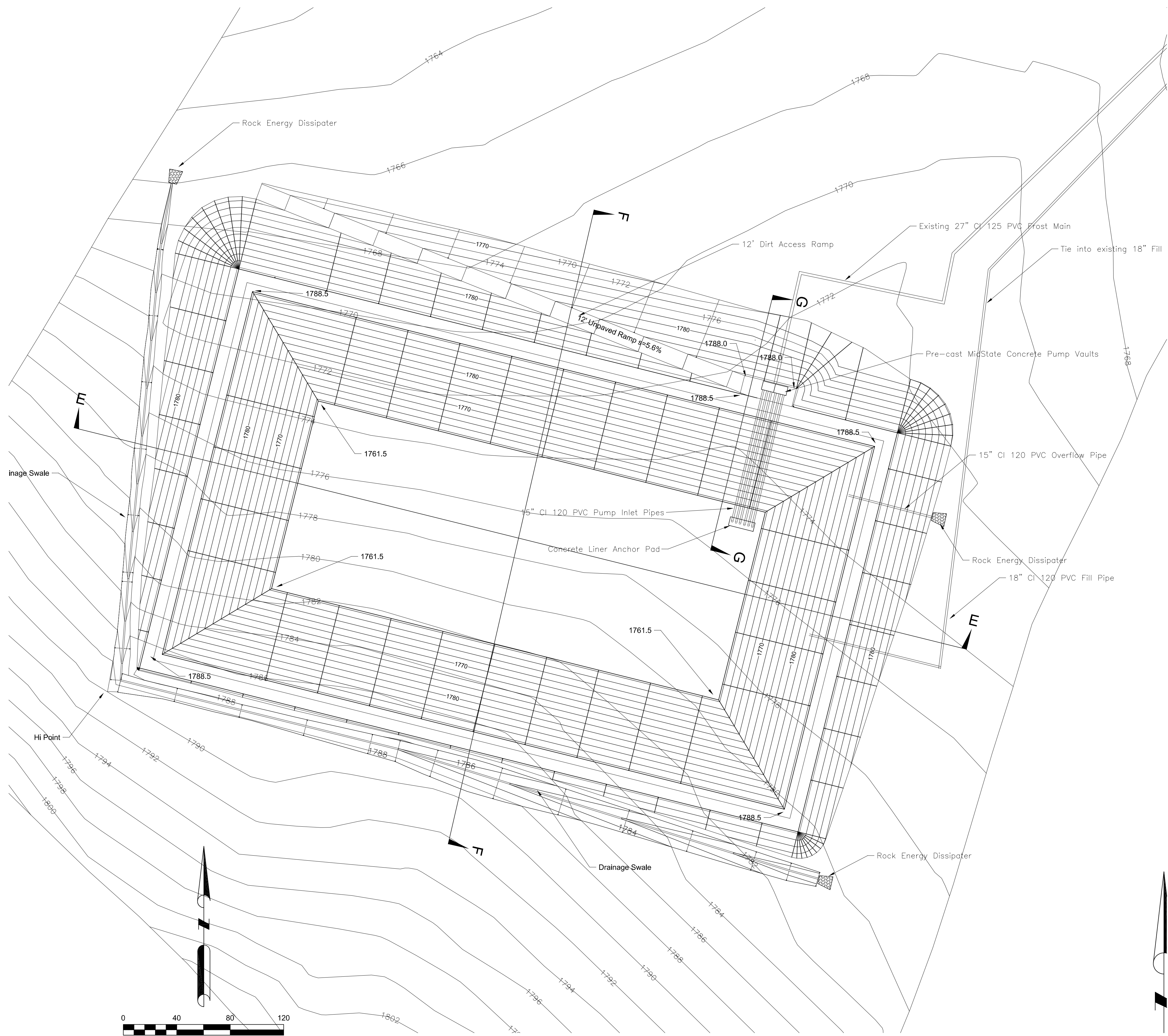
Reservoir #1 Pump Inlet



Revisions:
1/03/2017 Added 15" CMP Culvert Detail
Revised Stage-Storage Diagram
Revised Outlet Pipe Detail

North Fork Vineyards		
DRAWN TH	DATE 1/09/17	Reservoir #1 Details
APPROVED	DATE	
SCALE Varies	SHEET 5 of 12	PROJECT NO. 101715-6233

Reservoir #2 Grading Plan



Pond Report

Tue Oct 20 14:36:54 2015

Top of dam elevation: 1788.50
Bottom of pond elevation: 1761.50
Top of dam width: 14.00
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50:1
Existing Surface: C:\Carlson Projects\North Fork\Reservoir 2B OG.tin

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 44,064.35 C.Y.
Total fill: 1 42,205.16 C.Y.

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1761.50	0.00	1.146
1763.50	2.40	1.259
1765.50	5.04	1.378
1767.50	7.91	1.502
1769.50	11.05	1.630
1771.50	14.44	1.762
1773.50	18.10	1.899
1775.50	22.03	2.040
1777.50	26.26	2.186
1779.50	30.73	2.336
1781.50	35.60	2.490
1783.50	40.74	2.649
1785.50	46.20	2.813
1787.50	52.00	2.981
1788.50	55.02	3.067

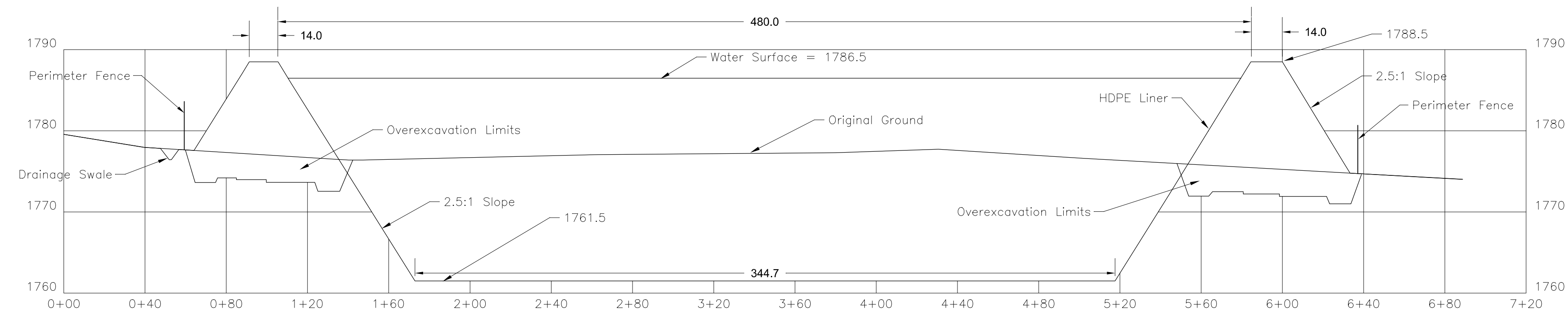
Area in Cut : 148,297.1 S.F.
Area in Fill: 186,122.7 S.F.



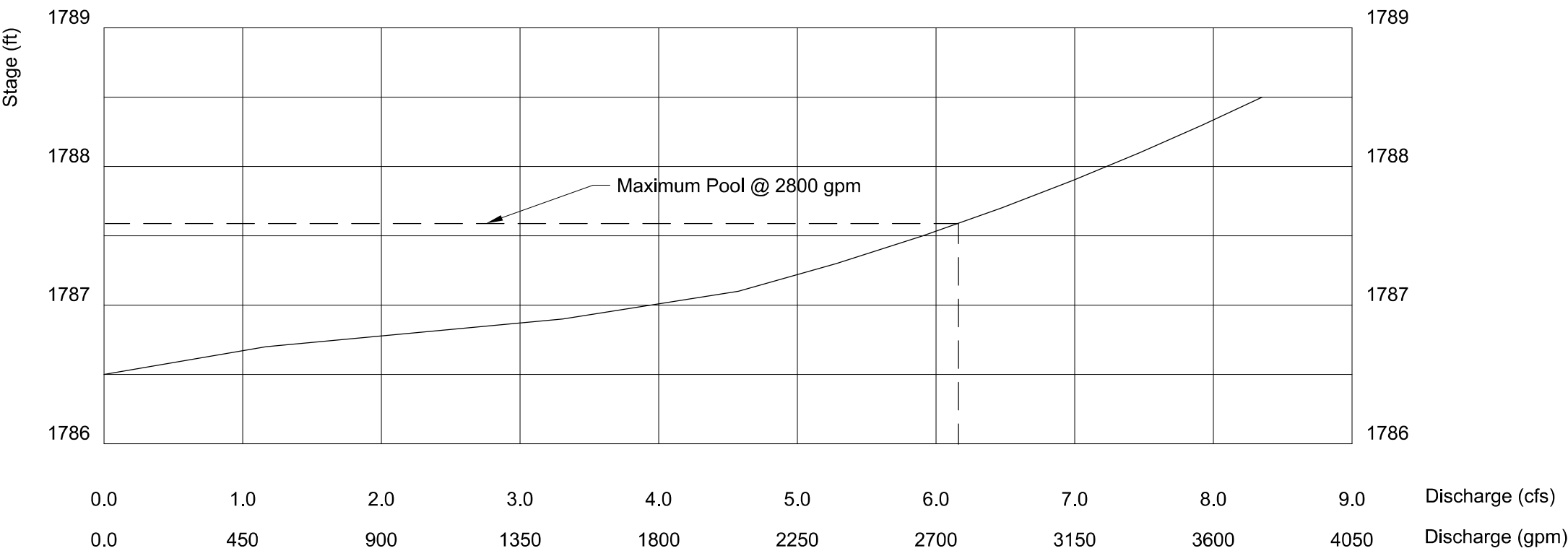
North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #2 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 6 of 12	PROJECT NO. 101715-6233

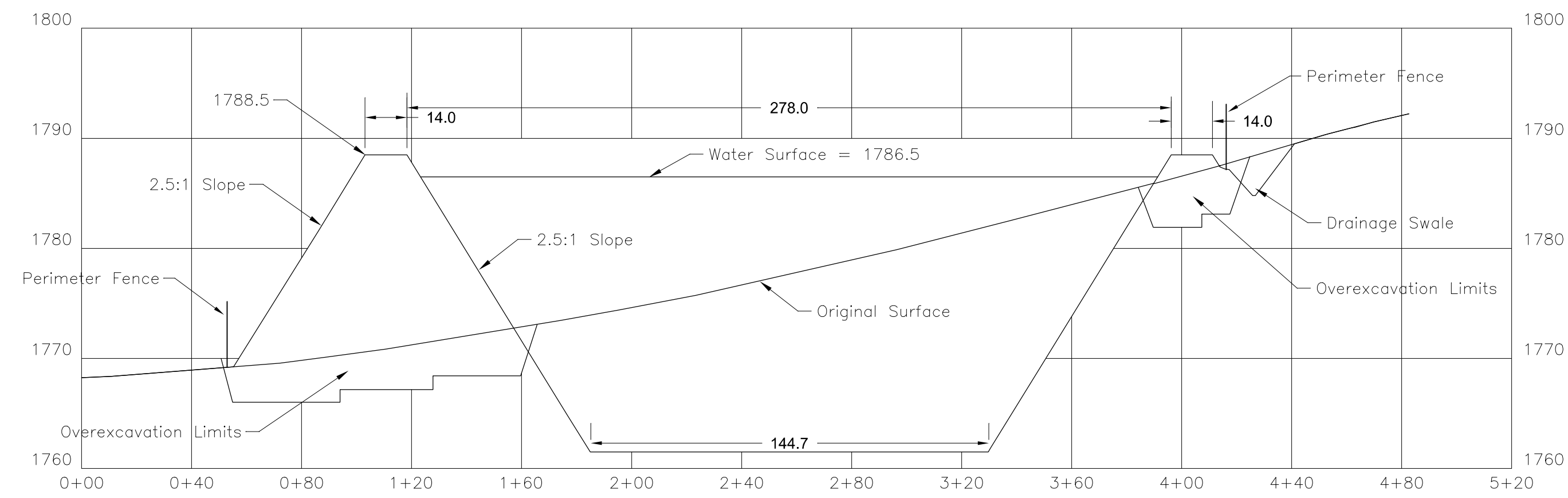
Reservoir #2 Section E-E



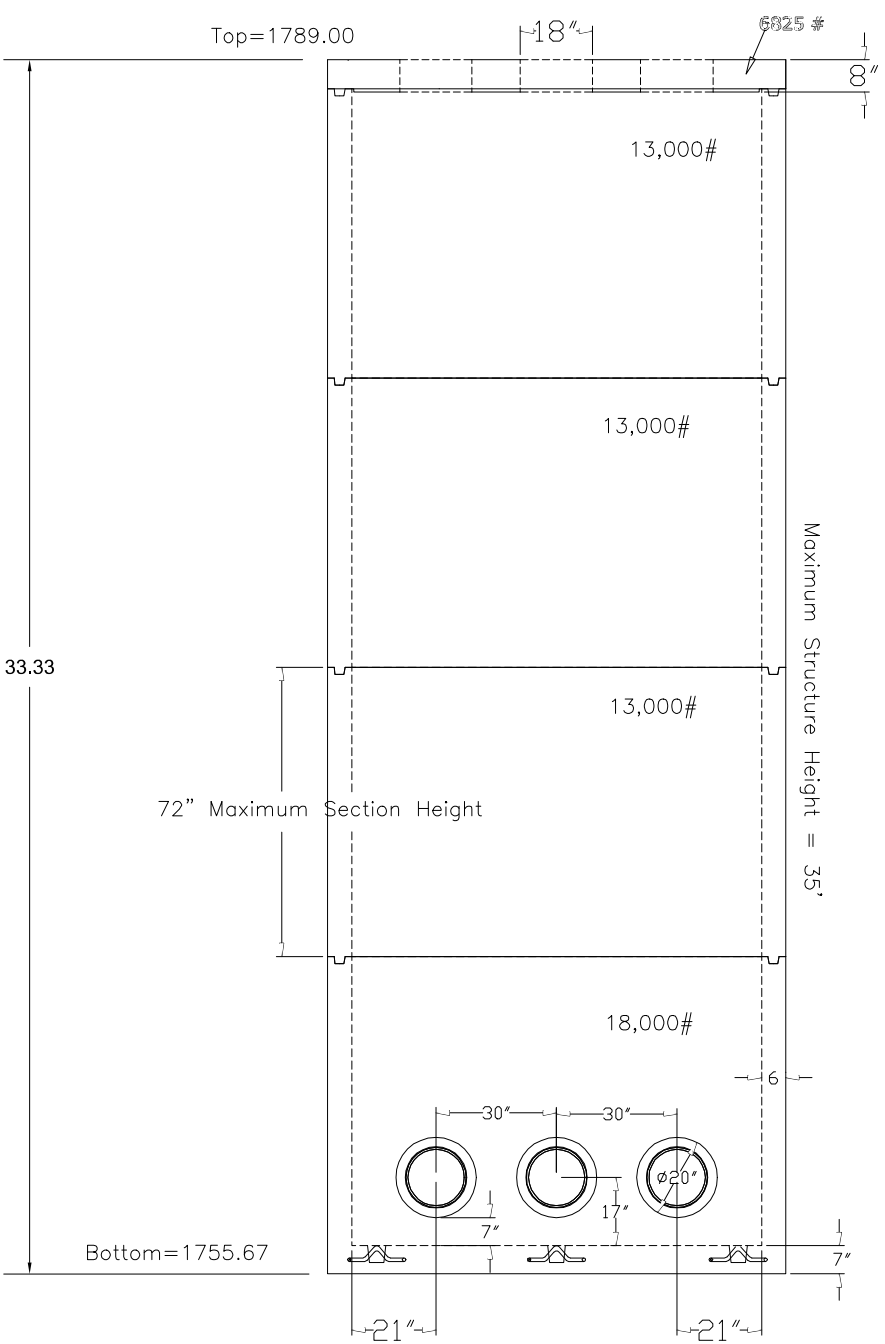
Reservoir #2 Stage Storage



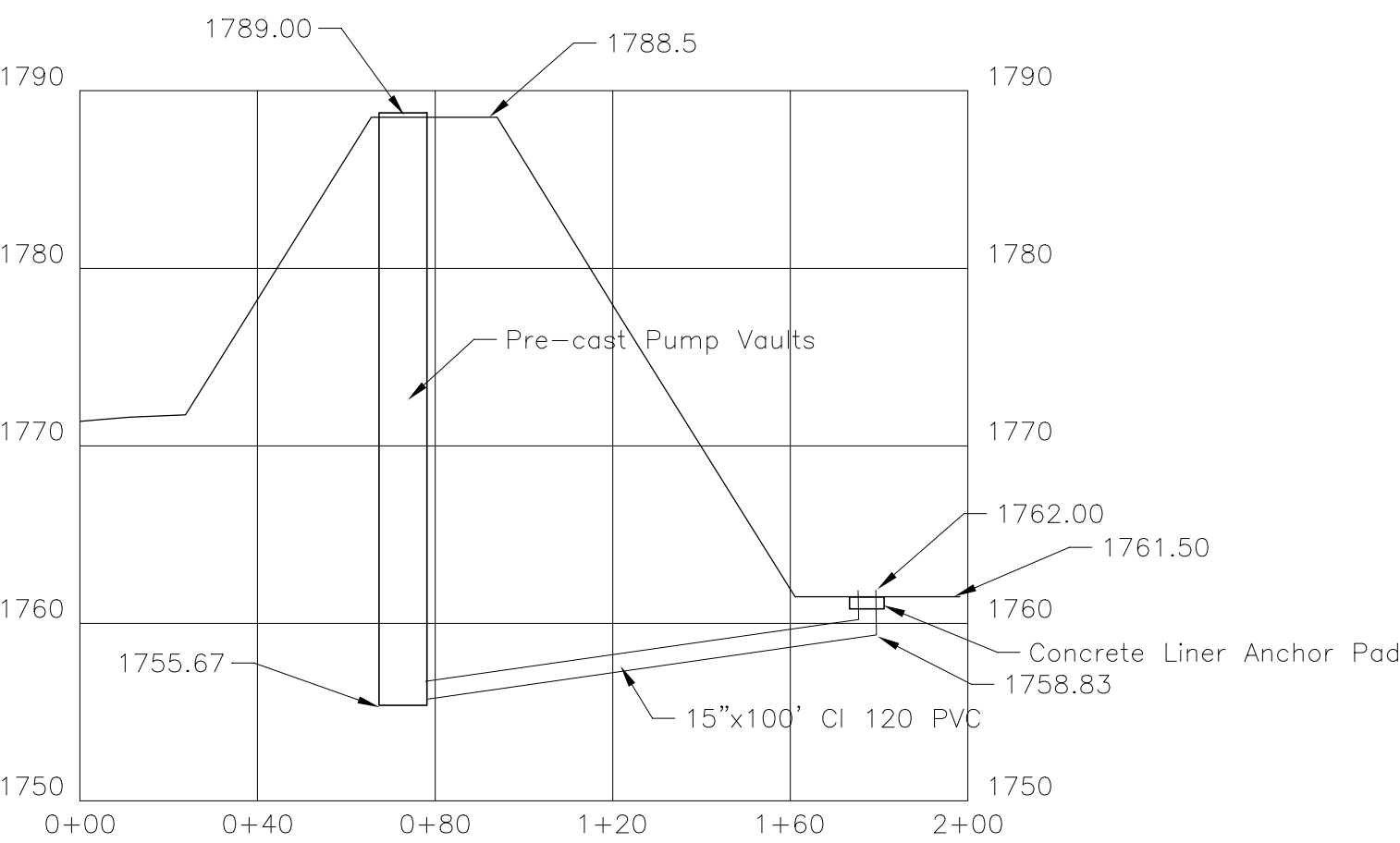
Reservoir #2 Section F-F



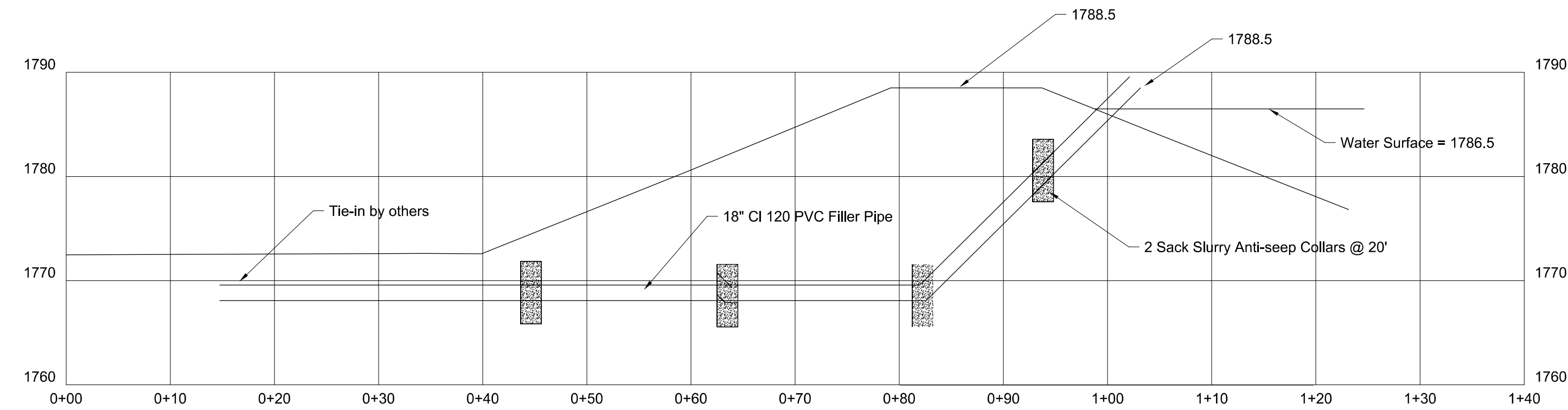
Reservoir #2 Pump Vaults



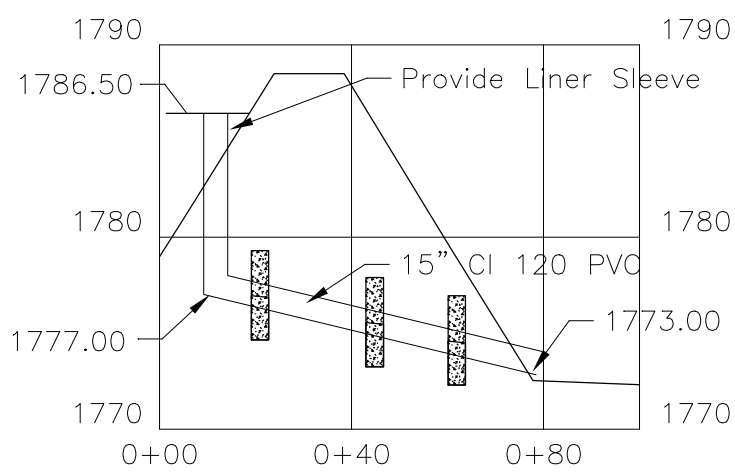
Reservoir #2 Pump Vaults Section G-G



Reservoir #2 Inlet Detail



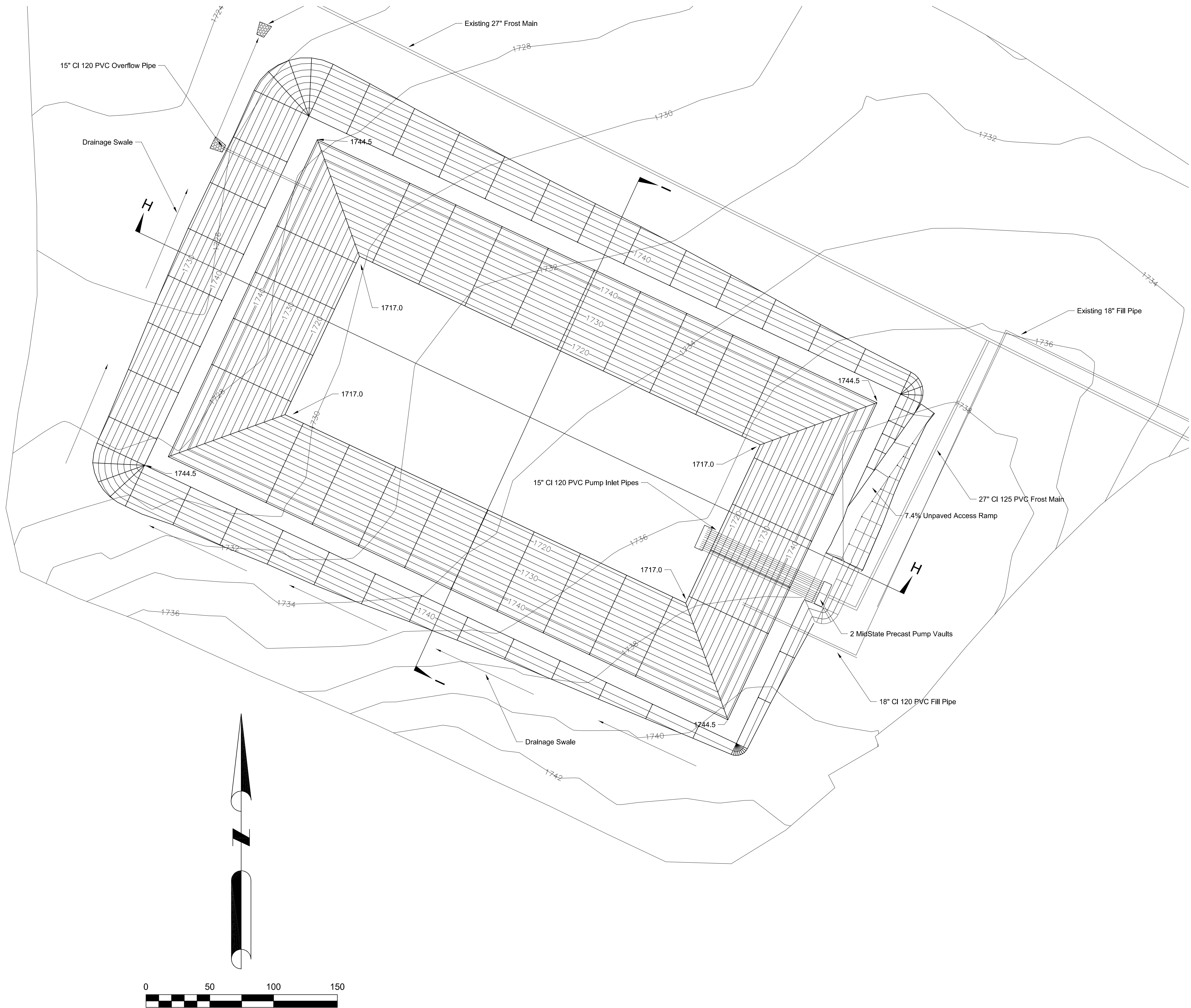
Reservoir #2 Overflow



North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #2 Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 7 of 12	PROJECT NO. 101715-6233

Reservoir #3 Grading Plan



Pond Report

Top of dam elevation: 1744.50
Bottom of pond elevation: 1717.00
Top of dam width: 14.00
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 42,770.71 C.Y.
Total fill: 40,253.87 C.Y.

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1717.00	0.00	1.093
1719.00	2.29	1.206
1721.00	4.82	1.323
1723.00	7.59	1.445
1725.00	10.60	1.571
1727.00	13.87	1.701
1729.00	17.41	1.835
1731.00	21.22	1.973
1733.00	25.30	2.116
1735.00	29.68	2.263
1737.00	34.36	2.414
1739.00	39.34	2.570
1741.00	44.64	2.729
1743.00	50.26	2.893
1744.50	54.70	3.019



North Fork Vineyards

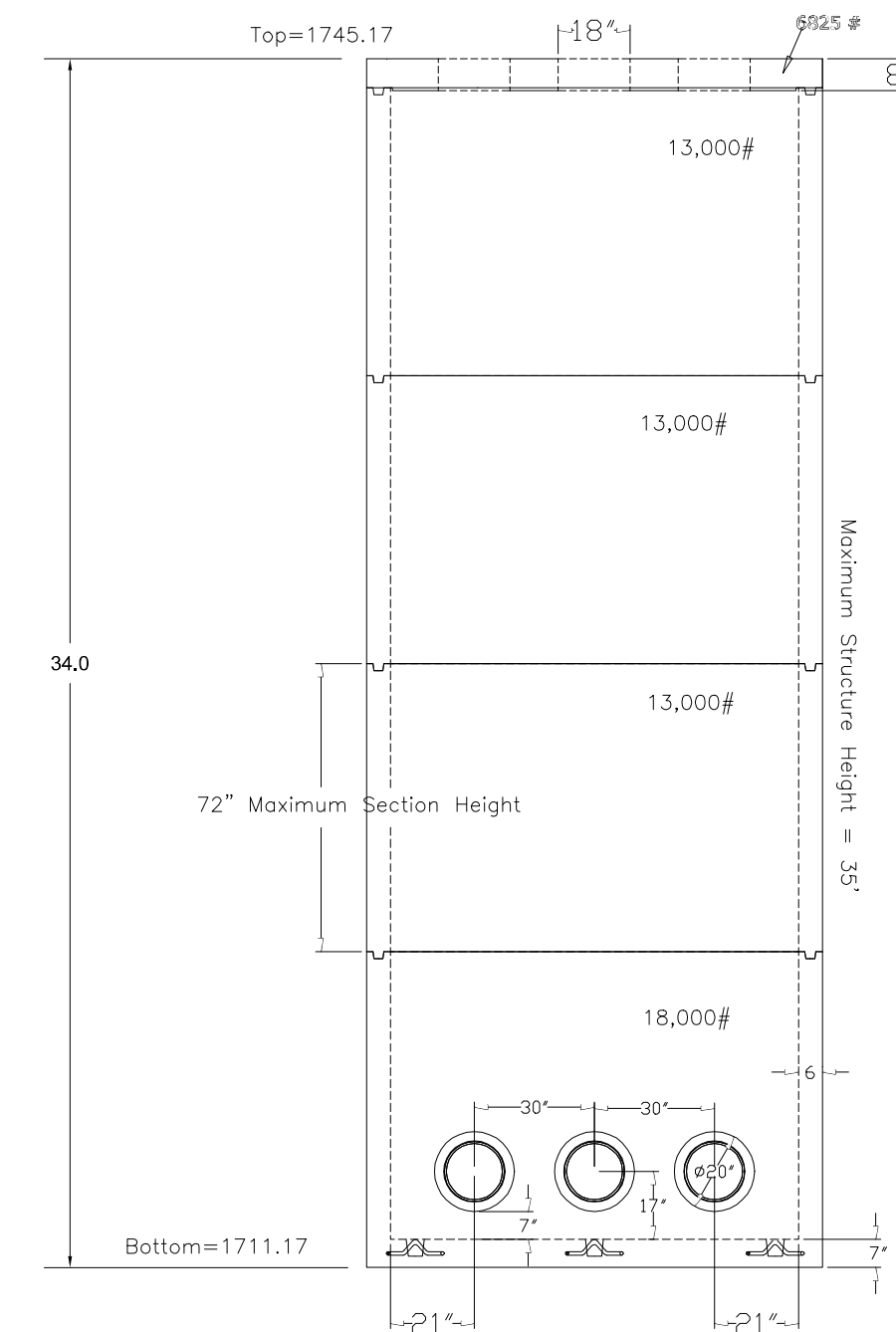
DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #3 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 8 of 12	PROJECT NO. 101715-6233

Mid-State Concrete Products
Pump Housing Vault Reservoir #3

Diagram illustrating the cross-section of a proposed water control structure, showing the water surface, original ground, and various structural dimensions.

Key Dimensions and Elevation Data:

- Water Surface:** 1742.5
- Original Ground:** 1717.0
- Structure Width (Top):** 485.0
- Structure Width (Base):** 347.0
- Structure Height:** 14.0
- Slopes:** 2.5:1 (both sides)
- Overexcavation Limits:** Indicated by dashed lines on the slopes.
- Exterior Fence:** Located on the left side of the structure.
- HDPE Liner:** Located on the right side of the structure.
- Stationing:** 0+00 to 7+20



The graph shows the relationship between Stage (ft) and Discharge (cfs) for a culvert. The y-axis represents Stage in feet, ranging from 1742 to 1745. The x-axis represents Discharge in cubic feet per second (cfs), ranging from 0 to 4050. A solid curve represents the culvert's performance. A horizontal dashed line at approximately 1743.5 ft is labeled "Maximum Pool @ 2800 gpm". A vertical dashed line at 2700 cfs intersects the curve at the maximum pool stage.

Discharge (cfs)	Stage (ft)
0	1742.5
1000	1742.7
2000	1742.8
3000	1743.0
4000	1743.2
5000	1743.5
6000	1743.8
7000	1744.2
8000	1744.6
9000	1745.0

1750

1742.5

1744.5

1745.17

1740

2 MidState Concret Products Pump Vaults

1730

1720

1717.5

1717.0

Concrete Liner Anchor Pad

1714.33 f/l

1712.33 f/l

1711.17

1710

0+00 0+40 0+80 1+20 1+60 2+00

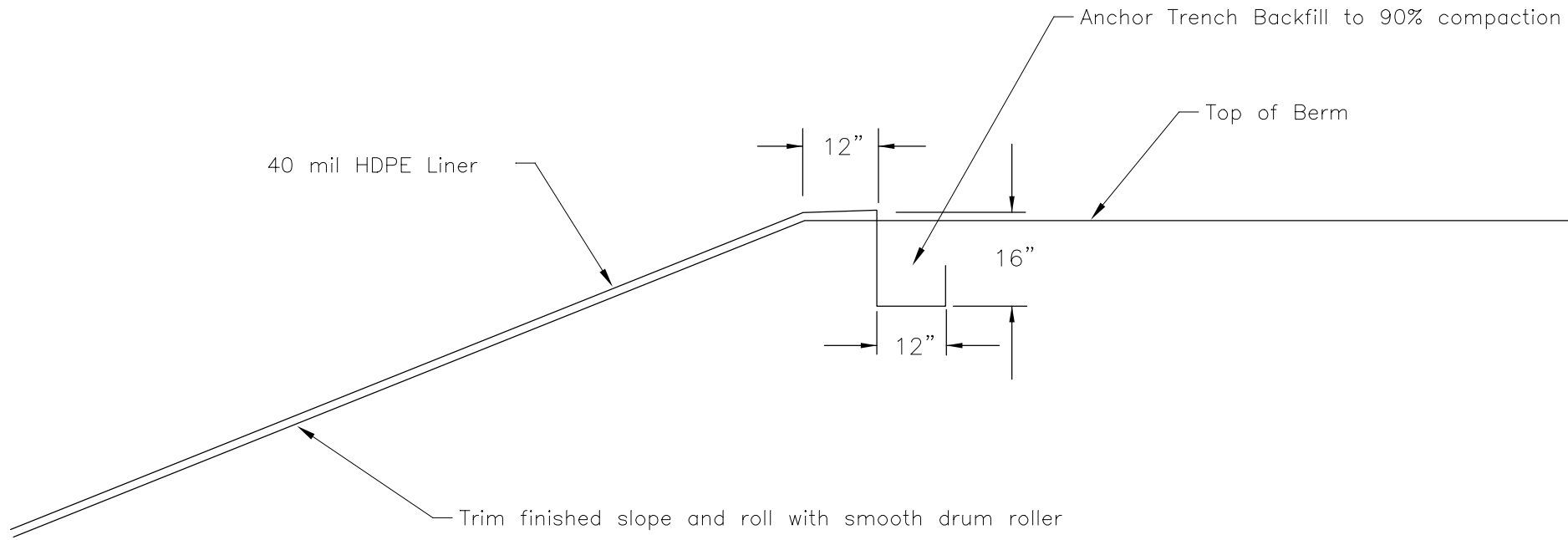
Profile view of the proposed 15 inch diameter sewer line. The graph shows elevation (1720 to 1750 feet) versus stationing (0+00 to 2+00). Key features include: 1726.0 f/l at station 0+40, Energy Dissipator at station 0+40, 1730.0 f/l at station 0+80, Slurry Anti-seep Collars @ 20' at station 1+00, 1742.5 f/l at station 1+20, Provide Sleeve for Liner at station 1+20, and 1744.5 f/l at station 1+20.



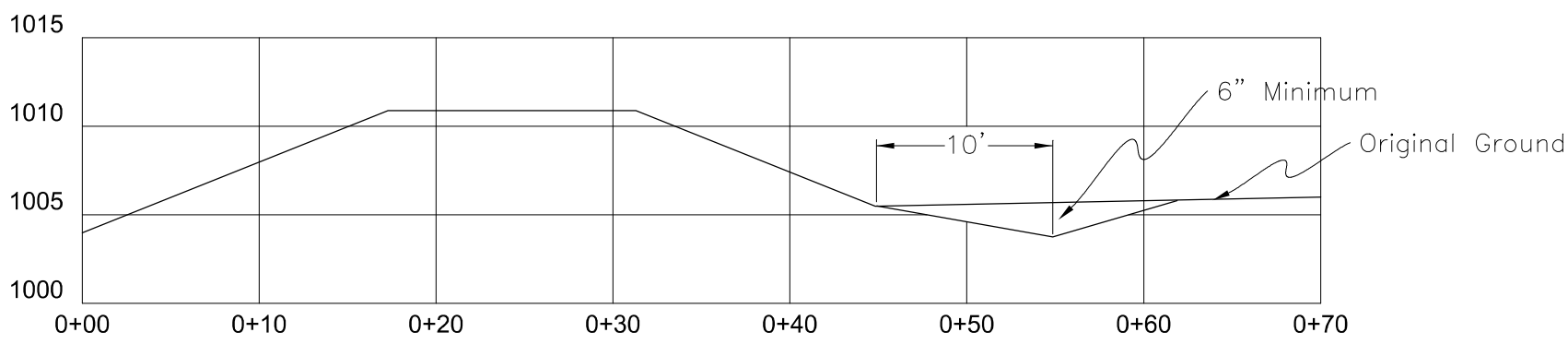
<i>North Fork Vineyards</i>		
<i>DRAWN</i>	<i>DATE</i>	<i>Reservoir #3</i>
<i>TH</i>	<i>1/09/17</i>	<i>Details</i>
<i>APPROVED</i>	<i>DATE</i>	
<i>SCALE</i>	<i>SHEET</i>	<i>PROJECT NO.</i>
<i>Varies</i>	<i>9 of 12</i>	<i>101715-6233</i>

Details Common to All Reservoirs

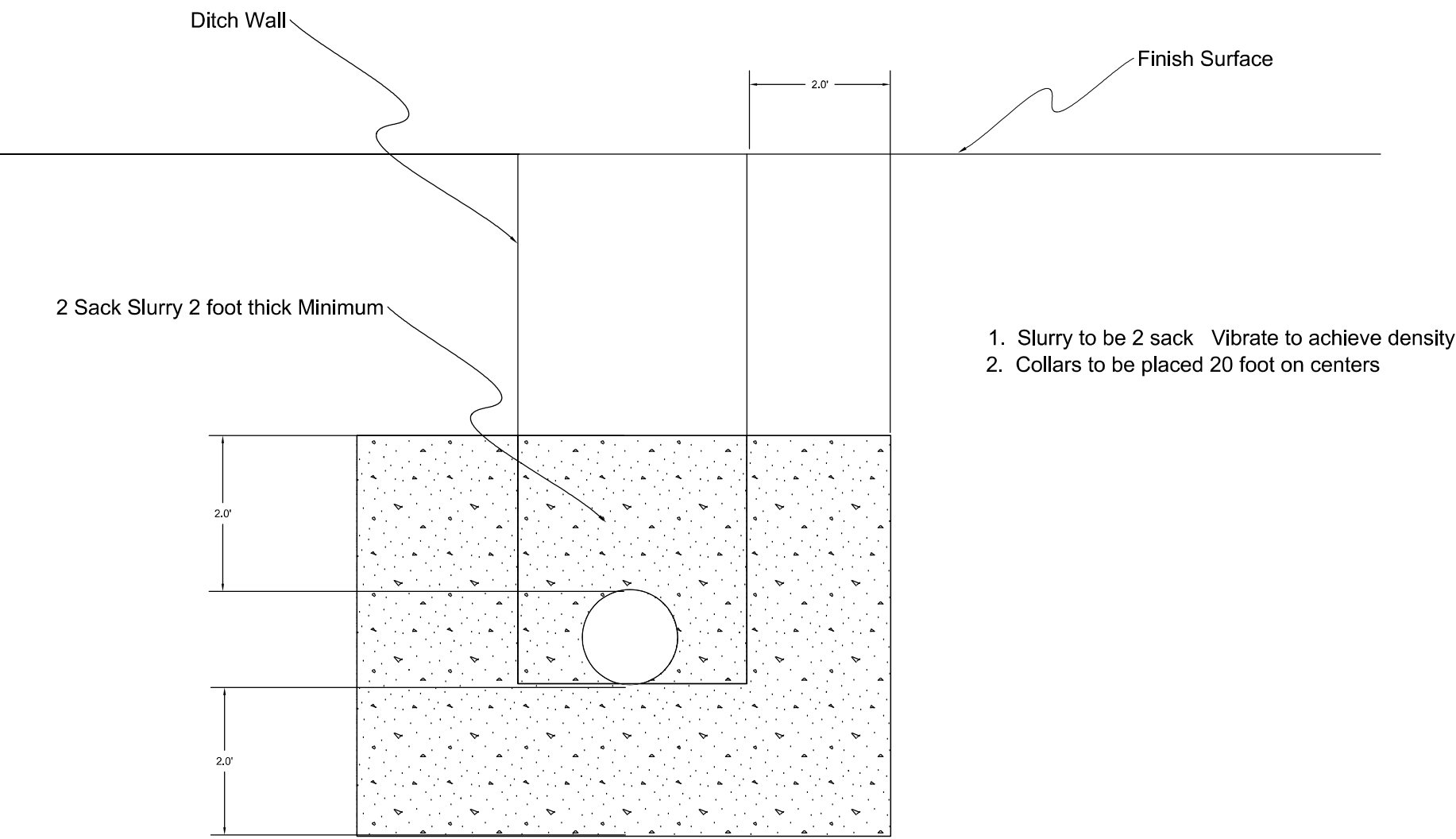
HDPE Liner Anchor Trench



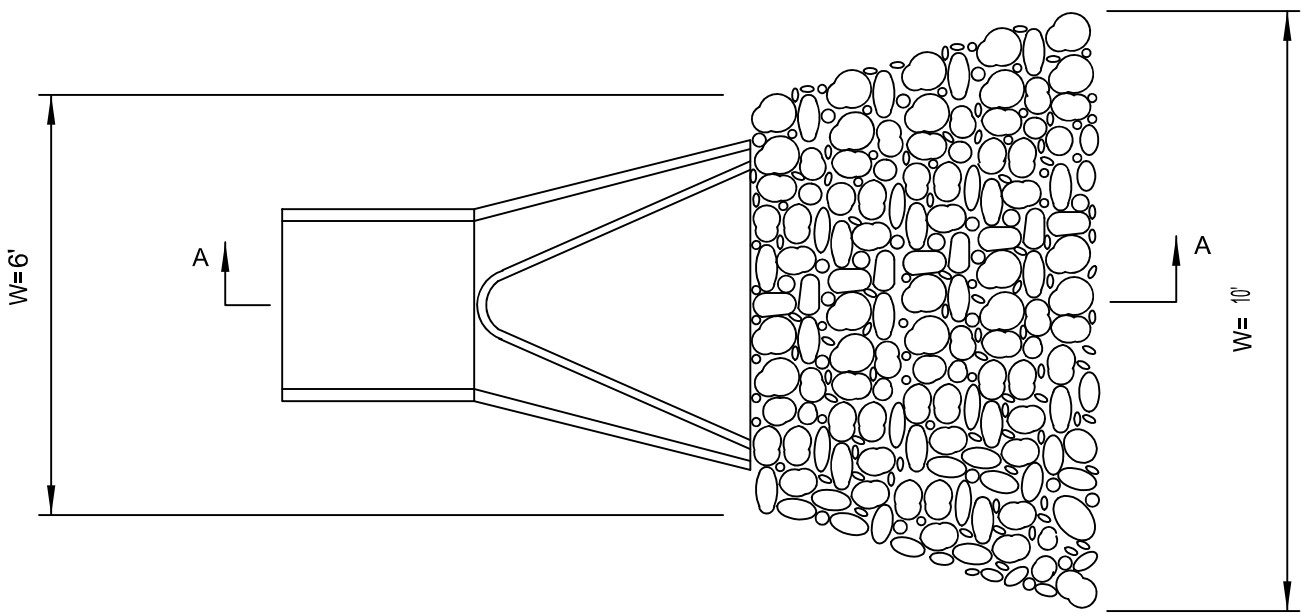
Drainage Swale Detail



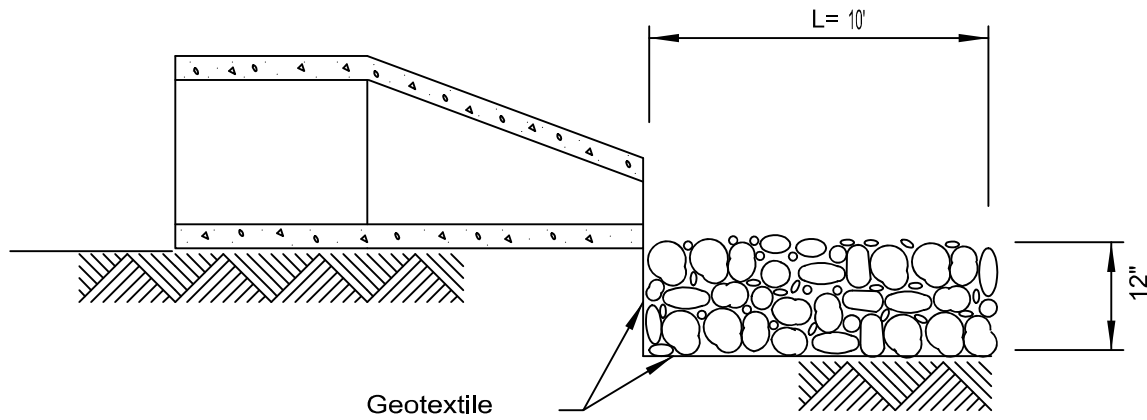
Anti-seep Collar Detail



Rock Energy Dissipater



PLAN



SECTION A-A

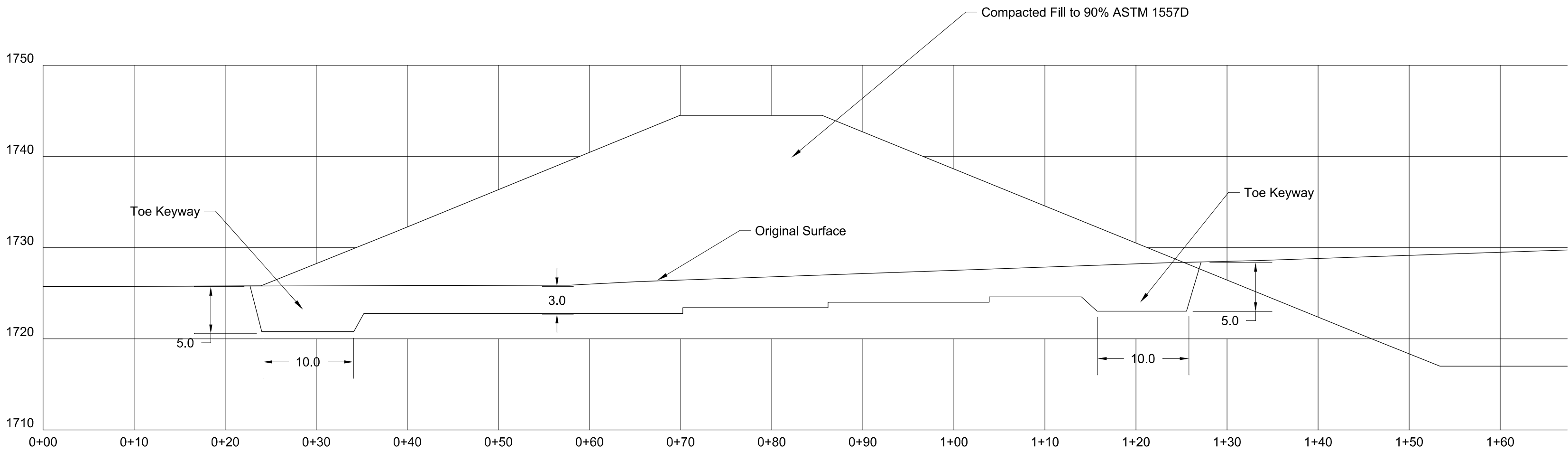
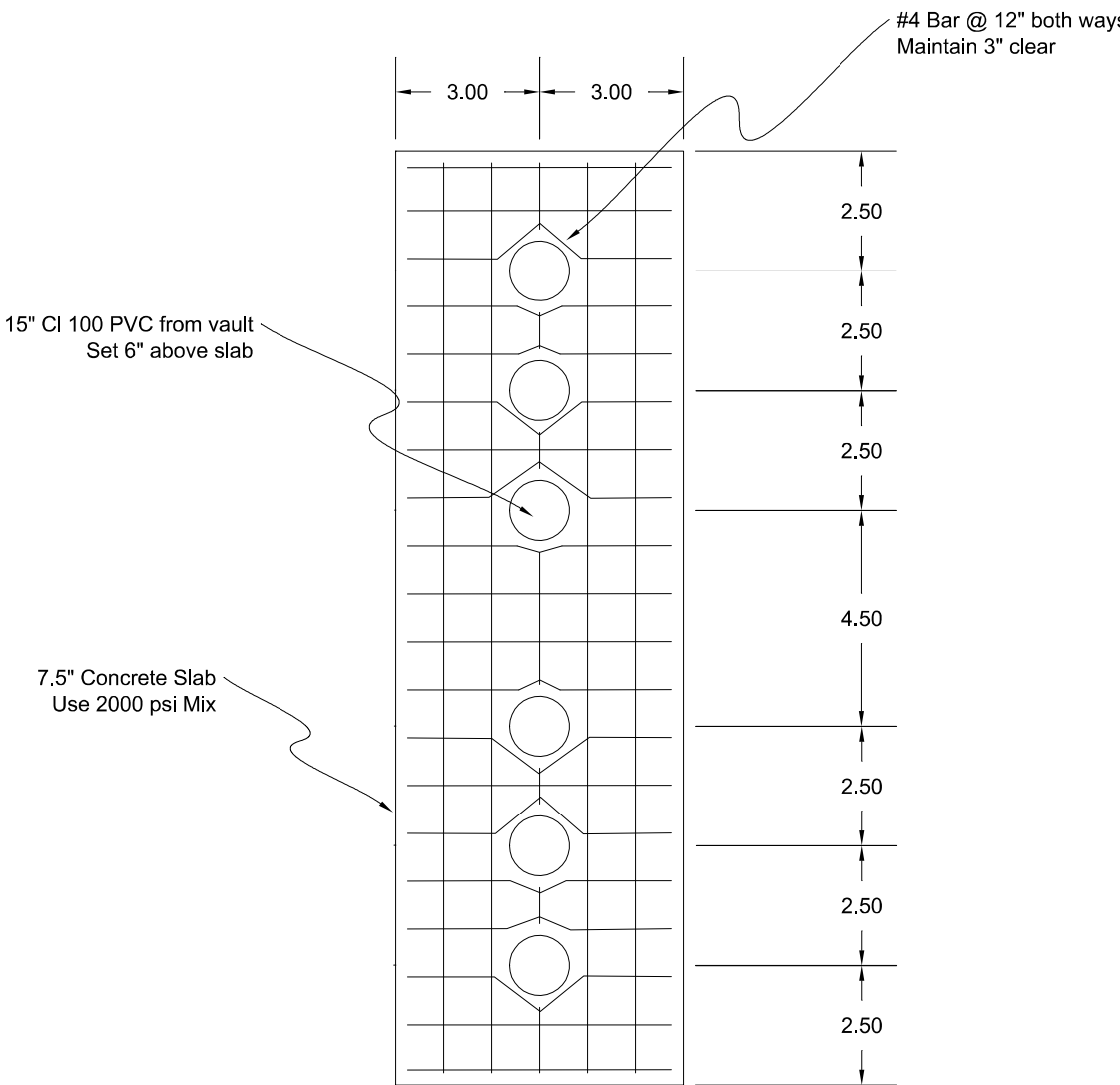
Notes:

1. Rock shall be 6" to 12" diameter
2. Minimum dimension shall be 6' x 10' x 12'

General Notes:

1. All grading shall conform to the Soil Report prepared by GSI Soils for this project dated January 4, 2016.
2. All slopes shall be overfilled than trimmed to finish grade to provide firm surfaces.
3. Finished slopes and the bottom surface shall be rolled with a smooth drum roller prior to placing fabric. The Engineer of Record shall inspect the surfaces to assure they are rock free and to the proper lines and grades before fabric shall be installed.
4. The liner shall be placed by a contractor specializing in pond liners and all pipes extending through the liner shall have sleeves and stainless bands to prevent leakage.
5. A 6 foot high non-climb fence shall be installed around the exterior perimeter of the reservoir. The fabric shall have 10 guage top and bottom wires with 12 1/2 guage 2x4 mesh filler fabric. Tee Posts shall be at 8 feet spacings and shall be heavy weight a minimum of 8 feet long.
6. The finished pond shall be surveyed by the Engineer of Record and the storage volume calculated. The 15" PVC Overflow Pipe shall be adjusted as necessary to ensure that the retained volume below the outflow inlet is no more than 49 acre feet and that there is a minimum of two feet of freeboard to the top of berm at the lowest point.

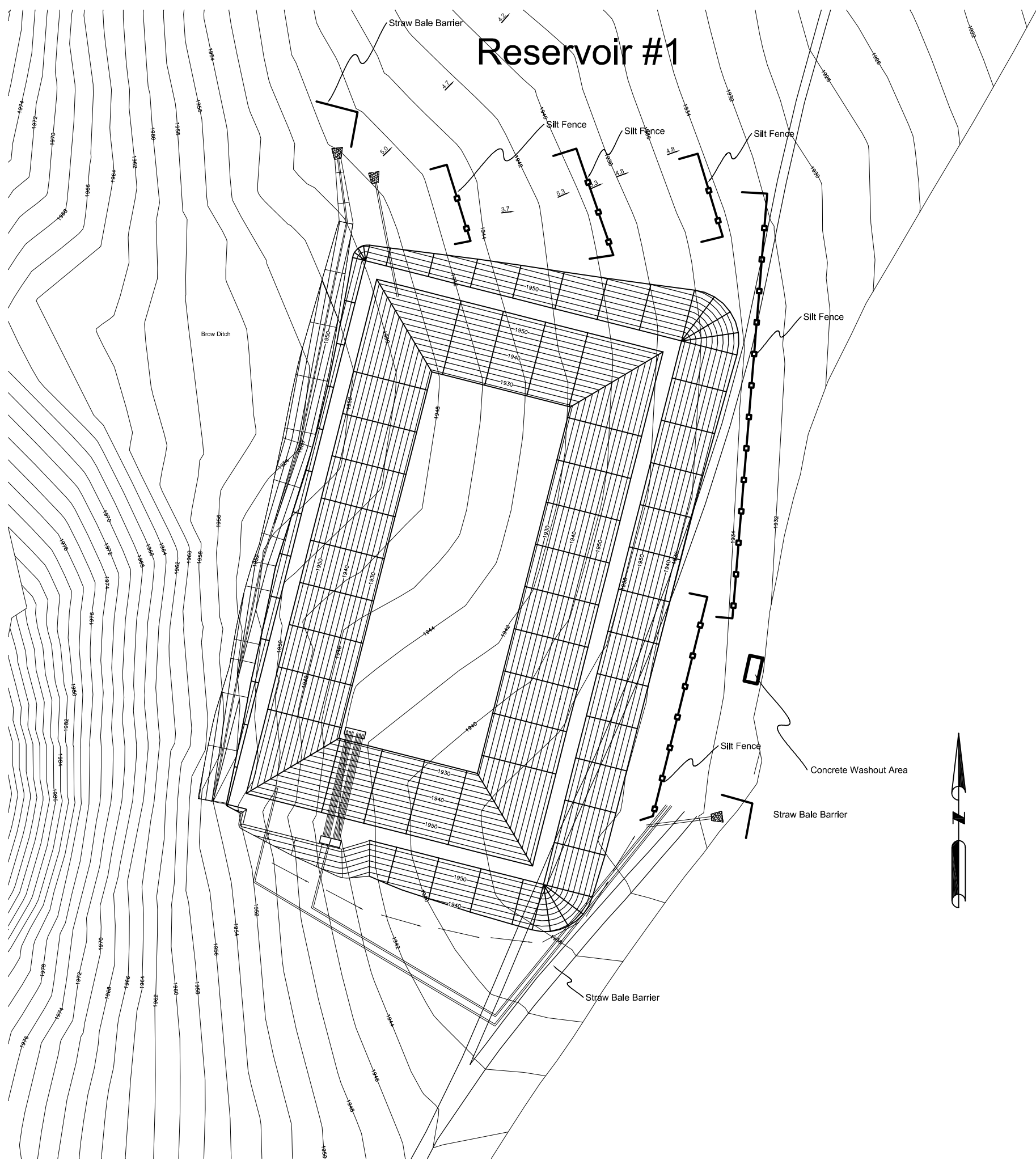
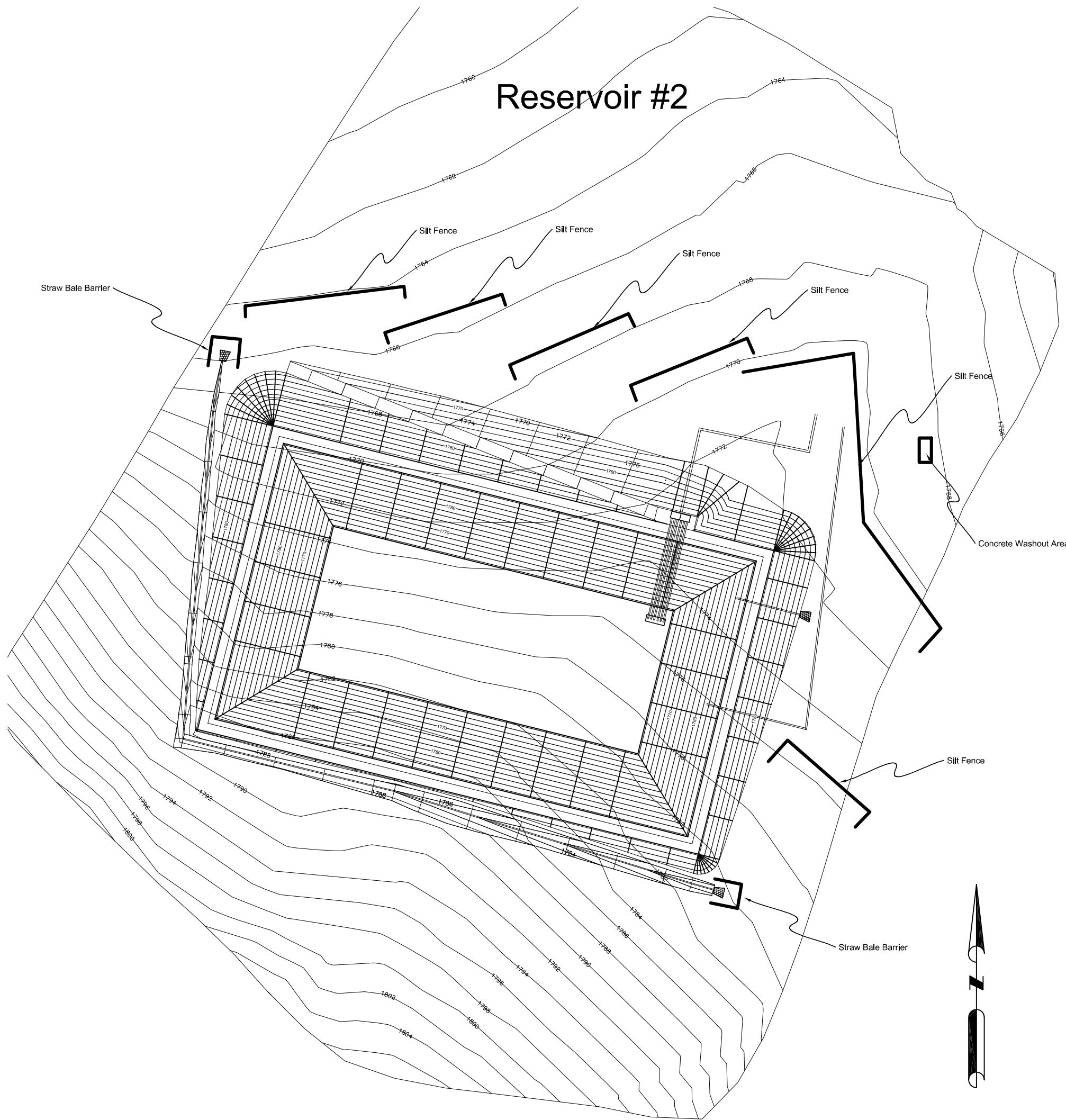
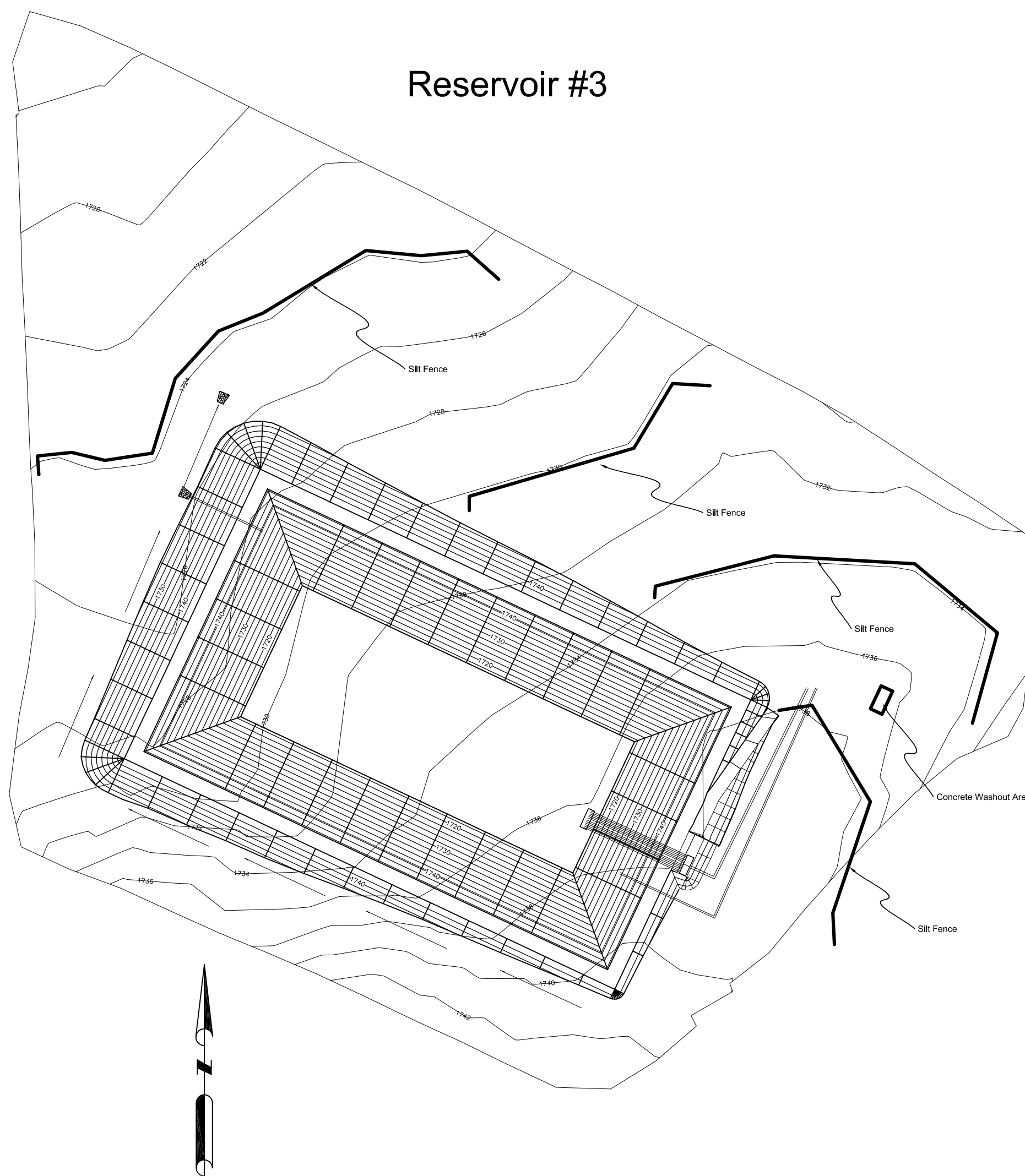
Overexcavation and Keyway Details per Figure 3 of Soil Report



North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoirs #1-3 Common Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 10 of 12	PROJECT NO. 101715-6233

Erosion and Sedimentation Control Plan



Erosion Control Notes:

- Erosion control measures shall be implemented on all projects and shall include source control, including protection of stockpiles, protection of slopes, protection of all disturbed areas, and protection of accesses. In addition, perimeter containment measures shall be placed prior to the commencement of grading and site disturbance activities unless the Engineer determines temporary measures to be unnecessary based upon location, site characteristics or time of year. The intent of the erosion control measures shall be to keep all sediment from entering a swale, drainage way, watercourse or onto adjacent properties. An approved Erosion Control and Sedimentation Control Plan will require County approval.
- Site Inspections and appropriate maintenance of erosion control devices shall be conducted and documented prior to, during, and after rain events.
- The developer shall be responsible for the placement and maintenance of all erosion control devices as specified by the approved plan until such time that the project is accepted as complete by the Engineer. Erosion control devices may be relocated, deleted or additional items may be required depending on the actual soil conditions encountered. Additional erosion control shall be placed at the discretion of the Engineer of Work, Engineer, SWPPP Monitor or RWQCB Inspector. Guidelines for determining appropriate erosion control devices are included in the appendix of the Public Improvement Standards.
- All erosion control devices shall be the first order of work and shall be in place between October 15 and April 15 or anytime when the rain probability exceeds 30%. This work shall be installed or applied after each area is graded and no longer than five (5) working days after the completion of each area.
- The Engineer of Work and the Engineer shall be notified before October 15 for inspection of installed erosion control devices.
- A standby crew for emergency work shall be available at all times during the rainy season (October 15 through April 15). Necessary materials shall be available and stockpiled at convenient locations to facilitate rapid construction or maintenance of temporary devices when rain is imminent.
- Permanent erosion control shall be placed and established with 70% coverage on all disturbed surfaces other than paved or gravel surfaces prior to final inspection. Permanent erosion control shall be fully established prior to final inspection. Temporary erosion control measures shall remain in place until permanent measures are established. A water truck shall be used to water areas hydroseeded until the planting is established.
- In the event of a failure, the developer and/or his representative shall be responsible for cleanup and all associated costs or damages.
- Slurry Mix: The slurry mix shall be composed of the following materials:

Bromus mollis - Blando Brome (95%, 85%)	20 pounds per acre
Festuca megalura - Zorro Fescue (85%, 80%)	8
Trifolium hirtum "Hykon" - Rose Clover (95%, 90%)	30
inoculated with appropriate bacteria	3
Eschscholzia californica - California Poppy (95%, 75%)	3
Lupinus nanus - Sky Lupine (95%, 75%)	4

(Seed available at S&S Seeds (805) 684-0436)

Other Materials:

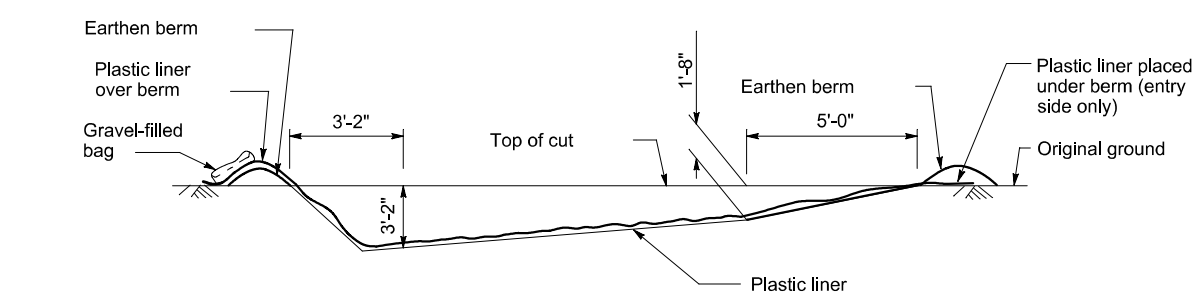
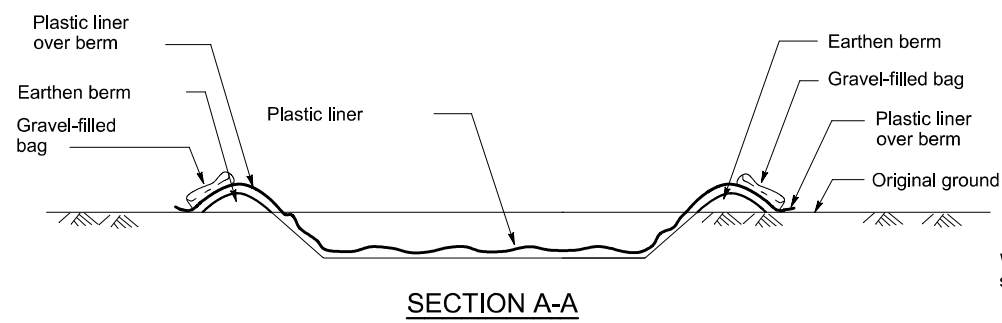
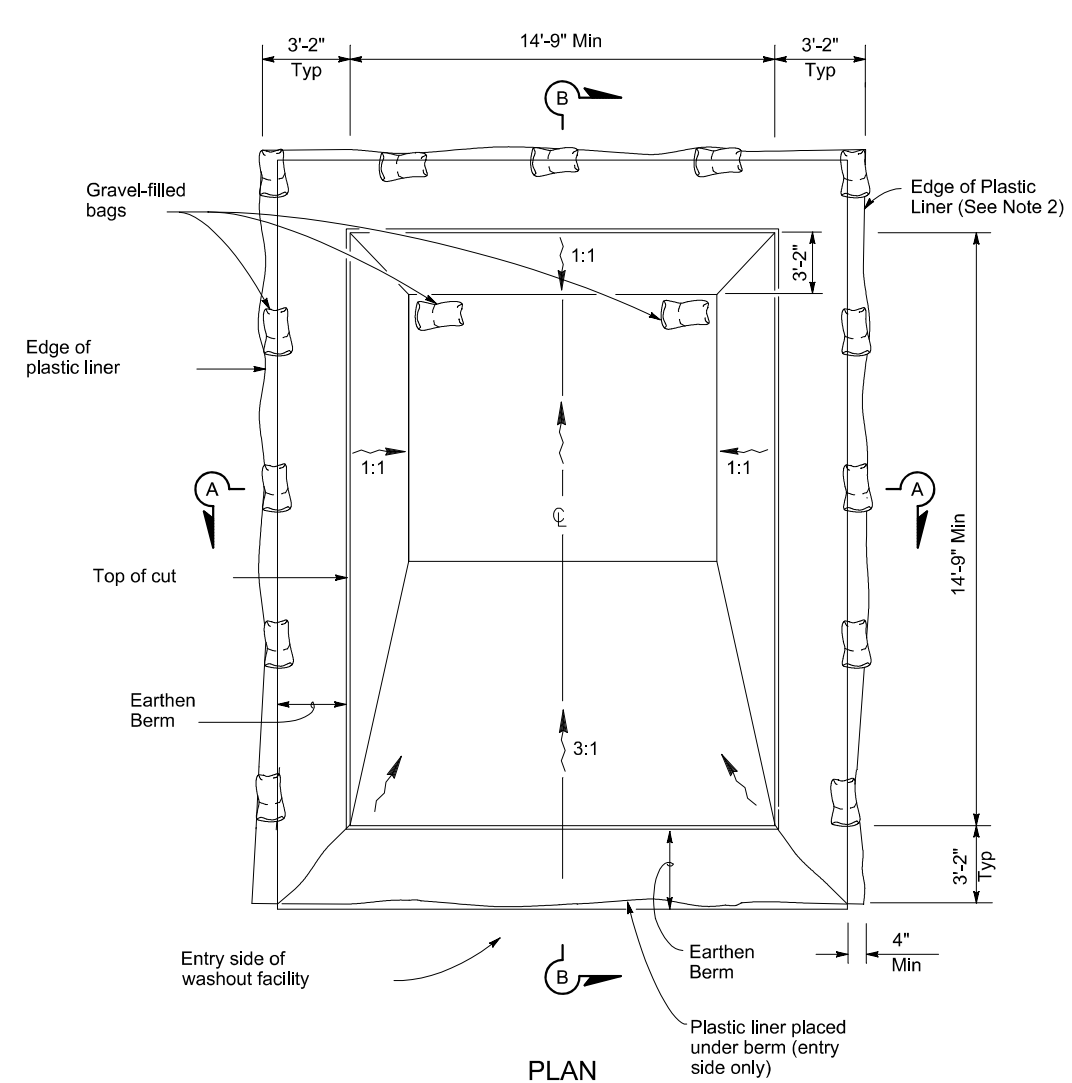
100% Wood fiber mulch (green)	1600 pounds per acre
Commercial Fertilizer (16-20-0)	400
"M-Binder" (stabilizing emulsion) or equal	120
Water (as needed for application and as specified by manufacturer)	
- Application: The slurry preparation shall take place at the site and in the presence of the Engineer. Spraying of the slurry shall be done by an experienced hydroseeding company and commence within five minutes after all the materials have been mixed thoroughly.
- The hydroseeded areas shall be watered with a fine mist periodically until the seed begins to germinate then every other day until the roots are established and 70% of the area is covered. Do not use the side spray of a watertruck but instead use a nozzle adjusted to spray a fine mist attached to a hose.
- BMP's to be constructed include but are not limited to:
 - Silt Fence
 - Straw bale barrier
 - Concrete washout area



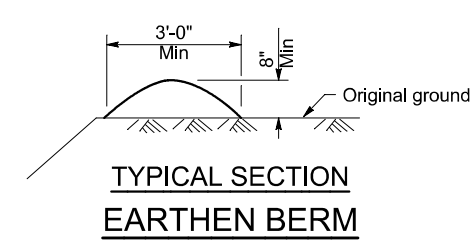
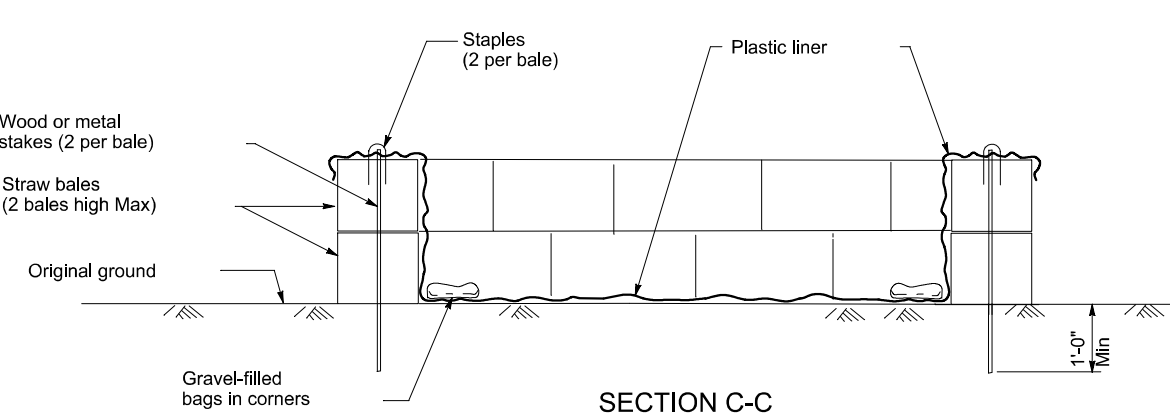
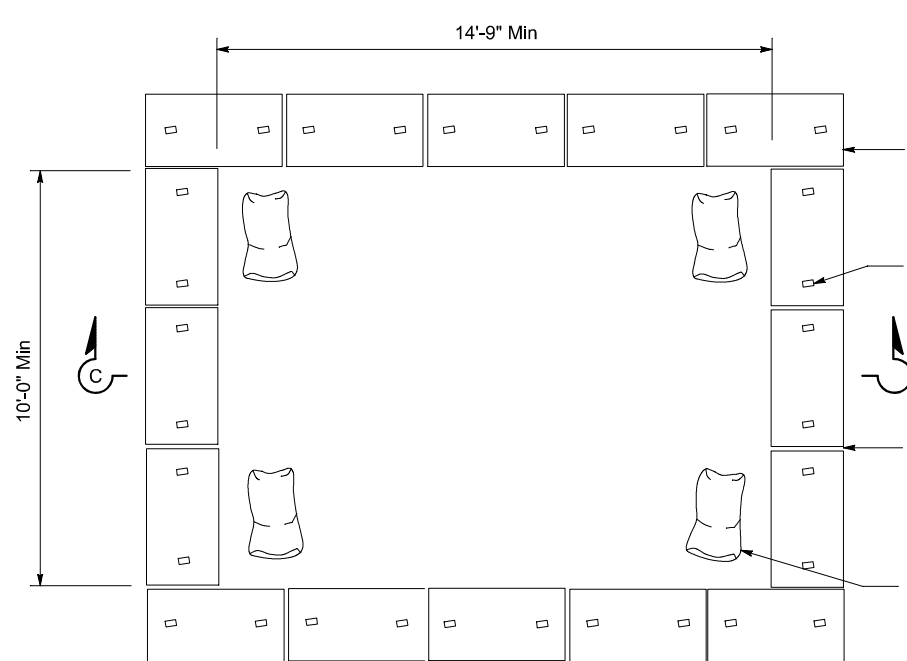
North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoirs #1-3 Erosion & Sedimentation Control
APPROVED	DATE	
SCALE 1"=100'	SHEET 11 of 12	PROJECT NO. 101715-6233

Erosion Control BMP Details



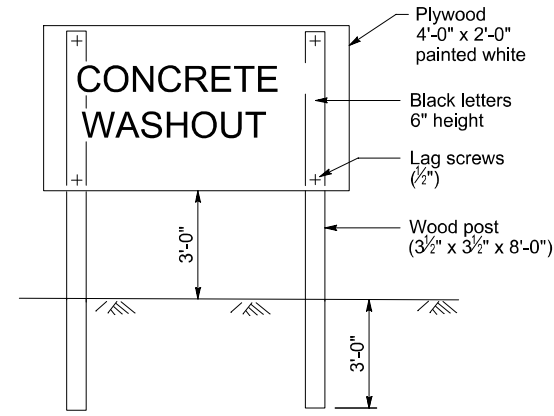
TEMPORARY CONCRETE WASHOUT FACILITY



TEMPORARY CONCRETE WASHOUT FACILITY

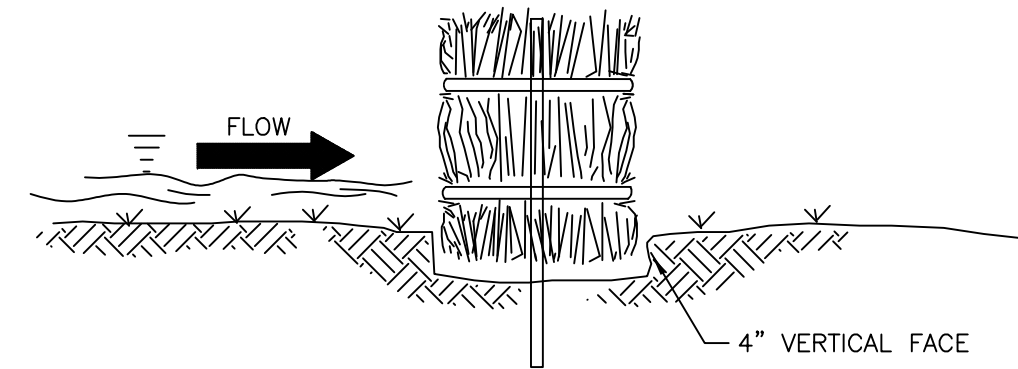
NOTES:

1. The concrete washout sign shall be installed within 32'-10" of the temporary concrete washout facility.
2. Plastic liner shall be anchored with gravel-filled bags for below grade concrete washout facility.

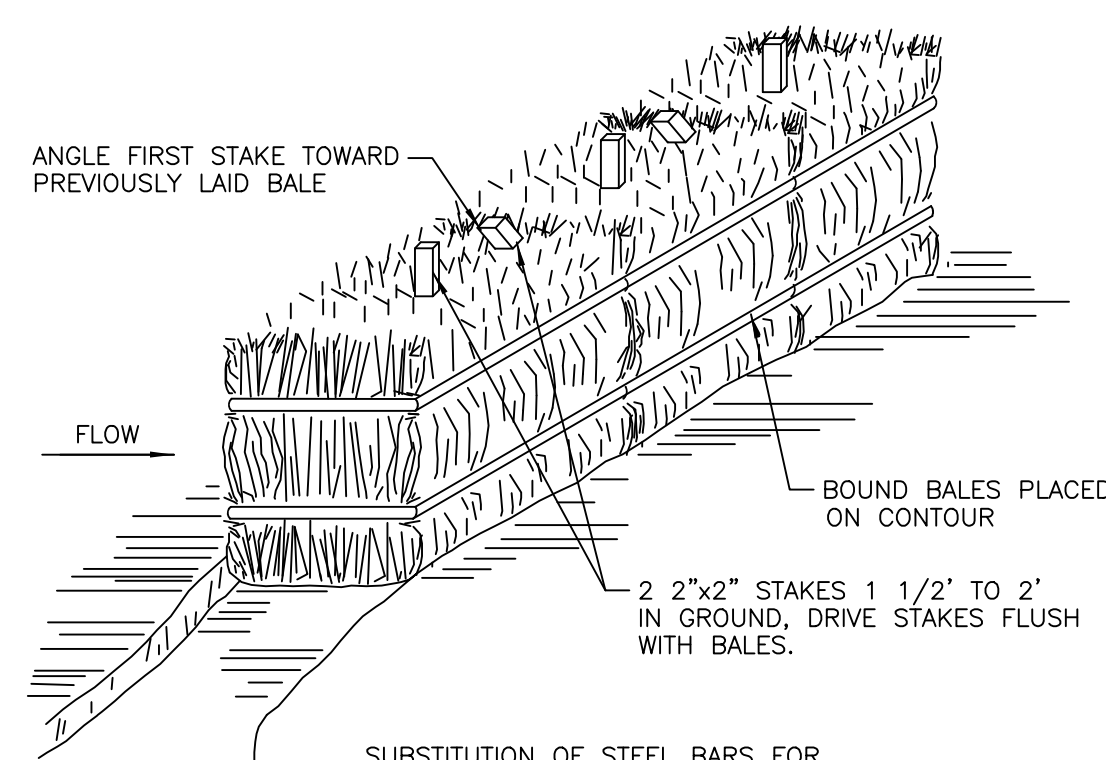


CONCRETE WASHOUT
SIGN DETAIL

NO SCALE

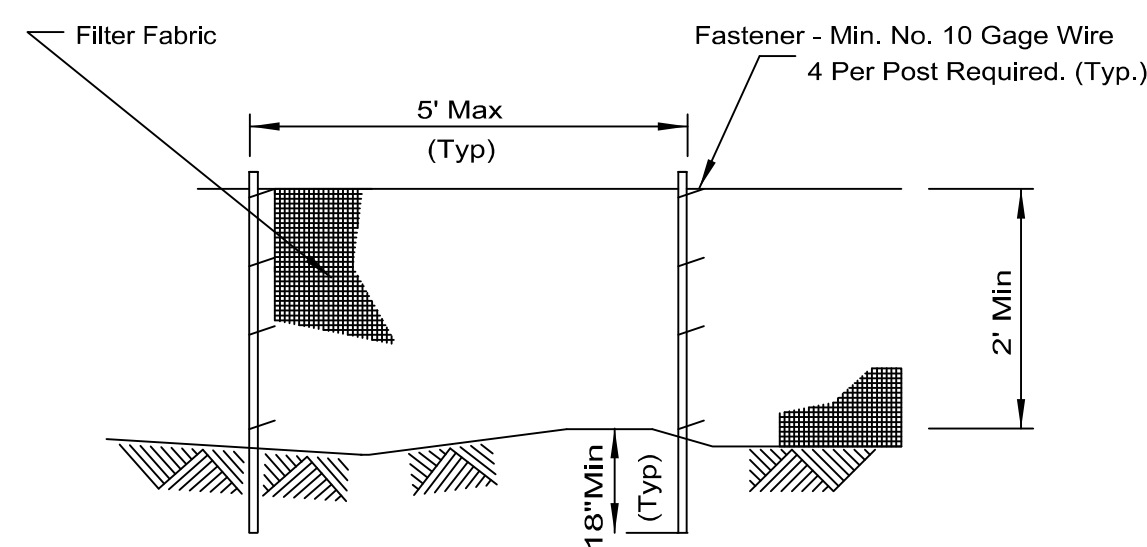
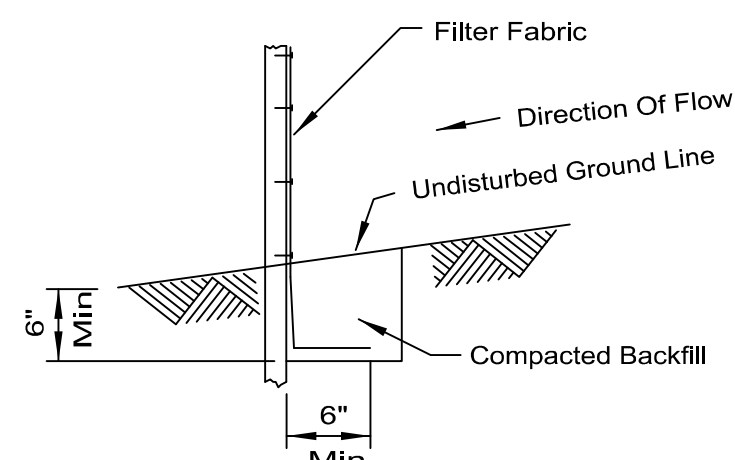


* PROMOTES ON SITE SEDIMENTATION
BY CREATING A TEMPORARY POND.



STRAW BALE BARRIERS

SILT FENCE PLAN



NOTES:

1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class with equivalent opening size of at least 30 for nonwoven and 50 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.



North Fork Vineyards

DRAWN TH	DATE 1/09/17	Reservoirs #1-3 BMP Details
APPROVED	DATE	
SCALE Varies	SHEET 12 of 12	PROJECT NO. 101715-6233

ERDENET COPPER DUMP LEACH PAD

ERDENET, MONGOLIA

[DURABILITY RUNS DEEP]

GSE Geomembrane Still Performing After 16 Years of Exposure to Harsh Weather

Owner:

Erdmin Company, Ltd.

Engineers:

BKS Consulting Engineers
EMC Design Department

Geosynthetics Installer:

Stroyinvest



Technical Description:

Product: GSE Geomembrane

Description: 2.0 mm Smooth HDPE

Quantity: 100,000 m²

Case Study

Background

Mongolia is a mineral-rich, landlocked country located in East-Central Asia, with large reserves of coal, copper, and gold. The mining city of Erdenet, located 371 kilometers Northwest of the capital, was built in 1974 to exploit Asia's largest deposit of copper ore, and it is the location of the fourth largest copper mine in the world. Erdenet Mining Corporation (EMC), a joint venture between the governments of Mongolia and Russia, and RMC of the United States agreed to build a pilot plant to manufacture pure copper cathode by using a weakened solution of sulfuric acid from low grade ore piles. Construction began in 1997, and 4 months later, the plant, registered under the name Erdmin Co., Ltd., started producing copper by dump leach process.

Challenge

Mongolia experiences extremely harsh weather conditions, with long cold winters and short summers, during which most precipitation falls. The altitude of Erdenet is 1,400 m, and the city receives stronger sunlight radiation than the plain areas. Historical weather records show the average yearly temperatures can range from 21°C to -26°C, while some years have seen temperatures fluctuate up to 69 degrees between the highest and lowest recorded thermometer readings. These conditions create a challenge for the design engineers to find a geomembrane material that can perform when continually exposed to such extreme temperatures and UV radiation.

The Solution

BKS Consulting Engineers and the design department of EMC specified 2.0 mm thick GSE High Density Polyethylene Smooth geomembrane for the bottom lining of the dump leach pad and 8 attached solution ponds. It

continued...



was a single liner system, utilizing a geotextile layer under the geomembrane for added protection from any sharp rocks or protruding objects in the compacted tailings subgrade. In total, 100,000 m² of liner were installed by Stroyinvest, a joint venture between Russian and local construction firms. At the time of installation, it was the first job of this kind in Mongolia and included a 56 meter high dump leach pad, four pregnant solution ponds connecting with geomembrane lined ditches, two raffinate ponds, and a waste impoundment. The typical side slope angles for the ponds were 2:1 and the average depth was 4-6 meters. Due to different seasons, the water level of the ponds varied and a large portion of the geomembrane was exposed to weather conditions and UV radiation over long periods of time. Installation was completed within 4 months during the spring and summer of 1997.

The Result

On a visit to the site in 2013, GSE engineers removed exposed samples of the liner that had been in service for 16 years and performed evaluation testing as per current GRI-GM 13 specifications. The laboratory evaluation on the exhumed samples revealed no significant reduction in the physical and mechanical properties (density, tensile, tear, puncture, carbon black content and dispersion). The liner showed a reduction in OIT values due to depletion of the antioxidant over time, but the levels are still relatively high and well within the specification of GRI-GM 13. Based on calculations, this geomembrane is expected to continue working in its desired function for another 141 years. Erdmin monitors the underground water quality two times a month, and no contamination has been detected so far. In addition, the quality of cathode copper manufactured in this plant has been confirmed by independent evaluators Alex Steward Assayers to meet the "A" grade quality requirements of the London Metal Exchange.

"We are very satisfied with the performance of the geomembrane applied in our dump leach pad. It helps us maintain a normal and effective operation in the facility," acknowledged Mr. J. Baatar, General Director of Erdmin Co., Ltd.



North America 800.435.2008

Europe & Africa 49.40.767420

Asia Pacific 66.2.937.0091

South America 56.2.595.4200

Middle East 20.23828.8888

For more information on this product and others, please visit us at GSEworld.com, call 800.435.2008 or contact your local sales office.

GSEworld.com

GSE is a leading manufacturer and marketer of geosynthetic lining products and services. We've built a reputation of reliability through our dedication to providing consistency of product, price and protection to our global customers.

Our commitment to innovation, our focus on quality and our industry expertise allow us the flexibility to collaborate with our clients to develop a custom, purpose-fit solution.

[DURABILITY RUNS DEEP]

For more information on this product and others, please visit us at GSEworld.com, call 800.435.2008 or contact your local sales office.

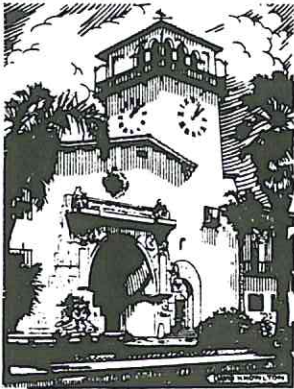


ATTACHMENT E

COUNTY OF SANTA BARBARA CALIFORNIA

ZONING ADMINISTRATOR

COUNTY ENGINEERING BUILDING
123 E. ANAPAMU STREET
SANTA BARBARA, CALIFORNIA 93101-2058
PHONE: (805) 568-2000



COURT HOUSE

October 2, 2017

Mr. Brian A. Tetley
Urban Planning Concepts
2624 Airpark Drive
Santa Maria, CA 93455

ZONING ADMINISTRATOR
HEARING OF SEPTEMBER 25, 2017

RE: North Fork Ranch Ponds Project, 16CUP-00000-00005

Hearing on the request of Brian Tetley, Urban Planning Concepts, agent for Brodiaea, Inc., owner, to consider Case No. 16CUP-00000-00005 [application filed on February 17, 2016] for a Conditional Use Permit allowing the construction and operation of three water storage reservoirs within a 6,565-acre parcel in compliance with Section 35.82.60 of the County Land Use and Development Code, on property zoned AG-II-100; and to adopt the Mitigated Negative Declaration (17NGD-00000-0004) pursuant to the State Guidelines for Implementation of the California Environmental Quality Act. As a result of this project, significant but mitigable effects on the environment are anticipated in the following categories: Biological Resources, Cultural Resources, Geologic Processes, and Water Resources/Flooding. The Mitigated Negative Declaration (MND) and all documents may be reviewed at the Planning and Development Department, 624 West Foster Road, Suite C, Santa Maria. The MND is also available for review at the Cuyama Branch Public Library located at 4689 Highway 166, New Cuyama. The application involves Assessor Parcel No. 147-020-045, located approximately nine miles west of the community of New Cuyama between Cottonwood Canyon Road and Schoolhouse Canyon Road, Fifth Supervisorial District.

Dear Mr. Tetley:

At the regular hearing of the Santa Barbara County Zoning Administrator on September 25, 2017 Case No. 16CUP-00000-00005 marked "Officially Accepted, County of Santa Barbara September 25, 2017 Zoning Administrator Attachments A-E" was conditionally approved, based upon the project's consistency with the Comprehensive Plan and based on the ability to make the required findings. The Zoning Administrator also took the following action:

1. Made the required findings for approval of the project, Case No. 16CUP-00000-00005, specified in Attachment A of the staff report dated September 8, 2017, including CEQA findings;
2. Adopted the Mitigated Negative Declaration included as Attachment C of the staff report dated September 8, 2017, and adopt the mitigation monitoring program contained in the conditions of approval; and

3. Approved the project, Case No. 16CUP-00000-00005, subject to the conditions included as Attachment B of the staff report dated September 8, 2017 and as revised at the hearing of September 25, 2017

Revisions to Attachment B – Conditions of Approval

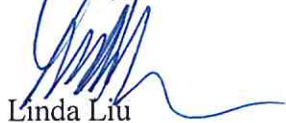
Condition No. 20, Project Monitoring, is added as follows:

20. **Project Monitoring.** Prior to the issuance of a zone clearance for grading, the applicant shall submit to P&D for review and approval a proposed Evaporation Reporting Plan that identifies the methodology to be used to measure and document evaporative water losses from each of the proposed reservoirs. Measures to reduce annual evaporation losses from the reservoirs shall be implemented if monitoring indicates that annual losses exceed 31 acre feet per year. Future modifications to the operation or design of the project to reduce evaporative losses must be approved by P&D before such measures are implemented. The first Evaporation Reporting Plan report shall be submitted to P&D 30 days after the reservoirs have been in operation for one year. The Evaporation Plan reports shall be submitted annually to P&D for four years after the first report is submitted. The requirement to submit Evaporation Monitoring and Reporting reports may be discontinued after an initial five (5) year monitoring period if deemed warranted by the Planning & Development Director based on results of the previously submitted reports.

The Findings and the Conditions of Approval reflect the action of the Zoning Administrator and are included in this letter as Attachment A and Attachment B.

- The action of the Zoning Administrator to approve, conditionally approve, or deny the project may be appealed to the Planning Commission by the applicant, or an aggrieved person, as defined in Chapter 35.102 (Appeals) of the Santa Barbara County Land Use and Development Code, adversely affected by the decision within the 10 calendar days following the date of action by the Zoning Administrator.
- An appeal, which shall be in writing, and accompanying fee of \$610.06 shall be filed with the Planning and Development Department located at 123 East Anapamu Street, Santa Barbara, or 624 West Foster Road, Suite C, Santa Maria, prior to expiration of the appeal period specified above.
- **Public appeal period expires on Thursday, October 5, 2017 at 5:00 P.M.**

Sincerely,



Linda Liu
Zoning Administrator

xc: Case File: 16CUP-00000-00005
Hearing Support Zoning Administrator File
Owner: Matt Turrentine – Brodiaea, Inc., P.O. Box 6565, Santa Maria, CA 93455
Address File: Nine miles west of New Cuyama, between Cottonwood Canyon Road and Schoolhouse Canyon Road.
County Surveyor's Office
Supervisor: Steve Lavagnino, Fifth District Supervisor
Planner: Steve Rodriguez

Attachments: **Attachment A – Findings**
 Attachment B – Conditions of Approval

LL:sf

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ATTACHMENT A: FINDINGS OF APPROVAL

1.0 CEQA FINDINGS

1.1 CONSIDERATION OF THE NEGATIVE DECLARATION AND FULL DISCLOSURE

The Zoning Administrator has considered the Mitigated Negative Declaration, 17NGD-00000-00004, together with the comments received and considered during the public review process. The Mitigated Negative Declaration reflects the independent judgment and analysis of the Zoning Administrator and has been completed in compliance with CEQA, and is adequate for this proposal.

1.2 FINDING OF NO SIGNIFICANT EFFECT

On the basis of the whole record, including the Mitigated Negative Declaration and any comments received, the Zoning Administrator finds that through feasible conditions placed upon the project, the significant impacts on the environment have been eliminated or substantially mitigated and on the basis of the whole record (including the initial study and any comments received), there is no substantial evidence that the project will have a significant effect on the environment.

1.3 LOCATION OF DOCUMENTS

The documents and other materials which constitute the record of proceedings upon which this decision is based are in the custody of the Secretary of the Zoning Administrator of the Planning and Development Department located at 624 W. Foster Road, Santa Maria, CA, 93455.

1.4 ENVIRONMENTAL REPORTING AND MONITORING PROGRAM

Public Resources Code Section 21081.6 and CEQA Guidelines Section 15074(d) require the County to adopt a reporting or monitoring program for the changes to the project that it has adopted or made a condition of approval in order to avoid or substantially lessen significant effects on the environment. The approved project description and conditions of approval, with their corresponding permit monitoring requirements, are hereby adopted as the reporting and monitoring program for this project. The monitoring program is designed to ensure compliance during project implementation.

2.0 ADMINISTRATIVE FINDINGS

2.1 Conditional Use Permits

- A. Findings required for all Conditional Use Permits.** In compliance with Subsection 35.82.060.E.1 of the County Land Use and Development Code, prior to the approval or conditional approval of an application for a Minor Conditional Use Permit the review authority shall first make all of the following findings:

- 1. The site for the proposed project is adequate in terms of location, physical characteristics, shape, and size to accommodate the type of use and level of development proposed.**

The project property (147-020-045) is approximately 6,565 acres. The proposed reservoir sites are generally level and slope gently to the east or northeast. The proposed reservoirs would be approximately 3,000, 1,200 and 1,500 feet south of State Route 166 and at least 100 feet from nearby ephemeral drainages. The proposed reservoirs would be located in areas adjacent to the vineyards they would serve and would limit the amount of required grading to the maximum extent feasible. Therefore this finding can be made.

- 2. Within the Inland area significant environmental impacts will be mitigated to the maximum extent feasible.**

The proposed reservoir sites are located within an area where San Joaquin kit fox and American badger have historically existed. However, according to the Biological Resources Assessment prepared by Kevin Merk Associates, LLC (dated February 24, 2016), the potential for these or other sensitive animal species to be located at the proposed reservoir sites is very low due to habitat conditions on and near the sites. However, to reduce the potential for the project to result in short-term construction-related impacts to these species to the maximum extent feasible, conditions of approval require preconstruction surveys and if necessary the implementation of appropriate avoidance measures.

A survey of the proposed reservoir sites (Rincon Consultants, August, 2016) did not detect evidence of archaeological resources, however, the project area is considered to be sensitive for cultural resources. Conditions of approval require that a preconstruction educational meeting be conducted with construction personnel; monitoring during construction of the reservoirs; and that if cultural resources are encountered during construction work be stopped in vicinity of the find so appropriate actions can be taken. The implementation of these conditions would reduce the potential for impacts to cultural resources to the maximum extent feasible.

Construction of the proposed reservoirs would have the potential to result in erosion and other water quality-related impacts. Conditions of approval require the preparation and implementation of approved short- and long-term water quality protection measures. The implementation of these conditions would reduce the potential for impacts to water quality to the maximum extent feasible.

The Final MND prepared for the project, dated August 11, 2017, did not identify potentially significant environmental impacts that would result from the construction or operation of the proposed reservoirs. Therefore, this finding can be made.

- 3. Streets and highways are adequate and properly designed to carry the type and quantity of traffic generated by the proposed use.**

The proposed reservoirs will take vehicular access from State Route 166. This public highway is adequate to serve the project as designed. The project will not result in a substantial increase in traffic on the highway and would not result in a significant decrease in the highway's current level of service. Therefore this finding can be made.

There will be adequate public services, including fire protection, police protection, sewage disposal, and water supply to serve the proposed project.

Water to be stored in the proposed reservoirs would be supplied by existing private water wells located on adjacent parcels but under the same ownership. The project would draw groundwater from the Cuyama Groundwater Basin, which is in a state of overdraft. The proposed project's water use that is subject to the County's adopted groundwater use threshold for the Cuyama Valley Groundwater Basin consists only of the reservoir's annual evaporative losses. The annual evaporative losses from the three proposed reservoirs are estimated to be approximately 26 AFY, which is below the adopted significance threshold of 31 acre feet per year. No sewage will be produced by the proposed project, therefore, no waste water disposal systems are required. The project would not have a substantial demand for fire and police protection services; therefore, adequate services are available to serve the project. Therefore this finding can be made.

- 4. The proposed project will not be detrimental to the comfort, convenience, general welfare, health, and safety of the neighborhood and will be compatible with the surrounding area.**

The project site is located in an agricultural zone (AG-II-100) that allows for the construction of agricultural reservoirs, subject to the approval of a minor conditional use permit for reservoirs consisting of 50,000 sq. ft. or more of total development. There are no residences or other buildings located near the proposed reservoir sites. The reservoirs and associated pipeline improvements are designed to conform to all applicable County requirements to ensure that detrimental effects will not occur to the health, safety, comfort, convenience, and general welfare of the neighborhood. The project also includes fencing and safety equipment to reduce the potential for humans and animals to become trapped in the reservoirs. Therefore this finding can be made.

- 5. The proposed project will comply with all applicable requirements of this Development Code and the Comprehensive Plan, including any applicable community or area plan.**

As discussed in Sections 5.3 and 5.4 of this staff report, dated September 8, 2017, and incorporated herein by reference, the project is consistent with the Comprehensive Plan and Land Use and Development Code. Therefore, this finding can be made.

- 6. Within Rural areas as designated on the Comprehensive Plan maps, the proposed use will be compatible with and subordinate to the rural and scenic character of the area.**

The agricultural reservoirs have been designed in a manner that is compatible with the rural and scenic character of the area. The reservoirs would not result in grading scars, would not be prominently visible from State Route 166, and would not obstruct scenic views of the mountains located south of the project site as seen from the highway. Therefore, this finding can be made.

ATTACHMENT B: CONDITONS OF APPROVAL

**North Fork Ranch Frost Ponds
Case No. 16CUP-00000-00005**

September 25, 2017

I. PROJECT DESCRIPTION

1. **Proj Des-01 Project Description.** This Conditional Use Permit is based upon and limited to compliance with the project description, the hearing exhibits marked Attachment A-E, and all conditions of approval set forth below, including mitigation measures and specified plans and agreements included by reference, as well as all applicable County rules and regulations.

The project description is as follows:

A request of Brian Tetley, agent for Brodiaea, Inc, owner, to consider Case No. 16CUP-00000-00005. The North Fork Ranch Frost Pond project is a request to construct and operate three frost ponds (reservoirs) that would store water to be used for frost protection at the North Fork Ranch Vineyards. The project also includes the construction of new underground pipelines that would extend between each of the proposed reservoirs and the existing vineyard irrigation system.

The proposed reservoirs would serve an existing 535-acre vineyard and an additional 100-acre area that is to be planted in the future. Reservoir No. 1 would be located on the eastern portion of the project site adjacent to Schoolhouse Canyon Road (a private road). Reservoir No. 2 would be located in the central portion of the project site, and Reservoir No. 3 would be located on the western portion of the project site approximately 0.75 mile east of Cottonwood Canyon Road. Access to the reservoirs would be from existing roads that connect to State Highway 166.

Frost protection would be achieved by sustained spray irrigation when frost has the potential to damage the grape vines. Frost protection would generally be required during the months of February, March and April. The reservoirs would be maintained at a full condition between February and April. A maximum of three feet of well-supplied water would be maintained in the reservoirs between May 1st through January 31st. Water above a depth of three feet contained in the reservoirs after May 1 would be distributed for vineyard irrigation.

Each reservoir would have a water storage capacity of 49 acre-feet and would be lined with a high-density polyethylene plastic liner to prevent water seepage. Each reservoir would also have an emergency overflow discharge system that would prevent stored water from over-topping the reservoir. Water to be stored in the reservoirs would be supplied by existing agricultural wells located on the north side of State Highway 166. Water from the wells would be conveyed to the reservoirs by existing vineyard irrigation pipelines that extend beneath the highway and throughout the vineyard. A six foot high fence

would be installed around the exterior perimeter of each reservoir to prevent unauthorized entry. Life ring stations and floating pool ropes would also be provided for rescue purposes.

A total of approximately 257,945 cubic yards of cut and fill grading would be required to construct the three proposed reservoirs. The reservoirs would have a maximum depth of 27-28 feet, and in total would occupy an area of approximately 15.6 acres. Proposed pipelines that would convey water from the vineyard's existing irrigation system to each of the reservoirs would have a total length of 1,350 feet. Proposed pipelines that would convey water from each of the reservoirs to the vineyard's existing spray irrigation system would have a total length of 976 feet. Construction details for each of the proposed reservoirs are summarized on Table 1. It is estimated that the construction period for the three proposed reservoirs would be approximately one year.

Table 1
North Fork Ranch Frost Ponds
Construction Characteristics

Reservoir	Proposed Grading			Reservoir Area		Reservoir Depth			Proposed Pipelines	
	Cut (cu. yds.)	Fill (cu. yds.)	Total (cu. yds.)	Approximate Dimensions (feet)	Acres	Top of Reservoir Elevation	Bottom of Pond Elevation	Depth (feet)	Fill Line (feet)	Drain Line (feet)
No. 1	44,062	44,589	88,651	590 x 370	5.0	1,955	1,927	28	624	517
No. 2	44,064	42,205	86,269	580 X 410	5.7	1,788	1,761	27	370	202
No. 3	42,771	40,254	83,025	590 x 360	4.9	1,744	1,717	27	356	257
TOTAL	130,897	127,048 (1)	257,945	--	15.6	--	--	--	1,350	976

(1) Due to shrinkage of fill material, no soil would be exported from the project site

Surface water drainage from upslope areas adjacent to the reservoirs would be collected by proposed drainage swales. The collected water would be discharged and allowed to sheet flow at downslope locations adjacent to the reservoirs. Rock energy dissipaters would be installed at each discharge location to reduce potential erosion-related impacts. Stormwater discharge from Reservoir No. 1 would be conveyed beneath Schoolhouse Canyon Road by a proposed culvert beneath the road.

The application involves Assessor Parcel Number 147-020-045, a 6,565-acre parcel that is zoned AG-II-100.

2. **Proj Des-02 Project Conformity.** The grading, development, use, and maintenance of the property, the size, shape, arrangement, and location of the structures, parking areas and landscape areas, and the protection and preservation of resources shall conform to the project description above and the hearing exhibits and conditions of approval below. The property and any portions thereof shall be sold, leased or financed in compliance with this project description and the approved hearing exhibits and conditions of approval thereto. All plans (such as Landscape and Tree Protection Plans) must be submitted for review and approval and shall be implemented as approved by the County.

II. CONDITIONS INCORPORATED FROM MITIGATION MEASURES

3. **Special Condition: San Joaquin Kit Fox Avoidance Measures.** Project-related pre-construction / pre-activity surveys shall be conducted prior to the beginning of ground disturbance and/or construction activities, or any project activity that has the potential to impact the San Joaquin kit fox and/or American badger. Required pre-construction / pre-activity surveys and project-related construction activities shall be conducted in accordance with the requirements of the U.S. Fish and Wildlife Service's *Standardized Recommendations for Protection of The Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (January, 2011). Similar measures and procedures shall be implemented to minimize the potential for impacts to American badger. The Standardized Recommendations are provided as Final MND (dated August 11, 2017) Attachment 3.

PLAN REQUIREMENTS AND TIMING: Prior to the start of any project-related pre-construction / pre-activity, the areas that would be affected by reservoir construction and the construction of the proposed reservoir fill and drain lines shall be marked in the field and surveyed by a qualified biologist. Project-related pre-construction / pre-activity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities. The qualified biologist shall conduct weekly site visits during site disturbance activities that proceed longer than 14 days for the purpose of monitoring compliance with the attached Standardized Recommendations. Site disturbance activities lasting up to 14 days do not require weekly monitoring by the biologist unless observations of kit fox or their dens are made on-site or the qualified biologist recommends additional monitoring. This measure shall be printed on all grading and construction plans.

MONITORING: The qualified biologist shall document the methods and results of site visits in weekly monitoring reports that are to be submitted to P&D. If incidental take of kit fox during project activities is possible, before project activities commence, the applicant must consult with the USFWS and CDFW. The results of this consultation may require the applicant to obtain a federal and/or state permit for incidental take during project activities.

4. **Bio-09 Fish and Wildlife Jurisdiction Advisory.** The project site is within the range of San Joaquin kit fox, a species listed as Endangered by the U.S. Fish and Wildlife Service, and Threatened by the California Department of Fish and Wildlife. Based upon reports prepared by Kevin Merk Associates, dated February 24, 2016 and June 24, 2016, it has been determined that the probability for San Joaquin kit fox occurrence on the site is very low. The issuance of this permit does not relieve the permit-holder of any duties, obligations, or responsibilities under the federal or California Endangered Species Act or any other law. The permit-holder shall contact the necessary jurisdictional agencies to ascertain his or her level of risk under the federal and California Endangered Species Act in implementing the project herein permitted.

Indemnity for Violation of the Endangered Species Act: The applicant shall defend, indemnify and hold harmless the County or its agents, officers and employees from any and all claims, actions, proceedings, demands, damages, costs, expenses (including attorney's fees), judgments or liabilities, against the County or its agents, offices or employees brought by any entity or person for any and all actions or omissions of the applicant or his agents, employees or other

independent contractors arising out of this permit alleged to be in violation of the federal or California Endangered Species Acts (16 USC Sec. 1531 et seq.; Cal. Fish and Game Code Sec. 2050 et seq.). This permit does not authorize, approve or otherwise support a "take" of any listed species as defined under the federal or California Endangered Species Acts. Applicant shall notify County immediately of any potential violation of the federal and/or California Endangered Species Act.

5. **American Badger Avoidance and Minimization Measures.** A minimum of 14 days prior to initiation of ground disturbing activities, a survey for badger burrows shall be conducted within the disturbance footprint by an approved biologist (a biologist familiar with, including identification of, the wildlife species in the region). Dens found within the survey area shall be mapped and monitored using a tracking medium, remote camera system, and/or spotlighting at night for a minimum of three days to assess the presence of badgers. Inactive dens shall be collapsed by hand with a shovel to prevent badgers from re-using them during construction. Active dens located within the survey area shall be avoided during the breeding season (March 1 through June 30). A minimum buffer of 50 feet around the active den within the proposed area of disturbance shall be demarcated by construction fencing. The fencing shall be installed one foot above ground to permit movement of badgers in and out of the buffer zone. Once the biologist has determined that active dens are no longer in use, the den shall be collapsed by shovel. Prior to ground disturbing activities occurring outside of the breeding season, badgers may be discouraged from using currently active dens by partially blocking the entrance of the den with sticks, debris, and soil for three (3) to five (5) days. Access to the den would be incrementally blocked to a greater degree over this period. This would cause the badger to abandon the den site and move elsewhere. After badgers have stopped using active dens within the project site, the dens would be collapsed by hand with a shovel.

Plan Requirements and Timing. The name, qualifications, scope of biological surveys and contact information for the surveying biologist must be submitted to P&D and CDFW in advance of the surveys. The above measures shall be included on all land use, grading, and building plans for the construction of the reservoirs, water pipelines, and utility line improvements. A report of the results of the badger survey shall be submitted to P&D for review and approval prior to Zoning Clearance. **Monitoring.** P&D will review and approve the reports. A County-approved biologist shall be present during the initial ground-disturbing activity.

6. **CulRes-07 Cultural Resource Monitor.** The Owner/Applicant shall have all earth disturbances including scarification and placement of fill within the proposed project sites monitored by a P&D approved archaeologist and a Native American consultant in compliance with the provisions of the County Archaeological Guidelines. The duration and depth of grading below the ground surface that requires monitoring shall be determined by the approved archaeologist and Native American consultant.

TIMING: Prior to the approval of a grading permit, the Owner/Applicant shall submit for P&D review and approval, a contract or Letter of Commitment between the Owner/Applicant and the archaeologist, consisting of a project description and scope of work, and once approved, shall execute the contract. This condition shall be printed on all building and grading plans.

MONITORING: The Owner/Applicant shall provide P&D compliance monitoring staff with the name and contact information for the assigned onsite monitor(s) prior to grading permit issuance and pre-construction meeting. P&D compliance monitoring staff shall confirm monitoring by archaeologist and Native American consultant and P&D grading inspectors shall spot check field work. The P&D permit processing planner shall check plans prior to approval of all building and grading permits and P&D compliance monitoring staff shall spot check in the field.

7. **CulRes-09 Stop Work at Encounter.** The Owner/Applicant and/or their agents, representatives or contractors shall stop or redirect work immediately in the event archaeological remains are encountered during grading, construction, landscaping or other construction-related activity. The Owner/Applicant shall retain a P&D approved archaeologist and Native American representative to evaluate the significance of the find in compliance with the provisions of Phase 2 investigations of the County Archaeological Guidelines and funded by the Owner/Applicant. If remains are found to be significant, they shall be subject to a Phase 3 mitigation program consistent with County Archaeological Guidelines and funded by the applicant.

PLAN REQUIREMENTS: This condition shall be printed on all building and grading plans.

MONITORING: The P&D permit processing planner shall check plans prior to Zone Clearance and P&D compliance monitoring staff shall spot check in the field.

8. **Special Condition: Pre-Construction Meeting.** A pre-construction meeting shall be conducted by a County-qualified archaeologist and a local Native American representative funded by the applicant. Meeting attendees shall include the applicant, archaeologist, local Chumash representative, construction supervisors, and heavy equipment operators to ensure that all parties understand the cultural resources monitoring program and their respective roles and responsibilities. All construction personnel who would work on the site during any phase of ground disturbance shall be required to attend the meeting. The names of all personnel who attend the meeting shall be recorded denoting that they have received the required training.

The meeting shall review the following: types of archaeological resources that may be uncovered; provide examples of common archaeological artifacts and other cultural materials to examine; describe why monitoring is required; what makes an archaeological resource significant; identify monitoring procedures; what would temporarily halt construction and for how long; describe a reasonable resource discovery scenario (i.e., feature or artifact); and describe reporting requirements and the responsibilities of the construction supervisor and crew. The meeting shall make attendees aware of prohibited activities, including vehicle use in protected areas, and educate construction workers about the inappropriateness of unauthorized collecting of artifacts that can result in impacts on cultural resources.

PLAN REQUIREMENTS: The pre-construction meeting requirements shall be shown on approved grading and building plans.

TIMING: The pre-construction meeting shall be conducted prior to the start of ground disturbing activities.

MONITORING: The Owner/Applicant shall provide P&D compliance monitoring staff with the names and responsibilities of persons who attended the meeting.

9. **Geo-02. Erosion and Sediment Control Plan.** Where required by the latest edition of the California Green Code and/or Chapter 14 of the Santa Barbara County Code, a Storm Water Pollution Prevention Plan (SWPPP), Storm Water Management Plan (SWMP) and/or an Erosion and Sediment Control Plan (ESCP) shall be implemented as part of the project. Grading and erosion and sediment control plans shall be designed to minimize erosion during construction and shall be implemented for the duration of the grading period and until re-graded areas have been stabilized by structures, long-term erosion control measures or permanent landscaping. The Owner/Applicant shall submit the SWPPP, SWMP or ESCP using Best Management Practices (BMP) designed to stabilize the site, protect natural watercourses/creeks, prevent erosion, convey storm water runoff to existing drainage systems keeping contaminants and sediments onsite. The SWPPP or ESCP shall be a part of the Grading Plan submittal and will be reviewed for its technical merits by P&D. Information on Erosion Control requirements can be found on the County web site re: Grading Ordinance Chapter 14 (<http://sbcountyplanning.org/building/grading.cfm>) refer to Erosion and Sediment Control Plan Requirements; and in the California Green Code for SWPPP (projects greater than 1 acre) and/or SWMP requirements.

PLAN REQUIREMENTS: The grading and SWPPP, SWMP and/or ESCP shall be submitted for review and approved by P&D prior Zoning Clearance. The plan shall be designed to address erosion, sediment and pollution control during all phases of development of the site until all disturbed areas are permanently stabilized. **TIMING:** The SWPPP requirements shall be implemented prior to the commencement of grading and throughout the year. The ESCP/SWMP requirements shall be implemented between November 1st and April 15th of each year, except pollution control measures shall be implemented year round.

MONITORING: P&D compliance monitoring staff shall perform site inspections throughout the construction phase.

10. **WatConv-04 Equipment Storage-Construction.** The Owner/Applicant shall designate a construction equipment filling and storage area(s) to contain spills, facilitate clean-up and proper disposal and prevent contamination from discharging to the storm drains, street, drainage ditches, creeks, or wetlands. The areas shall be no larger than 50 x 50 foot unless otherwise approved by P&D and shall be located at least 100 feet from any storm drain, water body or sensitive biological resources. **PLAN REQUIREMENTS:** The Owner/Applicant shall designate the P&D approved location on all plans for zoning clearance, grading and building permits. **TIMING:** The Owner/Applicant shall install the area prior to commencement of construction.

MONITORING: P&D compliance monitoring staff shall ensure compliance prior to and throughout construction.

11. **WatConv-05 Equipment Washout-Construction.** The Owner/Applicant shall designate a washout area(s) for the washing of concrete trucks, paint, equipment, or similar activities to

prevent wash water from discharging to the storm drains, street, drainage ditches, creeks, or wetlands. Note that polluted water and materials shall be contained in this area and removed from the site daily. The area shall be located at least 100 feet from any storm drain, water body or sensitive biological resources. **PLAN REQUIREMENTS:** The Owner/Applicant shall designate the P&D approved location on all zoning clearance, grading and building permits. **TIMING:** The Owner/Applicant shall install the area prior to commencement of construction.

MONITORING: P&D compliance monitoring staff shall ensure compliance prior to and throughout construction.

III. COUNTY RULES AND REGULATIONS

12. **Rules-05 Acceptance of Conditions.** The Applicant's acceptance of this permit and/or commencement of use, construction and/or operations under this permit shall be deemed acceptance of all conditions of this permit by the Applicant.
13. **Rules-12 CUP Expiration.** The Applicant shall obtain the required ZONING CLEARANCE within the 18 MONTHS following the effective date of this Conditional Use Permit. If the required ZONING CLEARANCE is not issued within the 18 months following the effective date of this Conditional Use Permit, or within such extended period of time as may be authorized in compliance with Section 35.84.030.2 of the COUNTY LAND USE AND DEVELOPMENT CODE, and an application for an extension has not been submitted to the Planning and Development Department, then Conditional Use Permit shall be considered void and of no further effect.
14. **Rules-17 CUP-Void.** This Conditional Use Permit shall become void and be automatically revoked if the development and/or authorized use allowed by this Conditional Use Permit is discontinued for a period of more than 12 months, or within such extended period of time as may be authorized in compliance with Section 35.84.030 of the COUNTY LAND USE AND DEVELOPMENT CODE. Any use authorized by this Conditional Use Permit shall immediately cease upon expiration or revocation of this Conditional Use Permit. Any ZONING CLEARANCE approved or issued pursuant to this Conditional Use Permit shall expire upon expiration or revocation of the Conditional Use Permit. Conditional Use Permit renewals must be applied for prior to expiration of the Conditional Use Permit. [LUDC §35.82.060 & §35.84.060].
15. **Rules-29 Other Dept Conditions.** Compliance with Departmental/Division letters required as follows:
 1. Air Pollution Control District letter dated June 28, 2017.
16. **Rules-31 Mitigation Monitoring Required.** The Owner/Applicant shall ensure that the project complies with all approved plans and all project conditions including those which must be monitored after the project is built and occupied. To accomplish this, the Owner/Applicant shall:

- a. Contact P&D compliance staff as soon as possible after project approval to provide the name and phone number of the future contact person for the project and give estimated dates for future project activities;
 - b. Sign a separate Agreement to Pay for compliance monitoring costs and remit a security deposit prior to approval of a Land Use Permit as authorized by ordinance and fee schedules. Compliance monitoring costs will be invoiced monthly and may include costs for P&D to hire and manage outside consultants when deemed necessary by P&D staff (e.g. non-compliance situations, special monitoring needed for sensitive areas including but not limited to biologists, archaeologists) to assess damage and/or ensure compliance. In such cases, the Owner/Applicant shall comply with P&D recommendations to bring the project into compliance. The decision of the Director of P&D shall be final in the event of a dispute. Monthly invoices shall be paid by the due date noted on the invoice;
 - c. Note the following on each page of grading and building plans "This project is subject to Mitigation and Condition Compliance Monitoring and Reporting. All aspects of project construction shall adhere to the approved plans, conditions of approval, and mitigation measures from Mitigated Negative Declaration 17NGD-00000-00004";
 - d. Contact P&D compliance staff at least two weeks prior to commencement of construction activities to schedule an on-site pre-construction meeting to be led by P&D Compliance Monitoring staff and attended by all parties deemed necessary by P&D, including the permit issuing planner, grading and/or building inspectors, other agency staff, and key construction personnel: contractors, sub-contractors and contracted monitors among others.
17. **Rules-33 Indemnity and Separation.** The Owner/Applicant shall defend, indemnify and hold harmless the County or its agents or officers and employees from any claim, action or proceeding against the County or its agents, officers or employees, to attack, set aside, void, or annul, in whole or in part, the County's approval of this project. In the event that the County fails promptly to notify the Applicant of any such claim, action or proceeding, or that the County fails to cooperate fully in the defense of said claim, this condition shall thereafter be of no further force or effect.
18. **Rules-34 Legal Challenge.** In the event that any condition imposing a fee, exaction, dedication or other measure is challenged by the project sponsors in an action filed in a court of law or threatened to be filed therein which action is brought in the time period provided for by law, this approval shall be suspended pending dismissal of such action, the expiration of the limitation period applicable to such action, or final resolution of such action. If any condition is invalidated by a court of law, the entire project shall be reviewed by the review authority and no approval shall be issued unless substitute feasible conditions/measures are imposed.
19. **Rules-37 Time Extensions-All Projects.** The Owner / Applicant may request a time extension prior to the expiration of the permit or entitlement for development. The review authority with jurisdiction over the project may, upon good cause shown, grant a time extension in compliance with County rules and regulations, which include reflecting changed circumstances and ensuring

compliance with CEQA. If the Owner / Applicant requests a time extension for this permit, the permit may be revised to include updated language to standard conditions and/or mitigation measures and additional conditions and/or mitigation measures which reflect changed circumstances or additional identified project impacts.

IV. PROJECT SPECIFIC CONDITIONS

20. **Project Monitoring.** Prior to the issuance of a zone clearance for grading, the applicant shall submit to P&D for review and approval a proposed Evaporation Reporting Plan that identifies the methodology to be used to measure and document evaporative water losses from each of the proposed reservoirs. Measures to reduce annual evaporation losses from the reservoirs shall be implemented if monitoring indicates that annual losses exceed 31 acre feet per year. Future modifications to the operation or design of the project to reduce evaporative losses must be approved by P&D before such measures are implemented. The first Evaporation Reporting Plan report shall be submitted to P&D 30 days after the reservoirs have been in operation for one year. The Evaporation Plan reports shall be submitted annually to P&D for four years after the first report is submitted. The requirement to submit Evaporation Monitoring and Reporting reports may be discontinued after an initial five (5) year monitoring period if deemed warranted by the Planning & Development Director based on results of the previously submitted reports.



**Santa Barbara County
Air Pollution Control District**

Our Vision  Clean Air

June 28, 2017

Steve Rodriguez
Santa Barbara County
Planning and Development
624 W. Foster Road
Santa Maria, CA 93455

RECEIVED

JUL 05 2017

**SB COUNTY
PLANNING & DEVELOPMENT**

Re: APCD Suggested Conditions on North Fork Ranch Frost Ponds, 16CUP-00000-00005

Dear Mr. Rodriguez:

The Air Pollution Control District (APCD) has reviewed the referenced project, which consists of a request to construct and operate three frost ponds (water storage reservoirs) to provide frost protection at the North Fork Ranch Vineyard. Each reservoir would have a storage capacity of 49 acre feet and would occupy an area of approximately five acres. Grading consists of approximately 130,280 cubic yards (cy) of cut and 127,900 cy of fill to construct the three proposed reservoirs. The subject property, a 6,565-acre parcel zoned AG-II-100 and identified in the Assessor Parcel Map Book as APN 147-020-045 is located on the south side of State Highway 166, between Cottonwood Canyon Road and Schoolhouse Canyon Road about 9 miles west of the unincorporated community of New Cuyama.

Air Pollution Control District staff offers the following suggested conditions:

1. The State of California considers particulate matter emitted by diesel engines carcinogenic. Therefore, during project grading, construction, and hauling, construction contracts must specify that contractors shall adhere to the requirements listed in Attachment B to reduce emissions of particulate matter (as well as of ozone precursors) from diesel equipment. Recommended measures should be implemented to the maximum extent feasible.
2. All portable diesel-fired construction engines rated at 50 bhp or greater must have either statewide Portable Equipment Registration Program (PERP) certificates or APCD permits prior to grading/building permit issuance. Construction engines with PERP certificates are exempt from APCD permit, provided they will be on-site for less than 12 months.



ATTACHMENT B
DIESEL PARTICULATE AND NO_x EMISSION REDUCTION MEASURES

Particulate emissions from diesel exhaust are classified as carcinogenic by the state of California. The following is a list of regulatory requirements and control strategies that should be implemented to the maximum extent feasible.

The following measures are required by state law:

- All portable diesel-powered construction equipment shall be registered with the state's portable equipment registration program OR shall obtain an APCD permit.
- Fleet owners of mobile construction equipment are subject to the California Air Resource Board (CARB) Regulation for In-Use Off-Road Diesel Vehicles (Title 13, California Code of Regulations (CCR), §2449), the purpose of which is to reduce oxides of nitrogen (NO_x), diesel particulate matter (DPM), and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles. Off-road heavy-duty trucks shall comply with the State Off-Road Regulation. For more information, see www.arb.ca.gov/msprog/ordiesel/ordiesel.htm.
- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-Use (On-Road) Heavy-Duty Diesel-Fueled Vehicles (Title 13, CCR, §2025), the purpose of which is to reduce DPM, NO_x and other criteria pollutants from in-use (on-road) diesel-fueled vehicles. On-road heavy-duty trucks shall comply with the State On-Road Regulation. For more information, see www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.
- All commercial off-road and on-road diesel vehicles are subject, respectively, to Title 13, CCR, §2449(d)(3) and §2485, limiting engine idling time. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to five minutes; electric auxiliary power units should be used whenever possible.

The following measures are recommended:

- Diesel equipment meeting the CARB Tier 3 or higher emission standards for off-road heavy-duty diesel engines should be used to the maximum extent feasible.
- On-road heavy-duty equipment with model year 2010 engines or newer should be used to the maximum extent feasible.
- Diesel powered equipment should be replaced by electric equipment whenever feasible.
- Equipment/vehicles using alternative fuels, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel, should be used on-site where feasible.
- Catalytic converters shall be installed on gasoline-powered equipment, if feasible.
- All construction equipment shall be maintained in tune per the manufacturer's specifications.
- The engine size of construction equipment shall be the minimum practical size.
- The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time.
- Construction worker trips should be minimized by requiring carpooling and by providing for lunch onsite.

Plan Requirements: All requirements shall be shown on grading and building plans and/or as a separate information sheet listing the conditions of approval to be recorded with the map. **Timing:** Requirements shall be shown on plans prior to grading/building permit issuance and/or recorded with the map during map recordation. Conditions shall be adhered to throughout all grading and construction periods.

MONITORING: Lead Agency shall ensure measures are on project plans and/or recorded with maps. Lead Agency staff shall ensure compliance onsite. APCD inspectors will respond to nuisance complaints.



PLANNING & DEVELOPMENT APPEAL FORM

SITE ADDRESS: _____ Highway 166 & Cottonwood Canyon Road _____

ASSESSOR PARCEL NUMBER: _____ 147-020-045 _____

Are there previous permits/applications? ☒ no ☐ yes numbers: _____
(include permit# & lot # if tract)

Are there previous environmental (CEQA) documents? ☐ no ☐ yes numbers: _____

1. **Appellant:** _____ Roberta Jaffe & Stephen Gliessman _____ Phone: _____ 831-818-2451 _____ FAX: _____

Mailing Address: _____ PO Box 215 _____ New Cuyama _____ CA _____ 93254 _____ E-mail: _____ robbiejaffe@gmail.com _____
Street City State Zip

2. **Owner:** _____ Matt Turrentine – Brodiaea, Inc _____ Phone: _____ 805-312-1828 _____ FAX: _____

Mailing Address: _____ PO Box 6565 _____ Santa Maria, CA 93455 _____ E-mail: _____
Street City State Zip

3. **Agent:** _____ Brian Tetley _____ Phone: _____ 805-312-1828 _____ FAX: _____

Mailing Address: _____ Urban Planning Concepts 2624 Airpark Dr. _____ Santa Maria, CA 93455 _____ E-mail: _____
Street City State Zip

4. **Attorney:** _____ Phone: _____ FAX: _____

Mailing Address: _____ E-mail _____
Street City State Zip

COUNTY USE ONLY

Case Number
Supervisor
Applicable
Project Plan
Zoning Designation

17APL-00000-00017

JAFFE/GLIESSMAN APPEAL OF THE BRODIAEA

7400 HIGHWAY 166

10/2/17

CUYAMA

147-020-045

Companion Case Number: _____

Submittal Date: _____

Receipt Number: _____

Accepted for Processing

Comp. Plan Designation _____

x PLANNING COMMISSION: COUNTY MONTECITO

Case No. 16CUP-00000-00005

I hereby appeal the x approval approval w/conditions denial of the:

 Coastal Development Permit decision

_____ Planning Commission decision – Which Commission?

 x Zoning Administrator decision

_____ Applicant

_____x_____ Aggrieved party – if you are not the applicant, provide an explanation of how you are and “aggrieved party” as defined on page two of this appeal form:

We appeared at both the Zoning Administrator hearing and the first hearing on the Mitigated Negative Declaration which took place in New Cuyama and spoke in opposition to this permit based on environmental concerns and those concerns were not addressed.

Reason of grounds for the appeal – Write the reason for the appeal below or submit 8 copies of your appeal letter that addresses the appeal requirements listed on page two of this appeal form:

- A clear, complete and concise statement of the reasons why the decision or determination is inconsistent with the provisions and purposes of the County's Zoning Ordinances or other applicable law; and
- Grounds shall be specifically stated if it is claimed that there was error or abuse of discretion, or lack of a fair and impartial hearing, or that the decision is not supported by the evidence presented for consideration, or that there is significant new evidence relevant to the decision which could not have been presented at the time the decision was made.

We are appealing this decision based on Finding # 1.2 and Finding #5. 1.2 states "there is no substantial evidence that the project will have a significant effect on the environment." #5 states: "the proposed project will not be detrimental to the comfort, convenience, general welfare, health and safety of the neighborhood and will be compatible with the surrounding area."

The permit request for these reservoirs is part of the whole vineyard development of converting over 1000 acres of dry range land to vineyards in the critically overdrafted basin of the Cuyama Valley. Brodiaea, Inc., a wholly owned subsidiary of Harvard Management Company (Harvard University's Endowment Fund) purchased 6500 acres of dry rangeland in 2014. In September 2014 the state of California signed into law the Sustainable Groundwater Management Act (SGMA). Under SGMA, the Cuyama Basin was identified as one of 21 critically overdrafted basins in California. In 2014 the Santa Barbara Board of Supervisors accepted the USGS 5-year groundwater study of the Cuyama Basin which identified the groundwater pumping of the main basin by agribusiness as the source of the depletion of groundwater in the Basin. The impacts of this overdraft include: continued overdraft of the aquifer; land subsidence; withdrawal of deep waters contaminated by heavy metals; continued degradation of surface vegetation and wildlife. Following the passage of SGMA, Brodiaea, Inc. drilled eleven agricultural wells based on ministerial permits from Santa Barbara County. The reservoirs offer the first opportunity for a full review of the project, yet they are being treated as a separate, piece meal project by the applicants.

As neighbors and farmers in Cottonwood Canyon, we disagree with the approval of the Mitigated Negative Declaration. This project represents major land use change from dry range land to heavily irrigated vineyard. In the past year this project has planted and irrigated over 1000 acres of grapes. During this same time period, Santa Barbara County has started monitoring wells in this region including ours. After our above average rainfall this past winter, it was expected that our well level would rise, instead it went down. We don't know if there is a direct connection to this project, but this needs to be determined before additional pumping to fill reservoirs can be said to not be "detrimental to the comfort, convenience, general welfare, health and safety of the neighborhood".

There can be multiple late spring frost events in this part of the Cuyama Basin. One event will drain all 3 reservoirs. Thus the amount of groundwater potentially pumped to refill the reservoirs is exponential at a time of year when the groundwater should be recharged.

There were multiple letters of concern submitted as public comment including one from the California Department of Fish and Wildlife. Yet none of these have been addressed to date.

Specific conditions imposed which I wish to appeal are (if applicable):

- a. _____
- b. _____
- c. _____
- d. _____

Please include any other information you feel is relevant to this application.

CERTIFICATION OF ACCURACY AND COMPLETENESS Signatures must be completed for each line. If one or more of the parties are the same, please re-sign the applicable line.

Applicant's signature authorizes County staff to enter the property described above for the purposes of inspection.

I hereby declare under penalty of perjury that the information contained in this application and all attached materials are correct, true and complete. I acknowledge and agree that the County of Santa Barbara is relying on the accuracy of this information and my representations in order to process this application and that any permits issued by the County may be rescinded if it is determined that the information and materials submitted are not true and correct. I further acknowledge that I may be liable for any costs associated with rescission of such permits.

Print name and sign – Firm

Date

Roberta Jaffe

10/2/17

Print name and sign - Preparer of this form

Date

Stephen Coliessman

2 Oct 17

Print name and sign - Applicant

Date

Print name and sign - Agent

Date

Print name and sign - Landowner

Date

1. All grading shall conform to Santa Barbara County Code Chapter 14 and standards and requirements pertaining thereto, these construction drawings and the recommendations of the soils engineer and engineering geologist.
2. Contractor to notify the county grading inspector and soils laboratory at least 48 hours before start of grad work or any pre-construction meeting.
3. Contractor shall employ all labor, equipment and methods required to prevent his operations from producing dust in amounts damaging to adjacent property, cultivated vegetation and domestic animals or causing a nuisance to persons occupying buildings in the vicinity of the job site. Contractor shall be responsible for damage caused by dust from his grading operation.
4. Before beginning work requiring exporting or importing of materials, the contractor shall obtain approval from Public Works Road Division for haul routes used and methods provided to minimize the deposit of soils on county roads. Grading/road inspectors shall monitor this requirement with the contractor.
5. The Geotechnical Engineer shall provide observation and testing during grading operations in the field and shall submit a final report stating that all earth work was properly completed and is in substantial conformance with the requirements of the grading ordinance.
6. Areas to be graded shall be cleared of all vegetation including roots and other unsuitable materials for a structural fill, then scarified to a depth of 6" prior to placing any fill. Call grading inspector for initial inspection.
7. A thorough search shall be made for all abandoned man-made facilities such as septic tank systems, fuel or water storage tanks, and pipelines or conduits. Any such facilities encountered shall be removed and the depression properly filled and compacted under observation of the geotechnical engineer.
8. Areas with existing slopes which are to receive fill materials shall be keyed and benched. The design and installation of the roadway shall be per the geotechnical engineer's recommendation or per County Standard Detail No. G-13.
9. Fill materials shall be spread in lifts not exceeding 6" in compacted thickness, moistened or dried as necessary to near optimum moisture content and compacted by an approved method. Fill materials shall be compacted to a minimum of 90% maximum density as determined by 1957 ASTM D-1557-01 modified proctor (ASHO) test or similar approved methods. Some fill areas may require compaction to a greater density if called for in the construction documents. Soil tests shall be conducted at not less than one test for each 18" of fill and/or for each 500 cubic yards of fill placed.
10. Cut slopes shall not exceed a grade of 1 1/2 horizontal to 1 vertical. Fill and combination fill and cut slopes shall not exceed 2 horizontal to 1 vertical. Slopes over three feet in vertical height shall be planted with approved perennial or treated with equally approved erosion control measures prior to final inspection.
11. Surface drainage shall be provided a minimum of 2% for 5 feet away from the foundation line of any structure.
12. All trees that are to remain on site shall be temporarily fenced and protected around the drip line during grading.
13. An erosion and sediment control plan shall be required as part of the grading plan and permit requirements.
14. "Best Management Practices for Construction Activities: Eroded sediments and other pollutants must be retained on-site and must not be transported from the site via sheet flow swales, area drains, natural drainage courses, or wind. Stockpiles of earth and other construction related materials must be protected from being transported from the site by forces of wind or water. Fuels, oils, solvents, and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weater. Spills may not be washed into the drainage system. Excess or waste concrete may not be washed into public way or any other drainage system. Provisions must be made to retain concrete wastes on site until they can be disposed as solid waste. Trash and construction related solid waste must be deposited into a covered waste receptacle to prevent contamination of rainwater and dispersal by wind. Sediments and other material may not be tracked from the site by vehicular traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental deposition shall be swept up immediately and may not be washed down by rain or other means. Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to minimize erosion by wind and water."
15. if grading occurs during Nov 1 through Apr 15, no grading shall occur unless approved erosion and sediment control measures are in place. Discharges of sediment from the project site may result in a Stop Work Order.
16. All earthwork on hillsides, sloping or mountainous terrain shall be stabilized to protect and prevent loss of soils, as necessary, year-round.

Earthwork Estimates

Cut: 130,280 C.Y. Fill: 127,900 C.Y. Import: 0 C.Y. Export: 0 C.Y. Quantities based on 30% shrinkage

Erosion Control Notes

1. Erosion control measures shall be implemented on all projects and shall include source control, including protection of stockpiles, protection of slopes, protection of all disturbed areas, and protection of accesses. In addition, perimeter containment measures shall be placed prior to the commencement of grading and site disturbance activities unless the Public Works Department determines measures to be unnecessary based upon location, site characteristics or time of year. The intent of erosion control measures shall be to keep all sediment from entering a swale, drainage way, watercourse or onto adjacent properties.
2. Site inspections and appropriate maintenance of erosion control devices shall be conducted and documented prior to, during, and after rain events.
3. The developer shall be responsible for the placement and maintenance of all erosion control devices as specified by the approved plan until such time that the project is accepted as complete by the Public Works Department. Erosion control devices may be relocated, deleted or added as needed depending on the actual soil conditions encountered. Additional erosion control devices shall be placed at the discretion of the Engineer of Work, County Inspector, SWPPP Monitor, or RWQCB Inspector. Guidelines for determining appropriate erosion control devices are included in the appendix of the Public Improvement Standards.
4. All erosion control devices shall be the first order of work and shall be in place between Oct 15 and April 15 or anytime when the rain probability exceeds 30%. This work shall be installed or applied after each area is graded and no later than five (5) working days after the completion of each area.
5. The Engineer of Work and the Public Works Department shall be notified before October 15 for inspection of installed erosion control devices.
6. A standby crew for emergency work shall be available at all times during the rainy season (October 15 through April 15). Necessary materials shall be available and stock piled at convenient locations to facilitate rapid construction or maintenance of temporary devices when rain is imminent.
7. Permanent erosion control shall be placed and established with 90% coverage on all disturbed surfaces other than paved or gravel surfaces, prior to final inspection. Permanent erosion control shall be fully established prior to final acceptance. Temporary erosion control measures shall remain in place until permanent measures are established.
8. In the event of a failure, the developer and/or his representative shall be responsible for cleanup and all associated costs or damages.
9. All projects involving site disturbance of one acre or greater shall comply with the requirements of the National Pollutant Discharge Elimination System (NPDES). The developer shall submit a Notice of Intent (NOI) to comply with the General Permit for Construction Activity with the Regional Water Quality Control Board (RWQCB). The developer shall provide the County with the Waste Discharge Identification Number (WDID #) or with verification that an exemption has been granted by RWQCB.

WDID# _____
10. Person to contact 24 hours a day in the event there is an erosion control/sedimentation problem (Storm Water Compliance Officer):
Name Kevin Merrill
Local Phone Number 310-3989

Project Air Quality Control Notes:

During Construction the contractor shall designate a person or persons to monitor the Dust Control Program and to order increases measures as necessary to prevent the transport of dust off-site. Their duties shall include holiday and weekend periods when work may or may not be in progress. The name and telephone number for such persons shall be provided to the APCD prior to the commencement of construction. The measures for dust control are as follows but not limited to:

Reduce the amount of disturbed area where possible,

1. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequency would be required whenever wind speeds exceed 15mph. Reclaimed (non-potable) water should be used whenever possible.
2. All dirt stockpile areas shall be sprayed daily as needed.
3. Exposed ground areas that are planned to be reworked at dates later than one month after initial grading should be seeded with a fast germinating native grass seed and watered until vegetation is established.
4. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD.
5. All external slopes shall be hydroseeded as soon as possible upon completion.
6. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
7. All trucks hauling dirt, sand, soil, or other loose material are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114.
8. Install wheel washers where vehicles enter and exit paved roads and streets, or wash off trucks and equipment leaving the site.
9. Prior to final inspection all disturbed areas shall be vegetated with a fast-growing, native seed mix.

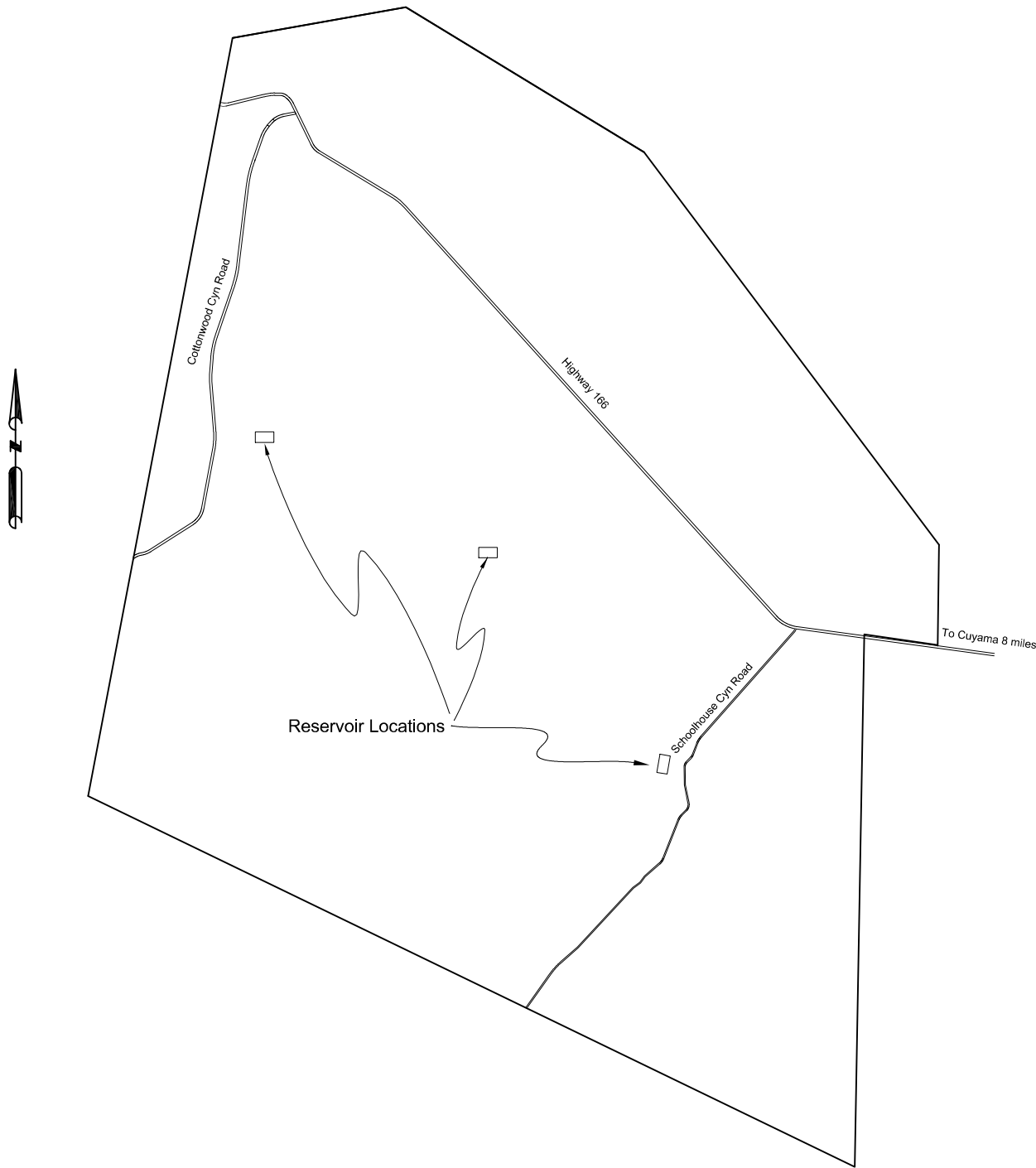
General Notes

1. No construction shall be started without plans approved by the County Planning Department. The Planning Department shall be notified at least 24 hrs prior to the start of construction and the time and location for the preconstruction conference.
2. All construction work and installations shall conform to the County Standards and Specifications.
3. Soils tests shall be done in accordance with the County Standards. The test results shall clearly indicate the location and source of materials.
4. Compaction tests shall be made on all embankment materials, subgrades and ditch backfill.
5. There will be no need for special concrete inspection. Concrete for the anchor pad shall be 2000 psi. The rebar shall be inspected prior to the placement of the concrete. All concrete and the two sack slurry for the anti-seep collars and ditch backfill where shown shall be properly vibrated.
6. The Design Engineer shall inspect the installation of the HDPE Liner. The liner shall be installed by a contractor specializing in lining ponds.
7. The Engineer of Record shall certify that the improvements when completed are in accordance to the plans prior to the request for Final Inspection. As-built plans are to be prepared after construction is completed. The Engineer certifying the improvements shall be present at the Final Inspection.
8. Final Reports for grading and earthwork shall be prepared in accordance with the requirements of the UBC, Chapter 33.
9. Upon completion of the work, the Geotechnical Engineer shall submit to the Engineer of Record a complete summary of all testing done during the project.
10. The Construction Contractor shall maintain a current, complete and accurate record of all changes which deviate from the approved plans. No changes shall be made without the prior approval of the Engineer of Record and the County.

North Fork Reservoirs #1-3

APN 147-020-045

Vicinity Map



ATTACHMENT G

Scope of Work

The work consists of constructing three new lined reservoirs for irrigation purposes. All areas to receive fill shall be excavated a minimum of three feet, the exposed surface scarified and moisture conditioned, then recompactd to 90% relative compaction. The intent is to balance the earthwork with no import or export. The completed interior slopes shall be fine graded and all rocks removed, then rolled with a smooth drum roller. A 40 mil HDPE geomembrane liner will then be installed on the slopes and bottom. The liner will be installed per manufacturer's recommendations by a company specializing in liner installation. A five foot by twenty three foot by eight inch reinforced concrete pad for anchoring the liner shall be constructed around the pump inlet pipes. No special inspection for the concrete work shall be required. A 6 foot non-climb fence will be built around the exterior perimeter. Coast Guard Approved buoys with a minimum of 90 feet of line shall be placed at no more than 200 foot intervals around the top interior slope of the reservoirs. The sources of water are pvc waterlines from existing wells and no surface water shall enter the reservoir. Valving, filters and pumps will be installed after the reservoirs are constructed by the Irrigation Contractor and are not part of this permit. This contract is for stubbing inlet pipes through the exterior slope for future connection to the fill and transfer lines by an Irrigation Contractor. These pipes shall have 2 sack concrete slurry anti-seep collars. A 15" PVC Drop Pipe Outlet Structure will serve as an emergency overflow in the event the high water limit switch fails and is sized to prevent the reservoir from overtopping. Access to the reservoir is by existing dirt farm roads. No driveways will be constructed. The existing farm fields sheet flow gently across the locations and earthen swales will be constructed around the perimeters where necessary to keep any surface flow away from the toe of the fill slopes. No electrical work is included in this permit.

Benchmark and Basis of Bearing

Benchmark is a 2 1/2" aluminum disc, stamped h-2, Cal-Trans Monument sb166 pm-55.01 elevation = 1824.55 NAVD88

Basis of Bearing is GPS established true north from NAD 83(92) from Cal-Trans Monuments sb166 pm-55.01 and sb166 pm-55.43

Project Information

Address: Hwy 166, Cuyama Valley

APN 147-020-045

Zoning AG

Project Description: Construct three 49 ac-ft Reservoirs for irrigation and frost protection purposes

Pre-Construction Meeting

Prior to construction a pre-construction meeting is required with the inspector to go over the special inspection reporting requirements, final and progress reports, & erosion control. E-mail inspection-North@countyofsb.org

Contacts:

Owner:

Grapevine Land Management

Matt Turrentine
444 Higuera St Suite 202
San Luis Obispo, CA 93401
805 312-1828

Engineer:

Tom A Howell

1812 N Vine
Santa Maria, CA 93454
805 925-5311

Geotechnical Engineer: GSI Soils, Inc

Rick Amero
524 East Chapel
Santa Maria, CA 93454
805 349-0140

Sheet Index

Sheet 1: Front sheet, notes and title

Sheet 2: Overall Layout & Existing Contours

Sheet 3: Overall Site Piping Layout

Sheet 4: Reservoir #1 Grading Plan

Sheet 5: Reservoir #1 Details

Sheet 6: Reservoir #2 Grading Plan

Sheet 7: Reservoir #2 Details

Sheet 8: Reservoir #3 Grading Plan

Sheet 9: Reservoir #3 Details

Sheet 10: Common Details

Sheet 11: Erosion and Sedimentation Control Plan

Sheet 12: BMP Details

Engineer's Certificate

I, Tom A Howell, RCE 27037, Engineer of Record, hereby certify that these plans are in accordance with the following codes: _____ Date: _____

2013 California Bldg Code (0112 IBC), Appdx Chp 33, 1997 UBC

2013 California Electric Code (2011 NEC)

2013 California Mechanical Code (2012 IAMPO UMC)

2013 California Plumbing Code (2012 IAMPO UPC)

California Title 24: 2011 California Energy Code and Accesibility Standards

County Ordinance(s) Title 19 (Building), (Inland)

Geotechnical Engineer's Certificate

I have reviewed the plans and specifications and have found them to be in

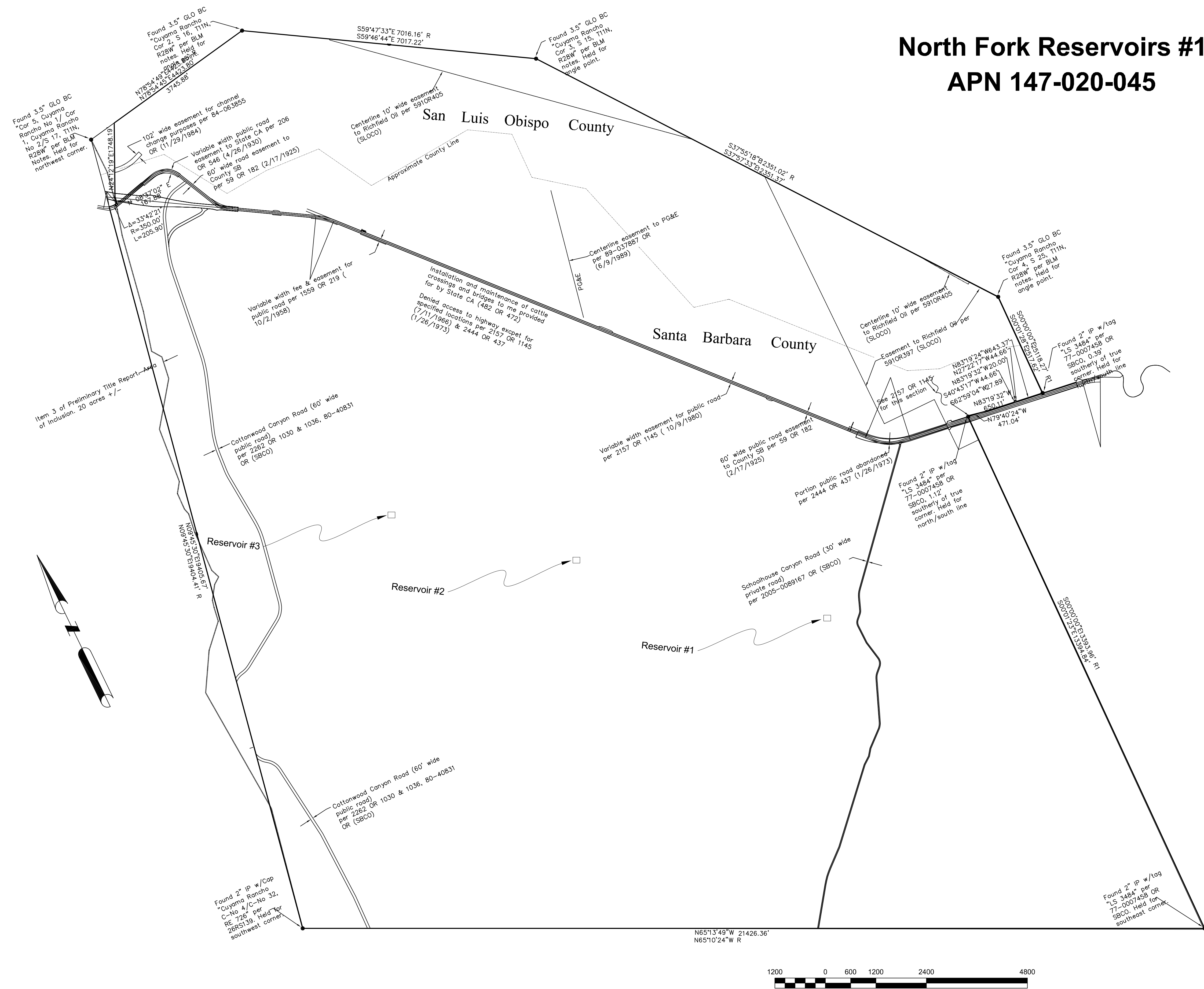
substantial conformance with the recommendations as found in my Soll Investigation.

Date: _____



North Fork Vineyards		
DRAWN <i>TH</i>	DATE <i>1/09/17</i>	<i>49 Ac-ft Reservoirs</i> <i>Hwy 166</i>
APPROVED	DATE	<i>Cuyama, CA</i> <i>Cover Sheet</i>
SCALE <i>Varies</i>	SHEET <i>1 of 12</i>	PROJECT NO. <i>101715-6233</i>

North Fork Reservoirs #1-3
APN 147-020-045



North Fork Vineyards

DRAWN TH	DATE 1/09/17	49 Ac-ft Reservoirs Hwy 166 Cuyama, CA Overall Property
APPROVED	DATE	
SCALE 1"=1200'	SHEET 2 of 12	PROJECT NO. 101715-6233

North Fork Vineyard Frost Protection Overall Site Plan



North Fork Vineyards		
DRAWN	DATE	Reservoirs #1-3
TH	1/09/17	Overall Piping Plan
APPROVED	DATE	Existing Piping
SCALE	SHEET	PROJECT NO.
1"=600'	3 of 12	101715-6233

Reservoir # 1 Grading Plan

Pond #1 Report

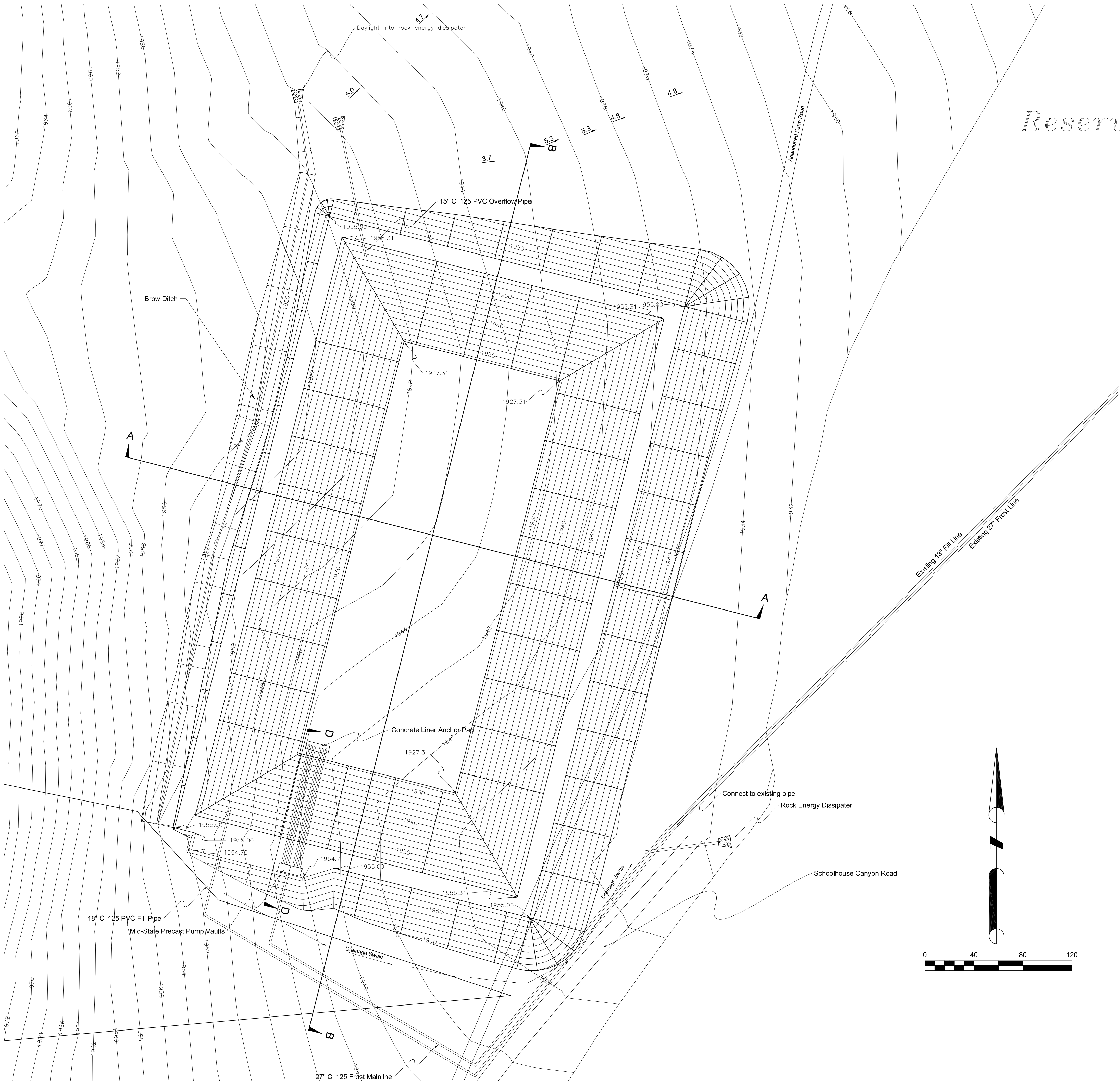
Top of dam elevation: 1955.3
Bottom of pond elevation: 1927.3
Top of dam width: 14.0
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50:1

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 44,062 C.Y.
Total fill: 44,589 C.Y.
Total Disturbed Area: 4.85 Acres

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1927.31	0.00	1.046
1929.31	2.20	1.158
1931.31	4.63	1.274
1933.31	7.30	1.395
1935.31	10.21	1.520
1937.31	13.38	1.650
1939.31	16.81	1.784
1941.31	20.52	1.923
1943.31	24.51	2.066
1945.31	28.79	2.214
1947.31	33.37	2.366
1949.31	38.26	2.523
1951.31	43.46	2.684
1953.31	49.00	2.850
1955.31	54.87	3.020



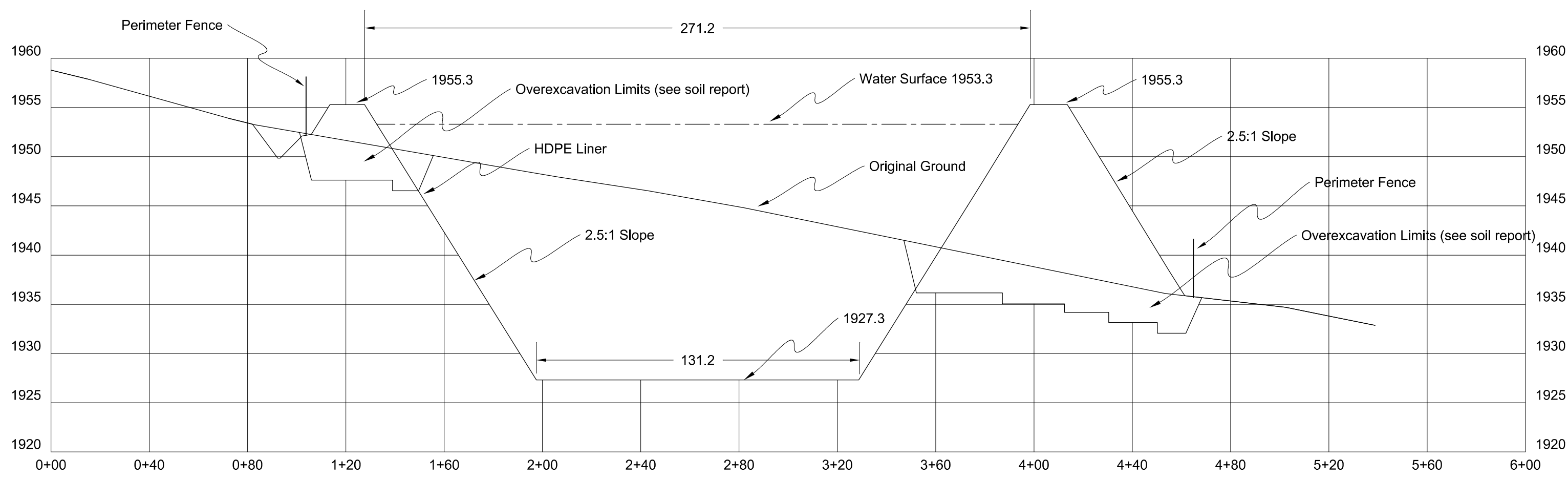
Revisions:
1/03/2017 Added 15" CMP Culvert
Moved Outlet Pipe
Lengthened Drainage Swales

North Fork Vineyards

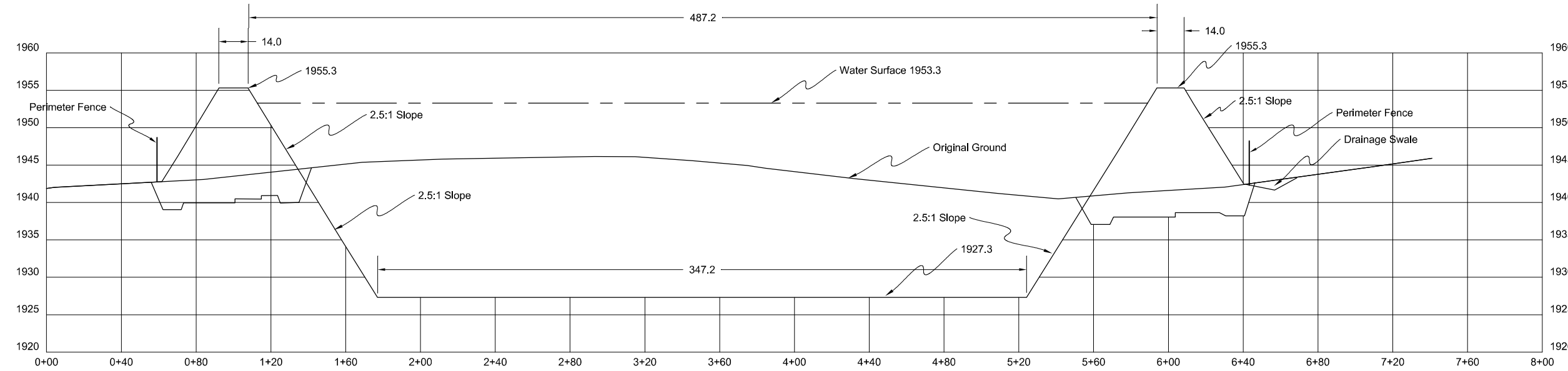
DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #1 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 4 of 12	PROJECT NO. 101715-6233

Reservoir #1 Details

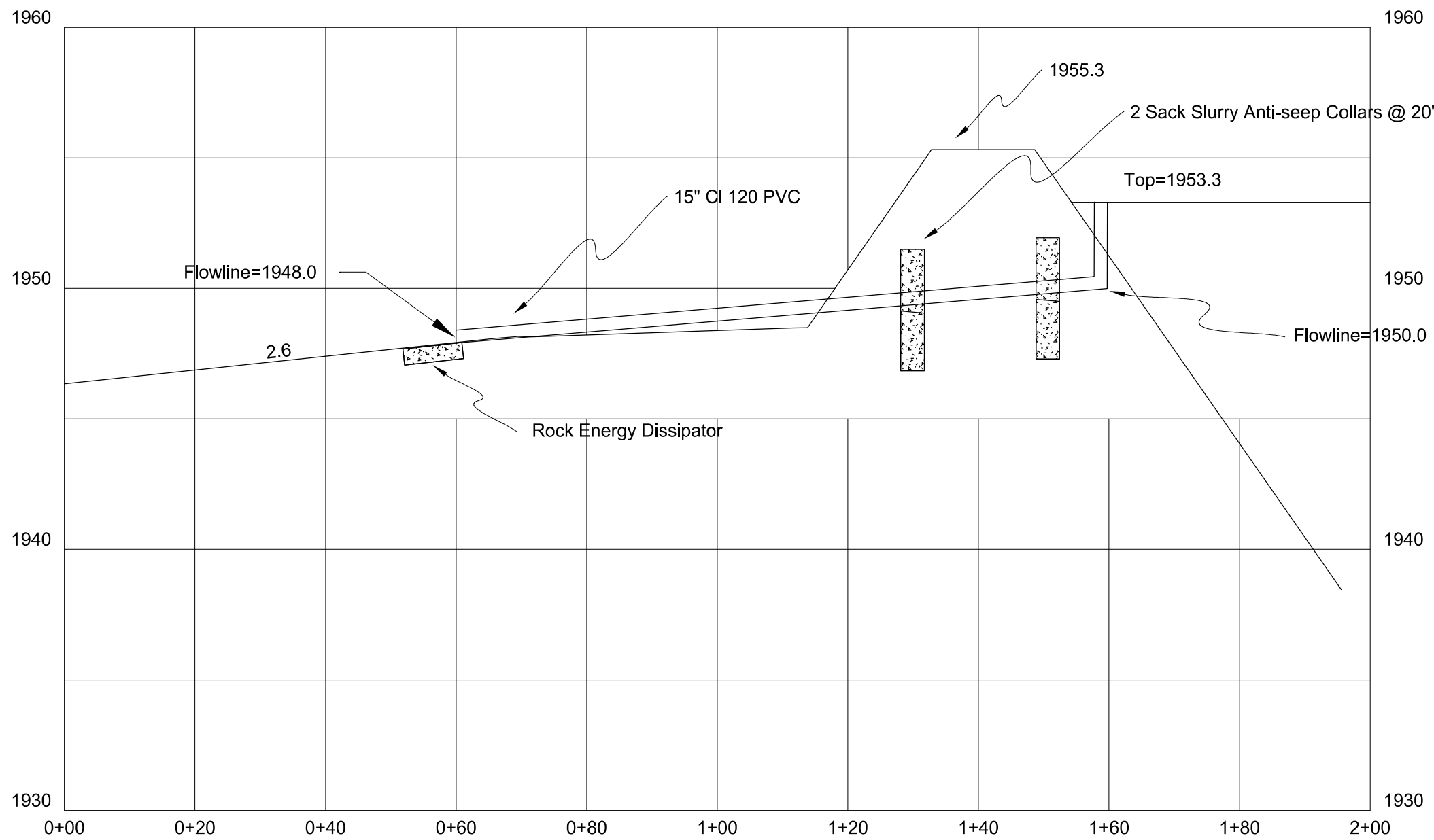
Reservoir #2 Section A-A



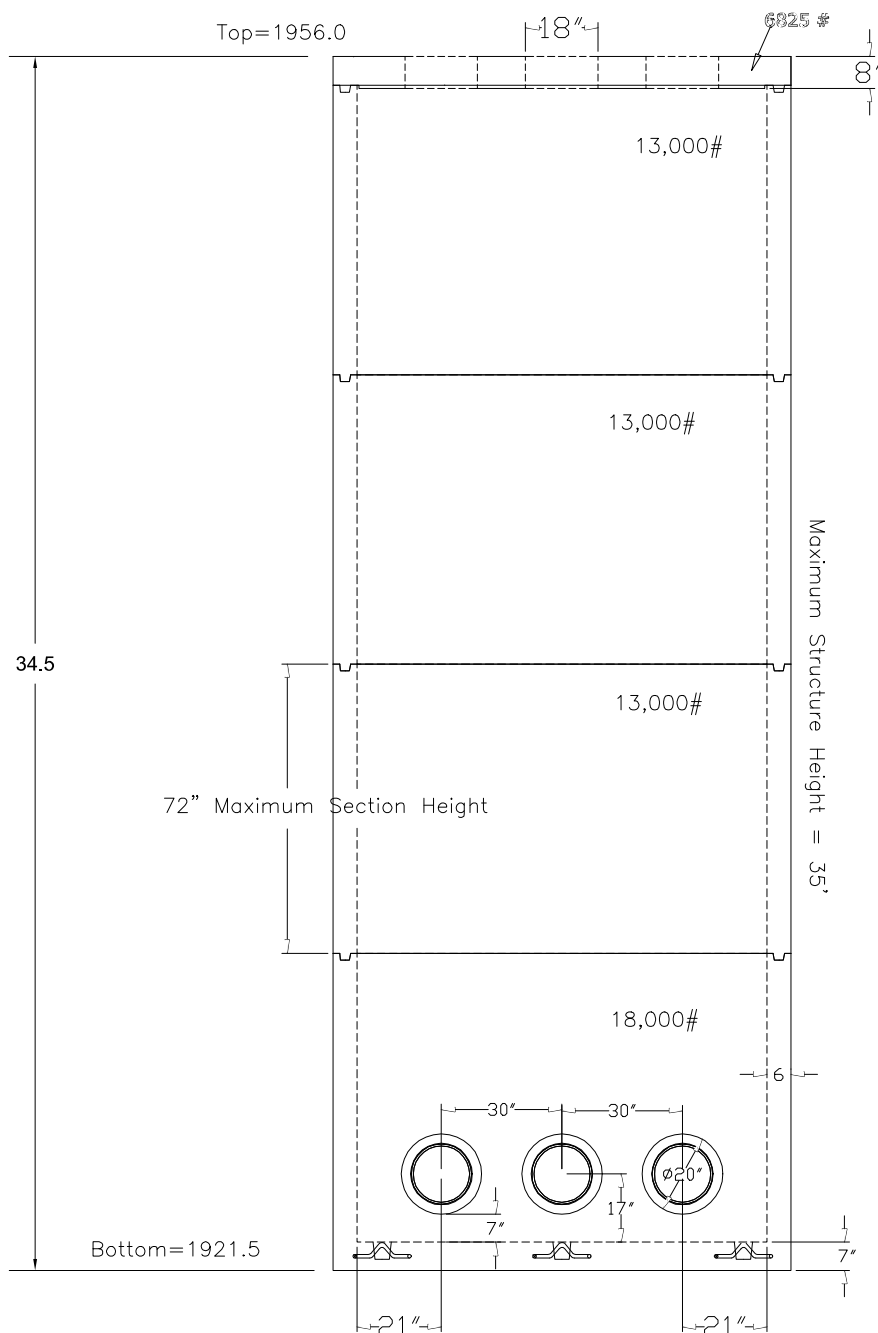
Reservoir #1 Section B-B



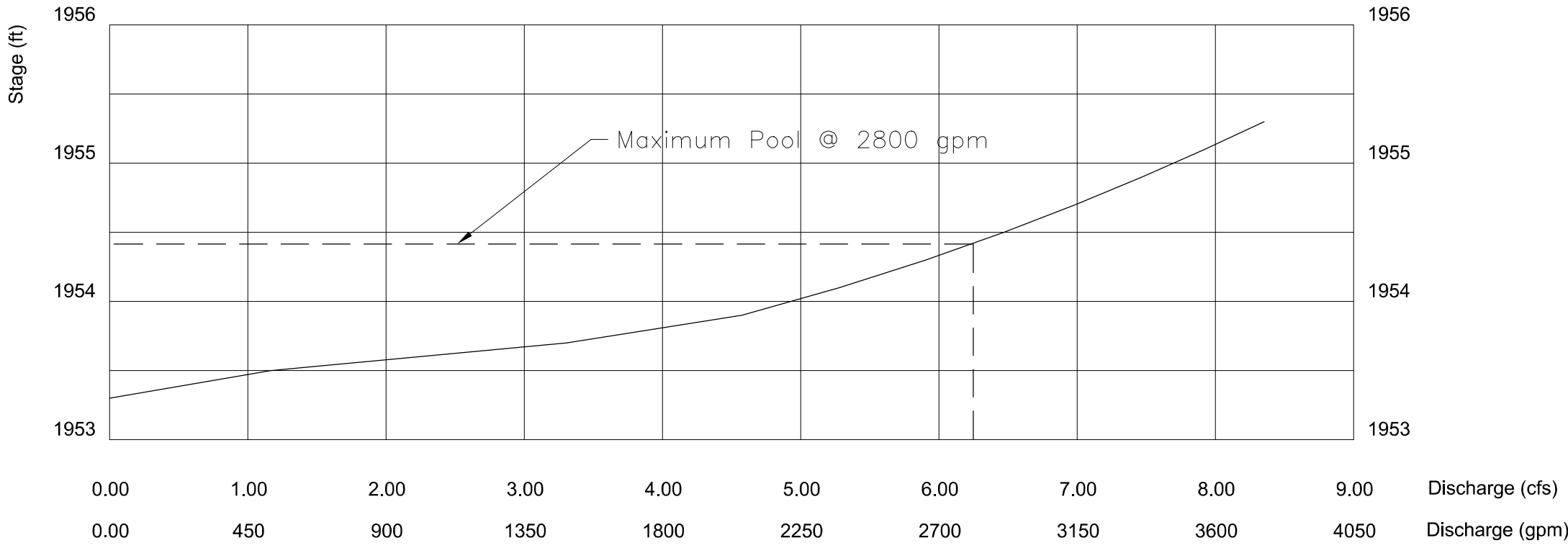
Reservoir #1 Overflow Detail



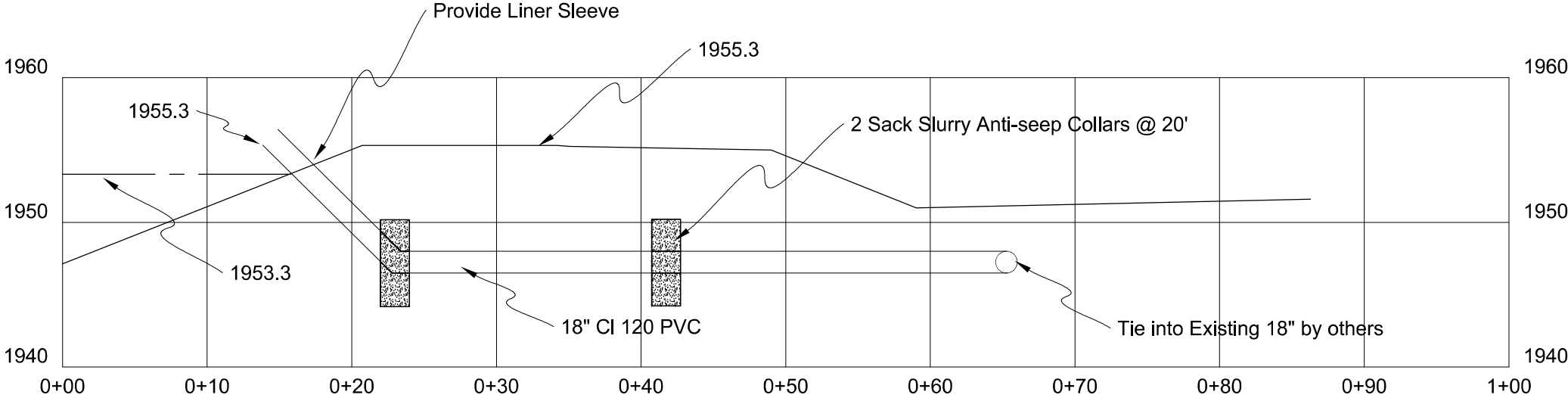
Mid-State Concrete Products
Pump Housing Vault Reservoir #1



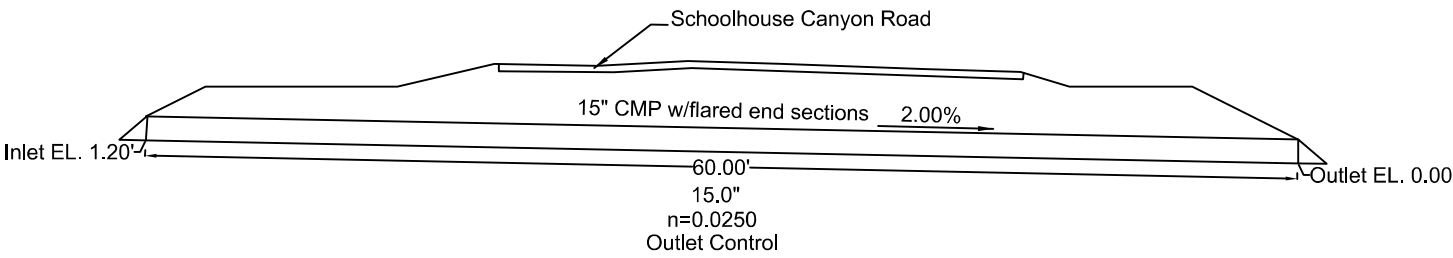
Pond #1 Stage-Storage



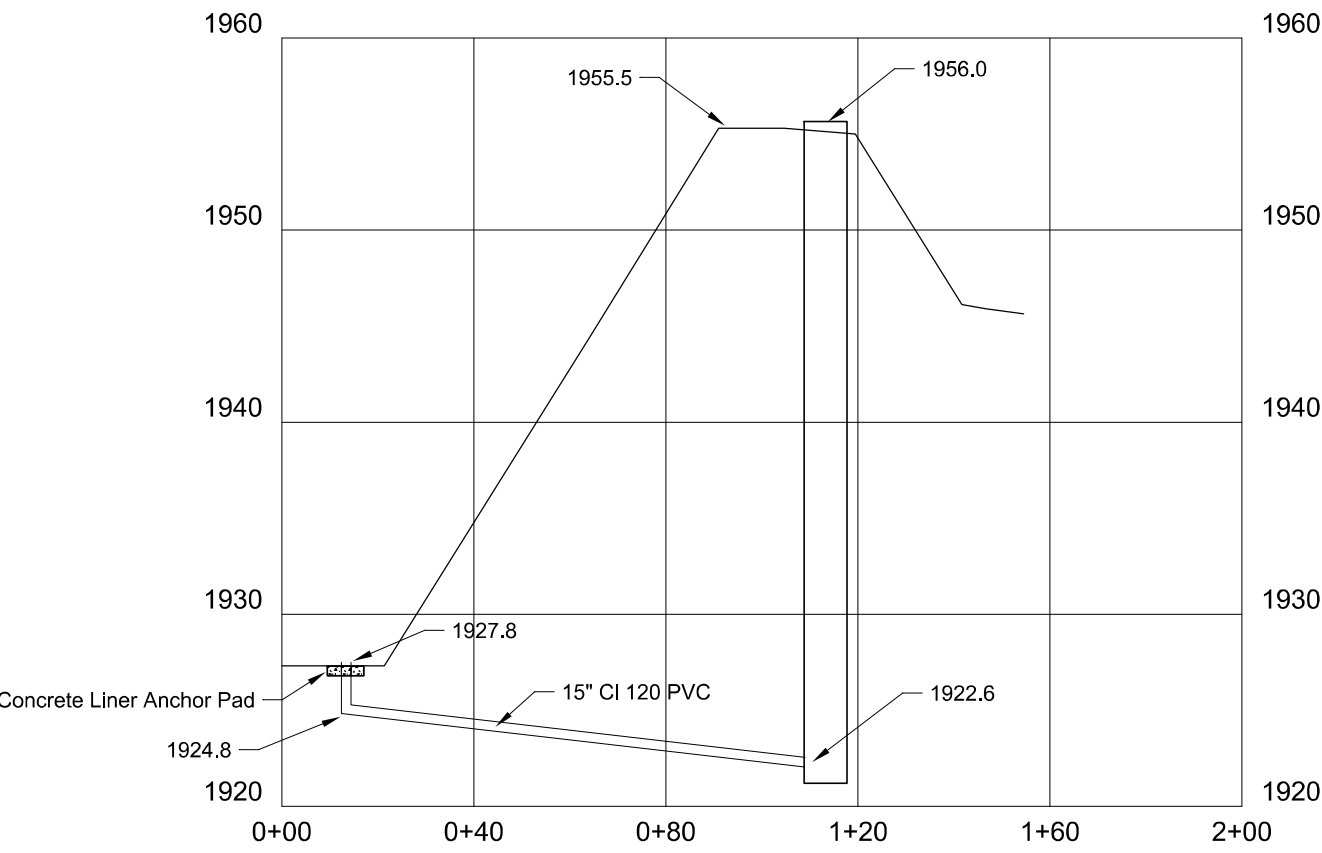
Reservoir #1 Filler Pipe



15" CMP Under Schoolhouse Road



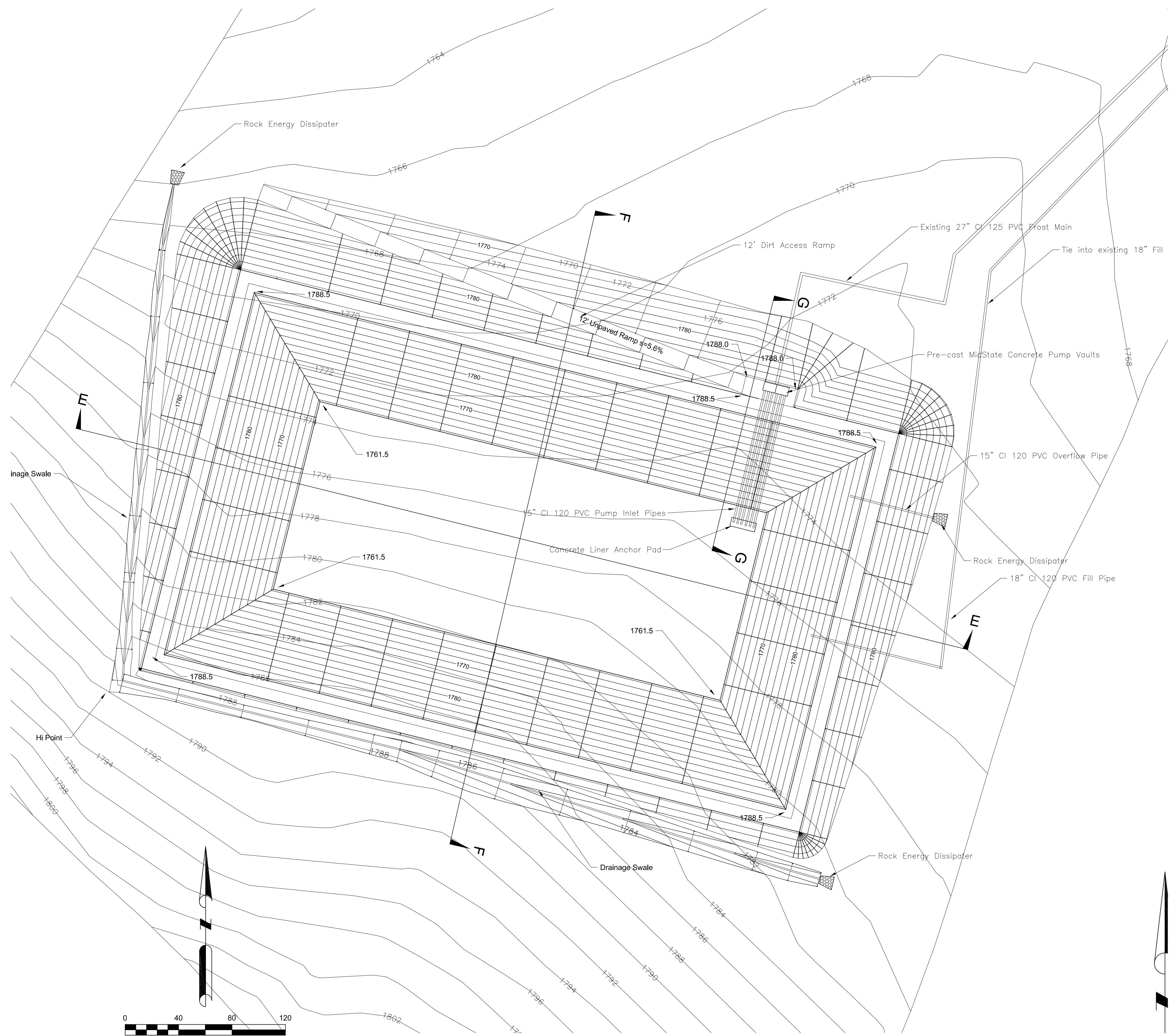
Reservoir #1 Pump Inlet



Revisions:
1/03/2017 Added 15" CMP Culvert Detail
Revised Stage-Storage Diagram
Revised Outlet Pipe Detail

North Fork Vineyards		
DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #1 Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 5 of 12	PROJECT NO. 101715-6233

Reservoir #2 Grading Plan



Pond Report

Tue Oct 20 14:36:54 2015

Top of dam elevation: 1788.50
Bottom of pond elevation: 1761.50
Top of dam width: 14.00
Cut Slope: 2.00:1
Fill Slope: 2.50:1
Interior Slope: 2.50:1
Existing Surface: C:\Carlson Projects\North Fork\Reservoir 2B OG.tin

Pond Earthwork Volumes

Fill Factor: 1.30
Total cut : 44,064.35 C.Y.
Total fill: 1 42,205.16 C.Y.

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1761.50	0.00	1.146
1763.50	2.40	1.259
1765.50	5.04	1.378
1767.50	7.91	1.502
1769.50	11.05	1.630
1771.50	14.44	1.762
1773.50	18.10	1.899
1775.50	22.03	2.040
1777.50	26.26	2.186
1779.50	30.73	2.336
1781.50	35.60	2.490
1783.50	40.74	2.649
1785.50	46.20	2.813
1787.50	52.00	2.981
1788.50	55.02	3.067

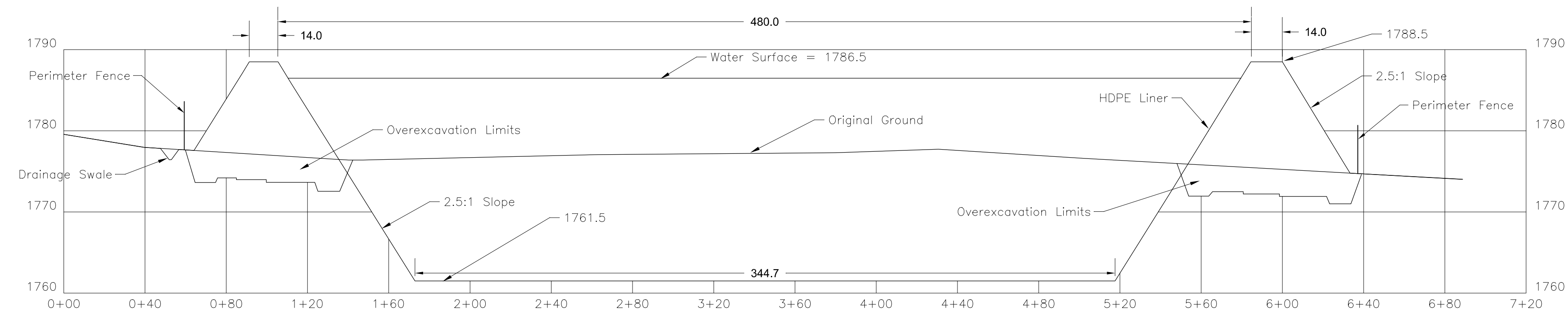
Area in Cut : 148,297.1 S.F.
Area in Fill: 186,122.7 S.F.



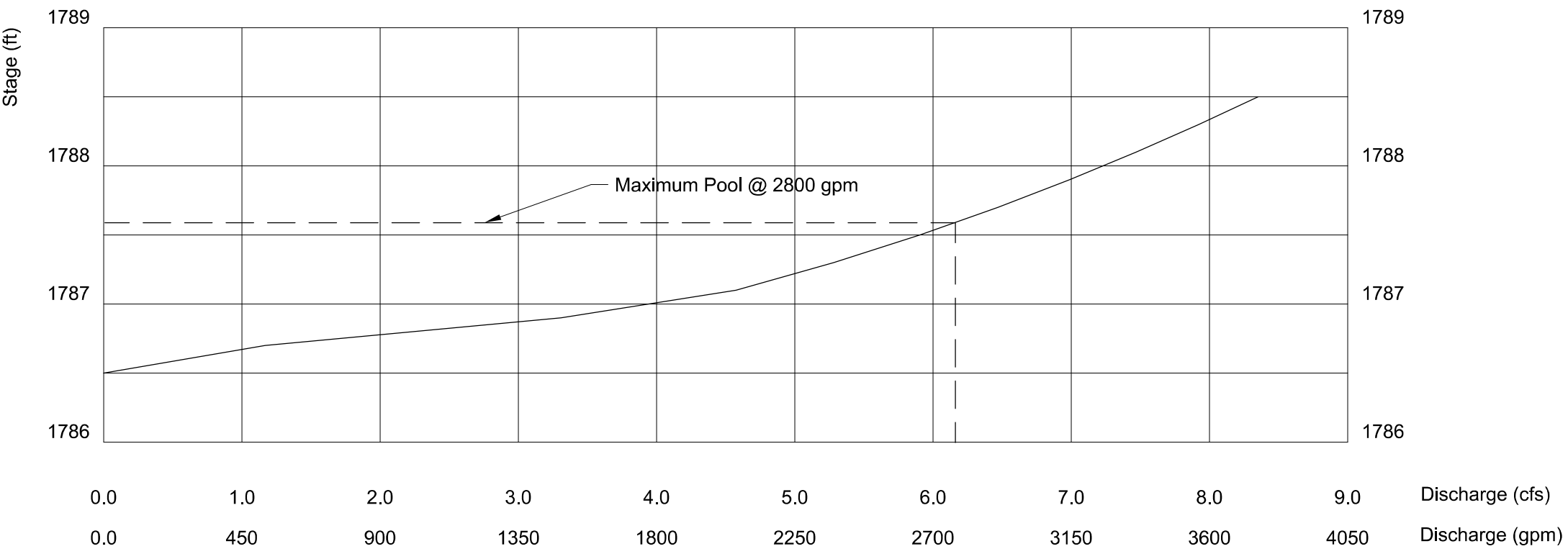
North Fork Vineyards

DRAWN TH	DATE 1/09/17	Reservoir #2 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 6 of 12	PROJECT NO. 101715-6233

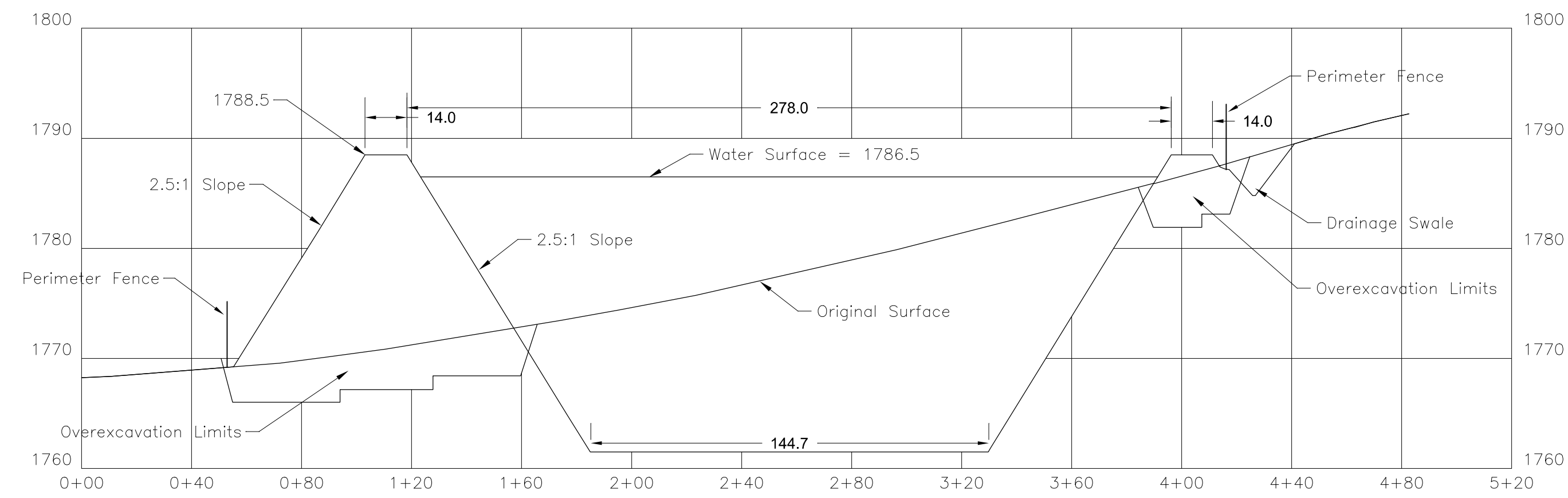
Reservoir #2 Section E-E



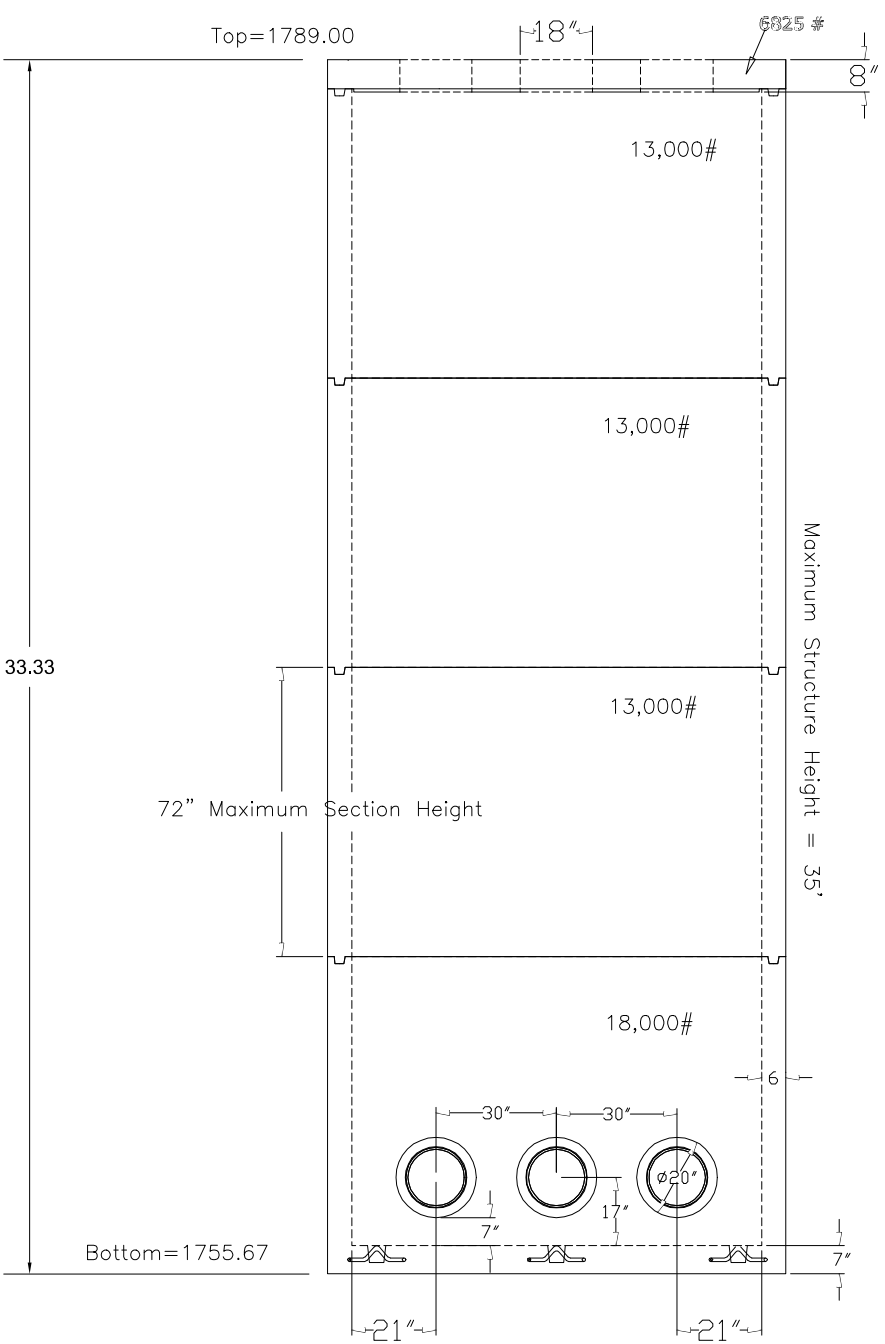
Reservoir #2 Stage Storage



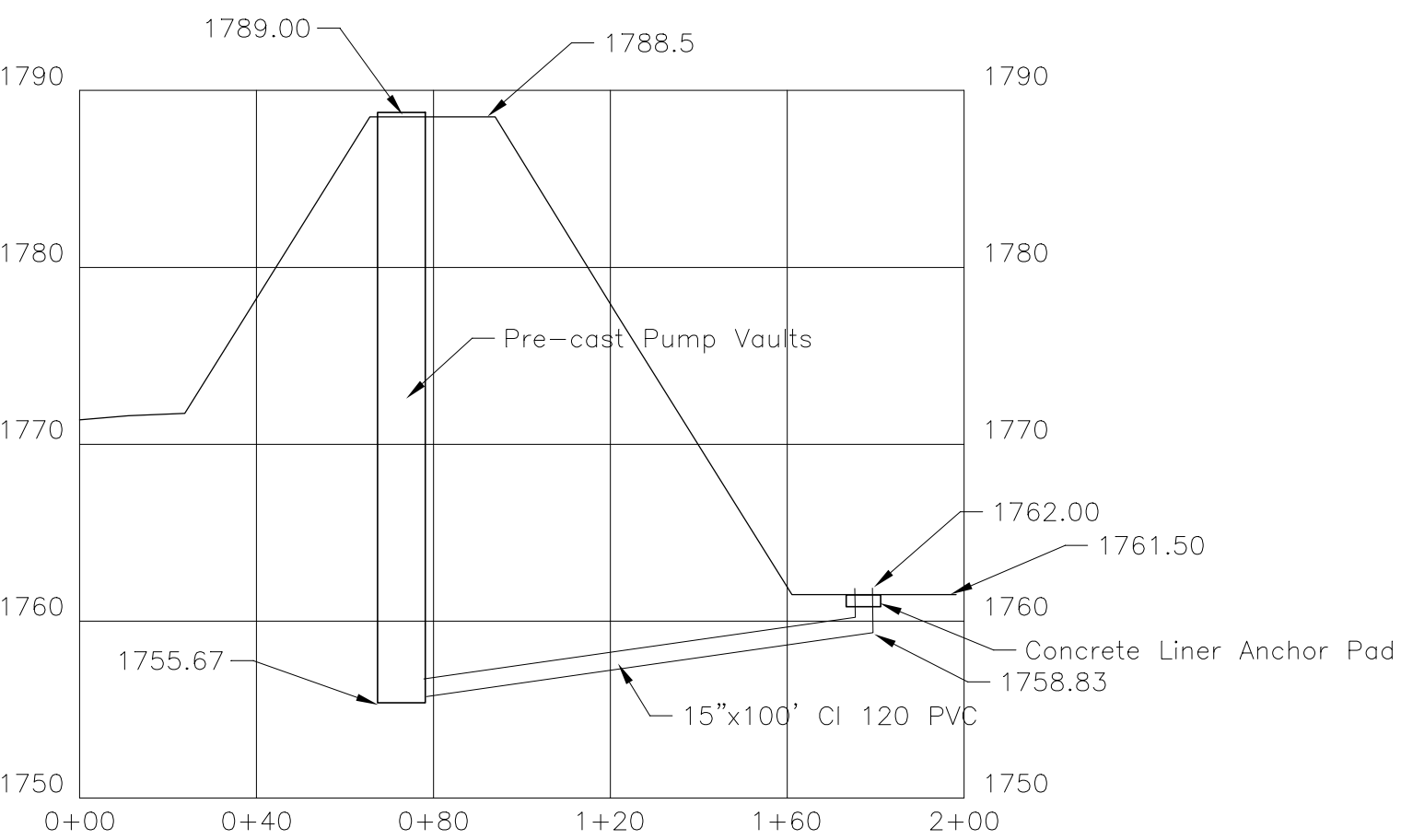
Reservoir #2 Section F-F



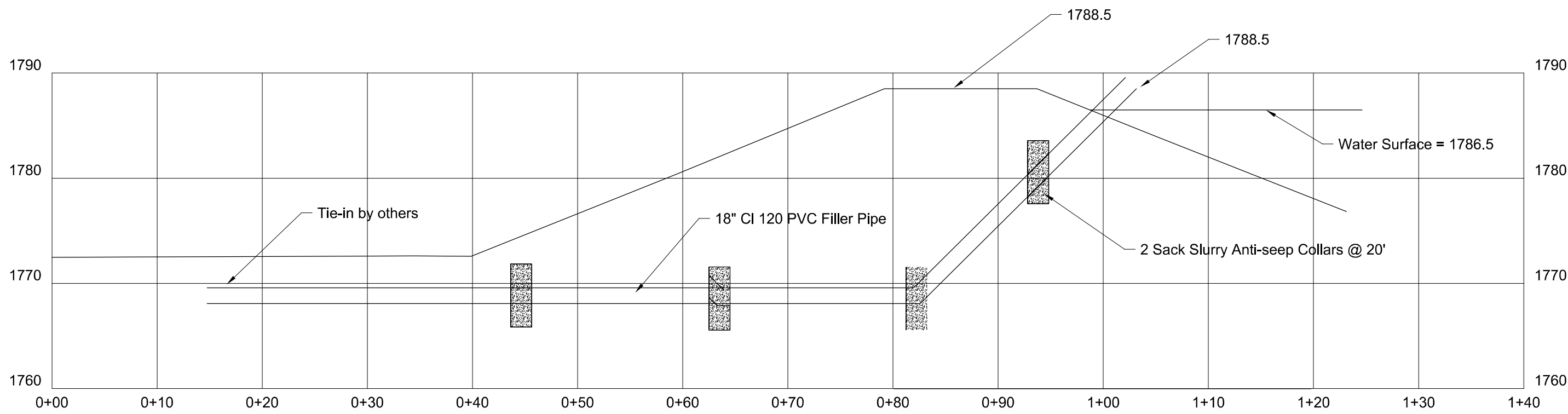
Reservoir #2 Pump Vaults



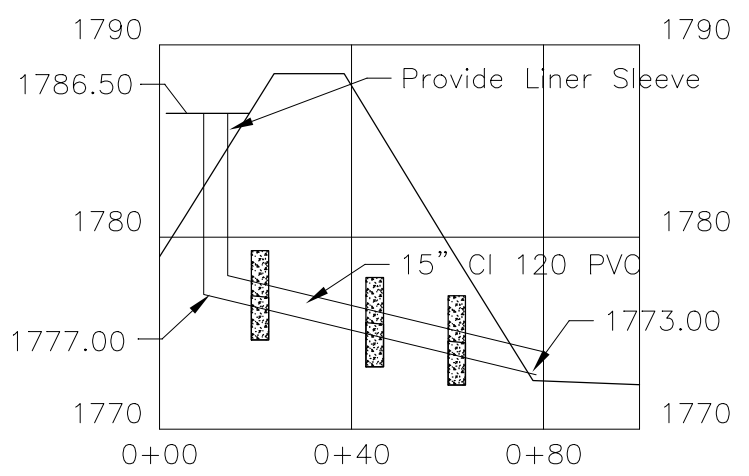
Reservoir #2 Pump Vaults Section G-G



Reservoir #2 Inlet Detail



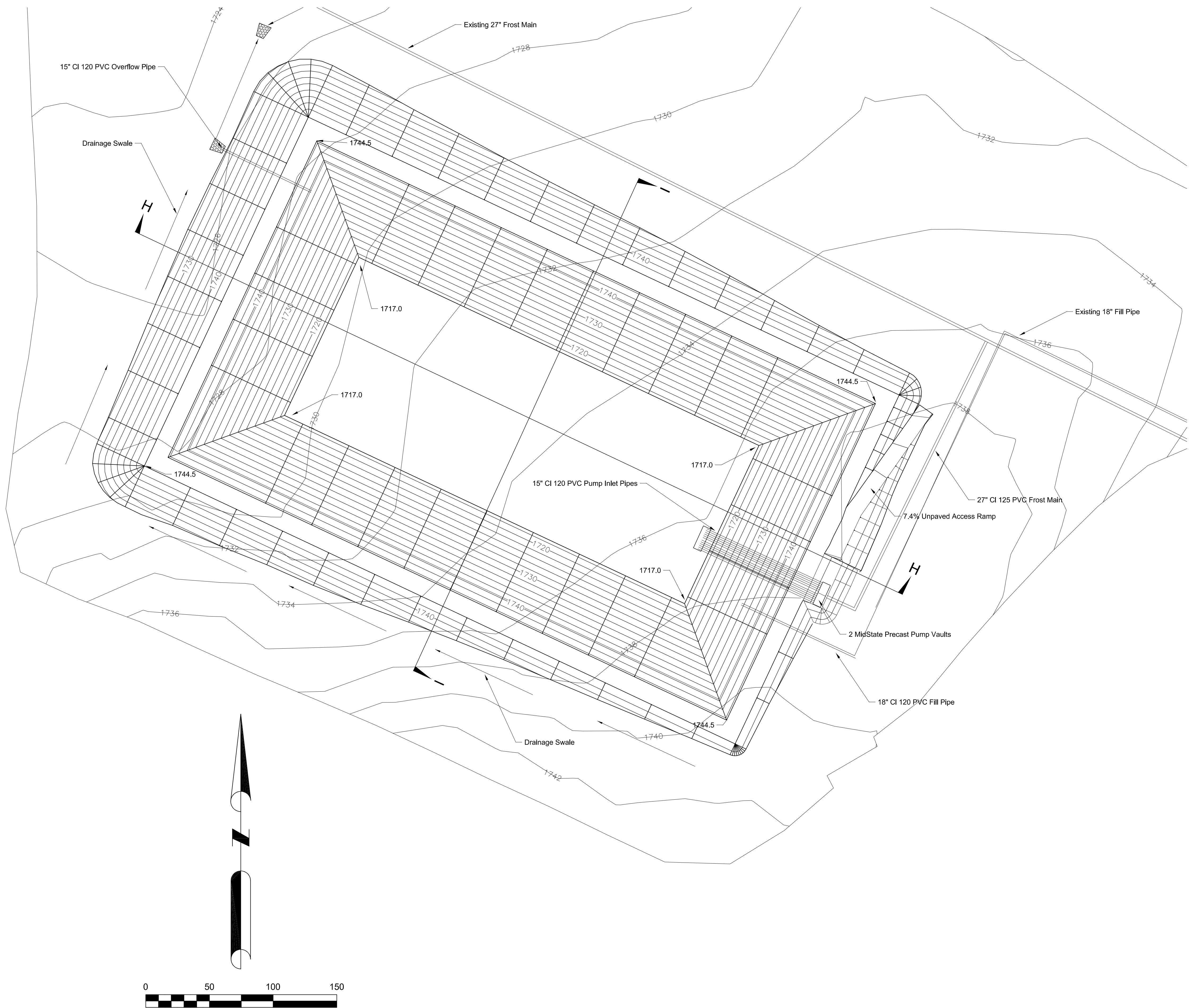
Reservoir #2 Overflow



North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoir #2 Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 7 of 12	PROJECT NO. 101715-6233

Reservoir #3 Grading Plan



Pond Report

Top of dam elevation:	1744.50
Bottom of pond elevation:	1717.00
Top of dam width:	14.00
Cut Slope:	2.00:1
Fill Slope:	2.50:1
Interior Slope:	2.50

Pond Earthwork Volumes

Fill Factor:	1.30
Total cut :	42,770.71 C.Y.
Total fill:	40,253.87 C.Y.

Pond Storage Volumes

Water Elev	Storage(AcreFt)	Area(Acre)
1717.00	0.00	1.093
1719.00	2.29	1.206
1721.00	4.82	1.323
1723.00	7.59	1.445
1725.00	10.60	1.571
1727.00	13.87	1.701
1729.00	17.41	1.835
1731.00	21.22	1.973
1733.00	25.30	2.116
1735.00	29.68	2.263
1737.00	34.36	2.414
1739.00	39.34	2.570
1741.00	44.64	2.729
1743.00	50.26	2.893
1744.50	54.70	3.019



North Fork Vineyards		
DRAWN TH	DATE 1/09/17	Reservoir #3 Grading Plan
APPROVED	DATE	
SCALE 1"=40'	SHEET 8 of 12	PROJECT NO. 101715-6233

Mid-State Concrete Products
Pump Housing Vault Reservoir #3

1750

1740

1730

1720

1710

0+00 0+40 0+80 1+20 1+60 2+00 2+40 2+80 3+20 3+60 4+00 4+40 4+80 5+20 5+60 6+00 6+40 6+80 7+20

2.5:1 Slope

2.5:1 Slope

Water Surface 1742.5

Original Ground

HDPE Liner

Exterior Fence

Overexcavation Limits

Overexcavation Limits

1744.5

1717.0

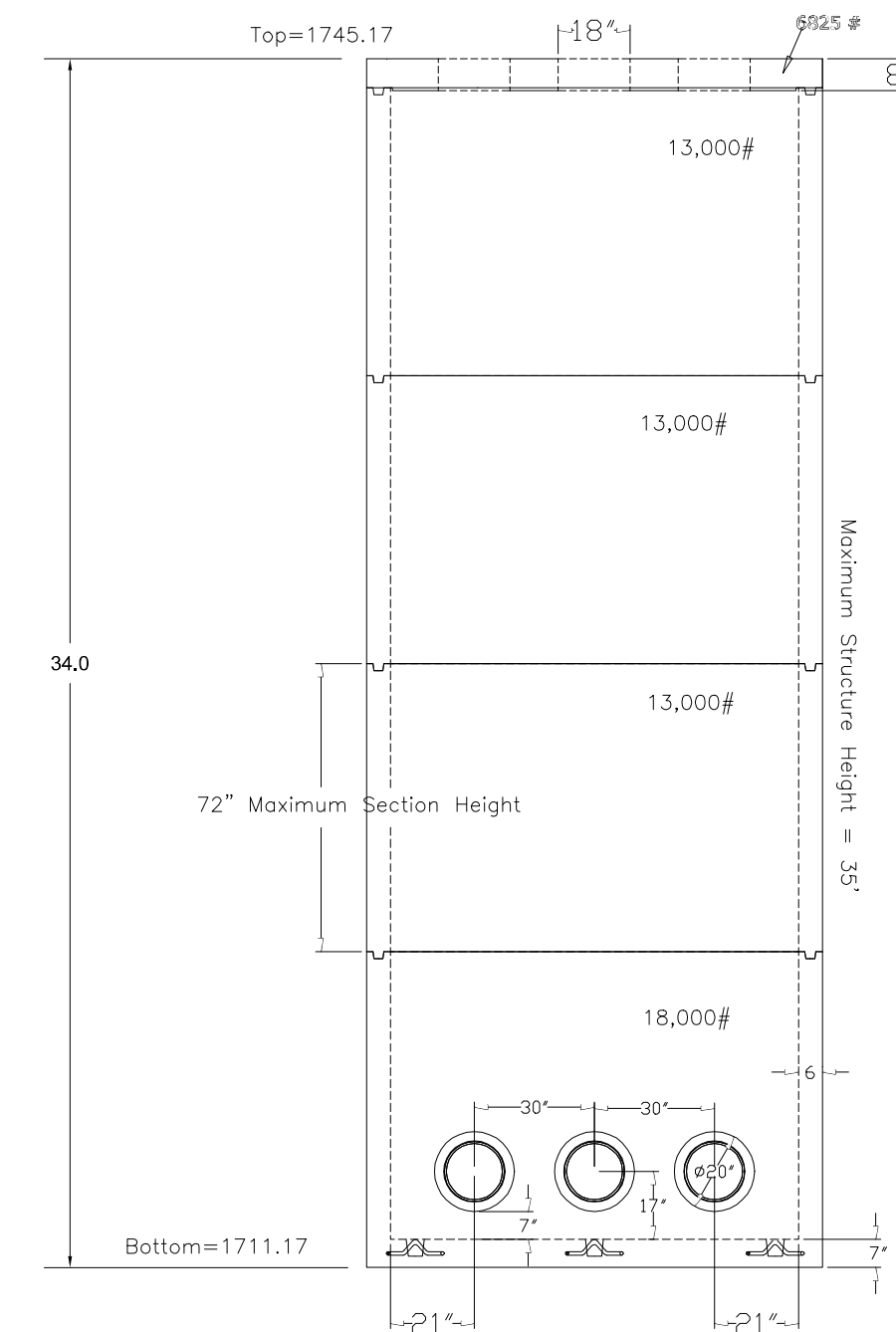
485.0

347.0

14.0

16.0

14.0



The graph shows the relationship between Stage (ft) and Discharge (cfs) for a culvert. The y-axis represents Stage in feet, ranging from 1742 to 1745. The x-axis represents Discharge in cubic feet per second (cfs), ranging from 0 to 4050. A solid curve represents the culvert's performance. A horizontal dashed line at approximately 1743.5 ft is labeled "Maximum Pool @ 2800 gpm". A vertical dashed line at 2700 cfs intersects the curve at the maximum pool stage.

Discharge (cfs)	Stage (ft)
0	1742.5
450	1742.7
900	1742.8
1350	1742.9
1800	1743.0
2250	1743.2
2700	1743.5
3150	1743.8
3600	1744.2
4050	1744.5

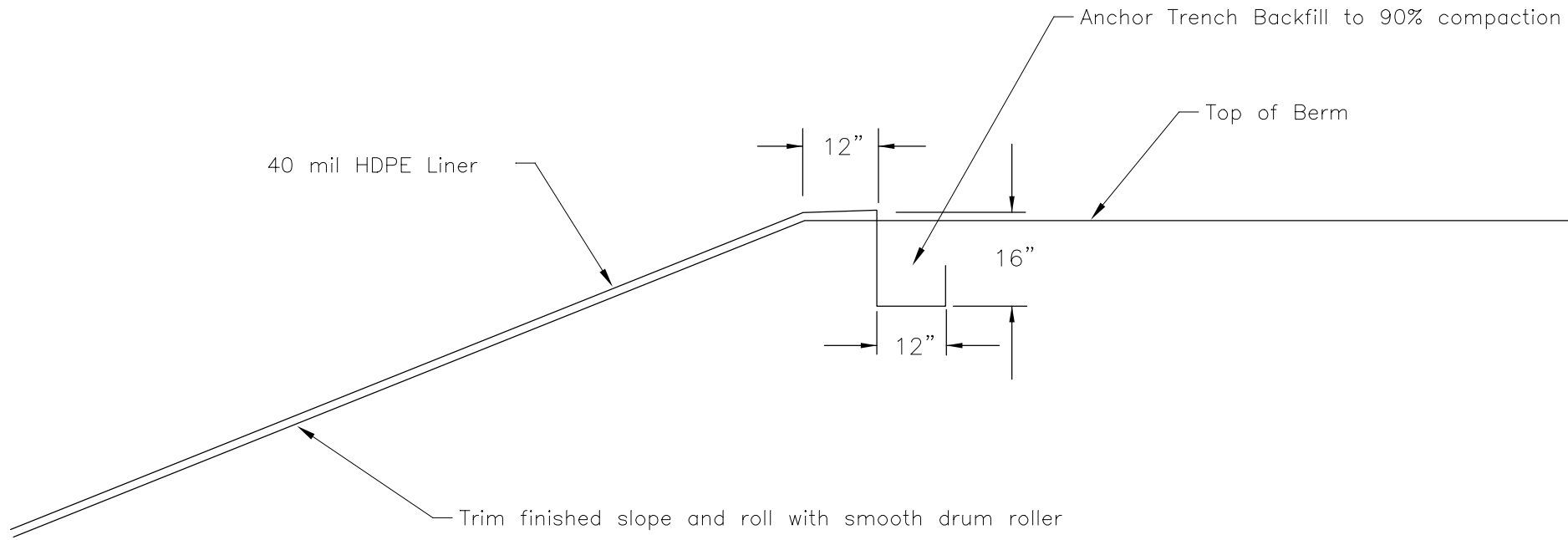
Profile view of the proposed 15 inch diameter sewer line. The graph shows elevation (1720 to 1750 feet) versus stationing (0+00 to 2+00). Key features include: 1726.0 f/l at station 0+40, Energy Dissipator at station 0+40, 1730.0 f/l at station 0+80, Slurry Anti-seep Collars @ 20' at station 1+00, 1742.5 f/l at station 1+20, Provide Sleeve for Liner at station 1+20, and 1744.5 f/l at station 1+20.



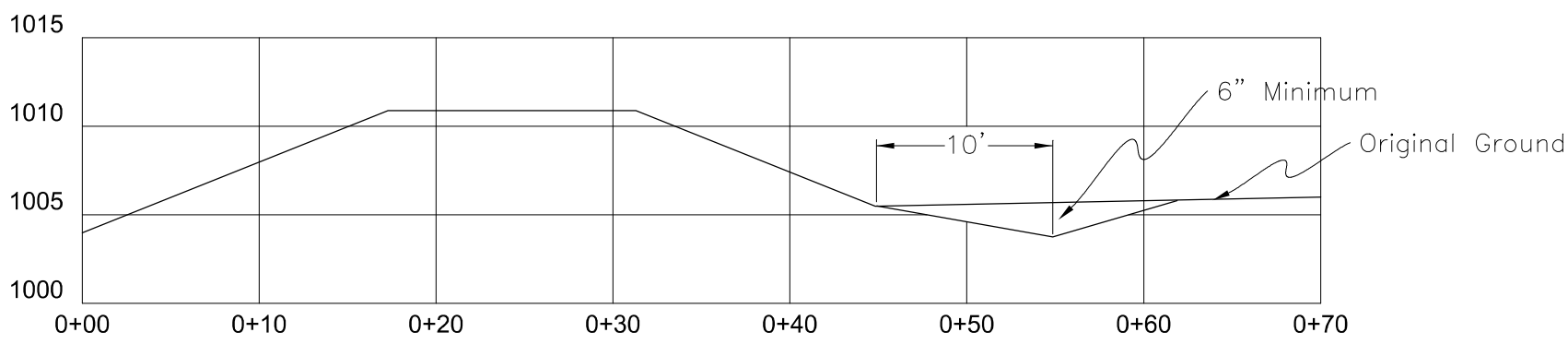
DRAWN <i>TH</i>	DATE <i>1/09/17</i>	<i>Reservoir #3 Details</i>
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET <i>9 of 12</i>	PROJECT NO. <i>101715-6233</i>

Details Common to All Reservoirs

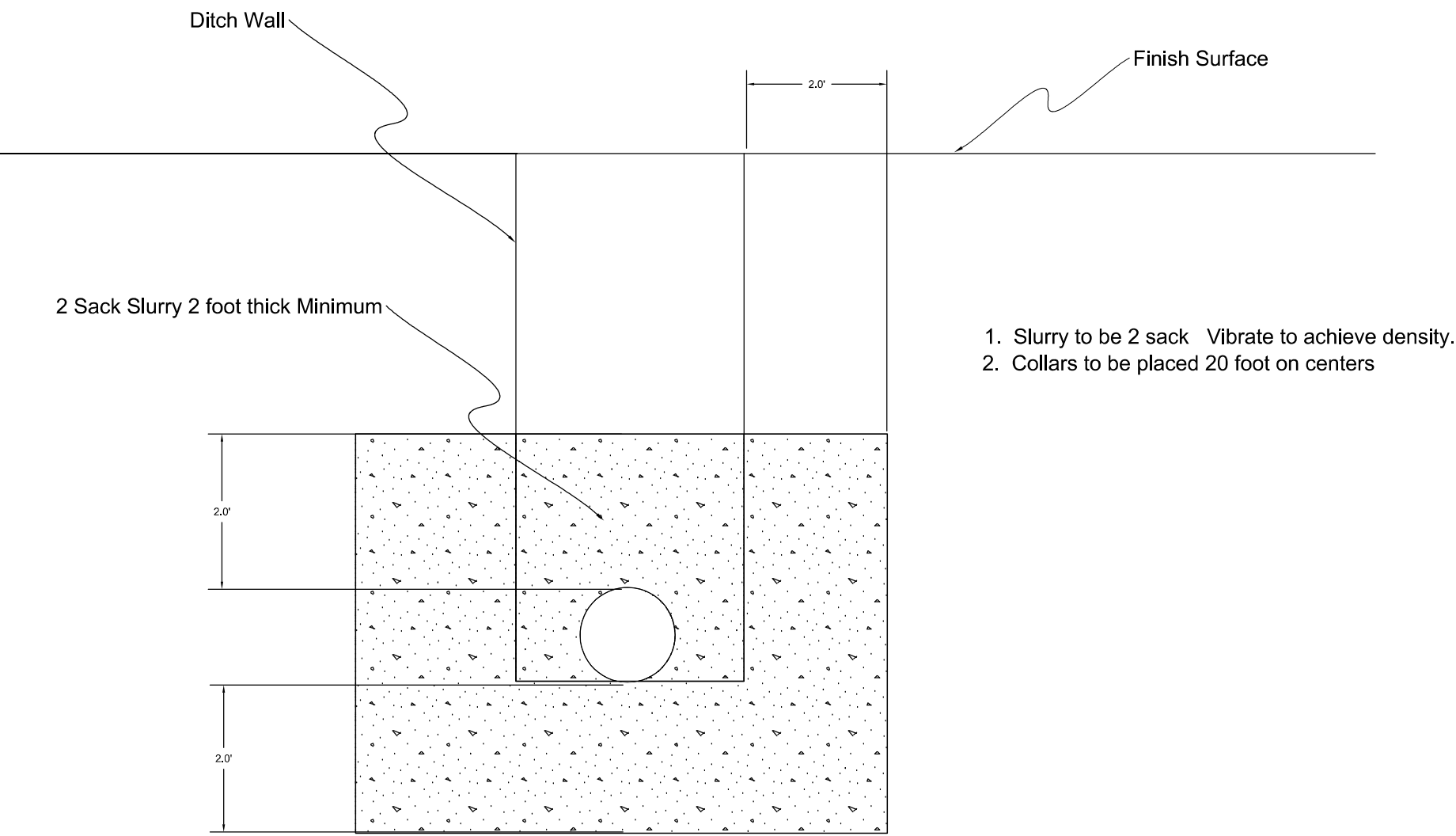
HDPE Liner Anchor Trench



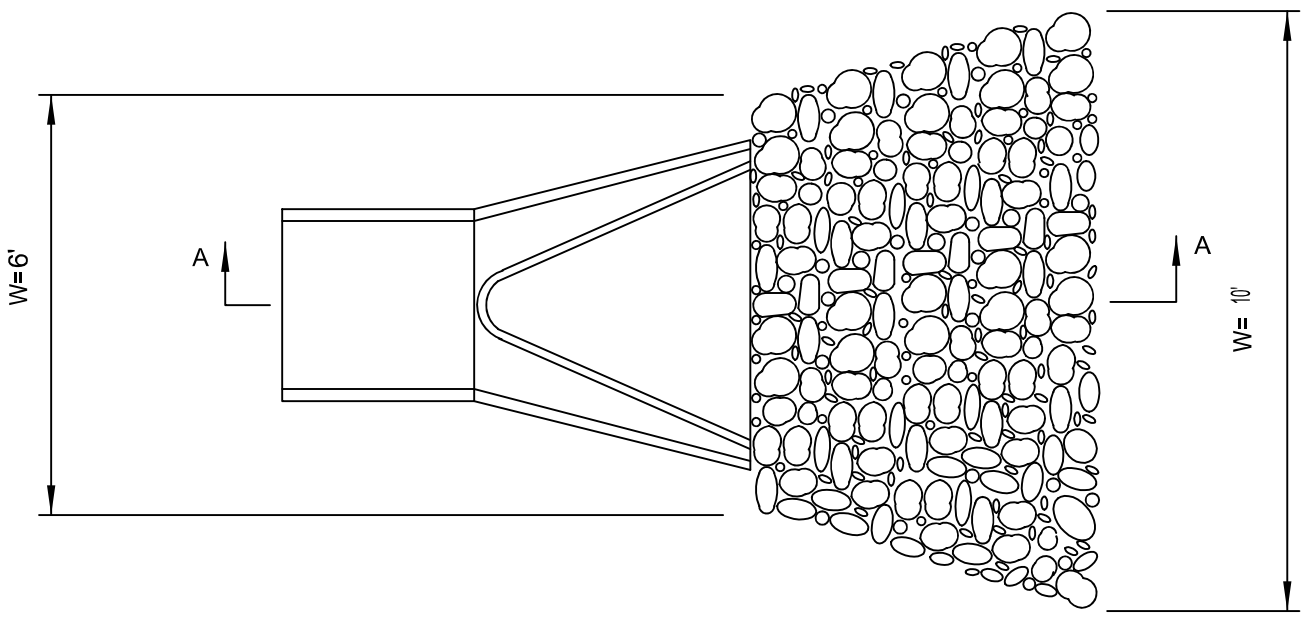
Drainage Swale Detail



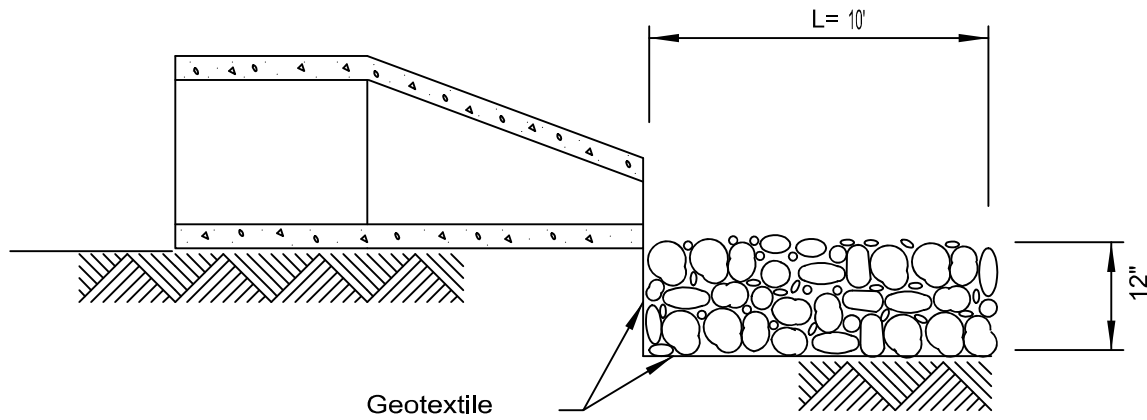
Anti-seep Collar Detail



Rock Energy Dissipater



PLAN



SECTION A-A

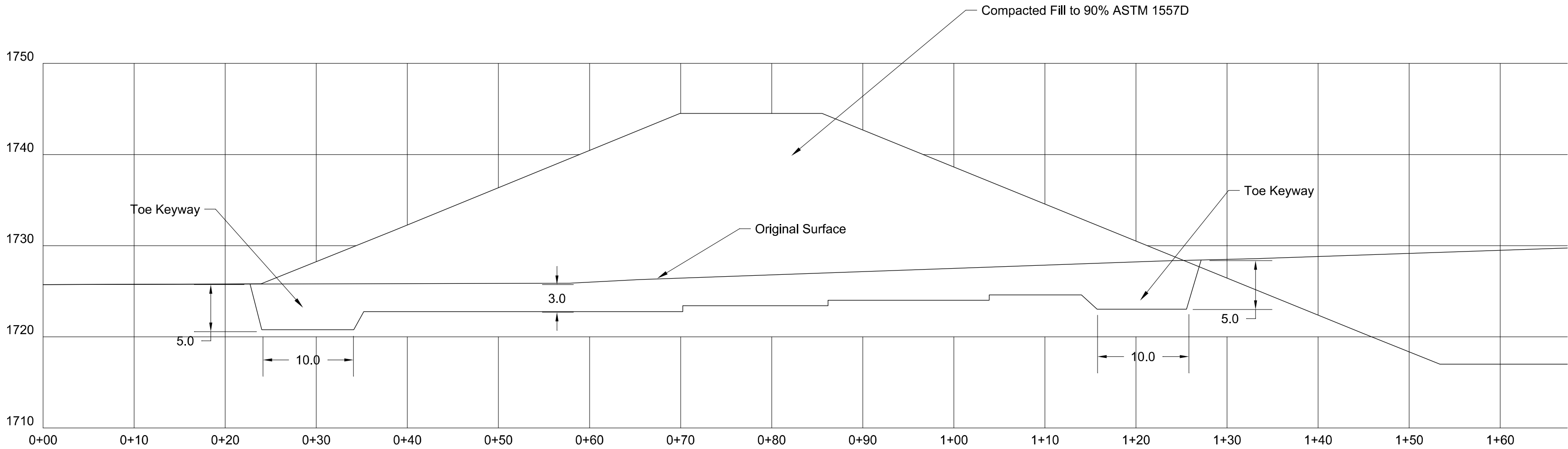
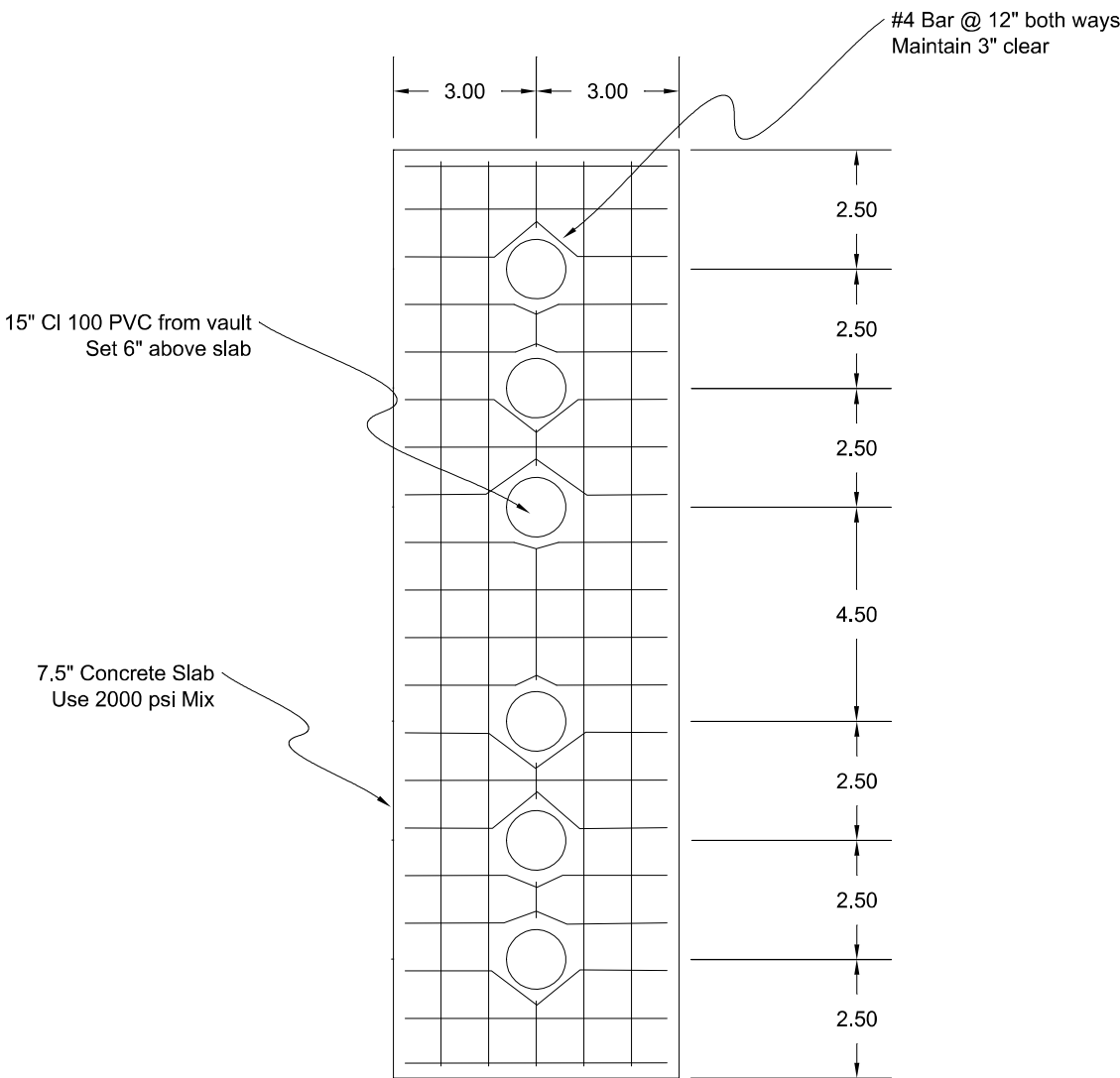
Notes:

1. Rock shall be 6" to 12" diameter
2. Minimum dimension shall be 6' x 10' x 12"

General Notes:

1. All grading shall conform to the Soil Report prepared by GSI Soils for this project dated January 4, 2016.
2. All slopes shall be overfilled than trimmed to finish grade to provide firm surfaces.
3. Finished slopes and the bottom surface shall be rolled with a smooth drum roller prior to placing fabric. The Engineer of Record shall inspect the surfaces to assure they are rock free and to the proper lines and grades before fabric shall be installed.
4. The liner shall be placed by a contractor specializing in pond liners and all pipes extending through the liner shall have sleeves and stainless bands to prevent leakage.
5. A 6 foot high non-climb fence shall be installed around the exterior perimeter of the reservoir. The fabric shall have 10 guage top and bottom wires with 12 1/2 guage 2x4 mesh filler fabric. Tee Posts shall be at 8 feet spacings and shall be heavy weight a minimum of 8 feet long.
6. The finished pond shall be surveyed by the Engineer of Record and the storage volume calculated. The 15" PVC Overflow Pipe shall be adjusted as necessary to ensure that the retained volume below the outflow inlet is no more than 49 acre feet and that there is a minimum of two feet of freeboard to the top of berm at the lowest point.

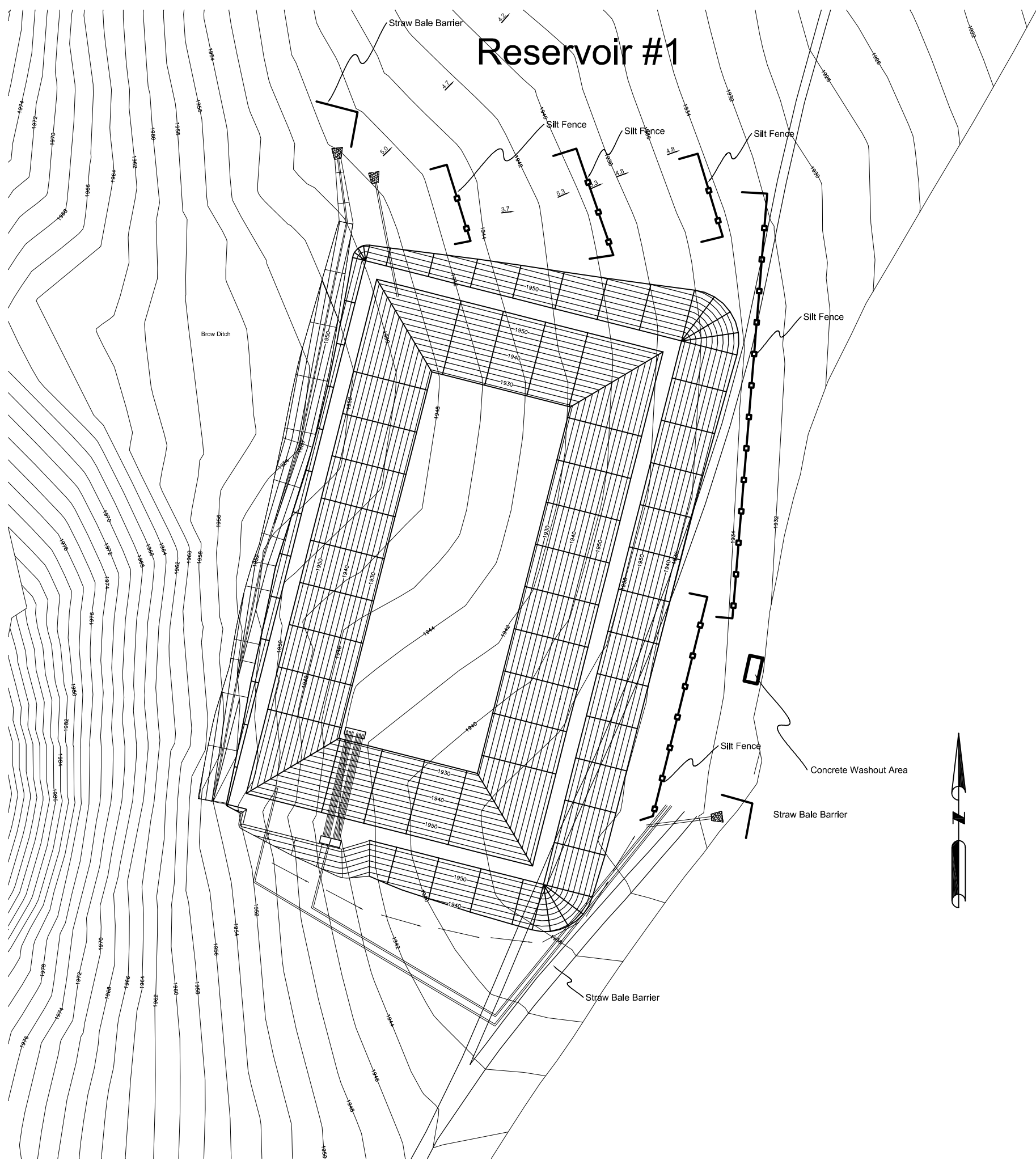
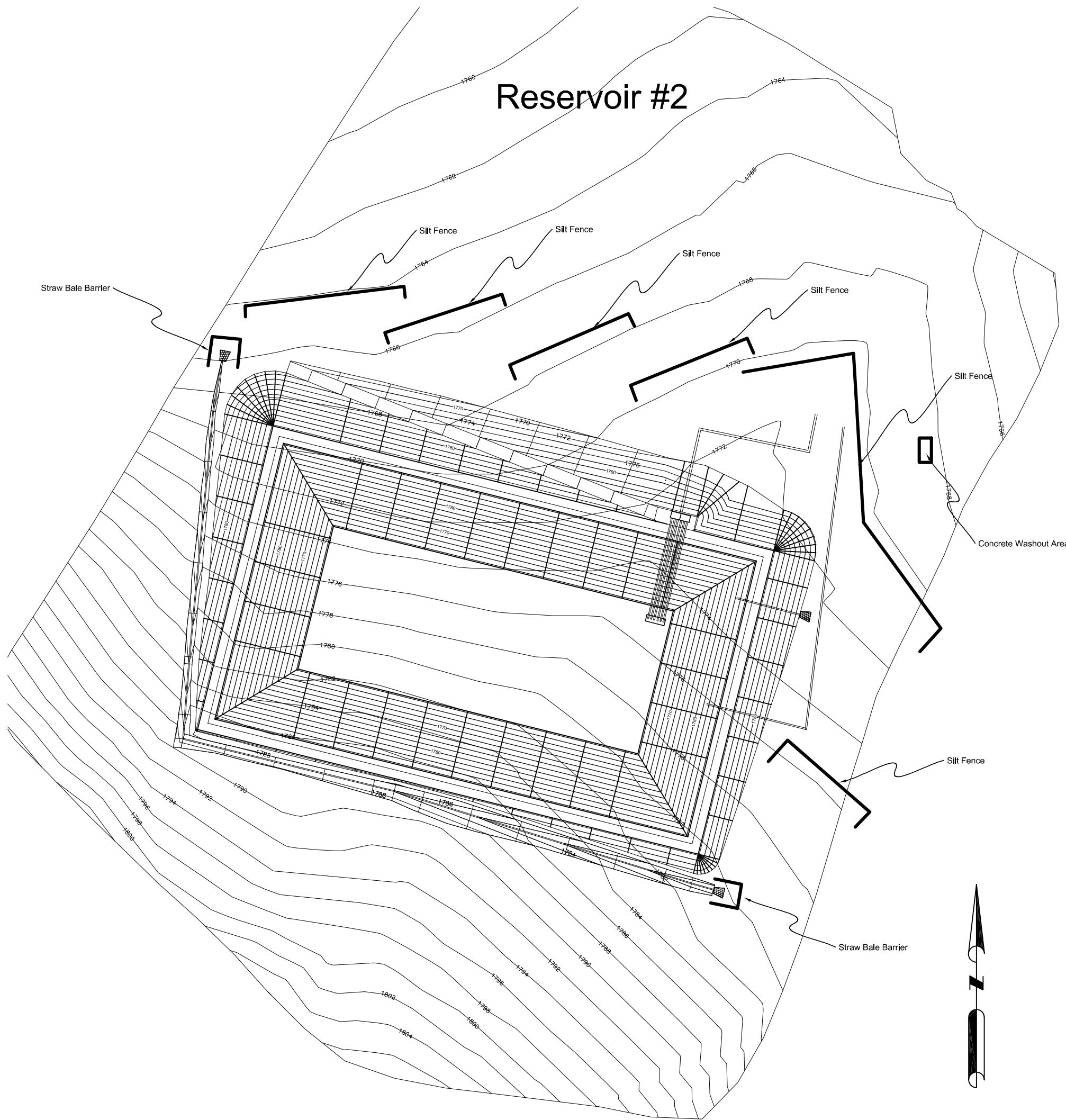
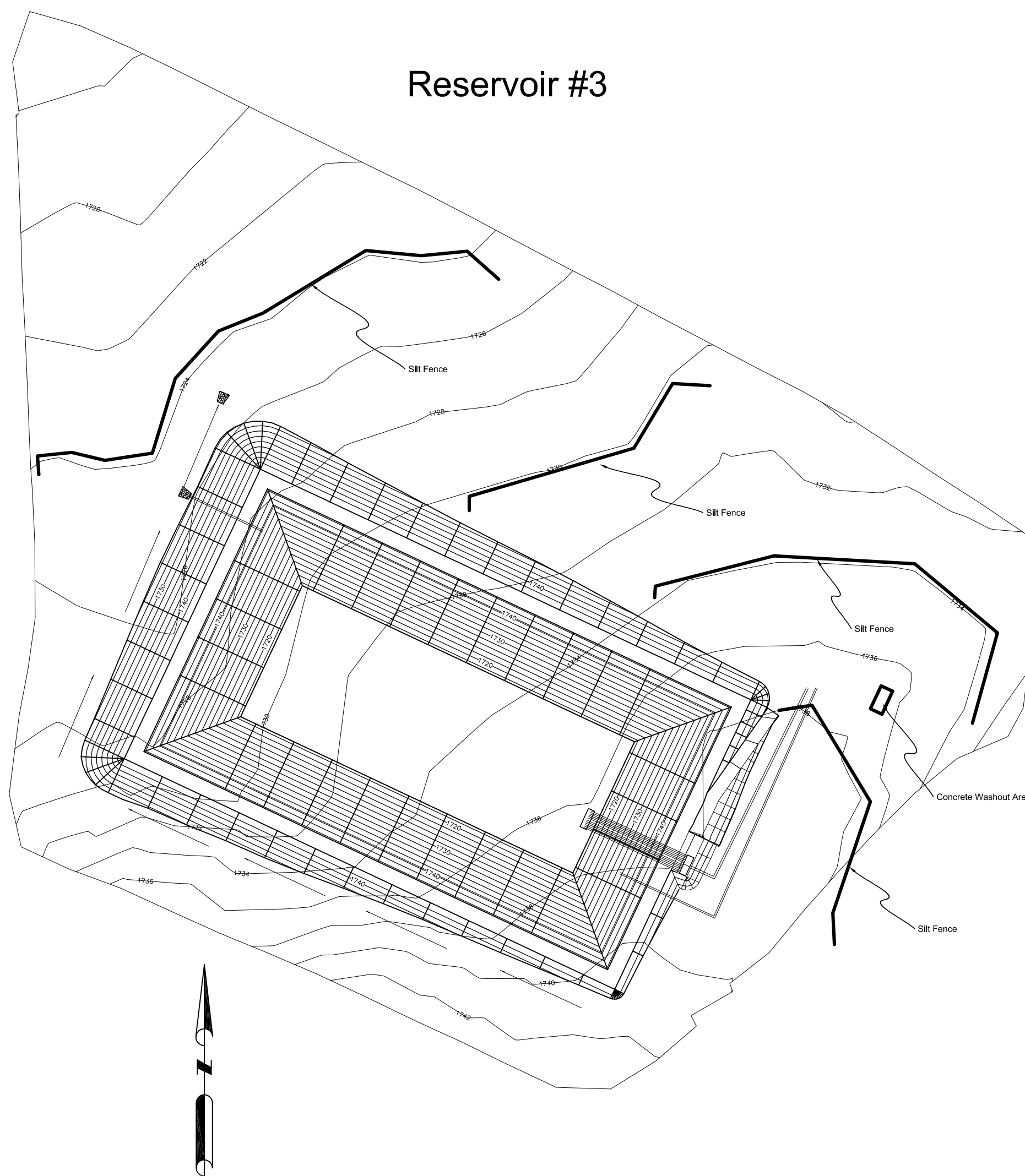
Overexcavation and Keyway Details per Figure 3 of Soil Report



North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoirs #1-3 Common Details
APPROVED	DATE	
SCALE <i>Varies</i>	SHEET 10 of 12	PROJECT NO. 101715-6233

Erosion and Sedimentation Control Plan



Erosion Control Notes:

- Erosion control measures shall be implemented on all projects and shall include source control, including protection of stockpiles, protection of slopes, protection of all disturbed areas, and protection of accesses. In addition, perimeter containment measures shall be placed prior to the commencement of grading and site disturbance activities unless the Engineer determines temporary measures to be unnecessary based upon location, site characteristics or time of year. The intent of the erosion control measures shall be to keep all sediment from entering a swale, drainage way, watercourse or onto adjacent properties. An approved Erosion Control and Sedimentation Control Plan will require County approval.
- Site Inspections and appropriate maintenance of erosion control devices shall be conducted and documented prior to, during, and after rain events.
- The developer shall be responsible for the placement and maintenance of all erosion control devices as specified by the approved plan until such time that the project is accepted as complete by the Engineer. Erosion control devices may be relocated, deleted or additional items may be required depending on the actual soil conditions encountered. Additional erosion control shall be placed at the discretion of the Engineer of Work, Engineer, SWPPP Monitor or RWQCB Inspector. Guidelines for determining appropriate erosion control devices are included in the appendix of the Public Improvement Standards.
- All erosion control devices shall be the first order of work and shall be in place between October 15 and April 15 or anytime when the rain probability exceeds 30%. This work shall be installed or applied after each area is graded and no longer than five (5) working days after the completion of each area.
- The Engineer of Work and the Engineer shall be notified before October 15 for inspection of installed erosion control devices.
- A standby crew for emergency work shall be available at all times during the rainy season (October 15 through April 15). Necessary materials shall be available and stockpiled at convenient locations to facilitate rapid construction or maintenance of temporary devices when rain is imminent.
- Permanent erosion control shall be placed and established with 70% coverage on all disturbed surfaces other than paved or gravel surfaces prior to final inspection. Permanent erosion control shall be fully established prior to final inspection. Temporary erosion control measures shall remain in place until permanent measures are established. A water truck shall be used to water areas hydroseeded until the planting is established.
- In the event of a failure, the developer and/or his representative shall be responsible for cleanup and all associated costs or damages.
- Slurry Mix: The slurry mix shall be composed of the following materials:

Bromus mollis - Blando Brome (95%, 85%)	20 pounds per acre
Festuca megalura - Zorro Fescue (85%, 80%)	8
Trifolium hirtum "Hykon" - Rose Clover (95%, 90%)	30
inoculated with appropriate bacteria	3
Eschscholzia californica - California Poppy (95%, 75%)	3
Lupinus nanus - Sky Lupine (95%, 75%)	4

(Seed available at S&S Seeds (805) 684-0436)

Other Materials:

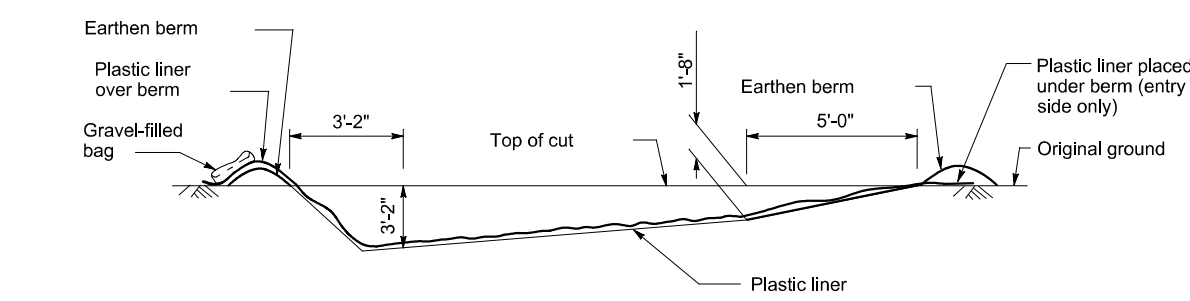
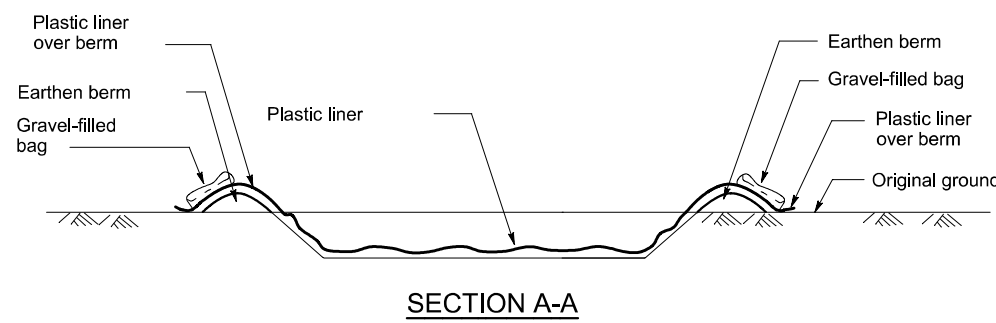
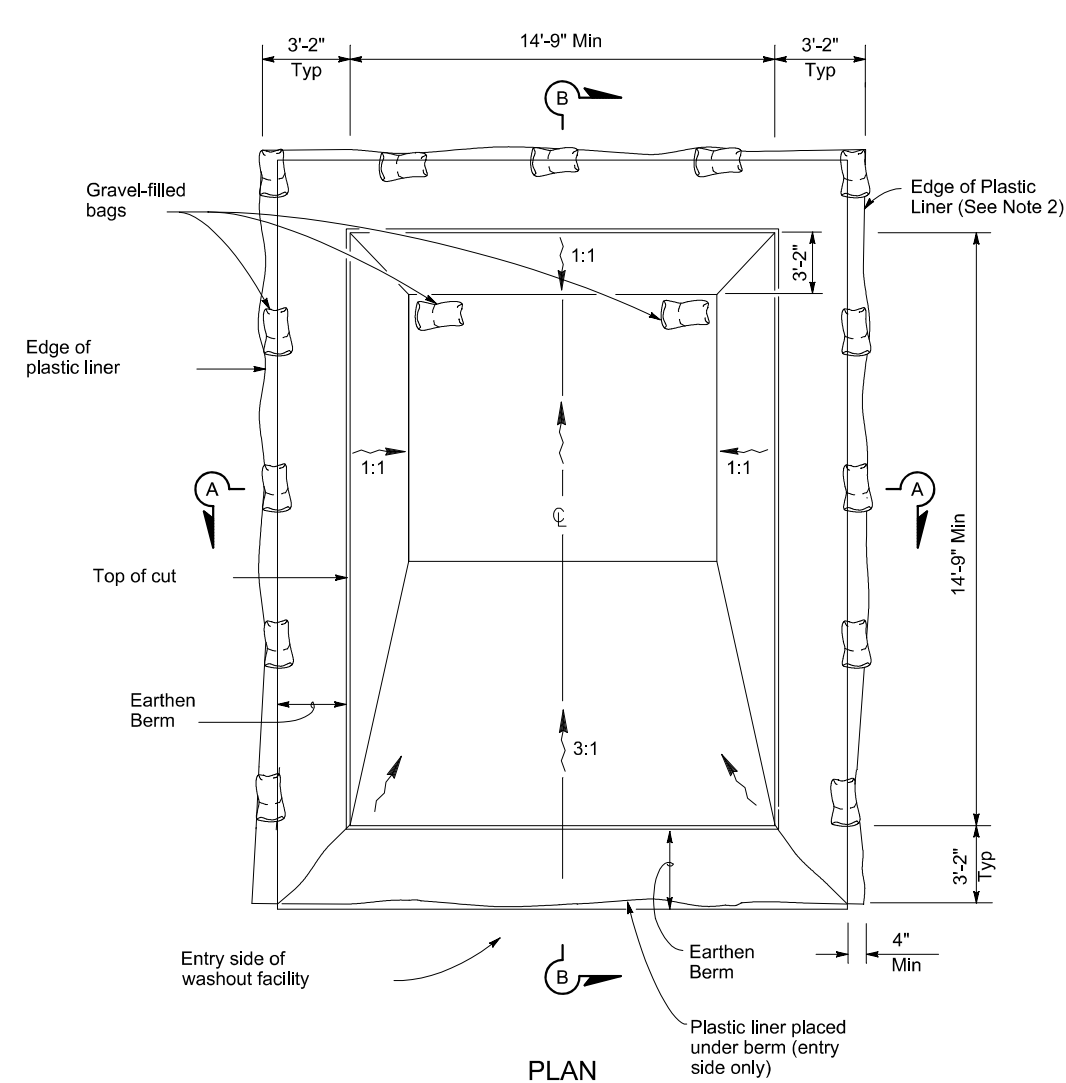
100% Wood fiber mulch (green)	1600 pounds per acre
Commercial Fertilizer (16-20-0)	400
"M-Binder" (stabilizing emulsion) or equal	120
Water (as needed for application and as specified by manufacturer)	
- Application: The slurry preparation shall take place at the site and in the presence of the Engineer. Spraying of the slurry shall be done by an experienced hydroseeding company and commence within five minutes after all the materials have been mixed thoroughly.
- The hydroseeded areas shall be watered with a fine mist periodically until the seed begins to germinate then every other day until the roots are established and 70% of the area is covered. Do not use the side spray of a watertruck but instead use a nozzle adjusted to spray a fine mist attached to a hose.
- BMP's to be constructed include but are not limited to:
 - Silt Fence
 - Straw bale barrier
 - Concrete washout area



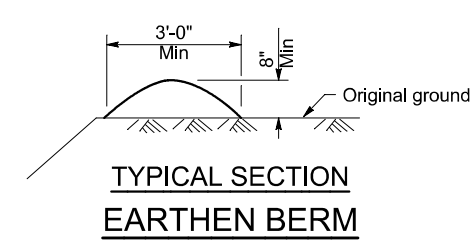
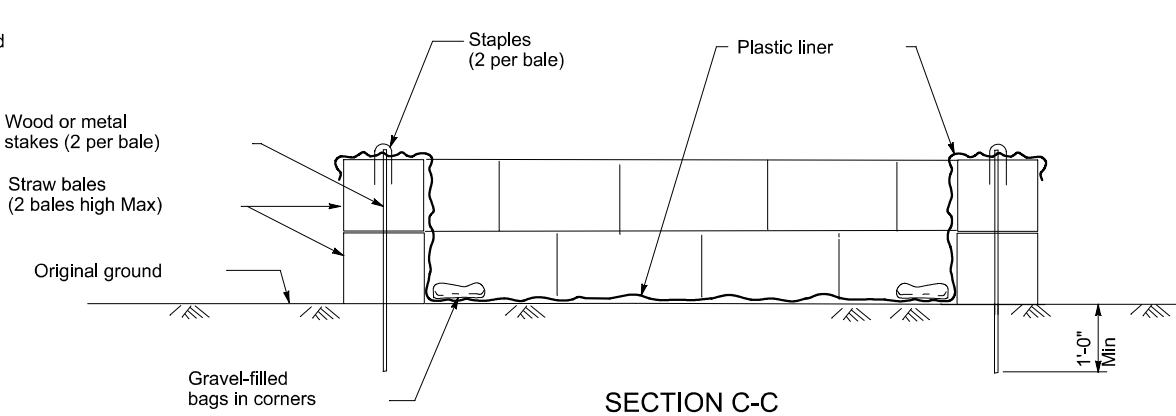
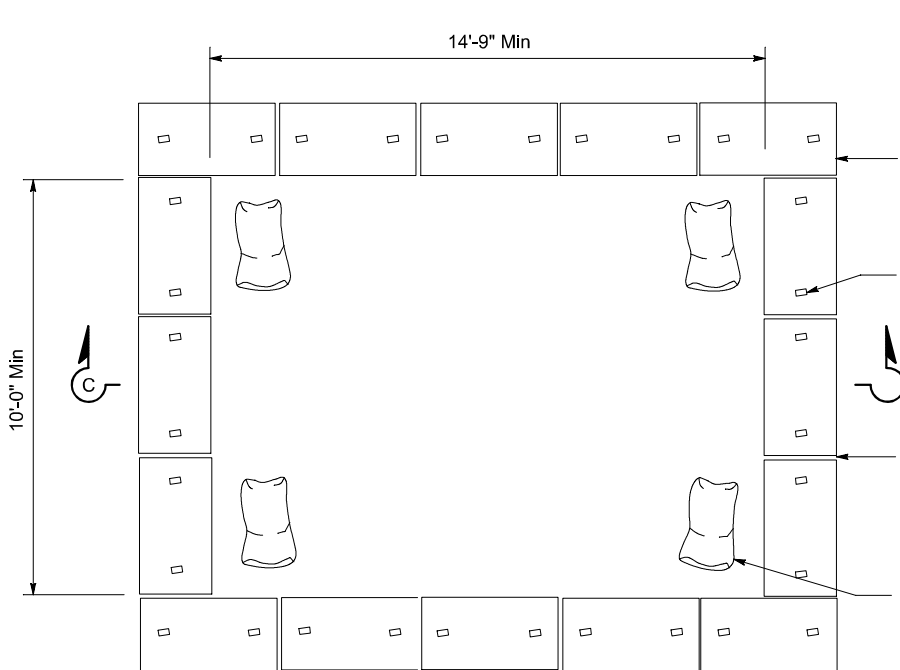
North Fork Vineyards

DRAWN <i>TH</i>	DATE 1/09/17	Reservoirs #1-3 Erosion & Sedimentation Control
APPROVED	DATE	
SCALE 1"=100'	SHEET 11 of 12	PROJECT NO. 101715-6233

Erosion Control BMP Details



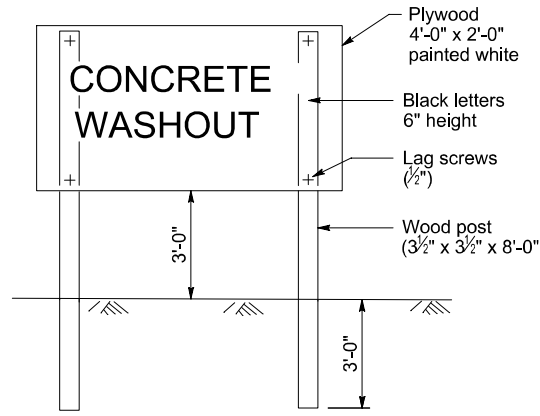
TEMPORARY CONCRETE WASHOUT FACILITY



TEMPORARY CONCRETE WASHOUT FACILITY

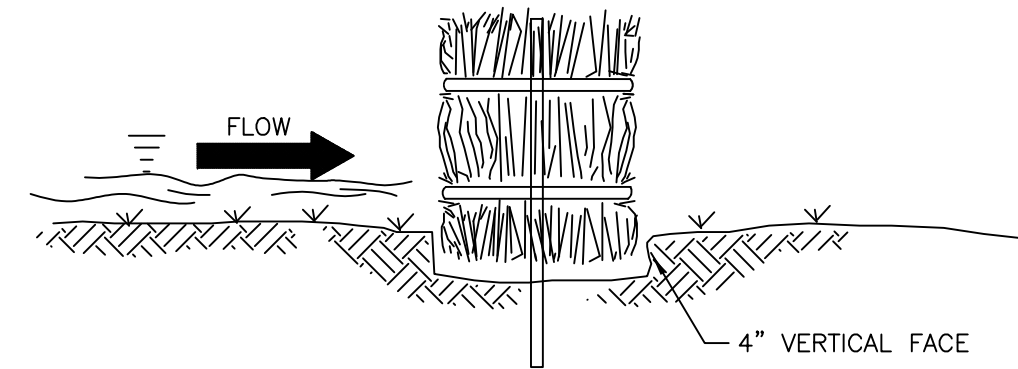
NOTES:

1. The concrete washout sign shall be installed within 32'-10" of the temporary concrete washout facility.
2. Plastic liner shall be anchored with gravel-filled bags for below grade concrete washout facility.

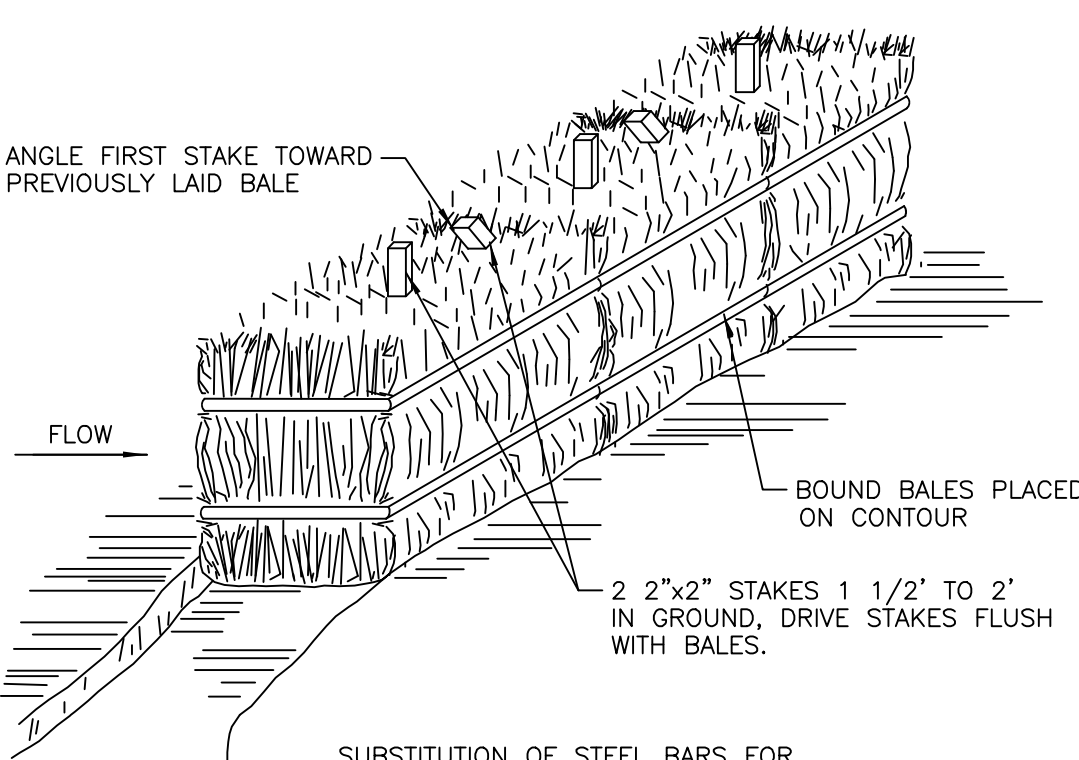


CONCRETE WASHOUT
SIGN DETAIL

NO SCALE

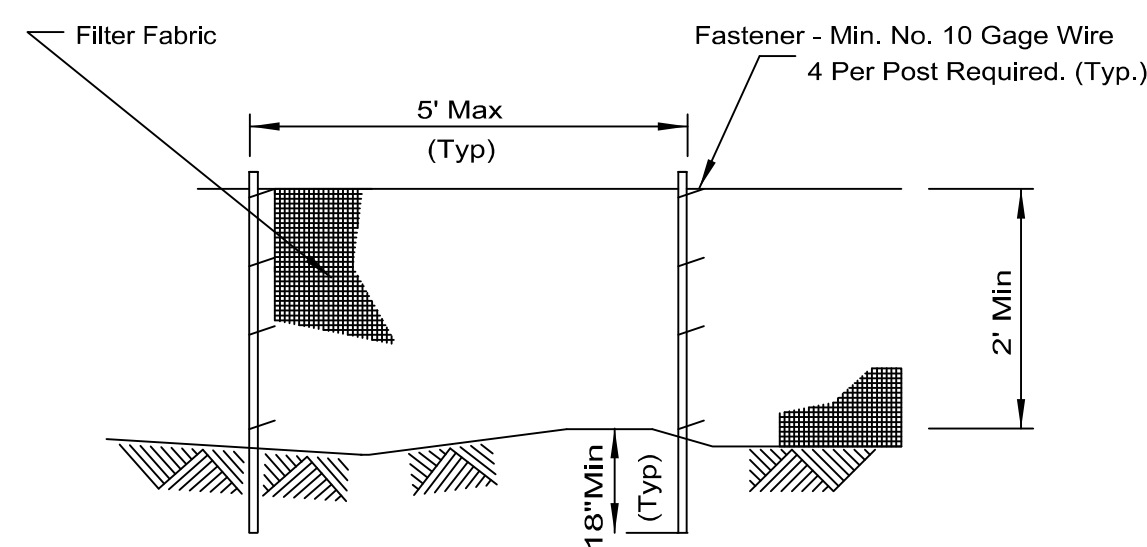
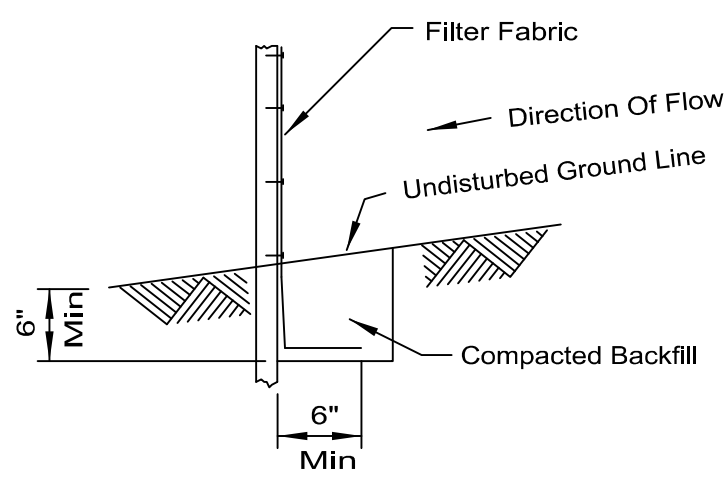


* PROMOTES ON SITE SEDIMENTATION
BY CREATING A TEMPORARY POND.



STRAW BALE BARRIERS

SILT FENCE PLAN



NOTES:

1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class with equivalent opening size of at least 30 for nonwoven and 50 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.



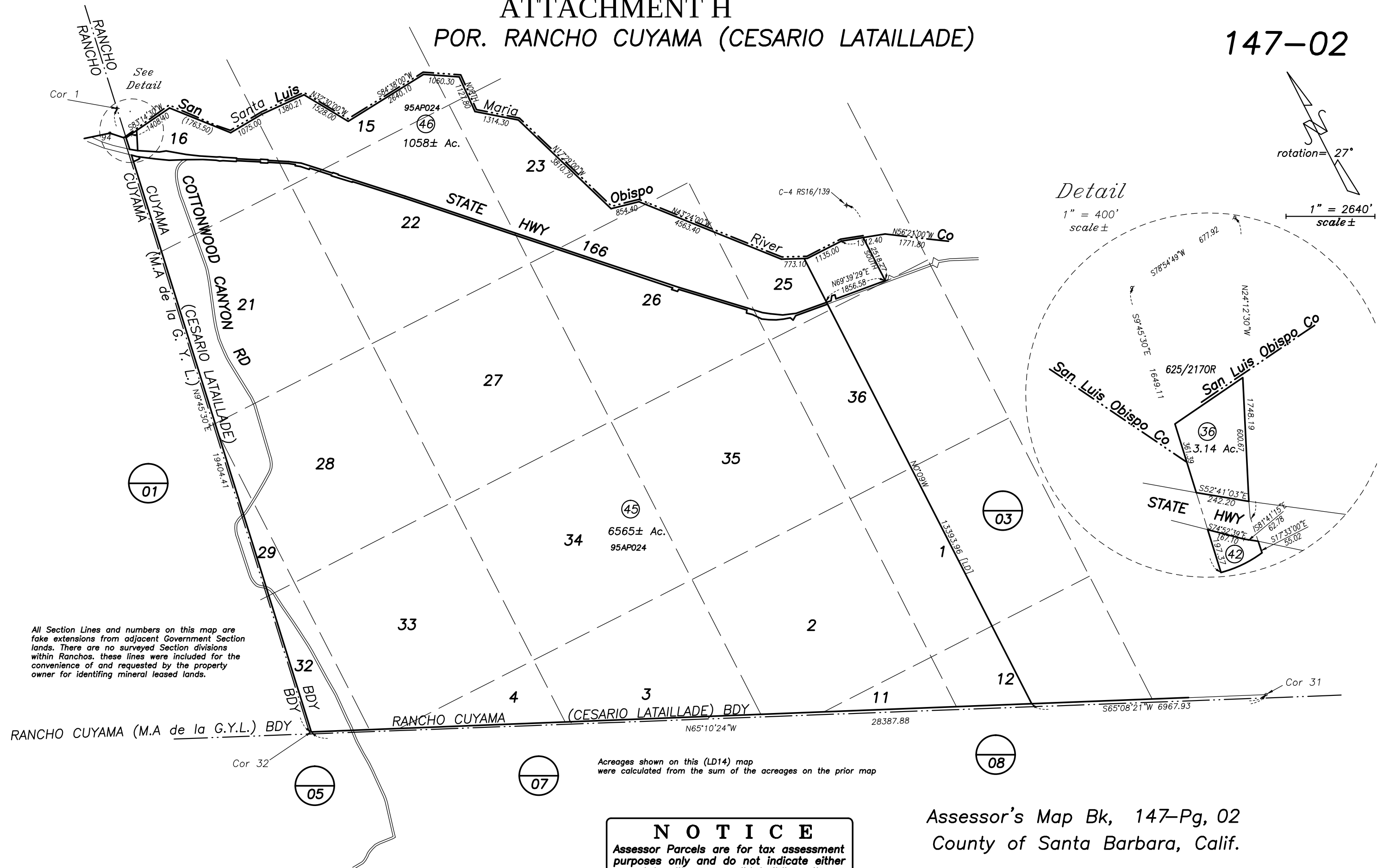
North Fork Vineyards

DRAWN TH	DATE 1/09/17	Reservoirs #1-3 BMP Details
APPROVED	DATE	
SCALE Varies	SHEET 12 of 12	PROJECT NO. 101715-6233

ATTACHMENT H

POR. RANCHO CUYAMA (CESARIO LATAILLADE)

147-02



Attachment I



February 19, 2018

5th District Commissioner Blough, Chair
Santa Barbara County Planning Commission
C/O Santa Barbara County Planning and Development Department
624 W. Foster Road
Santa Maria, CA 93455

Re: Response to Appeal RE: North Fork Frost Ponds
16CUP-00000-00005

Commissioner Blough, Chair and Members of the Commission,

On September 25, 2017, the County Zoning Administrator approved the North Fork Frost Ponds project, 16CUP-00000-00005. An appeal was filed by neighbors basing their argument on the following findings:

1. Finding No. 1.2 ***"FINDING OF NO SIGNIFICANT EFFECT"***
On the basis of the whole record, including the Mitigated Negative Declaration and any comments received, the Zoning Administrator finds that through feasible conditions placed upon the project, the significant impacts on the environment have been eliminated or substantially mitigated and on the basis of the whole record (including the initial study and any comments received), there is no substantial evidence that the project will have a significant effect on the environment."
2. Finding No. 5 ***"The proposed project will not be detrimental to the comfort, convenience, general welfare, health, and safety of the neighborhood and will be compatible with the surrounding area."***

In summary, the appellant claims the decision maker cannot make the findings for these items due to the following points:

- a. The State of California passed into law Sustainable Groundwater Management Act where the Cuyama Basin was identified as one of 21 critically overdrafted basins in the State.
- b. The project represented a major land use change of dry range land to vineyard.
- c. Impacts due to the installation of wells not evaluated so no opportunity for a full review and piecemealing.
- d. Insinuation the vineyards led to lowered well levels.
- e. Filling of ponds pumps groundwater at exponential levels.
- f. California Department of Fish and Wildlife (CDFW) concerns not addressed.

Implications of SGMA - The State Groundwater Management Act (SGMA) was signed by the Governor in 2014. Under the roadmap laid out by the legislation, local and regional authorities in medium and high priority groundwater basins are to undertake the formation of Groundwater

Sustainability Agencies (GSAs) that oversee the preparation and implementation of a local Groundwater Sustainability Plan (GSP).

The California Department of Water Resources has developed regulations governing the content of Groundwater Sustainability Plans. Local stakeholders have until 2022 (in critically overdrafted basins until 2020) to develop, prepare, and begin implementation of Groundwater Sustainability Plans. GSAs will have until 2040 to achieve groundwater sustainability. In the Cuyama Valley, the GSA is still reviewing proposals from consultant teams to prepare a Groundwater Sustainability Plan for the Cuyama basin, which is required to be adopted by 2020. Work on the GSP has not yet started and no standards or other requirements are in place. The Board of Supervisors is scheduled to discuss progress on progress toward meeting the SGMA milestones on May 8.

To be clear SGMA has not been finalized and no plan has been developed to determine the parameters the SGMA will operate. Staff is correct in that SGMA, since it has not been developed or adopted, is not applicable to this project since it is not known. CEQA mandates the environmental baseline a project is assessed is the conditions that are applicable at time of environmental review and clarified in numerous court decisions; *Madera Oversight Coalition Inc. vs County of Madera 2011*, *Sunnyvale West Neighborhood Ass. vs City of Sunnyvale City Council 2010*, etc.

Should SGMA be adopted, any future increased use of groundwater resources after is implementation may be subject to review of the plan per its provisions.

The project represents a major land use change of dry land to vineyard – Impacts due to the installation of wells not evaluated so no opportunity for a full review, and piecemealing

The Santa Barbara County Agricultural Element clearly specifies support for intensification of agriculture. The County of Santa Barbara is a “Right to Farm” county and does not distinguish between agricultural types.

GOAL I. Santa Barbara County shall assure and enhance the continuation of agriculture as a major viable production industry in Santa Barbara Country. Agriculture shall be encouraged. Where conditions allow, (taking into account environmental impacts) expansion and intensification shall be supported.

Policy I.B. The County shall recognize the rights of operation, freedom of choice as to the methods of cultivation, choice of crops or types of livestock, rotation of crops and all other functions within the traditional scope of agricultural management decisions. These rights and freedoms shall be conducted in a manner which is consistent with: (1) sound agricultural practices that promote the long-term viability of agriculture and (2) applicable resource protection policies and regulations

The appellant errs in appealing the project based on the conversion of rangeland to viticulture and asserting since the wells were not evaluated there is piecemealing. Staff disclosed the cultivation of agricultural land and the installation of agricultural wells in the Inland area are appropriately exempt from county zoning permit process pursuant to LUDC Sec. 35.21.030 and are not defined as a project under the provisions of CEQA. The project is not the agricultural production nor the wells, but the use of a common agricultural method of protecting the resource, the ponds in support of the agricultural use pursuant so the argument for piecemealing is incorrect and staff review is appropriate.

Policy I.G. Sustainable agricultural practices on agriculturally designated land should be encouraged in order to preserve the long-term health and viability of the soil

Under the California Environmental Quality Act, environmental review documents are written to analyze expected direct and cumulative physical environmental impacts from specific actions proposed to be taken under a proposed 'project'. Exempt activities are not considered a 'project' under CEQA and are therefore exempt from CEQA. Moreover, assessments of impacts and any mitigation measures under CEQA must have a nexus, or direction connection, to the planned activity and be roughly proportional to said activities

If the ponds were not proposed, there would be no nexus for appeal. The ponds provide for a more efficient means for water delivery with substantial savings in wear on tear of the pumping system. The ponds are filled during the rainy season prior to the potential frost period of February-April. Once concluded, the water in the ponds would be metered out for irrigation purposes minimizing the need for well pumping so in essence it is the same water that would have eventually been used for irrigation but used for a dual propose; vineyard protection and eventual irrigation. During the non-frost time period a shallow amount of water will be left in the pond so as to keep the pumps submerged.

There is a County Threshold Level of Significance for water use in the Cuyama Basin pursuant to the provisions of CEQA. The Thresholds of Significance are not applied to the everyday agricultural use of water since that is an exempt activity since the use of water for agricultural proposes is exempt from analysis. Staff correctly assessed evaporative losses of water while the ponds have water in them since are not exempt from CEQA since the ponds require a discretionary permit and permitting and studies were conducted to evaluate the potential loss.

Per staff direction, substantial analysis was performed to determine the amount of evaporative loss that would be the result of the ponds. Monsoon Consultants reviewed monthly reference evapotranspiration (ET_0) data from the California Irrigation Management Information System (CIMIS) for the period between January 1, 2000 and December 31, 2016 which was obtained from the CIMIS station in Cuyama (CIMIS Station #88). During the referenced time frame, the average monthly ET_0 for the Cuyama CIMIS site ranged from a minimum of 3.13-inches in December to a maximum of 14.45 inches in July. Pan evaporation was estimated by applying the conversion: $ET_0 / 0.6 = \text{Pan Evaporation}$. Pan evaporation was then converted to lake evaporation by applying a factor of 0.75. Through the implementation of the reservoir management strategy described above, the total average annual net evaporative losses, from each of the subject reservoirs, is summarized below. The combined average annual estimated net evaporative losses from all three reservoirs, is approximately 26.28 AC-FT below the 31 AF threshold adopted by the Board of Supervisors.

The use of frost ponds is standard practice used in viticulture and necessary to enhance protection of the agricultural resource sustaining the agricultural production consistent with Policy I.G.

Insinuation the vineyards led to lowered well levels - Filling of ponds pumps groundwater at exponential levels.

The Cuyama River Groundwater Basin is described having a net recharge of 33,400 AFY and is considered in overdraft. The proposed project would result in an average of 26.28 AFY loss in evaporation with the functioning of the ponds.

The North fork ranch lies within a sub basin known as the Ruby Star Basin. It is a geologically distinct basin located west of the Cuyama Basin within its area of incorporation. Analysis indicates the Ruby Star basin, due to its characteristics and location of faults, in effect an autonomous region within the overall Cuyama Groundwater Basin complex but has not been effected by the overdraft occurring in the Cuyama basin and has potential for groundwater development as described in the Groundwater Supply Development Assessment prepared by Cleath-Harris Geologists, December, 2014.

The appeal infers there may be a detrimental impact to wells on the appellant's property due to the irrigation of the vineyards. The appellant makes an assumption of lower well levels without quantitative assessment. Attached is a letter from Timothy Cleath, a professional Geologist who has assessed the groundwater basins in the Cuyama region. In the letter Mr. Heath advises the upper Cottonwood Canyon area, where the appellant property is located, is geologically separate from the basin where North Fork resides due to impermeable clay formations and a fault line. Groundwater recharge for the upper Cottonwood Canyon area comes from the Sierra Madre range up gradient from the North Forks ranch.

California Department of Fish and Wildlife concerns not addressed.

The county received an e-mail from a representative of CADFW on July 6, 2017 that stated incorrectly the installation of the vineyards may be considered for evaluation as part of the project under CEQA. Mr. Potter was informed county regulations exempt cultivated agriculture from permitting so is not evaluated under CEQA. The project is conditioned to require state and federal consultations if applicable as the issue of critical habitat or species is covered under state and federal jurisdiction. The applicant has already consulted per the requirements of the state and federal Endangered Species Acts and will prove the necessary documentation if applicable and when necessary.

As provided for in the staff report and analytic analysis, the points brought up in the appeal are meritless and the project meets all required regulations, policies, and conditions, and is consistent with County policies towards protection and enhancement of agriculture as indicated in the staff recommendation to deny the appeal and approve the project.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Swenk', written in a cursive style.

David Swenk
Principal Planner

Encl: Timothy Cleath Letter dated February 19, 2018

Cleath-Harris Geologists, Inc.

71 Zaca Lane, Suite 140
San Luis Obispo, CA 93401
(805) 543-1413



February 19, 2018

David Swenk
Rural Planning Services
2624 Airpark Drive
Santa Maria, CA 93455

**Subject: Assessment of Groundwater Impacts to the Jaffe/Gliessman property, Cottonwood Canyon,
Proposed Reservoir Project, North Forks Ranch, Cuyama, California**

Dear Mr. Swenk:

Per your request Cleath-Harris Geologists (CHG) has reviewed the comment submitted by Roberta Jaffe and Stephen Gliessman regarding the proposed project Mitigated Negative Declaration and provide the following information on the potential impact to groundwater at the Jaffe/Gliessman property. This property is located in the upper Cottonwood Canyon area.

CHG has performed a groundwater investigation of the western area of the Cuyama groundwater basin. This investigation found that groundwater in the upper Cottonwood Canyon area is geologically separated from the area of groundwater production for the North Forks Ranch vineyards (north of Highway 166) by impermeable clay formations and a fault that acts as a barrier to groundwater flow. The upper Cottonwood Canyon area is also upstream of the North Forks Ranch and receives groundwater recharge from runoff from the Sierra Madre range that occurs prior to flow onto the North Forks Ranch.

Therefore, groundwater production from the North Forks Ranch vineyard irrigation wells related to the proposed reservoir project will have no impact on the groundwater resources underlying the Jaffe/Gliessman property.

Lowering of the groundwater level in the Jaffe/Gleissman well would be due to other factors not related to the North Forks Ranch irrigation wells- potentially due to increased pumping at the Jaffe/Gleissman well or nearby wells along Foothill Road, south of the stratigraphic and fault barriers referred to above.

Sincerely,

Timothy S. Cleath, PG CHG CEG
President

Attachment 3

LAW OFFICE OF MARC CHYTILO, APC

ENVIRONMENTAL LAW

September 10, 2018

RECEIVED

SEP 10 2018

S.B. COUNTY
PLANNING & DEVELOPMENT
HEARING SUPPORT

Santa Barbara County Planning Commission
Santa Barbara County
123 E. Anapamu Street
Santa Barbara, CA 93101

By email to dvillalo@co.santa-barbara.ca.us

RE: North Fork Ranch Frost Ponds Appeal, Item # 3, 9/12/18

<u>AGENDA ITEMS</u>	
ITEM #:	3
MEETING DATE:	9/12/18

Dear Chair Blough and Honorable Planning Commissioners,

This office represents Roberta Jaffe and Stephen Gliessman, Appellants in this matter. Ms. Jaffe and Mr. Gliessman are Cuyama Valley residents and farmers of a 5-acre dry-farming operation called Condor's Hope Ranch. We've submitted several letters into the record to support the appeal, including a report by Professional Hydrologist Dennis Gibbs who has 20 years of experience monitoring and reporting on water conditions in the Cuyama Valley, a review of the biological surveys prepared by Dr. Gliessman who has almost 50 years of experience in botany and ecology, and a letter from this office addressing the fundamental legal issue that the consumptive water use of the frost protection system must be considered in the environmental analysis, not only the evaporation from the 3 frost ponds themselves, since CEQA requires analysis of "the whole of a project." (Letter dated September 7, 2018.)

The Cuyama Groundwater Basin is in a state of Critical Overdraft, with groundwater extraction proceeding at twice the rate of groundwater recharge. Groundwater is the exclusive source of water in the Cuyama Valley, and without adequate groundwater agriculture and human habitation would not be possible. The County of Santa Barbara, along with the three other counties that overly portions of the Cuyama Groundwater Basin, is participating in the development of a Groundwater Sustainability Plan (GSP) required by the Sustainable Groundwater Management Act (SGMA), that will regulate groundwater use in the Cuyama Valley in order to stop the overdraft of this groundwater basin. Ms. Jaffe is the Chairperson for the Standing Advisory Committee to the Cuyama Basin Groundwater Sustainability Agency (GSA), a stakeholder advisory committee that advises the GSA Board of Directors regarding the development of the GSP.

Because the Cuyama GSP is not yet final, it is incumbent on the County's planning process to carefully scrutinize projects such as the North Fork Frost Pond Project ("Project") which include large-scale extraction of groundwater from this critically overdrafted basin. Unfortunately the County's Planning Department so far has failed to give this Project the scrutiny it requires, by only counting the tiny fraction of water that will evaporate from these ponds and ignoring the large amount of water that is sprayed to protect the grapes from frost, which are all parts of the Project.

When all the Project's water use is totaled, the impacts on the critically overdrafted Cuyama Groundwater Basin are significant, but may be avoidable.

Whether or not the Mitigated Negative Declaration (MND) must consider the full consumptive water use of the Frost Ponds Project is a key issue in this appeal, and in our September 7, 2018 letter we make a clear case for why the California Environmental Quality Act (CEQA) requires that it does. **If the amount of water required to fill the frost ponds and protect the grapes from frost is included, the Project clearly exceeds the County's threshold for identifying a significant impact to groundwater resources in the critically overdrafted Cuyama Groundwater Basin, and the Planning Commission may not approve the Project without an Environmental Impact Report ("EIR").**

This letter explains that even considering only evaporation from all of the Frost Protection System (the MND considered only evaporation from the ponds themselves), the amount of water consumed exceeds the County's CEQA Threshold and thus there is substantial evidence supporting a fair argument that the Project may result in significant impacts to groundwater resources requiring analysis, and avoidance or mitigation in an EIR.

Additionally, the Staff Report and MND omit a discussion of the Project's consistency with the Comprehensive Plan Conservation Element's Groundwater Policies. Discussed herein, the Project is inconsistent with these policies, precluding the Commission from making required findings of approval.

1. The Project and its MND Violate the California Environmental Quality Act

"The foremost principle under CEQA is that the Legislature intended the act 'to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.'" (*The Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 926.) "The EIR requirement is the heart of CEQA." (Cal. Code Regs., tit. 14¹, § 15003 (a).) An EIR identifies the significant effects a Project will have on the environment, identifies alternatives to the project, and indicates the manner in which the significant effects can be mitigated or avoided. (Public Resources Code § 21002.1(a).) Its purpose is to "inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made", protecting the environment as well as informed self-government. *Citizens for Goleta Valley v. Board of Supervisors of Santa Barbara County* (1990) 52 Cal. 3d 553, 564.

CEQA "creates a low threshold requirement for initial preparation of an EIR and reflects a preference for resolving doubts in favor of environmental review when the question is whether any such review is warranted." *League for Protection of Oakland's Architectural and Historic*

¹ This code section referred to hereafter as the "CEQA Guidelines" or "Guidelines."

Resources v. City of Oakland (1997) 52 Cal. App. 4th 896, 904-905; Public Resources Code § 21151. Reliance on a Negative Declaration or Mitigated Negative Declaration is only allowed where “mitigation measures would mitigate the effects to a point where clearly no significant effects would occur” and “there is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.” (CEQA Guidelines 15070(b).)

If a lead agency is presented with substantial evidence supporting a fair argument that a project may have a significant effect on the environment, “the lead agency shall prepare an EIR even though it may also be presented with other substantial evidence that the project will not have a significant effect.” (CEQA Guidelines § 15064 (f)(1).(emphasis added)) Substantial evidence “means enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. (Guidelines § 15384 (a).) Substantial evidence includes facts, reasonable assumptions predicated on facts, and expert opinion supported by facts. (Pub. Res. Code, § 21082.2 (c); Guidelines, § 15384.)

“[I]n marginal cases where it is not clear whether there is substantial evidence that a project may have a significant effect on the environment, the lead agency shall be guided by the following principle: If there is a disagreement among expert opinion supported by facts over the significance of an effect on the environment, the Lead Agency shall treat the effect as significant and shall prepare an EIR.” (Guidelines § 15064 (g).)

Discussed below, there is substantial evidence supporting a fair argument that the Project may cause potentially significant impacts in the areas of groundwater, land use, and biological resources, and accordingly CEQA clearly requires that an EIR be prepared. An EIR would include a thorough assessment of the baseline environmental conditions with respect to groundwater and biology, a complete impact analysis, and importantly would identify a reasonable range of alternatives to the Project that would accomplish the Project’s basic objective (frost protection) while substantially reducing or avoiding the Project’s significant environmental impacts.

i. Excluding Water Used By the Project from the Environmental Analysis Is Plainly Contrary to CEQA

Our letter of September 7, 2018 explains in detail why CEQA clearly requires that the MND analyze the *whole of the development proposal* with the potential to impact the environment, which includes the Project’s consumptive water use. The County may not cut the project up into separate pieces to avoid environmental review – if a portion of the project is discretionary and subject to environmental review, and there is substantial evidence an impact may be significant, all of the project’s impacts must be evaluated in an EIR.

ii. Last Minute Changes to the Project Description

The Final MND for the Planning Commission's consideration was released to Appellant on Thursday September 6. Compared to the prior Final MND from August 2017, the Project Description changed significantly. The Zoning Administrator considered an MND that included 535 acres of grapes, with a projected addition of 100 additional acres, dated August 11, 2017. This increased by nearly 100% to 1000 acres of grapes in the Project Description released last week. Detail on the spray nozzles was provided for the first time in the latest MND, enabling calculation of evaporative emissions from frost protection operations. The all-important duration of frost events was provided for the first time in last week's MND, but projected that the spray operations would require only 2 hours per frost event, contrary to generally accepted and observed characteristics of these events which typically entail 5 hours of spraying, on average. These changes and omissions prevented an accurate assessment of the Project's total water use and other critical elements of the Project Description that are necessary for an adequate environmental review process. An accurate and stable Project Description is essential for an adequate environmental review process, and the significant changes to the project disclosed late in this process precludes informed public participation. (*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193.)

iii. Substantial Evidence Supports a Fair Argument that the Project May Result in Potentially Significant Impacts to the Critically Overdrafted Cuyama Groundwater Basin

1. The Project's Consumptive Water Use Far Exceeds the County's Threshold for the Cuyama Groundwater Basin

Discussed in our September 7, 2018 letter, the County erred in excluding the Project's full consumptive water use from the MND's impact analysis. The MND clarifies that the Project would utilize approximately 25 AF per 3-hour frost event (MND p. 37), meaning the County's 31 AFY threshold would be exceeded after only two frost events. The quantity of water used just to fill the ponds for just two events exceeds the threshold by over four-fold! The Frost Ponds are needed to operate the Frost Protection System – without them, the system cannot operate. Accordingly when the *whole of the Project* is considered, as CEQA requires, the County's threshold is exceeded, resulting in a potentially significant Project-specific and cumulative impacts (*see* MND p. 38, clarifying that the 31 AFY threshold also applies to determining whether the Project has a cumulatively considerable impact) that must be addressed in an EIR.

2. The MND Understates Impacts from Evaporation

Even if the County can find some justification to consider the Project's impact narrowly by looking only at evaporation from the Frost Pond System, there is additional substantial evidence that even the evaporation losses triggered by approval of the Frost Ponds themselves will cause a

significant impact. Attached hereto is a memo from Katherine Anderson on Evaporative Loss, which explains this issue in detail, and includes the data and references used in the analysis.

The MND significantly understates the quantity of water that will be lost to evaporation by failing to consider evaporative losses occurring from spray irrigating for frost-protection. Water not directly or indirectly used in support of the existing vineyards, such as evaporative losses, must be considered for the County's 31 AF threshold. Since the amount of water lost through evaporation exceeds this threshold, the impact is considered significant. Even at cold temperatures, water will evaporate from the sprayed water as it travels through the air.

Meteorological data from the nearby California Irrigation Management Information System (CIMIS) station was reviewed to identify the quantity and duration of frost events in the Cuyama Valley. The use of real-world data allows a clearer picture of potential water use and evaporation at the North Fork Ranch vineyard. From this data, nine frost events totaling 45 hours during the growing season were identified, with an average duration of 5 hours. This is much greater than the applicant's claim that *"the vines would be sprayed for a duration of two to three hours; and not all frost events require that the entire vineyard be sprayed (MND, p. 37)."* Since the vineyard lies an average of 375 feet lower in elevation than the CIMIS station, the temperatures at the North Fork Vineyard will be colder than those recorded at CIMIS Cuyama and be subject to even more frost events with longer durations, and would indeed represent the entire vineyard being sprayed for frost protection.

The amount of water that would be used for frost protection during one growing season and subsequently the evaporative loss associated with that sprayed water was calculated based on the CIMIS data, resulting in a total of 372.87 AF applied, and 18.14 AF lost to evaporation by the frost sprinklers. (See attached Anderson Memo.)

The project claims no significant impact through water loss because the reservoir evaporative losses are calculated to total 26.28 acre feet. However, the Project's additional evaporative losses of 18.14 AF from the frost sprinklers themselves increase the total water loss to 44.42 acre feet, well past the threshold of 31 acre feet per year. If the amount applied for frost protection is considered along with the amount evaporating from the frost reservoirs, it totals an astonishing 399.15 AF.

3. Substantial Evidence of a Fair Argument Notwithstanding the County's Numerical Impact Threshold

The County's 31 AFY threshold was calculated based expressly on a lesser level of overdraft based on 1992 data showing an overdraft of 28,525 AFY, whereas the MND identifies a current overdraft of at least 30,000 AFY. (Gibbs Report, p. 3.) Mr. Gibbs observes that the thresholds are "severely out of date (25 years old)" and concludes "[t]he 31 AFY Threshold should

be recalculated to reflect more current data on the status of the Cuyama Groundwater Basin.” (Gibbs Report, p. 3.) Discussed in section 2.i below, the County also has an action item in its Groundwater Resources policies requiring that the County update its groundwater thresholds as new data becomes available and as overdraft conditions persist (*see* Comprehensive Plan, Conservation Element Groundwater Resources Section, **ACTION 3.10.1.**)

Moreover, as explained in the Gibbs Report, according to the County’s CEQA Thresholds and Guidelines Manual,

Groundwater supplies are limited in terms of the annual amount of water which can be withdrawn without causing a long term drop in water levels (“Safe Yield”) and in the amount of total storage of a basin which can be removed without significant environmental effects (“Available Storage”). These limits make conservative use of water a necessary policy in Santa Barbara County in order to avoid or minimize significant and lasting adverse environmental effects.

(Gibbs Report, p. 3, County CEQA Thresholds Manual, pp. 67-68.) Based on this language in the County’s thresholds, and his considerable knowledge and expertise regarding the Cuyama Groundwater Basin, Mr. Gibbs concludes:

Based on the overdrafted condition of the Greater Cuyama Groundwater Basin, which per CDWR Bulletin 118 includes the Cottonwood Sub-basin, I believe that the project could result in Potentially Significant Impacts in these areas of Water Resources [subsections a, and g-j of the MND].

(Gibbs Report, p. 3.)

Discussed above, this expert opinion supported by facts that the Project may result in potentially significant impacts to groundwater resources is grounds for requiring an EIR. (*See* Pub. Res. Code, § 21082.2 (c); Guidelines, § 15384; *see also* Guidelines § 15064 (g).) This is the case even if an adopted significance threshold is not triggered. (*See Mejia v. City of Los Angeles* (2005) 130 Cal.App.4th 322, 342 (a public agency cannot apply a threshold of significance or regulatory standard in a way that forecloses the consideration of any other substantial evidence showing there may be a significant effect.))

iv. Substantial Evidence Supports a Fair Argument that the Project May Result in Significant Land Use Impacts Resulting from Policy Inconsistencies

“[I]f substantial evidence supports a fair argument that the proposed project conflicts with policies [adopted for the purpose of avoiding or mitigating an environmental effect] this constitutes grounds for requiring an EIR.” (*Pocket Protectors*, 124 Cal.App.4th at 930; CEQA Guidelines, App. G, § IX (b).) Here, substantial evidence supports a fair argument the Project is inconsistent

with groundwater conservation policies in the County's Comprehensive Plan, adopted for the purpose of conserving the County's groundwater resources. Specifically, the County's Conservation Element includes a Groundwater Resources Section, which sets forth various policies and actions that are directly applicable to this Project, but were not analyzed in the MND or Staff Report. The Project results in numerous inconsistencies with the applicable policies and actions in the Groundwater Resources Section, which are explained, along with the evidence supporting the inconsistency, in section 2.i of this letter (below).

v. The MND Fails to Accurately Describe the Environmental Setting for
Biological Resources and Potentially Significant Impacts to Sensitive Plants
May Result from Project Construction

To enable an assessment of whether a project's environmental effects are likely to be significant, the environmental document must describe the "baseline" for environmental analysis. (*Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 315.) The baseline normally consists of "the physical environmental conditions in the vicinity of the project, as they exist at the time ... environmental analysis is commenced" (*Id.*, CEQA Guidelines § 15125 (a).) If the description of the environmental setting of the project site and surrounding area is inaccurate, incomplete or misleading, an adequate analysis of environmental impacts of a project is not possible. (*Cadiz Land Co. v. County of San Bernardino* (2000), 83 Cal.App.4th 74, 87.)

Here, the MND does not include an accurate or complete description of the environmental setting with respect to biological resources including sensitive species. Dr. Gliessman, who is highly experienced and qualified in the area of botany and ecology, prepared a letter dated September 6, 2018 addressing the adequacy of the natural resource surveys provided by the Applicant. Dr. Gliessman concluded that because the biological surveys carried out by Kevin Merk Associates (KMA) were conducted during a period of extended drought, they are insufficient to identify several endangered and threatened species of plants that may be impacted by the Project. To support his conclusion Dr. Gliessman refers to a paper on the impact of drought in the Carrizo Plan and northern Cuyama Basin, in which a very dramatic reduction in observed populations of all plant and animal species three years into the drought. (Gliessman Letter, p. 1, fn. 1.)

The inadequate biological surveys result in an incomplete and inaccurate environmental baseline, which render the MND's impact assessment inadequate. (*See Cadiz*, 83 Cal.App.4th at 87.)

Moreover, while the absence of evidence in the record on a particular issue does not automatically give rise to a fair argument that a project may have a significant effect on the environment, an agency "should not be allowed to hide behind its own failure to gather relevant data" and "[d]eficiencies in the record may actually enlarge the scope of fair argument by lending a logical plausibility to a wider range of inferences." (*Sundstrom v. County of Mendocino* (1988) 202

Cal. App. 3d 296, 311.) Here, Dr. Gliessman also identifies a list of 25 threatened plant species, including four that have been collected in the past in the Project's immediate vicinity and another 13 that have been found in nearby Cuyama Valley areas (Id., p. 2, fn. 2.) Based on the likely presence of these sensitive plants, Dr. Gliessman concludes:

in my opinion, and based on my review of the Project plans and MND, the potential presence of the above plants in and around the Project site creates a reasonable possibility that the Project may result in significant impacts according to the County's thresholds for impacts to flora through loss or disturbance of unique, rare and threatened plant communities, and a reduction in the numbers of unique, rare or threatened species of plants (MND p. 11.)

Given the deficient biological resource surveys, the expert fact-based opinion of Mr. Gliessman clearly constitutes substantial evidence supporting a fair argument of a potentially significant impact to biological resources. (*See Sundstrom*, 202 Cal. App. 3d at 311; Pub. Res. Code, § 21082.2 (c); Guidelines, § 15384.))

vi. The MND's Analysis of Air Quality Impacts is Deficient, and the Conditions Fail to Identify What Mitigation Measures Are Required to Mitigate Impacts to Air Quality

The Project entails grading in excess of 250,000 cy of earth (cut+fill) over an approximate one year construction period. The grading will be performed with large "earthmoving equipment" that is not further defined or specified. APCD "recommended" mitigation measures suggest that the minimum size necessary equipment be used for projects to reduce emissions and that CARB Tier 3 diesel powered equipment be used "to the maximum extent feasible." The MND and Project Description do not specify what equipment will be used or for how long it will operate, and there is no calculation of the Project's total emissions of ozone precursors, toxic diesel PM_{2.5} or larger PM₁₀ particulate matter. The Project is upwind of the economically disadvantaged community of New Cuyama and air pollution will be generated in and transported between several counties, each of which exceeds state and/or federal health-based ambient air quality standards for pollutants or precursors the Project will generate.

The MND sweeps the issue of air pollution from construction period activities under the rug, noting that there is no established County CEQA threshold for short-term construction-related emissions. The County cannot simply ignore this impact, even if an adopted significance threshold is not triggered. (*See, supra, Mejia v. City of Los Angeles*, 130 Cal.App.4th at 342 (a public agency cannot apply a threshold of significance or regulatory standard in a way that forecloses the consideration of any other substantial evidence showing there may be a significant effect.)) The magnitude of the grading, and extended duration of this project extends beyond what may be considered short-term and involves emission that should be calculated and compared to the applicable thresholds and the applicable State Implementation Plan/State Clean Air Plan emissions

inventories. These plans define the size of emissions inventories modelled in regional air quality models for purposes of projecting whether the region in question can attain and maintain the health-based ambient air quality standards. Unless the emissions inventories and regional air models include these considerable emissions, they conflict with state and federal air quality attainment plans and implicate cumulative impacts. *See, generally, Kings County Farm Bureau v. Hanford* (1990) 221 Cal.App.3rd 692.

Typically MNDs will include a list of the equipment to be used and an estimate of the time such equipment will be running. This information is ordinarily included to establish whether the project will exceed the County's CEQA thresholds of 55 lbs of NO_x or ROG, or 80 lbs of PM₁₀ per day for total air pollution. Large construction projects are defined to cause a significant impact when annual emissions exceed 25 tons/year. (*See, Initial Study/Mitigated Negative Declaration, Peabody Stadium Replacement, DUDEK, March 2015, page 31.*) The MND's limited information concerning the Project's air pollution emissions, such as the equipment used and expected total hours of operation prevents any analysis of this impact.

While the MND states that the project will be required to implement standard APCD conditions, there is no condition of approval establishing this or specifying what is required. The APCD letter, attached to the conditions document, including both state-mandated emissions control measures and "recommended" measures. The Conditions fail to articulate which is required of the project, and the MND lacks information to determine whether whatever mitigation measures is imposed will be effective at avoiding significant impacts to air quality.

2. Substantial Evidence Does Not Support the Administrative Findings

- i. The Project Is Inconsistent with the Comprehensive Plan, State planning and zoning laws, and the LUDC

As mentioned in section 1.iii, above, the Project is inconsistent with a number of goals, policies, and actions contained in the County's Comprehensive Plan, Conservation Element, Groundwater Resources Section. The Staff Report did not include an analysis of the Project's consistency with these policies. The most relevant of these Groundwater Resources provisions, and the evidence supporting inconsistencies, are discussed below.

Action 3.3.2: The County shall conserve waters to the extent feasible through exercise of the County's discretionary land use planning and permitting decisions, and shall promote such conservation through related public and private actions.

The use of spray irrigation for frost protection is contrary to the County's groundwater conservation goals and specifically Action 3.3.2. More efficient irrigation methods (finer spray), as well as other alternatives such as wind machines, late pruning (*see e.g.*

vineyards.) should be identified and evaluated as feasible alternatives to the Project through the EIR process.

POLICY 3.4: The County's land use planning decisions shall be consistent with the ability of any affected water purveyor(s) to provide adequate services and resources to their existing customers, in coordination with any applicable groundwater management plan.

With the state of critical overdraft, and limited recharge, the ability of existing customers to obtain adequate groundwater is not assured as Policy 3.4 requires. The Gibbs' report explains that groundwater extracted from the Cuyama Groundwater Basin is tens of thousands of years old and that the "mining of groundwater" is occurring. "Given residential wells in the area are shallower than agricultural wells, this mining of groundwater could result in severe implications for residents and farmers using residential-scale wells like Condor's Hope Ranch." (Gibbs Report, p. 2.) Appellants' own well in the Cottonwood Canyon area has shown steady declines, explained in Appellants letter of September 10, 2018 and supported by well data. Specifically, the Appellants letter states:

Santa Barbara County has been monitoring several wells in the Cottonwood Canyon area since September 2016. While data is too short-term to show permanent trends, our own well (data available from Santa Barbara County Water Agency) has shown a worrisome downward trend:

(Numbers are depth to static groundwater level)

October 2016: 119.4 feet (at end of 5 years of drought)

September 2017: 120.5 feet (at the end of an above average wet year)

September 2018: 123.3 feet (at the end of a drought year)

While more study is needed to verify the cause of this downward trend, it correlates with the increased pumping by the North Fork Vineyards.

(Jaffe-Gliessman letter, September 10, 2018, p. 2.)

Action 3.4.3: In areas without a groundwater management plan accepted by the County, County land use plans and decisions shall account for a prudent "margin of safety" against errors in supply/demand estimates, safe yield and available storage estimates, changes in any other relevant conditions in a basin, and other possible unforeseen circumstances. (emphasis added.)

The County has not taken a prudent approach to this Project. Even when only evaporation from the surface of the reservoirs is considered, 26 AFY is close to the 31 AFY threshold. As explained in the Gibbs' report, there are many uncertainties affecting the future availability of water in this area including the effect of increasing climatic uncertainty on groundwater recharge. (Gibbs Report, pp. 2-3.) In Mr. Gibbs' professional opinion based on his extensive knowledge regarding this particular groundwater basin, "[u]ntil water augmentation and recharge projects are planned, funded and

undertaken to increase percolation to 'offset further degradation' and examine 'sustainability' as contemplated by SGMA, *no projects which increase extraction of groundwater should be approved.*" (Gibbs Report, p. 2 (emphasis added).)

POLICY 3.5: In coordination with any applicable groundwater management plan(s), the County shall not allow, through its land use permitting decisions, any basin to become seriously overdrafted on a prolonged basis.

POLICY 3.6: The County shall not make land use decisions which would lead to the substantial over commitment of any groundwater basin.

ACTION 3.5.1: Based on input from the County Water Agency and P&D, the Board, in coordination with the responsible water purveyor(s), shall designate any basins within the county as "seriously overdrafted" if the following conditions are present: Prolonged overdraft which results or, in the reasonably foreseeable future (generally within ten years) would result, in measurable, unmitigated adverse environmental or economic impacts, either long-term or permanent. Such impacts include but are not limited to seawater intrusion, other substantial quality degradation, land surface subsidence, substantial effects on riparian or other environmentally sensitive habitats, or unreasonable interference with the beneficial use of a basin's resources. The County's fundamental policy shall be to prevent such overdraft conditions. (emphasis added)

ACTION 3.5.2: In seriously overdrafted basins, the County shall not approve discretionary development permits if such development requires new net extractions or increases in net extractions of groundwater, pending development and County acceptance of a basin management plan, consistent with the Groundwater Management Act or other applicable law, which adequately addresses the serious overdraft. (emphasis added.)

The Project is a discretionary development permit that requires increases in net extractions of groundwater in a seriously overdrafted basins in violation of Policies 3.5 and 3.6. Pursuant to Action 3.5.2, the County is prohibited from approving such a discretionary permit.

ACTION 3.10.1: The County shall continue to refine and update its "significance thresholds" as new data becomes available and as overdraft conditions persist, as specified in the County's CEQA Guidelines. The County's acceptance of duly prepared and adopted groundwater management plans also may necessitate the adjustment of appropriate groundwater thresholds.

With respect to Action 3.10.1, the County has failed to update its significance thresholds as new data has become available about the severity of the overdraft conditions in the Cuyama Groundwater Basin. Discussed in the Gibbs' report, the County's 31 AFY threshold was calculated based on a lesser level of overdraft based on 1992 data showing an overdraft of 28,525 AFY, whereas the MND identifies a current overdraft of at least 30,000 AFY. Mr. Gibbs concludes "[t]he 31 AFY Threshold should be recalculated to reflect more current data on the status of the Cuyama Groundwater Basin." (Gibbs Report, p. 3.)

The significant inconsistencies with these Comprehensive Plan goals, policies, and actions intended to protect groundwater resources precludes the Commission from finding that the Amendment is consistent with the Comprehensive Plan.

ii. There Are Not Adequate Water Resources to Serve the Project

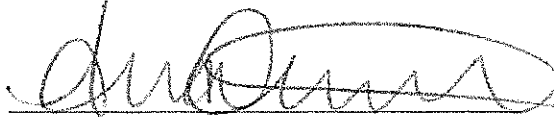
Pursuant to CUP Finding 4, the Commission must find that there are adequate public services to serve the Project including an adequate water supply. The proposed Findings of Approval only identify the 26 AFY from evaporation from the reservoirs. Explained above and in our September 7, 2018 letter, it was error for the County to focus its impact analysis only on evaporation from the reservoirs. Likewise in the context of this finding, determining whether there is adequate water to serve a Project necessitates an evaluation of the actual water required to serve the Project. If the Applicant's wells are not able to produce the water needed to fill the reservoirs and achieve the Project's purpose of frost protection, the environmental damage and cost of reservoir construction will be for naught. Clearly the Commission must look to the Project's actual, total water demand in the context of the Cuyama Groundwater Basin's Safe Yield before this Finding can be substantiated.

3. Conclusion

For the foregoing reasons, we respectfully request that the Commission grant our appeal, and direct the preparation of an EIR.

Sincerely,

LAW OFFICE OF MARC CHYTILO



Marc Chytilo

Ana Citrin

For Appellants Jaffe and Gliessman

Attachment: Memo from Katherine Anderson on Evaporative Loss

MEMORANDUM

TO: Marc Chytilo

FROM: Katherine Anderson

SUBJECT: Evaporative Water Loss at the North Fork Ranch Vineyard, Cuyama, CA
North Fork Ranch Frost Ponds Appeal, Item # 3, 9/12/18

DATE: 9/10/18

The North Fork Ranch vineyard has proposed three reservoirs to be installed to impound ground water to be used as frost protection for 1,000 acres of vines. This vineyard is located on Assessor Parcel Number 147-020-045 off the 166 Highway bordering the Cuyama River in Cuyama, CA. The majority of the subject vineyard lies at an elevation between 1700' to 1850' above sea level. These reservoirs require a discretionary Minor Conditional Use permit, subject to the water use threshold of 31 acre feet in the Environmental Thresholds Manual. Although stated that groundwater used for agricultural irrigation does not count toward this threshold, water not directly or indirectly used in support of the existing vineyards, such as evaporative losses, must be included. If water lost through evaporation exceeds this 31 acre foot threshold, the impact is considered significant.

Even at low temperatures, when water is applied by overhead sprinklers, a percentage of the water will evaporate as it travels. This can be calculated when combined with meteorological data. The project claims no significant impact through water loss because the reservoir evaporative losses are calculated to total 26.28 acre feet. However, the project did not consider evaporative losses by the frost sprinklers themselves, pushing the total to 44.42 acre feet, well past the threshold of 31 acre feet of water losses.

Frost protection in grapes

Frost protection of agricultural crops relies on several different methods, one of which is the physics of freezing water when applied to plants. To put it simply, for water to freeze, it has to give off heat stored in its molecular bonds. That microburst of heat given off as water transforms from liquid to solid ice is enough to protect the surface of a plant from damage, if applied correctly. The usual method is to apply water with sprinklers emitting the correct volume of water so that a thin film coats the plants every 30 seconds when temperatures are low enough to cause damage.

For grapes, about .11 inch of water per hour per acre needs to be applied to provide adequate frost protection, which translates to approximately 50 gallons per minute per acre (McGourty, 2018).

Grapevine Frost Tolerance

The proposed North Fork vineyard frost ponds are supposed to be filled from January to May of

Table 1. Temperature Sensitivity in Pinot Noir Grapevines

Stage of growth	Temperature at 50% destruction of tissue
Dormant Bud	20 degrees F or below
Dormant Swollen Bud	26 F
Bud Break	28F
One Leaf Unfolded	28-29 F
Two Leaves Unfolded	29-32 F

Frost tolerance of Pinot Noir grapevines, Nesbitt 2018. Virginia Tech University <https://agagle-horticulture.tamu.edu/vitwine/files/2017/06/Frost-and-Freeze-Protection-Strategies.pdf>

each year for frost protection. After May, the remaining water will be used for irrigating the vineyard, leaving a three-foot depth in the ponds all year. Although viticultural experts opine that the vines currently would not need frost protection in January, the increasing number of warm winters may push bud break earlier and earlier. Early season bud break is subject to more frequent cold snaps. According to Glenn McGourty, Winegrowing and Plant Science Advisor, University of California Cooperative Extension (UCCE), these stages of growth can be different each year. The earliest he's seen bud break is Feb 24th (McGourty, personal communication 2018). Warm spells during the normal winter dormancy period can cause buds to break too early, when the risk of frost in early spring is high in the Cuyama area. Indeed, the Mitigated Negative Declaration for the project states that "the months of February, March and April...is the part of the year when frost would have the greatest potential to result in damage to the existing vineyards." (p 37).

Grapevines break dormancy in stages; fully dormant stage, swollen bud stage, bud break, and leafing out. Each stage has a different critical temperature and can differ year to year. Grape variety plays a part as well - some grape varieties leaf out early, and some late. Pinot Noir grapes, such as planted at the North Fork vineyard, are known for early bud break (McGourty, personal communication, 2018).

These damaging temperatures are determined by both the dry bulb and the wet bulb temperatures. 'Dry bulb' refers to dry air temperature. 'Wet bulb' temperatures are measured by taking into account the relative humidity, and is a better measure of how cold it "feels." When the air (dry bulb) temperature is freezing at 32 degrees F and the wet bulb temperature is 27 degrees, the plants are experiencing 27 degrees (AWIS, 2018), and the crop could be lost. For meteorological data collection, wet bulb temperature is often described as the dew point (Battany, personal communication, 2018).

Estimating Sprinkler Use

In order to estimate the amount of water that would be used for frost protection and the amount of evaporation taking place, it is necessary to estimate the number and duration of frost events when grapevines would be vulnerable and require overhead sprinklers. Evaporative water loss is dependent on many different factors, such as air temperature, wet bulb temperature, wind speed, and relative humidity. Since predicting each of these factors in a future scenario is not possible, the precise number, duration, and evaporation rates of future hypothetical frost events would be difficult to forecast. Therefore, real-world weather data was obtained from a nearby agricultural recording station, and that data used to create a estimate of water use and evaporative losses during actual conditions.

The California Irrigation Management Information System (CIMIS) station in Cuyama is located 11.49 miles from the North Fork vineyard, near the Cuyama River at an elevation of 2190 ft above sea level. This monitoring station has the longest contiguous history of data recording of all of the CIMIS stations, and records weather data as well as pan evaporation data to aid agricultural operations, and is collected on an hourly basis. This hourly data was obtained for the last 10 years and examined for its potential impact on grape crops.

To use this data, we have to 'think like a farmer.' If the forecast is for damaging low temperatures, a farmer will turn on the sprinklers before these temperatures are reached. If sprinklers are to be used, they must be started prior to temps falling below 32 degrees F, or else the farmer runs the risk of applying slushy water or frozen pipes, which would not provide protection (Battany, personal communication, 2018).

This data has its limitations. Being that hindsight is 20/20, this data represents actual temperatures of past events, whereas predicting what the weather will do is far more difficult. In reality, a farmer facing falling temperatures may decide to turn on frost sprinklers far ahead of damaging temperatures. There may be events that merely flirt with damaging temperatures, causing a farmer to turn on the sprinklers 'just in case' rather than risk the crop. Since a vineyard inevitably has cold pockets, the sprinklers may stay on later to provide protection for those spots. Frost sprinklers are often turned on and off manually, meaning that sprinklers stay on in large vineyards until the workers can shut them off (Battany, personal communication, 2018). The coarseness of the data in that it is presented hourly prohibits a fine-tuning of the start and stop times. There may be times where the temperature is above freezing at the beginning of the hour, and dip below freezing before the end of the hour. A farmer would have turned the sprinklers on in the meantime, and that use is not captured by hourly data. Sprinklers are often left on well into the 40F range, to prevent a freezing jolt from ice when molecular heat stops forming (Battany, personal communication, 2018).

Sprinkler Run Times

Wet bulb temperature is the best indicator of when to start frost protection. Frost sprinklers should be turned on before wet bulb temperatures reach critical temperatures, if the dry bulb temperatures are predicted to dip into freezing. As noted above and in Figure 1 below, the sprinklers should be started well ahead of the air temperature reaches freezing.

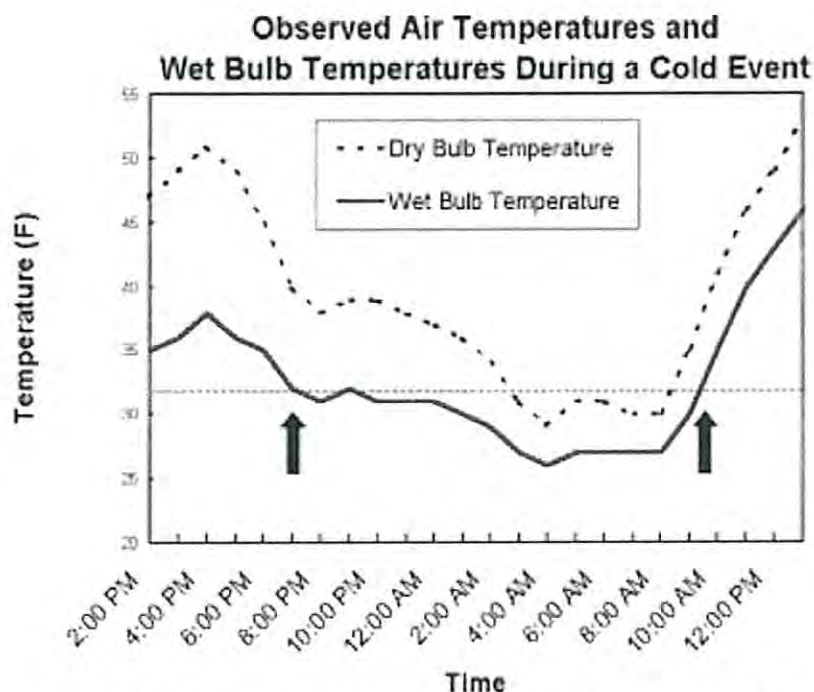


Figure 1. Arrows represent start and stop of frost sprinklers based on wet bulb temperatures. (AWIS, 2018)

California Irrigation Management Information System (CIMIS) data

The year 2013 was chosen to represent a “worst-case” scenario, as it was a reasonably cold spring with a low rainfall winter, which forced bud break relatively early (Jervis, 2015). This data is attached to this report as Appendix A. From this data, the number of damaging temperature events can be calculated to provide a projection of how much water would have been applied for a 1,000 acre vineyard. The percentage of water that would have been lost to evaporation can then be calculated based on real-world data.

2013 was a relatively dry winter, with some warm spells. Warming air and soil temperatures pushed bud break early in many areas. Though a definitive bud break date is not available for the North

Fork Ranch vineyard itself, it has been estimated at late March for that year based on local viticultural reports that discuss regional bud break (Jervis, 2015). Since grapevine buds are susceptible to damage prior to unfurling leaves, it is assumed that a grower would begin frost protection most conservatively at 10 to 14 days before bud break, when the bud tissues are beginning to emerge from dormancy and swell.

Given this estimated date of bud break, for a conservative estimate of when frost protection would have begun for the year 2013, this report includes damaging frost events from March 10 to May 31.

The 2013 frost events listed below represent a very conservative interpretation of the data and narrow window of sprinkler operation. The events most likely to cause a farmer to turn on the frost sprinklers, based on dry bulb and wet bulb temperatures, were identified and used. For the purpose of this investigation, it is assumed that all sprinklers are turned on and turned off at the same time, and that the sprinklers are not left on until temps are in the upper 40 F range, as sometimes is done. Under actual ground conditions, the frost sprinklers would likely be run for one to four hours more for each frost event.

From March, 2013, to May 2013 there were 9 frost events that would injure grapevines, totaling 45 hours (Table 2). Damaging temperatures do not rely solely on air temperature; relative humidity as measured by the dew point is a controlling factor. Therefore, the CIMIS temperature data has been adjusted for the dew point to pinpoint damaging temperatures to grapevines.

Table 2. Frost Events in the Cuyama Valley, Spring 2013

	Frost Event Start Date	Average Temp (F)	Average Dew Point/Wet Bulb (F)	Duration (hrs)
March 2013	3/10/13	33.3	30.6	8
	3/11/13	32.0	26.9	6
	3/23/13	34.2	21.0	6
	3/24/13	34.0	20.8	4
April 2013	4/9/13	32.8	26.6	5
	4/16/13	34.0	25.8	5
	4/17/13	35.9	23.0	4
	4/18/13	34.3	22.0	5
May 2013	5/23/13	37.7	22.7	2
Total Event Hours				45

For ease of calculation, dry bulb (air) temperatures, wet bulb (dew point) temperatures, and relative humidity were averaged during each event. Since critical temperatures, and the start and stop times of sprinklers are based on damaging wet bulb temperatures, dry bulb temperatures may average higher than 32 F.

These 9 dates represent the events and length of time that the frost sprinklers would be operating. It is to be noted that the May event did not read freezing air temperatures, but that the wet-bulb temperatures are so low that a grower would certainly start frost protection in case a dip occurred at that stage of vine growth.

Calculating Water Evaporation from Sprinklers

The nature of sprinkler irrigation ejects droplets of water under pressure to cover a large area. During this operation, water vaporizes from the droplets themselves as they travel, from the ground, and from the wet surfaces of the plants. Calculating evaporation from complex surfaces is beyond the scope of this report, but, evaporation rates from the sprayed droplets themselves can be done relatively easily.

The percentage of water evaporation is determined by the intersection of temperature, relative humidity, vapor pressure deficit, wind velocity, nozzle diameter, and water pressure. A nomograph for calculating sprinkler evaporation was developed by Frost and Schwalen in 1955 (Figure 2), and remains the standard to this day (Battany, personal communication, 2018; Zazueta, 2014).

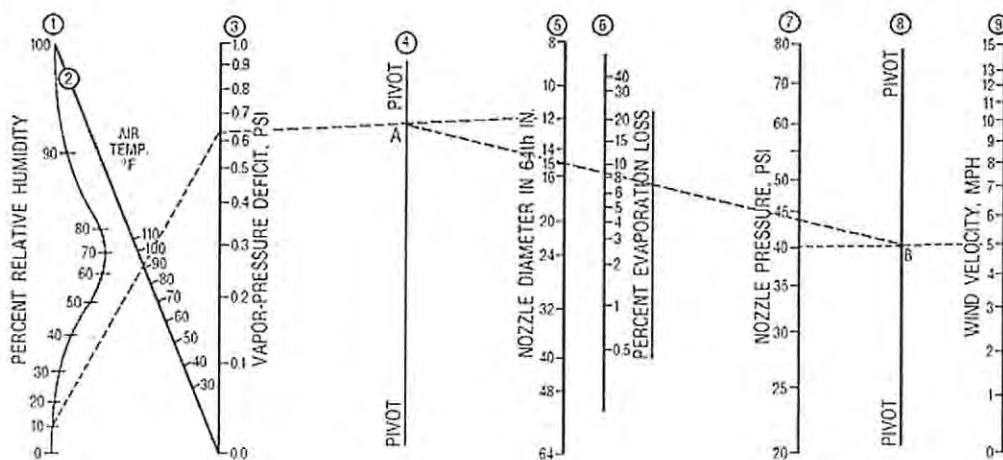


Figure 2. Sprinkler evaporation nomograph (from Frost and Schwalen, 1955).

Zazueta (2014) explains how to use the nomograph:

“The calculations are done in the following steps:

1. Draw a straight line from the point representing percent relative humidity in column 1 through the mark for temperature in column 2. Extend this line to indicate a vapor-pressure deficit in column 3.
2. Draw a straight line from the point representing vapor-pressure deficit in column 3 to the mark that indicates nozzle diameter in column 5. Locate point A where this line intersects the pivot line in column 4. Point A will be used in step 4 below.
3. Draw a straight line from the mark for nozzle pressure in column 7 to the point representing wind speed in column 9. Locate point B where this line intersects the pivot line in column 8. Point B will be used in step 4 below.
4. Draw a straight line from point A on the pivot line in column 4 to point B on the pivot line in column 8. Read the percentage of evaporation loss where this line intersects column 6."

To use the nomograph to calculate the evaporation rate of the water sprayed by the frost protection sprinklers at the North Fork Ranch vineyard, the following data must be obtained:

1. Relative Humidity
2. Air (Dry Bulb) Temperature
3. Wind Velocity

Table 3. Meteorological Data of 2013 Frost Events

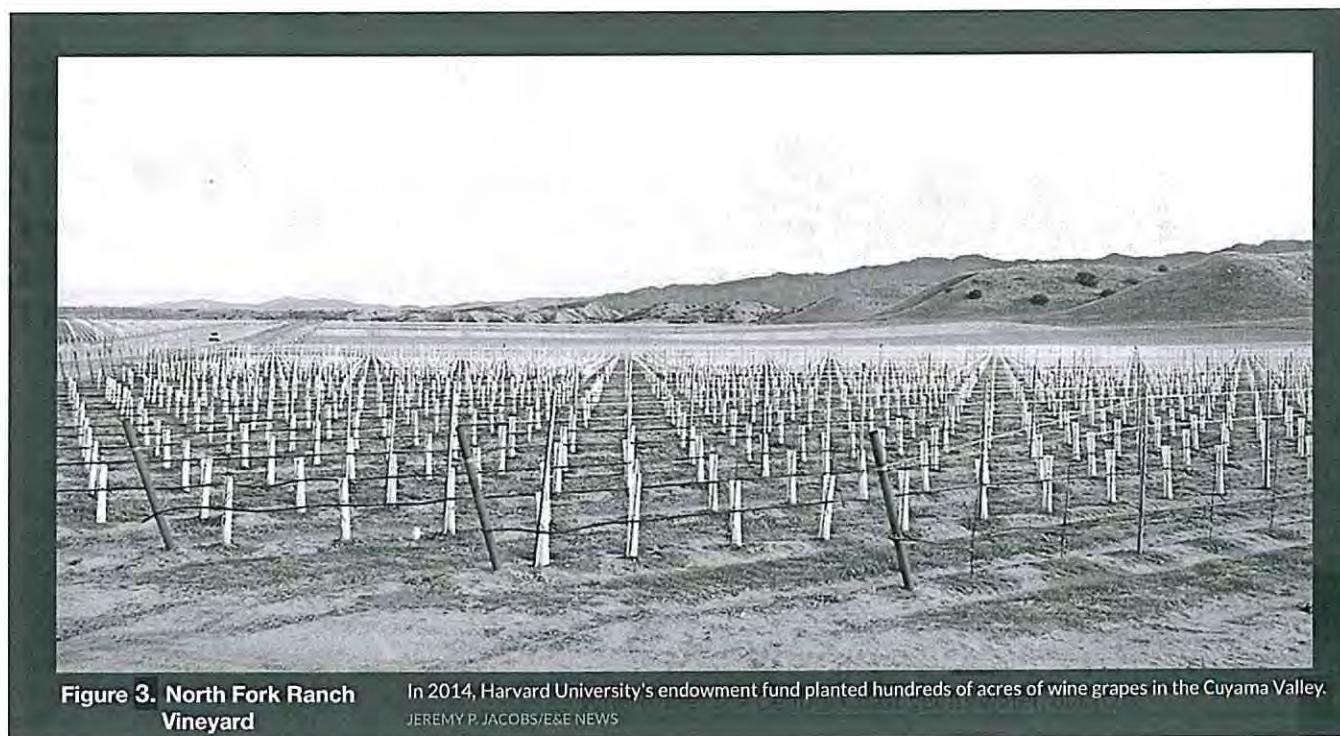
	Frost Event Start Date	Average Temp (F)	Average Relative Humidity (%)	Duration (hrs)	Wind Velocity (mph)
March 2013	3/10/13	33.3	90	8	6.0
	3/11/13	32.0	81	6	5.0
	3/23/13	34.2	58	6	5.0
	3/24/13	34.0	58	4	5.0
April 2013	4/9/13	32.8	77	5	3.5
	4/16/13	34.0	72	5	3.0
	4/17/13	35.9	59	4	4.0
	4/18/13	34.3	60	5	5.8
May 2013	5/23/13	37.7	57	2	4.1

4. Nozzle Water Pressure
5. Nozzle Diameter

Table 3 summarizes meteorological data for frost events from March through May, 2013. These numbers represent the average of each data type during each frost event and are used to calculate the evaporation rate of these events.

Nozzle diameter can be inferred by standard practices in frost protection of grapes. In order to provide the necessary .109 (.11) inch of water per hour for adequate frost protection, a 2.3 gallon per minute (gpm), 7/64" nozzle diameter is needed (Rainbird Technical Information Sheet, 2018). Most vineyards, especially vineyards of the size and land slope of the North Fork Ranch, would require an operating pressure of 50 psi (McGourty, personal communication, 2013). The Mitigated Negative Declaration (p.1; 37) and the Staff Report of 2017 (p. 3) both state that frost protection will be provided by the vineyard's existing sprinkler irrigation system. The MND of 8/1/18 provided 45 psi as the operating pressure of the frost protection sprinkler system, however, this information was not provided until Thursday, September 6, after these time-consuming calculations were already done. The difference between the two would be negligible, and as such these results using 50 psi still stand.

A photograph of the North Fork vineyard (Figure 3) shows the conventional Rainbird-style impact sprinkler system described above.



Frost and Schwalen's diagram does not calculate nozzle diameters smaller than 8/64". Today's standard nozzles used for frost protection in grapevines are 7/64". In consultation with Mark Battany,

Viticulture Farm Advisor for San Luis Obispo and Santa Barbara Counties, University of California Cooperative Extension (UCCE), frost protection and grape irrigation specialist, it was decided that a conservative approach would be to place a mark at an appropriate, conservative distance on the non-linear graph line to indicate 7/64", as seen in Figure 2. This distance would represent the best estimate for a nozzle diameter of 7/64".

By entering this data into the nomograph, evaporation percentages of applied water can be calculated for each event (Table 4). Figure 4 below shows an example of this calculation, using data from March 10, 2013.

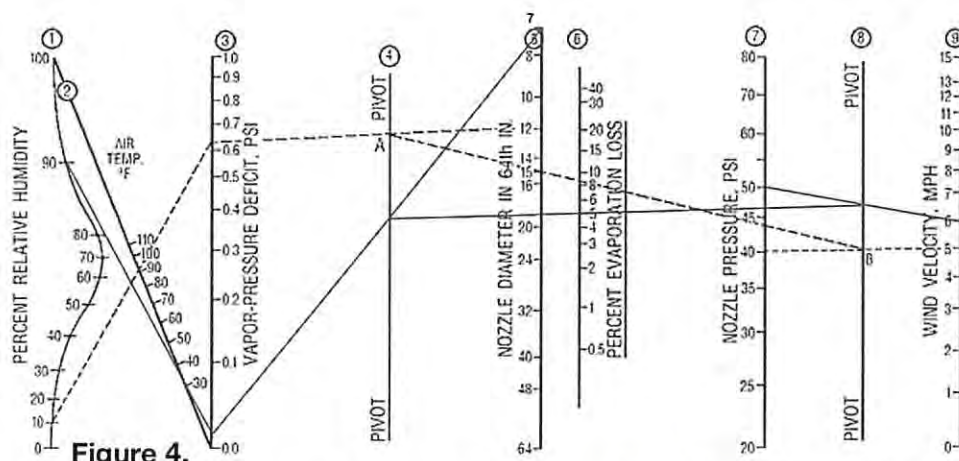


Figure 4.
 3/10/13 Frost Event Average Relative Humidity 90, Air Temp 33.3 F,
 Nozzle Diameter 7/64", Nozzle Pressure 50 psi, Wind Speed 6.0;
 calculated 5% evaporation rate. (after Frost and Schwalen, 1955)

Table 4 below summarizes the calculations of this data for the year 2013, showing the evaporation rates expressed as a percentage of the water applied.

Table 4. Projected Evaporation Loss by Sprinklers

	Frost Event Start Date	Water Applied, in Acre Feet (45 GPM per acre)	Evaporation Rate (%)	Amount of Water Lost to Evaporation, in Acre Feet
March 2013	3/10/13	66.288	5.0	3.314
	3/11/13	49.716	4.9	2.436
	3/23/13	49.716	5.2	2.585
	3/24/13	33.144	5.0	1.657
March Subtotal				9.992
April 2013	4/9/13	41.430	4.3	1.781
	4/16/13	41.430	4.2	1.740
	4/17/13	33.144	4.8	1.591
	4/18/13	41.430	5.4	2.238
April Subtotal				7.35
May 2013	5/23/13	16.572	4.8	0.795
Total Projected Frost Sprinkler Evaporative Loss, Spring 2013		372.87		18.137

These evaporation rates, when applied to the total water used during each event, show an evaporative loss of 18.14 acre feet.

MND Inaccuracies

Using actual data to estimate water use allows a more accurate picture of water use. The MND dated 8-1-18 states that:

“the vines would be sprayed for a duration of two to three hours; and not all frost events require that the entire vineyard be sprayed (p. 37).

From the data presented above, it is clear that frost events in the Cuyama Valley can indeed be much longer than two to three hours. The average duration of a frost event (Table 2) as calculated by actual damaging temperatures is 5 hours. These estimates are very conservative, and it is very likely

that a grower facing these events would extend sprinkling one to two hours (Battany, personal communication, 2018).

The North Fork vineyard sits, on average, about 375 ft lower than the Cuyama CIMIS station, along the Cuyama River bottom. Since cold air drains to lower elevations by gravity, much the same as water (Evans 2000, McGourty, 2018; Nesbitt, 2018) the temperatures at the North Fork Vineyard will likely be colder than those recorded at CIMIS Cuyama and be subject to more frost events with longer durations. The projected calculations shown here would indeed represent the entire vineyard being sprayed for frost protection.

Conclusion

The Santa Barbara County Staff Report for the North Fork Ranch project dated 9/25/17 states:

“If the project- specific or cumulative evaporative losses exceed the groundwater use significance threshold of 31 acre feet per year, mitigation measures would be required to reduce losses to a level below the threshold (p.7).”

The proposed frost ponds would allow large-scale use of sprinkled groundwater, with cumulative evaporative losses from the frost reservoirs (26.28 AF) and the frost sprinklers (18.14 AF) totaling 44.42 AF. This is well above the County’s 31 AF threshold and should certainly trigger environmental review. No methods of mitigating this loss is provided in the MND or the Staff Report, and a properly done EIR would identify tools and methods available to prevent this loss.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Katherine Anderson', with a stylized, flowing script.

Katherine Anderson

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KATHERINE E. ANDERSON

300 GLEN ANNIE RD. GOLETA, CA 93117
(805) 689-8657 BLUEOAKSB@GMAIL.COM

SUMMARY

Outside-the-box problem solver, logical, science and research oriented. Mindful that details are everything in solving complex puzzles, and each of those details must mesh perfectly to draw valid conclusions. Wide experience and life skills background. Excellent proofreading skills for content and structure.

EXPERIENCE

Law Office of Marc Chytilo, Environmental Law, Santa Barbara, CA 2017-current

Science Research

- Perform research and analysis of various case issues involving environmental science

Livestock Consultant/Small Farmer/Island Seed and Feed, Goleta, CA 2003-current

Consultant in Poultry and Small Livestock Management/Store Manager (part time)

- Specialize in the health and nutrition of small livestock species, to include proper care, health, housing, and emergency veterinary/medical advice. Own and operate a small organic farm and ranch.

University of Arizona Museum, Tucson, AZ 1998-2001

Inventory Curator, Human Remains Collection

- Inventoried accessioned skeletonized human remains to assess age, sex, pathology, and number of individuals represented under each accession. Identified and developed research projects.
- Specialized in the identification of difficult-to-identify, highly fragmented, and/or cremated remains.
- Excavated skeletonized human remains at a number of prehistoric sites under the auspices of the University of Arizona
- Performed background research pertaining to the accession records of the collection

Federal Bureau of Investigation, Ventura and Santa Barbara Resident Agencies, CA 1995-1998

Confidential Clerk

- Transcribed recorded audio tapes, specializing in difficult audio, foreign languages and complex cases.
- Aided in teaching a class in archaeological forensic excavation at the Los Angeles Field Office
- Held top secret security clearance

Federal Bureau of Investigation, Santa Ana Resident Agency, Santa Ana, CA 1988-1995

Data Analyst

- Implemented, built and maintained computer programs for input, storage, organization, and retrieval of information
- Worked closely with assigned agents in analysis and synthesis of information pertinent to their cases
- Data management, reports and depositions
- Held top secret security clearance

EDUCATION

University of Arizona, Tucson, AZ 1999-2001

Master's Program, Archaeology

- Presented original research in peer-reviewed scientific conferences
- Master's Thesis: Implemented original experimentally based research project

University of California at Santa Barbara, Santa Barbara, CA 1995-1998

Bachelor of Science - Anthropology

- Valedictorian, College of Letters and Science
- California State Presidential Award for Research
- Managed various field excavations, self-directed research projects, and summer archaeological field schools on Santa Cruz Island as well as the mainland, to include excavation of human remains
- Specialized in lithic reduction and prehistoric quarries, human remains and paleopathology

Appendix A

California Irrigation Management Information System
(CIMIS)

Station in #88, Cuyama, CA

March 2013 to May 2013

Raw Data

Evaporative Water Loss at the North Fork Ranch Vineyard, Cuyama, CA

North Fork Ranch Frost Ponds Appeal, Item # 3, 9/12/18

By

Katherine Anderson

9/10/18

hourly-2

Stn Id	Stn Name	CIMIS Region	Date	Hour (PST)	Jul	Eto (in)	qc	Precip (in)	qc	Sol Rad (Ly/day)	qc	Vap Pres (mBare)	qc	Air Temp (F)	qc	Rel Hum (%)	qc	Dew Point (F)	qc	Wind Speed (mph)	qc	Wind Dir (0-360)	qc	Soll Temp (F)	qc
88	Cuyama	Central Coast Valleys	3/1/2013	100	60	0				0		5.4		38.5		68		29		5.3		113		54.3	
88	Cuyama	Central Coast Valleys	3/1/2013	200	60	0		0		0		5.3		36.7		72		28.4		4.4		125		53.7	
88	Cuyama	Central Coast Valleys	3/1/2013	300	60	0		0		0		5.2		35.5		73		27.8		4.9		113		53	
88	Cuyama	Central Coast Valleys	3/1/2013	400	60	0		0		0		5		34.7		74		27.2		4.7		109		52.3	
88	Cuyama	Central Coast Valleys	3/1/2013	500	60	0		0		0		5		34.6		73		26.9		5.9		114		51.7	
88	Cuyama	Central Coast Valleys	3/1/2013	600	60	0		0		0		4.8		33.6		74		26.1		4.7		104		51	
88	Cuyama	Central Coast Valleys	3/1/2013	700	60	0		0		20		4.9		33.5		75		26.5		5.4		102		50.4	
88	Cuyama	Central Coast Valleys	3/1/2013	800	60	0		0		299		5.2		37.5		68		28.1		6.2		99		49.8	
88	Cuyama	Central Coast Valleys	3/1/2013	900	60	0.01		0		710		6.2		47.1		56		32.2		6.1		71		49.3	
88	Cuyama	Central Coast Valleys	3/1/2013	1000	60	0.01		0		1091		6.5		55.6		43		33.4		4.7		85		49.1	
88	Cuyama	Central Coast Valleys	3/1/2013	1100	60	0.02		0		1391		6.6		61.6		35		34		3.4		141		49.4	
88	Cuyama	Central Coast Valleys	3/1/2013	1200	60	0.02		0		1565		6.5		65.4		30		33.6		3.6		134		50.3	
88	Cuyama	Central Coast Valleys	3/1/2013	1300	60	0.02		0		1621		6.4		68.5		27		33		4		166		51.6	
88	Cuyama	Central Coast Valleys	3/1/2013	1400	60	0.02		0		1526		6.8		70.8		26		34.5		5.4		339		53.3	
88	Cuyama	Central Coast Valleys	3/1/2013	1500	60	0.02		0		1291		7.2		71.2		28		36.2		6.8		75		55	
88	Cuyama	Central Coast Valleys	3/1/2013	1600	60	0.01		0		949		7.3		69.8		29		36.3		6.9		87		56.6	
88	Cuyama	Central Coast Valleys	3/1/2013	1700	60	0.01		0		544		7.5		67.5		33		37.1		6.8		97		57.9	
88	Cuyama	Central Coast Valleys	3/1/2013	1800	60	0		0		137		7.4		62.6		38		36.6		6.7		129		58.8	
88	Cuyama	Central Coast Valleys	3/1/2013	1900	60	0	0	0		1		7.4		57		46		36.8		5.4		130		59.2	
88	Cuyama	Central Coast Valleys	3/1/2013	2000	60	0	0	0		0		7.4		53.5		53		36.7		5.5		163		59.3	
88	Cuyama	Central Coast Valleys	3/1/2013	2100	60	0	0	0		0		6.9		48.8		59		35		5		192		59	
88	Cuyama	Central Coast Valleys	3/1/2013	2200	60	0	0	0		0		6.6		44.4		67		34		3.4		118		58.6	
88	Cuyama	Central Coast Valleys	3/1/2013	2300	60	0	0	0		0		6.5		42.1		71		33.5		4.1		120		58	
88	Cuyama	Central Coast Valleys	3/1/2013	2400	60	0	0	0		0		6.3		40.1		75		32.7		4.4		99		57.4	
88	Cuyama	Central Coast Valleys	3/2/2013	100	61	0	0	0		0		6		38.6		76		31.5		4.9		108		56.7	
88	Cuyama	Central Coast Valleys	3/2/2013	200	61	0	0	0		0		5.9		37.8		77		31.1		4.6		110		56	
88	Cuyama	Central Coast Valleys	3/2/2013	300	61	0	0	0		0		5.7		37.3		76		30.4		5		118		55.3	
88	Cuyama	Central Coast Valleys	3/2/2013	400	61	0	0	0		0		5.6		35.7		77		29.3		3		126		54.5	
88	Cuyama	Central Coast Valleys	3/2/2013	500	61	0	0	0		0		5.4		35.9		76		29.1		4.7		123		53.8	
88	Cuyama	Central Coast Valleys	3/2/2013	600	61	0	0	0		0		5.2		35.1		75		27.9		2.6		172		53.2	
88	Cuyama	Central Coast Valleys	3/2/2013	700	61	0	0	0		35		5		35.1		72		27		2.6		130		52.5	
88	Cuyama	Central Coast Valleys	3/2/2013	800	61	0	0	0		310		5.9		42		65		31.1		3.1		103		51.9	
88	Cuyama	Central Coast Valleys	3/2/2013	900	61	0.01	0	0		695		5.6		54.6		38		29.8		2.7		104		51.3	
88	Cuyama	Central Coast Valleys	3/2/2013	1000	61	0.01	0	0		1142		5.7		63.2		29		30.1		2.2		302		51.1	
88	Cuyama	Central Coast Valleys	3/2/2013	1100	61	0.02	0	0		1289		5.6		69.5		23		29.7		3.6		314		51.5	
88	Cuyama	Central Coast Valleys	3/2/2013	1200	61	0.02	0	0		1173		4.8		74.6		16		26		3		309		52.5	
88	Cuyama	Central Coast Valleys	3/2/2013	1300	61	0.02	0	0		963		4		78.1		13		21.6		9.4		226		53.9	
88	Cuyama	Central Coast Valleys	3/2/2013	1400	61	0.02	0	0		766		3.8		76.8		12		20.5		10.2		217		55.2	
88	Cuyama	Central Coast Valleys	3/2/2013	1500	61	0.02	0	0		666		3.7		75		13		20.1		11.4		213		56.3	
88	Cuyama	Central Coast Valleys	3/2/2013	1600	61	0.01	0	0		648		3.9		74.6		13		21.1		7.8		219		57.2	
88	Cuyama	Central Coast Valleys	3/2/2013	1700	61	0.01	0	0		586		3.8		74.5		13		20.5		8.5		236		57.8	
88	Cuyama	Central Coast Valleys	3/2/2013	1800	61	0	0	0		79		3.4		68.9		14		17.7		7.9		230		58.4	
88	Cuyama	Central Coast Valleys	3/2/2013	1900	61	0	0	0		0		3.9		64.1		19		20.9		7.7		222		58.7	
88	Cuyama	Central Coast Valleys	3/2/2013	2000	61	0 Y	0	0		0		4.3		62.9 Y		22 Y		23.2 Y		5.8		226		58.8	
88	Cuyama	Central Coast Valleys	3/2/2013	2100	61	0 Y	0	0		0		5.2		62 Y		27 Y		28.1 Y		4.9		250		58.7	
88	Cuyama	Central Coast Valleys	3/2/2013	2200	61	0 Y	0	0		0		5.4		61.3 Y		29 Y		28.7 Y		6.3		254		58.5	
88	Cuyama	Central Coast Valleys	3/2/2013	2300	61	0 Y	0	0		0		5.1		59.3 Y		30 Y		27.8 Y		3.7		255		58.3	
88	Cuyama	Central Coast Valleys	3/2/2013	2400	61	0 Y	0	0		0		4.8		57.3 Y		30 Y		26 Y		3.2		280		58	
88	Cuyama	Central Coast Valleys	3/3/2013	100	62	0	0	0		0		5.4		54.9		37		29		3.8		127		57.8	
88	Cuyama	Central Coast Valleys	3/3/2013	200	62	0	0	0		0		4.7		54.1		33		25.7		4		245		57.5	
88	Cuyama	Central Coast Valleys	3/3/2013	300	62	0	0	0		0		4.9		52.9		36		26.5		2		271		57.1	
88	Cuyama	Central Coast Valleys	3/3/2013	400	62	0	0	0		0		6		50.2		49		31.6		3.6		162		56.8	
88	Cuyama	Central Coast Valleys	3/3/2013	500	62	0	0	0		0		6		49.9		49		31.7		3.9		135		56.5	
88	Cuyama	Central Coast Valleys	3/3/2013	600	62	0	0	0		0		6.1		48.4		53		32		3.3		138		56.2	
88	Cuyama	Central Coast Valleys	3/3/2013	700	62	0	0	0		5		5.9		49.5		49		31.1		3.4		140		55.8	
88	Cuyama	Central Coast Valleys	3/3/2013	800	62	0	0	0		148		6.5		51.1		51		33.4		2.9		98		55.5	
88	Cuyama	Central Coast Valleys	3/3/2013	900	62	0	0	0		290		6.3		50		41		32.9		3.5		85		55.2	
88	Cuyama	Central Coast Valleys	3/3/2013	1000	62	0.01	0	0		450		5.5		59.2		32		29.6		3.6		286		55	
88	Cuyama	Central Coast Valleys	3/3/2013	1100	62	0.01	0	0		971		5.8		60.7		32		30.9		5.2		289		55	
88	Cuyama	Central Coast Valleys																							

88	Cuyama	Central Coast Valleys	3/4/2013	1200	63	0.02	0	1569	8.7	61.7	46	40.8	4.3	110	55
89	Cuyama	Central Coast Valleys	3/4/2013	1300	63	0.02	0	1627	8.6	62.7	44	40.7	5.6	333	56.2
90	Cuyama	Central Coast Valleys	3/4/2013	1400	63	0.02	0	1507	8.5	63.6	42	40.2	5.6	335	57.7
91	Cuyama	Central Coast Valleys	3/4/2013	1500	63	0.02	0	1311	8.6	64.1	42	40.5	6.6	37	59.2
92	Cuyama	Central Coast Valleys	3/4/2013	1600	63	0.01	0	980	8.6	63.4	43	40.7	7.6	62	60.6
93	Cuyama	Central Coast Valleys	3/4/2013	1700	63	0.01	0	586	8.7	62.1	46	40.8	7.8	84	61.7
94	Cuyama	Central Coast Valleys	3/4/2013	1800	63	0	0	162	9	58.6	54	41.8	7.5	89	62.3
95	Cuyama	Central Coast Valleys	3/4/2013	1900	63	0	0	1	8.6	53.8	61	40.6	5.1	123	62.5
96	Cuyama	Central Coast Valleys	3/4/2013	2000	63	0	0	0	8	60.1	64	38.6	4.9	187	62.3
97	Cuyama	Central Coast Valleys	3/4/2013	2100	63	0	0	0	7.6	47.5	68	37.5	3.7	169	61.9
98	Cuyama	Central Coast Valleys	3/4/2013	2200	63	0	0	0	7.2	44.2	73	36.2	2.7	124	61.4
99	Cuyama	Central Coast Valleys	3/4/2013	2300	63	0	0	0	7	41.7	78	35.4	2.7	233	60.7
100	Cuyama	Central Coast Valleys	3/4/2013	2400	63	0	0	0	6.8	39.7	82	34.8	2.2	181	60
101	Cuyama	Central Coast Valleys	3/5/2013	100	64	0	0	0	6.6	38.1	85	33.9	2.6	137	59.2
102	Cuyama	Central Coast Valleys	3/5/2013	200	64	0	0	0	6.5	37.6	85	33.6	2.7	179	58.5
103	Cuyama	Central Coast Valleys	3/5/2013	300	64	0	0	0	6.2	35.8	87	32.2	2.6	140	57.7
104	Cuyama	Central Coast Valleys	3/5/2013	400	64	0	0	0	6.1	35.1	88	31.9	2.4	180	56.9
105	Cuyama	Central Coast Valleys	3/5/2013	500	64	0	0	0	6	34.2	89	31.4	2.4	171	56.2
106	Cuyama	Central Coast Valleys	3/5/2013	600	64	0	0	0	5.8	33.3	90	30.9	2	151	55.5
107	Cuyama	Central Coast Valleys	3/5/2013	700	64	0	0	33	5.8	33	91	30.7	1.9	224	54.8
108	Cuyama	Central Coast Valleys	3/5/2013	800	64	0	0	293	7	37.7	91	35.4	3.3	270	54
109	Cuyama	Central Coast Valleys	3/5/2013	900	64	0	0	387	8.2	41.6	92	39.3	2.7	314	53.4
110	Cuyama	Central Coast Valleys	3/5/2013	1000	64	0.01	0	1069	9.8	46.5	91	44	2.9	47	53.1
111	Cuyama	Central Coast Valleys	3/5/2013	1100	64	0.01	0.03 Y	1441	10	55.4	66	44.4	3	42	55.9
112	Cuyama	Central Coast Valleys	3/5/2013	1200	64	0.02	0	1619	9.3	60.4	62	42.7	7.6	291	63 Y
113	Cuyama	Central Coast Valleys	3/5/2013	1300	64	0.02	0	1664	9.3	60.4	52	42.6	10.2	285	54.9
114	Cuyama	Central Coast Valleys	3/5/2013	1400	64	0.02	0	1567	8.6	63.3	44	40.8	10.2	290	58.1
115	Cuyama	Central Coast Valleys	3/5/2013	1500	64	0.02	0	1347	8.7	63.5	43	40.8	8.7	289	57.3
116	Cuyama	Central Coast Valleys	3/5/2013	1600	64	0.01	0	1014	8.5	62.8	44	40.5	8.1	294	58.5
117	Cuyama	Central Coast Valleys	3/5/2013	1700	64	0.01	0	611	8.5	61.4	45	40.2	7.1	288	59.8
118	Cuyama	Central Coast Valleys	3/5/2013	1800	64	0	0	170	9.1	64.5	63	42	8.1	277	60.3
119	Cuyama	Central Coast Valleys	3/5/2013	1900	64	0	0	1	8.7	49.2	72	40.8	6.9	267	60.6
120	Cuyama	Central Coast Valleys	3/5/2013	2000	64	0	0	0	8.4	47	77	40.1	6.8	275	60.5
121	Cuyama	Central Coast Valleys	3/5/2013	2100	64	0	0	0	8.2	43.8	84	39.3	8.5	274	60.1
122	Cuyama	Central Coast Valleys	3/5/2013	2200	64	0	0	0	8	41.9	89	38.7	7.6	278	59.6
123	Cuyama	Central Coast Valleys	3/5/2013	2300	64	0	0	0	7.9	41.2	90	38.3	5.6	261	58.9
124	Cuyama	Central Coast Valleys	3/5/2013	2400	64	0	0	0	7.3	39.5	88	38.3	3.4	274	58.2
125	Cuyama	Central Coast Valleys	3/6/2013	100	65	0	0	0	6.4	35.9	90	33.3	2.5	111	57.5
126	Cuyama	Central Coast Valleys	3/6/2013	200	65	0	0	0	6.3	35	92	32.8	3	240	57.1
127	Cuyama	Central Coast Valleys	3/6/2013	300	65	0	0	0	6.6	36.2	92	34	3.3	102	56.5
128	Cuyama	Central Coast Valleys	3/6/2013	400	65	0	0	0	7.3	39.3	90	36.6	5.3	140	55.2
129	Cuyama	Central Coast Valleys	3/6/2013	500	65	0	0	0	7.3	40.1	86	36.3	2.9	297	54.4
130	Cuyama	Central Coast Valleys	3/6/2013	600	65	0	0	0	7.5	40.6	88	37.3	2.5	208	53.9
131	Cuyama	Central Coast Valleys	3/6/2013	700	65	0	0.01	27	7.6	40.8	87	37.4	3	92	53.4
132	Cuyama	Central Coast Valleys	3/6/2013	800	65	0	0	178	8.2	43.4	86	39.5	3.7	91	53.1
133	Cuyama	Central Coast Valleys	3/6/2013	900	65	0	0	528	9	47.9	80	41.9	3.8	61	52.7
134	Cuyama	Central Coast Valleys	3/6/2013	1000	65	0.01	0.01 Y	1122	9.7	52.1	73	43.8	6.1	236	52.6
135	Cuyama	Central Coast Valleys	3/6/2013	1100	65	0.01	0	1064	10	52.5	74	44.5	5.2	299	53.8
136	Cuyama	Central Coast Valleys	3/6/2013	1200	65	0.01	0	964	10.3	52.3	77	45.2	4.3	297	54.4
137	Cuyama	Central Coast Valleys	3/6/2013	1300	65	0.01	0	883	10	52	75	44.5	6.2	299	54.3
138	Cuyama	Central Coast Valleys	3/6/2013	1400	65	0.01	0	1040	9.7	52.8	71	43.8	5.9	298	55.3
139	Cuyama	Central Coast Valleys	3/6/2013	1500	65	0.01	0	971	9.5	53.3	68	43.1	6.8	291	55.7
140	Cuyama	Central Coast Valleys	3/6/2013	1600	65	0.01	0	647	9.4	52.8	69	43	6.8	286	56.4
141	Cuyama	Central Coast Valleys	3/6/2013	1700	65	0	0	284	9.2	51.8	70	42.4	7.1	268	57.1
142	Cuyama	Central Coast Valleys	3/6/2013	1800	65	0	0	126	9.2	49.1	77	42.3	6.7	278	57.5
143	Cuyama	Central Coast Valleys	3/6/2013	1900	65	0	0	1	8.8	46.1	83	41.1	6.8	278	57.8
144	Cuyama	Central Coast Valleys	3/6/2013	2000	65	0	0	0	8.6	45.5	83	40.8	5.9	259	57.5
145	Cuyama	Central Coast Valleys	3/6/2013	2100	65	0	0	0	8.9	45.8	85	41.4	7	285	57.1
146	Cuyama	Central Coast Valleys	3/6/2013	2200	65	0	0	0	8.8	45.5	85	41.1	5.2	274	56.8
147	Cuyama	Central Coast Valleys	3/6/2013	2300	65	0	0	0	8.7	44.7	86	40.8	4.3	270	56.3
148	Cuyama	Central Coast Valleys	3/6/2013	2400	65	0	0	0	8.5	43.8	88	40.4	3.9	273	56
149	Cuyama	Central Coast Valleys	3/7/2013	100	66	0	0	0	8.6	43.5	90	40.7	4.6	264	55.6
150	Cuyama	Central Coast Valleys	3/7/2013	200	66	0	0	0	8.5	43	90	40.4	3.8	273	55.2
151	Cuyama	Central Coast Valleys	3/7/2013	300	66	0	0	0	8.4	42.6	90	40	1.7	268	54.8
152	Cuyama	Central Coast Valleys	3/7/2013	400	66	0	0	0	8.5	42.9	90	40.3	2.7	251	54.5
153	Cuyama	Central Coast Valleys	3/7/2013	500	66	0	0	0	8.5	42.6	91	40.3	2.1	274	56.8
154	Cuyama	Central Coast Valleys	3/7/2013	600	66	0	0	0	8.5	42.5	92	40.4	1.8	310	57.5
155	Cuyama	Central Coast Valleys	3/7/2013	700	66	0	0	20	8.5	42.2	93	40.2	2.3	22	57.9
156	Cuyama	Central Coast Valleys	3/7/2013	800	66	0	0	171	8.7	43	92	40.9	1.6	234	55.3
157	Cuyama	Central Coast Valleys	3/7/2013	900	66	0	0	508	8.9	44.7	89	41.8	3.2	49	53
158	Cuyama	Central Coast Valleys	3/7/2013	1000	66	0	0	584	8.3	46.9	76	39.7	3.1	84	52.9
159	Cuyama	Central Coast Valleys	3/7/2013	1100	66	0.01	0	642	7.8	49	66	38.1	3.1	327	53
160	Cuyama	Central Coast Valleys	3/7/2013	1200	66	0.01	0	1275	8	51.8	61	38.9	4.4	308	53.3
161	Cuyama	Central Coast Valleys	3/7/2013	1300	66	0.01	0	869	8	52.8	58	38.7	4.4	308	53.6
162	Cuyama	Central Coast Valleys	3/7/2013	1400	66	0.02	0	1505	6.3	58	41	32.6	8.8	191	54.8
163	Cuyama	Central Coast Valleys	3/7/2013	1500	66	0.01	0	989	5.5	55.4	36	29.2	11.1	217	55.5
164	Cuyama	Central Coast Valleys	3/7/2013	1600	66	0.01	0	370	5.3	53.8	38	28.5	11.5	211	56.4
165	Cuyama	Central Coast Valleys	3/7/2013	1700	66	0	0	143	5	51.5	38	26.9	10.4	217	57
166	Cuyama	Central Coast Valleys	3/7/2013	1800	66	0	0	45	5.3	50.2	43	28.3	7.6	213	57.3
167	Cuyama	Central Coast Valleys	3/7/2013	1900	66	0	0	1	5.9	47.5	53	31.3	7.7	197	57.3
168	Cuyama	Central Coast Valleys	3/7/2013	2000	66	0	0	0	5.9	46	56	31.3	6	184	57.1
169	Cuyama	Central Coast Valleys	3/7/2013	2100	66	0	0	0	6	45.1	59	31.8	8.2	162	56.8
170	Cuyama	Central Coast Valleys	3/7/2013	2200	66	0	0	0	6.5	44.5	65	33.5	7	144	56.4
171	Cuyama	Central Coast Valleys	3/7/2013	2300	66	0	0	0	6.7	45	66	34.4	9.2	129	56
172	Cuyama	Central Coast Valleys	3/7/2013	2400	66	0	0	0	7	43.1	74	35.4	6.4	230	55.6

88	Cuyama	Central Coast Valleys	3/8/2013	100	67	0	0.05	0	7	38.2	89	35.4	8.2	283	57.5
88	Cuyama	Central Coast Valleys	3/8/2013	200	67	0	0.03	0	6.8	36.6	92	34.6	5.4	284	56.3
88	Cuyama	Central Coast Valleys	3/8/2013	300	67	0	0.01	0	6.9	37	93	35.1	2.6	237	56.1
88	Cuyama	Central Coast Valleys	3/8/2013	400	67	0	0	0	7	37.3	93	35.5	3.6	204	55.7
88	Cuyama	Central Coast Valleys	3/8/2013	500	67	0	0	0	7.1	37.6	93	35.7	3.2	197	55.7
88	Cuyama	Central Coast Valleys	3/8/2013	600	67	0	0.01	0	7.1	37.8	93	35.9	4.1	354	55.1
88	Cuyama	Central Coast Valleys	3/8/2013	700	67	0	0.02	6	7.1	37.9	92	35.9	2	291	54.3
88	Cuyama	Central Coast Valleys	3/8/2013	800	67	0	0.01	59	7.1	37.8	92	35.8	3.3	314	53.4
88	Cuyama	Central Coast Valleys	3/8/2013	900	67	0	0.01	291	7.1	37.8	92	35.8	4.2	221	53
88	Cuyama	Central Coast Valleys	3/8/2013	1000	67	0	0	602	7.4	39.3	91	36.8	3.5	177	52.4
88	Cuyama	Central Coast Valleys	3/8/2013	1100	67	0	0	594	7.6	41	87	37.5	2.2	7	52.5
88	Cuyama	Central Coast Valleys	3/8/2013	1200	67	0.01	0	771	7.8	43.1	80	37.4	2.4	325	53.7
88	Cuyama	Central Coast Valleys	3/8/2013	1300	67	0.01	0	1238	7.9	45.9	74	36.3	4	333	52.6
88	Cuyama	Central Coast Valleys	3/8/2013	1400	67	0.01	0.01	781	8.2	46.2	77	39.4	4.6	316	52.8
88	Cuyama	Central Coast Valleys	3/8/2013	1500	67	0	0.01	522	8.4	46	80	40.1	6.2	294	53.4
88	Cuyama	Central Coast Valleys	3/8/2013	1600	67	0	0	347	8.5	46.9	77	40.2	5.7	298	54.1
88	Cuyama	Central Coast Valleys	3/8/2013	1700	67	0	0	86	8.3	48.3	78	39.7	6.7	295	54.4
88	Cuyama	Central Coast Valleys	3/8/2013	1800	67	0	0	19	8.1	45.2	79	39.2	6.9	293	54.6
88	Cuyama	Central Coast Valleys	3/8/2013	1900	67	0	0	1	7.8	44.5	79	38.2	7	290	54.7
88	Cuyama	Central Coast Valleys	3/8/2013	2000	67	0	0	0	7.8	44	80	38.3	5.3	298	54.5
88	Cuyama	Central Coast Valleys	3/8/2013	2100	67	0	0	0	7.9	43.3	83	38.5	5.4	299	54.1
88	Cuyama	Central Coast Valleys	3/8/2013	2200	67	0	0	0	7.8	42.4	84	38	5.7	287	53.8
88	Cuyama	Central Coast Valleys	3/8/2013	2300	67	0	0	0	7.7	41.4	87	37.8	5.5	287	53.4
88	Cuyama	Central Coast Valleys	3/8/2013	2400	67	0	0	0	7.4	39.6	90	36.9	5.2	263	53
88	Cuyama	Central Coast Valleys	3/9/2013	100	68	0	0	0	7.3	38.7	91	36.5	4.1	264	52.7
88	Cuyama	Central Coast Valleys	3/9/2013	200	68	0	0	0	7.3	38.5	92	36.4	1.2	325	52.3
88	Cuyama	Central Coast Valleys	3/9/2013	300	68	0	0	0	7	37.4	92	35.3	1.5	247	51.8
88	Cuyama	Central Coast Valleys	3/9/2013	400	68	0	0	0	6.9	37.2	92	35	3.5	277	51
88	Cuyama	Central Coast Valleys	3/9/2013	500	68	0	0	0	6.8	37.2	91	34.7	2.1	302	50.5
88	Cuyama	Central Coast Valleys	3/9/2013	600	68	0	0	0	6.8	37.8	88	34.8	4.8	285	50.1
88	Cuyama	Central Coast Valleys	3/9/2013	700	68	0	0	13	6.7	38	86	34.2	4.5	288	49.7
88	Cuyama	Central Coast Valleys	3/9/2013	800	68	0	0	81	6.7	38.4	85	34.4	3.6	284	49.4
88	Cuyama	Central Coast Valleys	3/9/2013	900	68	0	0	267	6.9	40.1	82	35	3.2	302	49.1
88	Cuyama	Central Coast Valleys	3/9/2013	1000	68	0.01	0	665	6.9	41.8	76	34.9	3.7	317	48.9
88	Cuyama	Central Coast Valleys	3/9/2013	1100	68	0.01	0	881	7.1	43.5	74	35.9	4.3	119	49
88	Cuyama	Central Coast Valleys	3/9/2013	1200	68	0	0	545	7.3	44.2	74	36.5	4.6	126	49.3
88	Cuyama	Central Coast Valleys	3/9/2013	1300	68	0	0	458	7.4	45.2	73	36.9	4.3	119	49.9
88	Cuyama	Central Coast Valleys	3/9/2013	1400	68	0	0	439	7.7	46	73	37.8	5.9	110	50.3
88	Cuyama	Central Coast Valleys	3/9/2013	1500	68	0.01	0	696	8	47.5	71	38.7	6.8	77	50.6
88	Cuyama	Central Coast Valleys	3/9/2013	1600	68	0.01	0	522	7.6	48.3	66	37.5	6.2	8	51
88	Cuyama	Central Coast Valleys	3/9/2013	1700	68	0	0	479	7.3	48.6	62	36.4	6.9	0	51.3
88	Cuyama	Central Coast Valleys	3/9/2013	1800	68	0	0	173	7.4	47.5	66	36.9	5.2	63	51.7
88	Cuyama	Central Coast Valleys	3/9/2013	1900	68	0	0	3	7.4	44.2	75	36.7	4.1	141	51.9
88	Cuyama	Central Coast Valleys	3/9/2013	2000	68	0	0	0	7.2	41.2	81	35.9	4	204	51.9
88	Cuyama	Central Coast Valleys	3/9/2013	2100	68	0	0	0	6.7	38.7	84	34.3	4.1	103	51.7
88	Cuyama	Central Coast Valleys	3/9/2013	2200	68	0	0	0	6.5	36.8	88	33.5	5.9	120	51.4
88	Cuyama	Central Coast Valleys	3/9/2013	2300	68	0	0	0	6.2	35.6	89	32.4	5.8	117	50.9
88	Cuyama	Central Coast Valleys	3/9/2013	2400	68	0	0	0	5.9	33.9	90	31.3	5.6	103	50.4
88	Cuyama	Central Coast Valleys	3/10/2013	100	69	0	0	0	5.9	33.8	90	31.3	6.1	98	49.8
88	Cuyama	Central Coast Valleys	3/10/2013	200	69	0	0	0	5.9	33.6	90	31	5.7	116	49.2
88	Cuyama	Central Coast Valleys	3/10/2013	300	69	0	0	0	5.8	33.5	90	30.9	6.1	115	48.7
88	Cuyama	Central Coast Valleys	3/10/2013	400	69	0	0	0	5.7	33.1	89	30.3	6.6	109	48.1
88	Cuyama	Central Coast Valleys	3/10/2013	500	69	0	0	0	5.5	31.9	90	29.5	5.3	122	47.6
88	Cuyama	Central Coast Valleys	3/10/2013	600	69	0	0	0	5.6	33.2	90	30.5	6.1	106	47.1
88	Cuyama	Central Coast Valleys	3/10/2013	700	69	0	0	0	5.7	33.1	89	30.3	6.6	109	46.6
Averages										33.3	90	30.6	6.0		
88	Cuyama	Central Coast Valleys	3/10/2013	800	69	0	0	415	6.4	37.2	85	33.2	6.1	96	46.1
88	Cuyama	Central Coast Valleys	3/10/2013	900	69	0.01	0	843	7.5	44.9	74	37.2	6.9	99	45.8
88	Cuyama	Central Coast Valleys	3/10/2013	1000	69	0.01	0	1229	7.8	51.6	60	38.2	4.7	112	45.8
88	Cuyama	Central Coast Valleys	3/10/2013	1100	69	0.02	0	1528	7.3	57.4	45	36.5	3.2	110	46.4
88	Cuyama	Central Coast Valleys	3/10/2013	1200	69	0.02	0	1695	6.5	61.6	35	33.4	3.2	63	47.5
88	Cuyama	Central Coast Valleys	3/10/2013	1300	69	0.02	0	1728	7.3	63.5	36	36.3	4.8	341	49.3
88	Cuyama	Central Coast Valleys	3/10/2013	1400	69	0.02	0	1631	8	64.1	39	38.7	4.6	69	51.3
88	Cuyama	Central Coast Valleys	3/10/2013	1500	69	0.02	0	1406	7.9	65.5	37	38.6	4.8	344	53.2
88	Cuyama	Central Coast Valleys	3/10/2013	1600	69	0.01	0	1055	8.5	65.1	40	40.2	7	354	55.1
88	Cuyama	Central Coast Valleys	3/10/2013	1700	69	0.01	0	653	8.7	62.6	45	40.9	9.4	341	56.7
88	Cuyama	Central Coast Valleys	3/10/2013	1800	69	0	0	217	8.9	59	52	41.4	5	15	57.8
88	Cuyama	Central Coast Valleys	3/10/2013	1900	69	0	0	3	8.6	63.2	62	40.5	5	239	58.3
88	Cuyama	Central Coast Valleys	3/10/2013	2000	69	0	0	0	8.2	49.7	68	39.5	5.1	192	58.4
88	Cuyama	Central Coast Valleys	3/10/2013	2100	69	0	0	0	7.9	45.9	75	38.3	4.6	183	58.1
88	Cuyama	Central Coast Valleys	3/10/2013	2200	69	0	0	0	7.5	43.5	78	37.2	2.8	132	57.5
88	Cuyama	Central Coast Valleys	3/10/2013	2300	69	0	0	0	6.8	39.6	82	34.5	4.4	117	56.9
88	Cuyama	Central Coast Valleys	3/10/2013	2400	69	0	0	0	6.5	37.7	85	33.5	4.9	130	56.2
88	Cuyama	Central Coast Valleys	3/11/2013	100	70	0	0	0	6.1	36.5	83	31.8	6.7	109	55.4
88	Cuyama	Central Coast Valleys	3/11/2013	200	70	0	0	0	5.8	34.8	83	30	6.2	119	54.6
88	Cuyama	Central Coast Valleys	3/11/2013	300	70	0	0	0	5.1	32.8	82	27.8	5.4	123	53.7
88	Cuyama	Central Coast Valleys	3/11/2013	400	70	0	0	0	4.8	31.2	81	26.2	5.5	111	52.9
88	Cuyama	Central Coast Valleys	3/11/2013	500	70	0	0	0	4.9	31.9	80	26.5	4.8	97	52.1
88	Cuyama	Central Coast Valleys	3/11/2013	600	70	0	0	0	4.6	30.6	80	25.2	6.4	115	51.2
88	Cuyama	Central Coast Valleys	3/11/2013	700	70	0	0	58	4.8	31.2	80	25.9	3.5	161	50.5
Averages										32.0	81	26.9	5.0		
88	Cuyama	Central Coast Valleys	3/11/2013	800	70	0	0	427	5.6	37.5	74	29.9	4.4	72	49.7
88	Cuyama	Central Coast Valleys	3/11/2013	900	70	0.01	0	852	6.2	47.7	55	32.3	6.2	146	49.2
88	Cuyama	Central Coast Valleys	3/11/2013	1000	70	0.01	0	1229	6.9	56.5	44	35.1	3.6	324	49
88	Cuyama	Central Coast Valleys	3/11/2013	1100	70	0.02	0	1520	6.5	60.4	36	33.4	3.6	177	49.4

88	Cuyama	Central Coast Valleys	3/11/2013	1200	70	0.02	0	0	1697	8	63.4	30	31.5	3.9	52	50.8
89	Cuyama	Central Coast Valleys	3/11/2013	1300	70	0.02	0	0	1728	5.8	67.3	25	30.6	3.3	231	52.2
90	Cuyama	Central Coast Valleys	3/11/2013	1400	70	0.02	0	0	1619	7.1	69.3	29	35.6	5.4	357	54
91	Cuyama	Central Coast Valleys	3/11/2013	1500	70	0.02	0	0	1413	7.7	70.2	30	37.8	6.5	360	55.9
92	Cuyama	Central Coast Valleys	3/11/2013	1600	70	0.01	0	0	1065	7.7	69.9	31	37.7	8.3	347	57.7
93	Cuyama	Central Coast Valleys	3/11/2013	1700	70	0.01	0	0	650	7.8	66.5	35	38.1	11.0	344	59.2
94	Cuyama	Central Coast Valleys	3/11/2013	1800	70	0	0	0	213	7.9	62	42	38.4	6.5	94	60.3
95	Cuyama	Central Coast Valleys	3/11/2013	1900	70	0	0	0	2	7.7	55.7	51	37.9	5.5	148	60.8
96	Cuyama	Central Coast Valleys	3/11/2013	2000	70	0	0	0	0	8	52.4	60	38.8	6.7	181	60.8
97	Cuyama	Central Coast Valleys	3/11/2013	2100	70	0	0	0	0	7.9	49	66	38.3	5.1	164	60.4
98	Cuyama	Central Coast Valleys	3/11/2013	2200	70	0	0	0	0	7.5	45.8	72	37.3	4.3	157	59.9
99	Cuyama	Central Coast Valleys	3/11/2013	2300	70	0	0	0	0	7.3	42.7	78	36.3	3.9	137	59.2
100	Cuyama	Central Coast Valleys	3/11/2013	2400	70	0	0	0	0	7	40.8	81	35.4	4.2	109	58.5
101	Cuyama	Central Coast Valleys	3/12/2013	100	71	0	0	0	0	6.7	39.6	81	34.2	5	114	57.8
102	Cuyama	Central Coast Valleys	3/12/2013	200	71	0	0	0	0	6.5	38.9	80	33.4	5.6	122	57
103	Cuyama	Central Coast Valleys	3/12/2013	300	71	0	0	0	0	6.1	37.3	81	32.1	4	122	56.2
104	Cuyama	Central Coast Valleys	3/12/2013	400	71	0	0	0	0	6	36.6	82	31.5	5.2	118	55.4
105	Cuyama	Central Coast Valleys	3/12/2013	500	71	0	0	0	0	5.9	36.8	80	31.1	5.1	115	54.7
106	Cuyama	Central Coast Valleys	3/12/2013	600	71	0	0	0	0	5.6	35.6	80	30	4.2	112	54
107	Cuyama	Central Coast Valleys	3/12/2013	700	71	0	0	0	61	5.6	35.4	80	30	3.8	91	53.2
108	Cuyama	Central Coast Valleys	3/12/2013	800	71	0	0	0	424	6.6	42.5	72	34	4.5	84	52.6
109	Cuyama	Central Coast Valleys	3/12/2013	900	71	0.01	0	0	856	7.9	62.4	59	38.4	4.8	52	52.1
110	Cuyama	Central Coast Valleys	3/12/2013	1000	71	0.01	0	0	1227	7.9	61.6	42	38.4	4.9	64	52
111	Cuyama	Central Coast Valleys	3/12/2013	1100	71	0.02	0	0	1520	6.7	67	30	34.4	4.6	91	52.5
112	Cuyama	Central Coast Valleys	3/12/2013	1200	71	0.02	0	0	1693	7.6	71	29	37.5	4	346	53.6
113	Cuyama	Central Coast Valleys	3/12/2013	1300	71	0.02	0	0	1724	8.2	72.7	30	39.3	6	342	55.2
114	Cuyama	Central Coast Valleys	3/12/2013	1400	71	0.02	0	0	1625	8.2	74.2	28	39.3	7.1	337	57.1
115	Cuyama	Central Coast Valleys	3/12/2013	1500	71	0.02	0	0	1390	8.5	74.5	29	40.2	7.4	344	59
116	Cuyama	Central Coast Valleys	3/12/2013	1600	71	0.01	0	0	1048	9.2	73.7	32	42.3	5.3	58	60.8
117	Cuyama	Central Coast Valleys	3/12/2013	1700	71	0.01	0	0	840	8.8	72.4	32	41.2	7.9	347	62.3
118	Cuyama	Central Coast Valleys	3/12/2013	1800	71	0	0	0	209	9.1	68.4	38	42.2	7.6	13	63.3 Y
119	Cuyama	Central Coast Valleys	3/12/2013	1900	71	0	0	0	3	9.7	61.6	52	43.8	7.9	136	63.7 Y
120	Cuyama	Central Coast Valleys	3/12/2013	2000	71	0	0	0	0	9.8	57.2	61	44.1	7.3	159	63.8 Y
121	Cuyama	Central Coast Valleys	3/12/2013	2100	71	0	0	0	0	9.7	54.8	66	43.7	5.9	111	63.4 Y
122	Cuyama	Central Coast Valleys	3/12/2013	2200	71	0	0	0	0	9	50	73	41.7	4	147	62.9
123	Cuyama	Central Coast Valleys	3/12/2013	2300	71	0	0	0	0	8.4	47.1	76	40.1	4.3	122	62.3
124	Cuyama	Central Coast Valleys	3/12/2013	2400	71	0	0	0	0	8.3	45.8	79	39.8	3	115	61.6
125	Cuyama	Central Coast Valleys	3/13/2013	100	72	0	0	0	0	7.9	45.7	75	38.4	5.1	117	60.9
126	Cuyama	Central Coast Valleys	3/13/2013	200	72	0	0	0	0	7.5	44.5	75	37.2	5.8	118	60.2
127	Cuyama	Central Coast Valleys	3/13/2013	300	72	0	0	0	0	7.2	44.1	74	36.2	7.1	111	59.4
128	Cuyama	Central Coast Valleys	3/13/2013	400	72	0	0	0	0	7	42.6	76	35.5	4.9	118	58.7
129	Cuyama	Central Coast Valleys	3/13/2013	500	72	0	0	0	0	7	41.6	79	35.5	4.1	96	58
130	Cuyama	Central Coast Valleys	3/13/2013	600	72	0	0	0	0	6.8	40.9	78	34.5	5.7	109	57.3
131	Cuyama	Central Coast Valleys	3/13/2013	700	72	0	0	0	64	6.7	42	74	34.4	5.1	122	56.6
132	Cuyama	Central Coast Valleys	3/13/2013	800	72	0	0	0	436	7.9	48.2	69	38.3	5.6	97	55.9
133	Cuyama	Central Coast Valleys	3/13/2013	900	72	0.01	0	0	866	8.6	59	51	40.7	5	75	55.5
134	Cuyama	Central Coast Valleys	3/13/2013	1000	72	0.02	0	0	1250	8.3	67.6	36	39.8	4	72	55.4
135	Cuyama	Central Coast Valleys	3/13/2013	1100	72	0.02 Y	0	0	1547	7	75.5 Y	23 Y	35.3 Y	3.6	86	55.9
136	Cuyama	Central Coast Valleys	3/13/2013	1200	72	0.02 Y	0	0	1722	6.9	80 Y	20 Y	34.9 Y	2.7	342	57
137	Cuyama	Central Coast Valleys	3/13/2013	1300	72	0.02 Y	0	0	1757	5.9	82.9 Y	15 Y	31.2 Y	3.6	301	58.7
138	Cuyama	Central Coast Valleys	3/13/2013	1400	72	0.02 Y	0	0	1656	5.9	84.7 Y	15 Y	31.3 Y	5.4	304	60.6
139	Cuyama	Central Coast Valleys	3/13/2013	1500	72	0.02 Y	0	0	1400	9	82.4 Y	24 Y	41.7 Y	11.4	340	62.6 Y
140	Cuyama	Central Coast Valleys	3/13/2013	1600	72	0.02 Y	0	0	1060	8.8	80.9 Y	24 Y	41.1 Y	11.4	345	64.5 Y
141	Cuyama	Central Coast Valleys	3/13/2013	1700	72	0.01 Y	0	0	640	9.1	77.3 Y	28 Y	42 Y	8.4	348	66 Y
142	Cuyama	Central Coast Valleys	3/13/2013	1800	72	0 Y	0	0	218	9.5	73.2 Y	34 Y	43.3 Y	5.6	120	67 Y
143	Cuyama	Central Coast Valleys	3/13/2013	1900	72	0	0	0	3	10.6	64.5	51	46.1	5	164	67.4 Y
144	Cuyama	Central Coast Valleys	3/13/2013	2000	72	0	0	0	0	9.6	59.1	56	43.3	2.4	186	67.4 Y
145	Cuyama	Central Coast Valleys	3/13/2013	2100	72	0	0	0	0	9.2	55.9	60	42.4	2.9	126	67 Y
146	Cuyama	Central Coast Valleys	3/13/2013	2200	72	0	0	0	0	9	52.9	66	41.7	4.6	133	66.4 Y
147	Cuyama	Central Coast Valleys	3/13/2013	2300	72	0	0	0	0	8.6	51.5	67	40.7	5	129	65.7 Y
148	Cuyama	Central Coast Valleys	3/13/2013	2400	72	0	0	0	0	8	50.6	64	38.8	6.3	115	64.9 Y
149	Cuyama	Central Coast Valleys	3/14/2013	100	73	0	0	0	0	7.7	48.9	65	37.7	5.9	135	64.1 Y
150	Cuyama	Central Coast Valleys	3/14/2013	200	73	0	0	0	0	7.6	47.2	69	37.6	5.3	117	63.3 Y
151	Cuyama	Central Coast Valleys	3/14/2013	300	73	0	0	0	0	7.4	45.9	70	36.9	5.4	115	62.5 Y
152	Cuyama	Central Coast Valleys	3/14/2013	400	73	0	0	0	0	7.6	45.1	74	37.3	5.1	114	61.7 Y
153	Cuyama	Central Coast Valleys	3/14/2013	500	73	0	0	0	0	7.2	45.1	70	38	8.9	102	60.9
154	Cuyama	Central Coast Valleys	3/14/2013	600	73	0	0	0	0	7.2	44.9	71	36	6.4	97	60.2
155	Cuyama	Central Coast Valleys	3/14/2013	700	73	0	0	0	68	6.8	46.6	63	34.7	5.7	124	59.5
156	Cuyama	Central Coast Valleys	3/14/2013	800	73	0	0	0	448	8.2	51.8	62	39.3	6.1	107	58.8
157	Cuyama	Central Coast Valleys	3/14/2013	900	73	0.01	0	0	878	9	61.2	49	41.8	5.6	91	58.3
158	Cuyama	Central Coast Valleys	3/14/2013	1000	73	0.02 Y	0	0	1267	8.6	70.9 Y	33 Y	40.5 Y	3	125	58.2
159	Cuyama	Central Coast Valleys	3/14/2013	1100	73	0.02 Y	0	0	1481	8	78.2 Y	26 Y	38.6 Y	3.7	315	58.7
160	Cuyama	Central Coast Valleys	3/14/2013	1200	73	0.03 Y	0	0	1753	7.5	82.6 Y	20 Y	37.2 Y	5.6	305	59.9
161	Cuyama	Central Coast Valleys	3/14/2013	1300	73	0.03 Y	0	0	1712	6.8	85.8 Y	16 Y	34.8 Y	5.5	299	61.5 Y
162	Cuyama	Central Coast Valleys	3/14/2013	1400	73	0.03 Y	0	0	1590	8.5	85.4 Y	20 Y	40.3 Y	9.8	331	63.4 Y
163	Cuyama	Central Coast Valleys	3/14/2013	1500	73	0.02 Y	0	0	1259	10.8	82.5 Y	29 Y	46.7 Y	13.6	342	65.3 Y
164	Cuyama	Central Coast Valleys	3/14/2013	1600	73	0.02 Y	0	0	897	11.1	79.7 Y	32 Y	47.4 Y	10.7	355	67 Y
165	Cuyama	Central Coast Valleys	3/14/2013	1700	73	0.01 Y	0	0	547	11.3	77.8 Y	35 Y	47.8 Y	7.2	2	68.3 Y
166	Cuyama	Central Coast Valleys	3/14/2013	1800	73	0 Y	0	0	137	11.7	74.1 Y	40 Y	48.6 Y	4	317	69.1 R
167	Cuyama	Central Coast Valleys	3/14/2013	1900	73	0 Y	0	0	2	9.2	68.3 Y	39 Y	42.4 Y	2.7	181	69.4 R
168	Cuyama	Central Coast Valleys	3/14/2013	2000	73	0 Y	0	0	0	11.6	82.8 Y	60 Y	48.9 Y	4.7	166	69.4 R
169	Cuyama	Central Coast Valleys	3/14/2013	2100	73	0 Y	0	0	0	10.9	60.1 Y	61 Y	46.8 Y	3	179	69 Y
170	Cuyama	Central Coast Valleys	3/14/2013	2200	73	0	0	0	0	10.7	58.9	68	46.3	3.6	157	68.5 Y
171	Cuyama	Central Coast Valleys	3/14/2013	2300	73	0 Y	0	0	0	10.7	59.2 Y	62 Y	46.2 Y	4.6	104	67.8 Y
172	Cuyama	Central Coast Valleys	3/14/2013	2400	73	0 Y	0	0	0	10.6	57.1 Y	66 Y	46 Y	2.5	147	67.1 Y

88	Cuyama	Central Coast Valleys	3/15/2013	100	74	0	0	0	10.9	55.8	72	46.8	3.7	120	66.4	Y
88	Cuyama	Central Coast Valleys	3/15/2013	200	74	0	0	0	10.8	55.3	72	46.5	3.4	71	65.8	Y
88	Cuyama	Central Coast Valleys	3/15/2013	300	74	0	0	0	10.9	54.1	76	46.7	3.9	102	65.1	Y
88	Cuyama	Central Coast Valleys	3/15/2013	400	74	0	0	0	10.1	50.8	80	44.8	2.3	88	64.4	Y
88	Cuyama	Central Coast Valleys	3/15/2013	500	74	0	0	0	10.1	50.7	80	44.8	4.3	84	63.8	Y
88	Cuyama	Central Coast Valleys	3/15/2013	600	74	0	0	0	9.2	47.5	82	42.2	2.9	93	63.2	Y
88	Cuyama	Central Coast Valleys	3/15/2013	700	74	0	0	49	9.9	48	86	44.2	3.6	140	62.5	Y
88	Cuyama	Central Coast Valleys	3/15/2013	800	74	0	0	382	10	49.9	82	44.5	4.8	85	61.9	Y
88	Cuyama	Central Coast Valleys	3/15/2013	900	74	0.01	0	823	11.7	58	71	48.7	6.1	70	61.4	Y
88	Cuyama	Central Coast Valleys	3/15/2013	1000	74	0.02	0	1224	11.4	64.6	55	48	6.4	108	61.2	Y
88	Cuyama	Central Coast Valleys	3/15/2013	1100	74	0.02	0	1510	12	68.3	51	49.5	4.5	50	61.5	Y
88	Cuyama	Central Coast Valleys	3/15/2013	1200	74	0.02	0	1695	11.5	71.9	43	48.2	3.3	228	62.3	Y
88	Cuyama	Central Coast Valleys	3/15/2013	1300	74	0.02	0	1737	11.1	75.7	37	47.2	4.7	57	63.6	Y
88	Cuyama	Central Coast Valleys	3/15/2013	1400	74	0.03	0	1586	9.9	76	32	44.2	11.2	339	65.2	Y
88	Cuyama	Central Coast Valleys	3/15/2013	1500	74	0.02	0	1374	9.7	74.8	33	43.7	9.6	359	66.6	Y
88	Cuyama	Central Coast Valleys	3/15/2013	1600	74	0.02	0	944	9.5	73.7	33	43.2	10.1	343	68.4	R
88	Cuyama	Central Coast Valleys	3/15/2013	1700	74	0.01	0	455	9.5	71.2	36	43.2	10.7	348	69.5	R
88	Cuyama	Central Coast Valleys	3/15/2013	1800	74	0	0	114	10.2	68	44	45.2	6.7	66	70.1	R
88	Cuyama	Central Coast Valleys	3/15/2013	1900	74	0	0	3	10.6	63.4	53	46.1	5.5	127	70.3	R
88	Cuyama	Central Coast Valleys	3/15/2013	2000	74	0	0	0	10.4	59.4	60	45.5	4.3	139	70	R
88	Cuyama	Central Coast Valleys	3/15/2013	2100	74	0	0	0	10.1	58.2	61	44.9	4	149	69.5	R
88	Cuyama	Central Coast Valleys	3/15/2013	2200	74	0	0	0	9.7	56.2	63	43.7	4.4	178	68.9	Y
88	Cuyama	Central Coast Valleys	3/15/2013	2300	74	0	0	0	9.6	53.9	68	43.4	5.7	169	68.2	Y
88	Cuyama	Central Coast Valleys	3/15/2013	2400	74	0	0	0	8.9	50.5	71	41.4	2.9	123	67.4	Y
88	Cuyama	Central Coast Valleys	3/16/2013	100	75	0	0	0	8.9	48	78	41.4	4.3	114	66.7	Y
88	Cuyama	Central Coast Valleys	3/16/2013	200	75	0	0	0	8.5	46.5	79	40.2	4.8	113	65.8	Y
88	Cuyama	Central Coast Valleys	3/16/2013	300	75	0	0	0	8.1	44.6	81	39.1	4.2	124	65	Y
88	Cuyama	Central Coast Valleys	3/16/2013	400	75	0	0	0	7.2	43.1	76	38	3.2	134	64.2	Y
88	Cuyama	Central Coast Valleys	3/16/2013	500	75	0	0	0	6.8	42.9	72	34.5	3.7	129	63.4	Y
88	Cuyama	Central Coast Valleys	3/16/2013	600	75	0	0	0	6.8	41.4	77	34.8	4.3	82	62.6	Y
88	Cuyama	Central Coast Valleys	3/16/2013	700	75	0	0	70	7.4	41.9	81	36.7	5.5	113	61.8	Y
88	Cuyama	Central Coast Valleys	3/16/2013	800	75	0	0	426	8.9	48.4	77	41.4	5.2	72	61.1	Y
88	Cuyama	Central Coast Valleys	3/16/2013	900	75	0.01	0	858	10.4	56.8	66	45.7	6	75	60.5	Y
88	Cuyama	Central Coast Valleys	3/16/2013	1000	75	0.02	0	1241	10.7	63.3	54	46.4	5.6	100	60.3	Y
88	Cuyama	Central Coast Valleys	3/16/2013	1100	75	0.02	0	1530	10	66.3	45	44.6	5	114	60.6	Y
88	Cuyama	Central Coast Valleys	3/16/2013	1200	75	0.02	0	1708	9.1	68.7	38	42.1	7.6	351	61.4	Y
88	Cuyama	Central Coast Valleys	3/16/2013	1300	75	0.02	0	1751	8.4	69.6	34	39.9	8.4	347	62.7	Y
88	Cuyama	Central Coast Valleys	3/16/2013	1400	75	0.02	0	1660	8	70.9	31	38.6	8.9	345	64.3	Y
88	Cuyama	Central Coast Valleys	3/16/2013	1500	75	0.02	0	1429	7.7	71.7	29	37.8	7.6	345	65.8	Y
88	Cuyama	Central Coast Valleys	3/16/2013	1600	75	0.02	0	1095	7.5	71.7	28	37.2	9.1	348	67.3	Y
88	Cuyama	Central Coast Valleys	3/16/2013	1700	75	0.01	0	668	7.1	70.7	28	35.9	9.1	337	68.5	R
88	Cuyama	Central Coast Valleys	3/16/2013	1800	75	0.01	0	225	7.2	68.2	31	36.2	8	338	69.2	R
88	Cuyama	Central Coast Valleys	3/16/2013	1900	75	0	0	5	6.8	63.8	34	34.7	4.7	3	69.4	R
88	Cuyama	Central Coast Valleys	3/16/2013	2000	75	0	0	0	7.3	59.1	43	36.5	4.4	41	69.2	Y
88	Cuyama	Central Coast Valleys	3/16/2013	2100	75	0	0	0	7.9	54.1	55	38.4	3.7	94	68.8	Y
88	Cuyama	Central Coast Valleys	3/16/2013	2200	75	0	0	0	7.8	51	61	38.1	3.8	165	68.1	Y
88	Cuyama	Central Coast Valleys	3/16/2013	2300	75	0	0	0	7.9	49.2	66	38.4	3.3	87	67.4	Y
88	Cuyama	Central Coast Valleys	3/16/2013	2400	75	0	0	0	7.9	47.2	72	38.5	3.6	176	68.6	Y
88	Cuyama	Central Coast Valleys	3/17/2013	100	76	0	0	0	7.7	46.6	71	37.8	3.8	146	65.7	Y
88	Cuyama	Central Coast Valleys	3/17/2013	200	76	0	0	0	7.3	45.7	70	36.4	3.3	101	64.9	Y
88	Cuyama	Central Coast Valleys	3/17/2013	300	76	0	0	0	7.4	44.5	74	36.7	4.1	137	64.1	Y
88	Cuyama	Central Coast Valleys	3/17/2013	400	76	0	0	0	7.2	46.8	66	38	5.7	147	63.3	Y
88	Cuyama	Central Coast Valleys	3/17/2013	500	76	0	0	0	6.9	45	67	34.9	4.2	146	62.5	Y
88	Cuyama	Central Coast Valleys	3/17/2013	600	76	0	0	0	6.4	42.5	70	33.3	3.8	93	61.8	Y
88	Cuyama	Central Coast Valleys	3/17/2013	700	76	0	0	60	6.3	40.5	74	32.8	4.2	93	61.1	Y
88	Cuyama	Central Coast Valleys	3/17/2013	800	76	0	0	471	7.4	48.6	64	38.9	5.8	113	60.4	Y
88	Cuyama	Central Coast Valleys	3/17/2013	900	76	0.01	0	882	6.9	57.1	43	34.9	8.4	109	59.8	Y
88	Cuyama	Central Coast Valleys	3/17/2013	1000	76	0.02	0	1261	7.4	59.4	43	36.9	9.5	81	59.6	Y
88	Cuyama	Central Coast Valleys	3/17/2013	1100	76	0.02	0	1553	7.5	62.2	39	37.1	7.7	86	59.8	Y
88	Cuyama	Central Coast Valleys	3/17/2013	1200	76	0.02	0	1706	7.3	64.7	35	36.8	8.5	348	60.5	Y
88	Cuyama	Central Coast Valleys	3/17/2013	1300	76	0.02	0	1747	7.3	66.4	33	36.5	7.7	5	61.7	Y
88	Cuyama	Central Coast Valleys	3/17/2013	1400	76	0.02	0	1679	6.9	67	31	35.1	11.5	340	63.1	Y
88	Cuyama	Central Coast Valleys	3/17/2013	1500	76	0.02	0	1435	6.9	67.1	30	34.9	10	347	64.5	Y
88	Cuyama	Central Coast Valleys	3/17/2013	1600	76	0.02	0	1107	6.6	67	29	33.9	9.6	348	65.9	Y
88	Cuyama	Central Coast Valleys	3/17/2013	1700	76	0.01	0	587	6.3	65.8	29	32.9	9.1	358	66.9	Y
88	Cuyama	Central Coast Valleys	3/17/2013	1800	76	0	0	181	6.1	63.6	30	32	7.4	13	67.6	Y
88	Cuyama	Central Coast Valleys	3/17/2013	1900	76	0	0	3	6.8	58.1	41	34.6	4.1	88	67.8	Y
88	Cuyama	Central Coast Valleys	3/17/2013	2000	76	0	0	0	7.2	54	51	36.2	5.1	153	67.8	Y
88	Cuyama	Central Coast Valleys	3/17/2013	2100	76	0	0	0	6.9	50.5	55	35.1	4.7	177	67.1	Y
88	Cuyama	Central Coast Valleys	3/17/2013	2200	76	0	0	0	6.9	47.4	62	34.9	4.5	109	66.4	Y
88	Cuyama	Central Coast Valleys	3/17/2013	2300	76	0	0	0	6.5	43.4	68	33.5	3.2	152	65.7	Y
88	Cuyama	Central Coast Valleys	3/17/2013	2400	76	0	0	0	6.7	42.7	71	34.2	3.4	114	64.9	Y
88	Cuyama	Central Coast Valleys	3/18/2013	100	77	0	0	0	6.1	41.3	70	32.1	4.6	112	64.1	Y
88	Cuyama	Central Coast Valleys	3/18/2013	200	77	0	0	0	5.8	40.5	68	30.8	3	95	63.3	Y
88	Cuyama	Central Coast Valleys	3/18/2013	300	77	0	0	0	5.9	39.5	72	31.2	3.4	115	62.5	Y
88	Cuyama	Central Coast Valleys	3/18/2013	400	77	0	0	0	5.8	37.3	77	30.7	4.3	95	61.7	Y
88	Cuyama	Central Coast Valleys	3/18/2013	500	77	0	0	0	5.9	37.6	77	31	4.4	107	60.9	Y
88	Cuyama	Central Coast Valleys	3/18/2013	600	77	0	0	0	5.8	35.6	80	30	3	108	60.1	Y
88	Cuyama	Central Coast Valleys	3/18/2013	700	77	0	0	92	5.8	36.5	80	30.9	4.8	78	59.3	Y
88	Cuyama	Central Coast Valleys	3/18/2013	800	77	0	0	478	6.8	44.3	67	34	6.4	82	58.6	Y
88	Cuyama	Central Coast Valleys	3/18/2013	900	77	0.01	0	900	7	53.2	50	35.3	6.4	74	58.1	Y
88	Cuyama	Central Coast Valleys	3/18/2013	1000	77	0.02	0	1306	5.9	60.1	33	31	5	120	57.9	Y
88	Cuyama	Central Coast Valleys	3/18/2013	1100	77	0.02	0	1592	6.3	64.1	31	32.6	4.4	118	58.2	Y
88	Cuyama	Central Coast Valleys	3/18/2013	1200	77	0.02	0	1464	6.4	66.9	29	33.3	4	118	59.2	Y
88	Cuyama	Central Coast Valleys	3/18/2013	1300	77	0.02	0	1222	6.7	67.1	29	34.2	6.4	98	60.6	Y

88	Cuyama	Central Coast Valleys	3/18/2013	1400	77	0.02	0	0	1053	6.4	67.7	28	33.2	6.5	123	62	Y		
89	Cuyama	Central Coast Valleys	3/18/2013	1500	77	0.01	0	0	671	6.1	67.4	27	32.1	5.3	97	63.1	Y		
90	Cuyama	Central Coast Valleys	3/18/2013	1600	77	0.01	0	0	484	6	67.2	26	31.6	5.9	112	64	Y		
91	Cuyama	Central Coast Valleys	3/18/2013	1700	77	0.01	0	0	230	6.7	65	32	34.2	6	95	64.6	Y		
92	Cuyama	Central Coast Valleys	3/18/2013	1800	77	0	0	0	82	7.1	62.2	37	35.7	4.9	91	64.9	Y		
93	Cuyama	Central Coast Valleys	3/18/2013	1900	77	0	0	0	2	7.4	59.8	42	36.9	4.4	131	65	Y		
94	Cuyama	Central Coast Valleys	3/18/2013	2000	77	0	0	0	0	7.3	57.9	44	36.3	4.3	212	64.9	Y		
95	Cuyama	Central Coast Valleys	3/18/2013	2100	77	0	0	0	0	8.4	57.1	53	40.1	4.5	257	64.7	Y		
96	Cuyama	Central Coast Valleys	3/18/2013	2200	77	0	0	0	0	8.1	52.8	60	39.1	3.6	148	64.3	Y		
97	Cuyama	Central Coast Valleys	3/18/2013	2300	77	0	0	0	0	8.3	51.5	64	39.7	3.7	133	63.9	Y		
98	Cuyama	Central Coast Valleys	3/18/2013	2400	77	0	0	0	0	8	51.9	61	38.9	3	98	63.4	Y		
99	Cuyama	Central Coast Valleys	3/19/2013	100	78	0	0	0	0	7.5	50	61	37.2	3.5	128	63	Y		
100	Cuyama	Central Coast Valleys	3/19/2013	200	78	0	0	0	0	7.7	50.3	62	37.9	2	167	62.5	Y		
101	Cuyama	Central Coast Valleys	3/19/2013	300	78	0	0	0	0	7.6	47.2	69	37.4	3.1	109	62	Y		
102	Cuyama	Central Coast Valleys	3/19/2013	400	78	0	0	0	0	7.6	46	72	37.4	3.3	103	61.6			
103	Cuyama	Central Coast Valleys	3/19/2013	500	78	0	0	0	0	6.9	43.2	72	35	3.6	119	61.1			
104	Cuyama	Central Coast Valleys	3/19/2013	600	78	0	0	0	0	6.4	41.5	72	33.2	4.4	112	60.6			
105	Cuyama	Central Coast Valleys	3/19/2013	700	78	0	0	0	94	6.3	40.7	73	32.9	3.9	91	60			
106	Cuyama	Central Coast Valleys	3/19/2013	800	78	0	0	0	473	7	47.9	62	35.5	5.1	96	59.5			
107	Cuyama	Central Coast Valleys	3/19/2013	900	78	0.01	0	0	656	7.6	56.2	49	37.3	4.9	64	59			
108	Cuyama	Central Coast Valleys	3/19/2013	1000	78	0.02	0	0	1237	7.1	62.8	37	35.9	3.9	80	58.9			
109	Cuyama	Central Coast Valleys	3/19/2013	1100	78	0.02	0	0	1512	6.4	67.6	27	33.1	3.6	100	59.4			
110	Cuyama	Central Coast Valleys	3/19/2013	1200	78	0.02	0	0	1598	6.7	70.8	26	34.2	4.8	105	60.3	Y		
111	Cuyama	Central Coast Valleys	3/19/2013	1300	78	0.02	0	0	1720	7.1	72	26	35.7	6.4	351	61.7	Y		
112	Cuyama	Central Coast Valleys	3/19/2013	1400	78	0.02	0	0	1652	7.2	73.2	26	38	6.6	351	63.3	Y		
113	Cuyama	Central Coast Valleys	3/19/2013	1500	78	0.02	0	0	1406	6.9	73.6	24	35.1	6.7	352	64.9	Y		
114	Cuyama	Central Coast Valleys	3/19/2013	1600	78	0.02	0	0	1174	7	73.7	25	35.3	5.7	20	66.4	Y		
115	Cuyama	Central Coast Valleys	3/19/2013	1700	78	0.01	0	0	572	7.8	70.1	31	38.2	7.4	68	67.7	Y		
116	Cuyama	Central Coast Valleys	3/19/2013	1800	78	0	0	0	217	8.2	68.8	34	39.3	5.4	318	68.5	Y		
117	Cuyama	Central Coast Valleys	3/19/2013	1900	78	0	0	0	3	7.9	63.9	39	36.4	6	275	68.9	Y		
118	Cuyama	Central Coast Valleys	3/19/2013	2000	78	0	0	0	0	7.8	61.4	42	36.1	5.9	276	68.9	Y		
119	Cuyama	Central Coast Valleys	3/19/2013	2100	78	0	0	0	0	7.9	59.4	46	36.5	5.5	269	68.6	Y		
120	Cuyama	Central Coast Valleys	3/19/2013	2200	78	0	Y	0	0	8	58.1	Y	49	Y	38.8	Y	250	68.2	Y
121	Cuyama	Central Coast Valleys	3/19/2013	2300	78	0	0	0	0	8	56.6	51	36.6	2.2	244	67.7	Y		
122	Cuyama	Central Coast Valleys	3/19/2013	2400	78	0	0	0	0	8.2	54.9	55	39.3	2	263	67.2	Y		
123	Cuyama	Central Coast Valleys	3/20/2013	100	79	0	0	0	0	8	55.3	54	38.8	4.5	56	66.6	Y		
124	Cuyama	Central Coast Valleys	3/20/2013	200	79	0	0	0	0	8.5	53	62	40.5	9.2	134	66	Y		
125	Cuyama	Central Coast Valleys	3/20/2013	300	79	0	0	0	0	8.8	50.7	69	41.1	5.9	130	65.4	Y		
126	Cuyama	Central Coast Valleys	3/20/2013	400	79	0	0	0	0	8.5	47.4	76	40.4	3.8	132	64.8	Y		
127	Cuyama	Central Coast Valleys	3/20/2013	500	79	0	0	0	0	8	45.2	79	38.9	2.4	171	64.1	Y		
128	Cuyama	Central Coast Valleys	3/20/2013	600	79	0	0	0	0	7.7	47	70	37.9	4.8	201	63.5	Y		
129	Cuyama	Central Coast Valleys	3/20/2013	700	79	0	0	0	65	7.9	45.3	77	38.6	3.9	125	62.9	Y		
130	Cuyama	Central Coast Valleys	3/20/2013	800	79	0	0	0	279	8.8	49.2	74	41.3	5	86	62.2	Y		
131	Cuyama	Central Coast Valleys	3/20/2013	900	79	0.01	0	0	551	9.1	54.6	63	42.1	3.4	118	61.7	Y		
132	Cuyama	Central Coast Valleys	3/20/2013	1000	79	0.01	0	0	864	9.8	59.7	56	44	3.3	291	61.4	Y		
133	Cuyama	Central Coast Valleys	3/20/2013	1100	79	0.02	0	0	1346	9.3	64.5	45	42.6	3.7	327	61.4	Y		
134	Cuyama	Central Coast Valleys	3/20/2013	1200	79	0.02	0	0	1388	8.6	67.5	37	40.5	4.2	313	62	Y		
135	Cuyama	Central Coast Valleys	3/20/2013	1300	79	0.01	0	0	935	8.1	68.1	35	39.1	4.2	278	63	Y		
136	Cuyama	Central Coast Valleys	3/20/2013	1400	79	0.02	0	0	1501	8.6	69.9	34	40.6	6	334	64.2	Y		
137	Cuyama	Central Coast Valleys	3/20/2013	1500	79	0.01	0	0	794	9.3	68.2	39	42.6	8.3	335	65.3	Y		
138	Cuyama	Central Coast Valleys	3/20/2013	1600	79	0.01	0	0	415	9.2	67	41	42.3	7.8	350	66.4	Y		
139	Cuyama	Central Coast Valleys	3/20/2013	1700	79	0	0	0	188	9.5	65	45	43.2	8.8	352	67.2	Y		
140	Cuyama	Central Coast Valleys	3/20/2013	1800	79	0	0	0	81	10.4	62.2	55	45.7	5.1	76	67.6	Y		
141	Cuyama	Central Coast Valleys	3/20/2013	1900	79	0	0	0	7	10.2	60.5	57	45.1	3.3	141	67.7	Y		
142	Cuyama	Central Coast Valleys	3/20/2013	2000	79	0	0	0	0	10.1	57.4	63	44.8	3.8	174	67.5	Y		
143	Cuyama	Central Coast Valleys	3/20/2013	2100	79	0	0	0	0	9.6	55.1	65	43.5	2	254	67.2	Y		
144	Cuyama	Central Coast Valleys	3/20/2013	2200	79	0	0	0	0	8.9	51.7	68	41.5	1.8	198	66.7	Y		
145	Cuyama	Central Coast Valleys	3/20/2013	2300	79	0	0	0	0	8.5	48.5	73	40.3	3.4	175	66.1	Y		
146	Cuyama	Central Coast Valleys	3/20/2013	2400	79	0	0	0	0	8.4	47.1	76	40	3.6	137	65.5	Y		
147	Cuyama	Central Coast Valleys	3/21/2013	100	80	0	0	0	0	8.4	47.2	76	40.1	3.2	186	64.8	Y		
148	Cuyama	Central Coast Valleys	3/21/2013	200	80	0	0	0	0	8.4	48.2	73	39.9	2.7	129	64.1	Y		
149	Cuyama	Central Coast Valleys	3/21/2013	300	80	0	0	0	0	9.2	50.4	74	42.2	3.3	63	63.5	Y		
150	Cuyama	Central Coast Valleys	3/21/2013	400	80	0	0	0	0	10	51.4	77	44.5	3.7	84	62.9	Y		
151	Cuyama	Central Coast Valleys	3/21/2013	500	80	0	0	0	0	9.9	50.5	79	44.4	3.5	114	62.4	Y		
152	Cuyama	Central Coast Valleys	3/21/2013	600	80	0	0	0	0	10.1	49.8	83	44.8	4.5	94	61.9	Y		
153	Cuyama	Central Coast Valleys	3/21/2013	700	80	0	0	0	15	10.6	50.7	86	46.6	7	72	61.4	Y		
154	Cuyama	Central Coast Valleys	3/21/2013	800	80	0	0	0	101	10.9	50.2	88	46.9	7.3	68	61.1	Y		
155	Cuyama	Central Coast Valleys	3/21/2013	900	80	0	0	0	201	11.3	50.4	90	47.7	7.5	57	60.7	Y		
156	Cuyama	Central Coast Valleys	3/21/2013	1000	80	0.01	0	0	588	11.1	50.6	89	47.4	6.8	4	60.5	Y		
157	Cuyama	Central Coast Valleys	3/21/2013	1100	80	0.01	0	0	635	11.1	52.6	82	47.3	8.4	344	60.4	Y		
158	Cuyama	Central Coast Valleys	3/21/2013	1200	80	0.01	0	0	860	11.1	54.1	78	47.3	7.5	355	60.5	Y		
159	Cuyama	Central Coast Valleys	3/21/2013	1300	80	0.01	0	0	941	10.8	55.4	72	46.6	7.3	74	60.8	Y		
160	Cuyama	Central Coast Valleys	3/21/2013	1400	80	0.01	0	0	1277	10.4	57.1	65	45.5	5.8	87	61.3	Y		
161	Cuyama	Central Coast Valleys	3/21/2013	1500	80	0.02	0	0	1284	10.5	58.6	62	45.8	7.6	62	61.9	Y		
162	Cuyama	Central Coast Valleys	3/21/2013	1600	80	0.01	0	0	1021	10.3	59	60	45.2	8.8	10	62.6	Y		
163	Cuyama	Central Coast Valleys	3/21/2013	1700	80	0.01	0	0	752	10.1	58.3	61	44.7	7.4	30	63.4	Y		
164	Cuyama	Central Coast Valleys	3/21/2013	1800	80	0	0	0	261	9.9	56.4	63	44.2	8	132	64.1	Y		
165	Cuyama	Central Coast Valleys	3/21/2013	1900	80	0	0	0	8	9.8	53.3	69	43.3	4.6	124	64.4	Y		
166	Cuyama	Central Coast Valleys	3/21/2013	2000	80	0	0	0	0	9.3	51.1	73	42.7	4.3	150	64.4	Y		
167	Cuyama	Central Coast Valleys	3/21/2013	2100	80	0	0	0	0	8.7	47.7	77	40.9	2.5	146	64.1	Y		
168	Cuyama	Central Coast Valleys	3/21/2013	2200	80	0	0	0	0	8.3	45.3	77	39.6	2.3	129	63.7	Y		
169	Cuyama	Central Coast Valleys	3/21/2013	2300	80	0	0	0	0	7	45.7	87	35.5	3.7	82	63.1	Y		
170	Cuyama	Central Coast Valleys	3/21/2013	2400	80	0	0	0	0	7.4	45.2	72	38.8	4.7	63	62.5	Y		
171	Cuyama	Central Coast Valleys	3/22/2013	100	81	0	0	0	0	7.2	43.6	75	36.1	4.7					

88	Cuyama	Central Coast Valleys	3/22/2013	300	81	0	0	0	5.8	42.8	82	30.8	6	115	60.4
89	Cuyama	Central Coast Valleys	3/22/2013	450	81	0	0	0	5.7	41.1	65	30.1	6.3	119	59.8
90	Cuyama	Central Coast Valleys	3/22/2013	500	81	0	0	0	5.4	39.2	68	28.9	6	128	59.1
91	Cuyama	Central Coast Valleys	3/22/2013	650	81	0	0	1	5.3	39.0	64	28.5	6.1	141	58.4
92	Cuyama	Central Coast Valleys	3/22/2013	700	81	0	0	114	5.1	40.6	80	27.8	5.2	138	57.8
93	Cuyama	Central Coast Valleys	3/22/2013	800	81	0.01	0	511	5.2	40.2	48	28.1	8.7	129	57.2
94	Cuyama	Central Coast Valleys	3/22/2013	900	81	0.01	0	933	4.9	48.4	40	26.4	6.8	27	56.7
95	Cuyama	Central Coast Valleys	3/22/2013	1000	81	0.01	0	1302	5.2	51.7	40	28.1	5.9	31	56.6
96	Cuyama	Central Coast Valleys	3/22/2013	1100	81	0.02	0	1594	5.4	54.5	37	29	4.5	69	57.1
97	Cuyama	Central Coast Valleys	3/22/2013	1200	81	0.02	0	1761	6.1	57.7	37	31.8	4.3	67	58
98	Cuyama	Central Coast Valleys	3/22/2013	1300	81	0.02	0	1794	6.4	51.2	35	33.3	7.3	348	58.4
99	Cuyama	Central Coast Valleys	3/22/2013	1400	81	0.02	0	1889	5	53.9	25	28.9	10	2	61.1 Y
100	Cuyama	Central Coast Valleys	3/22/2013	1500	81	0.02	0	1476	3.9	64	19	21.4	12.7	344	62.5 Y
101	Cuyama	Central Coast Valleys	3/22/2013	1600	81	0.02	0	1127	3.9	63.1	20	21.2	11.5	357	63.9 Y
102	Cuyama	Central Coast Valleys	3/22/2013	1700	81	0.01	0	711	2.9	61.6	15	14.3	13.9	344	65 Y
103	Cuyama	Central Coast Valleys	3/22/2013	1800	81	0.01	0	259	2.9	58.3	18	14.5	9.4	339	65.6 Y
104	Cuyama	Central Coast Valleys	3/22/2013	1850	81	0	0	9	2.3	53.7	16	8.2	7.8	355	65.8 Y
105	Cuyama	Central Coast Valleys	3/22/2013	2000	81	0	0	0	2.6	49.7	21	11.3	6.5	45	65.6 Y
106	Cuyama	Central Coast Valleys	3/22/2013	2100	81	0	0	0	3.1	47.3	26	18.2	5.2	90	65.1 Y
107	Cuyama	Central Coast Valleys	3/22/2013	2200	81	0	0	0	3.7	45.2	36	19.8	4.5	105	64.4 Y
108	Cuyama	Central Coast Valleys	3/22/2013	2300	81	0	0	0	3.7	39.4	46	20.1	3.2	137	63.8 Y
109	Cuyama	Central Coast Valleys	3/22/2013	2400	81	0	0	0	3.7	38	47	19.7	3.6	115	62.7 Y
110	Cuyama	Central Coast Valleys	3/23/2013	100	82	0	0	0	3.9	38.9	49	21.4	5.2	129	61.9
111	Cuyama	Central Coast Valleys	3/23/2013	200	82	0	0	0	3.9	38.6	49	21	5.5	155	61
112	Cuyama	Central Coast Valleys	3/23/2013	300	82	0	0	0	3.8	33.2	60	20.8	3.6	78	60.1
113	Cuyama	Central Coast Valleys	3/23/2013	400	82	0	0	0	3.7	33.6	57	20.1	3.4	112	59.3
114	Cuyama	Central Coast Valleys	3/23/2013	500	82	0	0	0	3.5	34.6	52	18.9	5	151	60.6
115	Cuyama	Central Coast Valleys	3/23/2013	600	82	0	0	1	3.9	30.9	67	21.4	5.4	101	61.7
116	Cuyama	Central Coast Valleys	3/23/2013	700	82	0	0	122	4	33.2	62	21.6	5.7	101	60.9
117	Cuyama	Central Coast Valleys	3/23/2013	800	82	0	0	526	4.3	39.4	62	23.3	6.9	85	58.2
										Averages	34.2	58	21.0	6.0	
118	Cuyama	Central Coast Valleys	3/23/2013	900	82	0.01	0	960	4.4	47.6	59	23.8	6.8	84	55.7
119	Cuyama	Central Coast Valleys	3/23/2013	1000	82	0.02	0	1337	4.1	63.1	29	22.1	5.5	108	55.5
120	Cuyama	Central Coast Valleys	3/23/2013	1100	82	0.02	0	1619	4.2	67	26	22.8	5.2	134	54.9
121	Cuyama	Central Coast Valleys	3/23/2013	1200	82	0.02	0	1774	4.4	60.4	25	24.2	4.7	133	58.8
122	Cuyama	Central Coast Valleys	3/23/2013	1300	82	0.02	0	1807	4.8	63.6	24	26.2	7.1	84	58.3
123	Cuyama	Central Coast Valleys	3/23/2013	1400	82	0.02	0	1693	4.3	65.9	20	23.7	5	230	60
124	Cuyama	Central Coast Valleys	3/23/2013	1500	82	0.02	0	1421	3.7	67	16	20	8.6	343	61.6 Y
125	Cuyama	Central Coast Valleys	3/23/2013	1600	82	0.02	0	1003	3.6	66.6	18	19	10.4	344	63.2 Y
126	Cuyama	Central Coast Valleys	3/23/2013	1700	82	0.01	0	418	3.4	64.1	16	17.9	10.5	353	64.6 Y
127	Cuyama	Central Coast Valleys	3/23/2013	1800	82	0	0	193	4.7	60.2	26	25.5	7.2	65	65.5 Y
128	Cuyama	Central Coast Valleys	3/23/2013	1900	82	0	0	9	4.9	56	33	26.7	5.4	110	65.8 Y
129	Cuyama	Central Coast Valleys	3/23/2013	2000	82	0	0	0	4.6	50.5	37	25.2	4.9	160	65.5 Y
130	Cuyama	Central Coast Valleys	3/23/2013	2100	82	0	0	0	4.2	45.5	41	23.2	3.4	180	65.2 Y
131	Cuyama	Central Coast Valleys	3/23/2013	2200	82	0	0	0	4.2	44	42	22.7	3.3	160	64.6 Y
132	Cuyama	Central Coast Valleys	3/23/2013	2300	82	0	0	0	4.5	40.1	54	24.7	4.2	80	63.8 Y
133	Cuyama	Central Coast Valleys	3/23/2013	2400	82	0	0	0	4.4	38.8	54	23.8	5.4	117	63 Y
134	Cuyama	Central Coast Valleys	3/24/2013	100	83	0	0	0	4.3	37.3	56	23.3	4.6	104	62.2
135	Cuyama	Central Coast Valleys	3/24/2013	200	83	0	0	0	4.1	35.9	67	22.2	4.6	104	61.3
136	Cuyama	Central Coast Valleys	3/24/2013	300	83	0	0	0	3.8	39.3	55	20.8	5.1	107	60.5
137	Cuyama	Central Coast Valleys	3/24/2013	400	83	0	0	0	3.9	34.0	68	20.9	5.2	103	60.6
138	Cuyama	Central Coast Valleys	3/24/2013	500	83	0	0	0	3.9	33.3	60	20.9	5.2	100	58.8
139	Cuyama	Central Coast Valleys	3/24/2013	600	83	0	0	1	3.6	33.6	58	19.4	6	126	58
140	Cuyama	Central Coast Valleys	3/24/2013	700	83	0	0	130	4	34.7	59	22	4.6	91	57.3
										Averages	34.0	58	20.8	5.0	
141	Cuyama	Central Coast Valleys	3/24/2013	800	83	0.01	0	531	4.4	42.9	46	23.8	5.2	72	56.6
142	Cuyama	Central Coast Valleys	3/24/2013	900	83	0.01	0	957	5	63.9	35	26.9	4.6	73	56.1
143	Cuyama	Central Coast Valleys	3/24/2013	1000	83	0.02	0	1337	5.7	60.4	32	30.5	4.2	82	58
144	Cuyama	Central Coast Valleys	3/24/2013	1100	83	0.02	0	1829	4.6	65.2	21	24.8	3.4	29	58.8
145	Cuyama	Central Coast Valleys	3/24/2013	1200	83	0.02	0	1752	6.2	69.4	21	28.1	4.8	354	57.8
146	Cuyama	Central Coast Valleys	3/24/2013	1300	83	0.02	0	1788	6.1	71.3	23	31.8	6.5	344	59.5
147	Cuyama	Central Coast Valleys	3/24/2013	1400	83	0.02	0	1685	5.8	72.6	21	30.8	7.3	334	61.4 Y
148	Cuyama	Central Coast Valleys	3/24/2013	1500	83	0.02	0	1479	5.8	72.7	21	30.6	8.7	359	63.2 Y
149	Cuyama	Central Coast Valleys	3/24/2013	1600	83	0.02	0	1142	5.9	71.8	22	31.3	9	15	65 Y
150	Cuyama	Central Coast Valleys	3/24/2013	1700	83	0.01	0	717	5.9	70.2	23	31.3	8.9	4	66.3 Y
151	Cuyama	Central Coast Valleys	3/24/2013	1800	83	0	0	279	6	67.4	26	31.4	7.2	9	67.2 Y
152	Cuyama	Central Coast Valleys	3/24/2013	1900	83	0	0	8	6.2	60.6	34	32.4	4.6	123	67.6 Y
153	Cuyama	Central Coast Valleys	3/24/2013	2000	83	0	0	0	6.2	58.7	40	32.4	5.7	140	67.5 Y
154	Cuyama	Central Coast Valleys	3/24/2013	2100	83	0	0	0	5.8	51.9	43	29.9	4.4	177	67.2 Y
155	Cuyama	Central Coast Valleys	3/24/2013	2200	83	0	0	0	5.4	48.8	46	28.9	3.5	148	66.6 Y
156	Cuyama	Central Coast Valleys	3/24/2013	2300	83	0	0	0	5.6	45.1	54	29.7	3.6	122	65.9 Y
157	Cuyama	Central Coast Valleys	3/24/2013	2400	83	0	0	0	5.8	41.9	63	30	4.6	100	65.1 Y
158	Cuyama	Central Coast Valleys	3/25/2013	100	84	0	0	0	5.5	41.4	61	29.2	5.6	102	64.2 Y
159	Cuyama	Central Coast Valleys	3/25/2013	200	84	0	0	0	6.3	39.8	64	28.7	4.3	102	63.4 Y
160	Cuyama	Central Coast Valleys	3/25/2013	300	84	0	0	0	5.3	38.5	66	28.4	5.4	101	62.5 Y
161	Cuyama	Central Coast Valleys	3/25/2013	400	84	0	0	0	5.2	38.2	68	27.8	5.9	103	61.7 Y
162	Cuyama	Central Coast Valleys	3/25/2013	500	84	0	0	0	5	37.9	64	26.9	4.8	118	60.9
163	Cuyama	Central Coast Valleys	3/25/2013	600	84	0	0	1	5	38.8	63	27.1	6.3	102	60.1
164	Cuyama	Central Coast Valleys	3/25/2013	700	84	0	0	144	5	39.7	60	27	5.9	111	59.3
165	Cuyama	Central Coast Valleys	3/25/2013	800	84	0.01	0	495	5.8	47	63	30.7	6.8	93	58.7
166	Cuyama	Central Coast Valleys	3/25/2013	900	84	0.01	0	876	6	56	39	31.6	6.8	64	58.1
167	Cuyama	Central Coast Valleys	3/25/2013	1000	84	0.02	0	1235	6.5	64.7	27	29.7	4.5	106	58
168	Cuyama	Central Coast Valleys	3/25/2013	1100	84	0.02	0	1571	6.8	68.7	24	30.9	3.5	95	56.4
169	Cuyama	Central Coast Valleys	3/25/2013	1200	84	0.02	0	1434	5.4	72.1	20	29	3.9	56	59.4
170	Cuyama	Central Coast Valleys	3/25/2013	1300	84	0.02	0	1271	6.2	73	22	32.4	5.7	332	60.8 Y

88	Cuyama	Central Coast Valleys	3/25/2013	1400	84	0.02	0	894	6.8	71.6	28	34.8	8.8	352	62.3	Y
88	Cuyama	Central Coast Valleys	3/25/2013	1500	84	0.02	0	1242	6.9	72.7	25	35.1	7.5	19	63.6	Y
88	Cuyama	Central Coast Valleys	3/25/2013	1600	84	0.02	0	970	6.7	73	24	34.4	8.7	117	64.7	Y
88	Cuyama	Central Coast Valleys	3/25/2013	1700	84	0.01	0	555	6.9	71.8	26	34.9	6.8	100	65.6	Y
88	Cuyama	Central Coast Valleys	3/25/2013	1800	84	0	0	219	6.9	68.3	29	35.1	5.7	353	66.2	Y
88	Cuyama	Central Coast Valleys	3/25/2013	1900	84	0	0	9	8.2	64.1	40	39.3	6.1	284	66.5	Y
88	Cuyama	Central Coast Valleys	3/25/2013	2000	84	0	0	0	8.1	59.9	46	39	6.8	265	66.6	Y
88	Cuyama	Central Coast Valleys	3/25/2013	2100	84	0	0	0	8	57.7	49	38.9	6.9	261	66.4	Y
88	Cuyama	Central Coast Valleys	3/25/2013	2200	84	0	0	0	7.8	54.4	54	38	4	268	66	Y
88	Cuyama	Central Coast Valleys	3/25/2013	2300	84	0	0	0	7.5	49.6	62	37	3.8	142	65.5	Y
88	Cuyama	Central Coast Valleys	3/25/2013	2400	84	0	0	0	7	48.1	66	35.3	3.9	123	64.9	Y
88	Cuyama	Central Coast Valleys	3/26/2013	100	85	0	0	0	6.3	43.4	66	32.8	2.7	166	64.3	Y
88	Cuyama	Central Coast Valleys	3/26/2013	200	85	0	0	0	6.2	41.7	69	32.4	1.9	111	63.6	Y
88	Cuyama	Central Coast Valleys	3/26/2013	300	85	0	0	0	6.3	41.1	72	32.8	4.4	135	62.8	Y
88	Cuyama	Central Coast Valleys	3/26/2013	400	85	0	0	0	6.1	39.5	74	31.8	2.6	124	62.1	Y
88	Cuyama	Central Coast Valleys	3/26/2013	500	85	0	0	0	5.9	38.7	74	31.2	4.6	136	61.3	Y
88	Cuyama	Central Coast Valleys	3/26/2013	600	85	0	0	1	5.7	37.7	74	30.3	5.8	118	60.5	Y
88	Cuyama	Central Coast Valleys	3/26/2013	700	85	0	0	144	6	39.8	72	31.5	6.4	109	59.8	Y
88	Cuyama	Central Coast Valleys	3/26/2013	800	85	0.01	0	548	6.6	46.3	82	34.1	6.4	105	59.1	Y
88	Cuyama	Central Coast Valleys	3/26/2013	900	85	0.01	0	972	7.1	56.2	46	35.9	5.3	84	58.6	Y
88	Cuyama	Central Coast Valleys	3/26/2013	1000	85	0.02	0	1345	6.4	63.6	32	33	2.7	353	58.5	Y
88	Cuyama	Central Coast Valleys	3/26/2013	1100	85	0.02	0	1631	5.8	67.9	26	30.7	3.3	313	59	Y
88	Cuyama	Central Coast Valleys	3/26/2013	1200	85	0.02	0	1790	5.2	70.5	20	27.9	5.2	328	60.2	Y
88	Cuyama	Central Coast Valleys	3/26/2013	1300	85	0.03	0	1819	5.5	72.4	20	29.2	6.5	344	61.9	Y
88	Cuyama	Central Coast Valleys	3/26/2013	1400	85	0.03	0	1759	6.1	72.7	22	32.1	7.9	340	63.8	Y
88	Cuyama	Central Coast Valleys	3/26/2013	1500	85	0.02	0	1524	6.3	72.9	23	32.7	9.2	333	65.5	Y
88	Cuyama	Central Coast Valleys	3/26/2013	1600	85	0.02	0	1190	6.6	72.2	25	34	11.5	343	67.2	Y
88	Cuyama	Central Coast Valleys	3/26/2013	1700	85	0.01	0	444	6.7	69.4	28	34.4	10.4	346	68.6	R
88	Cuyama	Central Coast Valleys	3/26/2013	1800	85	0	0	195	7.1	67	32	35.9	6.4	3	69.5	R
88	Cuyama	Central Coast Valleys	3/26/2013	1900	85	0	0	8	7.3	63.1	37	36.4	3.4	256	69.9	R
88	Cuyama	Central Coast Valleys	3/26/2013	2000	85	0	0	0	7.8	59.6	45	38.3	4.7	272	69.8	R
88	Cuyama	Central Coast Valleys	3/26/2013	2100	85	0	0	0	7.8	58.4	50	38.2	5.3	270	69.5	R
88	Cuyama	Central Coast Valleys	3/26/2013	2200	85	0	0	0	7.5	53.4	54	37.2	3.3	254	68.9	Y
88	Cuyama	Central Coast Valleys	3/26/2013	2300	85	0	0	0	7.3	49.7	60	36.3	3	190	68.2	Y
88	Cuyama	Central Coast Valleys	3/26/2013	2400	85	0	0	0	6.5	45.8	62	33.4	3	193	67.4	Y
88	Cuyama	Central Coast Valleys	3/27/2013	100	86	0	0	0	6.4	44.7	64	33.3	1.7	103	66.6	Y
88	Cuyama	Central Coast Valleys	3/27/2013	200	86	0	0	0	7.2	46	68	36.2	2.6	109	65.8	Y
88	Cuyama	Central Coast Valleys	3/27/2013	300	86	0	0	0	7.1	45.6	69	35.8	4	112	65	Y
88	Cuyama	Central Coast Valleys	3/27/2013	400	86	0	0	0	6.7	42.9	71	34.1	3.6	122	64.2	Y
88	Cuyama	Central Coast Valleys	3/27/2013	500	86	0	0	0	6.6	41.1	76	34	2.7	109	63.5	Y
88	Cuyama	Central Coast Valleys	3/27/2013	600	86	0	0	1	6.6	40.7	77	34	3.6	108	62.8	Y
88	Cuyama	Central Coast Valleys	3/27/2013	700	86	0	0	142	7	42.3	76	35.3	4.6	97	62.1	Y
88	Cuyama	Central Coast Valleys	3/27/2013	800	86	0	0	442	7.7	48.8	68	37.9	5.5	92	61.4	Y
88	Cuyama	Central Coast Valleys	3/27/2013	900	86	0.01	0	891	8.7	57	55	41	4.2	98	60.9	Y
88	Cuyama	Central Coast Valleys	3/27/2013	1000	86	0.01	0	1214	9.7	61.7	52	43.7	4	59	60.7	Y
88	Cuyama	Central Coast Valleys	3/27/2013	1100	86	0.02	0	1547	9.2	65.7	43	42.4	3.4	354	61.1	Y
88	Cuyama	Central Coast Valleys	3/27/2013	1200	86	0.02	0	1633	9	67.5	39	41.9	4.5	298	62.1	Y
88	Cuyama	Central Coast Valleys	3/27/2013	1300	86	0.02	0	1530	8.9	68.8	37	41.5	7	294	63.8	Y
88	Cuyama	Central Coast Valleys	3/27/2013	1400	86	0.02	0	1491	8.9	69	37	41.6	8	294	67.7	R
88	Cuyama	Central Coast Valleys	3/27/2013	1500	86	0.01	0	784	9	68.8	37	41.7	8.1	300	65.9	Y
88	Cuyama	Central Coast Valleys	3/27/2013	1600	86	0.02	0	1362	9.3	70.1	37	42.8	8.2	296	66.8	Y
88	Cuyama	Central Coast Valleys	3/27/2013	1700	86	0.01	0	945	9.7	68.3	41	43.6	8.1	297	67.5	Y
88	Cuyama	Central Coast Valleys	3/27/2013	1800	86	0	0	351	9.4	65.4	44	43	7.1	293	68.1	Y
88	Cuyama	Central Coast Valleys	3/27/2013	1900	86	0	0	15	9.5	60.4	53	43.3	6.5	276	68.4	Y
88	Cuyama	Central Coast Valleys	3/27/2013	2000	86	0	0	0	9.7	56.7	62	43.8	7.4	258	68.5	Y
88	Cuyama	Central Coast Valleys	3/27/2013	2100	86	0	0	0	10	54.1	70	44.5	7	261	68.1	Y
88	Cuyama	Central Coast Valleys	3/27/2013	2200	86	0	0	0	10	51.7	76	44.4	3.8	256	67.6	Y
88	Cuyama	Central Coast Valleys	3/27/2013	2300	86	0	0	0	9.8	49.7	81	44	2.5	292	67	Y
88	Cuyama	Central Coast Valleys	3/27/2013	2400	86	0	0	0	8.8	45.8	84	41.2	3.4	192	66.2	Y
88	Cuyama	Central Coast Valleys	3/28/2013	100	87	0	0	0	8.1	43.5	84	39.1	2.5	215	65.5	Y
88	Cuyama	Central Coast Valleys	3/28/2013	200	87	0	0	0	8.2	43.4	86	39.4	3.9	130	64.7	Y
88	Cuyama	Central Coast Valleys	3/28/2013	300	87	0	0	0	8.1	42.8	86	39	4.1	131	64	Y
88	Cuyama	Central Coast Valleys	3/28/2013	400	87	0	0	0	7.8	41.8	86	38	4	107	63.2	Y
88	Cuyama	Central Coast Valleys	3/28/2013	500	87	0	0	0	7.5	40.8	86	37	4.4	103	62.5	Y
88	Cuyama	Central Coast Valleys	3/28/2013	600	87	0	0	1	7.4	40.6	86	36.7	5	109	61.8	Y
88	Cuyama	Central Coast Valleys	3/28/2013	700	87	0	0	143	7.7	41.8	85	37.7	6.1	113	61	Y
88	Cuyama	Central Coast Valleys	3/28/2013	800	87	0	0	521	8.7	48.4	75	41	6.2	103	60.4	Y
88	Cuyama	Central Coast Valleys	3/28/2013	900	87	0.01	0	971	9.7	57.1	61	43.8	5.4	86	59.9	Y
88	Cuyama	Central Coast Valleys	3/28/2013	1000	87	0.02	0	1311	9.9	62.5	51	44.3	3.7	80	59.8	Y
88	Cuyama	Central Coast Valleys	3/28/2013	1100	87	0.02	0	1516	9.2	67.4	40	42.5	3.9	308	60.3	Y
88	Cuyama	Central Coast Valleys	3/28/2013	1200	87	0.02	0	1371	9.4	69.3	38	42.9	5.3	313	61.4	Y
88	Cuyama	Central Coast Valleys	3/28/2013	1300	87	0.02	0	1468	9.7	70.1	39	43.8	6.6	336	62.9	Y
88	Cuyama	Central Coast Valleys	3/28/2013	1400	87	0.01	0	711	9.7	68.7	40	43.7	9.1	348	64.3	Y
88	Cuyama	Central Coast Valleys	3/28/2013	1500	87	0.01	0	343	9.2	67.5	40	42.3	7.3	309	65.6	Y
88	Cuyama	Central Coast Valleys	3/28/2013	1600	87	0.01	0	547	9.2	66.2	42	42.3	6.4	78	66.4	Y
88	Cuyama	Central Coast Valleys	3/28/2013	1700	87	0.01	0	362	9.1	68.9	40	42.1	5.3	106	66.9	Y
88	Cuyama	Central Coast Valleys	3/28/2013	1800	87	0	0	123	11	60.5	61	47.1	7.9	279	67	Y
88	Cuyama	Central Coast Valleys	3/28/2013	1900	87	0	0	18	11	58.1	67	47.1	6	278	67	Y
88	Cuyama	Central Coast Valleys	3/28/2013	2000	87	0	0	0	10.8	55.7	71	46.5	4.7	276	66.9	Y
88	Cuyama	Central Coast Valleys	3/28/2013	2100	87	0	0	0	10	51.6	77	44.6	3.5	246	66.6	Y
88	Cuyama	Central Coast Valleys	3/28/2013	2200	87	0	0	0	9.5	49.8	78	43.2	2.5	169	66.1	Y
88	Cuyama	Central Coast Valleys	3/28/2013	2300	87	0	0	0	8.7	46.4	81	40.9	2.9	150	65.5	Y
88	Cuyama	Central Coast Valleys	3/28/2013	2400	87	0	0	0	8.5	45.5	82	40.3	4.1	140	64.9	Y
88	Cuyama	Central Coast Valleys	3/29/2013	100	88	0	0	0	8.3	44.2	84	39.6	4	120	64.1	Y
88	Cuyama	Central Coast Valleys	3/29/2013	200	88	0	0	0	7.9	43.2	83	38.5	4.1	125	63.4	Y

86	Cuyama	Central Coast Valleys	3/29/2013	300	88	0	0	0	7.8	42.5	84	38.1	4.9	124	62.7 Y
86	Cuyama	Central Coast Valleys	3/29/2013	400	88	0	0	0	7.6	41.7	85	37.8	4.8	118	62 Y
86	Cuyama	Central Coast Valleys	3/29/2013	500	88	0	0	0	7.6	41.3	86	37.4	5.1	103	61.4 Y
86	Cuyama	Central Coast Valleys	3/29/2013	600	88	0	0	3	7.3	40.2	87	36.8	4.4	117	60.7
86	Cuyama	Central Coast Valleys	3/29/2013	700	88	0	0	164	7.8	42.1	85	38	5.2	104	60.1
86	Cuyama	Central Coast Valleys	3/29/2013	800	88	0.01	0	586	8.9	49.7	73	41.5	4.8	96	59.5
86	Cuyama	Central Coast Valleys	3/29/2013	900	88	0.01	0	1003	9.2	58.8	54	42.2	4.9	123	59.1
86	Cuyama	Central Coast Valleys	3/29/2013	1000	88	0.02	0	1377	9.5	66.8	42	43.3	3.5	56	59.2
86	Cuyama	Central Coast Valleys	3/29/2013	1100	88	0.02	0	1648	9.3	71	36	42.5	3.5	283	59.8
86	Cuyama	Central Coast Valleys	3/29/2013	1200	88	0.02	0	1807	8.8	74.4	30	41.1	3.6	11	61 Y
86	Cuyama	Central Coast Valleys	3/29/2013	1300	88	0.03	0	1825	8.3	78.5	27	39.6	5.8	113	62.7 Y
86	Cuyama	Central Coast Valleys	3/29/2013	1400	88	0.02	0	1761	8.5	77.9	26	40.4	4.5	49	64.6 Y
86	Cuyama	Central Coast Valleys	3/29/2013	1500	88	0.01	0	908	8.5	78.4	27	40.2	5.5	283	66.3 Y
86	Cuyama	Central Coast Valleys	3/29/2013	1600	88	0.02	0	934	6.9	75.2	23	34.9	10	221	67.9 R
86	Cuyama	Central Coast Valleys	3/29/2013	1700	88	0.01	0	505	6.5	73.7	23	33.5	9.7	230	69.1 R
86	Cuyama	Central Coast Valleys	3/29/2013	1800	88	0.01 Y	0	347	6.1	73.2 Y	22 Y	32.1 Y	7.1	217	69.7 R
86	Cuyama	Central Coast Valleys	3/29/2013	1900	88	0 Y	0	11	7.2	68.7 Y	32 Y	38 Y	6	234	70 R
86	Cuyama	Central Coast Valleys	3/29/2013	2000	88	0	0	0	10.6	61.5	58	46.7	4.5	269	69.9 R
86	Cuyama	Central Coast Valleys	3/29/2013	2100	88	0	0	0	10.3	57.4	64	45.4	3.1	199	69.6 R
86	Cuyama	Central Coast Valleys	3/29/2013	2200	88	0	0	0	9.2	53.5	66	42.5	2.6	147	69.1 R
86	Cuyama	Central Coast Valleys	3/29/2013	2300	88	0	0	0	7.2	53.4	52	36.2	2.7	206	68.5 Y
86	Cuyama	Central Coast Valleys	3/29/2013	2400	88	0	0	0	7.3	53.1	53	36.4	2.3	223	67.8 Y
86	Cuyama	Central Coast Valleys	3/30/2013	100	89	0	0	0	7.9	53.5	56	38.4	2.4	255	67.1 Y
86	Cuyama	Central Coast Valleys	3/30/2013	200	89	0	0	0	8.8	53.3	63	41.1	2.1	262	66.5 Y
86	Cuyama	Central Coast Valleys	3/30/2013	300	89	0	0	0	9.2	52.6	68	42.4	2.3	288	65.9 Y
86	Cuyama	Central Coast Valleys	3/30/2013	400	89	0	0	0	9.3	50.3	75	42.6	2.6	176	65.3 Y
86	Cuyama	Central Coast Valleys	3/30/2013	500	89	0	0	0	9.2	48.8	78	42.2	2.7	177	64.7 Y
86	Cuyama	Central Coast Valleys	3/30/2013	600	89	0	0	3	8	44.6	79	38.7	3.3	167	64.2 Y
86	Cuyama	Central Coast Valleys	3/30/2013	700	89	0	0	192	8.1	46.7	75	39.1	2.3	246	63.6 Y
86	Cuyama	Central Coast Valleys	3/30/2013	800	89	0.01	0	688	9.6	54.4	66	43.5	2.6	46	63.1 Y
86	Cuyama	Central Coast Valleys	3/30/2013	900	89	0.01	0	1127	9.4	62.3	49	42.8	2.3	232	62.7 Y
86	Cuyama	Central Coast Valleys	3/30/2013	1000	89	0.02	0	1520	9	66.9	40	41.7	4.9	287	62.9 Y
86	Cuyama	Central Coast Valleys	3/30/2013	1100	89	0.02	0	1666	8.5	69.4	35	40.4	5.7	297	63.6 Y
86	Cuyama	Central Coast Valleys	3/30/2013	1200	89	0.03	0	1749	8	73	29	38.7	4.6	292	64.8 Y
86	Cuyama	Central Coast Valleys	3/30/2013	1300	89	0.03	0	1770	7.9	78.3	26	38.5	8.9	232	66.4 R
86	Cuyama	Central Coast Valleys	3/30/2013	1400	89	0.02	0	1247	7.6	78.5	24	37.4	13.2	214	68 R
86	Cuyama	Central Coast Valleys	3/30/2013	1500	89	0.03	0	1664 Y	7.8	78.2	24	38.2	12.2	213	69.4 R
86	Cuyama	Central Coast Valleys	3/30/2013	1600	89	0.02	0	977	8	74.9	27	38.7	13.1	219	70.4 R
86	Cuyama	Central Coast Valleys	3/30/2013	1700	89	0.01	0	415	7.5	72.6	28	37.2	10.9	214	71.3 R
86	Cuyama	Central Coast Valleys	3/30/2013	1800	89	0.01	0	358	7.1	70.5	28	35.9	8.8	208	71.8 R
86	Cuyama	Central Coast Valleys	3/30/2013	1900	89	0	0	15	6.6	65.6	31	33.8	6.6	214	71.9 R
86	Cuyama	Central Coast Valleys	3/30/2013	2000	89	0	0	0	7.3	61.6	39	36.6	6.3	251	71.8 R
86	Cuyama	Central Coast Valleys	3/30/2013	2100	89	0	0	0	8.3	59.4	48	39.7	6.6	263	71.4 R
86	Cuyama	Central Coast Valleys	3/30/2013	2200	89	0 Y	0	0	8.5	59.1 Y	50 Y	40.4 Y	9.8	232	70.8 R
86	Cuyama	Central Coast Valleys	3/30/2013	2300	89	0 Y	0	0	9.1	58.8 Y	54 Y	42.1 Y	5.7	247	70.2 R
86	Cuyama	Central Coast Valleys	3/30/2013	2400	89	0 Y	0	0	9.4	57.7 Y	58 Y	43 Y	4.9	237	69.6 R
86	Cuyama	Central Coast Valleys	3/31/2013	100	90	0 Y	0	0	9.6	56.4 Y	62 Y	43.3 Y	6.4	210	69 R
86	Cuyama	Central Coast Valleys	3/31/2013	200	90	0	0	0	9.1	53.4	65	42	3	136	68.4 R
86	Cuyama	Central Coast Valleys	3/31/2013	300	90	0	0	0	9.5	53.5	68	43.2	2.6	255	67.8 R
86	Cuyama	Central Coast Valleys	3/31/2013	400	90	0	0	0	9.4	52	71	43	2.7	164	67.2 Y
86	Cuyama	Central Coast Valleys	3/31/2013	500	90	0	0	0	8.7	48.7	74	40.8	3.7	175	66.5 Y
86	Cuyama	Central Coast Valleys	3/31/2013	600	90	0	0	2	9.3	61.5	71	42.6	3.3	213	65.9 Y
86	Cuyama	Central Coast Valleys	3/31/2013	700	90	0	0	140	9.3	50.2	75	42.8	4.2	122	65.3 Y
86	Cuyama	Central Coast Valleys	3/31/2013	800	90	0	0	178	10.6	54.1	74	46.1	5.7	150	64.7 Y
86	Cuyama	Central Coast Valleys	3/31/2013	900	90	0.01	0	680	11.8	55.4	79	49	3.9	240	64.3 Y
86	Cuyama	Central Coast Valleys	3/31/2013	1000	90	0.01	0	805	11.9	56.6	76	49.2	4.4	308	64 Y
86	Cuyama	Central Coast Valleys	3/31/2013	1100	90	0.01	0	1011	10.9	58.1	66	46.7	4.7	260	64.4 Y
86	Cuyama	Central Coast Valleys	3/31/2013	1200	90	0.02	0	1274	11.2	59.6	64	47.5	6.1	213	64.5 Y
86	Cuyama	Central Coast Valleys	3/31/2013	1300	90	0.01	0	992	10.7	60.9	59	46.4	6.1	246	65.7 Y
86	Cuyama	Central Coast Valleys	3/31/2013	1400	90	0.01	0.01	919	12	58.9	71	49.3	5.5	273	S
86	Cuyama	Central Coast Valleys	3/31/2013	1500	90	0.01	0	641	12.2	57.4	76	49.9	8.1	288	S
86	Cuyama	Central Coast Valleys	3/31/2013	1600	90	0.01	0	438	11.3	57.9	69	47.8	6.2	277	69.7 R
86	Cuyama	Central Coast Valleys	3/31/2013	1700	90	0	0	389	10.7	59	63	46.3	5.5	305	67 Y
86	Cuyama	Central Coast Valleys	3/31/2013	1800	90	0.01	0	394	10.1	59.1	59	44.8	7.2	290	67 Y
86	Cuyama	Central Coast Valleys	3/31/2013	1900	90	0	0	22	9.5	55.6	63	43.2	5.7	294	67 Y
86	Cuyama	Central Coast Valleys	3/31/2013	2000	90	0	0	0	9.4	52.4	70	42.9	6.8	258	66.8 Y
86	Cuyama	Central Coast Valleys	3/31/2013	2100	90	0	0	0	9.1	50.2	74	42.2	4.2	263	66.4 Y
86	Cuyama	Central Coast Valleys	3/31/2013	2200	90	0	0	0	8.8	48.1	77	41.3	4.6	257	65.8 Y
86	Cuyama	Central Coast Valleys	3/31/2013	2300	90	0	0	0	8.7	47.2	78	40.8	3.6	257	65.2 Y
86	Cuyama	Central Coast Valleys	3/31/2013	2400	90	0	0	0	8.1	43.8	83	38.9	3.1	219	64.5 Y
86	Cuyama	Central Coast Valleys	4/1/2013	100	91	0	0	0	7.7	41.8	86	37.8	2.4	134	63.8
86	Cuyama	Central Coast Valleys	4/1/2013	200	91	0	0	0	7.3	39.7	88	36.5	3.1	164	63
86	Cuyama	Central Coast Valleys	4/1/2013	300	91	0	0	0	7.4	39.5	89	36.8	3.7	175	62.3
86	Cuyama	Central Coast Valleys	4/1/2013	400	91	0	0	0	7.1	38.8	89	35.9	3.7	122	61.6
86	Cuyama	Central Coast Valleys	4/1/2013	500	91	0	0	0	7.7	40.7	89	37.7	4.7	110	60.9
86	Cuyama	Central Coast Valleys	4/1/2013	600	91	0	0	3	7.5	40.3	88	37	4.6	104	60.2
86	Cuyama	Central Coast Valleys	4/1/2013	700	91	0	0	118	7.8	41.2	88	38	3.3	96	59.6
86	Cuyama	Central Coast Valleys	4/1/2013	800	91	0	0	490	8.6	45.3	84	40.7	3.5	90	59.1
86	Cuyama	Central Coast Valleys	4/1/2013	900	91	0.01	0	954	9.3	52.4	69	42.5	4.1	86	58.8
86	Cuyama	Central Coast Valleys	4/1/2013	1000	91	0.02	0	1438	9.1	56.5	58	42.1	4.2	284	58.7
86	Cuyama	Central Coast Valleys	4/1/2013	1100	91	0.02	0	1720	8.9	59.3	52	41.6	5.8	264	59.3
86	Cuyama	Central Coast Valleys	4/1/2013	1200	91	0.02	0	1982	8.7	62	46	40.8	5.6	304	60.4
86	Cuyama	Central Coast Valleys	4/1/2013	1300	91	0.02	0	1671	8.9	62.6	46	41.5	6.8	353	62
86	Cuyama	Central Coast Valleys	4/1/2013	1400	91	0.02	0	1551	8.6	64.3	42	40.7	5.6	320	63.6
86	Cuyama	Central Coast Valleys	4/1/2013	1500	91	0.02	0	1755 Y	8.7	66.4	39	40.9	7.1	294	65.1

86	Cuyama	Central Coast Valleys	4/1/2013	1600	91	0.02		0	1410	Y	8.9	55.8	41	41.5	7.6	306	66.5
86	Cuyama	Central Coast Valleys	4/1/2013	1700	91	0.01	R	0	1082	R	9.4	55.1	44	42.9	7.7	297	67.9
86	Cuyama	Central Coast Valleys	4/1/2013	1800	91	0.01		0	293		10.1	61.3	55	44.8	8.5	288	68.9
86	Cuyama	Central Coast Valleys	4/1/2013	1900	91	0		0	15		10.2	58.9	64	45	9.3	284	69.5
86	Cuyama	Central Coast Valleys	4/1/2013	2000	91	0		0	0		10.2	53.7	73	45.1	8.2	276	69.7
86	Cuyama	Central Coast Valleys	4/1/2013	2100	91	0		0	0		10	50.8	79	44.6	6.4	263	69.5
86	Cuyama	Central Coast Valleys	4/1/2013	2200	91	0		0	0		9.7	48.8	83	43.8	4	263	69
86	Cuyama	Central Coast Valleys	4/1/2013	2300	91	0		0	0		9.2	46.5	86	42.4	3.4	247	68.3
86	Cuyama	Central Coast Valleys	4/1/2013	2400	91	0		0	0		8.8	45.1	86	41.1	1.6	170	67.6
86	Cuyama	Central Coast Valleys	4/2/2013	100	92	0		0	0		8.5	44.2	87	40.4	1	88	66.7
86	Cuyama	Central Coast Valleys	4/2/2013	200	92	0		0	0		8.3	43.2	87	39.8	1.7	146	65.9
86	Cuyama	Central Coast Valleys	4/2/2013	300	92	0		0	0		8.1	42.1	89	39	2	139	65.1
86	Cuyama	Central Coast Valleys	4/2/2013	400	92	0		0	0		9	44.7	89	41.7	2.6	162	64.3
86	Cuyama	Central Coast Valleys	4/2/2013	500	92	0		0	0		9.6	47	88	43.5	2.6	78	63.6
86	Cuyama	Central Coast Valleys	4/2/2013	600	92	0		0	2		10.5	49.6	88	45.8	4.8	18	63
86	Cuyama	Central Coast Valleys	4/2/2013	700	92	0		0	65		10.8	51.2	84	46.5	7.1	10	62.5
86	Cuyama	Central Coast Valleys	4/2/2013	800	92	0		0	134		10.8	51.5	83	46.8	5.5	6	62
86	Cuyama	Central Coast Valleys	4/2/2013	900	92	0.01		0	630		10.9	53.4	78	46.9	5.9	105	61.8
86	Cuyama	Central Coast Valleys	4/2/2013	1000	92	0.01		0	1196		10.7	56.5	69	46.4	5.1	105	61.6
86	Cuyama	Central Coast Valleys	4/2/2013	1100	92	0.02		0	1823		10.5	60.1	59	45.9	6.8	128	61.8
86	Cuyama	Central Coast Valleys	4/2/2013	1200	92	0.02		0	1873		10.4	63.1	53	45.7	6.6	101	62.4
86	Cuyama	Central Coast Valleys	4/2/2013	1300	92	0.02		0	1875		9.8	65.2	46	44.1	5.3	6	63.6
86	Cuyama	Central Coast Valleys	4/2/2013	1400	92	0.02		0	1766		9.8	66.8	43	43.9	8.2	348	65
86	Cuyama	Central Coast Valleys	4/2/2013	1500	92	0.02		0	1524		9	67.3	40	41.9	9.5	346	66.5
86	Cuyama	Central Coast Valleys	4/2/2013	1600	92	0.02		0	1203		9	66.8	40	41.8	10.6	348	68
86	Cuyama	Central Coast Valleys	4/2/2013	1700	92	0.01		0	771		8.9	65.6	41	41.5	10.1	3	69.4
86	Cuyama	Central Coast Valleys	4/2/2013	1800	92	0		0	311		8.6	63.8	43	40.8	9.1	6	70.3
86	Cuyama	Central Coast Valleys	4/2/2013	1900	92	0		0	13		8.8	59.5	51	41.3	6.1	54	70.7
86	Cuyama	Central Coast Valleys	4/2/2013	2000	92	0		0	0		9	55.4	60	41.8	5.3	136	70.6
86	Cuyama	Central Coast Valleys	4/2/2013	2100	92	0		0	0		8.5	53	62	40.3	5.2	162	70.2
86	Cuyama	Central Coast Valleys	4/2/2013	2200	92	0		0	0		8.1	50.5	65	39.2	3.7	123	69.6
86	Cuyama	Central Coast Valleys	4/2/2013	2300	92	0		0	0		8.3	46.6	76	39.6	3.3	101	68.9
86	Cuyama	Central Coast Valleys	4/2/2013	2400	92	0		0	0		8.2	44.9	81	39.5	2.1	115	68.1
86	Cuyama	Central Coast Valleys	4/3/2013	100	93	0		0	0		7.9	43.9	81	38.4	2.2	139	67.3
86	Cuyama	Central Coast Valleys	4/3/2013	200	93	0		0	0		7.4	42.4	81	36.9	2.5	87	66.4
86	Cuyama	Central Coast Valleys	4/3/2013	300	93	0		0	0		7.6	41.9	84	37.4	3.7	111	65.6
86	Cuyama	Central Coast Valleys	4/3/2013	400	93	0		0	0		7.8	42.3	84	38	4.5	90	64.8
86	Cuyama	Central Coast Valleys	4/3/2013	500	93	0		0	0		7.5	41.3	85	37.1	3.7	113	64
86	Cuyama	Central Coast Valleys	4/3/2013	600	93	0		0	6		7.3	40.6	85	36.5	5.1	106	63.3
86	Cuyama	Central Coast Valleys	4/3/2013	700	93	0		0	265		7.6	42.3	83	37.5	5.7	107	62.5
86	Cuyama	Central Coast Valleys	4/3/2013	800	93	0.01		0	649		8.7	49.8	71	40.8	6.3	92	61.9
86	Cuyama	Central Coast Valleys	4/3/2013	900	93	0.01		0	951		9.4	58.2	57	42.9	4.4	85	61.4
86	Cuyama	Central Coast Valleys	4/3/2013	1000	93	0.02		0	1425		9.6	63.8	47	43.3	3.3	94	61.4
86	Cuyama	Central Coast Valleys	4/3/2013	1100	93	0.02		0	1679		9.5	67.6	41	43.3	3.7	127	62
86	Cuyama	Central Coast Valleys	4/3/2013	1200	93	0.02		0	1627		9.5	70.5	37	43.2	4.9	118	63.1
86	Cuyama	Central Coast Valleys	4/3/2013	1300	93	0.03		0	1914		9.9	73.3	35	44.2	4.2	337	64.6
86	Cuyama	Central Coast Valleys	4/3/2013	1400	93	0.02		0	1757		9.8	75.2	33	44	5.5	100	66.2
86	Cuyama	Central Coast Valleys	4/3/2013	1500	93	0.02		0	1479		9.7	78	29	43.6	4.1	75	67.8
86	Cuyama	Central Coast Valleys	4/3/2013	1600	93	0.02		0	1046		10.3	77.3	32	45.4	7.9	87	69.4
86	Cuyama	Central Coast Valleys	4/3/2013	1700	93	0.01		0	603		10.5	74.6	36	45.8	6.9	17	70.7
86	Cuyama	Central Coast Valleys	4/3/2013	1800	93	0		0	247		11.2	71.8	42	47.5	6.2	119	71.5
86	Cuyama	Central Coast Valleys	4/3/2013	1900	93	0		0	23		10.6	68.1	45	46	3.8	159	72
86	Cuyama	Central Coast Valleys	4/3/2013	2000	93	0		0	0		10.7	63.2	54	46.4	5.3	272	72
86	Cuyama	Central Coast Valleys	4/3/2013	2100	93	0		0	0		10.6	60	60	46	4.8	277	71.7
86	Cuyama	Central Coast Valleys	4/3/2013	2200	93	0		0	0		10.2	57.5	63	45	3.4	268	71.3
86	Cuyama	Central Coast Valleys	4/3/2013	2300	93	0		0	0		9.7	53.3	70	43.7	4	131	70.7
86	Cuyama	Central Coast Valleys	4/3/2013	2400	93	0		0	0		9.3	50.8	73	42.5	4.1	173	70
86	Cuyama	Central Coast Valleys	4/4/2013	100	94	0		0	0		8.3	48.4	72	39.8	2.3	245	69.3
86	Cuyama	Central Coast Valleys	4/4/2013	200	94	0		0	0		8.3	47.1	75	39.7	2.6	172	68.5
86	Cuyama	Central Coast Valleys	4/4/2013	300	94	0		0	0		8.5	47.4	76	40.2	2.9	142	67.7
86	Cuyama	Central Coast Valleys	4/4/2013	400	94	0		0	0		7.8	46	74	38.2	1.8	141	67
86	Cuyama	Central Coast Valleys	4/4/2013	500	94	0		0	0		8.6	46.3	80	40.5	2.7	123	66.2
86	Cuyama	Central Coast Valleys	4/4/2013	600	94	0		0	1		9.2	49.7	75	42.3	3.1	115	65.5
86	Cuyama	Central Coast Valleys	4/4/2013	700	94	0		0	30		9	50.5	72	41.9	1.6	316	64.9
86	Cuyama	Central Coast Valleys	4/4/2013	800	94	0		0	121		9.4	51.3	73	42.9	2.5	291	64.4
86	Cuyama	Central Coast Valleys	4/4/2013	900	94	0		0	512		10.1	55.1	68	44.9	2.5	28	64
86	Cuyama	Central Coast Valleys	4/4/2013	1000	94	0.01		0	704		10.3	59.4	60	45.4	2.7	67	63.7
86	Cuyama	Central Coast Valleys	4/4/2013	1100	94	0.02		0	1704		11	64.2	53	47	3.8	81	63.8
86	Cuyama	Central Coast Valleys	4/4/2013	1200	94	0.02		0	1875		12	68.1	51	49.4	4.8	310	64.2
86	Cuyama	Central Coast Valleys	4/4/2013	1300	94	0.01		0	1009		12	68.6	50	49.4	6.7	334	65.4
86	Cuyama	Central Coast Valleys	4/4/2013	1400	94	0.02		0	1319		11.6	69.7	47	48.5	6.4	353	66.8
86	Cuyama	Central Coast Valleys	4/4/2013	1500	94	0.01		0	851		11.3	69.8	45	47.7	7.7	20	68
86	Cuyama	Central Coast Valleys	4/4/2013	1600	94	0		0	230		10.9	68.1	46	48.7	4	341	69.2
86	Cuyama	Central Coast Valleys	4/4/2013	1700	94	0.01		0	435		10.7	68.6	45	46.3	6.7	327	69.9
86	Cuyama	Central Coast Valleys	4/4/2013	1800	94	0.01		0	423		11.2	67.5	49	47.6	7.1	352	70.3
86	Cuyama	Central Coast Valleys	4/4/2013	1900	94	0		0	41		11.9	62.9	61	49.1	6.4	287	70.5
86	Cuyama	Central Coast Valleys	4/4/2013	2000	94	0		0	0		12	58.6	71	49.4	8.5	275	70.5
86	Cuyama	Central Coast Valleys	4/4/2013	2100	94	0		0	0		12.1	56.9	79	49.5	8.1	277	70.3
86	Cuyama	Central Coast Valleys	4/4/2013	2200	94	0		0	0		11.9	54.8	81	49.1	6.4	276	69.9
86	Cuyama	Central Coast Valleys	4/4/2013	2300	94	0		0	0		11.8	54.1	82	48.8	5.3	280	69.4
86	Cuyama	Central Coast Valleys	4/4/2013	2400	94	0		0	0		11.7	53.1	85	48.6	3.3	275	68.8
86	Cuyama	Central Coast Valleys	4/5/2013	100	95	0		0	0		11.8	52.8	87	49	3.5	271	68.3
86	Cuyama	Central Coast Valleys	4/5/2013	200	95	0		0	0		11.7	52.3	88	48.7	1.8	320	67.7
86	Cuyama	Central Coast Valleys	4/5/2013	300	95	0		0	0		11.7	52	88	48.6	1.4	303	67.2
86	Cuyama	Central Coast Valleys	4/5/2013	400	95	0		0	0		11.8	52.4	88	49	2.1	137	68.7

88	Cuyama	Central Coast Valleys	4/5/2013	500	95	0	0	0	11.8	52.9	86	49	2	143	66.3
89	Cuyama	Central Coast Valleys	4/5/2013	600	95	0	0	2	11.8	53.2	86	49	1.9	32	65.9
90	Cuyama	Central Coast Valleys	4/5/2013	700	95	0	0	61	11.9	53.7	85	49.2	3.5	88	65.5
91	Cuyama	Central Coast Valleys	4/5/2013	800	95	0	0	175	12.3	54.4	85	50	7.5	86	65.1
92	Cuyama	Central Coast Valleys	4/5/2013	900	95	0	0	246	12.3	52.9	90	50.1	9	88	64.8
93	Cuyama	Central Coast Valleys	4/5/2013	1000	95	0	0	410	12.5	53.1	91	50.4	7.8	96	64.6
94	Cuyama	Central Coast Valleys	4/5/2013	1100	95	0.01	0	641	12.5	54.9	85	50.5	4	111	64.4
95	Cuyama	Central Coast Valleys	4/5/2013	1200	95	0.02	0	1726	12.4	60	70	50.2	4.1	132	64.4
96	Cuyama	Central Coast Valleys	4/5/2013	1300	95	0.02	0	1859	12.1	63	61	49.5	8.4	113	64.7
97	Cuyama	Central Coast Valleys	4/5/2013	1400	95	0.02	0	1551	11.6	64.2	57	48.5	7.1	120	65.5
98	Cuyama	Central Coast Valleys	4/5/2013	1500	95	0.01	0	1033	11.8	64.2	57	48.8	8.7	76	66.6
99	Cuyama	Central Coast Valleys	4/5/2013	1600	95	0.01	0	815	11.4	62.8	59	48.1	10	25	67.6
100	Cuyama	Central Coast Valleys	4/5/2013	1700	95	0.01	0	525	11.3	61.9	60	47.9	7.7	5	68.3
101	Cuyama	Central Coast Valleys	4/5/2013	1800	95	0	0	274	11.1	60.8	61	47.3	5	6	68.8
102	Cuyama	Central Coast Valleys	4/5/2013	1900	95	0	0	16	11.1	57.8	68	47.2	5.5	77	69
103	Cuyama	Central Coast Valleys	4/5/2013	2000	95	0	0	0	10.9	54.5	75	46.8	4.4	113	69
104	Cuyama	Central Coast Valleys	4/5/2013	2100	95	0	0	0	10.5	52.3	78	45.7	5.2	146	68.7
105	Cuyama	Central Coast Valleys	4/5/2013	2200	95	0	0	0	10.1	51.8	77	44.9	3.7	174	68.3
106	Cuyama	Central Coast Valleys	4/5/2013	2300	95	0	0	0	10	51.3	77	44.4	2.6	83	67.7
107	Cuyama	Central Coast Valleys	4/5/2013	2400	95	0	0	0	9.4	48.2	82	42.9	2.5	107	67.1
108	Cuyama	Central Coast Valleys	4/6/2013	100	96	0	0	0	9.2	47.3	83	42.5	2.5	195	66.5
109	Cuyama	Central Coast Valleys	4/6/2013	200	96	0	0	0	8.6	45.4	83	40.8	2.3	173	65.9
110	Cuyama	Central Coast Valleys	4/6/2013	300	96	0	0	0	9.7	48	85	43.8	4.8	126	65.3
111	Cuyama	Central Coast Valleys	4/6/2013	400	96	0	0	0	10.6	50.7	84	46	5.1	113	64.7
112	Cuyama	Central Coast Valleys	4/6/2013	500	96	0	0	0	10.7	51.8	81	46.3	6.4	20	64.1
113	Cuyama	Central Coast Valleys	4/6/2013	600	96	0	0	2	10.5	51	82	45.7	4.7	79	63.6
114	Cuyama	Central Coast Valleys	4/6/2013	700	96	0	0	111	10.6	51	83	46.2	7	121	63.3
115	Cuyama	Central Coast Valleys	4/6/2013	800	96	0	0	275	10.6	52.3	79	46.1	5.2	119	62.9
116	Cuyama	Central Coast Valleys	4/6/2013	900	96	0.01	0	640	10.2	53.8	72	45.1	5.5	12	62.7
117	Cuyama	Central Coast Valleys	4/6/2013	1000	96	0.02	0	1315	10.1	56.7	64	44.8	10.6	122	62.7
118	Cuyama	Central Coast Valleys	4/6/2013	1100	96	0.02	0	1561	10.1	58.4	61	44.8	10.2	124	62.8
119	Cuyama	Central Coast Valleys	4/6/2013	1200	96	0.02	0	1846	10	61.6	54	44.8	7.9	125	63.4
120	Cuyama	Central Coast Valleys	4/6/2013	1300	96	0.02	0	1852	9.7	64.1	48	43.8	5.9	66	64.4
121	Cuyama	Central Coast Valleys	4/6/2013	1400	96	0.02	0	1747	8.6	66.6	39	40.7	7.2	359	65.6
122	Cuyama	Central Coast Valleys	4/6/2013	1500	96	0.02	0	1481	8.6	68.1	37	40.7	12.3	353	66.9
123	Cuyama	Central Coast Valleys	4/6/2013	1600	96	0.02	0	1164	8	67.4	35	38.8	13.5	351	68.3
124	Cuyama	Central Coast Valleys	4/6/2013	1700	96	0.01	0	693	7.7	66.2	35	37.7	12.7	0	69.4
125	Cuyama	Central Coast Valleys	4/6/2013	1800	96	0.01	0	345	7.8	64.5	38	36.1	10.6	351	70.1
126	Cuyama	Central Coast Valleys	4/6/2013	1900	96	0	0	17	8	61.3	43	38.8	6.3	353	70.4
127	Cuyama	Central Coast Valleys	4/6/2013	2000	96	0	0	0	8.7	58.4	56	41	3.5	72	70.4
128	Cuyama	Central Coast Valleys	4/6/2013	2100	96	0	0	0	8.8	54.3	61	41.1	4.4	117	70
129	Cuyama	Central Coast Valleys	4/6/2013	2200	96	0	0	0	8.7	51.5	67	40.9	4.1	134	69.4
130	Cuyama	Central Coast Valleys	4/6/2013	2300	96	0	0	0	8.2	50.4	68	39.4	3.4	205	68.8
131	Cuyama	Central Coast Valleys	4/6/2013	2400	96	0	0	0	9.1	54.3	63	42.2	3.3	297	68.1
132	Cuyama	Central Coast Valleys	4/7/2013	100	97	0	0	0	11.3	55.1	76	47.8	7.9	345	67.4
133	Cuyama	Central Coast Valleys	4/7/2013	200	97	0	0	0	10.7	53.5	77	46.4	7.2	352	68.8
134	Cuyama	Central Coast Valleys	4/7/2013	300	97	0	0	0	10.2	52	77	45	5.2	14	66.3
135	Cuyama	Central Coast Valleys	4/7/2013	400	97	0	0	0	9.9	50.8	78	44.2	5.6	73	65.8
136	Cuyama	Central Coast Valleys	4/7/2013	500	97	0	0	0	9.8	50.7	77	43.9	4.8	104	65.2
137	Cuyama	Central Coast Valleys	4/7/2013	600	97	0	0	5	9.4	50.8	75	43	5.5	82	64.7
138	Cuyama	Central Coast Valleys	4/7/2013	700	97	0	0	135	9.8	50.9	77	44	5.1	130	64.2
139	Cuyama	Central Coast Valleys	4/7/2013	800	97	0	0	324	10	52.3	75	44.5	6.4	125	63.8
140	Cuyama	Central Coast Valleys	4/7/2013	900	97	0.01	0	658	9.3	54.1	65	42.8	5.4	21	63.4
141	Cuyama	Central Coast Valleys	4/7/2013	1000	97	0.02	0	1250	8.9	57.3	55	41.4	7.2	5	63.2
142	Cuyama	Central Coast Valleys	4/7/2013	1100	97	0.02	0	1487	8.4	60.2	47	39.9	8.2	356	63.4
143	Cuyama	Central Coast Valleys	4/7/2013	1200	97	0.02	0	1856	8.2	62.9	42	39.3	8	3	64
144	Cuyama	Central Coast Valleys	4/7/2013	1300	97	0.03	0	1863	8.4	65.9	39	40.1	10.7	345	65.1
145	Cuyama	Central Coast Valleys	4/7/2013	1400	97	0.03	0	1662	8.7	67.6	38	40.9	11.3	347	66.5
146	Cuyama	Central Coast Valleys	4/7/2013	1500	97	0.02	0	1543	8.6	67.9	37	40.8	10.6	357	67.8
147	Cuyama	Central Coast Valleys	4/7/2013	1600	97	0.02	0	1170	8.4	68.2	36	39.9	9.9	8	69
148	Cuyama	Central Coast Valleys	4/7/2013	1700	97	0.01	0	752	8	67.9	34	38.9	9.2	358	70.1 Y
149	Cuyama	Central Coast Valleys	4/7/2013	1800	97	0.01	0	293	7.9	66.2	36	38.5	9.4	354	70.7 Y
150	Cuyama	Central Coast Valleys	4/7/2013	1900	97	0	0	22	8.9	60.9	49	41.5	6.3	109	71 Y
151	Cuyama	Central Coast Valleys	4/7/2013	2000	97	0	0	0	8.4	57.2	53	40.1	2.9	236	71
152	Cuyama	Central Coast Valleys	4/7/2013	2100	97	0	0	0	9.5	56.3	61	43.1	4.1	277	70.6
153	Cuyama	Central Coast Valleys	4/7/2013	2200	97	0	0	0	9.9	54.7	68	44.4	5.4	283	70
154	Cuyama	Central Coast Valleys	4/7/2013	2300	97	0	0	0	9.8	52.8	73	44.1	5.4	287	69.4
155	Cuyama	Central Coast Valleys	4/7/2013	2400	97	0	0	0	9.7	50.9	76	43.6	5.7	269	68.7
156	Cuyama	Central Coast Valleys	4/8/2013	100	98	0	0	0	9	47.9	80	41.9	2.8	284	68
157	Cuyama	Central Coast Valleys	4/8/2013	200	98	0	0	0	8.9	47.2	80	41.5	5.5	267	67.3
158	Cuyama	Central Coast Valleys	4/8/2013	300	98	0	0	0	8.9	46.1	83	41.4	2.9	303	66.6
159	Cuyama	Central Coast Valleys	4/8/2013	400	98	0	0	0	8.5	45.2	83	40.4	3.5	298	65.9
160	Cuyama	Central Coast Valleys	4/8/2013	500	98	0	0	0	7.7	44.4	77	37.8	6.3	304	65.2
161	Cuyama	Central Coast Valleys	4/8/2013	600	98	0	0	12	7.5	44.1	76	37	5.8	283	64.5
162	Cuyama	Central Coast Valleys	4/8/2013	700	98	0	0	251	6.2	43.3	65	32.3	7.9	290	63.9 Y
163	Cuyama	Central Coast Valleys	4/8/2013	800	98	0	0	423	5.8	43.8	59	30.5	8.6	292	63.3
164	Cuyama	Central Coast Valleys	4/8/2013	900	98	0.01	0	632	6.8	45.3	64	33.8	9.3	313	62.9
165	Cuyama	Central Coast Valleys	4/8/2013	1000	98	0.01	0	878	7.1	47	64	35.6	8.7	329	62.6
166	Cuyama	Central Coast Valleys	4/8/2013	1100	98	0.01	0	1150	7.5	49	63	37	10.9	319	62.6
167	Cuyama	Central Coast Valleys	4/8/2013	1200	98	0.01	0	714	7.1	49.1	60	35.9	11.8	325	62.9
168	Cuyama	Central Coast Valleys	4/8/2013	1300	98	0.02	0	1540	8.9	51	54	35.1	12.3	330	63.4
169	Cuyama	Central Coast Valleys	4/8/2013	1400	98	0.01	0	1021	6.5	52.9	47	33.4	12	326	63.8
170	Cuyama	Central Coast Valleys	4/8/2013	1500	98	0.01	0	892	5.8	54.2	41	30.9	14.3	329	64.5
171	Cuyama	Central Coast Valleys	4/8/2013	1600	98	0.02	0	1035	5.6	66.7	36	29.8	16.2	332	65.1
172	Cuyama	Central Coast Valleys	4/8/2013	1700	98	0.01	0	711	5.4	56.4	35	29.2	17.6	336	65.6

88	Cuyama	Central Coast Valleys	4/8/2013	1800	98	0.01	0	0	324	5.2	55.1	35	27.9	15.2	329	68
89	Cuyama	Central Coast Valleys	4/8/2013	1900	98	0	0	0	25	5.3	53	39	28.4	10.3	326	66.2
90	Cuyama	Central Coast Valleys	4/8/2013	2000	98	0	0	0	0	5.3	51.3	41	28.4	8.6	315	66.1
91	Cuyama	Central Coast Valleys	4/8/2013	2100	98	0	0	0	0	5.1	49.9	42	27.8	6.1	311	65.7
92	Cuyama	Central Coast Valleys	4/8/2013	2200	98	0	0	0	0	5	47.2	45	27	3.5	296	65.2
93	Cuyama	Central Coast Valleys	4/8/2013	2300	98	0	0	0	0	4.6	42.4	50	24.9	2.6	238	64.6
94	Cuyama	Central Coast Valleys	4/8/2013	2400	98	0	0	0	0	5.3	42.1	58	28.4	3.4	253	63.9
95	Cuyama	Central Coast Valleys	4/9/2013	100	99	0	0	0	0	5.1	37.4	67	27.3	3.6	134	63.2
96	Cuyama	Central Coast Valleys	4/9/2013	200	99	0	0	0	0	5.3	35.2	76	28.3	3.6	137	62.4
97	Cuyama	Central Coast Valleys	4/9/2013	300	99	0	0	0	0	5	34.2	75	27.3	4	154	61.7
98	Cuyama	Central Coast Valleys	4/9/2013	400	99	0	0	0	0	4.6	31.7	77	25.3	3.2	146	60.9
99	Cuyama	Central Coast Valleys	4/9/2013	500	99	0	0	0	0	4.6	30.7	80	25.3	2.9	131	60.2
100	Cuyama	Central Coast Valleys	4/9/2013	600	99	0	0	0	11	4.9	31.6	81	26.4	4	162	59.4
101	Cuyama	Central Coast Valleys	4/9/2013	700	99	0	0	0	267	5.3	35.9	74	28.6	3.6	118	58.7
										Averages	32.6	77	26.6	3.6		
102	Cuyama	Central Coast Valleys	4/9/2013	800	99	0.01	0	0	694	6.2	44.6	62	32.4	2.7	41	58
103	Cuyama	Central Coast Valleys	4/9/2013	900	99	0.01	0	0	1121	6	50.8	47	31.5	3.5	315	57.6
104	Cuyama	Central Coast Valleys	4/9/2013	1000	99	0.02	0	0	1499	5.1	55.3	34	27.7	8.9	333	57.8
105	Cuyama	Central Coast Valleys	4/9/2013	1100	99	0.02	0	0	1770	4.5	57.6	28	24.7	12	338	58.5
106	Cuyama	Central Coast Valleys	4/9/2013	1200	99	0.03	0	0	1916	4.6	59.1	27	24.9	11.9	336	59.8
107	Cuyama	Central Coast Valleys	4/9/2013	1300	99	0.03	0	0	1937	4.6	61	25	25	11.4	336	61.5
108	Cuyama	Central Coast Valleys	4/9/2013	1400	99	0.02	0	0	1825	4.6	62.1	24	25.3	10.1	331	63.1
109	Cuyama	Central Coast Valleys	4/9/2013	1500	99	0.02	0	0	1584	4.7	62.8	24	25.8	10.4	335	64.6
110	Cuyama	Central Coast Valleys	4/9/2013	1600	99	0.02	0	0	1242	4.8	62.7	25	26.2	12.1	342	66
111	Cuyama	Central Coast Valleys	4/9/2013	1700	99	0.01	0	0	815	4.9	62.3	26	26.6	11	334	67.2
112	Cuyama	Central Coast Valleys	4/9/2013	1800	99	0.01	0	0	377	5.2	61	29	28.2	9.4	333	67.9
113	Cuyama	Central Coast Valleys	4/9/2013	1900	99	0	0	0	30	5.2	57.7	32	27.9	8.1	350	68.2
114	Cuyama	Central Coast Valleys	4/9/2013	2000	99	0	0	0	0	5	54.8	34	27	6	5	68.1
115	Cuyama	Central Coast Valleys	4/9/2013	2100	99	0	0	0	0	5	49.3	42	27.1	3.5	109	74.3 Y
116	Cuyama	Central Coast Valleys	4/9/2013	2200	99	0	0	0	0	5	46	48	27.3	5.7	190	S
117	Cuyama	Central Coast Valleys	4/9/2013	2300	99	0	0	0	0	5.5	43.5	57	29.3	4.2	118	S
118	Cuyama	Central Coast Valleys	4/9/2013	2400	99	0	0	0	0	5.7	40.7	66	30.4	5.7	129	S
119	Cuyama	Central Coast Valleys	4/10/2013	100	100	0	0	0	0	5.7	39.3	70	30.4	4.2	101	82.4 R
120	Cuyama	Central Coast Valleys	4/10/2013	200	100	0	0	0	0	5.8	38.6	72	30.6	4.7	115	77.9 R
121	Cuyama	Central Coast Valleys	4/10/2013	300	100	0	0	0	0	5.5	37.7	71	29.3	4.4	132	76.3 Y
122	Cuyama	Central Coast Valleys	4/10/2013	400	100	0	0	0	0	5.6	36.4	76	29.7	5.1	111	71.9 Y
123	Cuyama	Central Coast Valleys	4/10/2013	500	100	0	0	0	0	5.5	37.2	73	29.5	6.7	111	71 Y
124	Cuyama	Central Coast Valleys	4/10/2013	600	100	0	0	0	13	5.3	35.7	74	28.3	4.9	119	71.3 Y
125	Cuyama	Central Coast Valleys	4/10/2013	700	100	0	0	0	284	5.6	39.2	71	30.6	6.5	99	62.3
126	Cuyama	Central Coast Valleys	4/10/2013	800	100	0.01	0	0	705	6.4	48.9	54	33.2	5.9	94	68.7 Y
127	Cuyama	Central Coast Valleys	4/10/2013	900	100	0.01	0	0	1137	6.2	58.8	37	32.5	3.2	88	54.6
128	Cuyama	Central Coast Valleys	4/10/2013	1000	100	0.02	0	0	1505	5.8	63.8	29	30.7	3.8	124	54.2
129	Cuyama	Central Coast Valleys	4/10/2013	1100	100	0.02	0	0	1772	5.5	67.2	24	29.3	4.5	161	55.2
130	Cuyama	Central Coast Valleys	4/10/2013	1200	100	0.03	0	0	1916	5.3	70	21	28.3	5.1	149	56.8
131	Cuyama	Central Coast Valleys	4/10/2013	1300	100	0.03	0	0	1933	4.9	72.6	18	26.7	7.1	348	58.6
132	Cuyama	Central Coast Valleys	4/10/2013	1400	100	0.03	0	0	1819	5	74.5	17	27.1	10.1	345	60.3
133	Cuyama	Central Coast Valleys	4/10/2013	1500	100	0.03	0	0	1590	5.5	75.5	18	29.3	9.8	339	61.9
134	Cuyama	Central Coast Valleys	4/10/2013	1600	100	0.02	0	0	1255	5	74.7	17	27.1	11.2	330	63.4
135	Cuyama	Central Coast Valleys	4/10/2013	1700	100	0.01	0	0	840	5.4	73.5	19	29	7.5	328	64.7
136	Cuyama	Central Coast Valleys	4/10/2013	1800	100	0.01	0	0	392	5.3	71.8	20	28.7	7.8	337	65.6
137	Cuyama	Central Coast Valleys	4/10/2013	1900	100	0	0	0	33	4.9	67.5	21	26.7	4.9	8	66.1
138	Cuyama	Central Coast Valleys	4/10/2013	2000	100	0	0	0	0	5.4	62.1	28	29	3.7	111	66.2
139	Cuyama	Central Coast Valleys	4/10/2013	2100	100	0	0	0	0	5.6	59.4	32	29.9	5	92	65.8
140	Cuyama	Central Coast Valleys	4/10/2013	2200	100	0	0	0	0	6.7	54.1	47	34.2	6.5	132	65.2
141	Cuyama	Central Coast Valleys	4/10/2013	2300	100	0	0	0	0	6.5	51.4	50	33.5	5	95	64.4
142	Cuyama	Central Coast Valleys	4/10/2013	2400	100	0	0	0	0	6.8	49.1	57	34.7	5.5	122	63.6
143	Cuyama	Central Coast Valleys	4/11/2013	100	101	0	0	0	0	7	48.1	61	35.3	5	118	62.7
144	Cuyama	Central Coast Valleys	4/11/2013	200	101	0	0	0	0	7	48.3	65	35.2	3.5	140	61.9
145	Cuyama	Central Coast Valleys	4/11/2013	300	101	0	0	0	0	7.1	45.7	68	35.8	5.1	115	61
146	Cuyama	Central Coast Valleys	4/11/2013	400	101	0	0	0	0	7	44.3	70	35.2	4.4	126	60.2
147	Cuyama	Central Coast Valleys	4/11/2013	500	101	0	0	0	0	6.9	43.5	71	34.9	3.3	140	59.5
148	Cuyama	Central Coast Valleys	4/11/2013	600	101	0	0	0	8	6.4	42.3	70	33.2	3.2	220	58.7
149	Cuyama	Central Coast Valleys	4/11/2013	700	101	0	0	0	274	7.5	47.3	67	37.1	4.2	100	58
150	Cuyama	Central Coast Valleys	4/11/2013	800	101	0.01	0	0	689	8.5	55.8	56	40.3	4.3	50	57.5
151	Cuyama	Central Coast Valleys	4/11/2013	900	101	0.01	0	0	1101	8.8	61.2	47	41.1	3.9	88	57.1
152	Cuyama	Central Coast Valleys	4/11/2013	1000	101	0.02	0	0	1466	8.7	66.3	39	40.8	4.4	102	57.4
153	Cuyama	Central Coast Valleys	4/11/2013	1100	101	0.02	0	0	1733	8.5	68.9	35	40.5	6.3	80	58.2
154	Cuyama	Central Coast Valleys	4/11/2013	1200	101	0.03	0	0	1885	8.9	70	36	41.6	10.5	101	59.5
155	Cuyama	Central Coast Valleys	4/11/2013	1300	101	0.03	0	0	1894	9	71.4	34	41.8	7.6	21	61
156	Cuyama	Central Coast Valleys	4/11/2013	1400	101	0.03	0	0	1788	9	72.4	33	41.8	8.9	348	62.5
157	Cuyama	Central Coast Valleys	4/11/2013	1500	101	0.03	0	0	1551	9.2	73.1	33	42.4	13.3	352	64
158	Cuyama	Central Coast Valleys	4/11/2013	1600	101	0.02	0	0	1174	9.3	71.8	35	42.6	14.7	350	65.5
159	Cuyama	Central Coast Valleys	4/11/2013	1700	101	0.01	0	0	719	9.2	70.3	36	42.3	14.1	343	66.7
160	Cuyama	Central Coast Valleys	4/11/2013	1800	101	0.01	0	0	261	9	67.9	39	41.9	13.4	344	67.5
161	Cuyama	Central Coast Valleys	4/11/2013	1900	101	0	0	0	29	9	65.3	42	41.7	8.8	352	67.8
162	Cuyama	Central Coast Valleys	4/11/2013	2000	101	0	0	0	0	9	62.5	46	41.7	5.4	2	67.7
163	Cuyama	Central Coast Valleys	4/11/2013	2100	101	0	0	0	0	8.8	57.6	54	41.1	3.5	168	67.3
164	Cuyama	Central Coast Valleys	4/11/2013	2200	101	0	0	0	0	8.7	55	59	41	4.3	170	66.7
165	Cuyama	Central Coast Valleys	4/11/2013	2300	101	0	0	0	0	9	53.4	65	41.8	6.4	159	66.1
166	Cuyama	Central Coast Valleys	4/11/2013	2400	101	0	0	0	0	8.7	52.4	65	40.8	5.9	155	65.3
167	Cuyama	Central Coast Valleys	4/12/2013	100	102	0	0	0	0	8.4	49	71	40.1	2.9	65	64.6
168	Cuyama	Central Coast Valleys	4/12/2013	200	102	0	0	0	0	7.9	47.2	71	38.3	2.4	132	63.8
169	Cuyama	Central Coast Valleys	4/12/2013	300	102	0	0	0	0	7.8	46	74	38.3	3.5	44	63.1
170	Cuyama	Central Coast Valleys	4/12/2013	400	102	0	0	0	0	8.1	44.7	80	39	5.1	89	62.3
171	Cuyama	Central Coast Valleys	4/12/2013	500	102	0	0	0	0	7.8	43.2	82	38.1	4.5	126	61.6

88	Cuyama	Central Coast Valleys	4/12/2013	600	102	0	0	16	7.7	42.2	84	37.7	3.9	112	60.9
88	Cuyama	Central Coast Valleys	4/12/2013	700	102	0	0	271	8.5	45.8	81	40.2	5.5	90	60.1
88	Cuyama	Central Coast Valleys	4/12/2013	800	102	0.01	0	688	9.5	53.4	68	43.2	6.1	75	59.5
88	Cuyama	Central Coast Valleys	4/12/2013	900	102	0.01	0	1110	9.5	61.4	51	43.2	4.4	107	59.1
88	Cuyama	Central Coast Valleys	4/12/2013	1000	102	0.02	0	1470	8.7	65.9	40	40.8	4.4	151	59.2
88	Cuyama	Central Coast Valleys	4/12/2013	1100	102	0.02	0	1737	8.8	69.3	36	41.2	5.6	158	59.9
88	Cuyama	Central Coast Valleys	4/12/2013	1200	102	0.03	0	1887	9.3	72.2	34	42.5	5	106	61.2
88	Cuyama	Central Coast Valleys	4/12/2013	1300	102	0.03	0	1906	9.2	74.8	31	42.3	4.9	117	62.9
88	Cuyama	Central Coast Valleys	4/12/2013	1400	102	0.03	0	1803	9.1	76.9	29	42.2	6.1	353	64.6
88	Cuyama	Central Coast Valleys	4/12/2013	1500	102	0.02	0	1555	8.9	77.1	28	41.4	7.4	347	66.2
88	Cuyama	Central Coast Valleys	4/12/2013	1600	102	0.02	0	1203	8.9	77.6	27	41.4	7.5	343	67.9
88	Cuyama	Central Coast Valleys	4/12/2013	1700	102	0.01	0	802	8.8	78.4	28	41.3	10.1	344	69.4
88	Cuyama	Central Coast Valleys	4/12/2013	1800	102	0.01	0	357	9.5	73.9	33	43.3	7.2	72	70.4
88	Cuyama	Central Coast Valleys	4/12/2013	1900	102	0	0	34	9.9	69	41	44.2	4.4	109	70.9 Y
88	Cuyama	Central Coast Valleys	4/12/2013	2000	102	0	0	0	9.5	65.5	44	43.3	3.1	194	70.8
88	Cuyama	Central Coast Valleys	4/12/2013	2100	102	0	0	0	9.1	61.1	49	42	3.2	248	70.4
88	Cuyama	Central Coast Valleys	4/12/2013	2200	102	0	0	0	8.4	58.8	54	40.2	2.2	227	69.9
88	Cuyama	Central Coast Valleys	4/12/2013	2300	102	0	0	0	8.8	53.7	63	41.3	3.8	135	69.2
88	Cuyama	Central Coast Valleys	4/12/2013	2400	102	0	0	0	9.4	52.3	70	42.8	4.1	117	68.5
88	Cuyama	Central Coast Valleys	4/13/2013	100	103	0	0	0	9	49.3	75	41.9	5.2	114	67.6
88	Cuyama	Central Coast Valleys	4/13/2013	200	103	0	0	0	8.7	47.9	77	41	4	94	66.8
88	Cuyama	Central Coast Valleys	4/13/2013	300	103	0	0	0	8.5	47	77	40.2	4.6	103	65.9
88	Cuyama	Central Coast Valleys	4/13/2013	400	103	0	0	0	8.1	46.7	75	39.2	5.3	106	65.1
88	Cuyama	Central Coast Valleys	4/13/2013	500	103	0	0	0	7.9	45	78	38.6	4.9	114	64.3
88	Cuyama	Central Coast Valleys	4/13/2013	600	103	0	0	18	7.9	44.6	78	38.4	5.3	103	63.4
88	Cuyama	Central Coast Valleys	4/13/2013	700	103	0	0	290	8.5	48.2	74	40.2	6.3	78	62.7
88	Cuyama	Central Coast Valleys	4/13/2013	800	103	0.01	0	712	9.4	57	59	42.8	6.7	84	62
88	Cuyama	Central Coast Valleys	4/13/2013	900	103	0.01	0	1131	9.5	66	43	43.1	4.3	64	61.5
88	Cuyama	Central Coast Valleys	4/13/2013	1000	103	0.02	0	1462	9.7	71.5	37	43.9	2.9	311	61.6
88	Cuyama	Central Coast Valleys	4/13/2013	1100	103	0.02	0	1757	8.7	74.4	30	40.8	4.5	26	62.5
88	Cuyama	Central Coast Valleys	4/13/2013	1200	103	0.03	0	1912	8.3	78.7	27	39.8	5.6	341	63.9
88	Cuyama	Central Coast Valleys	4/13/2013	1300	103	0.03	0	1904	8.2	78.7	24	39.4	4.9	138	65.8
88	Cuyama	Central Coast Valleys	4/13/2013	1400	103	0.03	0	1755	8.8	80.2	25	41.3	5.9	305	67.4
88	Cuyama	Central Coast Valleys	4/13/2013	1500	103	0.03	0	1518	7.4	80.2	21	36.8	9.7	318	69 Y
88	Cuyama	Central Coast Valleys	4/13/2013	1600	103	0.02	0	1190	9.3	79	28	42.7	9.1	295	70.7 Y
88	Cuyama	Central Coast Valleys	4/13/2013	1700	103	0.01	0	798	9.2	75.9	30	42.5	10.4	284	72.1 Y
88	Cuyama	Central Coast Valleys	4/13/2013	1800	103	0.01	0	388	8.9	72.1	33	41.5	10.3	284	73.1 Y
88	Cuyama	Central Coast Valleys	4/13/2013	1900	103	0	0	36	8.4	65.8	39	40	9.8	275	73.4 Y
88	Cuyama	Central Coast Valleys	4/13/2013	2000	103	0	0	0	8.9	61.4	48	41.5	8.2	272	73.1 Y
88	Cuyama	Central Coast Valleys	4/13/2013	2100	103	0	0	0	8.5	59.7	49	40.4	6.7	262	72.6 Y
88	Cuyama	Central Coast Valleys	4/13/2013	2200	103	0	0	0	8.7	58.4	56	40.9	2.3	5	71.9 Y
88	Cuyama	Central Coast Valleys	4/13/2013	2300	103	0	0	0	8.1	52.1	61	39	3.7	180	71 Y
88	Cuyama	Central Coast Valleys	4/13/2013	2400	103	0	0	0	7.5	50	61	37.2	1.8	3	70.1
88	Cuyama	Central Coast Valleys	4/14/2013	100	104	0	0	0	7.4	48.1	65	38.8	4.1	168	69.2
88	Cuyama	Central Coast Valleys	4/14/2013	200	104	0	0	0	7.2	46	68	36.1	2.2	115	66.2
88	Cuyama	Central Coast Valleys	4/14/2013	300	104	0	0	0	7.4	45.4	71	36.7	3.6	242	67.3
88	Cuyama	Central Coast Valleys	4/14/2013	400	104	0	0	0	7.2	44.4	72	36.1	2.9	166	66.4
88	Cuyama	Central Coast Valleys	4/14/2013	500	104	0	0	0	7.3	43.6	76	36.6	3.7	109	65.5
88	Cuyama	Central Coast Valleys	4/14/2013	600	104	0	0	13	7.7	43.6	80	37.7	3	82	64.6
88	Cuyama	Central Coast Valleys	4/14/2013	700	104	0	0	294	9	50.3	72	41.7	3.5	149	63.8
88	Cuyama	Central Coast Valleys	4/14/2013	800	104	0.01	0	721	9.4	58	57	42.8	6.8	128	63
88	Cuyama	Central Coast Valleys	4/14/2013	900	104	0.01	0	1143	9.3	61.6	50	42.8	7.2	97	62.6
88	Cuyama	Central Coast Valleys	4/14/2013	1000	104	0.02	0	1503	9.4	64.2	46	43	6.2	99	62.6
88	Cuyama	Central Coast Valleys	4/14/2013	1100	104	0.02	0	1764	9.3	66.3	42	42.6	6.8	110	63.2
88	Cuyama	Central Coast Valleys	4/14/2013	1200	104	0.03	0	1904	9.2	68.7	38	42.2	6.2	5	64.3
88	Cuyama	Central Coast Valleys	4/14/2013	1300	104	0.03	0	1920	8.7	70.3	34	40.9	9.8	348	65.8
88	Cuyama	Central Coast Valleys	4/14/2013	1400	104	0.03	0	1813	8.4	71.8	32	40.1	8.8	9	67.2
88	Cuyama	Central Coast Valleys	4/14/2013	1500	104	0.02	0	1588	8	73.4	28	38.7	8.7	352	68.6 Y
88	Cuyama	Central Coast Valleys	4/14/2013	1600	104	0.02	0	1246	7.6	74.2	26	37.6	12.7	342	69.9 Y
88	Cuyama	Central Coast Valleys	4/14/2013	1700	104	0.01	0	838	7	73.9	25	35.4	9.4	335	71.1 Y
88	Cuyama	Central Coast Valleys	4/14/2013	1800	104	0.01	0	387	7.8	71.1	30	38.2	7.5	316	71.9 Y
88	Cuyama	Central Coast Valleys	4/14/2013	1900	104	0	0	38	9.3	65.4	43	42.7	6.8	266	72.3 Y
88	Cuyama	Central Coast Valleys	4/14/2013	2000	104	0	0	0	9.5	60.9	52	43.1	5.4	279	72.3 Y
88	Cuyama	Central Coast Valleys	4/14/2013	2100	104	0	0	0	9.4	58.1	57	43	3.9	298	72 Y
88	Cuyama	Central Coast Valleys	4/14/2013	2200	104	0	0	0	8.1	57.2	51	39.1	4.9	281	71.4 Y
88	Cuyama	Central Coast Valleys	4/14/2013	2300	104	0	0	0	7.3	54.9	50	36.6	5	284	70.7 Y
88	Cuyama	Central Coast Valleys	4/14/2013	2400	104	0	0	0	7.2	51.5	55	36.1	3.3	326	69.9
88	Cuyama	Central Coast Valleys	4/15/2013	100	105	0	0	0	7.3	51.1	57	36.3	2	264	69
88	Cuyama	Central Coast Valleys	4/15/2013	200	105	0	0	0	7	48.1	61	35.3	3	259	68.2
88	Cuyama	Central Coast Valleys	4/15/2013	300	105	0	0	0	6.6	44.5	66	33.9	2	217	67.3
88	Cuyama	Central Coast Valleys	4/15/2013	400	105	0	0	0	6.3	42.4	68	32.8	2.2	215	66.4
88	Cuyama	Central Coast Valleys	4/15/2013	500	105	0	0	0	6.4	41.4	72	33.1	2.7	231	65.6
88	Cuyama	Central Coast Valleys	4/15/2013	600	105	0	0	23	6.5	41	75	33.6	2	266	64.7
88	Cuyama	Central Coast Valleys	4/15/2013	700	105	0	0	315	7.2	44.2	72	38	2.4	304	63.8
88	Cuyama	Central Coast Valleys	4/15/2013	800	105	0.01	0	706	7.8	49.2	66	38.3	3.2	48	63.1
88	Cuyama	Central Coast Valleys	4/15/2013	900	105	0.01	0	1171	8.4	53.8	60	40.2	4.1	89	62.7
88	Cuyama	Central Coast Valleys	4/15/2013	1000	105	0.02	0	1540	8.4	56.7	54	40.1	3.5	110	62.7
88	Cuyama	Central Coast Valleys	4/15/2013	1100	105	0.02	0	1803	8.2	59.6	47	39.4	4.8	343	63.3
88	Cuyama	Central Coast Valleys	4/15/2013	1200	105	0.02	0	1953	7.4	63.1	37	38.6	5.9	324	64.5
88	Cuyama	Central Coast Valleys	4/15/2013	1300	105	0.03	0	1982	4.9	66.1	22	26.6	8.8	295	66.1
88	Cuyama	Central Coast Valleys	4/15/2013	1400	105	0.03	0	1871	5	66.9	22	27	8.9	291	67.4
88	Cuyama	Central Coast Valleys	4/15/2013	1500	105	0.02	0	1635	4.6	66.2	21	25.2	9.4	289	68.7 Y
88	Cuyama	Central Coast Valleys	4/15/2013	1600	105	0.02	0	1292	5.4	65.3	26	29.2	10	280	70 Y
88	Cuyama	Central Coast Valleys	4/15/2013	1700	105	0.01	0	868	5.5	62.7	28	29.6	10.1	286	71 Y
88	Cuyama	Central Coast Valleys	4/15/2013	1800	105	0.01	0	428	5.8	58	35	30.8	10.2	289	71.5 Y

88	Cuyama	Central Coast Valleys	4/15/2013	1900	105	0		0		43	6.6	52.5	49	34	9.6	274	71.6	Y		
88	Cuyama	Central Coast Valleys	4/15/2013	2000	105	0		0		0	7.1	48.8	60	35.7	10.1	263	71.3	Y		
88	Cuyama	Central Coast Valleys	4/15/2013	2100	105	0		0		0	7.1	46.1	67	35.7	8.8	265	70.6			
88	Cuyama	Central Coast Valleys	4/15/2013	2200	105	0		0		0	6.9	42.4	75	35.1	7.5	279	69.7			
88	Cuyama	Central Coast Valleys	4/15/2013	2300	105	0		0		0	6.8	40.4	79	34.5	7.7	274	68.7			
88	Cuyama	Central Coast Valleys	4/15/2013	2400	105	0		0		0	6.4	39.8	77	33.1	6.4	287	67.7			
88	Cuyama	Central Coast Valleys	4/16/2013	100	106	0		0		0	5.2	38.1	66	27.8	5.2	300	66.7			
88	Cuyama	Central Coast Valleys	4/16/2013	200	106	0		0		0	4.6	34.9	66	24.9	4.3	323	65.7			
88	Cuyama	Central Coast Valleys	4/16/2013	300	106	0		0		0	4.7	34.1	70	25.6	3.4	281	64.8			
88	Cuyama	Central Coast Valleys	4/16/2013	400	106	0		0		0	4.7	33.2	73	25.8	2.2	188	63.8			
88	Cuyama	Central Coast Valleys	4/16/2013	500	106	0		0		0	4.8	32.3	77	26	3	178	62.8			
88	Cuyama	Central Coast Valleys	4/16/2013	600	106	0		0		9	5	34.3	74	27.1	1.9	5	61.6			
											Averages				34	72	25.8	3.0		
88	Cuyama	Central Coast Valleys	4/16/2013	700	106	0		0		175	5.2	37	70	28.2	1.3	280	61			
88	Cuyama	Central Coast Valleys	4/16/2013	800	106	0.01		0		735	5.6	41.8	62	29.9	2.1	19	60.3			
88	Cuyama	Central Coast Valleys	4/16/2013	900	106	0.01		0		1225	5.7	45.6	55	30.4	4.7	4	59.8			
88	Cuyama	Central Coast Valleys	4/16/2013	1000	106	0.02		0		1376	5.5	48.6	48	29.8	8.9	334	59.8			
88	Cuyama	Central Coast Valleys	4/16/2013	1100	106	0.02		0		1759	5.4	51.5	42	29	11.1	335	60.4			
88	Cuyama	Central Coast Valleys	4/16/2013	1200	106	0.02		0		1968	5.2	54.1	37	28.2	13.3	339	61.5			
88	Cuyama	Central Coast Valleys	4/16/2013	1300	106	0.03		0		1964	5	56.1	32	27	13.5	339	62.9			
88	Cuyama	Central Coast Valleys	4/16/2013	1400	106	0.02		0		1850	4.8	57.7	30	26.3	12.3	339	64			
88	Cuyama	Central Coast Valleys	4/16/2013	1500	106	0.02		0		1476	4.2	58.6	25	22.9	13.2	329	65			
88	Cuyama	Central Coast Valleys	4/16/2013	1600	106	0.02		0		922	3.6	58.7	21	19.2	14.4	337	66			
88	Cuyama	Central Coast Valleys	4/16/2013	1700	106	0.01		0		387	2.9	57	18	14.3	14.2	339	66.9			
88	Cuyama	Central Coast Valleys	4/16/2013	1800	106	0.01		0		251	2.6	56.4	17	12	12.9	336	67.3			
88	Cuyama	Central Coast Valleys	4/16/2013	1900	106	0.01		0		23	2.1	54.9	15	7.4	12.3	330	67.2			
88	Cuyama	Central Coast Valleys	4/16/2013	2000	106	0		0		0	2.2	52.9	16	8.8	10.9	325	66.9			
88	Cuyama	Central Coast Valleys	4/16/2013	2100	106	0		0		0	2.8	50.6	22	13.4	12.4	330	66.3			
88	Cuyama	Central Coast Valleys	4/16/2013	2200	106	0		0		0	2.9	49.6	24	14.7	11.2	328	65.7			
88	Cuyama	Central Coast Valleys	4/16/2013	2300	106	0		0		0	2.9	49.6	24	14.2	9.9	320	65			
88	Cuyama	Central Coast Valleys	4/16/2013	2400	106	0		0		0	3.1	47.2	28	15.6	4.6	281	64.2			
88	Cuyama	Central Coast Valleys	4/17/2013	100	107	0		0		0	3.6	44.5	36	19.2	4	266	63.5			
88	Cuyama	Central Coast Valleys	4/17/2013	200	107	0		0		0	3.6	40.9	42	19.6	2.4	237	62.7			
88	Cuyama	Central Coast Valleys	4/17/2013	300	107	0		0		0	3.9	39.6	47	21.2	2.2	273	61.9			
88	Cuyama	Central Coast Valleys	4/17/2013	400	107	0		0		0	4	37.9	52	21.7	1.9	333	61.1			
88	Cuyama	Central Coast Valleys	4/17/2013	500	107	0		0		0	4.1	34.9	59	22.2	4.2	164	60.4			
88	Cuyama	Central Coast Valleys	4/17/2013	600	107	0		0		29	4.1	33.5	64	22.5	5.5	153	59.6			
88	Cuyama	Central Coast Valleys	4/17/2013	700	107	0		0		343	4.6	37.3	61	25.2	4.4	95	58.7			
											Averages				35.9	59	23	4.0		
88	Cuyama	Central Coast Valleys	4/17/2013	800	107	0.01		0		773	4.8	46.1	45	26	3.8	107	58			
88	Cuyama	Central Coast Valleys	4/17/2013	900	107	0.01		0		1198	4.3	51.4	33	23.2	4	339	57.6			
88	Cuyama	Central Coast Valleys	4/17/2013	1000	107	0.02		0		1563	4	53.9	28	22	9.2	338	57.8			
88	Cuyama	Central Coast Valleys	4/17/2013	1100	107	0.02		0		1819	4.1	56.4	26	22.2	9.8	345	58.6			
88	Cuyama	Central Coast Valleys	4/17/2013	1200	107	0.03		0		1960	3.7	58.1	23	20.2	13.5	340	59.9			
88	Cuyama	Central Coast Valleys	4/17/2013	1300	107	0.03		0		1972	3.8	59.3	22	20.5	11.7	344	61.4			
88	Cuyama	Central Coast Valleys	4/17/2013	1400	107	0.03		0		1844	3.9	60.2	22	20.9	12	335	62.6			
88	Cuyama	Central Coast Valleys	4/17/2013	1500	107	0.02		0		1617	3.8	60.4	21	20.5	11.6	336	63.7			
88	Cuyama	Central Coast Valleys	4/17/2013	1600	107	0.02		0		1278	3.4	60.4	19	17.8	11.2	333	64.9			
88	Cuyama	Central Coast Valleys	4/17/2013	1700	107	0.01		0		862	3.2	60	18	16.8	10.3	339	66			
88	Cuyama	Central Coast Valleys	4/17/2013	1800	107	0.01		0		424	2.9	58.7	17	14.1	10.5	337	66.8			
88	Cuyama	Central Coast Valleys	4/17/2013	1900	107	0		0		46	2.8	55.1	19	13.3	7.4	343	67.1			
88	Cuyama	Central Coast Valleys	4/17/2013	2000	107	0		0		0	2.8	51.6	22	13.5	4.8	5	67			
88	Cuyama	Central Coast Valleys	4/17/2013	2100	107	0		0		0	3.9	47.4	35	21.4	5	115	66.6			
88	Cuyama	Central Coast Valleys	4/17/2013	2200	107	0		0		0	4.1	44.3	41	22.4	5.4	98	65.9			
88	Cuyama	Central Coast Valleys	4/17/2013	2300	107	0		0		0	4	38.1	52	21.9	3.8	71	65.1			
88	Cuyama	Central Coast Valleys	4/17/2013	2400	107	0		0		0	3.8	38	48	20.3	3.8	138	64.2			
88	Cuyama	Central Coast Valleys	4/18/2013	100	108	0		0		0	3.8	37.5	50	20.7	4.3	99	63.4			
88	Cuyama	Central Coast Valleys	4/18/2013	200	108	0		0		0	4.3	36.1	59	23.3	6.2	121	62.5			
88	Cuyama	Central Coast Valleys	4/18/2013	300	108	0		0		0	4.2	34.4	63	23.1	3.9	110	61.6			
88	Cuyama	Central Coast Valleys	4/18/2013	400	108	0		0		0	4	34	60	21.7	8	97	60.7			
88	Cuyama	Central Coast Valleys	4/18/2013	500	108	0		0		0	4	32.7	63	21.5	5.6	120	59.9			
88	Cuyama	Central Coast Valleys	4/18/2013	600	108	0		0		30	4	32.7	63	21.7	6	108	59.1			
88	Cuyama	Central Coast Valleys	4/18/2013	700	108	0		0		341	4.1	37.9	53	22.1	7.4	92	58.2			
											Averages				34.3	60	22.0	5.8		
88	Cuyama	Central Coast Valleys	4/18/2013	800	108	0.01		0		767	4.4	46.5	41	24.2	8.2	96	57.5			
88	Cuyama	Central Coast Valleys	4/18/2013	900	108	0.01		0		1197	4.3	54.9	29	23.4	4.5	101	57.1			
88	Cuyama	Central Coast Valleys	4/18/2013	1000	108	0.02		0		1559	3.5	60.4	19	18.5	5.2	143	57.2			
88	Cuyama	Central Coast Valleys	4/18/2013	1100	108	0.02		0		1817	3.8	64.8	18	20.5	4.1	32	57.9			

88	Cuyama	Central Coast Valleys	4/19/2013	500	109	0	0	0	4.5	38	58	24.6	5.5	125	61.8
89	Cuyama	Central Coast Valleys	4/19/2013	600	109	0	0	33	4.5	37.4	59	24.6	6	117	60.9
90	Cuyama	Central Coast Valleys	4/19/2013	700	109	0	0	350	4.6	42.6	52	26.1	6.2	83	60.2
91	Cuyama	Central Coast Valleys	4/19/2013	800	109	0.01	0	774	5.1	52.1	38	27.5	5.7	92	59.5
92	Cuyama	Central Coast Valleys	4/19/2013	900	109	0.01	0	1192	4.9	61.1	27	26.5	4	117	59.1
93	Cuyama	Central Coast Valleys	4/19/2013	1000	109	0.02	0	1549	5	65.9	23	26.9	3.9	114	59.3
94	Cuyama	Central Coast Valleys	4/19/2013	1100	109	0.02	0	1805	5.1	69.7	20	27.4	4.8	109	60.1
95	Cuyama	Central Coast Valleys	4/19/2013	1200	109	0.03	0	1931	5.3	72	20	28.6	7.1	355	61.5
96	Cuyama	Central Coast Valleys	4/19/2013	1300	109	0.03	0	1943	5	72.8	18	26.9	9	1	63.2
97	Cuyama	Central Coast Valleys	4/19/2013	1400	109	0.03	0	1832	5.1	73.7	18	27.4	8.7	358	64.7
98	Cuyama	Central Coast Valleys	4/19/2013	1500	109	0.02	0	1602	5.2	74.3	18	28.2	9.2	353	66.1
99	Cuyama	Central Coast Valleys	4/19/2013	1600	109	0.02	0	1267	4.7	74.8	16	25.7	11.2	353	67.5
100	Cuyama	Central Coast Valleys	4/19/2013	1700	109	0.01	0	862	4.9	73.1	18	26.5	10.7	338	68.8
101	Cuyama	Central Coast Valleys	4/19/2013	1800	109	0.01	0	429	5.3	70.9	21	28.8	11	346	69.7
102	Cuyama	Central Coast Valleys	4/19/2013	1900	109	0	0	46	5.2	67.7	23	28.1	6.4	354	70.1
103	Cuyama	Central Coast Valleys	4/19/2013	2000	109	0	0	0	5.5	61	30	29.4	4.6	114	70.1
104	Cuyama	Central Coast Valleys	4/19/2013	2100	109	0	0	0	5.9	56.7	38	31.1	5.1	124	69.8
105	Cuyama	Central Coast Valleys	4/19/2013	2200	109	0	0	0	4.9	53.3	35	26.5	1.7	174	69.3
106	Cuyama	Central Coast Valleys	4/19/2013	2300	109	0	0	0	5.8	50	47	30.6	4.1	109	68.6
107	Cuyama	Central Coast Valleys	4/19/2013	2400	109	0	0	0	6.1	47.3	55	31.8	3.6	124	67.9
108	Cuyama	Central Coast Valleys	4/20/2013	100	110	0	0	0	5.8	47.5	52	30.8	4.2	143	67.1
109	Cuyama	Central Coast Valleys	4/20/2013	200	110	0	0	0	6.3	44.5	63	32.8	4	103	66.3
110	Cuyama	Central Coast Valleys	4/20/2013	300	110	0	0	0	6.3	43.7	65	32.6	4	119	65.5
111	Cuyama	Central Coast Valleys	4/20/2013	400	110	0	0	0	6.2	42.8	67	32.4	3.6	107	64.7
112	Cuyama	Central Coast Valleys	4/20/2013	500	110	0	0	0	6.2	42	68	32.2	3.3	90	63.9
113	Cuyama	Central Coast Valleys	4/20/2013	600	110	0	0	32	6.3	42.1	69	32.6	4.3	104	63.2
114	Cuyama	Central Coast Valleys	4/20/2013	700	110	0	0	342	7.4	53.2	53	36.8	4.5	127	62.5
115	Cuyama	Central Coast Valleys	4/20/2013	800	110	0.01	0	763	8.8	62.8	45	41.3	8.4	30	61.9
116	Cuyama	Central Coast Valleys	4/20/2013	900	110	0.02	0	1177	9.4	65	45	43	10	356	61.6
117	Cuyama	Central Coast Valleys	4/20/2013	1000	110	0.02	0	1538	9.2	68.4	39	42.3	5.7	40	61.9
118	Cuyama	Central Coast Valleys	4/20/2013	1100	110	0.03	0	1797	8.8	70.8	34	41.3	6.5	68	62.7
119	Cuyama	Central Coast Valleys	4/20/2013	1200	110	0.03	0	1933	8.8	73.2	32	41.3	5.7	10	64.1
120	Cuyama	Central Coast Valleys	4/20/2013	1300	110	0.03	0	1951	8.2	75.2	27	39.3	6.5	354	65.7
121	Cuyama	Central Coast Valleys	4/20/2013	1400	110	0.03	0	1854	7.4	78.3	24	36.9	6.2	338	67.1
122	Cuyama	Central Coast Valleys	4/20/2013	1500	110	0.02	0	1627	8.6	78.2	20	33.8	6.2	330	68.5 Y
123	Cuyama	Central Coast Valleys	4/20/2013	1600	110	0.02	0	1275	6.1	78.6	18	32.1	7.8	346	70 Y
124	Cuyama	Central Coast Valleys	4/20/2013	1700	110	0.01	0	859	5.7	77.3	18	30.2	9.3	350	71.5 Y
125	Cuyama	Central Coast Valleys	4/20/2013	1800	110	0.01	0	419	6.1	76.2	20	32	9.7	351	72.4 Y
126	Cuyama	Central Coast Valleys	4/20/2013	1900	110	0	0	47	6	71.1	23	31.6	6.9	357	72.9 Y
127	Cuyama	Central Coast Valleys	4/20/2013	2000	110	0	0	0	7.3	63.1	37	36.5	5.2	142	72.9 Y
128	Cuyama	Central Coast Valleys	4/20/2013	2100	110	0	0	0	7.7	59.6	44	37.6	5	152	72.5 Y
129	Cuyama	Central Coast Valleys	4/20/2013	2200	110	0	0	0	7.1	55.1	48	35.8	2.9	156	71.9 Y
130	Cuyama	Central Coast Valleys	4/20/2013	2300	110	0	0	0	7.8	51.7	60	38.1	4.1	96	71.2 Y
131	Cuyama	Central Coast Valleys	4/20/2013	2400	110	0	0	0	7.5	49.5	62	37.1	5.8	115	70.4 Y
132	Cuyama	Central Coast Valleys	4/21/2013	100	111	0	0	0	7.4	48	64	36.7	5.6	113	69.6
133	Cuyama	Central Coast Valleys	4/21/2013	200	111	0	0	0	7.2	48.8	66	35.9	5.4	112	68.7
134	Cuyama	Central Coast Valleys	4/21/2013	300	111	0	0	0	6.9	45.5	67	35.1	5.2	98	67.9
135	Cuyama	Central Coast Valleys	4/21/2013	400	111	0	0	0	6.5	44.4	65	33.4	3.7	120	67
136	Cuyama	Central Coast Valleys	4/21/2013	500	111	0	0	0	6.5	43.6	67	33.4	5.7	101	66.2
137	Cuyama	Central Coast Valleys	4/21/2013	600	111	0	0	37	6.2	43	66	32.4	6.1	101	65.4
138	Cuyama	Central Coast Valleys	4/21/2013	700	111	0	0	352	6.5	47.9	57	33.5	6.3	84	64.6
139	Cuyama	Central Coast Valleys	4/21/2013	800	111	0.01	0	774	6.7	57.5	42	34.4	7	70	63.9
140	Cuyama	Central Coast Valleys	4/21/2013	900	111	0.02	0	1199	7.2	68.4	33	36.1	5.2	69	63.5
141	Cuyama	Central Coast Valleys	4/21/2013	1000	111	0.02	0	1569	7.2	73.1	26	36.9	4.3	34	63.6
142	Cuyama	Central Coast Valleys	4/21/2013	1100	111	0.03	0	1819	6.6	78.5	20	34.1	6	4	64.4
143	Cuyama	Central Coast Valleys	4/21/2013	1200	111	0.03	0	1956	6	80.3	17	31.4	6.5	352	65.9
144	Cuyama	Central Coast Valleys	4/21/2013	1300	111	0.03	0	1958	6.1	82	16	32	7	350	67.6 Y
145	Cuyama	Central Coast Valleys	4/21/2013	1400	111	0.03	0	1838	6.3	82.7	17	32.8	6.5	343	69.1 Y
146	Cuyama	Central Coast Valleys	4/21/2013	1500	111	0.03	0	1596	6.4	82.6	17	33.1	11.3	345	70.5 Y
147	Cuyama	Central Coast Valleys	4/21/2013	1600	111	0.02	0	1252	7	82.1	19	35.3	10.8	347	71.9 Y
148	Cuyama	Central Coast Valleys	4/21/2013	1700	111	0.02	0	839	7.4	80.8	21	36.8	10.4	344	73.2 Y
149	Cuyama	Central Coast Valleys	4/21/2013	1800	111	0.01	0	410	7.1	78.5	21	35.6	8.8	347	74.1 Y
150	Cuyama	Central Coast Valleys	4/21/2013	1900	111	0	0	48	7.3	73.5	26	36.8	4.3	79	74.5 Y
151	Cuyama	Central Coast Valleys	4/21/2013	2000	111	0	0	0	7.5	67.1	33	37	4	170	74.5 Y
152	Cuyama	Central Coast Valleys	4/21/2013	2100	111	0	0	0	6.7	63.1	34	34.3	4.6	197	74.2 Y
153	Cuyama	Central Coast Valleys	4/21/2013	2200	111	0	0	0	7.2	66.6	43	38	2.8	134	73.6 Y
154	Cuyama	Central Coast Valleys	4/21/2013	2300	111	0	0	0	7.3	55.3	49	36.4	2.9	149	72.9 Y
155	Cuyama	Central Coast Valleys	4/21/2013	2400	111	0	0	0	7.2	51.7	55	36	4.6	98	72.1 Y
156	Cuyama	Central Coast Valleys	4/22/2013	100	112	0	0	0	6.5	49.5	54	33.5	4.6	112	71.3 Y
157	Cuyama	Central Coast Valleys	4/22/2013	200	112	0	0	0	6.3	48	55	32.7	5.3	107	70.4 Y
158	Cuyama	Central Coast Valleys	4/22/2013	300	112	0	0	0	6.2	47.5	55	32.2	5.1	95	69.5 Y
159	Cuyama	Central Coast Valleys	4/22/2013	400	112	0	0	0	5.9	46.2	55	31.1	5.5	108	68.7
160	Cuyama	Central Coast Valleys	4/22/2013	500	112	0	0	0	5.9	45.6	57	31.2	6.1	104	67.8
161	Cuyama	Central Coast Valleys	4/22/2013	600	112	0	0	40	5.9	45.3	57	31	6.2	103	67
162	Cuyama	Central Coast Valleys	4/22/2013	700	112	0	0	362	6.3	50.8	49	32.6	6.5	97	66.2
163	Cuyama	Central Coast Valleys	4/22/2013	800	112	0.01	0	783	6.8	60.3	38	34.8	6.1	89	65.5
164	Cuyama	Central Coast Valleys	4/22/2013	900	112	0.02	0	1202	7	69.8	28	35.4	4.5	95	65.1
165	Cuyama	Central Coast Valleys	4/22/2013	1000	112	0.02	0	1557	6.9	76.4	22	35.1	4.2	139	65.3
166	Cuyama	Central Coast Valleys	4/22/2013	1100	112	0.03	0	1811	7.2	79	21	36.1	5.2	116	66.1
167	Cuyama	Central Coast Valleys	4/22/2013	1200	112	0.03	0	1935	7	80.9	20	35.5	5.8	357	67.5 Y
168	Cuyama	Central Coast Valleys	4/22/2013	1300	112	0.03	0	1956	6.7	82	18	34.4	6.5	3	69.2 Y
169	Cuyama	Central Coast Valleys	4/22/2013	1400	112	0.03	0	1842	6.5	83.1	17	33.4	5.5	352	70.6 Y
170	Cuyama	Central Coast Valleys	4/22/2013	1500	112	0.03	0	1600	7.1	83.9	18	35.6	7.2	344	72 Y
171	Cuyama	Central Coast Valleys	4/22/2013	1600	112	0.02	0	1248	7	82.9	18	35.5	9.1	345	73.5 Y
172	Cuyama	Central Coast Valleys	4/22/2013	1700	112	0.02	0	839	6.4	81.5	17	33.2	10.3	347	74.8 Y

88	Cuyama	Central Coast Valleys	4/22/2013	1800	112	0.01	0	0	408	6.1	79.4	18	31.8	10.2	347	75.7 Y
88	Cuyama	Central Coast Valleys	4/22/2013	1900	112	0	0	0	50	8.4	72.9	30	40.1	5.8	285	76.1 Y
88	Cuyama	Central Coast Valleys	4/22/2013	2000	112	0	0	0	0	9	68.1	38	41.8	5.2	275	76.1 Y
88	Cuyama	Central Coast Valleys	4/22/2013	2100	112	0	0	0	0	9.7	64.1	47	43.7	4.5	261	75.7 Y
88	Cuyama	Central Coast Valleys	4/22/2013	2200	112	0	0	0	0	9.1	61	50	42.2	3	220	75.2 Y
88	Cuyama	Central Coast Valleys	4/22/2013	2300	112	0	0	0	0	8.3	57.4	52	39.7	4.3	131	74.5 Y
88	Cuyama	Central Coast Valleys	4/22/2013	2400	112	0	0	0	0	8.1	53.5	58	39.2	3.3	145	73.7 Y
88	Cuyama	Central Coast Valleys	4/23/2013	100	113	0	0	0	0	8.1	51.5	62	39.1	3.2	104	72.9 Y
88	Cuyama	Central Coast Valleys	4/23/2013	200	113	0	0	0	0	8.1	49.6	66	38.9	4.2	103	72 Y
88	Cuyama	Central Coast Valleys	4/23/2013	300	113	0	0	0	0	7.8	49.9	64	38.1	3.8	120	71.2 Y
88	Cuyama	Central Coast Valleys	4/23/2013	400	113	0	0	0	0	7.5	49.6	62	37.2	4.4	82	70.3 Y
88	Cuyama	Central Coast Valleys	4/23/2013	500	113	0 Y	0	0	0	8.8	55.1 Y	48 Y	34.6 Y	8.2	147	69.5 Y
88	Cuyama	Central Coast Valleys	4/23/2013	600	113	0 Y	0	0	43	8.1	55.3 Y	41 Y	31.9 Y	8.2	146	68.7 Y
88	Cuyama	Central Coast Valleys	4/23/2013	700	113	0.01 Y	0	0	368	6	61.1 Y	32 Y	31.4 Y	6.5	138	67.9 Y
88	Cuyama	Central Coast Valleys	4/23/2013	800	113	0.01	0	0	791	5.8	66.6	28	30.7	7	112	67.4
88	Cuyama	Central Coast Valleys	4/23/2013	900	113	0.02	0	0	1208	5.4	69.4	22	29.1	6.5	88	67.1
88	Cuyama	Central Coast Valleys	4/23/2013	1000	113	0.02	0	0	1567	5.7	73.1	21	30.4	4.9	31	67.2 Y
88	Cuyama	Central Coast Valleys	4/23/2013	1100	113	0.03	0	0	1821	6	75.3	20	31.7	8.2	87	68 Y
88	Cuyama	Central Coast Valleys	4/23/2013	1200	113	0.03	0	0	1962	5.9	76.6	19	30.9	8.6	109	69.3 Y
88	Cuyama	Central Coast Valleys	4/23/2013	1300	113	0.03	0	0	1978	6.4	79	19	33.1	5.6	18	70.6 Y
88	Cuyama	Central Coast Valleys	4/23/2013	1400	113	0.03	0	0	1854	6.3	80.7	18	32.7	8.1	354	71.8 Y
88	Cuyama	Central Coast Valleys	4/23/2013	1500	113	0.03	0	0	1611	6.1	81.4	17	32	7.6	345	73 Y
88	Cuyama	Central Coast Valleys	4/23/2013	1600	113	0.02	0	0	1261	6.1	81.7	16	31.8	8.2	355	74.4 Y
88	Cuyama	Central Coast Valleys	4/23/2013	1700	113	0.02	0	0	838	6	80.8	17	31.7	8.6	346	75.6 Y
88	Cuyama	Central Coast Valleys	4/23/2013	1800	113	0.01	0	0	404	7.6	78.3	23	37.6	7.3	301	76.5 Y
88	Cuyama	Central Coast Valleys	4/23/2013	1900	113	0	0	0	54	8.3	72	31	39.7	8	273	76.9 Y
88	Cuyama	Central Coast Valleys	4/23/2013	2000	113	0	0	0	0	8.2	68.8	37	39.4	7.2	288	76.9 Y
88	Cuyama	Central Coast Valleys	4/23/2013	2100	113	0	0	0	0	8.5	82.8	44	40.4	3.2	272	76.6 Y
88	Cuyama	Central Coast Valleys	4/23/2013	2200	113	0	0	0	0	8.2	58.6	49	39.5	3	202	76 Y
88	Cuyama	Central Coast Valleys	4/23/2013	2300	113	0	0	0	0	8.4	55.8	55	40	3.9	157	75.3 Y
88	Cuyama	Central Coast Valleys	4/23/2013	2400	113	0	0	0	0	7.9	52.3	59	38.3	4.6	143	74.4 Y
88	Cuyama	Central Coast Valleys	4/24/2013	100	114	0	0	0	0	8	50.2	65	38.8	4.5	132	73.6 Y
88	Cuyama	Central Coast Valleys	4/24/2013	200	114	0	0	0	0	8	49.2	67	38.7	5	127	72.7 Y
88	Cuyama	Central Coast Valleys	4/24/2013	300	114	0	0	0	0	7.6	48	66	37.4	4.7	92	71.8 Y
88	Cuyama	Central Coast Valleys	4/24/2013	400	114	0	0	0	0	7.4	47.5	68	36.7	4.7	107	70.9 Y
88	Cuyama	Central Coast Valleys	4/24/2013	500	114	0	0	0	0	7.2	46.3	68	36.2	5.3	108	70.1 Y
88	Cuyama	Central Coast Valleys	4/24/2013	600	114	0	0	0	38	7.2	45.8	68	35.9	4.9	108	69.2 Y
88	Cuyama	Central Coast Valleys	4/24/2013	700	114	0	0	0	270	7.5	50	61	37	6.4	94	68.4 Y
88	Cuyama	Central Coast Valleys	4/24/2013	800	114	0.01	0	0	620	8.1	57.5	50	39	6.8	110	67.7 Y
88	Cuyama	Central Coast Valleys	4/24/2013	900	114	0.01	0	0	1116	7.8	66.3	36	38.3	3.3	78	67.2
88	Cuyama	Central Coast Valleys	4/24/2013	1000	114	0.02	0	0	1586	7.8	70.1	31	38	5.7	291	87.2 Y
88	Cuyama	Central Coast Valleys	4/24/2013	1100	114	0.03	0	0	1706	8.4	70.5	33	40.1	8	288	67.8 Y
88	Cuyama	Central Coast Valleys	4/24/2013	1200	114	0.02	0	0	1204	8.6	72.5	32	40.6	7.3	284	69.1 Y
88	Cuyama	Central Coast Valleys	4/24/2013	1300	114	0.03	0	0	2038	10	72.5	37	44.7	11.1	285	70.4 Y
88	Cuyama	Central Coast Valleys	4/24/2013	1400	114	0.02	0	0	1516	10.8	69	45	46.6	12.8	282	71.4 Y
88	Cuyama	Central Coast Valleys	4/24/2013	1500	114	0.02	0	0	1139	11.1	67.1	49	47.3	12.2	278	72.3 Y
88	Cuyama	Central Coast Valleys	4/24/2013	1600	114	0.01	0	0	722	11.5	64.7	55	48.3	11.6	282	73.2 Y
88	Cuyama	Central Coast Valleys	4/24/2013	1700	114	0.01	0	0	448	11.8	61.4	63	48.8	10.7	277	73.7 Y
88	Cuyama	Central Coast Valleys	4/24/2013	1800	114	0	0	0	192	11.7	57	74	48.6	10.8	282	73.9 Y
88	Cuyama	Central Coast Valleys	4/24/2013	1900	114	0	0	0	68	11.5	54	81	48.2	9.1	274	73.8 Y
88	Cuyama	Central Coast Valleys	4/24/2013	2000	114	0	0	0	0	11.3	51.6	86	47.7	7.8	269	73.4 Y
88	Cuyama	Central Coast Valleys	4/24/2013	2100	114	0	0	0	0	11.2	51	88	47.6	7.1	274	72.8 Y
88	Cuyama	Central Coast Valleys	4/24/2013	2200	114	0	0	0	0	11.2	51	88	47.6	8.5	288	72.1 Y
88	Cuyama	Central Coast Valleys	4/24/2013	2300	114	0	0	0	0	11.2	50.8	89	47.5	4.4	275	71.4 Y
88	Cuyama	Central Coast Valleys	4/24/2013	2400	114	0	0	0	0	11.2	50.8	88	47.5	4.2	269	70.8 Y
88	Cuyama	Central Coast Valleys	4/25/2013	100	115	0	0	0	0	11.2	50.9	88	47.5	4.3	293	70.1 Y
88	Cuyama	Central Coast Valleys	4/25/2013	200	115	0	0	0	0	11	50.5	88	47.1	4.8	275	69.5 Y
88	Cuyama	Central Coast Valleys	4/25/2013	300	115	0	0	0	0	10.9	49.9	89	46.6	4.3	268	69.1
88	Cuyama	Central Coast Valleys	4/25/2013	400	115	0	0	0	0	10.8	49.4	90	46.6	4.6	271	68.6
88	Cuyama	Central Coast Valleys	4/25/2013	500	115	0	0	0	0	10.8	49.3	90	46.6	4.6	255	68.1
88	Cuyama	Central Coast Valleys	4/25/2013	600	115	0	0	0	9	10.7	49.1	90	46.3	3.6	253	67.6
88	Cuyama	Central Coast Valleys	4/25/2013	700	115	0	0	0	75	10.7	49.2	90	46.4	3.5	264	67.1
88	Cuyama	Central Coast Valleys	4/25/2013	800	115	0	0	0	243	10.9	50.1	88	46.7	2.4	288	66.7
88	Cuyama	Central Coast Valleys	4/25/2013	900	115	0.01	0	0	792	11.3	52.8	83	47.7	2.5	314	66.3
88	Cuyama	Central Coast Valleys	4/25/2013	1000	115	0.02	0	0	1503	11.6	57.4	72	48.4	3.5	317	66.1
88	Cuyama	Central Coast Valleys	4/25/2013	1100	115	0.02	0	0	1764	10.9	63.2	55	48.8	3.6	173	66.5
88	Cuyama	Central Coast Valleys	4/25/2013	1200	115	0.03	0	0	1900	10.2	67.8	44	45.1	4.2	302	67.5 Y
88	Cuyama	Central Coast Valleys	4/25/2013	1300	115	0.03	0	0	1908	10	71.1	39	44.6	4.8	282	68.9 Y
88	Cuyama	Central Coast Valleys	4/25/2013	1400	115	0.03	0	0	1792	10	73.9	35	44.5	5.2	282	70.1 Y
88	Cuyama	Central Coast Valleys	4/25/2013	1500	115	0.02	0	0	1557	10.2	75.3	34	45.1	6.7	285	71.3 Y
88	Cuyama	Central Coast Valleys	4/25/2013	1600	115	0.02	0	0	1221	10.3	75.5	34	45.4	7	289	72.7 Y
88	Cuyama	Central Coast Valleys	4/25/2013	1700	115	0.01	0	0	816	10.5	73.2	38	45.9	9.7	281	73.9 Y
88	Cuyama	Central Coast Valleys	4/25/2013	1800	115	0.01	0	0	395	10.5	68.1	45	45.7	9.3	277	74.7 Y
88	Cuyama	Central Coast Valleys	4/25/2013	1900	115	0	0	0	60	10.1	62.6	52	44.7	7.8	282	75.1 Y
88	Cuyama	Central Coast Valleys	4/25/2013	2000	115	0	0	0	0	9.9	58.5	59	44.2	6.7	279	75 Y
88	Cuyama	Central Coast Valleys	4/25/2013	2100	115	0	0	0	0	9.7	56.2	63	43.8	5	265	74.6 Y
88	Cuyama	Central Coast Valleys	4/25/2013	2200	115	0	0	0	0	9.4	54.3	65	43	3.1	247	74 Y
88	Cuyama	Central Coast Valleys	4/25/2013	2300	115	0	0	0	0	8.8	50.3	70	41.1	2.9	153	73.2 Y
88	Cuyama	Central Coast Valleys	4/25/2013	2400	115	0	0	0	0	8.6	48.3	74	40.5	1.3	187	72.4 Y
88	Cuyama	Central Coast Valleys	4/26/2013	100	116	0	0	0	0	8.4	47.4	75	39.9	3.4	174	71.5 Y
88	Cuyama	Central Coast Valleys	4/26/2013	200	116	0	0	0	0	8.4	46.7	78	40.2	3.6	104	70.7 Y
88	Cuyama	Central Coast Valleys	4/26/2013	300	116	0	0	0	0	8.5	47	78	40.4	4.7	129	69.8 Y
88	Cuyama	Central Coast Valleys	4/26/2013	400	116	0	0	0	0	8.5	45.3	82	40.2	4.2	106	69 Y
88	Cuyama	Central Coast Valleys	4/26/2013	500	116	0	0	0	0	8.4	44.2	84	39.9	3.9	104	68.2
88	Cuyama	Central Coast Valleys	4/26/2013	600	116	0	0	0	50	8.5	44.5	85	40.3	4.4	106	67.5

86	Cuyama	Central Coast Valleys	4/26/2013	700	116	0	0	363	9.4	49.2	79	42.9	5.8	83	66.7
86	Cuyama	Central Coast Valleys	4/26/2013	800	116	0.01	0	779	10.7	57.4	66	46.2	4.5	87	66.1
86	Cuyama	Central Coast Valleys	4/26/2013	900	116	0.01	0	1195	11.1	64.3	54	47.4	3.6	93	65.8
86	Cuyama	Central Coast Valleys	4/26/2013	1000	116	0.02	0	1553	10.2	69.4	41	45	3.7	172	65.9
86	Cuyama	Central Coast Valleys	4/26/2013	1100	116	0.03	0	1803	9.1	73	33	42	5.2	155	66.7
86	Cuyama	Central Coast Valleys	4/26/2013	1200	116	0.03	0	1933	7.6	76.3	24	37.4	7.4	3	68 Y
86	Cuyama	Central Coast Valleys	4/26/2013	1300	116	0.03	0	1945	7.2	77.5	22	36.1	7.6	357	69.6 Y
86	Cuyama	Central Coast Valleys	4/26/2013	1400	116	0.03	0	1830	7.5	78.4	23	37	8.6	4	70.9 Y
86	Cuyama	Central Coast Valleys	4/26/2013	1500	116	0.03	0	1588	7.9	79	23	38.5	9.3	354	72.1 Y
86	Cuyama	Central Coast Valleys	4/26/2013	1600	116	0.02	0	1253	7.1	79	21	35.9	9.2	352	73.5 Y
86	Cuyama	Central Coast Valleys	4/26/2013	1700	116	0.02	0	848	7.3	78.1	22	36.3	9.7	350	74.8 Y
86	Cuyama	Central Coast Valleys	4/26/2013	1800	116	0.01	0	414	7.9	78.1	26	38.5	9.5	358	75.7 Y
86	Cuyama	Central Coast Valleys	4/26/2013	1900	116	0	0	65	9	71	35	41.7	6.7	74	76.1 Y
86	Cuyama	Central Coast Valleys	4/26/2013	2000	116	0	0	0	9.1	68.4	41	42.2	6.6	123	76.2 Y
86	Cuyama	Central Coast Valleys	4/26/2013	2100	116	0	0	0	9.3	62.8	47	42.5	6.6	152	75.6 Y
86	Cuyama	Central Coast Valleys	4/26/2013	2200	116	0	0	0	8.5	60.4	47	40.2	3.7	151	75.3 Y
86	Cuyama	Central Coast Valleys	4/26/2013	2300	116	0	0	0	9	58.8	57	41.7	4.8	143	74.6 Y
86	Cuyama	Central Coast Valleys	4/26/2013	2400	116	0	0	0	8.3	53.9	59	39.8	3.7	145	73.9 Y
86	Cuyama	Central Coast Valleys	4/21/2013	100	117	0	0	0	8.6	51.3	67	40.7	4.4	100	73.1 Y
86	Cuyama	Central Coast Valleys	4/21/2013	200	117	0	0	0	8.6	49.5	71	40.8	4.6	108	72.3 Y
86	Cuyama	Central Coast Valleys	4/21/2013	300	117	0	0	0	8.3	48.4	72	39.7	4.7	117	71.4 Y
86	Cuyama	Central Coast Valleys	4/21/2013	400	117	0	0	0	8	47.9	70	38.8	5.7	110	70.6 Y
86	Cuyama	Central Coast Valleys	4/21/2013	500	117	0	0	0	7.9	46.6	73	38.3	5.3	113	69.8 Y
86	Cuyama	Central Coast Valleys	4/21/2013	600	117	0	0	54	7.9	47	72	38.4	5.2	114	69 Y
86	Cuyama	Central Coast Valleys	4/21/2013	700	117	0	0	381	8.3	51.8	63	39.8	5.9	71	68.3 Y
86	Cuyama	Central Coast Valleys	4/21/2013	800	117	0.01	0	800	8.6	60.7	47	40.6	5.5	59	67.6 Y
86	Cuyama	Central Coast Valleys	4/21/2013	900	117	0.02	0	1216	8.9	68.8	37	41.4	4	68	67.3 Y
86	Cuyama	Central Coast Valleys	4/21/2013	1000	117	0.02	0	1571	8.8	74.7	30	41.1	3	1	67.5 Y
86	Cuyama	Central Coast Valleys	4/21/2013	1100	117	0.03	0	1628	8	79.2	24	38.8	4	96	68.3 Y
86	Cuyama	Central Coast Valleys	4/21/2013	1200	117	0.03	0	1949	7.7	82.2	20	37.8	5.8	342	69.7 Y
86	Cuyama	Central Coast Valleys	4/21/2013	1300	117	0.03	0	1968	7.6	83.3	20	37.5	8.4	352	71.4 Y
86	Cuyama	Central Coast Valleys	4/21/2013	1400	117	0.03	0	1846	7.5	84.1	19	37.2	8.9	352	72.8 Y
86	Cuyama	Central Coast Valleys	4/21/2013	1500	117	0.03	0	1607	8.3	84.3	21	39.6	9.6	346	74.1 Y
86	Cuyama	Central Coast Valleys	4/21/2013	1600	117	0.02	0	1274	7.5	84	19	37.1	10.7	349	75.5 Y
86	Cuyama	Central Coast Valleys	4/21/2013	1700	117	0.02	0	861	7.3	82.9	19	36.4	12.1	350	76.9 Y
86	Cuyama	Central Coast Valleys	4/21/2013	1800	117	0.01	0	423	7.6	80.5	21	37.4	10.3	355	77.7 Y
86	Cuyama	Central Coast Valleys	4/21/2013	1900	117	0 Y	0	72	8.2	78.1 Y	27 Y	39.4 Y	6.5	53	78.1 R
86	Cuyama	Central Coast Valleys	4/21/2013	2000	117	0	0	0	9.2	68.2	39	42.2	5.7	141	78.1 Y
86	Cuyama	Central Coast Valleys	4/21/2013	2100	117	0 Y	0	0	8.1	65.5 Y	38 Y	39.2 Y	3.5	190	77.8 Y
86	Cuyama	Central Coast Valleys	4/21/2013	2200	117	0 Y	0	0	7.9	62.1 Y	42 Y	38.8 Y	3.6	134	77.2 Y
86	Cuyama	Central Coast Valleys	4/21/2013	2300	117	0	0	0	8.8	58.5	53	41.2	3.8	117	78.4 Y
86	Cuyama	Central Coast Valleys	4/21/2013	2400	117	0	0	0	8.9	57.1	56	41.4	4.9	143	75.7 Y
86	Cuyama	Central Coast Valleys	4/26/2013	100	118	0	0	0	8.8	55.8	58	41.3	4.9	103	74.8 Y
86	Cuyama	Central Coast Valleys	4/26/2013	200	118	0	0	0	8.8	54.6	60	41.1	5.1	104	74 Y
86	Cuyama	Central Coast Valleys	4/26/2013	300	118	0	0	0	8.7	53	63	40.8	5.5	113	73.2 Y
86	Cuyama	Central Coast Valleys	4/26/2013	400	118	0	0	0	8.7	51	68	40.9	4.5	100	72.4 Y
86	Cuyama	Central Coast Valleys	4/26/2013	500	118	0	0	0	8.7	50	71	40.8	5.8	107	71.7 Y
86	Cuyama	Central Coast Valleys	4/26/2013	600	118	0	0	54	8.7	50	71	40.8	6.2	104	70.9 Y
86	Cuyama	Central Coast Valleys	4/26/2013	700	118	0	0	376	9.3	55.2	63	42.7	6.6	88	70.2 Y
86	Cuyama	Central Coast Valleys	4/26/2013	800	118	0.01	0	792	10.3	63.8	51	45.4	5	101	69.6 Y
86	Cuyama	Central Coast Valleys	4/26/2013	900	118	0.02	0	1212	11	71.8	41	46.9	4.7	86	69.3 Y
86	Cuyama	Central Coast Valleys	4/26/2013	1000	118	0.02	0	1569	9.6	78.7	29	43.5	3.7	116	69.5 Y
86	Cuyama	Central Coast Valleys	4/26/2013	1100	118	0.03 Y	0	1803	8.3	82.6 Y	22 Y	39.8 Y	4.9	108	70.3 Y
86	Cuyama	Central Coast Valleys	4/26/2013	1200	118	0.03	0	1949	7.3	84	18	38.5	8.1	357	71.7 Y
86	Cuyama	Central Coast Valleys	4/26/2013	1300	118	0.03	0	1968	6.8	85.2	16	34.7	7.7	1	73.3 Y
86	Cuyama	Central Coast Valleys	4/26/2013	1400	118	0.03	0	1859	5.9	86.2	14	31.3	7	346	74.6 Y
86	Cuyama	Central Coast Valleys	4/26/2013	1500	118	0.03	0	1625	5.9	86.6	14	31.3	8.5	343	75.8 R
86	Cuyama	Central Coast Valleys	4/26/2013	1600	118	0.02	0	1278	6	86.4	14	31.5	9.4	359	77.2 R
86	Cuyama	Central Coast Valleys	4/26/2013	1700	118	0.02 Y	0	868	6.2	85.2 Y	15 Y	32.5 Y	10.8	355	78.4 R
86	Cuyama	Central Coast Valleys	4/26/2013	1800	118	0.01 Y	0	438	6.6	82.9 Y	17 Y	33.8 Y	9.2	13	79.1 R
86	Cuyama	Central Coast Valleys	4/26/2013	1900	118	0 Y	0	77	7.7	76.9 Y	24 Y	37.8 Y	7.2	87	79.5 R
86	Cuyama	Central Coast Valleys	4/26/2013	2000	118	0 Y	0	0	7.4	70.7 Y	29 Y	36.7 Y	6.3	145	78.4 R
86	Cuyama	Central Coast Valleys	4/26/2013	2100	118	0 Y	0	0	6.8	65.9 Y	31 Y	34.5 Y	5.8	175	79 R
86	Cuyama	Central Coast Valleys	4/26/2013	2200	118	0	0	0	6.8	62	36	34.5	4	121	78.4 R
86	Cuyama	Central Coast Valleys	4/26/2013	2300	118	0	0	0	7.2	58.5	43	38	4.3	109	77.7 Y
86	Cuyama	Central Coast Valleys	4/26/2013	2400	118	0	0	0	7.7	55.8	51	37.7	5.1	110	76.9 Y
86	Cuyama	Central Coast Valleys	4/29/2013	100	119	0	0	0	7.4	53.5	53	36.8	4.7	102	76 Y
86	Cuyama	Central Coast Valleys	4/29/2013	200	119	0	0	0	7.5	52	57	37.3	5.9	97	75.1 Y
86	Cuyama	Central Coast Valleys	4/29/2013	300	119	0	0	0	7.3	51	57	36.3	5.5	118	74.2 Y
86	Cuyama	Central Coast Valleys	4/29/2013	400	119	0	0	0	7.2	50	59	36.1	5.8	109	73.4 Y
86	Cuyama	Central Coast Valleys	4/29/2013	500	119	0	0	0	8.9	49	58	34.9	6	116	72.5 Y
86	Cuyama	Central Coast Valleys	4/29/2013	600	119	0	0	59	6.7	49.7	56	34.4	6.2	98	71.7 Y
86	Cuyama	Central Coast Valleys	4/29/2013	700	119	0.01	0	392	7.4	55	50	36.7	6.4	87	70.9 Y
86	Cuyama	Central Coast Valleys	4/29/2013	800	119	0.01	0	810	7.7	65.2	36	37.9	6.5	78	70.2 Y
86	Cuyama	Central Coast Valleys	4/29/2013	900	119	0.02	0	1222	9.5	73.5	34	43.1	3.7	99	69.9 Y
86	Cuyama	Central Coast Valleys	4/29/2013	1000	119	0.02	0	1569	10	78	31	44.6	3.8	102	70.1 Y
86	Cuyama	Central Coast Valleys	4/29/2013	1100	119	0.03	0	1813	9.2	80.9	26	42.5	6.8	350	70.9 Y
86	Cuyama	Central Coast Valleys	4/29/2013	1200	119	0.03	0	1945	9.2	82.3	24	42.4	8.2	343	72.4 Y
86	Cuyama	Central Coast Valleys	4/29/2013	1300	119	0.03	0	1964	8.4	83.9	21	39.9	7.8	353	74 Y
86	Cuyama	Central Coast Valleys	4/29/2013	1400	119	0.03	0	1863	7.1	85.3	17	36.6	7.1	351	75.4 R
86	Cuyama	Central Coast Valleys	4/29/2013	1500	119	0.03	0	1625	6.4	86.6	15	33.3	7.5	354	76.6 R
86	Cuyama	Central Coast Valleys	4/29/2013	1600	119	0.02	0	1282	5.9	86.9	14	31.2	10.5	348	77.9 R
86	Cuyama	Central Coast Valleys	4/29/2013	1700	119	0.02 Y	0	873	6.4	86 Y	15 Y	33.3 Y	10.6	348	79.1 R
86	Cuyama	Central Coast Valleys	4/29/2013	1800	119	0.01 Y	0	447	6.9	84 Y	17 Y	34.9 Y	11.1	343	79.9 R
86	Cuyama	Central Coast Valleys	4/29/2013	1900	119	0.01 Y	0	79	7.6	80.4 Y	21 Y	37.4 Y	9.8	341	80.3 R

88	Cuyama	Central Coast Valleys	4/29/2013	2000	119	0	Y	0	0	9	75.9	Y	30	Y	41.9	Y	3.5	300	80.3	R
88	Cuyama	Central Coast Valleys	4/29/2013	2100	119	0	Y	0	0	9.2	71	Y	35	Y	42.3	Y	3	287	79.9	R
88	Cuyama	Central Coast Valleys	4/29/2013	2200	119	0	Y	0	0	7.9	65.4	Y	37	Y	38.5	Y	3.4	217	79.4	R
88	Cuyama	Central Coast Valleys	4/29/2013	2300	119	0	Y	0	0	8.2	63.4	Y	41	Y	39.3	Y	3.9	123	78.8	R
88	Cuyama	Central Coast Valleys	4/29/2013	2400	119	0	Y	0	0	9.5	59.9	Y	54	Y	43.2	Y	3.4	131	78	R
88	Cuyama	Central Coast Valleys	4/30/2013	100	120	0	Y	0	0	9.3	58.3	Y	56	Y	42.6	Y	4.1	124	77.2	R
88	Cuyama	Central Coast Valleys	4/30/2013	200	120	0	Y	0	0	9.4	56.4	Y	61	Y	42.9	Y	3.6	101	76.4	Y
88	Cuyama	Central Coast Valleys	4/30/2013	300	120	0	0	0	0	9.2	54.4		63		42.3		5.7	112	75.6	Y
88	Cuyama	Central Coast Valleys	4/30/2013	400	120	0	0	0	0	8.9	53.3		64		41.5		5.5	108	74.8	Y
88	Cuyama	Central Coast Valleys	4/30/2013	500	120	0	0	0	0	8.5	52.5		63		40.3		4.8	126		Y
88	Cuyama	Central Coast Valleys	4/30/2013	600	120	0	0	0	64	8	51.7		61		38.8		2.6	173	73.2	Y
88	Cuyama	Central Coast Valleys	4/30/2013	700	120	0	0	0	406	8.8	57.1		55		41.1		2.7	149	72.5	Y
88	Cuyama	Central Coast Valleys	4/30/2013	800	120	0.01	0	0	820	9.2	65.5		43		42.3		4.6	81	71.9	Y
88	Cuyama	Central Coast Valleys	4/30/2013	900	120	0.02	Y	0	1228	9.1	74.1	Y	32	Y	42	Y	9	84	71.6	Y
88	Cuyama	Central Coast Valleys	4/30/2013	1000	120	0.03	0	0	1567	9.5	75.8		31		43.3		8.7	73	71.8	Y
88	Cuyama	Central Coast Valleys	4/30/2013	1100	120	0.03	0	0	1792	9.4	78.4		30		42.8		8.5	342	72.5	Y
88	Cuyama	Central Coast Valleys	4/30/2013	1200	120	0.03	0	0	1947	9.1	78.1		28		42.2		7.4	349	73.6	Y
88	Cuyama	Central Coast Valleys	4/30/2013	1300	120	0.03	0	0	1951	9	79.8		26		41.8		7.7	336	75.1	R
88	Cuyama	Central Coast Valleys	4/30/2013	1400	120	0.03	0	0	1834	8.5	81.2		23		40.3		7	357	76.2	R
88	Cuyama	Central Coast Valleys	4/30/2013	1500	120	0.03	0	0	1596	8.7	82.2		23		41		9.1	345	77.2	R
88	Cuyama	Central Coast Valleys	4/30/2013	1600	120	0.02	0	0	1259	8.6	81.6		23		40.6		11.5	351	78.4	R
88	Cuyama	Central Coast Valleys	4/30/2013	1700	120	0.02	0	0	818	8	80.5		22		38.7		10.5	341	79.4	R
88	Cuyama	Central Coast Valleys	4/30/2013	1800	120	0.01	0	0	430	6.6	78.1		21		34.8		11.4	339	80.1	R
88	Cuyama	Central Coast Valleys	4/30/2013	1900	120	0	0	0	62	10	71.6		38		44.5		7.2	298	80.3	R
88	Cuyama	Central Coast Valleys	4/30/2013	2000	120	0	0	0	0	11.8	65.5		55		48.9		5.5	276	80.2	R
88	Cuyama	Central Coast Valleys	4/30/2013	2100	120	0	0	0	0	11.8	62.1		62		48.8		5.6	270	79.8	R
88	Cuyama	Central Coast Valleys	4/30/2013	2200	120	0	0	0	0	11.6	59.1		68		48.4		3.7	276	79.2	R
88	Cuyama	Central Coast Valleys	4/30/2013	2300	120	0	0	0	0	10.7	55.4		72		46.4		3.2	180	78.5	R
88	Cuyama	Central Coast Valleys	4/30/2013	2400	120	0	0	0	0	9.9	56.2		64		44.4		5.1	123	77.7	Y
88	Cuyama	Central Coast Valleys	5/1/2013	100	121	0	0	0	0	7	57.3		44		35.5		7.6	152	76.8	Y
88	Cuyama	Central Coast Valleys	5/1/2013	200	121	0	0	0	0	5.8	57.7		36		30.8		8	151	75.9	Y
88	Cuyama	Central Coast Valleys	5/1/2013	300	121	0	0	0	0	5.4	56		35		28.9		8.3	142	75	Y
88	Cuyama	Central Coast Valleys	5/1/2013	400	121	0	0	0	0	5	54.2		35		27.2		8.2	148	74.2	Y
88	Cuyama	Central Coast Valleys	5/1/2013	500	121	0	0	0	0	4.7	54.4		33		25.7		7.5	145	73.4	Y
88	Cuyama	Central Coast Valleys	5/1/2013	600	121	0	0	0	66	4.7	53.2		34		25.4		5.6	148	72.6	
88	Cuyama	Central Coast Valleys	5/1/2013	700	121	0.01	0	0	403	5.5	54.9		37		29.5		5.3	53	71.8	
88	Cuyama	Central Coast Valleys	5/1/2013	800	121	0.01	0	0	815	5.4	62		28		26.8		5.3	67	71.2	
88	Cuyama	Central Coast Valleys	5/1/2013	900	121	0.02	0	0	1225	4.1	68.2		17		22.4		4.2	135	70.9	
88	Cuyama	Central Coast Valleys	5/1/2013	1000	121	0.02	0	0	1576	4	72.1		15		21.5		4.3	148	71	
88	Cuyama	Central Coast Valleys	5/1/2013	1100	121	0.03	0	0	1823	4.1	75.7		14		22.4		6.9	96	71.7	
88	Cuyama	Central Coast Valleys	5/1/2013	1200	121	0.03	0	0	1960	4.4	78.6		13		24		9.7	101	72.8	Y
88	Cuyama	Central Coast Valleys	5/1/2013	1300	121	0.03	0	0	1954	4.6	80.4		13		25		8.9	94	74.2	Y
88	Cuyama	Central Coast Valleys	5/1/2013	1400	121	0.03	0	0	1848	5	81.4		14		27.1		7.7	357	75.2	Y
88	Cuyama	Central Coast Valleys	5/1/2013	1500	121	0.03	0	0	1609	5.1	82.1		14		27.4		7.7	13	76.1	Y
88	Cuyama	Central Coast Valleys	5/1/2013	1600	121	0.02	0	0	1269	5.2	82.5		14		27.8		9.1	80	77.3	Y
88	Cuyama	Central Coast Valleys	5/1/2013	1700	121	0.02	0	0	860	5.2	81.3		14		27.9		9.4	75	78.3	Y
88	Cuyama	Central Coast Valleys	5/1/2013	1800	121	0.01	0	0	431	5.3	79.4		15		28.4		7.9	73	79	Y
88	Cuyama	Central Coast Valleys	5/1/2013	1900	121	0	0	0	74	6.4	74.3		22		33.2		4.5	66	79.2	Y
88	Cuyama	Central Coast Valleys	5/1/2013	2000	121	0	0	0	0	6.4	69.6		28		33.3		3.6	100	79.2	Y
88	Cuyama	Central Coast Valleys	5/1/2013	2100	121	0	0	0	0	6.8	64.4		33		34.5		4.5	164	78.8	Y
88	Cuyama	Central Coast Valleys	5/1/2013	2200	121	0	0	0	0	5.5	61.3		30		29.5		3.9	173	78.2	Y
88	Cuyama	Central Coast Valleys	5/1/2013	2300	121	0	0	0	0	6.4	57.5		39		33		4.3	126	77.5	Y
88	Cuyama	Central Coast Valleys	5/1/2013	2400	121	0	0	0	0	6.5	53.1		47		33.5		5.2	117	76.7	Y
88	Cuyama	Central Coast Valleys	5/2/2013	100	122	0	0	0	0	6.3	50.5		51		32.9		5.8	101	75.9	Y
88	Cuyama	Central Coast Valleys	5/2/2013	200	122	0	0	0	0	6.2	48.1		54		32.4		4.9	106	75	Y
88	Cuyama	Central Coast Valleys	5/2/2013	300	122	0	0	0	0	6.3	46.9		57		32.6		4.1	96	74.1	Y
88	Cuyama	Central Coast Valleys	5/2/2013	400	122	0	0	0	0	6	45.3		58		31.6		5.2	94	73.2	
88	Cuyama	Central Coast Valleys	5/2/2013	500	122	0	0	0	0	5.3	44.2		53		28.3		5.5	101	72.4	
88	Cuyama	Central Coast Valleys	5/2/2013	600	122	0	0	0	73	5.6	44.7		56		30		4.6	100	71.5	
88	Cuyama	Central Coast Valleys	5/2/2013	700	122	0.01	0	0	427	6.3	52		47		32.8		5.9	107	70.6	
88	Cuyama	Central Coast Valleys	5/2/2013	800	122	0.01	0	0	854	5.2	62.6		27		28.1		5.4	108	69.9	
88	Cuyama	Central Coast Valleys	5/2/2013	900	122	0.02	0	0	1272	3.6	72.3		13		19.1		4	98	69.6	
88	Cuyama	Central Coast Valleys	5/2/2013	1000	122	0.02	0	0	1617	3.2	78.2		10		16.4		5	118	69.7	
88	Cuyama	Central Coast Valleys	5/2/2013	1100	122	0.03	0	0	1863	3.5	81.9		9		18.3		6.7	81	70.5	
88	Cuyama	Central Coast Valleys	5/2/2013	1200	122	0.04	0	0	1987	3.3	82.8		9		17		12.4	348	71.6	
88	Cuyama	Central Coast Valleys	5/2/2013	1300	122	0.04	0	0	1982	3.3	83.7		8		17.2		12.6	350	73.3	Y
88	Cuyama	Central Coast Valleys	5/2/2013	1400	122	0.03	0	0	1681	3.2	84.3		8		16.4		12.7	356	74.5	Y
88	Cuyama	Central Coast Valleys	5/2/2013	1500	122	0.03	0	0	1658	2.9	84.4		7		14.2		12.1	354	75.6	Y
88	Cuyama	Central Coast Valleys	5/2/2013	1600	122	0.02	0	0	1335	2.7	84.3		7		12.7		11.6	354	76.7	Y
88	Cuyama	Central Coast Valleys	5/2/2013	1700	122	0.02	0	0	927	2.6	83.3		7		11.4		11.3	349	77.7	Y
88	Cuyama	Central Coast Valleys	5/2/2013	1800	122	0.01	0	0	490	2.4	81.8		7		10.3		10.4	354	78.4	Y
88	Cuyama	Central Coast Valleys	5/2/2013	1900	122	0	0	0	98	2.2	78		7		8.1		7.1	357	78.7	Y
88	Cuyama	Central Coast Valleys	5/2/2013	2000	122	0	R	0	0	2.3	72.9		8		9.4		3.4	19	78.6	Y
88	Cuyama	Central Coast Valleys	5/2/2013	2100	122	0	R	0	0	2.5	64.1		12		11		4.9	199	78.2	Y
88	Cuyama	Central Coast Valleys	5/2/2013	2200	122	0	R	0	0	2.5	59.9		14		10.9		4	165	77.6	Y
88	Cuyama	Central Coast Valleys	5/2/2013	2300	122	0	0	0	0	3	56.2		19		14.8		3.2	146	76.6	Y
88	Cuyama	Central Coast Valleys	5/2/2013	2400	122	0	0	0	0	4.2	53.3		30		22.8		4.1	121	76	Y
88	Cuyama	Central Coast Valleys	5/3/2013	100	123	0	0	0	0</											

88	Cuyama	Central Coast Valleys	5/3/2013	900	123	0.02	0	1260	6.3	72.2	23	32.7	3.8	87	69.2
88	Cuyama	Central Coast Valleys	5/3/2013	1000	123	0.02	0	1613	5.4	78	18	28.9	4.4	146	69.4
88	Cuyama	Central Coast Valleys	5/3/2013	1100	123	0.03	0	1850	4.7	81.2	13	25.7	6.1	139	70.3
88	Cuyama	Central Coast Valleys	5/3/2013	1200	123	0.03	0	1991	4.5	83.6	11	24.5	4.9	307	71.6
88	Cuyama	Central Coast Valleys	5/3/2013	1300	123	0.03	0	2005	4.3	84.8	11	23.7	6.4	347	73.2 Y
88	Cuyama	Central Coast Valleys	5/3/2013	1400	123	0.03	0	1902	4.2	85.9	10	22.8	6.2	346	74.6 Y
88	Cuyama	Central Coast Valleys	5/3/2013	1500	123	0.03	0	1656	4.1	86.5	10	22.4	7.3	340	75.8 Y
88	Cuyama	Central Coast Valleys	5/3/2013	1600	123	0.02	0	1297	4.0	86.7	11	24.9	9.2	353	77.2 Y
88	Cuyama	Central Coast Valleys	5/3/2013	1700	123	0.02	0	880	5	85.3	12	27.3	10	347	78.5 Y
88	Cuyama	Central Coast Valleys	5/3/2013	1800	123	0.01	0	449	4.8	83.4	12	26.2	10.5	356	79.4 Y
88	Cuyama	Central Coast Valleys	5/3/2013	1900	123	0	0	88	5.7	78.3	17	30.2	6.6	48	79.8 Y
88	Cuyama	Central Coast Valleys	5/3/2013	2000	123	0	0	0	6.1	70.7	24	32	5.3	157	79.8 Y
88	Cuyama	Central Coast Valleys	5/3/2013	2100	123	0	0	0	5.1	68.2	21	27.4	2.6	224	79.5 Y
88	Cuyama	Central Coast Valleys	5/3/2013	2200	123	0	0	0	5	64.7	24	27.1	3.4	218	78.9 Y
88	Cuyama	Central Coast Valleys	5/3/2013	2300	123	0	0	0	5.7	59.1	33	30.3	3.3	157	78.2 Y
88	Cuyama	Central Coast Valleys	5/3/2013	2400	123	0	0	0	6.1	57	38	31.9	4.8	122	77.4 Y
88	Cuyama	Central Coast Valleys	5/4/2013	100	124	0	0	0	6.2	55.3	41	32.2	6.2	116	76.6 Y
88	Cuyama	Central Coast Valleys	5/4/2013	200	124	0	0	0	6.1	53.2	44	31.8	6.1	107	75.7 Y
88	Cuyama	Central Coast Valleys	5/4/2013	300	124	0	0	0	5.9	52.4	44	31	4.9	111	74.9 Y
88	Cuyama	Central Coast Valleys	5/4/2013	400	124	0	0	0	6.1	50	49	31.9	5.2	113	74 Y
88	Cuyama	Central Coast Valleys	5/4/2013	500	124	0	0	0	6.1	49.1	51	31.9	5.8	101	73.2 Y
88	Cuyama	Central Coast Valleys	5/4/2013	600	124	0	0	74	6.2	49.2	52	32.2	6.1	108	72.4
88	Cuyama	Central Coast Valleys	5/4/2013	700	124	0.01	0	409	6.4	55.9	42	33.2	6.7	92	71.7
88	Cuyama	Central Coast Valleys	5/4/2013	800	124	0.01	0	824	6.4	66.3	29	33.2	7.3	76	71
88	Cuyama	Central Coast Valleys	5/4/2013	900	124	0.02	0	1229	6.6	74.9	22	34	5.6	87	70.7
88	Cuyama	Central Coast Valleys	5/4/2013	1000	124	0.02	0	1584	6.1	81.2	17	31.8	3.8	31	70.9
88	Cuyama	Central Coast Valleys	5/4/2013	1100	124	0.03	0	1830	5.7	82.5	15	30.2	6.7	293	71.7
88	Cuyama	Central Coast Valleys	5/4/2013	1200	124	0.03	0	1958	5.4	84.1	14	29.1	6.4	286	73.1 Y
88	Cuyama	Central Coast Valleys	5/4/2013	1300	124	0.03	0	1953	5.6	84.6	14	30	7	292	74.8 Y
88	Cuyama	Central Coast Valleys	5/4/2013	1400	124	0.03	0	1850	5.8	85	14	30.8	9.2	286	76.1 Y
88	Cuyama	Central Coast Valleys	5/4/2013	1500	124	0.03	0	1596	7.3	83.7	18	36.3	10.1	287	77.3 Y
88	Cuyama	Central Coast Valleys	5/4/2013	1600	124	0.02	0	1254	8.1	82.8	21	39.2	9.4	253	78.7 Y
88	Cuyama	Central Coast Valleys	5/4/2013	1700	124	0.02	0	848	7.3	80.8	20	36.5	13.3	230	79.9 Y
88	Cuyama	Central Coast Valleys	5/4/2013	1800	124	0.01	0	434	7.8	78.7	25	38.1	11.4	242	80.6 Y
88	Cuyama	Central Coast Valleys	5/4/2013	1900	124	0	0	87	8.4	71.3	32	40	7.4	260	80.9 Y
88	Cuyama	Central Coast Valleys	5/4/2013	2000	124	0	0	0	9.2	65.6	43	42.4	7.4	262	80.8 Y
88	Cuyama	Central Coast Valleys	5/4/2013	2100	124	0	0	0	10.1	61.1	55	44.8	5.7	269	80.3 Y
88	Cuyama	Central Coast Valleys	5/4/2013	2200	124	0	0	0	10.1	57.2	63	44.8	3	280	79.6 Y
88	Cuyama	Central Coast Valleys	5/4/2013	2300	124	0	0	0	10.1	53.3	73	44.7	4	282	78.8 Y
88	Cuyama	Central Coast Valleys	5/4/2013	2400	124	0	0	0	10.3	49.5	86	45.4	5.5	280	78.3 Y
88	Cuyama	Central Coast Valleys	5/5/2013	100	125	0	0	0	10.3	48.2	89	45.2	5.3	272	77.7 Y
88	Cuyama	Central Coast Valleys	5/5/2013	200	125	0	0	0	10	47.5	89	44.5	3	261	76.4 Y
88	Cuyama	Central Coast Valleys	5/5/2013	300	125	0	0	0	8.6	44.7	86	40.8	2	180	75.2 Y
88	Cuyama	Central Coast Valleys	5/5/2013	400	125	0	0	0	7.6	42.2	83	37.5	1.8	182	74.3 Y
88	Cuyama	Central Coast Valleys	5/5/2013	500	125	0	0	0	7.4	41.4	84	36.9	2.4	177	73.5 Y
88	Cuyama	Central Coast Valleys	5/5/2013	600	125	0	0	54	7.7	41.7	86	37.7	2.6	213	72.8
88	Cuyama	Central Coast Valleys	5/5/2013	700	125	0	0	227	9.3	46.8	85	42.6	1.6	251	71.7
88	Cuyama	Central Coast Valleys	5/5/2013	800	125	0.01	0	665	10.2	50.8	81	45.1	4.6	289	70.9
88	Cuyama	Central Coast Valleys	5/5/2013	900	125	0.01	0	1066	10.2	55.9	67	45	3.5	282	70.4
88	Cuyama	Central Coast Valleys	5/5/2013	1000	125	0.02	0	1397	8.8	53.8	43	41.1	9	115	70.3
88	Cuyama	Central Coast Valleys	5/5/2013	1100	125	0.03	0	1894	7.8	68.9	32	38.2	18.8	134	70.6
88	Cuyama	Central Coast Valleys	5/5/2013	1200	125	0.03	0	1607	7.9	69	33	38.6	20.4	143	71.3
88	Cuyama	Central Coast Valleys	5/5/2013	1300	125	0.03	0	1766	7.8	69.1	32	38.2	17	183	72
88	Cuyama	Central Coast Valleys	5/5/2013	1400	125	0.03	0	1873	8.1	68.3	34	38.9	19.8	156	72.6
88	Cuyama	Central Coast Valleys	5/5/2013	1500	125	0.03	0	1619	8.3	66.1	38	39.8	23.2	153	73.1
88	Cuyama	Central Coast Valleys	5/5/2013	1600	125	0.02	0	1097	7.8	64.7	37	38	18.1	154	73.7
88	Cuyama	Central Coast Valleys	5/5/2013	1700	125	0.01	0	396	7.8	61.9	42	38.3	16.5	137	74.2
88	Cuyama	Central Coast Valleys	5/5/2013	1800	125	0.01	0	188	8	50.1	45	38.8	12.4	145	74.3
88	Cuyama	Central Coast Valleys	5/5/2013	1900	125	0	0	53	8.1	58.5	48	39.1	12.5	143	74.2
88	Cuyama	Central Coast Valleys	5/5/2013	2000	125	0	0	0	8.1	56.9	51	39	10.4	143	73.9
88	Cuyama	Central Coast Valleys	5/5/2013	2100	125	0	0	0	8	55.9	52	38.7	11.5	138	73.5
88	Cuyama	Central Coast Valleys	5/5/2013	2200	125	0	0	0	8.1	55.8	53	39.1	8.7	139	73
88	Cuyama	Central Coast Valleys	5/5/2013	2300	125	0	0	0	8.2	54.9	56	39.5	11.2	131	72.5
88	Cuyama	Central Coast Valleys	5/5/2013	2400	125	0	0	0	8.3	53.7	59	39.7	9.5	127	71.9
88	Cuyama	Central Coast Valleys	5/6/2013	100	126	0	0	0	8.6	52.4	64	40.5	6.9	129	71.3
88	Cuyama	Central Coast Valleys	5/6/2013	200	126	0	0	0	8.2	52.5	61	39.3	6.4	149	70.8
88	Cuyama	Central Coast Valleys	5/6/2013	300	126	0	0	0	8.1	51.4	62	39	2.2	342	70.2
88	Cuyama	Central Coast Valleys	5/6/2013	400	126	0	0	0	8.2	53	60	39.5	2.9	311	69.7
88	Cuyama	Central Coast Valleys	5/6/2013	500	126	0	0	0	8.4	51.6	65	40.1	3.4	357	69.2
88	Cuyama	Central Coast Valleys	5/6/2013	600	126	0	0	20	8.6	52	65	40.5	2.8	283	68.7
88	Cuyama	Central Coast Valleys	5/6/2013	700	126	0	0	242	10	52.1	76	44.6	9.5	87	68.3
88	Cuyama	Central Coast Valleys	5/6/2013	800	126	0	0	363	10.4	53.3	75	45.5	6.9	105	68
88	Cuyama	Central Coast Valleys	5/6/2013	900	126	0.01	0	584	10.2	56	66	45	2.5	128	67.7
88	Cuyama	Central Coast Valleys	5/6/2013	1000	126	0.01	0	628	9.7	58	59	43.8	5.1	188	67.6
88	Cuyama	Central Coast Valleys	5/6/2013	1100	126	0.02	0	1268	8.8	61	48	41.3	5.9	212	67.8
88	Cuyama	Central Coast Valleys	5/6/2013	1200	126	0.02	0	1437	8.2	63.7	41	39.4	11.6	202	68.1
88	Cuyama	Central Coast Valleys	5/6/2013	1300	126	0.02	0	1555	7.9	64.5	38	38.5	8.1	199	68.7
88	Cuyama	Central Coast Valleys	5/6/2013	1400	126	0.02	0	1181	8.1	65	38	39.1	8.4	178	69.4
88	Cuyama	Central Coast Valleys	5/6/2013	1500	126	0.02	0	1681	8.1	66.4	37	39.1	8.4	194	70.1
88	Cuyama	Central Coast Valleys	5/6/2013	1600	126	0.02	0	1308	8.1	66.3	37	39.1	11.4	214	70.9
88	Cuyama	Central Coast Valleys	5/6/2013	1700	126	0.01	0	893	8	65.2	38	38.8	11.4	211	71.8
88	Cuyama	Central Coast Valleys	5/6/2013	1800	126	0.01	0	475	8	63.3	41	38.9	11.1	183	72.5
88	Cuyama	Central Coast Valleys	5/6/2013	1900	126	0	0	88	8.1	59.2	47	39.2	10.1	179	72.9
88	Cuyama	Central Coast Valleys	5/6/2013	2000	126	0	0	0	8.1	55.7	53	39	7.5	180	72.8
88	Cuyama	Central Coast Valleys	5/6/2013	2100	126	0	0	0	8.1	54.2	56	39	6.8	168	72.5

88	Cuyama	Central Coast Valleys	5/6/2013	2200	126	0	0	0	8.1	54.7	55	38.9	8.2	159	72
88	Cuyama	Central Coast Valleys	5/6/2013	2300	126	0	0	0	8	54.8	54	38.7	6.5	140	71.4
88	Cuyama	Central Coast Valleys	5/6/2013	2400	126	0	0	0	8.3	53.9	59	39.8	3	187	70.9
88	Cuyama	Central Coast Valleys	5/7/2013	100	127	0	0	0	8.9	51.4	68	41.4	3.5	269	70.4
88	Cuyama	Central Coast Valleys	5/7/2013	200	127	0	0	0	8.2	48.1	71	39.3	1.8	165	69.9
88	Cuyama	Central Coast Valleys	5/7/2013	300	127	0	0	0	8.1	48.3	70	39.1	2.3	271	69.4
88	Cuyama	Central Coast Valleys	5/7/2013	400	127	0	0	0	8.4	49.6	70	40.2	1.3	52	68.8
88	Cuyama	Central Coast Valleys	5/7/2013	500	127	0	0	0	8.5	50.4	68	40.2	2.6	42	68.3
88	Cuyama	Central Coast Valleys	5/7/2013	600	127	0	0	43	8.5	50.8	67	40.3	3.4	329	67.8
88	Cuyama	Central Coast Valleys	5/7/2013	700	127	0	0	418	9	52.3	67	41.7	3.9	308	67.4
88	Cuyama	Central Coast Valleys	5/7/2013	800	127	0.01	0	855	9.2	55.5	61	42.4	3.8	359	67
88	Cuyama	Central Coast Valleys	5/7/2013	900	127	0.01	0	1260	8.7	56	53	40.8	3.4	29	67
88	Cuyama	Central Coast Valleys	5/7/2013	1000	127	0.02	0	1552	8.4	60.6	47	40	4.6	314	67.3
88	Cuyama	Central Coast Valleys	5/7/2013	1100	127	0.01	0	876	8.3	61.2	45	39.8	7.1	328	66.2
88	Cuyama	Central Coast Valleys	5/7/2013	1200	127	0.01	0	889	8.1	61.8	43	39.1	6.4	327	69.2
88	Cuyama	Central Coast Valleys	5/7/2013	1300	127	0.01	0	568	8.1	61.7	43	39.2	5.7	291	70.2
88	Cuyama	Central Coast Valleys	5/7/2013	1400	127	0	0	310	8.5	60.8	47	40.5	6.3	284	70.8
88	Cuyama	Central Coast Valleys	5/7/2013	1500	127	0.01	0	578	8.8	62.3	46	41.2	4.9	271	71.2
88	Cuyama	Central Coast Valleys	5/7/2013	1600	127	0.01	0	771	8.8	63.9	44	41.3	5.3	325	71.4
88	Cuyama	Central Coast Valleys	5/7/2013	1700	127	0.01	0	929	8.8	65.1	41	41.2	6.2	355	71.5
88	Cuyama	Central Coast Valleys	5/7/2013	1800	127	0.01	0	391	8.4	64	41	39.9	6.8	354	71.8
88	Cuyama	Central Coast Valleys	5/7/2013	1900	127	0	0	38	8.9	60.6	49	41.5	5.8	18	71.9
88	Cuyama	Central Coast Valleys	5/7/2013	2000	127	0	0	0	9.2	56.5	59	42.5	6.7	271	71.8
88	Cuyama	Central Coast Valleys	5/7/2013	2100	127	0	0	0	8.6	55	58	40.8	7.1	280	71.5
88	Cuyama	Central Coast Valleys	5/7/2013	2200	127	0	0	0	9	53.6	64	41.8	7.7	272	71
88	Cuyama	Central Coast Valleys	5/7/2013	2300	127	0	0	0	9.2	51.5	71	42.3	6.8	259	70.5
88	Cuyama	Central Coast Valleys	5/7/2013	2400	127	0	0	0	9	49.7	74	41.7	3.8	253	70
88	Cuyama	Central Coast Valleys	5/8/2013	100	128	0	0	0	8.7	47.6	77	40.8	1.1	321	69.4
88	Cuyama	Central Coast Valleys	5/8/2013	200	128	0	0	0	8.1	44.9	80	39.1	2.9	165	68.8
88	Cuyama	Central Coast Valleys	5/8/2013	300	128	0	0	0	8.8	47.4	79	41.3	3	124	68.1
88	Cuyama	Central Coast Valleys	5/8/2013	400	128	0	0	0	8.8	47.3	79	41.1	4.7	100	67.5
88	Cuyama	Central Coast Valleys	5/8/2013	500	128	0	0	0	8.7	48.5	75	41	4.1	138	66.9
88	Cuyama	Central Coast Valleys	5/8/2013	600	128	0	0	33	8.7	49.4	73	41	3.5	127	66.4
88	Cuyama	Central Coast Valleys	5/8/2013	700	128	0	0	178	9	51.2	70	41.8	2.2	82	66
88	Cuyama	Central Coast Valleys	5/8/2013	800	128	0.01	0	591	9.2	54.9	62	42.2	3.1	16	65.7
88	Cuyama	Central Coast Valleys	5/8/2013	900	128	0.01	0	1138	8.7	59	51	40.9	3.3	103	65.5
88	Cuyama	Central Coast Valleys	5/8/2013	1000	128	0.02	0	1619	9.2	63	47	42.3	4.5	15	65.7
88	Cuyama	Central Coast Valleys	5/8/2013	1100	128	0.01	0	966	9.7	63.6	48	43.6	6.1	354	66.4
88	Cuyama	Central Coast Valleys	5/8/2013	1200	128	0.02	0	1189	9.6	64.9	46	43.4	6.4	8	67.4
88	Cuyama	Central Coast Valleys	5/8/2013	1300	128	0.01	0	466	9.4	64.4	46	43	6.1	4	68.5
88	Cuyama	Central Coast Valleys	5/8/2013	1400	128	0.02	0	1103	10.1	65.8	47	44.7	7	347	69.3
88	Cuyama	Central Coast Valleys	5/8/2013	1500	128	0.01	0	837	10	66.7	45	44.4	6.5	359	69.9
88	Cuyama	Central Coast Valleys	5/8/2013	1600	128	0.01	0	319	10.2	65.4	48	45	9.2	353	70.5
88	Cuyama	Central Coast Valleys	5/8/2013	1700	128	0	0	177	10.4	64.5	50	45.5	8	357	71
88	Cuyama	Central Coast Valleys	5/8/2013	1800	128	0	0	93	11.1	61.6	60	47.4	7.1	299	71.3
88	Cuyama	Central Coast Valleys	5/8/2013	1900	128	0	0	21	11	58.4	66	47.1	7.4	279	71.3
88	Cuyama	Central Coast Valleys	5/8/2013	2000	128	0	0	0	10.6	56.3	69	46.1	7.7	280	71.2
88	Cuyama	Central Coast Valleys	5/8/2013	2100	128	0	0	0	10.3	55	69	45.2	6.8	274	70.9
88	Cuyama	Central Coast Valleys	5/8/2013	2200	128	0	0	0	9.5	53.6	68	43.3	5.2	267	70.5
88	Cuyama	Central Coast Valleys	5/8/2013	2300	128	0	0	0	9.1	52.7	67	42.1	4	256	70.1
88	Cuyama	Central Coast Valleys	5/8/2013	2400	128	0	0	0	9.2	52.8	68	42.4	1.9	280	69.5
88	Cuyama	Central Coast Valleys	5/9/2013	100	129	0	0	0	9.4	52.2	71	42.9	2.5	111	69
88	Cuyama	Central Coast Valleys	5/9/2013	200	129	0	0	0	9.8	51.8	74	43.9	2.6	67	68.5
88	Cuyama	Central Coast Valleys	5/9/2013	300	129	0	0	0	9.8	52.7	72	44	3.8	150	68.1
88	Cuyama	Central Coast Valleys	5/9/2013	400	129	0	0	0	9.8	52.7	72	44	1.8	50	67.6
88	Cuyama	Central Coast Valleys	5/9/2013	500	129	0	0	1	9.3	51.2	73	42.7	1.7	88	67.2
88	Cuyama	Central Coast Valleys	5/9/2013	600	129	0	0	58	9	48.2	78	41.8	1.8	183	66.8
88	Cuyama	Central Coast Valleys	5/9/2013	700	129	0	0	345	10.4	54.6	72	45.6	1.2	191	66.4
88	Cuyama	Central Coast Valleys	5/9/2013	800	129	0.01	0	608	10.1	58.6	60	44.9	2	162	66.1
88	Cuyama	Central Coast Valleys	5/9/2013	900	129	0.02	0	1242	10.2	62.2	53	45	3.8	158	65.9
88	Cuyama	Central Coast Valleys	5/9/2013	1000	129	0.02	0	1489	10.5	65.6	49	45.7	6.6	14	66.2
88	Cuyama	Central Coast Valleys	5/9/2013	1100	129	0.03	0	1813	10.1	68.9	42	44.7	8.9	4	66.9
88	Cuyama	Central Coast Valleys	5/9/2013	1200	129	0.02	0	1567	9.7	69.2	40	43.7	9	348	68.1
88	Cuyama	Central Coast Valleys	5/9/2013	1300	129	0.03	0	1945	9.4	71.7	36	43	6.7	1	69.5
88	Cuyama	Central Coast Valleys	5/9/2013	1400	129	0.03	0	1949	9.3	73.4	33	42.6	7.2	349	70.6
88	Cuyama	Central Coast Valleys	5/9/2013	1500	129	0.02	0	1264	9.2	73.3	33	42.3	10.7	355	71.6
88	Cuyama	Central Coast Valleys	5/9/2013	1600	129	0.02	0	939	9.1	72.2	34	42.1	10.2	352	72.7
88	Cuyama	Central Coast Valleys	5/9/2013	1700	129	0.01	0	827	9	72.8	33	41.9	9.5	354	73.6
88	Cuyama	Central Coast Valleys	5/9/2013	1800	129	0.01	0	268	9.5	70.4	37	43.2	11.1	4	74.2
88	Cuyama	Central Coast Valleys	5/9/2013	1900	129	0	0	108	10.3	67.9	44	45.2	7.6	47	74.4
88	Cuyama	Central Coast Valleys	5/9/2013	2000	129	0	0	1	10.6	63.9	52	46.1	5.4	111	74.4
88	Cuyama	Central Coast Valleys	5/9/2013	2100	129	0	0	0	10.4	60.4	58	45.6	4.5	141	74.1
88	Cuyama	Central Coast Valleys	5/9/2013	2200	129	0	0	0	9.9	58	60	44.2	4.1	178	73.6
88	Cuyama	Central Coast Valleys	5/9/2013	2300	129	0	0	0	9.7	57.5	60	43.8	3.3	104	73
88	Cuyama	Central Coast Valleys	5/9/2013	2400	129	0	0	0	9.8	55.2	66	44	3.2	145	72.4
88	Cuyama	Central Coast Valleys	5/10/2013	100	130	0	0	0	9.3	52.7	69	42.8	4.1	131	71.8
88	Cuyama	Central Coast Valleys	5/10/2013	200	130	0	0	0	9.3	51.5	71	42.5	2.7	137	71.1
88	Cuyama	Central Coast Valleys	5/10/2013	300	130	0	0	0	9.2	49.7	76	42.4	4.2	109	70.4
88	Cuyama	Central Coast Valleys	5/10/2013	400	130	0	0	0	9.2	49.8	75	42.3	5	113	69.8
88	Cuyama	Central Coast Valleys	5/10/2013	500	130	0	0	1	9.4	50	77	43	5.3	143	69.1
88	Cuyama	Central Coast Valleys	5/10/2013	600	130	0	0	89	9.5	50.6	75	43.1	3.8	100	68.5
88	Cuyama	Central Coast Valleys	5/10/2013	700	130	0	0	429	10.8	55.1	72	46.2	3.9	64	67.9
88	Cuyama	Central Coast Valleys	5/10/2013	800	130	0.01	0	834	12.1	64	59	49.5	3	80	67.5
88	Cuyama	Central Coast Valleys	5/10/2013	900	130	0.02	0	1230	12.8	68.8	53	51	3.2	139	67.4
88	Cuyama	Central Coast Valleys	5/10/2013	1000	130	0.02	0	1565	12.5	71.8	47	50.5	3.9	132	67.8

88	Cuyama	Central Coast Valleys	5/10/2013	1100	130	0.03	0	1801	12.3	74.8	42	50.1	5.4	327	68.7
88	Cuyama	Central Coast Valleys	5/10/2013	1200	130	0.03	0	1933	12	76.9	38	49.3	6.9	343	70.1
88	Cuyama	Central Coast Valleys	5/10/2013	1300	130	0.03	0	1939	11.7	78.9	35	48.8	7.9	345	71.7
88	Cuyama	Central Coast Valleys	5/10/2013	1400	130	0.03	0	1836	11.3	80.7	31	47.7	8.1	358	73.1
88	Cuyama	Central Coast Valleys	5/10/2013	1500	130	0.03	0	1609	10.8	82	29	46.7	10.7	0	74.2 Y
88	Cuyama	Central Coast Valleys	5/10/2013	1600	130	0.02	0	1292	10.7	82.4	28	46.4	11.9	351	75.4 Y
88	Cuyama	Central Coast Valleys	5/10/2013	1700	130	0.02	0	895	11	81.4	30	46.9	12.6	354	76.5 Y
88	Cuyama	Central Coast Valleys	5/10/2013	1800	130	0.01	0	476	11.4	79.4	33	48.1	11.7	355	77.3 Y
88	Cuyama	Central Coast Valleys	5/10/2013	1900	130	0	0	105	13.1	74.9	44	51.7	7.6	62	77.6 Y
88	Cuyama	Central Coast Valleys	5/10/2013	2000	130	0	0	1	13.5	69.8	54	52.5	6	138	77.5 Y
88	Cuyama	Central Coast Valleys	5/10/2013	2100	130	0	0	0	12.8	66.7	58	51.2	5	170	77.2 Y
88	Cuyama	Central Coast Valleys	5/10/2013	2200	130	0	0	0	12.3	64.1	60	50.1	3.6	133	76.8 Y
88	Cuyama	Central Coast Valleys	5/10/2013	2300	130	0	0	0	12.3	61.7	66	50	3.4	109	76.2
88	Cuyama	Central Coast Valleys	5/10/2013	2400	130	0	0	0	11.8	60.6	66	49	5.2	143	75.6
88	Cuyama	Central Coast Valleys	5/11/2013	100	131	0	0	0	11.5	58.1	70	48.3	4.3	123	74.9
88	Cuyama	Central Coast Valleys	5/11/2013	200	131	0	0	0	11.5	56.3	74	48.2	3.7	104	74.2
88	Cuyama	Central Coast Valleys	5/11/2013	300	131	0	0	0	11.3	54.9	77	47.7	5.7	102	73.5
88	Cuyama	Central Coast Valleys	5/11/2013	400	131	0	0	0	10.7	54.1	75	46.4	5.9	106	72.9
88	Cuyama	Central Coast Valleys	5/11/2013	500	131	0	0	1	10.6	53.3	77	46.1	5.4	112	72.2
88	Cuyama	Central Coast Valleys	5/11/2013	600	131	0	0	96	10.6	53.7	75	46	5.4	100	71.5
88	Cuyama	Central Coast Valleys	5/11/2013	700	131	0.01	0	447	11.3	59.6	65	47.8	7.1	85	70.9
88	Cuyama	Central Coast Valleys	5/11/2013	800	131	0.01	0	851	12.2	68.3	52	49.9	6.7	76	70.4
88	Cuyama	Central Coast Valleys	5/11/2013	900	131	0.02	0	1247	13.3	74.8	45	52.2	4.6	87	70.2
88	Cuyama	Central Coast Valleys	5/11/2013	1000	131	0.02	0	1588	11.7	80	33	48.6	3.1	144	70.5
88	Cuyama	Central Coast Valleys	5/11/2013	1100	131	0.03	0	1830	11.9	83.4	31	49.2	4.2	103	71.4
88	Cuyama	Central Coast Valleys	5/11/2013	1200	131	0.03	0	1960	11.6	87.6	26	48.5	3.6	16	72.8 Y
88	Cuyama	Central Coast Valleys	5/11/2013	1300	131	0.03	0	1951	9.5	90.9	19	43.3	6.3	343	74.5 Y
88	Cuyama	Central Coast Valleys	5/11/2013	1400	131	0.03	0	1861	7.4	91.8	14	36.6	7.6	347	75.9 Y
88	Cuyama	Central Coast Valleys	5/11/2013	1500	131	0.03	0	1642	7.3	92.3	14	36.4	8.7	343	77.1 Y
88	Cuyama	Central Coast Valleys	5/11/2013	1600	131	0.02	0	1154	8	91.3	16	38.7	8.1	337	78.5 Y
88	Cuyama	Central Coast Valleys	5/11/2013	1700	131	0.01	0	377	10.2	88.9	22	45	6.7	312	79.8 Y
88	Cuyama	Central Coast Valleys	5/11/2013	1800	131	0.01 Y	0	392	10.6	87.7 Y	24 Y	46.2 Y	5.5	333	80.6 Y
88	Cuyama	Central Coast Valleys	5/11/2013	1900	131	0.01 Y	0	108	10.5	84.5 Y	26 Y	45.9 Y	5.5	288	81 Y
88	Cuyama	Central Coast Valleys	5/11/2013	2000	131	0 Y	0	0	11	78.7 Y	33 Y	47 Y	7.3	263	81 Y
88	Cuyama	Central Coast Valleys	5/11/2013	2100	131	0 Y	0	0	11.1	74.8 Y	38 Y	47.3 Y	5	277	80.7 Y
88	Cuyama	Central Coast Valleys	5/11/2013	2200	131	0 Y	0	0	11	71.1 Y	42 Y	47 Y	2.9	249	80.3 Y
88	Cuyama	Central Coast Valleys	5/11/2013	2300	131	0 Y	0	0	11.6	68.1 Y	53 Y	48.5 Y	4.5	127	79.7 Y
88	Cuyama	Central Coast Valleys	5/11/2013	2400	131	0 Y	0	0	11.5	65.6 Y	53 Y	48.2 Y	5	145	79 Y
88	Cuyama	Central Coast Valleys	5/12/2013	100	132	0 Y	0	0	11.1	62.9 Y	57 Y	47.3 Y	4	89	78.3 Y
88	Cuyama	Central Coast Valleys	5/12/2013	200	132	0	0	0	11.4	60.4	63	47.9	4.1	116	77.6 Y
88	Cuyama	Central Coast Valleys	5/12/2013	300	132	0	0	0	11.6	59.1	68	48.4	3.5	93	76.9 Y
88	Cuyama	Central Coast Valleys	5/12/2013	400	132	0	0	0	11.9	58.3	72	49.2	4.2	89	76.2 Y
88	Cuyama	Central Coast Valleys	5/12/2013	500	132	0	0	1	11.4	57.4	71	47.9	5.8	100	75.5 Y
88	Cuyama	Central Coast Valleys	5/12/2013	600	132	0	0	111	11.5	58.1	70	48.3	5.2	102	74.8 Y
88	Cuyama	Central Coast Valleys	5/12/2013	700	132	0.01	0	464	12	64.7	58	49.4	6.6	77	74.1 Y
88	Cuyama	Central Coast Valleys	5/12/2013	800	132	0.01	0	853	13.4	72.9	48	52.3	5.8	90	73.6 Y
88	Cuyama	Central Coast Valleys	5/12/2013	900	132	0.02	0	1253	13.9	80.2	40	53.3	4.1	107	73.5 Y
88	Cuyama	Central Coast Valleys	5/12/2013	1000	132	0.02	0	1586	13.1	83.7	33	51.7	4	147	73.8 Y
88	Cuyama	Central Coast Valleys	5/12/2013	1100	132	0.03	0	1825	12.1	86.4	28	49.7	4.7	153	74.7 Y
88	Cuyama	Central Coast Valleys	5/12/2013	1200	132	0.03	0	1937	11.2	89.2	24	47.5	6.1	11	76 Y
88	Cuyama	Central Coast Valleys	5/12/2013	1300	132	0.03	0	1943	9.4	91.1	19	42.9	7.8	344	77.6 Y
88	Cuyama	Central Coast Valleys	5/12/2013	1400	132	0.03	0	1846	9	92.1	17	41.7	9.8	344	78.9 Y
88	Cuyama	Central Coast Valleys	5/12/2013	1500	132	0.03	0	1640	7.8	92.7	15	38.1	11.1	353	80.1 Y
88	Cuyama	Central Coast Valleys	5/12/2013	1600	132	0.03	0	1283	8.1	92.2	16	39	9.6	1	81.5 Y
88	Cuyama	Central Coast Valleys	5/12/2013	1700	132	0.01	0	506	8	90.1	17	38.8	9.8	351	82.7 Y
88	Cuyama	Central Coast Valleys	5/12/2013	1800	132	0.01 Y	0	408	8.2	88.7 Y	18 Y	39.5 Y	7.4	348	83.4 Y
88	Cuyama	Central Coast Valleys	5/12/2013	1900	132	0.01 Y	0	113	10.8	85.7 Y	25 Y	46.1 Y	5.4	302	83.7 Y
88	Cuyama	Central Coast Valleys	5/12/2013	2000	132	0 Y	0	1	9.6	81.1 Y	27 Y	43.5 Y	6.1	265	83.6 Y
88	Cuyama	Central Coast Valleys	5/12/2013	2100	132	0 Y	0	0	8.5	76.8 Y	27 Y	40.4 Y	5.4	245	83.2 Y
88	Cuyama	Central Coast Valleys	5/12/2013	2200	132	0 Y	0	0	8.3	74 Y	29 Y	39.7 Y	3.4	248	82.7 Y
88	Cuyama	Central Coast Valleys	5/12/2013	2300	132	0 Y	0	0	10.2	67.3 Y	45 Y	45 Y	3.7	149	82.1 Y
88	Cuyama	Central Coast Valleys	5/12/2013	2400	132	0 Y	0	0	10	64.3 Y	49 Y	44.5 Y	4	141	81.4 Y
88	Cuyama	Central Coast Valleys	5/13/2013	100	133	0	0	0	10.5	61.6	56	45.9	4.5	102	80.6 Y
88	Cuyama	Central Coast Valleys	5/13/2013	200	133	0	0	0	10.2	60.9	56	44.9	4.6	104	79.8 Y
88	Cuyama	Central Coast Valleys	5/13/2013	300	133	0	0	0	9.5	58.7	56	43.2	3	44	79 Y
88	Cuyama	Central Coast Valleys	5/13/2013	400	133	0	0	0	10	56.7	64	44.5	3.8	82	78.2 Y
88	Cuyama	Central Coast Valleys	5/13/2013	500	133	0	0	1	10.1	56.8	65	44.8	5.4	103	77.5 Y
88	Cuyama	Central Coast Valleys	5/13/2013	600	133	0	0	108	9.8	57.2	61	44	5.3	102	76.7 Y
88	Cuyama	Central Coast Valleys	5/13/2013	700	133	0.01	0	463	10.5	63.4	52	45.8	7.2	91	76 Y
88	Cuyama	Central Coast Valleys	5/13/2013	800	133	0.01	0	868	11.2	72	42	47.4	6.3	91	75.4 Y
88	Cuyama	Central Coast Valleys	5/13/2013	900	133	0.02	0	1265	10.9	80	31	46.9	5.1	84	75.1 Y
88	Cuyama	Central Coast Valleys	5/13/2013	1000	133	0.03 Y	0	1602	10	85 Y	24 Y	44.7 Y	3.7	90	75.4 Y
88	Cuyama	Central Coast Valleys	5/13/2013	1100	133	0.03 Y	0	1836	9.4	88.2 Y	21 Y	43 Y	6	6	76.2 Y
88	Cuyama	Central Coast Valleys	5/13/2013	1200	133	0.04	0	1951	8.3	89.7	17	39.7	9.8	350	77.6 Y
88	Cuyama	Central Coast Valleys	5/13/2013	1300	133	0.03	0	1960	8.2	90.9	17	39.5	7.8	349	79.2 Y
88	Cuyama	Central Coast Valleys	5/13/2013	1400	133	0.03	0	1867	8.1	91.8	16	39	7.7	344	80.5 Y
88	Cuyama	Central Coast Valleys	5/13/2013	1500	133	0.03	0	1638	8.1	92.4	16	39	8	349	81.7 Y
88	Cuyama	Central Coast Valleys	5/13/2013	1600	133	0.02	0	1167	8.1	92.4	16	39.1	8	356	83 Y
88	Cuyama	Central Coast Valleys	5/13/2013	1700	133	0.02 Y	0	830	8	91.6 Y	16 Y	38.9 Y	5.7	354	84.1 Y
88	Cuyama	Central Coast Valleys	5/13/2013	1800	133	0.01 Y	0	513	6.3	89.8 Y	13 Y	32.8 Y	7.1	289	84.9 Y
88	Cuyama	Central Coast Valleys	5/13/2013	1900	133	0.01 Y	0	140	6.3	84.8 Y	15 Y	32.6 Y	7.4	281	85.2 Y
88	Cuyama	Central Coast Valleys	5/13/2013	2000	133	0 Y	0	1	6.3	78.7 Y	19 Y	32.6 Y	5.4	264	85.1 Y
88	Cuyama	Central Coast Valleys	5/13/2013	2100	133	0 Y	0	0	6.3	74.2 Y	22 Y	32.8 Y	4.7	255	84.6 Y
88	Cuyama	Central Coast Valleys	5/13/2013	2200	133	0 Y	0	0	6.1	70 Y	24 Y	32 Y	4.1	269	84 Y
88	Cuyama	Central Coast Valleys	5/13/2013	2300	133	0	0	0	7.6	64.8	36	37.4	3	253	83.2 Y

88	Cuyama	Central Coast Valleys	5/13/2013	2400	133	0	0	0	8.6	59.5	49	40.5	3.2	176	82.4 Y
88	Cuyama	Central Coast Valleys	5/14/2013	100	134	0	0	0	7.8	55.5	52	38.2	3.3	188	81.5 Y
88	Cuyama	Central Coast Valleys	5/14/2013	200	134	0	0	0	6.6	53.9	46	33.7	2.6	176	80.5 Y
88	Cuyama	Central Coast Valleys	5/14/2013	300	134	0	0	0	6.9	52.3	52	35	4.2	162	79.6 Y
88	Cuyama	Central Coast Valleys	5/14/2013	400	134	0	0	0	6.1	51.3	47	32	3.3	77	78.6 Y
88	Cuyama	Central Coast Valleys	5/14/2013	500	134	0	0	2	6.5	49.8	53	33.7	4.7	129	77.7 Y
88	Cuyama	Central Coast Valleys	5/14/2013	600	134	0	0	90	6.4	50	52	33	4.5	153	76.8 Y
88	Cuyama	Central Coast Valleys	5/14/2013	700	134	0.01	0	500	6	59.1	35	31.6	4.3	117	75.9 Y
88	Cuyama	Central Coast Valleys	5/14/2013	800	134	0.01	0	907	6.1	63	31	31.8	6.8	281	75.1 Y
88	Cuyama	Central Coast Valleys	5/14/2013	900	134	0.02	0	1309	7.5	71.6	28	37.1	7.1	273	74.8 Y
88	Cuyama	Central Coast Valleys	5/14/2013	1000	134	0.03	0	1652	7	76.6	22	35.2	7.3	287	75 Y
88	Cuyama	Central Coast Valleys	5/14/2013	1100	134	0.03	0	1875	7.9	78.4	24	38.5	9.6	291	75.8 Y
88	Cuyama	Central Coast Valleys	5/14/2013	1200	134	0.03	0	2005	6.6	80.5	19	34	9.9	301	77.1 Y
88	Cuyama	Central Coast Valleys	5/14/2013	1300	134	0.03	0	2011	6	81.7	18	31.4	10.1	303	78.6 Y
88	Cuyama	Central Coast Valleys	5/14/2013	1400	134	0.03	0	1904	5.7	82.3	15	30.3	9.8	299	79.7 Y
88	Cuyama	Central Coast Valleys	5/14/2013	1500	134	0.03	0	1675	5.3	82.1	14	28.7	9.2	294	80.7 Y
88	Cuyama	Central Coast Valleys	5/14/2013	1600	134	0.02	0	1349	5.7	81.2	16	30.3	9.9	293	81.8 Y
88	Cuyama	Central Coast Valleys	5/14/2013	1700	134	0.02	0	968	5.9	79.2	17	31.1	9.8	288	82.6 Y
88	Cuyama	Central Coast Valleys	5/14/2013	1800	134	0.01	0	539	8.5	74.4	29	40.2	9.6	276	83.5 Y
88	Cuyama	Central Coast Valleys	5/14/2013	1900	134	0	0	133	9.5	68.3	40	43.1	8.6	279	83.8 Y
88	Cuyama	Central Coast Valleys	5/14/2013	2000	134	0	0	1	10.4	62.5	54	45.5	7.2	278	83.6 Y
88	Cuyama	Central Coast Valleys	5/14/2013	2100	134	0	0	0	10.5	59.3	61	45.9	7.2	264	83.1 Y
88	Cuyama	Central Coast Valleys	5/14/2013	2200	134	0	0	0	10.3	57.2	65	45.4	2.4	238	82.4 Y
88	Cuyama	Central Coast Valleys	5/14/2013	2300	134	0	0	0	10.1	54.8	69	44.9	2.4	134	81.5 Y
88	Cuyama	Central Coast Valleys	5/14/2013	2400	134	0	0	0	10	53.5	72	44.6	2.9	144	80.8 Y
88	Cuyama	Central Coast Valleys	5/15/2013	100	135	0	0	0	8.8	51.5	68	41.3	1.4	212	79.6 Y
88	Cuyama	Central Coast Valleys	5/15/2013	200	135	0	0	0	8.8	51.2	68	41.2	2.4	128	78.7 Y
88	Cuyama	Central Coast Valleys	5/15/2013	300	135	0	0	0	8.5	49.9	70	40.4	1.8	154	77.8 Y
88	Cuyama	Central Coast Valleys	5/15/2013	400	135	0	0	0	8.7	49.3	73	40.9	3.2	139	76.9 Y
88	Cuyama	Central Coast Valleys	5/15/2013	500	135	0	0	1	8.4	49.4	70	40.2	4.6	130	76 Y
88	Cuyama	Central Coast Valleys	5/15/2013	600	135	0	0	112	8.5	50.3	68	40.2	5.4	120	75.2 Y
88	Cuyama	Central Coast Valleys	5/15/2013	700	135	0.01	0	474	8.9	56.4	57	41.5	5.6	95	74.4 Y
88	Cuyama	Central Coast Valleys	5/15/2013	800	135	0.01	0	886	8.2	65.2	39	39.5	2.8	90	73.7 Y
88	Cuyama	Central Coast Valleys	5/15/2013	900	135	0.02	0	1285	6.5	71.2	25	33.4	3	292	73.4 Y
88	Cuyama	Central Coast Valleys	5/15/2013	1000	135	0.02	0	1621	7.7	75.3	26	37.7	3.9	304	73.7 Y
88	Cuyama	Central Coast Valleys	5/15/2013	1100	135	0.03	0	1794	8.6	79.4	25	40.7	3.8	252	74.5 Y
88	Cuyama	Central Coast Valleys	5/15/2013	1200	135	0.03	0	1984	8.2	82.5	22	39.5	4.3	282	75.8 Y
88	Cuyama	Central Coast Valleys	5/15/2013	1300	135	0.03	0	1978	8	85	19	38.7	5.4	314	77.4 Y
88	Cuyama	Central Coast Valleys	5/15/2013	1400	135	0.03	0	1883	7.2	86.3	17	36.2	8.9	289	78.7 Y
88	Cuyama	Central Coast Valleys	5/15/2013	1500	135	0.03	0	1656	6.9	85.7	16	34.9	9.9	284	79.8 Y
88	Cuyama	Central Coast Valleys	5/15/2013	1600	135	0.02	0	1330	6.6	85	16	34	9.7	283	81.1 Y
88	Cuyama	Central Coast Valleys	5/15/2013	1700	135	0.02	0	941	6.6	82.3	17	33.8	10.4	285	82.2 Y
88	Cuyama	Central Coast Valleys	5/15/2013	1800	135	0.01	0	516	7.5	78.6	23	37.2	9.5	282	83 Y
88	Cuyama	Central Coast Valleys	5/15/2013	1900	135	0	0	127	8.9	72.7	32	41.4	8.7	278	83.4 Y
88	Cuyama	Central Coast Valleys	5/15/2013	2000	135	0	0	1	9.5	66.8	42	43.2	7.3	281	83.3 Y
88	Cuyama	Central Coast Valleys	5/15/2013	2100	135	0	0	0	10	62.7	51	44.6	4.2	282	82.9 Y
88	Cuyama	Central Coast Valleys	5/15/2013	2200	135	0	0	0	9.6	59.3	58	43.5	2.7	241	82.2 Y
88	Cuyama	Central Coast Valleys	5/15/2013	2300	135	0	0	0	9.3	56	61	42.7	2.2	159	81.4 Y
88	Cuyama	Central Coast Valleys	5/15/2013	2400	135	0	0	0	9.3	53.7	68	42.7	2.9	151	80.5 Y
88	Cuyama	Central Coast Valleys	5/16/2013	100	136	0	0	0	8.2	50.7	65	39.4	2.5	161	79.6 Y
88	Cuyama	Central Coast Valleys	5/16/2013	200	136	0	0	0	7.5	50	61	37	2.6	145	78.7 Y
88	Cuyama	Central Coast Valleys	5/16/2013	300	136	0	0	0	7.9	48.5	68	38.5	4.2	165	77.7 Y
88	Cuyama	Central Coast Valleys	5/16/2013	400	136	0	0	0	7.5	48.5	65	37.2	2.9	119	76.8 Y
88	Cuyama	Central Coast Valleys	5/16/2013	500	136	0	0	1	7.8	47	72	38.3	3.9	100	75.9 Y
88	Cuyama	Central Coast Valleys	5/16/2013	600	136	0	0	131	8.2	48.7	70	39.4	2.7	89	75 Y
88	Cuyama	Central Coast Valleys	5/16/2013	700	136	0	0	278	8.6	52.4	64	40.6	4.4	58	74.2 Y
88	Cuyama	Central Coast Valleys	5/16/2013	800	136	0.01	0	872	9.1	60.9	50	42	4.3	72	73.5 Y
88	Cuyama	Central Coast Valleys	5/16/2013	900	136	0.02	0	1274	8.4	67.7	36	39.9	4.2	103	73.1 Y
88	Cuyama	Central Coast Valleys	5/16/2013	1000	136	0.02	0	1532	8.6	70.5	34	40.6	5.4	71	73.3 Y
88	Cuyama	Central Coast Valleys	5/16/2013	1100	136	0.02	0	1474	8.8	70.6	35	41.3	7.8	349	73.9 Y
88	Cuyama	Central Coast Valleys	5/16/2013	1200	136	0.02	0	1410	8.8	71.5	33	41.1	9.7	359	74.9 Y
88	Cuyama	Central Coast Valleys	5/16/2013	1300	136	0.01	0	861	8.7	70.5	34	41	9.4	1	76.1 Y
88	Cuyama	Central Coast Valleys	5/16/2013	1400	136	0.02	0	1148	9.1	70.4	36	42	9.2	2	77 Y
88	Cuyama	Central Coast Valleys	5/16/2013	1500	136	0.01	0	932	9.2	70.2	37	42.3	6.3	358	77.6 Y
88	Cuyama	Central Coast Valleys	5/16/2013	1600	136	0.01	0	565	9.1	68.8	38	42	10.2	4	78.1 Y
88	Cuyama	Central Coast Valleys	5/16/2013	1700	136	0.01	0	495	9	66.9	40	41.9	10.3	360	78.5 Y
88	Cuyama	Central Coast Valleys	5/16/2013	1800	136	0.01	0	574	9.1	67.1	40	42.2	7	351	78.6 Y
88	Cuyama	Central Coast Valleys	5/16/2013	1900	136	0	0	134	9	65	43	41.8	4.9	63	78.6 Y
88	Cuyama	Central Coast Valleys	5/16/2013	2000	136	0	0	1	9.4	60.5	52	42.9	2.9	98	78.4 Y
88	Cuyama	Central Coast Valleys	5/16/2013	2100	136	0	0	0	9.4	58.6	56	43	4.8	149	78 Y
88	Cuyama	Central Coast Valleys	5/16/2013	2200	136	0	0	0	9.4	58.6	56	43	4.6	163	77.5 Y
88	Cuyama	Central Coast Valleys	5/16/2013	2300	136	0	0	0	9.4	57.9	57	42.9	1.9	169	76.8 Y
88	Cuyama	Central Coast Valleys	5/16/2013	2400	136	0	0	0	8.5	56.3	55	40.2	2.8	208	76.2 Y
88	Cuyama	Central Coast Valleys	5/17/2013	100	137	0	0	0	8.6	55.1	58	40.7	2.8	180	75.6 Y
88	Cuyama	Central Coast Valleys	5/17/2013	200	137	0	0	0	8.6	53.5	61	40.6	2.1	112	74.9 Y
88	Cuyama	Central Coast Valleys	5/17/2013	300	137	0	0	0	8.7	52.6	64	40.8	2.8	139	74.3 Y
88	Cuyama	Central Coast Valleys	5/17/2013	400	137	0	0	0	8.6	50.3	69	40.5	1.9	115	73.7 Y
88	Cuyama	Central Coast Valleys	5/17/2013	500	137	0	0	1	8.9	49.8	73	41.5	2.8	151	73 Y
88	Cuyama	Central Coast Valleys	5/17/2013	600	137	0	0	41	10.1	52.9	74	44.7	4.1	41	72.4 Y
88	Cuyama	Central Coast Valleys	5/17/2013	700	137	0	0	275	10.2	54.3	71	45	2.2	339	71.8 Y
88	Cuyama	Central Coast Valleys	5/17/2013	800	137	0.01	0	879	10.8	59.6	62	46.5	2.3	354	71.3 Y
88	Cuyama	Central Coast Valleys	5/17/2013	900	137	0.02	0	1258	10.9	62.1	57	46.7	3.1	104	71.1 Y
88	Cuyama	Central Coast Valleys	5/17/2013	1000	137	0.02	0	1518	10.7	65	51	46.3	3.6	88	71.4 Y
88	Cuyama	Central Coast Valleys	5/17/2013	1100	137	0.02	0	1323	11	65.4	51	47	4.8	56	72.2 Y
88	Cuyama	Central Coast Valleys	5/17/2013	1200	137	0.03	0	1883	10.4	68.3	44	45.8	4.7	44	73.2 Y

88	Cuyama	Central Coast Valleys	5/17/2013	1300	137	0.03	0	1840	10.8	70.2	43	48.5	6.4	343	74.4	Y
88	Cuyama	Central Coast Valleys	5/17/2013	1400	137	0.02	0	1336	9.4	72	35	42.9	7.8	343	75.5	Y
88	Cuyama	Central Coast Valleys	5/17/2013	1500	137	0.02	0	818	8.2	72.2	31	39.5	11.1	332	78.4	Y
88	Cuyama	Central Coast Valleys	5/17/2013	1600	137	0.01	0	588	8.3	71.9	31	39.6	9.1	334	77.3	Y
88	Cuyama	Central Coast Valleys	5/17/2013	1700	137	0.01	0	973	8.8	72.6	32	41.2	8.6	336	77.6	Y
88	Cuyama	Central Coast Valleys	5/17/2013	1800	137	0.01	0	588	9.3	71.1	36	42.5	8.6	303	78.2	Y
88	Cuyama	Central Coast Valleys	5/17/2013	1900	137	0	0	143	9.1	66.4	41	42.1	9.4	283	78.4	Y
88	Cuyama	Central Coast Valleys	5/17/2013	2000	137	0	0	1	8	63	40	38.6	7.6	279	78.4	Y
88	Cuyama	Central Coast Valleys	5/17/2013	2100	137	0	0	0	8.1	61	44	39.2	6.1	271	78.2	Y
88	Cuyama	Central Coast Valleys	5/17/2013	2200	137	0	0	0	8.5	58	52	40.3	4.2	278	77.7	Y
88	Cuyama	Central Coast Valleys	5/17/2013	2300	137	0	0	0	8.6	55.7	57	40.5	3.5	268	77.1	Y
88	Cuyama	Central Coast Valleys	5/17/2013	2400	137	0	0	0	8.5	53.5	61	40.2	3.6	258	76.4	Y
88	Cuyama	Central Coast Valleys	5/18/2013	100	138	0	0	0	8	51	63	38.9	2.2	239	75.7	Y
88	Cuyama	Central Coast Valleys	5/18/2013	200	138	0	0	0	7.7	48.5	66	37.7	3.5	161	74.9	Y
88	Cuyama	Central Coast Valleys	5/18/2013	300	138	0	0	0	7.6	47.6	68	37.5	2.7	170	74.2	Y
88	Cuyama	Central Coast Valleys	5/18/2013	400	138	0	0	0	7.3	46.1	68	36.3	1.7	122	73.4	Y
88	Cuyama	Central Coast Valleys	5/18/2013	500	138	0	0	2	7.1	44.2	72	35.7	3.4	161	72.6	Y
88	Cuyama	Central Coast Valleys	5/18/2013	600	138	0	0	121	7.2	45.9	69	36.2	3.3	139	71.9	Y
88	Cuyama	Central Coast Valleys	5/18/2013	700	138	0.01	0	483	8.6	51.9	65	40.5	3.5	51	71.2	Y
88	Cuyama	Central Coast Valleys	5/18/2013	800	138	0.01	0	889	8.3	58.4	50	39.7	3.3	40	70.8	Y
88	Cuyama	Central Coast Valleys	5/18/2013	900	138	0.02	0	1286	7.7	63.4	39	37.7	3.9	85	70.2	Y
88	Cuyama	Central Coast Valleys	5/18/2013	1000	138	0.02	0	1627	6.7	66.6	30	34.3	6.5	92	70.1	Y
88	Cuyama	Central Coast Valleys	5/18/2013	1100	138	0.03	0	1863	6.5	68.3	27	33.4	7.6	104	70.6	Y
88	Cuyama	Central Coast Valleys	5/18/2013	1200	138	0.03	0	1980	7	70.8	27	35.2	6.7	350	71.5	Y
88	Cuyama	Central Coast Valleys	5/18/2013	1300	138	0.03	0	1989	7	72.2	28	35.3	7.9	356	72.8	Y
88	Cuyama	Central Coast Valleys	5/18/2013	1400	138	0.03	0	1887	6	73.7	21	31.4	8	360	73.9	Y
88	Cuyama	Central Coast Valleys	5/18/2013	1500	138	0.03	0	1664	5.5	74.9	19	29.8	8.4	353	75	Y
88	Cuyama	Central Coast Valleys	5/18/2013	1600	138	0.02	0	1345	4.6	75.5	15	25.3	9.1	343	76.3	Y
88	Cuyama	Central Coast Valleys	5/18/2013	1700	138	0.02	0	954	4.2	74.9	14	22.8	9.5	340	77.5	Y
88	Cuyama	Central Coast Valleys	5/18/2013	1800	138	0.01	0	541	4.2	73.5	15	22.7	10.3	340	78.5	Y
88	Cuyama	Central Coast Valleys	5/18/2013	1900	138	0	0	158	4.3	71.1	17	23.7	7.2	336	79	Y
88	Cuyama	Central Coast Valleys	5/18/2013	2000	138	0	0	2	4.4	67.2	19	23.8	4	342	79.2	Y
88	Cuyama	Central Coast Valleys	5/18/2013	2100	138	0	0	0	5.3	63.8	26	28.3	3.3	27	78.9	Y
88	Cuyama	Central Coast Valleys	5/18/2013	2200	138	0	0	0	5.8	59.6	33	30.6	2.3	101	78.5	Y
88	Cuyama	Central Coast Valleys	5/18/2013	2300	138	0	0	0	5.5	57.1	35	29.4	2.9	183	77.8	Y
88	Cuyama	Central Coast Valleys	5/18/2013	2400	138	0	0	0	4.8	54.5	33	26	5.4	194	77.1	Y
88	Cuyama	Central Coast Valleys	5/19/2013	100	139	0	0	0	5.6	53.5	40	30	4.3	158	76.3	Y
88	Cuyama	Central Coast Valleys	5/19/2013	200	139	0	0	0	6.1	50.3	49	31.8	3.9	187	75.5	Y
88	Cuyama	Central Coast Valleys	5/19/2013	300	139	0	0	0	6.2	47.8	54	32.2	3.3	40	74.7	Y
88	Cuyama	Central Coast Valleys	5/19/2013	400	139	0	0	0	6.4	46.1	60	33.1	2.4	33	73.9	Y
88	Cuyama	Central Coast Valleys	5/19/2013	500	139	0	0	2	6.7	46.4	62	34.2	2.7	89	73.2	Y
88	Cuyama	Central Coast Valleys	5/19/2013	600	139	0	0	131	7.2	47.9	63	36	2.8	42	72.4	Y
88	Cuyama	Central Coast Valleys	5/19/2013	700	139	0.01	0	506	8.3	57	52	39.7	3.1	19	71.7	Y
88	Cuyama	Central Coast Valleys	5/19/2013	800	139	0.01	0	913	9.1	64.4	44	42	7.8	87	71.2	Y
88	Cuyama	Central Coast Valleys	5/19/2013	900	139	0.02	0	1303	9.1	66.4	41	42.2	7.8	354	70.8	Y
88	Cuyama	Central Coast Valleys	5/19/2013	1000	139	0.02	0	1633	8.9	68.5	38	41.6	8.5	356	70.8	Y
88	Cuyama	Central Coast Valleys	5/19/2013	1100	139	0.03	0	1869	8.6	70.5	34	40.6	10.1	351	71.3	Y
88	Cuyama	Central Coast Valleys	5/19/2013	1200	139	0.03	0	1989	8.4	72.1	31	40	9.7	348	72.4	Y
88	Cuyama	Central Coast Valleys	5/19/2013	1300	139	0.03	0	1999	8.1	74.2	28	39.1	8.9	353	73.9	Y
88	Cuyama	Central Coast Valleys	5/19/2013	1400	139	0.03	0	1892	7.7	75.8	25	37.7	9.3	351	75	Y
88	Cuyama	Central Coast Valleys	5/19/2013	1500	139	0.03	0	1668	7.7	77	24	37.8	9.7	345	76.1	Y
88	Cuyama	Central Coast Valleys	5/19/2013	1600	139	0.02	0	1349	7.1	77.6	22	35.8	10	332	77.4	Y
88	Cuyama	Central Coast Valleys	5/19/2013	1700	139	0.02	0	958	6.6	77.5	20	33.8	10.6	340	78.6	Y
88	Cuyama	Central Coast Valleys	5/19/2013	1800	139	0.01	0	536	6.6	76.3	21	33.8	10.1	352	79.5	Y
88	Cuyama	Central Coast Valleys	5/19/2013	1900	139	0.01	0	150	8.8	73.8	24	34.6	8.7	344	80.1	Y
88	Cuyama	Central Coast Valleys	5/19/2013	2000	139	0	0	2	7	70	28	35.5	5.8	1	80.2	Y
88	Cuyama	Central Coast Valleys	5/19/2013	2100	139	0	0	0	7.4	64.8	35	36.7	4.8	120	80	Y
88	Cuyama	Central Coast Valleys	5/19/2013	2200	139	0	0	0	7.5	59.5	43	37	4.4	165	79.5	Y
88	Cuyama	Central Coast Valleys	5/19/2013	2300	139	0	0	0	6.9	57.7	43	35.1	4.7	162	78.9	Y
88	Cuyama	Central Coast Valleys	5/19/2013	2400	139	0	0	0	7.6	54.2	53	37.3	3.7	108	78.2	Y
88	Cuyama	Central Coast Valleys	5/20/2013	100	140	0	0	0	7.8	52.3	58	38.1	3.8	109	77.4	Y
88	Cuyama	Central Coast Valleys	5/20/2013	200	140	0	0	0	7.8	50.5	62	38	3.8	110	76.6	Y
88	Cuyama	Central Coast Valleys	5/20/2013	300	140	0	0	0	7.6	49.9	62	37.5	5.4	98	75.8	Y
88	Cuyama	Central Coast Valleys	5/20/2013	400	140	0	0	0	7.4	48.2	64	36.7	4.6	112	74.9	Y
88	Cuyama	Central Coast Valleys	5/20/2013	500	140	0	0	2	7.2	47.9	63	35.9	4.5	113	74.2	Y
88	Cuyama	Central Coast Valleys	5/20/2013	600	140	0	0	133	7.5	48.5	64	37	5.6	99	73.4	Y
88	Cuyama	Central Coast Valleys	5/20/2013	700	140	0.01	0	508	8.2	56	54	39.4	6.2	89	72.7	Y
88	Cuyama	Central Coast Valleys	5/20/2013	800	140	0.01	0	910	8	65.2	38	36.7	5.6	87	72.1	Y
88	Cuyama	Central Coast Valleys	5/20/2013	900	140	0.02	0	1311	7	72.1	26	35.3	3.4	136	71.7	Y
88	Cuyama	Central Coast Valleys	5/20/2013	1000	140	0.02	0	1646	7.2	75.8	23	36	3.8	117	71.6	Y
88	Cuyama	Central Coast Valleys	5/20/2013	1100	140	0.03	0	1879	7.2	79.2	21	36.1	5.4	67	72	Y
88	Cuyama	Central Coast Valleys	5/20/2013	1200	140	0.03	0	2001	7.2	80.7	20	36	6.1	342	73.1	Y
88	Cuyama	Central Coast Valleys	5/20/2013	1300	140	0.03	0	2018	6.7	83.3	17	34.3	5.5	339	74.6	Y
88	Cuyama	Central Coast Valleys	5/20/2013	1400	140	0.03	0	1906	6	84.8	15	31.7	6.8	4	76	Y
88	Cuyama	Central Coast Valleys	5/20/2013	1500	140	0.03	0	1877	5.8	86	14	30.9	6.4	13	77.2	Y
88	Cuyama	Central Coast Valleys	5/20/2013	1600	140	0.02	0	1347	5.4	85.3	13	29.1	8.1	352	78.5	Y
88	Cuyama	Central Coast Valleys	5/20/2013	1700	140	0.02	0	952	5.3	86.1	12	28.5	8.3	349	79.9	Y
88	Cuyama	Central Coast Valleys	5/20/2013	1800	140	0.01	0	526	5.3	84.5	13	28.7	9.7	347	80.9	Y
88	Cuyama	Central Coast Valleys	5/20/2013	1900	140	0.01	0	154	5.6	80.9	15	29.7	7.7	343	81.6	Y
88	Cuyama	Central Coast Valleys	5/20/2013	2000	140	0	0	2	6.6	75.9	22	34	3.2	286	81.8	Y
88	Cuyama	Central Coast Valleys	5/20/2013	2100	140	0	0	0	7	67.8	30	35.4	3.2	205	81.7	Y
88	Cuyama	Central Coast Valleys	5/20/2013	2200	140	0	0	0	6.3	63.9	31	32.8	4.4	201	81.2	Y
88	Cuyama	Central Coast Valleys	5/20/2013	2300	140	0	0	0	6.3	62.2	33	32.8	4.5	158	80.6	Y
88	Cuyama	Central Coast Valleys	5/20/2013	2400	140	0	0	0	7.1	57.2	45	36.9	3.8	137	79.9	Y
88	Cuyama	Central Coast Valleys	5/21/2013	100	141	0	0	0	7.1	56.2	46	35.8	4.5	120	79.1	Y

88	Cuyama	Central Coast Valleys	5/21/2013	200	141	0	0	0	7.5	54.1	52	37.1	5.6	111	78.3	Y
88	Cuyama	Central Coast Valleys	5/21/2013	300	141	0	0	0	7.5	53.3	54	37.2	5.4	106	77.5	Y
88	Cuyama	Central Coast Valleys	5/21/2013	400	141	0	0	0	7.1	52.9	52	35.8	6.5	103	76.7	Y
88	Cuyama	Central Coast Valleys	5/21/2013	500	141	0	0	2	7.2	52.4	54	36.2	5.6	113	75.9	Y
88	Cuyama	Central Coast Valleys	5/21/2013	600	141	0	0	114	7	54	49	35.3	6.7	103	75.1	Y
88	Cuyama	Central Coast Valleys	5/21/2013	700	141	0.01	0	475	7.4	60.4	41	36.9	7.4	90	74.4	Y
88	Cuyama	Central Coast Valleys	5/21/2013	800	141	0.01	0	912	7.6	69.3	31	37.5	7.1	98	73.9	Y
88	Cuyama	Central Coast Valleys	5/21/2013	900	141	0.02	0	1147	7.2	77.1	23	36.1	3.5	86	73.5	Y
88	Cuyama	Central Coast Valleys	5/21/2013	1000	141	0.02	0	1422	6.6	82.2	18	34	3	37	73.4	Y
88	Cuyama	Central Coast Valleys	5/21/2013	1100	141	0.03	0	1778	6.4	84.3	16	33	4.7	298	73.9	Y
88	Cuyama	Central Coast Valleys	5/21/2013	1200	141	0.03	0	1987	6.1	86	14	32.1	5.6	315	74.9	Y
88	Cuyama	Central Coast Valleys	5/21/2013	1300	141	0.03	0	2009	7	86.1	16	35.4	8.2	48	76.3	Y
88	Cuyama	Central Coast Valleys	5/21/2013	1400	141	0.03	0	1755	6.8	86.7	16	34.5	8.9	7	77.6	Y
88	Cuyama	Central Coast Valleys	5/21/2013	1500	141	0.03	0	1635	6.3	87.6	14	32.8	9	344	78.7	Y
88	Cuyama	Central Coast Valleys	5/21/2013	1600	141	0.02	0	1333	6.6	86.1	15	33.7	9.5	290	79.9	Y
88	Cuyama	Central Coast Valleys	5/21/2013	1700	141	0.02	0	936	6.9	82.7	18	34.9	10.1	288	81.1	Y
88	Cuyama	Central Coast Valleys	5/21/2013	1800	141	0.01	0	522	8.2	78.8	24	39.4	10.8	288	82.1	Y
88	Cuyama	Central Coast Valleys	5/21/2013	1900	141	0.01	0	158	8.6	73.7	30	40.6	9.1	281	82.6	Y
88	Cuyama	Central Coast Valleys	5/21/2013	2000	141	0	0	2	7.9	68.3	33	38.5	8.1	273	82.7	Y
88	Cuyama	Central Coast Valleys	5/21/2013	2100	141	0	0	0	7.5	65.2	36	37.3	6.2	271	82.4	Y
88	Cuyama	Central Coast Valleys	5/21/2013	2200	141	0	0	0	7.7	60.2	43	37.9	5.1	274	81.9	Y
88	Cuyama	Central Coast Valleys	5/21/2013	2300	141	0	0	0	7.3	56.5	47	36.6	3.3	255	81.1	Y
88	Cuyama	Central Coast Valleys	5/21/2013	2400	141	0	0	0	7.2	52.9	53	36.2	2	145	80.3	Y
88	Cuyama	Central Coast Valleys	5/22/2013	100	142	0	0	0	7.7	51	60	37.8	2.9	180	79.4	Y
88	Cuyama	Central Coast Valleys	5/22/2013	200	142	0	0	0	7	49.2	58	35.3	2.9	187	78.5	Y
88	Cuyama	Central Coast Valleys	5/22/2013	300	142	0	0	0	6.7	49	57	34.4	3.6	159	77.6	Y
88	Cuyama	Central Coast Valleys	5/22/2013	400	142	0	0	0	5.7	49.1	48	30.2	2	42	76.7	Y
88	Cuyama	Central Coast Valleys	5/22/2013	500	142	0	0	2	5.7	47.3	52	30.4	3.1	138	75.8	Y
88	Cuyama	Central Coast Valleys	5/22/2013	600	142	0	0	136	6.3	49.1	53	32.7	7.9	132	74.9	Y
88	Cuyama	Central Coast Valleys	5/22/2013	700	142	0.01	0	510	6.6	53.5	47	33.8	9.8	69	74	Y
88	Cuyama	Central Coast Valleys	5/22/2013	800	142	0.01	0	913	6.7	55.4	45	34.4	8.7	42	73.3	Y
88	Cuyama	Central Coast Valleys	5/22/2013	900	142	0.02	0	1304	6.2	56.8	39	32.4	10.4	352	72.8	Y
88	Cuyama	Central Coast Valleys	5/22/2013	1000	142	0.02	0	1642	5.7	58.6	34	30.1	7.3	346	72.5	Y
88	Cuyama	Central Coast Valleys	5/22/2013	1100	142	0.02	0	1875	5.6	61	31	30	6.7	351	72.7	Y
88	Cuyama	Central Coast Valleys	5/22/2013	1200	142	0.03	0	1993	5.5	63.9	27	29.5	9	350	73.5	Y
88	Cuyama	Central Coast Valleys	5/22/2013	1300	142	0.03	0	1995	5.3	65.2	25	28.3	8.8	351	74.8	Y
88	Cuyama	Central Coast Valleys	5/22/2013	1400	142	0.03	0	1692	5	66.5	23	27.3	6.7	6	75.8	Y
88	Cuyama	Central Coast Valleys	5/22/2013	1500	142	0.02	0	1664	5	67.9	22	27.2	7.4	4	76.6	Y
88	Cuyama	Central Coast Valleys	5/22/2013	1600	142	0.02	0	1339	4.7	68.6	20	25.8	8.2	348	77.6	Y
88	Cuyama	Central Coast Valleys	5/22/2013	1700	142	0.02	0	948	4.5	67.8	20	24.8	10.5	343	78.7	Y
88	Cuyama	Central Coast Valleys	5/22/2013	1800	142	0.01	0	528	4.3	65.8	20	23.5	11.5	348	79.4	Y
88	Cuyama	Central Coast Valleys	5/22/2013	1900	142	0.01	0	148	4.1	63.1	21	22.4	9.7	347	78.8	Y
88	Cuyama	Central Coast Valleys	5/22/2013	2000	142	0	0	2	4.1	59.5	24	22.5	5.3	21	79.7	Y
88	Cuyama	Central Coast Valleys	5/22/2013	2100	142	0	0	0	4.3	57.1	27	23.5	3.4	49	79.3	Y
88	Cuyama	Central Coast Valleys	5/22/2013	2200	142	0	0	0	3.8	56	25	20.9	4.8	358	78.6	Y
88	Cuyama	Central Coast Valleys	5/22/2013	2300	142	0	0	0	3.7	53.5	26	19.9	4.5	33	77.8	Y
88	Cuyama	Central Coast Valleys	5/22/2013	2400	142	0	0	0	3.7	47.4	33	20	5.4	189	77	Y
88	Cuyama	Central Coast Valleys	5/23/2013	100	143	0	0	0	3.6	48.1	34	19.1	4.4	181	76.1	Y
88	Cuyama	Central Coast Valleys	5/23/2013	200	143	0	0	0	4.1	43	43	22.1	1.7	128	75.2	Y
88	Cuyama	Central Coast Valleys	5/23/2013	300	143	0	0	0	4.8	40.2	57	26.2	3.5	88	74.3	Y
88	Cuyama	Central Coast Valleys	5/23/2013	400	143	0	0	0	4.7	38.6	59	25.4	4.5	95	73.4	Y
88	Cuyama	Central Coast Valleys	5/23/2013	500	143	0	0	2	4.2	37.5	55	22.7	3.7	32	72.6	Y
88	Cuyama	Central Coast Valleys	5/23/2013	600	143	0	0	138	4.5	37.8	58	24.6	4.4	55	71.7	Y
										Averages	37.7	57	23.7	4.1		
88	Cuyama	Central Coast Valleys	5/23/2013	700	143	0.01	0	515	5.2	44.9	51	27.8	4.5	60	70.9	Y
88	Cuyama	Central Coast Valleys	5/23/2013	800	143	0.01	0	922	4.8	53.3	34	26	3.5	16	71	Y
88	Cuyama	Central Coast Valleys	5/23/2013	900	143	0.02	0	1308	5.6	55.9	37	29.8	3	76		M
88	Cuyama	Central Coast Valleys	5/23/2013	1000	143	0.02	0	1650	6.1	57.5	38	32	4	349		M
88	Cuyama	Central Coast Valleys	5/23/2013	1100	143	0.02	0	1902	5.5	61.5	30	29.4	4.5	11		M
88	Cuyama	Central Coast Valleys	5/23/2013	1200	143	0.03	0	2020	5.4	64.5	26	28.7	4.7	3		M
88	Cuyama	Central Coast Valleys	5/23/2013	1300	143	0.03	0	2030	5.3	66	24	28.7	5.7	326		M
88	Cuyama	Central Coast Valleys	5/23/2013	1400	143	0.03	0	1910	5.3	69.1	22	28.6	7.3	42		M
88	Cuyama	Central Coast Valleys	5/23/2013	1500	143	0.02	0	1677	4.9	70.1	20	26.7	9	71	73.2	Y
88	Cuyama	Central Coast Valleys	5/23/2013	1600	143	0.02	0	1359	5	70.2	20	27.1	9.4	28	72.6	Y
88	Cuyama	Central Coast Valleys	5/23/2013	1700	143	0.02	0	973	5.1	69.1	21	27.5	10.5	30	72.8	Y
88	Cuyama	Central Coast Valleys	5/23/2013	1800	143	0.01	0	559	5.2	67.2	23	28	10.9	3	72.9	Y
88	Cuyama	Central Coast Valleys	5/23/2013	1900	143	0.01	0	174	4.8	64.5	23	26.3	9.6	7	72.8	Y
88	Cuyama	Central Coast Valleys	5/23/2013	2000	143	0	0	3	5.5	59.6	32	29.4	4	28		M
88	Cuyama	Central Coast Valleys	5/23/2013	2100	143	0	0	0	7.2	54.1	51	36.2	3.6	260		S
88	Cuyama	Central Coast Valleys	5/23/2013	2200	143	0	0	3	7.2	51.2	56	36.1	3	261		S
88	Cuyama	Central Coast Valleys	5/23/2013	2300	143	0	0	5	5.9	48.7	55	31.3	3.5	166		S
88	Cuyama	Central Coast Valleys	5/23/2013	2400	143	0	0	6	5.6	44.5	56	29.8	1.7	233		S
88	Cuyama	Central Coast Valleys	5/24/2013	100	144	0	0	6	6.3	44.6	63	32.8	3.8	91		S
88	Cuyama	Central Coast Valleys	5/24/2013	200	144	0	0	1	6.1	45.4	59	31.9	4.9	107		S
88	Cuyama	Central Coast Valleys	5/24/2013	300	144	0	0	6	5.4	44	55	28.8	3.4	207		S
88	Cuyama	Central Coast Valleys	5/24/2013	400	144	0	0	7	5.4	42.4	58	28.9	3.9	61		S
88	Cuyama	Central Coast Valleys	5/24/2013	500	144	0	0	4	5.7	39.3	70	30.2	4.1	82		S
88	Cuyama	Central Coast Valleys	5/24/2013	600	144	0	0	146	6.3	40.6	74	32.9	4.5	89		S
88	Cuyama	Central Coast Valleys	5/24/2013	700	144	0.01	0	540	6.9	46.7	63	34.9	5.2	58	78.9	Y
88	Cuyama	Central Coast Valleys	5/24/2013	800	144	0.01	0	943	7.2	55.9	47	36.2	4.8	104		S
88	Cuyama	Central Coast Valleys	5/24/2013	900	144	0.02	0	1334	7.2	60	40	36	3.7	131	61.1	Y
88	Cuyama	Central Coast Valleys	5/24/2013	1000	144	0.02	0	1660	6.9	62.9	35	35.1	4.2	169	61.5	Y
88	Cuyama	Central Coast Valleys	5/24/2013	1100	144	0.02	0	1894	6.8	65.9	31	34.8	4.8	150	62.3	Y
88	Cuyama	Central Coast Valleys	5/24/2013	1200	144	0.03	0	2022	7	68.9	29	35.4	4	286	63.4	Y
88	Cuyama	Central Coast Valleys	5/24/2013	1300	144	0.03	0	2030	6.9	71.5	26	35.1	4.6	9	64.5	Y

88	Cuyama	Central Coast Valleys	5/24/2013	1400	144	0.03	0	1927	6.8	73.5	24	34.5	4.7	333	65.5
88	Cuyama	Central Coast Valleys	5/24/2013	1500	144	0.02	0	1695	6.8	75.4	23	34.6	5.3	345	66.5
88	Cuyama	Central Coast Valleys	5/24/2013	1600	144	0.02	0	1369	7.3	75.3	24	36.6	10.1	284	67.7
88	Cuyama	Central Coast Valleys	5/24/2013	1700	144	0.02	0	982	7.3	73.1	26	36.6	9.7	282	68.8
88	Cuyama	Central Coast Valleys	5/24/2013	1800	144	0.01	0	552	7.4	69.5	30	36.8	9.8	284	69.7
88	Cuyama	Central Coast Valleys	5/24/2013	1900	144	0	0	168	7.1	55.2	34	35.9	8.8	279	70.2
88	Cuyama	Central Coast Valleys	5/24/2013	2000	144	0	0	3	7.2	60.5	40	38.1	7.8	273	70.1
88	Cuyama	Central Coast Valleys	5/24/2013	2100	144	0	0	0	7.2	57.7	44	38.2	8.3	264	69.8
88	Cuyama	Central Coast Valleys	5/24/2013	2200	144	0	0	0	8.6	55.3	44	34	6.2	256	69.2
88	Cuyama	Central Coast Valleys	5/24/2013	2300	144	0	0	0	6.7	52.5	50	34.2	2.6	242	68.5
88	Cuyama	Central Coast Valleys	5/24/2013	2400	144	0	0	0	6.6	47.9	58	33.8	2.7	167	67.8
88	Cuyama	Central Coast Valleys	5/25/2013	100	145	0	0	0	6.3	44.4	63	32.6	3.6	167	67
88	Cuyama	Central Coast Valleys	5/25/2013	200	145	0	0	0	6.5	43.8	67	33.6	3	126	66.3
88	Cuyama	Central Coast Valleys	5/25/2013	300	145	0	0	0	6.5	43.6	69	34.2	4.4	129	65.5
88	Cuyama	Central Coast Valleys	5/25/2013	400	145	0	0	0	6.3	41.5	70	32.6	2.5	134	64.7
88	Cuyama	Central Coast Valleys	5/25/2013	500	145	0	0	3	6.4	41.4	72	33.2	4.1	104	63.9
88	Cuyama	Central Coast Valleys	5/25/2013	600	145	0	0	152	6.7	43.4	70	34.3	5	103	63.2
88	Cuyama	Central Coast Valleys	5/25/2013	700	145	0.01	0	522	7.2	50	59	36.2	6	86	62.5
88	Cuyama	Central Coast Valleys	5/25/2013	800	145	0.01	0	683	7.2	57.8	44	36.2	4.7	92	61.9
88	Cuyama	Central Coast Valleys	5/25/2013	900	145	0.02	0	1336	6.6	64.7	32	34	3.9	86	61.7
88	Cuyama	Central Coast Valleys	5/25/2013	1000	145	0.02	0	1666	6.4	69.2	26	33.2	3.4	322	62
88	Cuyama	Central Coast Valleys	5/25/2013	1100	145	0.03	0	1898	6.5	71.7	24	33.4	5.1	319	63.1
88	Cuyama	Central Coast Valleys	5/25/2013	1200	145	0.03	0	2011	6.1	73.5	22	32.1	5.3	305	64.7
88	Cuyama	Central Coast Valleys	5/25/2013	1300	145	0.03	0	2020	6.1	76.1	20	32	5.1	297	66.6
88	Cuyama	Central Coast Valleys	5/25/2013	1400	145	0.03	0	1910	6.3	77	20	32.9	7.2	290	68
88	Cuyama	Central Coast Valleys	5/25/2013	1500	145	0.03	0	1677	7.6	77.1	24	37.5	9.2	288	69.3
88	Cuyama	Central Coast Valleys	5/25/2013	1600	145	0.02	0	1358	7.7	75.3	28	37.8	10.2	288	70.6
88	Cuyama	Central Coast Valleys	5/25/2013	1700	145	0.02	0	976	7	73.1	25	35.4	10.3	283	71.8
88	Cuyama	Central Coast Valleys	5/25/2013	1800	145	0.01	0	565	6.3	69.8	25	32.8	9.9	276	72.6
88	Cuyama	Central Coast Valleys	5/25/2013	1900	145	0.01	0	174	5.4	64.8	28	29.2	9.6	270	73
88	Cuyama	Central Coast Valleys	5/25/2013	2000	145	0	0	3	6.3	60.3	35	32.8	8.7	267	72.9
88	Cuyama	Central Coast Valleys	5/25/2013	2100	145	0	0	0	7.1	57.1	45	35.9	7	267	72.4
88	Cuyama	Central Coast Valleys	5/25/2013	2200	145	0	0	0	7.9	53.8	56	38.6	4.3	265	71.7
88	Cuyama	Central Coast Valleys	5/25/2013	2300	145	0	0	0	8	51.8	61	38.7	2.9	273	70.9
88	Cuyama	Central Coast Valleys	5/25/2013	2400	145	0	0	0	7.8	48.7	67	38.1	2.3	122	70.1
88	Cuyama	Central Coast Valleys	5/26/2013	100	146	0	0	0	7.1	46.2	66	35.6	3.2	174	69.3
88	Cuyama	Central Coast Valleys	5/26/2013	200	146	0	0	0	6.8	44.6	68	34.5	1.6	152	68.5
88	Cuyama	Central Coast Valleys	5/26/2013	300	146	0	0	0	6.4	44.6	63	33	2.5	192	67.6
88	Cuyama	Central Coast Valleys	5/26/2013	400	146	0	0	0	5.6	42.1	61	29.8	2.4	212	66.8
88	Cuyama	Central Coast Valleys	5/26/2013	500	146	0	0	3	6.2	42.2	68	32.4	3.1	130	66
88	Cuyama	Central Coast Valleys	5/26/2013	600	146	0	0	150	7	44.8	69	35.4	2.5	144	65.2
88	Cuyama	Central Coast Valleys	5/26/2013	700	146	0.01	0	519	7.4	52.9	54	36.7	2.6	101	64.4
88	Cuyama	Central Coast Valleys	5/26/2013	800	146	0.01	0	911	7.3	58.4	44	36.5	2.8	58	63.9
88	Cuyama	Central Coast Valleys	5/26/2013	900	146	0.02	0	1293	8	62.2	42	38.9	4.5	54	63.7
88	Cuyama	Central Coast Valleys	5/26/2013	1000	146	0.02	0	1621	8	64.7	38	38.6	4.7	47	64.1
88	Cuyama	Central Coast Valleys	5/26/2013	1100	146	0.03	0	1856	7.6	66.5	35	38	6.5	353	65
88	Cuyama	Central Coast Valleys	5/26/2013	1200	146	0.03	0	1984	7.7	68.8	32	37.8	6.2	359	66.4
88	Cuyama	Central Coast Valleys	5/26/2013	1300	146	0.03	0	1995	7.5	70.8	29	37.3	6.4	349	68.1
88	Cuyama	Central Coast Valleys	5/26/2013	1400	146	0.03	0	1896	7.2	72.7	26	36.2	6.4	349	69.4
88	Cuyama	Central Coast Valleys	5/26/2013	1500	146	0.03	0	1677	7.4	74	26	36.7	7.8	356	70.5
88	Cuyama	Central Coast Valleys	5/26/2013	1600	146	0.02	0	1360	7.4	74.4	25	36.8	7.8	350	71.8
88	Cuyama	Central Coast Valleys	5/26/2013	1700	146	0.02	0	975	7.4	74.5	25	36.8	10.2	349	73
88	Cuyama	Central Coast Valleys	5/26/2013	1800	146	0.01	0	564	7.6	73.3	27	37.5	10.1	344	73.9
88	Cuyama	Central Coast Valleys	5/26/2013	1900	146	0	0	166	8.5	70.3	33	40.2	6.6	317	74.4
88	Cuyama	Central Coast Valleys	5/26/2013	2000	146	0	0	2	9.8	84	48	44	7.9	280	74.5
88	Cuyama	Central Coast Valleys	5/26/2013	2100	146	0	0	0	10	61	54	44.4	5.7	284	74.2
88	Cuyama	Central Coast Valleys	5/26/2013	2200	146	0	0	0	10.1	59.2	59	44.8	5	279	73.7
88	Cuyama	Central Coast Valleys	5/26/2013	2300	146	0	0	0	10	57.2	62	44.5	3.4	280	73.1
88	Cuyama	Central Coast Valleys	5/26/2013	2400	146	0	0	0	9.3	54.2	65	42.7	3.1	215	72.3
88	Cuyama	Central Coast Valleys	5/27/2013	100	147	0	0	0	9	52.3	68	41.9	1.5	168	71.6
88	Cuyama	Central Coast Valleys	5/27/2013	200	147	0	0	0	8.6	49.2	72	40.6	3.1	146	70.8
88	Cuyama	Central Coast Valleys	5/27/2013	300	147	0	0	0	8.8	48.9	75	41.3	3	122	70
88	Cuyama	Central Coast Valleys	5/27/2013	400	147	0	0	0	9.3	50.9	73	42.6	5.3	103	69.2
88	Cuyama	Central Coast Valleys	5/27/2013	500	147	0	0	3	9	51	71	41.8	7.1	135	68.4
88	Cuyama	Central Coast Valleys	5/27/2013	600	147	0	0	156	9	52.2	67	41.7	7	119	67.7
88	Cuyama	Central Coast Valleys	5/27/2013	700	147	0.01	0	522	8.9	55.9	58	41.5	8.4	123	66.9
88	Cuyama	Central Coast Valleys	5/27/2013	800	147	0.01	0	917	8.5	58.8	50	40.4	7.3	110	66.4
88	Cuyama	Central Coast Valleys	5/27/2013	900	147	0.02	0	1301	8	61.9	42	38.7	4.5	65	66.1
88	Cuyama	Central Coast Valleys	5/27/2013	1000	147	0.02	0	1627	7.5	64.7	36	37.1	4.4	106	66.4
88	Cuyama	Central Coast Valleys	5/27/2013	1100	147	0.03	0	1854	8	66.9	35	38.8	7.5	344	67.2
88	Cuyama	Central Coast Valleys	5/27/2013	1200	147	0.03	0	1941	7.9	68.8	33	38.5	8	349	68.7
88	Cuyama	Central Coast Valleys	5/27/2013	1300	147	0.03	0	1976	6.6	71.6	26	34.6	8.8	360	70.4
88	Cuyama	Central Coast Valleys	5/27/2013	1400	147	0.03	0	1842	6.3	73.3	23	32.8	9.1	350	71.6
88	Cuyama	Central Coast Valleys	5/27/2013	1500	147	0.02	0	1296	5.7	73.5	20	30.3	10.8	345	72.6
88	Cuyama	Central Coast Valleys	5/27/2013	1600	147	0.02	0	954	6.1	72.2	23	32	9.8	339	73.5
88	Cuyama	Central Coast Valleys	5/27/2013	1700	147	0.01	0	624	7	71.7	26	35.4	10.9	341	74.2
88	Cuyama	Central Coast Valleys	5/27/2013	1800	147	0.01	0	317	7.4	70.1	30	36.8	9.8	348	74.7
88	Cuyama	Central Coast Valleys	5/27/2013	1900	147	0.01	0	121	7.8	68.2	33	38.2	10.4	348	74.8
88	Cuyama	Central Coast Valleys	5/27/2013	2000	147	0	0	4	9.9	65.1	47	44.2	10.9	354	74.6
88	Cuyama	Central Coast Valleys	5/27/2013	2100	147	0	0	0	11	62.8	56	46.9	5.6	10	74.3
88	Cuyama	Central Coast Valleys	5/27/2013	2200	147	0	0	0	11.5	61.6	62	48.3	7.3	351	73.7
88	Cuyama	Central Coast Valleys	5/27/2013	2300	147	0	0	0	11.4	59.9	65	47.9	5.6	13	73.1
88	Cuyama	Central Coast Valleys	5/27/2013	2400	147	0	0	0	11.1	58.8	65	47.2	4.9	38	72.5
88	Cuyama	Central Coast Valleys	5/28/2013	100	148	0	0	0	10.8	56	71	46.6	3.8	143	71.8
88	Cuyama	Central Coast Valleys	5/28/2013	200	148	0	0	0	11	54.7	76	47.2	6.1	128	71.2

88	Cuyama	Central Coast Valleys	5/28/2013	300	148	0	0	0	11.2	53.7	80	47.6	5.6	125	70.5
88	Cuyama	Central Coast Valleys	5/28/2013	400	148	0	0	0	11.7	54.4	81	48.7	5	98	69.8
88	Cuyama	Central Coast Valleys	5/28/2013	500	148	0	0	1	11.7	54.7	80	48.6	4.9	93	69.2
88	Cuyama	Central Coast Valleys	5/28/2013	600	148	0	0	55	11.6	55.3	78	48.5	4.2	140	68.6
88	Cuyama	Central Coast Valleys	5/28/2013	700	148	0	0	198	11.7	55.7	78	48.8	4	139	68.1
88	Cuyama	Central Coast Valleys	5/28/2013	800	148	0.01	0	622	12	57.9	73	49.4	3.6	119	67.7
88	Cuyama	Central Coast Valleys	5/28/2013	900	148	0.01	0	750	12.3	60.6	68	50	3.6	106	67.4
88	Cuyama	Central Coast Valleys	5/28/2013	1000	148	0.01	0	812	12.5	62.2	65	50.4	5.5	37	67.4
88	Cuyama	Central Coast Valleys	5/28/2013	1100	148	0.02	0	1710	13.1	64.2	64	51.8	9.8	357	67.7
88	Cuyama	Central Coast Valleys	5/28/2013	1200	148	0.03	0	1805	13.3	65.7	62	52.2	9.6	352	68.2
88	Cuyama	Central Coast Valleys	5/28/2013	1300	148	0.03	0	2005	13.3	67.7	57	52.1	10.2	351	69.1
88	Cuyama	Central Coast Valleys	5/28/2013	1400	148	0.03	0	1892	13	70	52	51.4	9.3	355	70
88	Cuyama	Central Coast Valleys	5/28/2013	1500	148	0.03	0	1501	11	73.9	39	47.1	11.5	335	70.9
88	Cuyama	Central Coast Valleys	5/28/2013	1600	148	0.02	0	1342	10.4	74.3	36	45.7	12.5	335	72
88	Cuyama	Central Coast Valleys	5/28/2013	1700	148	0.02	0	896	10.8	73.5	38	46.8	11.2	337	73.1
88	Cuyama	Central Coast Valleys	5/28/2013	1800	148	0.01	0	559	11.4	72.5	42	48	9.3	346	73.9
88	Cuyama	Central Coast Valleys	5/28/2013	1900	148	0	0	182	11.2	70.6	44	47.6	9.2	352	74.4
88	Cuyama	Central Coast Valleys	5/28/2013	2000	148	0	0	4	11	68	47	47.1	5.9	356	74.5
88	Cuyama	Central Coast Valleys	5/28/2013	2100	148	0	0	0	11.8	64.5	57	48.8	4.1	76	74.2
88	Cuyama	Central Coast Valleys	5/28/2013	2200	148	0	0	0	11.9	61.7	63	49.1	3.9	59	73.8
88	Cuyama	Central Coast Valleys	5/28/2013	2300	148	0	0	0	11.7	62	62	48.8	5.1	12	73.3
88	Cuyama	Central Coast Valleys	5/28/2013	2400	148	0	0	0	12	61.9	64	49.5	7.3	13	72.6
88	Cuyama	Central Coast Valleys	5/28/2013	100	149	0	0	0	12.1	60.1	68	49.8	5.3	30	72
88	Cuyama	Central Coast Valleys	5/28/2013	200	149	0	0	0	11.3	56	74	47.7	1.8	191	71.4
88	Cuyama	Central Coast Valleys	5/28/2013	300	149	0	0	0	11.3	64.8	78	47.8	4.7	166	70.8
88	Cuyama	Central Coast Valleys	5/28/2013	400	149	0	0	0	10.9	53	80	46.8	3	84	70.2
88	Cuyama	Central Coast Valleys	5/28/2013	500	149	0	0	3	10.8	51.6	82	46.5	3.7	130	69.6
88	Cuyama	Central Coast Valleys	5/28/2013	600	149	0	0	148	10.9	51.7	83	45.7	3.2	90	68.9
88	Cuyama	Central Coast Valleys	5/28/2013	700	149	0.01	0	502	12.3	58.5	73	50	4.7	101	68.3
88	Cuyama	Central Coast Valleys	5/28/2013	800	149	0.01	0	746	12.5	63.9	61	50.4	5.6	99	67.9
88	Cuyama	Central Coast Valleys	5/28/2013	900	149	0.02	0	1292	12.1	66.8	54	49.6	4.8	45	67.8
88	Cuyama	Central Coast Valleys	5/28/2013	1000	149	0.02	0	1582	11.5	68.9	48	48.3	5.7	113	68.2
88	Cuyama	Central Coast Valleys	5/28/2013	1100	149	0.03	0	1815	10.9	71.6	41	46.8	5.7	341	69
88	Cuyama	Central Coast Valleys	5/28/2013	1200	149	0.03	0	1953	10.6	73.8	37	46.1	6.4	359	70.4
88	Cuyama	Central Coast Valleys	5/28/2013	1300	149	0.03	0	1878	10.8	75.7	34	46.7	6.1	16	72
88	Cuyama	Central Coast Valleys	5/28/2013	1400	149	0.03	0	1879	10.2	79.5	30	45	11.6	347	73.2 Y
88	Cuyama	Central Coast Valleys	5/28/2013	1500	149	0.03	0	1669	9.9	79.6	29	44.2	13	346	74.2 Y
88	Cuyama	Central Coast Valleys	5/28/2013	1600	149	0.02	0	1361	9.7	79.6	28	43.7	12.5	350	75.3 Y
88	Cuyama	Central Coast Valleys	5/28/2013	1700	149	0.02	0	985	9.5	78.9	28	43.1	13	348	76.3 Y
88	Cuyama	Central Coast Valleys	5/28/2013	1800	149	0.01	0	580	9.4	77.4	29	42.8	11.8	352	76.9
88	Cuyama	Central Coast Valleys	5/28/2013	1900	149	0.01	0	190	10.2	75.2	34	45.1	10.1	354	77.2
88	Cuyama	Central Coast Valleys	5/28/2013	2000	149	0	0	4	10.8	72.1	40	46.7	8.5	347	77.2
88	Cuyama	Central Coast Valleys	5/28/2013	2100	149	0	0	0	10	69.6	40	44.5	11.2	350	76.9
88	Cuyama	Central Coast Valleys	5/28/2013	2200	149	0	0	0	8.7	66.9	39	41	10.8	341	76.4
88	Cuyama	Central Coast Valleys	5/28/2013	2300	149	0	0	0	8.7	63.9	43	40.9	5.3	339	75.7
88	Cuyama	Central Coast Valleys	5/28/2013	2400	149	0	0	0	8.7	62.6	45	41	3.6	127	75.1
88	Cuyama	Central Coast Valleys	5/30/2013	100	150	0	0	0	8.7	60.4	49	41	6.6	139	74.3
88	Cuyama	Central Coast Valleys	5/30/2013	200	150	0	0	0	9.1	57.2	57	42.2	6.4	137	73.6
88	Cuyama	Central Coast Valleys	5/30/2013	300	150	0	0	0	9.1	56.2	59	42	7.6	135	72.8
88	Cuyama	Central Coast Valleys	5/30/2013	400	150	0	0	0	9.1	53.7	64	42	6.8	142	72.1
88	Cuyama	Central Coast Valleys	5/30/2013	500	150	0	0	3	8.9	52	68	41.8	5.5	184	71.3
88	Cuyama	Central Coast Valleys	5/30/2013	600	150	0	0	160	9.3	53.1	68	42.8	3.2	84	70.6
88	Cuyama	Central Coast Valleys	5/30/2013	700	150	0.01	0	525	10.2	57.8	62	45	4.5	59	69.9
88	Cuyama	Central Coast Valleys	5/30/2013	800	150	0.01	0	923	9.9	64.7	48	44.4	4.7	111	69.4
88	Cuyama	Central Coast Valleys	5/30/2013	900	150	0.02	0	1310	9.5	68.2	40	43.1	4	157	69.3
88	Cuyama	Central Coast Valleys	5/30/2013	1000	150	0.02	0	1640	8.8	71.5	34	41.3	4.1	71	69.7
88	Cuyama	Central Coast Valleys	5/30/2013	1100	150	0.03	0	1673	8.5	74.2	29	40.2	7.3	349	70.6
88	Cuyama	Central Coast Valleys	5/30/2013	1200	150	0.03	0	2003	8.2	76.1	27	39.3	7.6	344	72 Y
88	Cuyama	Central Coast Valleys	5/30/2013	1300	150	0.03	0	2015	7.5	78.7	22	37.1	8.8	2	73.6 Y
88	Cuyama	Central Coast Valleys	5/30/2013	1400	150	0.03	0	1920	6.8	80.5	19	34.7	8.1	344	74.8 Y
88	Cuyama	Central Coast Valleys	5/30/2013	1500	150	0.03	0	1706	6.9	81.1	19	34.9	10.1	349	75.7 Y
88	Cuyama	Central Coast Valleys	5/30/2013	1600	150	0.02	0	1382	6.6	81.5	18	34.1	10.1	7	76.8 Y
88	Cuyama	Central Coast Valleys	5/30/2013	1700	150	0.02	0	1000	6.1	81.4	17	32	10.9	358	77.8 Y
88	Cuyama	Central Coast Valleys	5/30/2013	1800	150	0.01	0	591	5.5	79.9	16	29.4	11.9	350	78.4 Y
88	Cuyama	Central Coast Valleys	5/30/2013	1900	150	0.01	0	199	6.2	77.4	19	32.5	10.5	349	78.7 Y
88	Cuyama	Central Coast Valleys	5/30/2013	2000	150	0	0	4	7.7	71.3	30	37.9	6.7	66	78.6 Y
88	Cuyama	Central Coast Valleys	5/30/2013	2100	150	0	0	0	7.6	66.3	35	37.5	5.7	143	78.2 Y
88	Cuyama	Central Coast Valleys	5/30/2013	2200	150	0	0	0	7.4	64.8	35	36.8	5.3	147	77.6 Y
88	Cuyama	Central Coast Valleys	5/30/2013	2300	150	0	0	0	7.7	62.4	40	37.8	5.3	163	76.9 Y
88	Cuyama	Central Coast Valleys	5/30/2013	2400	150	0	0	0	7.5	60.3	42	37	5.6	175	76.1 Y
88	Cuyama	Central Coast Valleys	5/31/2013	100	151	0	0	0	7.8	60.1	44	38.2	6.8	148	75.4 Y
88	Cuyama	Central Coast Valleys	5/31/2013	200	151	0	0	0	8.1	58.9	47	39	6.8	150	74.6 Y
88	Cuyama	Central Coast Valleys	5/31/2013	300	151	0	0	0	8	57.8	49	38.7	6.6	141	73.8
88	Cuyama	Central Coast Valleys	5/31/2013	400	151	0	0	0	7.7	55.8	50	37.7	7.1	158	73
88	Cuyama	Central Coast Valleys	5/31/2013	500	151	0	0	3	7.4	53.4	53	36.6	6	166	72.3
88	Cuyama	Central Coast Valleys	5/31/2013	600	151	0	0	158	7.6	54.3	53	37.5	3	183	71.6
88	Cuyama	Central Coast Valleys	5/31/2013	700	151	0.01	0	527	8.5	62.3	44	40.2	4.2	114	70.9
88	Cuyama	Central Coast Valleys	5/31/2013	800	151	0.01	0	931	7.2	68.2	30	35.9	8	112	70.4
88	Cuyama	Central Coast Valleys	5/31/2013	900	151	0.02	0	1316	7	71.2	27	35.3	4.8	117	70.3
88	Cuyama	Central Coast Valleys	5/31/2013	1000	151	0.02	0	1642	6.8	74.8	23	34.7	5	105	70.6
88	Cuyama	Central Coast Valleys	5/31/2013	1100	151	0.03	0	1877	7.2	76.9	23	36	9.3	350	71.5
88	Cuyama	Central Coast Valleys	5/31/2013	1200	151	0.03	0	1995	6.7	78.9	20	34.2	10	341	72.9 Y
88	Cuyama	Central Coast Valleys	5/31/2013	1300	151	0.03	0	2009	6.8	81	19	34.5	10.2	352	74.5 Y
88	Cuyama	Central Coast Valleys	5/31/2013	1400	151	0.03	0	1910	6.5	82	18	33.7	9.1	343	75.6 Y
88	Cuyama	Central Coast Valleys	5/31/2013	1500	151	0.03	0	1695	6	82.9	16	31.5	9.8	343	76.5 Y

68	Cuyama	Central Coast Valleys	5/31/2013	1600	151	0.02	0	1379	5.6	83.3	14	29.9	9.9	358	77.6 Y
68	Cuyama	Central Coast Valleys	5/31/2013	1700	151	0.02	0	993	9.7	83	15	30.4	9.8	345	78.6 Y
68	Cuyama	Central Coast Valleys	5/31/2013	1800	151	0.01	0	578	7.1	82	19	35.9	10.1	347	78.3 Y
68	Cuyama	Central Coast Valleys	5/31/2013	1900	151	0.01	0	194	6.3	79.7	16	32.9	6.8	348	79.6 Y
68	Cuyama	Central Coast Valleys	5/31/2013	2000	151	0	0	4	8	72.8	29	38.8	4.9	115	79.6 Y
68	Cuyama	Central Coast Valleys	5/31/2013	2100	151	0	0	0	7.5	69.9	31	37	5.4	136	79.2 Y
68	Cuyama	Central Coast Valleys	5/31/2013	2200	151	0	0	0	7.6	66.2	26	37.4	3.8	168	78.7 Y
68	Cuyama	Central Coast Valleys	5/31/2013	2300	151	0	0	0	8.7	61.2	47	41	4	119	78 Y
68	Cuyama	Central Coast Valleys	5/31/2013	2400	151	0	0	0	9.3	57.8	57	42.6	3.8	83	77.2 Y

Villalobos, David

From: Jane Slama <janeslama11@gmail.com>
Sent: Monday, September 10, 2018 10:08 AM
To: Villalobos, David
Subject: Harvard North Fork Ranch Frost Ponds Project

Categories: Purple Category

<u>AGENDA ITEMS</u>	
ITEM #:	<u>3</u>
MEETING DATE:	<u>9/12/18</u>

Dear Planning Commissioners,

Having lived in the Cuyama Valley for sixteen years, I am fully aware of the valley's critical overdraft, and I am also aware of the decades-long absence of critical oversight in addressing this issue. Too often County officials who had the power to establish much needed guidelines for stewarding the valley's one source of water have made only weak recommendations to the largest users or, worse, said there was nothing they could do to insist on better management of this essential resource. Now, with State mandated sustainability requirements looming on the horizon, County officials should act responsibly and proactively about this understudied area. Because Harvard's proposed frost pond project will exceed thirty-one acre-feet per year and obviously affect the valley's over-drafted basin, Planning staff should prepare a completed Environmental Impact Report before making any decision about this proposal.

Sincerely,
Jane Slama

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HEARING SUPPORT

September 10, 2018

Chairman Dan Blough By Email: Dvillalo@co.santa-barbara.ca.us
Santa Barbara County Planning Commission
c/o Santa Barbara County
Planning and Development Department
123 E. Anapamu Street
Santa Barbara, California 93101

AGENDA ITEMS	
ITEM #:	3
MEETING DATE:	9/12/18

Dear Chairman Blough and Fellow Commissioners:

For over 20 years, we have been growing grapes and olives and producing wine and olive oil in the western end of the arid Cuyama Valley. The farmers in the Valley, including us, the residents and the environment of our Valley rely solely on the availability of groundwater to sustain the region. The Cuyama Groundwater Basin, which is identified by the CA Department of Water Resources (DWR) as being "critically overdrafted" for many years is in process of developing an important groundwater basin management plan according to California's 2014 groundwater law (Sustainable Groundwater Management Act or SGMA). SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge.¹ While we respect the rights of farmers to grow crops in their selected production system, we also see the need to recognize the limits of our groundwater and the impacts of the overdraft. We are concerned that by the time SGMA is implemented in the Cuyama Valley (2025) the Project's reservoirs will have already been constructed and in use, impacting the neighbors, the native plants and habitats and further depleting an already severely overdrafted groundwater basin.

As explained below and in other submittals, the applicant relies on a number of unproven and geologically questionable conclusions to support its claim that the project will not cause impacts to the Cuyama Groundwater Basin. Some of these claims have been rejected by the Department of Water Resources (DWR) and others. We believe many of these claims should not be relied on by the Commission in approving this project, and instead your Planning Commission should require the preparation of an environmental impact report (EIR) that will consider whether the project, based on known science, will have a significant impact on the Cuyama Groundwater Basin.

As appellants to the North Fork Ranch Frost Pond's permit application we want to let you know:

- That we are very involved in the development of the Groundwater Sustainability Plan (GSP) for the critically overdrafted Cuyama Basin and therefore are aware of what the Cuyama Basin is facing in needing to decrease our overall groundwater extraction. (Our specific credentials and expertise are listed at the end of this letter);

¹ <https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management>

- That we are farmers and we support the right to farm as long as it is done in a way that does not have negative impacts on the environment;
- That we think that the application to construct three large reservoirs will have a negative impact on the Cuyama Basin, especially the neighbors to the south in Cottonwood and Schoolhouse Canyons and the ranches to the west;
- These reservoirs are not needed for frost protection since there are more efficient technologies to use that either don't require water at all or use minimal amounts;
- By the time SGMA kicks in, Brodiaea, Inc., through this Project, will have already expanded the damaging overextraction of groundwater, creating negative impacts on native plants and animals, and impact the groundwater availability to nearby neighbors.

Unfortunately, SGMA implementation will come too late. We request the Planning Commission to recognize the already known fact that the Cuyama Basin is a critically overdrafted basin - extracting beyond replenishment - and require an EIR that assesses this impact and investigates use of alternative technologies to the frost ponds.

Specifically, below we will respond to Brodiaea, Inc.'s claims regarding water availability under its North Fork Ranch vineyard on the western portion of the Cuyama Basin, and possible impacts of increased water use and potential over-drafting of groundwater.

In response to the recent claims by Mr. Ray Shady of Grapevine Capital and their geologist consultants, both representing Brodiaea, Inc., we offer the following rebuttals:

1. Claim: The vineyard is located in a separate groundwater basin from the rest of the Cuyama Valley, and is separated by the Russell Fault acting as a barrier to water movement.

Response: As stated in the community letter to the DWR regarding Santa Barbara County's request in 2016 for a modification of the Bulletin 118 boundaries for the basin, there is strong geologic evidence that the Russell Fault has been inactive for thousands of years, and is covered by over 1000 feet of water-bearing Morales formation sediments and more recent Quaternary sediments. [Jaffe et. al. letter to Timothy Godwin, DWR, April 28, 2016, attached as Exhibit 1]. DWR accepted the reasoning of this letter and denied the boundary modification, concluding:

"The provided technical information did not adequately demonstrate support for the modifications to the basin boundaries due to:

- 1) It was not demonstrated that the Russell Fault is a hydrogeologic barrier to groundwater flow adequate to subdivide the basin, and
- 2) The external boundary modifications described in the USGS report did not consistently follow geologic contacts used to define units consistent with the alluvial basin definition."²

² https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Basin-Boundary-Modifications/Files/Final_2016_Basin_Boundary_Modifications.pdf

Most of the wells on the vineyard (west) side of the fault are less than 1000 feet deep, hence it would appear that water might move in both directions across the top of this fault, although there is very limited data on water movement to back either claim. A dedicated depth-dependent monitoring well (similar to the construction of several wells installed for the last USGS study) would be needed to clarify this issue. In addition, the consultants developing the Cuyama Basin GSP (Woodard and Curran) have analyzed the scientific reports on the permeability of the Russell Fault and have concluded that there are different scientific opinions and this would need to be further investigated before Brodiaea's claims can either be confirmed or refuted.

2. Claim: The separate sub-basin has significant sources of inflow of groundwater from the south and north through significant feeder systems, and helps maintain the irrigation needs of the vineyard without impacting the Basin overdraft.

Response: There are no hard data to back up this claim, including such details as any streamflow monitors, water quality data to back up claims of origin, or well usage data. This lack of data was cited in Sweetkind, et al. (Sweetkind, D.S., Faunt, C.C., and Hanson, R.T., 2013, Construction of 3-D geologic framework and textural models for Cuyama Valley groundwater basin, California: U.S. Geological Survey Scientific Investigations Report 2013-5127, 46 p.) regarding the South Cuyama Fault. In summary, the western portion of the Cuyama Basin is geologically complex with multiple faults, and it has been recognized by USGS and Cuyama Basin GSA Consultants Woodard and Curran that the geology of this area has not been studied sufficiently to determine the permeability of these faults. These findings are needed information to determine whether neighboring wells will be impacted.

3. Claim: The pumpage by the vineyard will not impact neighbors to the north, south, and west, especially those of us living in the Cottonwood Canyon area since there is a prominent fault blocking water flow such that Cottonwood Canyon wells will not be impacted from Brodiaea's drawing from their nearby wells.

Response: If this fault does not isolate the sections of the groundwater basin, then Brodiaea's pumping to fill the frost ponds will impact farmers in Cottonwood Canyon, including ourselves. Brodiaea's argument is only hypothetical, since there is no data available regarding the permeability of faults south of the vineyard. Santa Barbara County has been monitoring several wells in the Cottonwood Canyon area since September 2016. While data is too short-term to show permanent trends, our own well (data available from Santa Barbara County Water Agency) has shown a worrisome downward trend:

(Numbers are depth to static groundwater level)

October 2016: 119.4 feet (at end of 5 years of drought)

September 2017: 120.5 feet (at the end of an above average wet year)

September 2018: 123.3 feet (at the end of a drought year)

While more study is needed to verify the cause of this downward trend, it correlates with the increased pumping by the North Fork Vineyards.

We have investigated the geology of our area, and there is a fault extending through the ridge between Schoolhouse Canyon and Cottonwood Canyon, but it appears to dive deeply before it crosses Cottonwood Canyon and can only be hypothesized from there on. It is probably associated with the narrow strip of Santa Margarita Formation imbedded in Morales Formation that occurs on the ridge, but not further to the west or crossing Cottonwood Canyon. The fact that water-dependent riparian vegetation, especially sycamores, extend for the entire length of Cottonwood Creek (from the South Cuyama fault at the base of the Sierra Madre Mountains to the confluence with the Cuyama River) would imply that there is no barrier to the eventual flow of water down the watershed to the river. If this is true as we suspect, Brodiaea's pumping will harm wells in Cottonwood Canyon.

4. Claim: The vineyard is using less than a depth of 1-2 feet of water per year (AFY) to irrigate their vines, and this is the amount that will be needed into the future.

Response: This is a very low water use for grapes in our arid region. If this figure is based on actual water use, it must be remembered that this was the first year that the grape plants had been planted and it was a wet year. Plants that are small have limited root systems and a very small canopy of leaves. Irrigation would normally be light and frequent, using much less water than when the plants are fully developed and have high evapotranspiration (ET) of water from their leaves. A study of a vineyard in the Ventucopa area of the Cuyama Valley used a figure of 2.8 AFY for the water use part of their study of the Valley (Andersen, C., B. Dobrowski, M. Harris, E. Moreno, and P. Roehrdanz. 2009. Conservation Estimate for the Cuyama Valley: Current Conditions and Planning Scenarios. Bren School of Environmental Science and Management. UCSB, Santa Barbara, CA.).

5. Claim: The area from the Russell Fault's supposed barrier to the confluence of Cottonwood Creek on the Cuyama River creates a separate and independent sub-basin with its own sustainable 54,000 acre feet of water.

Response: This amount of water is an estimate that has not been fully verified. It is also dependent of surface flow of water in the Cuyama River from the eastern part of the Basin for recharge. If this is the recharge source, then it is not independent, and must be included in the overall Basin management plan. Regardless, as drawdown of the supposed sub-basin occurs, as will happen during years of extended drought, all surface flow of water and associated water-dependent riparian vegetation will be severely impacted, raising issues with the DWR "undesirable results" benchmark of impacts on water dependent surface ecosystems. This is especially true for the extensive riparian ecosystem of cottonwoods and willows at the confluence with Cottonwood Creek.

Needs: We need open and transparent sharing of data on pumpage, water levels, and water quality in order to document changes to the groundwater basin both beneath and in the area around the vineyards. We also need data reflecting isotopes and tritium in the pumped water from areas of the basin in order to estimate both age and origin of the water Brodiaea claims is available to supply the frost ponds. We also need at least several years of data to show real trends and impacts, but by the time we have such data it might be too late and irreversible damage to the Cuyama Groundwater Basin may have already occurred.

In summary, the western part of the Cuyama Basin has traditionally been dry rangeland and unlike the eastern portion, there have not been extensive hydrogeological studies conducted. With the installation of frost ponds with the capacity of 147 acre-feet of water and causing significant evaporation, the project can cause impacts on habitat, groundwater levels, and neighboring wells and potentially deplete groundwater in the western end of the Cuyama Valley. We ask that the Planning Commission not prejudice the goals of the 2014 California groundwater legislation by facilitating additional extraction and direct that an EIR be prepared examining impacts to the groundwater basin before this project is considered.

Thank you for your consideration.

Sincerely,

The image shows two handwritten signatures in black ink. The signature on the left is 'Stephen Gliessman' and the signature on the right is 'Roberta Jaffe'.

Stephen Gliessman and Roberta Jaffe
Farmers and Residents
Cottonwood Canyon
Cuyama Valley

Our Credentials and Expertise

Stephen R. Gliessman and Roberta M. Jaffe have extensive careers in sustainable agriculture as both educators and practitioners. For almost 25 years we have been organically dry farming grapevines and olive trees in the western Cuyama Valley. We have worked with nonprofit and farmer organizations in rural communities internationally and in California to support sustainable food systems that support the local economy. Ms. Jaffe currently serves as Chair of the Standing Advisory Committee for the Cuyama Basin Groundwater Sustainability Agency and is very involved in the development of the Groundwater Sustainability Plan. Dr. Gliessman is a professor emeritus in Agroecology from the University of California Santa Cruz. Both are members of the Cuyama Valley Community Association.

April 28, 2016

Timothy Godwin, Engineering Geologist
California Department of Water Resources
Division of Integrated Regional Water Management
Sustainable Groundwater Management Section
901 P St.
Sacramento, CA 95814

Re: Opposition to 3-13 Cuyama Valley Groundwater Basin Boundary Change Proposal

Dear Mr. Godwin:

We, the undersigned, request that the Cuyama Basin Boundary modification proposal submitted to the DWR by Dudek Hydrology on behalf of the County of Santa Barbara, be rejected based on the criteria identified by the Department in its basin boundary modification regulations¹. The following criteria apply in this case:

§345.2 (a) (2) The proposed boundary modification may limit the opportunity or likelihood of ...sustainable groundwater management in other basins or sub-basins;

§345.2 (b) The requesting agency is unable to provide information that would allow the Department to assess whether there is a history of sustainable management of groundwater levels in the existing or proposed basin or sub-basin;

§345.2 (c) ...the available scientific evidence does not support the addition, deletion, or relocation of a basin or sub-basin boundary.

Insufficient data

The basin boundary modification application submitted on behalf of Santa Barbara County² provides insufficient information to justify its approval by the Department. (345.2(b), (c))

- 1) The Cuyama Basin is not fully CASGEM compliant. Only 3 of the 17 wells used to provide required CASGEM data have the construction information required by the program. Moreover, all of these wells are located east of the proposed Russell Fault border (Appendix A). This proposal therefore would create two basins, one of which only partially complies with CASGEM monitoring requirements and a second basin, which would immediately be out of compliance with the CASGEM monitoring requirements. The lack of groundwater elevation data in the proposed Chalk Mountain sub-basin is problematic; this data is intended to provide high-level understanding of groundwater supply conditions in each of California's groundwater aquifers. The lack of basic water level information in the western portion of the aquifer calls into question the assumptions made in the proposal.
- 2) The proposal fails to note a change in agriculture practice in the proposed Chalk Mountain sub-basin from non-irrigated rangeland to irrigated vineyards in the years since the USGS study was completed. Eleven new irrigation wells were drilled west of the Russell Fault between November 2014 and August 2015 (Appendices A and B) by a non-resident grower, new to the Cuyama Valley. The

wells will be used for irrigation and frost protection for an initial planting of one million grapevine starts on 500 acres of vineyard. The total property owned by this entity totals 7,500 acres, with phased plans for vineyard expansion. If all 7,500 acres are planted, irrigated acreage for the basin as a whole would increase by 19.7%. (Currently there are 38,000 acres of irrigated farmland reported in the basin³). It could be argued that any increase in irrigated acreage in a basin in a condition of critical overdraft is significant. A nearly 20% increase would certainly constitute a significant and unreasonable result. This new source of groundwater extraction, coupled with a lack of baseline data for the western portion of the basin and its status as a critically over-drafted basin, creates doubts that a newly formed sub-basin in this area could be managed sustainably. In addition, rangeland to the west of the property currently under transition from non-irrigated rangeland to intensive vineyard cultivation is for sale. Without the oversight of a Groundwater Sustainability Agency and a DWR-approved Groundwater Sustainability Plan in place for the western part of the Cuyama Valley, there is concern that agriculture use of the land will continue to change and intensify demand on limited groundwater resources. Additionally, the USGS study of the basin which forms the basis for the proposed basin boundary change pre-dates this significant new use of water. Its findings should be updated prior to any boundary modification being considered.

- 3) The proposal fails to scientifically justify its selection of the Russell Fault as the boundary line for sub-basins. Detailed geologic studies by Robert Yeats and his students, summarized in a peer-reviewed scientific journal publication by Yeats and others (Yeats, et al., 1989)³ show that the Russell Fault is an ancient fault that cuts older bedrock, but the fault does not cut water-bearing units including the Morales Formation and younger alluvial sediments that overlie the Morales. If the Russell Fault does not cut the water-bearing units as noted by Yeats and others, then the fault is unlikely to be a barrier to groundwater flow and therefore not a groundwater basin boundary. Furthermore, no CASGEM monitoring wells are located near this fault line, on either the east or west side, to provide any understanding of groundwater flow and volume. (Appendix A). The lack of substantial scientific data is further supported by the USGS study in: Geology, Hydrology, and Geomechanics of the Cuyama Valley Groundwater Basin (2008-12), "Several faults that offset the basin-fill deposits, associated with measured water-level offsets, are *inferred* to impede groundwater movement (Upson and Worts, 1951; Singer and Swarzenski, 1970; fig.2). Because the faults do not intersect land surface and are not readily apparent in the unconsolidated surface sediments, their locations have been *inferred* from well data and topographical features." (Italics are ours.) As scientists who wanted the study to reflect an accurate summary, but were constrained by the imposed limitations of the sponsoring entity (Santa Barbara County), their use of the word *inferred* in the final report and reference to previous studies demonstrates their inability to make a conclusive scientific statement regarding the arbitrary end point to the study. Moreover, the effect on groundwater flow of significant new groundwater extraction on the west side of the fault (as noted in #2 above) has not yet been examined.

Governance concerns

While the boundary modification request is based on scientific information, it is predicated on the belief that the Chalk Mountain sub-basin, once established, will in short order be:

- a) determined *not* to be in a state of critical overdraft, and
- b) be reprioritized as a low-priority basin. (Naftaly email, March 3, 2016)⁵.

The acceleration of well drilling and groundwater extraction in the proposed Chalk Mountain sub-basin, and the limited understanding of how that extraction impacts the basin as a whole, make such findings problematic. We have a high level of concern for creating the sub-basin and recommend against creation of the sub-basin. We also oppose the proposal by the Santa Barbara County to remove the critical overdraft designation from the proposed Chalk Mountain sub-basin and change it to a low priority basin. We assert that the western region should remain part of the main basin and not be reclassified from medium priority since to date there is no baseline data, and there is significant change taking place in agricultural practices and groundwater use in this part of the Cuyama Valley.

Conclusion

We sympathize with the interests of the proponents to limit their basin boundaries to better manage their resources. But changing basin boundaries is a serious matter that must be based on sufficient science. There is currently not sufficient scientific evidence to separate the Valley into a main basin and sub-basin at the Russell Fault. In addition, the recent change in agricultural practices in the western part of the Cuyama Valley and dramatic increase in agricultural well drilling calls for keeping the western region designated as medium priority. And the proponents do have an option. The Sustainable Groundwater Management Act allows any number of Groundwater Sustainability Agencies and Plans to be developed within a basin, provided they do not have overlapping boundaries and that a single point of contact for coordinating and submitting plans is identified. We recommend that the County retain the basin boundary as currently drawn in Bulletin 118 in order to maintain the integrity of the Cuyama Valley basin. Given the current state of understanding of the basin in its entirety, we believe this to be the best option.

Therefore, we recommend that this basin boundary change request be rejected until further information on groundwater flows and availability in the western portion of the basin are determined.

Thank you for allowing us the opportunity to comment.

Sincerely,

50 Concerned residents, landowners and others with interest in the Cuyama Valley
(See signatures below.)

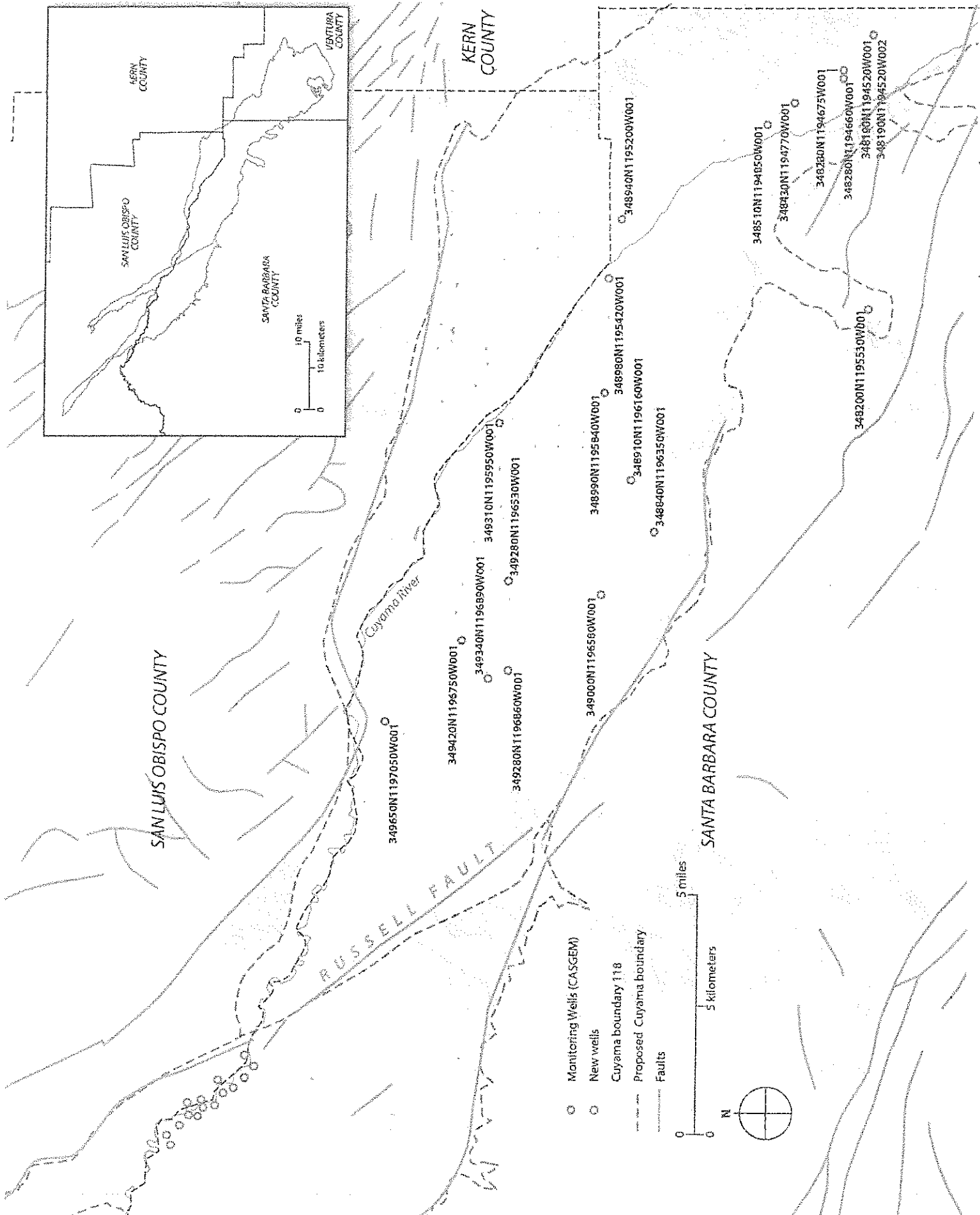
Attachments:

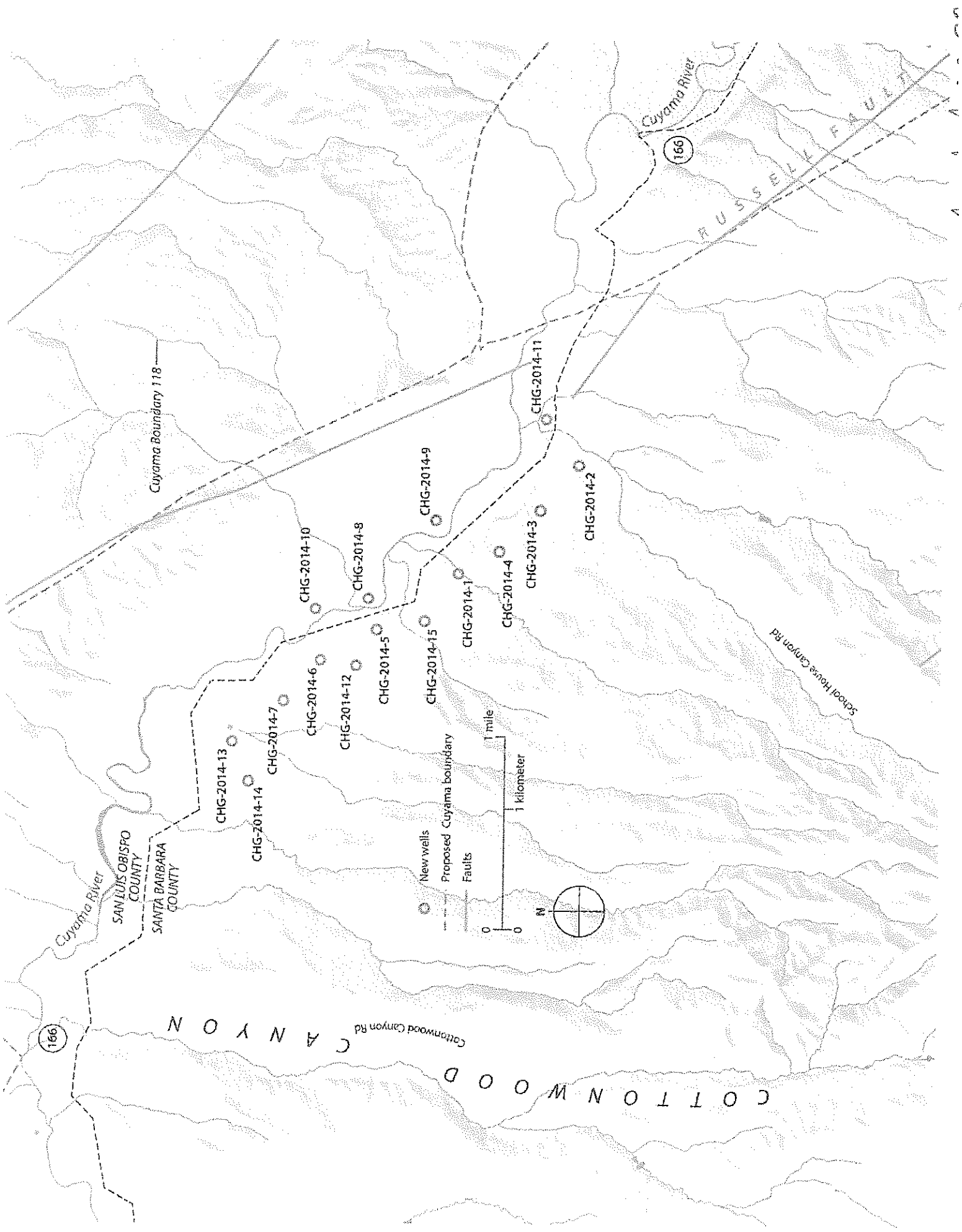
Appendix A: map of basin 3-13

Appendix B: spreadsheet of west basin well-drilling activity, 2014-2015

Endnotes

- 1) Refer to the SGMA Basin Boundary Regulations (“SGMA Regs”).
- 2) The Boundary Basin Modification Proposal submitted by Dudek Engineering on behalf of Santa Barbara County (“Proposal”).
- 3) In the Cuyama Valley Community Association Town Hall meeting of October 21, 2015 the following information was reported:
There are 147,000 acres in the eastern portion of the Cuyama Valley (with the Russell Fault as the western boundary). Of those acres, 38,000 are irrigated agricultural land.
- 4) A detailed study of the Russell Fault, showing location, geological formation, possible faulting changes, and possible function related to groundwater that refers to its transmissivity and permeability: Yeats, R.S., J.A. Calhoun, B.B. Nevins, H.F. Schwing, and H.M. Spitz. 1989. Russell Fault: Early Strike-Slip Fault of the California Coast Ranges. *The American Association of Petroleum Geologists Bulletin*. Vol. 73 (9): 1089-1102.
- 5) The 2014 USGS Study of the Cuyama Valley groundwater system, (“USGS”) that demonstrates critical overdraft and subsidence in the eastern portion of the Valley is available at: <http://ca.water.usgs.gov/projects/cuyama/cuyama-valley-groundwater.html>.
- 6) The e-mail announcement of the Proposal communicated by Matt Naftaly of Dudek on March 3rd, 2016; (“Naftaly”): “This email is an update on the Basin Boundary Modification for the Cuyama Valley Groundwater Basin. Working in conjunction with the Department of Water Resources (DWR) the County will revise the current application to include as a sub-basin the area west of the Russell fault and within the existing DWR Bulletin 118 boundary (see map attached). This is an appropriate distinction because of the limited connectivity and differing groundwater and land use conditions of the two areas. It will allow for effective management in the existing Cuyama Valley Groundwater Basin and independent evaluation of the area west of the fault. The basin boundary revision process requires that DWR reevaluate the priority of each affected basin and it is expected that based on prioritization criteria, the Cuyama Valley Groundwater Basin will remain classified as medium priority and the sub-basin will be classified as low priority. The sub-basin west of the Russell fault has been preliminarily named the *Chalk Mountain Sub-Basin*.”





Appendix B

Well Data of new wells drilled in the western Cuyama Valley 2014-2015 on one property

Well name	Parcel	Permit no.	Latitude	Longitude	Drilling Dates	Depth, boring, ft	Depth, completed, ft	Depth to first water, ft	Estimated yield, gpm	Total drawdown, ft
CHG-2014-1	147-020-040	SR0109409	35.01222	-119.84167	11/16/14 - 11/21/14	960	900	200	324	284
CHG-2014-12	147-020-040	WP0000466	35.01983	-119.85019	Jul-22-15	760	600	83	115	111
CHG-2014-13	147-020-043	WP0000469	35.02906	-119.85714	6/25-6/30/15	670	390	45	300	137
CHG-2014-14	147-020-043	WP0000470	35.02783	-119.86077	6/19/16-6/25/15	620	570	45	302	137
CHG-2014-15	147-020-040	WP0000468	35.01477	-119.84608	8/7/15-8/13/15	810	790	61	303	99
CHG-2014-2	147-020-040	SR0109410	35.00320	-119.83180	12/7/14-12/11/14	620	600	170	207	198
CHG-2014-3	147-020-040	SR0109411	35.00597	-119.83601	12/16/14-12/19/14	606	450	26	340	114
CHG-2014-4	147-020-040	SR0109412	35.00917	-119.83972	12/29/14-1/5/15	622	620	60	411	140
CHG-2014-5	147-020-040	SR0109413	35.01833	-119.84694	7/13/15-7/17/15	740	730	19	297	91
CHG-2014-6	147-020-040	SR0109414	35.02250	-119.84972	7/8/15-7/12/15	720	380	49	102	61
CHG-2014-7	147-020-043	SR0109415	35.02526	-119.85343	6/10-6/16/15	710	510	42	305	116
Still Pending?	147-020-028	WP0000465								

Source: Well Drilling Reports, Santa Barbara County Dept. of Environmental Health

Appendix B p. 1 of 1

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Therefore, we recommend that this basin boundary change request be rejected until further information on groundwater flows and availability in the western portion of the basin are determined.

Thank you for allowing us the opportunity to comment.

Sincerely,

- 1) Jeffa Roberta Jeffe
Condor's Hope Ranch, Cottonwood Canyon, Western Cuyama Valley, member CVA
- 2) Steph R. Sherrin Stephen R. Gliessman
Condor's Hope Ranch, Cottonwood Canyon, Western Cuyama Valley, member SWE
- 3) Yardall D. Mazzini 3135 Cottonwood Canyon Rd. New
Cuyama, CA
- 4) Michael Mazzini 3135 Cottonwood Canyon Rd. New Cuyama CA
- 5) Janet Gudi Cottonwood Canyon, New Cuyama CA
- 6) James J. Lee Cottonwood Canyon, New Cuyama, CA
- 7) Nick Price Cottonwood Canyon, New Cuyama CA
- 8) Mary Thomas Cottonwood Canyon, New Cuyama CA
- 9) Bill Price Cottonwood Canyon New Cuyama CA
- 10) Jon E. Jones = Jones Ranch 2401 Cottonwood
New Cuyama CA
- 11) Mari J. Jones 2401 Cottonwood Cyn Rd New Cuyama, CA
- 12) Steven A. Brown 8000 Foothill Rd. Cottonwood Cyn. New
Cuyama
- 13) Susan L. Brown 8000 Foothill Rd Cottonwood Cyn, New
Cuyama
- 14) Mike Forfermen 8000 Foothill Rd Cottonwood Canyon New Cuyama

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Sincerely,

John Mackenzie JOHN MACKENZIE
FORMER VICE CHAIRMAN (12 YEARS) CCSD, CVCA MEMBER

John Slama John Slama
Cuyama Valley resident

Steve Draucker Steve Draucker
Local Methodist Pastor resident over 40 yrs.

Vivian Vickery Vivian Vickery
Long-time resident of 59 years

Esther Louise Draucker ESTHER LOUISE DRAUCKER
42+ yr resident, CVCA member, Board of Directors: Cuyama Community Methodist Ch.
CVFRC, Cuyama Christian Academy

Tamela Baez TAMELA BAEZ
CUYAMA VALLEY RESIDENT, CVCA MEMBER

John Coats JOHN COATS
Cuyama Valley Resident, CCSD BOARD OF DIRECTORS

Robin Mounts Robin Mounts

Long-time property owner - Librarian Cuyama School District

Thomas Mounts - THOMAS MOUNTS

PROPERTY OWNER - DOMESTIC WELL USER.

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Sincerely,

Terri Allyn Cox Terri Allyn Cox
resident (50 yrs); teacher at Cuyama Valley High School
Bonnie S. Goller Bonnie S. Goller
32 yr resident, business owner, archaeologist
Whitney Goller Whitney Goller
home/property owner - community member - resident
David Goller David Goller
same as Whitney
Lisa Connell Lisa Connell
CVEA member - home owner - concerned citizen
Gary Moore - GARY MOORE
PROPERTY ^{OWNER} THIRD GENERATION HOMESTEADER

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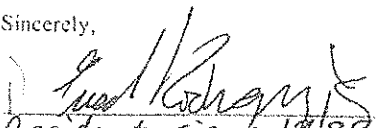
- Foothill Rd
- 1) Debbie Bales 8000 ~~Cottonwood~~ Cottonwood Canyon New Cuyama
 - 2) Jane Collins 8000 Foothill Rd Cottonwood Canyon New Cuyama
 - 3) Jacqueline & Jones 2401 Cottonwood Cyn Rd New Cuyama CA
 - 4) Bill Jones 2401 Cottonwood Cyn Rd. New Cuyama CA 93254
 - 5) Juana Jones 2401 Cottonwood Cyn Rd New Cuyama CA 93254
 - 6) Brett A Jones 2401 Cottonwood Cyn Rd New Cuyama CA

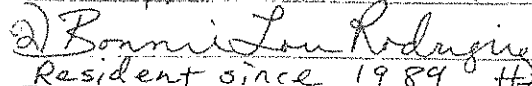
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Thank you for allowing us the opportunity to comment.

Sincerely,

 Eusebio Rodriguez
Resident since 1989 Homeowner
Chairman, Muhu Taseen Inc. Foundation to Preserve Native Am. Culture, Ventura County / Cyn. Rd

 Bonnie Lou Rodriguez
Resident since 1989 Homeowner
Treasurer, Muhu Taseen Inc. Foundation to Preserve Native Am. Culture.

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1)  - ROBERT RYAN
COTTONWOOD CYN., WEST CUYAMA VALLEY

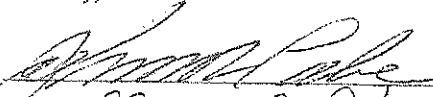
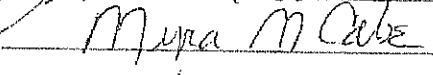
2) Susan Kront Susan Kront
Cottonwood Cyn., West Cuyama Valley

We sympathize with the interests of the proponents to limit their basin boundaries to better manage their resources. But changing basin boundaries is a serious matter that must be based on sufficient science. There is currently not sufficient scientific evidence to separate the Valley into a main basin and sub-basin at the Russell Fault. In addition, the recent change in agricultural practices in the western part of the Cuyama Valley and dramatic increase in agricultural well drilling calls for keeping the western region designated as medium priority. And the proponents do have an option. The Sustainable Groundwater Management Act allows any number of Groundwater Sustainability Agencies and Plans to be developed within a basin, provided they do not have overlapping boundaries and that a single point of contact for coordinating and submitting plans is identified. We recommend that the County retain the basin boundary as currently drawn in Bulletin 118 in order to maintain the integrity of the Cuyama Valley basin. Given the current state of understanding of the basin in its entirety, we believe this to be the best option.

Therefore, we recommend that this basin boundary change request be rejected until further information on groundwater flows and availability in the western portion of the basin are determined.

Thank you for allowing us the opportunity to comment.

Sincerely,

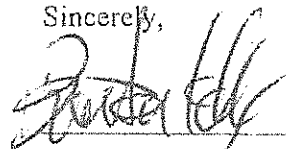
1)  JOHN R. CABE
2)  MYRA M. CABE
LANDOWNER COTTONWOOD CANYON
WESTERN CUYAMA VALLEY

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Thank you for allowing us the opportunity to comment.

Sincerely,

1)  Branton Kelly 35070 Hwy 35 Lancaster CA 93292

2)  Casey Walsh, Dept of Anthropology, UCSB
Santa Barbara, CA. 93106-3210

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Sincerely,

Paula G. Doman

April 25, 2016

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Sincerely,

Alisha Taff
Rock Front Ranch

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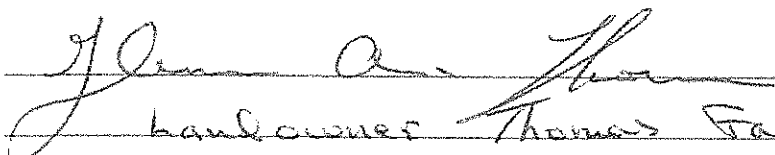
 Barry Skelton
owner Rock Front Ranch

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Sincerely,

 Glenn A. Thomas
landowner Thomas Family Ranch
Cottonwood Canyon
Western Cuyama Valley

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Sincerely,

J. Ariey - Janine Y. Ariey
Ariey 400 Ranch, Cottonwood Canyon area, Western Cuyama Valley

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Sincerely,

P.B.H. - PHILIP B. HENRY III

ARLEY 9100 RANCH, COTTONWOOD CANYON, WESTERN
CUYAMA VALLEY

Therefore, we recommend that this basin boundary change request be rejected until further information on groundwater flows and availability in the western portion of the basin are determined.

Sincerely,

2451036

100-443887-100

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



SANTA BARBARA • SANTA CRUZ

ENVIRONMENTAL STUDIES DEPARTMENT

SANTA CRUZ, CALIFORNIA 95064

September 6, 2018

Mr. Daniel Blough
Chair, Santa Barbara County Planning Commission
123 East Anapamu Street
Santa Barbara CA 93101

Dear Mr. Blough and Honorable Santa Barbara County Planning Commissioners (SBCPC):

I respectfully submit this letter in regards to the natural resource surveys provided as part of the proposed "North Fork Ranch Frost Ponds" Case No. 16CUP-00000-00005, by the Applicant Brodiaea, Inc. My qualifications to provide technical, expert opinion on this aspect of the project include almost 50 years of experience in botany and ecology, B.A., M.A, and PhD degrees in Botany and Ecology from the University of California at Santa Barbara, 32 years teaching an annual 10-week spring field course in botany and natural history through my position as a Professor of Natural History and Agroecology at the University of California at Santa Cruz, 25 years as a part-time resident in the Cottonwood Canyon area of the Cuyama Basin, and leader of multiple spring wildflower events in Cottonwood Canyon for Condor's Hope Ranch.

In my judgement, the biological surveys carried out by Kevin Merk Associates (KMA) are insufficient to ensure that there will be no negative project impacts on plants and animals, especially several endangered or threatened species of plants, since they were conducted in the fourth and fifth years of consecutive drought. Further study is required. KMA completed their first survey in 2015. The Santa Barbara County Planning Department staff asked DUDEK to peer review the survey. DUDEK found the study inadequate and suggested they do a survey comparing it to species in the neighboring Carrizo Plain. This was done in KMA's 2016 study. The impact on the drought on native plant and animal populations in the Carrizzo Plan and northern Cuyama Basin was recently reported in two separate studies which I describe below.

In a communication just published on 20 August 2018¹, the impact of drought in the Carrizo Plain and northern Cuyama Basin was documented. As part of a long-term biological survey that began in 2007 and continued through 2014, researchers observed a very dramatic reduction in observed populations of all plant and animal species three years into what ended up being a 5-year drought that lasted through 2016. There is a very graphic representation of the drought's impact in the photo of Attachment #1 that

was taken from this study. I note that the biological surveys carried out by Kevin Merk Associates as part of the North Fork Frost Pond application were done in 2015 and 2016, the 4th and 5th years of the same drought referred to in this publication. This brings into question the validity of the surveys carried out by Kevin Merk Associates, since conditions of extreme drought would have severely reduced the presence of most species, especially annual plants.

In another report from the California Native Plant Society², results of long-term monitoring sites provide important information on the many and diverse plant taxa and vegetation types in the Carrizo National Monument, including multiple sites along the southern border of the monument that extends over the Caliente Mountains down to the Cuyama River. See map of their study sites in Attachment #2. Their surveys encountered 417 taxa of plants, indicating the rich diversity that occurs in the region. The surveys completed by Kevin Merk Associates only found a small percentage of the taxa on this list, due most likely to the fact their observations took place in drought years when populations of native plants were reduced and the physical manifestation of plants was depressed. Hence the surveys by Kevin Merk Associates most likely missed a large number of important plants including unique, rare, and threatened plant species that would probably be present in normal to wet rainfall years, and could be significantly impacted by the Frost Ponds project, both directly and indirectly. In particular, species known to occur in the Project vicinity include the attached list³ of 25 species based on extensive studies of threatened plants in the BLM lands of the Carrizo Monument. Cross checking this list with the Flora of Santa Barbara County published by the Santa Barbara Botanic Garden, at least 4 of these species are highly likely to occur in the project area since they have been collected in the past from the Cottonwood and Schoolhouse Canyon areas. Another 13 have been reported from nearby Cuyama Valley areas. The 8 species not likely to occur in the project area are only those that grow best on alkali soils typical of the dry lake areas of the Carrizo.

Based on my reading of the surveys from Kevin Merk Associates, the two reports described above, and my own experience with native plant species in the Cuyama and Carrizzo areas, these surveys are insufficient to support a claim that there will no adverse impacts upon botanical and wildlife populations caused by the Frost Pond Project. Additionally, in my opinion, and based on my review of the Project plans and MND, the potential presence of the above plants in and around the Project site creates a reasonable possibility that the Project may result in significant impacts according to the County's thresholds for impacts to flora through loss or disturbance of unique, rare and threatened plant communities, and a reduction in the numbers of unique, rare or threatened species of plants (MND p. 11.).

Sincerely yours,

A handwritten signature in black ink, appearing to read "Stephen R. Gliessman", with a long horizontal flourish extending to the right.

Dr. Stephen R. Gliessman

Professor Emeritus of Natural History and Agroecology
Department of Environmental Studies
University of California at Santa Cruz
gliess@ucsc.edu

¹ Prugh, L.R., N. Deguines, J.B. Grinath, K.N. Suding, W.T. Bean, R. Stafford, and J. S. Brashares. 2018. Ecological winners and losers of extreme drought in California. *Nature Climate Change*. Volume 8: 819-824.

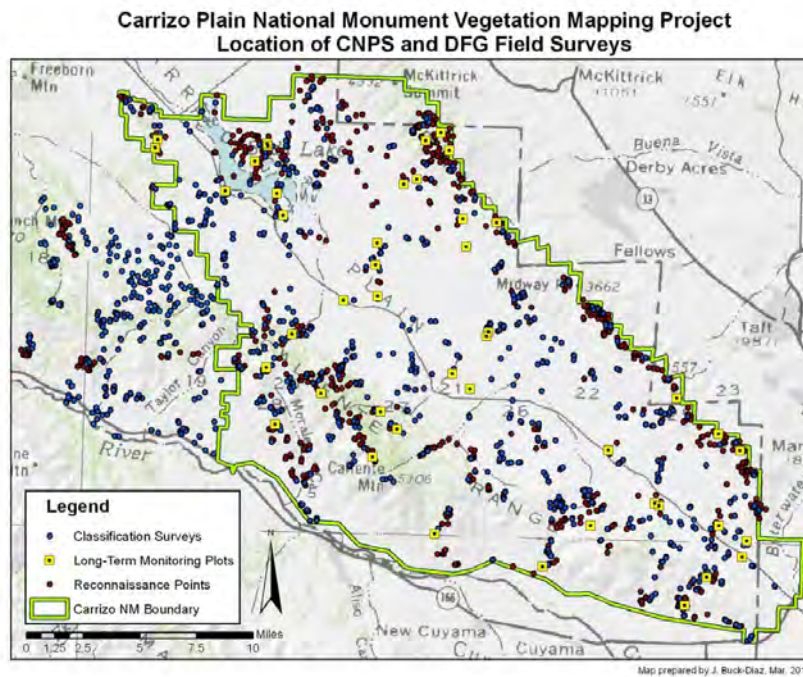


Figure 1. Project study area depicting surveys used for the floristic vegetation classification as well as locations of long-term monitoring plots and reconnaissance points to inform vegetation mapping.

² Buck-Diaz, Jennifer, and Julie Evens. 2011. Carrizo Plain National Monument Vegetation Classification and Mapping Project. California Native Plant Society. Sacramento, CA. 16 pages.



The same study site in late March 2011, before the drought began, and in late March 2014, three years into the drought. Researchers were able to study the response of this unique ecosystem to an exceptional climate event. *J. Chesnut*

³Potentially threatened plant species in the Project Area (see below):

Source: BLM Carrizo Plant List, accessed at www.inaturalist.org/check_lists/ ****

Hoover's Eriastrum (*Eriastrum hooveri*)*
Tehachapi Woollystar (*Eriastrum pluriflorum*)**
Grass Blazingstar (*Mentzelia gracilenta*)*
Cottony Buckwheat (*Eriogonum gossypinum*)*
Temblor Buckwheat (*Eriogonum temblorense*)
Twisselmann's Buckwheat (*Eriogonum twisselmannii*)
Ferris' Goldfields (*Lasthenia ferrisiae*)*
San Joaquin Woollythreads (*Monolopia congdonii*)
Pale Yellow Layia (*Layia heterotricha*)**
Munz's Tidytops (*Layia munzii*)*
Big Tarplant (*Blepharizonia plumosa*)*
Twisselmann's Nemacladus (*Nemacladus twisselmannii*)
Round-leaved Filaree (*California 'Erodium' macrophylla*)*
Temblor Range Clarkia (*Clarkia tembloriensis*)
Northern California Black Walnut (*Juglans hindsii*)
San Joaquin Bluecurls (*Trichostema ovatum*)*
Oval-leaved Snapdragon (*Antirrhinum ovatum*)**
Byron Larkspur (*Delphinium recurvatum*)
Spiny-sealed Button-Celery (*Eryngium spinosepalum*)
Alkali Heliotrope (*Heliotropium curassavicum*)*
Douglas Fiddleneck (*Amsinkia douglasiana*)*
California Jewelflower (*Caulanthus californicus*)*
Nodding Needle Grass (*Nassella cernua*)**
Crinkled Onion (*Allium crispum*)*
Stinkbells (*Fritillaria agrestis*)*

*Species that have been found in habitats of Santa Barbara County similar to those where the reservoirs are proposed, according to Smith, Clifton F. 1998. *A Flora of the Santa Barbara Region, California*. Santa Barbara Botanic Garden and Capra Press, Santa Barbara, CA.

**Species that have been found in the Cottonwood Subarea as noted in Smith (1998).

*** From a total of 25 species classified in the BLM list as threatened, only 8 are not listed for the Cuyama Valley in Smith (1998).

September 10, 2018

To: Chair Blough and Commissioners
Santa Barbara County Planning Commissioners

On behalf of the landowners and residents of Cottonwood Canyon which is adjacent to the North Fork Vineyard property, please find the following petition in support of the appeal before you related to the permit for three reservoirs on the vineyard property. This petition is signed by over 80% of the full and part-time resident landowners of Cottonwood Canyon which is located in the 5th Supervisorial District. Thank you for your consideration.

April 2, 2018

To: Chairman Daniel Blough and Commissioners
From: Cottonwood Canyon Residents and Landowners
Re: North Fork Ranch Frost Ponds

The undersigned are residents and/or landowners in Cottonwood Canyon, west of the North Fork Ranch Vineyard in the Cuyama Valley. Water is a precious resource to all of us. The Cuyama groundwater basin is in a state of critical overdraft, with annual extractions much greater than replenishment. Groundwater is the only water supply for Cuyama Valley.

Between November 2014 to August 2015, we witnessed the installation of 11 new agricultural wells in the Cottonwood subbasin and the conversion of 850 acres non-irrigated rangeland to vineyards. Brodiaea, Inc. is now requesting County approval to construct three 49 acre-foot reservoirs that they claim will be used for frost protection.

Brodiaea claims that the Cottonwood subbasin is separate from the Cuyama groundwater basin, and is not in a state of overdraft. The California Department of Water Resources rejected the foundation of Brodiaea's claim based on scientific evidence and literature. We are gravely concerned that Brodiaea's pumping will worsen the overdraft of the Cuyama groundwater basin.

Our community is developing a Cuyama Groundwater Sustainability Plan (GSP) under the Sustainable Groundwater Management Act (SGMA), which must be submitted to the Department of Water Resources (DWR) by January 2020. Until the GSP is completed and approved, we should not approve projects that increase Cuyama's overdraft.

As residents and landowners of Cottonwood Canyon, we are concerned that the project, including both the proposed reservoirs and the vineyard, will adversely impact groundwater supplies especially the wells in our Canyon. We request that an Environmental Impact Report (EIR) be prepared to analyze the project's impacts to the Cuyama groundwater basin and whether it will prejudice the Groundwater Sustainability Plan process and compromise water supply sustainability in the Cuyama Valley.

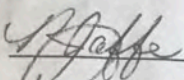
For all these reasons, the undersigned request that the Planning Commission find that the project may have a significant impact on groundwater resources and direct preparation of an EIR.

Residents and/or Landowners in Cottonwood Canyon

SIGNATURE

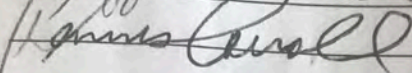
PRINT NAME

COTTONWOOD CYN ADDRESS



Roberta Jaffe

Condor's Hope Ranch



Dennis Carroll

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For all these reasons, the undersigned request that the Planning Commission find that the project may have a significant impact on groundwater resources and direct preparation of an EIR.

Residents and/or Landowners in Cottonwood Canyon

SIGNATURE

PRINT NAME

COTTONWOOD CYN ADDRESS

[Signature] William F. Reid IV

[Signature] John R. Cane

[Signature] Mary Cane

[Signature] Julie Reid

[Signature] 2875 Cottonwood Cyn

[Signature] John G. Kidd Cotton Canyon No. 1 #

[Signature] Cotton Canyon #1

[Signature] Randall Tognazzini 3750 Cottonwood Canyon Rd.

[Signature] CAROL TIGNAZZINI

[Signature] DENISE A. HANZ NONZ-EL RANCHO CHAPARRAL

[Signature] Sue Krout Cottonwood/Foothill Canyon

[Signature] Robert Ryan Cottonwood/Foothill Canyon

[Signature] 2461 Cottonwood Cyn Rd New Cuyama

[Signature] JANE JONES 2401 Cottonwood Canyon Rd

[Signature] SUSAN L. BROWN 8000 FOOTHILL RD NEW CUYAMA

[Signature] STEVE BROWN 8000 FOOTHILL RD NEW CUYAMA

[Signature] DEBBIE JILES 8000 FOOTHILL RD NEW CUYAMA

[Signature] STEVE GLISSMAN 12340 FOOTHILL RD, New Cuyama

Villalobos, David

From: Louise Draucker <ldraucker@gmail.com>
Sent: Saturday, September 08, 2018 3:31 PM
To: Villalobos, David
Subject: frost pond project in Cuyama Valley

Categories: Purple Category

My husband and I have lived in Cuyama Valley for almost 45 years and have watched the take-over of this beautiful valley and its groundwater for many years now. There has been a marked decrease in wildlife since the advent of unlimited watering for commercial farming. It seems the only mammals left are gophers, ground squirrels, and coyotes. I have identified and counted backyard birds for many years for Project Feederwatch, run by Cornell University. I have less than half the numbers I had 20 years ago. The same goes for insects. Pollinators are few and far between. Instead, there seems to be a race to be the first to drain the basin among the commercial agriculture companies.

The state of California has designated Cuyama Valley as a high-priority, critically overdrafted basin. Farmers and a few residents have been charged with coming up with a plan for sustainability under SIGMA regulations. But is that realistic? Can the pace of groundwater extraction be slowed enough to ensure adequate water for farmers and residents?

It doesn't make sense to overhead-water lettuce and other salad greens (cool-weather crops) to keep them cool in the summer as big ag is doing now, but now Brodeia wants to overhead water in the winter to keep the grapes from freezing. There are other solutions for both problems, but the goal does not appear to be sustainability.

The rapid depletion and degradation of our groundwater poses major consequences for residents of Cuyama Valley. What will happen to residents when it is no longer economical or practical to continue farming? Residents also rely on groundwater. Cuyama Valley has three disadvantaged communities; it will be very expensive, if not impossible, for many people to move, and it is very expensive to increase the depth of wells. Our homes and property will have little or no value without adequate water.

A complete Environmental Impact Report is absolutely essential in this case. Surely Santa Barbara County will be as environmentally conscientious in its northern sector as it is in its southern portions. The request for frost-pond wells, and procedures for future agricultural wells, need to be reviewed for current appropriateness. Our world is changing too fast to be careless what we allow.

Louise Draucker
ldraucker@gmail.com

LAW OFFICE OF MARC CHYTILO, APC

ENVIRONMENTAL LAW

September 7, 2018

Santa Barbara County Planning Commission
Santa Barbara County
123 E. Anapamu Street
Santa Barbara, CA 93101

By email to dvillalo@co.santa-barbara.ca.us

RE: North Fork Ranch Frost Ponds Appeal; Legal Question Regarding MND Scope

Dear Chair Blough and Honorable Planning Commissioners,

This office represents Roberta Jaffe and Stephen Gliessman, Appellants in this matter. Ms. Jaffe and Mr. Gliessman are Cuyama Valley residents and farmers of a 5-acre dry-farming operation called Condor's Hope Ranch. Appellants have already submitted several letters into the record including a report from professional hydrologist Dennis Gibbs to support our appeal, and this office will submit an additional letter responding in full to the Staff Report before Monday's noon submittal deadline. This letter addresses one specific legal issue that is central to the adequacy of the Mitigated Negative Declaration (MND) prepared for the North Fork Frost Ponds Project ("Project"), that we want to ensure the Applicant and County Counsel have the opportunity to fully review and respond to.

The Cuyama Valley relies on groundwater as its exclusive source of water. Agriculture and human habitation would not be possible in the Cuyama Valley without adequate groundwater. The Cuyama Groundwater Basin is in a state of Critical Overdraft, with groundwater extraction proceeding at twice the rate of groundwater recharge. The County's Environmental Thresholds, as described in the MND, provide:

A project is determined to have a significant effect on water resources if it would exceed established threshold values which have been set for each overdrafted groundwater basin. These values were determined based on an estimation of a basin's remaining life of available water storage. If the project's net new consumptive water use [total consumptive demand adjusted for recharge less discontinued historic use] exceeds the threshold adopted for the basin, the project's impacts on water resources are considered significant. The water demand threshold for the Cuyama Valley Groundwater Basin is 31 AFY. The adopted threshold applies only to projects subject to discretionary review by the County, and do not apply to uses, such as agricultural operations, that do not require approval of a discretionary permit.

(MND, p. 35.)

A key issue in this appeal is whether it was proper for the MND to constrain its analysis of the Project's groundwater impacts to consider only the water lost from the surface of the frost ponds through evaporation, rather than the water used to fill the frost ponds and protect the grapes from frost. This issue is central to the question of whether the Project's impacts to groundwater are significant. When only this surface evaporation is considered, the MND ascertains that the Project will utilize 26.28 AFY, which is less than the 31 AFY of groundwater required to trigger a significant impact pursuant to the County's CEQA thresholds. (MND pp. 38-39.) However, at least 147-AFY, and likely much more than that, will be actually used for operation of the Frost Ponds, which unquestionably exceeds the County's CEQA threshold. A CEQA document must evaluate the *whole of a development proposal* with the potential to impact the environment, not merely the governmental approval. (CEQA Guidelines §§ 15378 (a, c and d).) Discussed below, there is simply no legal basis for excluding the Project's consumptive water use from the environmental analysis simply because the water will be used for agricultural purposes.

The Staff Report states on page 8 (emphasis added):

Since the proposed water storage reservoirs require the approval of a discretionary permit (a Minor Conditional Use Permit), their construction and operation is subject to CEQA review. *However, water that would be stored in the reservoirs and applied directly to the vineyards for frost protection would support an allowed agricultural use, similar to the application of irrigation water, and that water is not a discretionary action that is subject to CEQA review.*

The first sentence above accurately characterizes the construction and operation of the frost ponds as a discretionary project requiring CEQA review. The second sentence essentially provides that where a project like this includes both discretionary and ministerial elements, only the discretionary elements are subject to CEQA review. This proposition is plainly contrary to CEQA.

CEQA identifies a three-step process:

First, the Lead Agency, during its "preliminary review" of a project, determines whether an agency is contemplating "approval" of a "project," and whether the project is subject to CEQA or is exempt.

Second, if the project is not exempt, the Lead Agency prepares an Initial Study to determine whether the project may have a significant effect on the environment, and then prepares a Negative Declaration if there is no substantial evidence of significant effect.

Third, if the Initial Study shows that the project may have a significant effect on the environment, the Lead Agency prepares an Environmental Impact Report (EIR).

(California Environmental Law & Land Use Practice § 21.02 (2018).) Determining whether a project is "discretionary" or "ministerial" involves the first step. **"Where a project involves an approval that contains elements of both a ministerial action and a discretionary action, the**

project will be deemed to be discretionary and will be subject to the requirements of CEQA.
(CEQA Guidelines § 15268 (d) (emphasis added).)

The “Project” that proceeds to step 2 is “the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment” (CEQA Guidelines § 15378 (a)). “Project” refers to the underlying development proposal, not the governmental approval. (Id., subd. (c) and (d “the lead agency shall describe the project as the development proposal for the purpose of environmental analysis”)) (emphasis added.)) Accordingly, pursuant to CEQA Guidelines sections 15268 (d) and 15378, the “Project” analyzed in the environmental review document cannot be limited to only the discretionary elements of the proposal. Moreover, whether a particular activity constitutes a CEQA “project” is a question of law; courts do not defer to Lead Agency determinations of whether an activity is a project. (California Environmental Law & Land Use Practice § 21.02 (2018); California Environmental Law & Land Use Practice § 21.05 (2018); *Fullerton Joint Union High School Dist. v. State Bd. of Education* (1982) 32 Cal.3d 779, 795.)

We have found no case upholding a decision to exclude an element of a Project from the environmental analysis of an otherwise discretionary project because that element would not individually require governmental approval. The Applicant has identified several cases, discussed in turn below, that they believe are helpful in supporting their case. However, none of these cases involve projects being approved with discretionary permits, like the Frost Ponds Project.

Friends of Westwood v. City of Los Angeles (1987) 191 Cal.App.3d 259, 266-267, explains why CEQA applies to discretionary projects, but does not in any way support an assertion that the scope of the “Project” considered in the Frost Pond MND can exclude consideration of Project water use:

As applied to private projects, the purpose of CEQA is to minimize the adverse effects of new construction on the environment. To serve this goal the act requires assessment of environmental consequences where government has the power through its regulatory powers to eliminate or mitigate one or more adverse environmental consequences a study could reveal. Thus the touchstone is whether the approval process involved allows the government to shape the project in any way which could respond to any of the concerns which might be identified in an environmental impact report. And when is government foreclosed from influencing the shape of the project? Only when a private party can *legally compel* approval without any changes in the design of its project which might alleviate adverse environmental consequences.

Clearly here, the Applicant cannot legally compel approval of the Frost Ponds Project. The Planning Commission is well within its discretion to apply mitigation measures or alternatives that reduce the water used by the Project, and accordingly reduce the potentially significant impact to groundwater resources. Such measures and alternatives potentially include more efficient

sprinklers, the use of wind machines, and delayed pruning, among other things. (See e.g. <https://www.kj.com/blog/frost-protection-vineyards>.)

Leach v. City of San Diego (1990) 220 Cal.App.3d 389 determined that a decision to draft water from one reservoir to another was ministerial and not subject to CEQA review. Importantly however, the action at issue in *Leach* did not involve the construction or operation of the reservoirs. There was no discretionary action linked to the drafting. Here by contrast, the action proposed for approval is the *construction and operation* of three frost ponds. The approval indisputably requires a discretionary Conditional Use Permit.

San Diego Navy Broadway Complex Coalition v. City of San Diego (2016) 185 Cal.App.4th 924 concerned the question of whether a subsequent action concerning a project, after that project had been approved with an EIR, triggered CEQA's subsequent environmental review requirements. The court determined no subsequent environmental review was required in part because the discretion available to the agency was strictly limited to aesthetics, and the environmental impacts at issue in the petition concerned global climate change only. The court declined to determine whether CEQA could be applied to address aesthetic issues, because the petition did not request subsequent environmental review concerning aesthetics. (*Id.* at 939.) In the Frost Pond context however, the environmental impact at issue concerns groundwater use, and the Project itself over which the Planning Commission has plenary discretion will impound and consume groundwater. Accordingly, *San Diego Navy* is readily distinguishable both in its procedural posture and on its facts, and it fails to lend any support to the proposition that the Frost Ponds MND may exclude consumptive water use from consideration in the impact analysis.

Sierra Club v. Napa County Board of Supervisors (2012) 205 Cal.App.4th 162, 180 again clarifies that the approval process involved must allow the government to shape the project in a way which responds to the concerns that could be identified in an EIR. Again however, because the Frost Ponds Project clearly requires the approval of a discretionary CUP, the Planning Commission has the discretion to condition the Project in a way that would reduce water use, or indeed could deny the Project outright.

The quantity of water the Applicant could theoretically use through alternative means that would not involve a discretionary permit is not relevant to the determination of whether the environmental analysis for *this Project*, approved under a discretionary CUP, may *exclude* the water used during operation of the Project in its environmental analysis. A long line of cases hold that an initial study or negative declaration "must focus on impacts to the existing environment, not hypothetical situations". (*Communities for a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 321, 323.) In *Communities for a Better Environment*, the California Supreme Court reasoned as follows:

the Negative Declaration reasons that the increased steam production the Diesel Project called for was within the boiler permits' maximum operational levels and "could, therefore,

occur even if the proposed project did not commence (exist)." By comparing the proposed project to what *could* happen, rather than to what was actually happening, the District set the baseline not according to "established levels of a particular use," but by "merely hypothetical conditions allowable" under the permits. (*San Joaquin Raptor Rescue Center v. County of Merced*, *supra*, 149 Cal.App.4th at p. 658.) Like an EIR, an initial study or negative declaration "must focus on impacts to the existing environment, not hypothetical situations." (*County of Amador v. El Dorado County Water Agency*, *supra*, 76 Cal.App.4th at p. 955.)

An approach using hypothetical allowable conditions as the baseline results in "illusory" comparisons that "can only mislead the public as to the reality of the impacts and subvert full consideration of the actual environmental impacts," a result at direct odds with CEQA's intent. (*Environmental Planning & Information Council v. County of El Dorado*, *supra*, 131 Cal.App.3d at p. 358.) The District's use of the prior permits' maximum operating levels as a baseline appears to have had that effect here, providing an illusory basis for a finding of no significant adverse effect despite an acknowledged increase in NOx emissions exceeding the District's published significance threshold.

(Id. at 323.) Pursuant to this authority, the impacts of the Frost Ponds Project must be measured against the existing conditions on the ground, not against a hypothetical scenario such as the Applicant increasing water use to the same degree via other non-discretionary means.

To conclude, CEQA plainly requires that once a Project is determined to be subject to CEQA, the CEQA document must evaluate the *whole of the development proposal*. (CEQA Guidelines § 15378 (a).) The Project analyzed is not limited to the specific portion of the Project over which the County has approval jurisdiction. (Id. subd. (c and d).) Here, the development proposal is the construction and operation of three frost ponds that would store water to be used for frost protection. Operation of the frost ponds includes the sustained spray irrigation of approximately 1,000 acres of existing vineyards for frost protection purposes. There is simply no legal basis for excluding this water use from the environmental analysis.

Respectfully submitted,

LAW OFFICE OF MARC CHYTILO, APC



Ana Citrin

Marc Chytilo

For Appellants Jaffe and Gliessman

CC: County Counsel
Steve Rodriguez, Planner



Santa Barbara County Farm Bureau

Affiliated with the California Farm Bureau Federation and the American Farm Bureau Federation

August 29, 2018

Paul Van Leer, Chairman
Santa Barbara County Agricultural Advisory Committee

<u>AGENDA ITEMS</u>	
ITEM #:	3
MEETING DATE:	9/12/18

Chairman Van Leer:

The Santa Barbara County Farm Bureau, a nonprofit California corporation representing approximately 1,400 agricultural and associate members in Santa Barbara County, support the construction and use of 3 agricultural reservoirs on the North Fork Vineyard, located near the western end of the Cuyama Valley.

The applicant, Brodiaea Inc, received a Zoning Administrator hearing after a 20-month permit and environmental review process. The Zoning Administrator found the construction of the three reservoirs met all County standards. The Zoning Administrator approved the CEQA Mitigated Negative declaration, including a determination the construction of the reservoirs fell beneath the threshold of significance for water use. The Zoning Administrator concurred with County Staff's determination that agricultural water use and the associated development of wells, as exempt activities and are not considered a "project" under CEQA.

Reservoirs are and historically have been an integral part of irrigated agriculture here in Santa Barbara County as well as the State. They help maximize the farmers' ability to manage the water they legally have access to, while allowing them to be more flexible and efficient in their water use.

The applicant has met all of Santa Barbara Counties permitting requirements for constructing these reservoirs.

Sincerely,

Russell Doty, President
Santa Barbara County Farm Bureau

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SEP 04 2018

S.B. COUNTY
PLANNING & DEVELOPMENT
HEARING SUPPORT



CALIFORNIA FARM BUREAU FEDERATION

OFFICE OF THE GENERAL COUNSEL

2300 RIVER PLAZA DRIVE, SACRAMENTO, CA 95833-3293 • PHONE (916) 561-5665 • FAX (916) 561-5691

Sent via email

dtrupe@co.santa-barbara.ca.us

September 4, 2018

Paul Van Leer, Chairman
Santa Barbara County Agricultural Advisory Committee
Santa Barbara County Agricultural Commissioner's Office
263 Camino del Remedio
Santa Barbara, CA 93110-1335

AGENDA ITEMS	
ITEM #:	3
MEETING DATE:	9/12/18

Re: North Fork Ranch Frost Ponds Project Appeal

Dear Chair Van Leer,

Enclosed is the California Farm Bureau Federation's letter to the Santa Barbara County Planning Commission regarding the North Fork Ranch Frost Ponds Project Appeal. For the reasons described therein, we encourage the Santa Barbara Agricultural Advisory Committee to discourage the Planning Commission from accepting the appeal.

Farm Bureau believes that groundwater management is appropriately addressed locally through the process set forth in the Sustainable Groundwater Management Act (SGMA), not through permitting of water management infrastructure on the farm. The appeal attempts to use the permitting process to accomplish what should be addressed through SGMA.

Thank you for considering the attached letter as you discuss this critical issue. Please contact me at jrice@cfbf.com or (916) 561-5667 with any questions.

Very truly yours,

JACK L. RICE
Senior Counsel

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S.B. COUNTY
PLANNING & DEVELOPMENT
HEARING SUPPORT

Attachment

cc: Santa Barbara County Farm Bureau



CALIFORNIA FARM BUREAU FEDERATION

OFFICE OF THE GENERAL COUNSEL

2300 RIVER PLAZA DRIVE, SACRAMENTO, CA 95833-3293 • PHONE (916) 561-5665 • FAX (916) 561-5691

September 4, 2018

via email: dvillalo@co.santa-barbara.ca.us

Daniel Blough
Chair, 5th District
C/O Planning and Development, Hearing Support
123 East Anapamu Street
Santa Barbara, Ca. 93101

Re: North Fork Ranch Frost Ponds Project Appeal

Dear Chair Blough,

Please accept these comments from the California Farm Bureau Federation (Farm Bureau) regarding the North Fork Ranch Frost Ponds Project Appeal (Appeal). Although concerns about groundwater management are common and understandable, these issues should be worked out through local implementation of the Sustainable Groundwater Management Act (SGMA), not through permitting of on-farm water management infrastructure. Farm Bureau encourages the Planning Commission to reject the Appeal and allow SGMA's thoughtful and deliberate process to address groundwater management in the Cuyama Valley.

Farm Bureau is a non-governmental, non-profit, voluntary membership California corporation whose purpose is to protect and promote agricultural interests throughout the state of California and to find solutions to the problems of the farm, the farm home and the rural community. Farm Bureau is California's largest farm organization, comprised of 53 county Farm Bureaus currently representing approximately 40,000 agricultural, associate and collegiate members in 56 counties. Farm Bureau strives to protect and improve the ability of farmers and ranchers engaged in production agriculture to provide a reliable supply of food and fiber through responsible stewardship of California's resources.

Local communities throughout California are working hard to achieve the important goal of sustainable groundwater management in compliance with SGMA. For basins like the Cuyama Valley, identified by the Department of Water Resources as being subject to critical conditions of overdraft, this can be especially challenging. But it is precisely because sustainable groundwater management is such an important goal, and because the issues are so challenging, that SGMA established a thorough process with clear standards and timelines. This process is essential to ensuring local communities develop a workable Groundwater Sustainability Plan that can be successfully implemented.

Letter to Daniel Blough
Re: North Fork Ranch Frost Ponds Project Appeal
September 4, 2018
Page 2

The Appeal would impair this process by attempting to achieve the purposes of SGMA through the process of permitting of water management infrastructure on the farm. We encourage the Planning Commission to reject this approach. Basin-wide groundwater management and on-farm water management are different. Basin-wide groundwater water management is about bringing a basin's groundwater budget into balance, ultimately informing individual pumpers of how much water is available for extraction. On-farm water management, in contrast, is how farmers manage whatever water is legally available to them. Where SGMA will inform groundwater users how much water they may pump, on-farm water management is how farmers manage whatever water they will have.

In the Cuyama Valley basin, the groundwater management process is moving quickly. SGMA requires the Cuyama Valley basin to have a Groundwater Sustainability Plan adopted by January 31, 2020, a mere 17 months from now. It is this plan that will describe the groundwater budget and identify the groundwater available for use in the North Fork Ranch frost ponds. Whatever this amount turns out to be, the frost ponds will be important water management infrastructure necessary to use the available water effectively and efficiently. The permitting process for on-farm water infrastructure should not be used to attempt to preempt SGMA. Groundwater management should be left to the SGMA process, and construction of water infrastructure on the farm should follow normal procedures.

Because allowing the permitting process for water management infrastructure on the farm to subvert SGMA would be a troubling precedent, Farm Bureau encourages the Planning Commission to reject the Appeal.

Thank you for considering these comments. Please contact me at jrice@cbbf.com or (916) 561-5667 with any questions.

Very truly yours,



JACK L. RICE
Senior Counsel

cc: Santa Barbara County Agricultural Advisory Committee
Santa Barbara County Farm Bureau

Villalobos, David

From: John Mackenzie <j7a9mac10@gmail.com>
Sent: Monday, September 03, 2018 7:54 PM
To: Villalobos, David
Subject: Harvard Endowment, et al reservoirs

Categories: Purple Category

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S.B. COUNTY
PLANNING & DEVELOPMENT
HEARING SUPPORT

S B Planning Staff,

I have lived in the Cuyama Valley for 16 years. I have served as Vice Chairman of CCSD for 12 years. I have written previously to County Planning in opposition to the so called frost ponds proposed by the latest water mining scheme in this fragile valley.

I have frequently appeared before County Supervisors to to express varying degrees of outrage at the mismanagement of this remote corner of Santa Barbara by those whose role it is to protect its resources and ecological integrity now and for the future.

I hoped at one time that County Planning would rezone to allow a kind of development encouraging local growth instead of endorsing industrial scale environmental destruction by out-of-county and out-of-state entities. Instead 661 imposes a one-size-fits-all regime that favors historically destructive patterns that allow for the acceleration of the extraction of the sole source of water at mega-scale levels.

The proposed reservoirs have a purpose other than stated by applicant. The engineering is based on unverified assumptions and outdated technology. The evaporation calculations are specious. The geological/hydrological assertions are wishful thinking. This is an investment, pure and simple, designed to appeal to a new investor who cares no more for this valley than the current applicant.

I urge County Planning to recognize the facts and the real science that is in opposition to this scheme and honor your responsibility to at minimum, require the EIR that the applicants have so desperately hoped to avoid. You would be starting a new trend toward responsible management of North East Santa Barbara County.

Sincerely,
John A. Mackenzie

<u>AGENDA ITEMS</u>	
ITEM #:	3
MEETING DATE:	9/12/18

YULALONA HYDROLOGY

PO Box 63

Bonanza, OR 97623

805-451-4179

dennisgibbs@yahoo.com

September 5, 2018

Mr. Daniel Blough

Chair, Santa Barbara County Planning Commission

123 East Anapamu Street

Santa Barbara CA 93101

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S.B. COUNTY
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HEARING SUPPORT

AGENDA ITEMS

ITEM #: 3

MEETING
DATE: 9/12/18

Dear Mr. Blough and Honorable Santa Barbara County Planning Commission Staff (SBCPC)

I have been retained on behalf of Mr. Steve Gliessman and Ms. Roberta Jaffe of *Condor's Hope Ranch* (CHR), located in the Cottonwood Canyon Subarea of the Cuyama Valley and Cuyama Groundwater Basin (CGB) to provide an unbiased review of the documents and analyses provided as part of the proposed "North Fork Ranch Frost Ponds" Case No. 16CUP-00000-00005, by the Applicant Brodiaea, Inc. My qualifications to comment on this matter and project include 30 years of experience in all aspects of hydrology and hydrogeology, 20 years of experience monitoring and reporting on water conditions in the Cuyama Valley, eight years of experience serving as the "project manager" for the US Geological Survey – Santa Barbara County Water Agency Water Availability Study (2014) and a professional license in the field of Hydrology.

I would like to concisely bring to your attention **five** deficiencies as the above referenced project is evaluated, and which implicate potentially significant impacts under CEQA. This "summary assessment" could be developed further with the investment of additional resources, however that would be the function of a more robust environmental review process.

1. The applicant claims abundant groundwater resources are available in the project area but no peer reviewed published literature exists to support such claims. CHR requested the analysis of "groundwater availability" used by the applicant to support such claim but the request for transparent information was denied.

2. The project area lies within the boundaries of the Cuyama Groundwater Basin (CGB) as defined by the California Department of Water Resources (CDWR) Bulletin 118 which has been defined to be in a critical state of "overdraft" or "usage greater than replenishment". The applicant states that the project area is separated from the Cuyama Groundwater Basin and residential and small scale farmstead water wells but again there is no scientific peer reviewed work to support this claim.

3. The applicant states that "imbalance" of the Basin is not relevant since the *County of Santa Barbara Environmental Thresholds and Guideline Manual* (1992) state a "threshold of significance of 31 acre-feet per year" for a project in the CGB to require further environmental review. These "thresholds" are severely out of date (25 years old).

4. The applicant has grossly underestimated water demand for the project.

5. The applicant has overemphasized needed usage of water for "frost protection".

I will expand on each of the aforementioned points in detail:

1. No proof of long term Water Availability

Previous investigations by Federal, State and Local Agencies indicate the overall Cuyama Groundwater Basin "imbalance" from a low of 14,600 Acre Feet per Year to a high of 38,000 Acre Feet per Year, with a mean or average of 28,100 Acre Feet per Year and a **median value of 30,300 Acre Feet per Year**. According to the US Geological Survey (USGS) the overall Hydrologic Budget of the CGB is in a serious condition of "overdraft" or "imbalance" or "usage greater than replenishment", and has been for many decades (Hanson, 2014, 2015 and others).

The Cuyama Groundwater Basin has been declared to be in a state of "critical overdraft" by the CDWR. This includes the Cottonwood Canyon Subarea as defined in CDWR Bulletin 118 (2003), where the Project would extract its water. As such, this Basin is one of 21 Basins in California that are designated "High Priority" and must submit a Groundwater Sustainability Plan under the Sustainable Groundwater Management Act (SGMA) to the CDWR by January 2020. Until water augmentation and recharge projects are planned, funded and undertaken to increase percolation to "offset further degradation" and examine "sustainability" as contemplated by SGMA, no projects which increase extraction of groundwater should be approved. Approving a project that will cause a significant increase in groundwater extractions before the SGMA Groundwater Sustainability Plan is adopted and implemented in less than 18 months could substantially prejudice the Groundwater Sustainability Plan and increase the burdens of achieving sustainability of this resource as required by SGMA.

The Project Applicant has made the claim of abundant groundwater resources available in the area but has denied requests to review their analyses to prove such. They claim this Cottonwood subarea is named the *Ruby Star Groundwater Basin* but this "Basin" is not cited in any US Geological Survey (USGS), California Department of Water Resources (CDWR), US Department of Agriculture (USDA), Santa Barbara County (SBC) or any other peer reviewed and published literature. The Applicant has also made the argument that geological fault barriers separate the project water production area from residential wells in Cottonwood Canyon, and has an "available storage" of 54,000 Acre-Feet of groundwater, but there are no published studies which have been adequately peer reviewed to support this claim **and requests by CHR to review the analysis used to make these claims were denied** Without credible, verifiable and peer reviewed evidence supporting the Applicant's contrary claims that the project will extract groundwater from a separate isolated basin, it must be assumed that the Project proposes to utilize water from the CGB.

2. The Project could adversely affect existing groundwater users in the area

Recent studies (Everett, 2013), have indicated that much of the groundwater extracted in the Cuyama Groundwater Basin is thousands to tens of thousands of years old indicating that simply "the mining of groundwater" is occurring. Given residential wells in the area are shallower than agricultural wells, this mining of groundwater could result in severe implications for residents and small farmers using residential-scale wells like *Condor's Hope Ranch*.

In addition, based on my review of evidence of increasing climatic uncertainty and by interpolating local dendrochronology records that disclose long-period historical and pre-historical trends, I believe that

higher extremes of dry periods (longer and more severe) can be expected. Tree ring analysis and reconstruction of climate has been done for the Santa Ynez River Watershed (Michaelsen and Haston, 1988) indicates that since 1537 there have been major fluctuations in precipitation variability including changes in the frequency of extremes and rare events that have not occurred during the time of modern written records. The recharge of waters to the Cuyama Groundwater Basin could be substantially diminished in the future based on these trends and related evidence.

3. Applicant Claims the “existing imbalance of the Basin is not relevant”

The applicant states that “imbalance” of the Basin is not relevant since the *County of Santa Barbara Environmental Thresholds and Guideline Manual* (1992) state a “threshold of significance of 31 acre-feet per year” for a project in the Cuyama Groundwater Basin to require further environmental review. These “thresholds” are severely out of date (25 years) and the Final MND more than tripled the amount of annual evaporative loss for the proposed “frost ponds” from 8.14 acre feet per year to 26 acre feet per year, based on the change of keeping water in the “frost ponds” year round to alleviate damage to pump and control systems. This alone equates to an increase of over 300% in loss of valuable water to direct evaporation and thins the margin between the 1992 accepted “thresholds” of 31 acre feet per year. There is no guarantee in place that the “frost ponds” will only hold 3 feet of water in non-frost months and most likely the loss will be significantly greater than 31 acre feet per year for ponds with a cumulative area of 15.6 acres in an arid environment such as the Western Cuyama Valley. Additionally, the 31 AFY Threshold was calculated based on a lesser level of overdraft, as detailed in Table 2 of the County’s 2008 CEQA Thresholds, which is based on 1992 data. The 1992 Cuyama Groundwater Basin overdraft was 28,525 AFY, whereas the Negative Declaration discloses that the 2014 overdraft is at least 30,000 AFY (Page 35 of FMND). The 31 AFY Threshold should be recalculated to reflect more current data on the status of the Cuyama Groundwater Basin.

According to the Santa Barbara County Planning Department’s CEQA Thresholds and Guidelines Manual (2008) “Groundwater supplies are limited in terms of the annual amount of water which can be withdrawn without causing a long term drop in water levels (“Safe Yield”) and in the amount of total storage of a basin which can be removed without significant environmental effects (“Available Storage”). These limits make **conservative use** of water a necessary policy in Santa Barbara County in order to avoid or minimize significant and lasting adverse environmental effects” (Pages 67-68).

Therefore, I disagree with sub sections a. and g. through j. of section 4.16 Water Resources/Flooding of the Final Mitigated Negative Declaration dated August 11, 2017 for project 16CUP-00000-00005 which state Less than Significant Impacts. Based on the overdrafted condition of the Greater Cuyama Groundwater Basin, which per CDWR Bulletin 118 includes the Cottonwood Sub-basin, I believe that the project could result in Potentially Significant Impacts in these areas of Water Resources.

4. The Applicant has grossly underestimated water usage for the Project

I have carefully reviewed and disagree with the conclusions in the “Analysis of Reservoir Evaporative Losses” provided to the Applicant by *Monsoon Consultants* because it does not accurately account for local climatic conditions. Based on my knowledge of the area, and on available data, I believe that the overall annual evaporative losses would significantly exceed the threshold of 31 acre feet per year, and

further that this threshold should be lowered to avoid significant direct project and cumulative impacts to the Cuyama Groundwater Basin. The analysis understates the amount of evaporation by not taking into account potential "frosts" during the month of May and the minimum storage needed in winter months to alleviate damage to pond-pump infrastructure.

In addition, water duty projections are unrealistic. The Applicant has suggested that the Vineyards will only consume a depth of approximately 0.8 feet of water per year. The UC Cooperative Extension estimates "Irrigation Water Use by Crops in Santa Barbara County" (Included in this correspondence as Appendix A). The chart, which is a part of the County's CEQA Thresholds, lists a range of 1.0 to 3.0 feet of water usage for Grapes in the Santa Ynez, Los Alamos and Sisquoc Valleys with an average value of 2.0 feet. As of 1981 when this work was accomplished, viticulture in the Greater Cuyama Valley was rare to absent and thus no values were presented for such locale. However, it is well established that the Cuyama Valley provides a much hotter and more arid climate than the Santa Ynez, Los Alamos or Sisquoc areas and does not experience any "sea breeze" which cools and increases humidity in those regions. For all these reasons, I believe that the value of projected water use to raise wine grapes in the Cuyama region must be assumed to be greater than 2.0 feet. Using a value of 2.5 feet which in my opinion more accurately describes likely water usage for the Project in its location, with 850 acres in production, this equates to an extraction of approximately 2130 acre-feet per year in a "critically overdrafted groundwater basin" as defined by CDWR, versus the approximate 680 acre-feet using the value (depth) of 0.8 feet. Thus, the combination of the project's extraction to maintain and utilize the frost ponds with the more realistic amount of water needed to grow the crops themselves supports the conclusion that the project will have a significant cumulative impact to the Cuyama Groundwater Basin.

5. The applicant has overemphasized needed usage of water for "frost protection"

It is widely known in the viticulture industry that water consumption for "frost protection" can be minimal when utilizing the latest technology in fine spray nozzles compared to the overall consumptive water use for the maturity and viability of such crops (Sisquoc Ranch Staff, 2017). It is also widely known that in many agriculturally developed areas where "instantaneous" water production from groundwater wells cannot meet needed irrigation requirements, "storage" ponds are commonly used. These facts, combined with the size of the proposed ponds at just under the minimum requirement to be defined as a "Dam" by the US Bureau of Reclamation at 49 acre feet, raises a distinct possibility (if not probability) that the applicant will use these structures for routine irrigation since the frost protection goals can be met through different techniques that do not justify such large water storage facilities on these lands.

While the Applicant threatens that without the frost ponds, they could be forced to install larger pumps and/or add additional wells, these alternatives would avoid the evaporative losses from the surface of the frost ponds, and would avoid the other impacts to the environment from constructing the frost ponds.

Summary

There has been a historical lack of "comprehensive planning" for water supplies and land use in the Cuyama Valley, where all water users must rely exclusively on groundwater or are limited to "dry farming". In the Cottonwood Subarea where the proposed project would extract groundwater there have been no peer reviewed published technical reports by any public or private agency which would support the conclusion that ample groundwater supplies exist and surface detention of water is a

Santa Barbara County Planning Commission
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prudent practice. In addition, the Sustainable Groundwater Management Act (SGMA) dictates conservation requirements must be put in place by 2020.

Based on my knowledge, experience and study of local geohydrology, and review of the proposed project and MND, I believe there is ample evidence that supports the conclusion that the proposed project could result in significant adverse effects to the water resources of the Cottonwood Subarea of the Cuyama Groundwater Basin as designated by the California Department of Water Resources Basin 3-13 (CDWR, 2003). It is my opinion that Santa Barbara County should not approve the referenced project (16CUP-00000-00005) without complete environmental review in regards to utilization of existing Water Resources.

D. Gibbs

Dennis Gibbs, P.H.
Yulalona Hydrology



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APPENDIX A

IRRIGATION WATER USE BY CROPS IN SANTA BARBARA COUNTY

CROP	South Coast Area		Santa Maria & Lompoc Valleys		Santa Ynes, Los Alamos, & Sisquoc Valleys		Cuyama Valley	
	Range	Ave	Range	Ave	Range	Ave	Range	Ave
<u>Field Crops</u>								
Beans			.5-1.3	1.0	.9-1.5	1.3	1.0-1.7	1.5
Corn, field			1.5-2.2	1.8	2.0-2.8	2.2	2.4-3.2	2.8
Grain, irrigated			.3-.7	0.5	.6-1.0	.8	1.0-1.8	1.5
Sugar Beets			2.6-3.2	3.0	3.0-3.6	3.2	3.6-4.6	4.0
<u>Forages & pastures</u>								
Alfalfa			2.6-3.3	3.0	3.0-4.0	3.5	4.0-4.6	4.3
Pasture/irrigated			2.8-3.3	3.0	3.3-4.0	3.7	4.0-4.6	4.3
Sudangrass			1.0-1.8	1.5	1.3-2.0	1.7	2.0-3.0	2.5
<u>Ornamentals</u>								
Cut Flowers/field	1.5-2.3	1.8	1.5-2.3	1.8				
Flower seeds			1.5-3.0	2.3	2.0-3.5	2.7		
Greenhouse-								
-Carnations	2.0-3.0	2.5						
-Mums, pompom	3.0-4.5	4.0						
-Mums, potted	4.5-5.5	5.5						
Turfgrass	2.5-2.8	2.7	2.5-2.8	2.7	3.0-4.0	3.5	3.5-4.5	4.0
<u>Trees and Vines</u>								
Avocados	1.0-2.0	1.6	1.1-2.1	1.7				
Deciduous Fruits			1.2-2.0	1.7	1.5-3.0	2.5	3.0-4.5	3.8
Grapes			.7-1.8	1.2	1.0-3.0	2.0		
Lemons	.8-1.8	1.5	1.0-2.0	1.6				
Walnuts	1.0-2.0	1.5	1.3-2.5	1.8	2.0-3.5	3.3		
<u>Vegetables</u>								
Broccoli/Cabbage			1.3-1.5	1.4	1.5-2.0	1.7		
Cauliflower			1.5-2.0	1.7	2.0-3.0	2.5		
Carrots			1.5-3.0	2.3	2.0-2.5	2.2	2.5-3.5	3.0
Celery			2.0-2.5	2.2	2.0-2.5	2.2		
Lettuce			1.0-1.3	1.1	1.0-2.0	1.5		
Potatoes			1.5-2.0	1.7	2.0-3.0	2.5		
Strawberries	2.5-3.5	3.0	2.5-3.0	2.7				
Tomatoes	1.0-2.0	1.5	1.5-2.0	1.7				

See back page for assumptions.

Attachment 4

HERUM \ CRABTREE \ SUNTAG
ATTORNEYS

Jeanne M. Zolezzi
jzolezzi@herumcrabtree.com

September 21, 2018

Santa Barbara County Board of Supervisors
c/o Clerk of the Board
105 East Anapamu Street
Santa Barbara, CA 93101

**RE: Appeal of September 12, 2018 County Planning Commission Action on the Northfork
Ranch Frost Ponds Project 16CUP-00000-00005**

Honorable Members of the Board of Supervisors:

On September 12, 2018, the County Planning Commission (Commission) voted 3-2 to not support the Zoning Administrator's (ZA) approval of this Minor Conditional Use Permit (MCUP). This MCUP was evaluated through a Mitigated Negative Declaration (MND). The Commission acted to direct staff to prepare a "focused EIR that evaluates potential water use and biological impacts that may result from the **operation of the proposed reservoirs for frost protection and associated frost protection systems**" (emphasis added). The Commission also "directed staff to determine if an evaluation of potential reservoir failure impacts to State Route 166 should be included in the focused EIR." County staff continues to recommend approval of the project, and believes the existing MND is adequate to comply with the California Environmental Quality Act (CEQA).

Applicant submits an appeal to this Commission action requiring additional environmental review on the following bases:

1. The Commission inappropriately extended the required environmental review into the arena of exempt agricultural water use. The cultivation of crops, the drilling of agricultural wells, and spray irrigation for frost protection purposes of said crops in the Inland area of the County is exempt from permits. Therefore, these normal agricultural activities are not considered a "project" under CEQA and are exempt from environmental review. The source of the water, whether from wells, reservoirs, water towers, bladders, or any other conceivable storage or production method, has no bearing on whether the water usage is agricultural, and thus exempt. County staff had it correct when they determined that water use thresholds do not apply to normal agricultural activities.

County staff complied with CEQA, only counting the change in water use related to the proposed activity under the MCUP – construction of the frost ponds. In this case, the proposed frost ponds that hold water in the winter for necessary frost-protection for the established vineyards are subject to water loss through evaporation. Staff determined the water loss from evaporation would be less than the established County threshold for groundwater use in the

Cuyama basin. Therefore, there is no potential for significant impacts due to groundwater use, and an MND is the appropriate CEQA document.

2. The MCUP application was accompanied by a Biological Resources Assessment (BRA) prepared by a professional biologist. The field surveys for the BRA included springtime surveys when flowering plants are most visible. The BRA was peer-reviewed by a third-party consultant. The BRA was deemed adequate after some minor revisions. The BRA determined that significant impacts to sensitive species are not anticipated from the project. Mitigation measures were proposed, and included as part of project approval, that would provide for pre-construction surveys and other measures necessary to ensure that impacts would not occur during construction of the project.

Testimony from the appellant during the Commission asserted that because the biological field surveys were conducted during drought years, they are not adequate to analyze potential biological impacts. The lack of significance findings is more likely due to the areas in question having been utilized for agricultural purposes in the past through grazing, ground preparations, discing, and other farming activities. All established protocols for biological resources reporting were strictly followed, and the Planning Commission should have upheld the staff conclusions that the existing BRA and environmental review is adequate for the project under CEQA.

3. In the event of a catastrophic event resulting in a failed or breached frost pond, up to 49 acre-feet of water could be released. Our analysis of the amount of water potentially released, the size of the property, and the numerous existing natural drainage features indicates that any impacts to highway 166 would be minor and temporary.

With a seemingly innocuous vote, the Commission has potentially created a dangerous precedent that would, if upheld, allow the regulation of agricultural water usage, an exempt activity in Santa Barbara County. If this sort of regulation does come, it should be imposed by Groundwater Sustainability Agencies empowered by the Sustainable Groundwater Management Act, not from the Commission, which, simply put, does not have the administrative powers to do so.

We therefore urge the Board to: (1) approve the appeal, affirming the decision of the Zoning Administrator, (2) adopt findings for approval of the project, including CEQA findings, (3) adopt the Final Mitigated Negative Declaration 17NGD-00000-00004, dated August 1, 2018 along with the mitigation monitoring program contained in the conditions of approval, and (4) grant *de novo* approval of the project 16CUP-00000-00005, subject to the conditions of approval.

Very truly yours,



JEANNE M. ZOLEZZI
Attorney-at-Law

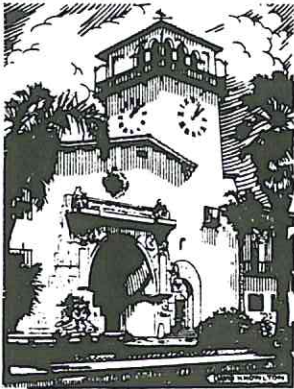
cc: Mr. Matthew Newhall
Mr. Brian A. Tetley
Santa Barbara County Planning Commission

ATTACHMENT 5

COUNTY OF SANTA BARBARA CALIFORNIA

ZONING ADMINISTRATOR

COUNTY ENGINEERING BUILDING
123 E. ANAPAMU STREET
SANTA BARBARA, CALIFORNIA 93101-2058
PHONE: (805) 568-2000



COURT HOUSE

October 2, 2017

Mr. Brian A. Tetley
Urban Planning Concepts
2624 Airpark Drive
Santa Maria, CA 93455

ZONING ADMINISTRATOR
HEARING OF SEPTEMBER 25, 2017

RE: North Fork Ranch Ponds Project, 16CUP-00000-00005

Hearing on the request of Brian Tetley, Urban Planning Concepts, agent for Brodiaea, Inc., owner, to consider Case No. 16CUP-00000-00005 [application filed on February 17, 2016] for a Conditional Use Permit allowing the construction and operation of three water storage reservoirs within a 6,565-acre parcel in compliance with Section 35.82.60 of the County Land Use and Development Code, on property zoned AG-II-100; and to adopt the Mitigated Negative Declaration (17NGD-00000-0004) pursuant to the State Guidelines for Implementation of the California Environmental Quality Act. As a result of this project, significant but mitigable effects on the environment are anticipated in the following categories: Biological Resources, Cultural Resources, Geologic Processes, and Water Resources/Flooding. The Mitigated Negative Declaration (MND) and all documents may be reviewed at the Planning and Development Department, 624 West Foster Road, Suite C, Santa Maria. The MND is also available for review at the Cuyama Branch Public Library located at 4689 Highway 166, New Cuyama. The application involves Assessor Parcel No. 147-020-045, located approximately nine miles west of the community of New Cuyama between Cottonwood Canyon Road and Schoolhouse Canyon Road, Fifth Supervisorial District.

Dear Mr. Tetley:

At the regular hearing of the Santa Barbara County Zoning Administrator on September 25, 2017 Case No. 16CUP-00000-00005 marked "Officially Accepted, County of Santa Barbara September 25, 2017 Zoning Administrator Attachments A-E" was conditionally approved, based upon the project's consistency with the Comprehensive Plan and based on the ability to make the required findings. The Zoning Administrator also took the following action:

1. Made the required findings for approval of the project, Case No. 16CUP-00000-00005, specified in Attachment A of the staff report dated September 8, 2017, including CEQA findings;
2. Adopted the Mitigated Negative Declaration included as Attachment C of the staff report dated September 8, 2017, and adopt the mitigation monitoring program contained in the conditions of approval; and

3. Approved the project, Case No. 16CUP-00000-00005, subject to the conditions included as Attachment B of the staff report dated September 8, 2017 and as revised at the hearing of September 25, 2017

Revisions to Attachment B – Conditions of Approval

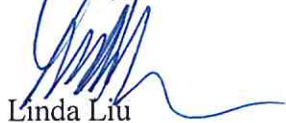
Condition No. 20, Project Monitoring, is added as follows:

20. **Project Monitoring.** Prior to the issuance of a zone clearance for grading, the applicant shall submit to P&D for review and approval a proposed Evaporation Reporting Plan that identifies the methodology to be used to measure and document evaporative water losses from each of the proposed reservoirs. Measures to reduce annual evaporation losses from the reservoirs shall be implemented if monitoring indicates that annual losses exceed 31 acre feet per year. Future modifications to the operation or design of the project to reduce evaporative losses must be approved by P&D before such measures are implemented. The first Evaporation Reporting Plan report shall be submitted to P&D 30 days after the reservoirs have been in operation for one year. The Evaporation Plan reports shall be submitted annually to P&D for four years after the first report is submitted. The requirement to submit Evaporation Monitoring and Reporting reports may be discontinued after an initial five (5) year monitoring period if deemed warranted by the Planning & Development Director based on results of the previously submitted reports.

The Findings and the Conditions of Approval reflect the action of the Zoning Administrator and are included in this letter as Attachment A and Attachment B.

- The action of the Zoning Administrator to approve, conditionally approve, or deny the project may be appealed to the Planning Commission by the applicant, or an aggrieved person, as defined in Chapter 35.102 (Appeals) of the Santa Barbara County Land Use and Development Code, adversely affected by the decision within the 10 calendar days following the date of action by the Zoning Administrator.
- An appeal, which shall be in writing, and accompanying fee of \$610.06 shall be filed with the Planning and Development Department located at 123 East Anapamu Street, Santa Barbara, or 624 West Foster Road, Suite C, Santa Maria, prior to expiration of the appeal period specified above.
- **Public appeal period expires on Thursday, October 5, 2017 at 5:00 P.M.**

Sincerely,



Linda Liu
Zoning Administrator

xc: Case File: 16CUP-00000-00005
Hearing Support Zoning Administrator File
Owner: Matt Turrentine – Brodiaea, Inc., P.O. Box 6565, Santa Maria, CA 93455
Address File: Nine miles west of New Cuyama, between Cottonwood Canyon Road and Schoolhouse Canyon Road.
County Surveyor's Office
Supervisor: Steve Lavagnino, Fifth District Supervisor
Planner: Steve Rodriguez

Attachments: **Attachment A – Findings**
 Attachment B – Conditions of Approval

LL:sf

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ATTACHMENT A: FINDINGS OF APPROVAL

1.0 CEQA FINDINGS

1.1 CONSIDERATION OF THE NEGATIVE DECLARATION AND FULL DISCLOSURE

The Zoning Administrator has considered the Mitigated Negative Declaration, 17NGD-00000-00004, together with the comments received and considered during the public review process. The Mitigated Negative Declaration reflects the independent judgment and analysis of the Zoning Administrator and has been completed in compliance with CEQA, and is adequate for this proposal.

1.2 FINDING OF NO SIGNIFICANT EFFECT

On the basis of the whole record, including the Mitigated Negative Declaration and any comments received, the Zoning Administrator finds that through feasible conditions placed upon the project, the significant impacts on the environment have been eliminated or substantially mitigated and on the basis of the whole record (including the initial study and any comments received), there is no substantial evidence that the project will have a significant effect on the environment.

1.3 LOCATION OF DOCUMENTS

The documents and other materials which constitute the record of proceedings upon which this decision is based are in the custody of the Secretary of the Zoning Administrator of the Planning and Development Department located at 624 W. Foster Road, Santa Maria, CA, 93455.

1.4 ENVIRONMENTAL REPORTING AND MONITORING PROGRAM

Public Resources Code Section 21081.6 and CEQA Guidelines Section 15074(d) require the County to adopt a reporting or monitoring program for the changes to the project that it has adopted or made a condition of approval in order to avoid or substantially lessen significant effects on the environment. The approved project description and conditions of approval, with their corresponding permit monitoring requirements, are hereby adopted as the reporting and monitoring program for this project. The monitoring program is designed to ensure compliance during project implementation.

2.0 ADMINISTRATIVE FINDINGS

2.1 Conditional Use Permits

- A. Findings required for all Conditional Use Permits.** In compliance with Subsection 35.82.060.E.1 of the County Land Use and Development Code, prior to the approval or conditional approval of an application for a Minor Conditional Use Permit the review authority shall first make all of the following findings:

- 1. The site for the proposed project is adequate in terms of location, physical characteristics, shape, and size to accommodate the type of use and level of development proposed.**

The project property (147-020-045) is approximately 6,565 acres. The proposed reservoir sites are generally level and slope gently to the east or northeast. The proposed reservoirs would be approximately 3,000, 1,200 and 1,500 feet south of State Route 166 and at least 100 feet from nearby ephemeral drainages. The proposed reservoirs would be located in areas adjacent to the vineyards they would serve and would limit the amount of required grading to the maximum extent feasible. Therefore this finding can be made.

- 2. Within the Inland area significant environmental impacts will be mitigated to the maximum extent feasible.**

The proposed reservoir sites are located within an area where San Joaquin kit fox and American badger have historically existed. However, according to the Biological Resources Assessment prepared by Kevin Merk Associates, LLC (dated February 24, 2016), the potential for these or other sensitive animal species to be located at the proposed reservoir sites is very low due to habitat conditions on and near the sites. However, to reduce the potential for the project to result in short-term construction-related impacts to these species to the maximum extent feasible, conditions of approval require preconstruction surveys and if necessary the implementation of appropriate avoidance measures.

A survey of the proposed reservoir sites (Rincon Consultants, August, 2016) did not detect evidence of archaeological resources, however, the project area is considered to be sensitive for cultural resources. Conditions of approval require that a preconstruction educational meeting be conducted with construction personnel; monitoring during construction of the reservoirs; and that if cultural resources are encountered during construction work be stopped in vicinity of the find so appropriate actions can be taken. The implementation of these conditions would reduce the potential for impacts to cultural resources to the maximum extent feasible.

Construction of the proposed reservoirs would have the potential to result in erosion and other water quality-related impacts. Conditions of approval require the preparation and implementation of approved short- and long-term water quality protection measures. The implementation of these conditions would reduce the potential for impacts to water quality to the maximum extent feasible.

The Final MND prepared for the project, dated August 11, 2017, did not identify potentially significant environmental impacts that would result from the construction or operation of the proposed reservoirs. Therefore, this finding can be made.

- 3. Streets and highways are adequate and properly designed to carry the type and quantity of traffic generated by the proposed use.**

The proposed reservoirs will take vehicular access from State Route 166. This public highway is adequate to serve the project as designed. The project will not result in a substantial increase in traffic on the highway and would not result in a significant decrease in the highway's current level of service. Therefore this finding can be made.

There will be adequate public services, including fire protection, police protection, sewage disposal, and water supply to serve the proposed project.

Water to be stored in the proposed reservoirs would be supplied by existing private water wells located on adjacent parcels but under the same ownership. The project would draw groundwater from the Cuyama Groundwater Basin, which is in a state of overdraft. The proposed project's water use that is subject to the County's adopted groundwater use threshold for the Cuyama Valley Groundwater Basin consists only of the reservoir's annual evaporative losses. The annual evaporative losses from the three proposed reservoirs are estimated to be approximately 26 AFY, which is below the adopted significance threshold of 31 acre feet per year. No sewage will be produced by the proposed project, therefore, no waste water disposal systems are required. The project would not have a substantial demand for fire and police protection services; therefore, adequate services are available to serve the project. Therefore this finding can be made.

- 4. The proposed project will not be detrimental to the comfort, convenience, general welfare, health, and safety of the neighborhood and will be compatible with the surrounding area.**

The project site is located in an agricultural zone (AG-II-100) that allows for the construction of agricultural reservoirs, subject to the approval of a minor conditional use permit for reservoirs consisting of 50,000 sq. ft. or more of total development. There are no residences or other buildings located near the proposed reservoir sites. The reservoirs and associated pipeline improvements are designed to conform to all applicable County requirements to ensure that detrimental effects will not occur to the health, safety, comfort, convenience, and general welfare of the neighborhood. The project also includes fencing and safety equipment to reduce the potential for humans and animals to become trapped in the reservoirs. Therefore this finding can be made.

- 5. The proposed project will comply with all applicable requirements of this Development Code and the Comprehensive Plan, including any applicable community or area plan.**

As discussed in Sections 5.3 and 5.4 of this staff report, dated September 8, 2017, and incorporated herein by reference, the project is consistent with the Comprehensive Plan and Land Use and Development Code. Therefore, this finding can be made.

- 6. Within Rural areas as designated on the Comprehensive Plan maps, the proposed use will be compatible with and subordinate to the rural and scenic character of the area.**

The agricultural reservoirs have been designed in a manner that is compatible with the rural and scenic character of the area. The reservoirs would not result in grading scars, would not be prominently visible from State Route 166, and would not obstruct scenic views of the mountains located south of the project site as seen from the highway. Therefore, this finding can be made.

ATTACHMENT B: CONDITONS OF APPROVAL

**North Fork Ranch Frost Ponds
Case No. 16CUP-00000-00005**

September 25, 2017

I. PROJECT DESCRIPTION

1. **Proj Des-01 Project Description.** This Conditional Use Permit is based upon and limited to compliance with the project description, the hearing exhibits marked Attachment A-E, and all conditions of approval set forth below, including mitigation measures and specified plans and agreements included by reference, as well as all applicable County rules and regulations.

The project description is as follows:

A request of Brian Tetley, agent for Brodiaea, Inc, owner, to consider Case No. 16CUP-00000-00005. The North Fork Ranch Frost Pond project is a request to construct and operate three frost ponds (reservoirs) that would store water to be used for frost protection at the North Fork Ranch Vineyards. The project also includes the construction of new underground pipelines that would extend between each of the proposed reservoirs and the existing vineyard irrigation system.

The proposed reservoirs would serve an existing 535-acre vineyard and an additional 100-acre area that is to be planted in the future. Reservoir No. 1 would be located on the eastern portion of the project site adjacent to Schoolhouse Canyon Road (a private road). Reservoir No. 2 would be located in the central portion of the project site, and Reservoir No. 3 would be located on the western portion of the project site approximately 0.75 mile east of Cottonwood Canyon Road. Access to the reservoirs would be from existing roads that connect to State Highway 166.

Frost protection would be achieved by sustained spray irrigation when frost has the potential to damage the grape vines. Frost protection would generally be required during the months of February, March and April. The reservoirs would be maintained at a full condition between February and April. A maximum of three feet of well-supplied water would be maintained in the reservoirs between May 1st through January 31st. Water above a depth of three feet contained in the reservoirs after May 1 would be distributed for vineyard irrigation.

Each reservoir would have a water storage capacity of 49 acre-feet and would be lined with a high-density polyethylene plastic liner to prevent water seepage. Each reservoir would also have an emergency overflow discharge system that would prevent stored water from over-topping the reservoir. Water to be stored in the reservoirs would be supplied by existing agricultural wells located on the north side of State Highway 166. Water from the wells would be conveyed to the reservoirs by existing vineyard irrigation pipelines that extend beneath the highway and throughout the vineyard. A six foot high fence

would be installed around the exterior perimeter of each reservoir to prevent unauthorized entry. Life ring stations and floating pool ropes would also be provided for rescue purposes.

A total of approximately 257,945 cubic yards of cut and fill grading would be required to construct the three proposed reservoirs. The reservoirs would have a maximum depth of 27-28 feet, and in total would occupy an area of approximately 15.6 acres. Proposed pipelines that would convey water from the vineyard's existing irrigation system to each of the reservoirs would have a total length of 1,350 feet. Proposed pipelines that would convey water from each of the reservoirs to the vineyard's existing spray irrigation system would have a total length of 976 feet. Construction details for each of the proposed reservoirs are summarized on Table 1. It is estimated that the construction period for the three proposed reservoirs would be approximately one year.

Table 1
North Fork Ranch Frost Ponds
Construction Characteristics

Reservoir	Proposed Grading			Reservoir Area		Reservoir Depth			Proposed Pipelines	
	Cut (cu. yds.)	Fill (cu. yds.)	Total (cu. yds.)	Approximate Dimensions (feet)	Acres	Top of Reservoir Elevation	Bottom of Pond Elevation	Depth (feet)	Fill Line (feet)	Drain Line (feet)
No. 1	44,062	44,589	88,651	590 x 370	5.0	1,955	1,927	28	624	517
No. 2	44,064	42,205	86,269	580 X 410	5.7	1,788	1,761	27	370	202
No. 3	42,771	40,254	83,025	590 x 360	4.9	1,744	1,717	27	356	257
TOTAL	130,897	127,048 (1)	257,945	--	15.6	--	--	--	1,350	976

(1) Due to shrinkage of fill material, no soil would be exported from the project site

Surface water drainage from upslope areas adjacent to the reservoirs would be collected by proposed drainage swales. The collected water would be discharged and allowed to sheet flow at downslope locations adjacent to the reservoirs. Rock energy dissipaters would be installed at each discharge location to reduce potential erosion-related impacts. Stormwater discharge from Reservoir No. 1 would be conveyed beneath Schoolhouse Canyon Road by a proposed culvert beneath the road.

The application involves Assessor Parcel Number 147-020-045, a 6,565-acre parcel that is zoned AG-II-100.

2. **Proj Des-02 Project Conformity.** The grading, development, use, and maintenance of the property, the size, shape, arrangement, and location of the structures, parking areas and landscape areas, and the protection and preservation of resources shall conform to the project description above and the hearing exhibits and conditions of approval below. The property and any portions thereof shall be sold, leased or financed in compliance with this project description and the approved hearing exhibits and conditions of approval thereto. All plans (such as Landscape and Tree Protection Plans) must be submitted for review and approval and shall be implemented as approved by the County.

II. CONDITIONS INCORPORATED FROM MITIGATION MEASURES

3. **Special Condition: San Joaquin Kit Fox Avoidance Measures.** Project-related pre-construction / pre-activity surveys shall be conducted prior to the beginning of ground disturbance and/or construction activities, or any project activity that has the potential to impact the San Joaquin kit fox and/or American badger. Required pre-construction / pre-activity surveys and project-related construction activities shall be conducted in accordance with the requirements of the U.S. Fish and Wildlife Service's *Standardized Recommendations for Protection of The Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (January, 2011). Similar measures and procedures shall be implemented to minimize the potential for impacts to American badger. The Standardized Recommendations are provided as Final MND (dated August 11, 2017) Attachment 3.

PLAN REQUIREMENTS AND TIMING: Prior to the start of any project-related pre-construction / pre-activity, the areas that would be affected by reservoir construction and the construction of the proposed reservoir fill and drain lines shall be marked in the field and surveyed by a qualified biologist. Project-related pre-construction / pre-activity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities. The qualified biologist shall conduct weekly site visits during site disturbance activities that proceed longer than 14 days for the purpose of monitoring compliance with the attached Standardized Recommendations. Site disturbance activities lasting up to 14 days do not require weekly monitoring by the biologist unless observations of kit fox or their dens are made on-site or the qualified biologist recommends additional monitoring. This measure shall be printed on all grading and construction plans.

MONITORING: The qualified biologist shall document the methods and results of site visits in weekly monitoring reports that are to be submitted to P&D. If incidental take of kit fox during project activities is possible, before project activities commence, the applicant must consult with the USFWS and CDFW. The results of this consultation may require the applicant to obtain a federal and/or state permit for incidental take during project activities.

4. **Bio-09 Fish and Wildlife Jurisdiction Advisory.** The project site is within the range of San Joaquin kit fox, a species listed as Endangered by the U.S. Fish and Wildlife Service, and Threatened by the California Department of Fish and Wildlife. Based upon reports prepared by Kevin Merk Associates, dated February 24, 2016 and June 24, 2016, it has been determined that the probability for San Joaquin kit fox occurrence on the site is very low. The issuance of this permit does not relieve the permit-holder of any duties, obligations, or responsibilities under the federal or California Endangered Species Act or any other law. The permit-holder shall contact the necessary jurisdictional agencies to ascertain his or her level of risk under the federal and California Endangered Species Act in implementing the project herein permitted.

Indemnity for Violation of the Endangered Species Act: The applicant shall defend, indemnify and hold harmless the County or its agents, officers and employees from any and all claims, actions, proceedings, demands, damages, costs, expenses (including attorney's fees), judgments or liabilities, against the County or its agents, offices or employees brought by any entity or person for any and all actions or omissions of the applicant or his agents, employees or other

independent contractors arising out of this permit alleged to be in violation of the federal or California Endangered Species Acts (16 USC Sec. 1531 et seq.; Cal. Fish and Game Code Sec. 2050 et seq.). This permit does not authorize, approve or otherwise support a "take" of any listed species as defined under the federal or California Endangered Species Acts. Applicant shall notify County immediately of any potential violation of the federal and/or California Endangered Species Act.

5. **American Badger Avoidance and Minimization Measures.** A minimum of 14 days prior to initiation of ground disturbing activities, a survey for badger burrows shall be conducted within the disturbance footprint by an approved biologist (a biologist familiar with, including identification of, the wildlife species in the region). Dens found within the survey area shall be mapped and monitored using a tracking medium, remote camera system, and/or spotlighting at night for a minimum of three days to assess the presence of badgers. Inactive dens shall be collapsed by hand with a shovel to prevent badgers from re-using them during construction. Active dens located within the survey area shall be avoided during the breeding season (March 1 through June 30). A minimum buffer of 50 feet around the active den within the proposed area of disturbance shall be demarcated by construction fencing. The fencing shall be installed one foot above ground to permit movement of badgers in and out of the buffer zone. Once the biologist has determined that active dens are no longer in use, the den shall be collapsed by shovel. Prior to ground disturbing activities occurring outside of the breeding season, badgers may be discouraged from using currently active dens by partially blocking the entrance of the den with sticks, debris, and soil for three (3) to five (5) days. Access to the den would be incrementally blocked to a greater degree over this period. This would cause the badger to abandon the den site and move elsewhere. After badgers have stopped using active dens within the project site, the dens would be collapsed by hand with a shovel.

Plan Requirements and Timing. The name, qualifications, scope of biological surveys and contact information for the surveying biologist must be submitted to P&D and CDFW in advance of the surveys. The above measures shall be included on all land use, grading, and building plans for the construction of the reservoirs, water pipelines, and utility line improvements. A report of the results of the badger survey shall be submitted to P&D for review and approval prior to Zoning Clearance. **Monitoring.** P&D will review and approve the reports. A County-approved biologist shall be present during the initial ground-disturbing activity.

6. **CulRes-07 Cultural Resource Monitor.** The Owner/Applicant shall have all earth disturbances including scarification and placement of fill within the proposed project sites monitored by a P&D approved archaeologist and a Native American consultant in compliance with the provisions of the County Archaeological Guidelines. The duration and depth of grading below the ground surface that requires monitoring shall be determined by the approved archaeologist and Native American consultant.

TIMING: Prior to the approval of a grading permit, the Owner/Applicant shall submit for P&D review and approval, a contract or Letter of Commitment between the Owner/Applicant and the archaeologist, consisting of a project description and scope of work, and once approved, shall execute the contract. This condition shall be printed on all building and grading plans.

MONITORING: The Owner/Applicant shall provide P&D compliance monitoring staff with the name and contact information for the assigned onsite monitor(s) prior to grading permit issuance and pre-construction meeting. P&D compliance monitoring staff shall confirm monitoring by archaeologist and Native American consultant and P&D grading inspectors shall spot check field work. The P&D permit processing planner shall check plans prior to approval of all building and grading permits and P&D compliance monitoring staff shall spot check in the field.

7. **CulRes-09 Stop Work at Encounter.** The Owner/Applicant and/or their agents, representatives or contractors shall stop or redirect work immediately in the event archaeological remains are encountered during grading, construction, landscaping or other construction-related activity. The Owner/Applicant shall retain a P&D approved archaeologist and Native American representative to evaluate the significance of the find in compliance with the provisions of Phase 2 investigations of the County Archaeological Guidelines and funded by the Owner/Applicant. If remains are found to be significant, they shall be subject to a Phase 3 mitigation program consistent with County Archaeological Guidelines and funded by the applicant.

PLAN REQUIREMENTS: This condition shall be printed on all building and grading plans.

MONITORING: The P&D permit processing planner shall check plans prior to Zone Clearance and P&D compliance monitoring staff shall spot check in the field.

8. **Special Condition: Pre-Construction Meeting.** A pre-construction meeting shall be conducted by a County-qualified archaeologist and a local Native American representative funded by the applicant. Meeting attendees shall include the applicant, archaeologist, local Chumash representative, construction supervisors, and heavy equipment operators to ensure that all parties understand the cultural resources monitoring program and their respective roles and responsibilities. All construction personnel who would work on the site during any phase of ground disturbance shall be required to attend the meeting. The names of all personnel who attend the meeting shall be recorded denoting that they have received the required training.

The meeting shall review the following: types of archaeological resources that may be uncovered; provide examples of common archaeological artifacts and other cultural materials to examine; describe why monitoring is required; what makes an archaeological resource significant; identify monitoring procedures; what would temporarily halt construction and for how long; describe a reasonable resource discovery scenario (i.e., feature or artifact); and describe reporting requirements and the responsibilities of the construction supervisor and crew. The meeting shall make attendees aware of prohibited activities, including vehicle use in protected areas, and educate construction workers about the inappropriateness of unauthorized collecting of artifacts that can result in impacts on cultural resources.

PLAN REQUIREMENTS: The pre-construction meeting requirements shall be shown on approved grading and building plans.

TIMING: The pre-construction meeting shall be conducted prior to the start of ground disturbing activities.

MONITORING: The Owner/Applicant shall provide P&D compliance monitoring staff with the names and responsibilities of persons who attended the meeting.

9. **Geo-02. Erosion and Sediment Control Plan.** Where required by the latest edition of the California Green Code and/or Chapter 14 of the Santa Barbara County Code, a Storm Water Pollution Prevention Plan (SWPPP), Storm Water Management Plan (SWMP) and/or an Erosion and Sediment Control Plan (ESCP) shall be implemented as part of the project. Grading and erosion and sediment control plans shall be designed to minimize erosion during construction and shall be implemented for the duration of the grading period and until re-graded areas have been stabilized by structures, long-term erosion control measures or permanent landscaping. The Owner/Applicant shall submit the SWPPP, SWMP or ESCP using Best Management Practices (BMP) designed to stabilize the site, protect natural watercourses/creeks, prevent erosion, convey storm water runoff to existing drainage systems keeping contaminants and sediments onsite. The SWPPP or ESCP shall be a part of the Grading Plan submittal and will be reviewed for its technical merits by P&D. Information on Erosion Control requirements can be found on the County web site re: Grading Ordinance Chapter 14 (<http://sbcountyplanning.org/building/grading.cfm>) refer to Erosion and Sediment Control Plan Requirements; and in the California Green Code for SWPPP (projects greater than 1 acre) and/or SWMP requirements.

PLAN REQUIREMENTS: The grading and SWPPP, SWMP and/or ESCP shall be submitted for review and approved by P&D prior Zoning Clearance. The plan shall be designed to address erosion, sediment and pollution control during all phases of development of the site until all disturbed areas are permanently stabilized. **TIMING:** The SWPPP requirements shall be implemented prior to the commencement of grading and throughout the year. The ESCP/SWMP requirements shall be implemented between November 1st and April 15th of each year, except pollution control measures shall be implemented year round.

MONITORING: P&D compliance monitoring staff shall perform site inspections throughout the construction phase.

10. **WatConv-04 Equipment Storage-Construction.** The Owner/Applicant shall designate a construction equipment filling and storage area(s) to contain spills, facilitate clean-up and proper disposal and prevent contamination from discharging to the storm drains, street, drainage ditches, creeks, or wetlands. The areas shall be no larger than 50 x 50 foot unless otherwise approved by P&D and shall be located at least 100 feet from any storm drain, water body or sensitive biological resources. **PLAN REQUIREMENTS:** The Owner/Applicant shall designate the P&D approved location on all plans for zoning clearance, grading and building permits. **TIMING:** The Owner/Applicant shall install the area prior to commencement of construction.

MONITORING: P&D compliance monitoring staff shall ensure compliance prior to and throughout construction.

11. **WatConv-05 Equipment Washout-Construction.** The Owner/Applicant shall designate a washout area(s) for the washing of concrete trucks, paint, equipment, or similar activities to

prevent wash water from discharging to the storm drains, street, drainage ditches, creeks, or wetlands. Note that polluted water and materials shall be contained in this area and removed from the site daily. The area shall be located at least 100 feet from any storm drain, water body or sensitive biological resources. **PLAN REQUIREMENTS:** The Owner/Applicant shall designate the P&D approved location on all zoning clearance, grading and building permits. **TIMING:** The Owner/Applicant shall install the area prior to commencement of construction.

MONITORING: P&D compliance monitoring staff shall ensure compliance prior to and throughout construction.

III. COUNTY RULES AND REGULATIONS

12. **Rules-05 Acceptance of Conditions.** The Applicant's acceptance of this permit and/or commencement of use, construction and/or operations under this permit shall be deemed acceptance of all conditions of this permit by the Applicant.
13. **Rules-12 CUP Expiration.** The Applicant shall obtain the required ZONING CLEARANCE within the 18 MONTHS following the effective date of this Conditional Use Permit. If the required ZONING CLEARANCE is not issued within the 18 months following the effective date of this Conditional Use Permit, or within such extended period of time as may be authorized in compliance with Section 35.84.030.2 of the COUNTY LAND USE AND DEVELOPMENT CODE, and an application for an extension has not been submitted to the Planning and Development Department, then Conditional Use Permit shall be considered void and of no further effect.
14. **Rules-17 CUP-Void.** This Conditional Use Permit shall become void and be automatically revoked if the development and/or authorized use allowed by this Conditional Use Permit is discontinued for a period of more than 12 months, or within such extended period of time as may be authorized in compliance with Section 35.84.030 of the COUNTY LAND USE AND DEVELOPMENT CODE. Any use authorized by this Conditional Use Permit shall immediately cease upon expiration or revocation of this Conditional Use Permit. Any ZONING CLEARANCE approved or issued pursuant to this Conditional Use Permit shall expire upon expiration or revocation of the Conditional Use Permit. Conditional Use Permit renewals must be applied for prior to expiration of the Conditional Use Permit. [LUDC §35.82.060 & §35.84.060].
15. **Rules-29 Other Dept Conditions.** Compliance with Departmental/Division letters required as follows:
 1. Air Pollution Control District letter dated June 28, 2017.
16. **Rules-31 Mitigation Monitoring Required.** The Owner/Applicant shall ensure that the project complies with all approved plans and all project conditions including those which must be monitored after the project is built and occupied. To accomplish this, the Owner/Applicant shall:

- a. Contact P&D compliance staff as soon as possible after project approval to provide the name and phone number of the future contact person for the project and give estimated dates for future project activities;
 - b. Sign a separate Agreement to Pay for compliance monitoring costs and remit a security deposit prior to approval of a Land Use Permit as authorized by ordinance and fee schedules. Compliance monitoring costs will be invoiced monthly and may include costs for P&D to hire and manage outside consultants when deemed necessary by P&D staff (e.g. non-compliance situations, special monitoring needed for sensitive areas including but not limited to biologists, archaeologists) to assess damage and/or ensure compliance. In such cases, the Owner/Applicant shall comply with P&D recommendations to bring the project into compliance. The decision of the Director of P&D shall be final in the event of a dispute. Monthly invoices shall be paid by the due date noted on the invoice;
 - c. Note the following on each page of grading and building plans "This project is subject to Mitigation and Condition Compliance Monitoring and Reporting. All aspects of project construction shall adhere to the approved plans, conditions of approval, and mitigation measures from Mitigated Negative Declaration 17NGD-00000-00004";
 - d. Contact P&D compliance staff at least two weeks prior to commencement of construction activities to schedule an on-site pre-construction meeting to be led by P&D Compliance Monitoring staff and attended by all parties deemed necessary by P&D, including the permit issuing planner, grading and/or building inspectors, other agency staff, and key construction personnel: contractors, sub-contractors and contracted monitors among others.
17. **Rules-33 Indemnity and Separation.** The Owner/Applicant shall defend, indemnify and hold harmless the County or its agents or officers and employees from any claim, action or proceeding against the County or its agents, officers or employees, to attack, set aside, void, or annul, in whole or in part, the County's approval of this project. In the event that the County fails promptly to notify the Applicant of any such claim, action or proceeding, or that the County fails to cooperate fully in the defense of said claim, this condition shall thereafter be of no further force or effect.
18. **Rules-34 Legal Challenge.** In the event that any condition imposing a fee, exaction, dedication or other measure is challenged by the project sponsors in an action filed in a court of law or threatened to be filed therein which action is brought in the time period provided for by law, this approval shall be suspended pending dismissal of such action, the expiration of the limitation period applicable to such action, or final resolution of such action. If any condition is invalidated by a court of law, the entire project shall be reviewed by the review authority and no approval shall be issued unless substitute feasible conditions/measures are imposed.
19. **Rules-37 Time Extensions-All Projects.** The Owner / Applicant may request a time extension prior to the expiration of the permit or entitlement for development. The review authority with jurisdiction over the project may, upon good cause shown, grant a time extension in compliance with County rules and regulations, which include reflecting changed circumstances and ensuring

compliance with CEQA. If the Owner / Applicant requests a time extension for this permit, the permit may be revised to include updated language to standard conditions and/or mitigation measures and additional conditions and/or mitigation measures which reflect changed circumstances or additional identified project impacts.

IV. PROJECT SPECIFIC CONDITIONS

20. **Project Monitoring.** Prior to the issuance of a zone clearance for grading, the applicant shall submit to P&D for review and approval a proposed Evaporation Reporting Plan that identifies the methodology to be used to measure and document evaporative water losses from each of the proposed reservoirs. Measures to reduce annual evaporation losses from the reservoirs shall be implemented if monitoring indicates that annual losses exceed 31 acre feet per year. Future modifications to the operation or design of the project to reduce evaporative losses must be approved by P&D before such measures are implemented. The first Evaporation Reporting Plan report shall be submitted to P&D 30 days after the reservoirs have been in operation for one year. The Evaporation Plan reports shall be submitted annually to P&D for four years after the first report is submitted. The requirement to submit Evaporation Monitoring and Reporting reports may be discontinued after an initial five (5) year monitoring period if deemed warranted by the Planning & Development Director based on results of the previously submitted reports.



**Santa Barbara County
Air Pollution Control District**

Our Vision  Clean Air

June 28, 2017

Steve Rodriguez
Santa Barbara County
Planning and Development
624 W. Foster Road
Santa Maria, CA 93455

RECEIVED

JUL 05 2017

**SB COUNTY
PLANNING & DEVELOPMENT**

Re: APCD Suggested Conditions on North Fork Ranch Frost Ponds, 16CUP-00000-00005

Dear Mr. Rodriguez:

The Air Pollution Control District (APCD) has reviewed the referenced project, which consists of a request to construct and operate three frost ponds (water storage reservoirs) to provide frost protection at the North Fork Ranch Vineyard. Each reservoir would have a storage capacity of 49 acre feet and would occupy an area of approximately five acres. Grading consists of approximately 130,280 cubic yards (cy) of cut and 127,900 cy of fill to construct the three proposed reservoirs. The subject property, a 6,565-acre parcel zoned AG-II-100 and identified in the Assessor Parcel Map Book as APN 147-020-045 is located on the south side of State Highway 166, between Cottonwood Canyon Road and Schoolhouse Canyon Road about 9 miles west of the unincorporated community of New Cuyama.

Air Pollution Control District staff offers the following suggested conditions:

1. The State of California considers particulate matter emitted by diesel engines carcinogenic. Therefore, during project grading, construction, and hauling, construction contracts must specify that contractors shall adhere to the requirements listed in Attachment B to reduce emissions of particulate matter (as well as of ozone precursors) from diesel equipment. Recommended measures should be implemented to the maximum extent feasible.
2. All portable diesel-fired construction engines rated at 50 bhp or greater must have either statewide Portable Equipment Registration Program (PERP) certificates or APCD permits prior to grading/building permit issuance. Construction engines with PERP certificates are exempt from APCD permit, provided they will be on-site for less than 12 months.



ATTACHMENT B
DIESEL PARTICULATE AND NO_x EMISSION REDUCTION MEASURES

Particulate emissions from diesel exhaust are classified as carcinogenic by the state of California. The following is a list of regulatory requirements and control strategies that should be implemented to the maximum extent feasible.

The following measures are required by state law:

- All portable diesel-powered construction equipment shall be registered with the state's portable equipment registration program OR shall obtain an APCD permit.
- Fleet owners of mobile construction equipment are subject to the California Air Resource Board (CARB) Regulation for In-Use Off-Road Diesel Vehicles (Title 13, California Code of Regulations (CCR), §2449), the purpose of which is to reduce oxides of nitrogen (NO_x), diesel particulate matter (DPM), and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles. Off-road heavy-duty trucks shall comply with the State Off-Road Regulation. For more information, see www.arb.ca.gov/msprog/ordiesel/ordiesel.htm.
- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-Use (On-Road) Heavy-Duty Diesel-Fueled Vehicles (Title 13, CCR, §2025), the purpose of which is to reduce DPM, NO_x and other criteria pollutants from in-use (on-road) diesel-fueled vehicles. On-road heavy-duty trucks shall comply with the State On-Road Regulation. For more information, see www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm.
- All commercial off-road and on-road diesel vehicles are subject, respectively, to Title 13, CCR, §2449(d)(3) and §2485, limiting engine idling time. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to five minutes; electric auxiliary power units should be used whenever possible.

The following measures are recommended:

- Diesel equipment meeting the CARB Tier 3 or higher emission standards for off-road heavy-duty diesel engines should be used to the maximum extent feasible.
- On-road heavy-duty equipment with model year 2010 engines or newer should be used to the maximum extent feasible.
- Diesel powered equipment should be replaced by electric equipment whenever feasible.
- Equipment/vehicles using alternative fuels, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel, should be used on-site where feasible.
- Catalytic converters shall be installed on gasoline-powered equipment, if feasible.
- All construction equipment shall be maintained in tune per the manufacturer's specifications.
- The engine size of construction equipment shall be the minimum practical size.
- The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time.
- Construction worker trips should be minimized by requiring carpooling and by providing for lunch onsite.

Plan Requirements: All requirements shall be shown on grading and building plans and/or as a separate information sheet listing the conditions of approval to be recorded with the map. **Timing:** Requirements shall be shown on plans prior to grading/building permit issuance and/or recorded with the map during map recordation. Conditions shall be adhered to throughout all grading and construction periods.

MONITORING: Lead Agency shall ensure measures are on project plans and/or recorded with maps. Lead Agency staff shall ensure compliance onsite. APCD inspectors will respond to nuisance complaints.



PLANNING & DEVELOPMENT APPEAL FORM

SITE ADDRESS: _____ Highway 166 & Cottonwood Canyon Road _____

ASSESSOR PARCEL NUMBER: _____ 147-020-045 _____

Are there previous permits/applications? ☒ no ☐ yes numbers: _____
(include permit# & lot # if tract)

Are there previous environmental (CEQA) documents? ☐ no ☐ yes numbers: _____

1. **Appellant:** _____ Roberta Jaffe & Stephen Gliessman _____ Phone: _____ 831-818-2451 _____ FAX: _____

Mailing Address: _____ PO Box 215 _____ New Cuyama _____ CA _____ 93254 _____ E-mail: _____ robbiejaffe@gmail.com _____
Street City State Zip

2. **Owner:** _____ Matt Turrentine – Brodiaea, Inc _____ Phone: _____ 805-312-1828 _____ FAX: _____

Mailing Address: _____ PO Box 6565 _____ Santa Maria, CA 93455 _____ E-mail: _____
Street City State Zip

3. **Agent:** _____ Brian Tetley _____ Phone: _____ 805-312-1828 _____ FAX: _____

Mailing Address: _____ Urban Planning Concepts 2624 Airpark Dr. Santa Maria, CA 93455 _____ E-mail: _____
Street City State Zip

4. **Attorney:** _____ Phone: _____ FAX: _____

Mailing Address: _____ E-mail _____
Street City State Zip

COUNTY USE ONLY

Case Number
Supervisor
Applicable
Project Plan
Zoning Designation

17APL-00000-00017

JAFFE/GLIESSMAN APPEAL OF THE BRODIAEA

7400 HIGHWAY 166

10/2/17

CUYAMA

147-020-045

Companion Case Number: _____

Submittal Date: _____

Receipt Number: _____

Accepted for Processing

Comp. Plan Designation _____

x PLANNING COMMISSION: COUNTY MONTECITO

Case No. 16CUP-00000-00005

Date of Action October 2, 2017

I hereby appeal the x approval approval w/conditions denial of the:

_____ Board of Architectural Review – Which Board?

_____ Coastal Development Permit decision

Land Use Permit decision

_____ Planning Commission decision – Which Commission?

Planning & Development Director decision

 x Zoning Administrator decision

Is the appellant the applicant or an aggrieved party?

_____ Applicant

_____x_____ Aggrieved party – if you are not the applicant, provide an explanation of how you are and “aggrieved party” as defined on page two of this appeal form:

We appeared at both the Zoning Administrator hearing and the first hearing on the Mitigated Negative Declaration which took place in New Cuyama and spoke in opposition to this permit based on environmental concerns and those concerns were not addressed.

Reason of grounds for the appeal – Write the reason for the appeal below or submit 8 copies of your appeal letter that addresses the appeal requirements listed on page two of this appeal form:

- A clear, complete and concise statement of the reasons why the decision or determination is inconsistent with the provisions and purposes of the County's Zoning Ordinances or other applicable law; and
- Grounds shall be specifically stated if it is claimed that there was error or abuse of discretion, or lack of a fair and impartial hearing, or that the decision is not supported by the evidence presented for consideration, or that there is significant new evidence relevant to the decision which could not have been presented at the time the decision was made.

We are appealing this decision based on Finding # 1.2 and Finding #5. 1.2 states "there is no substantial evidence that the project will have a significant effect on the environment." #5 states: "the proposed project will not be detrimental to the comfort, convenience, general welfare, health and safety of the neighborhood and will be compatible with the surrounding area."

The permit request for these reservoirs is part of the whole vineyard development of converting over 1000 acres of dry range land to vineyards in the critically overdrafted basin of the Cuyama Valley. Brodiaea, Inc., a wholly owned subsidiary of Harvard Management Company (Harvard University's Endowment Fund) purchased 6500 acres of dry rangeland in 2014. In September 2014 the state of California signed into law the Sustainable Groundwater Management Act (SGMA). Under SGMA, the Cuyama Basin was identified as one of 21 critically overdrafted basins in California. In 2014 the Santa Barbara Board of Supervisors accepted the USGS 5-year groundwater study of the Cuyama Basin which identified the groundwater pumping of the main basin by agribusiness as the source of the depletion of groundwater in the Basin. The impacts of this overdraft include: continued overdraft of the aquifer; land subsidence; withdrawal of deep waters contaminated by heavy metals; continued degradation of surface vegetation and wildlife. Following the passage of SGMA, Brodiaea, Inc. drilled eleven agricultural wells based on ministerial permits from Santa Barbara County. The reservoirs offer the first opportunity for a full review of the project, yet they are being treated as a separate, piece meal project by the applicants.

As neighbors and farmers in Cottonwood Canyon, we disagree with the approval of the Mitigated Negative Declaration. This project represents major land use change from dry range land to heavily irrigated vineyard. In the past year this project has planted and irrigated over 1000 acres of grapes. During this same time period, Santa Barbara County has started monitoring wells in this region including ours. After our above average rainfall this past winter, it was expected that our well level would rise, instead it went down. We don't know if there is a direct connection to this project, but this needs to be determined before additional pumping to fill reservoirs can be said to not be "detrimental to the comfort, convenience, general welfare, health and safety of the neighborhood".

There can be multiple late spring frost events in this part of the Cuyama Basin. One event will drain all 3 reservoirs. Thus the amount of groundwater potentially pumped to refill the reservoirs is exponential at a time of year when the groundwater should be recharged.

There were multiple letters of concern submitted as public comment including one from the California Department of Fish and Wildlife. Yet none of these have been addressed to date.

Specific conditions imposed which I wish to appeal are (if applicable):

- a. _____
- b. _____
- c. _____
- d. _____

Please include any other information you feel is relevant to this application.

CERTIFICATION OF ACCURACY AND COMPLETENESS Signatures must be completed for each line. If one or more of the parties are the same, please re-sign the applicable line.

Applicant's signature authorizes County staff to enter the property described above for the purposes of inspection.

I hereby declare under penalty of perjury that the information contained in this application and all attached materials are correct, true and complete. I acknowledge and agree that the County of Santa Barbara is relying on the accuracy of this information and my representations in order to process this application and that any permits issued by the County may be rescinded if it is determined that the information and materials submitted are not true and correct. I further acknowledge that I may be liable for any costs associated with rescission of such permits.

Print name and sign – Firm

Date

Roberta Jaffe

10/2/17

Print name and sign - Preparer of this form

Date

Stephen Copiessman

2 Oct 17

Print name and sign - Applicant

Date

Print name and sign - Agent

Date

Print name and sign - Landowner

Date

Attachment 7

6.0 RAINFALL

County-wide 2016 water-year* rainfall average was 70% of normal.

Rainfall Location	ID	Year*	% of Norm.
Buellton (Fire Stn)	233	10.75	65%
Cachuma Dam (USBR)	332	11.71	60%
Carpinteria (Fire Stn)	208	10.11	55%
Cuyama (Fire Stn)	436	7.58	102%
Figueroa Mtn (USFS Stn)	421	17.89	85%
Gibraltar Dam (City Facility)	230	13.08	50%
Goleta (Fire Stn-Los Carneros)	440	11.10	61%
Lompoc (City Hall)	439	11.69	83%
Los Alamos (Fire Stn)	204	11.79	78%
San Marcos Pass (USFS Stn)	212	20.58	63%
Santa Barbara (County Bldg)	234	11.70	64%
Santa Maria (City Pub. Works)	380	8.99	69%
Santa Ynez (Fire Stn /Airport)	218	10.19	66%
Sisquoc (Fire Stn)	256	12.05	81%

County-Wide Year End Rainfall Percentage: 70%

Table 2 – County WY2016 Rainfall
*Water-Year runs from Sept. 1st to Aug. 31st

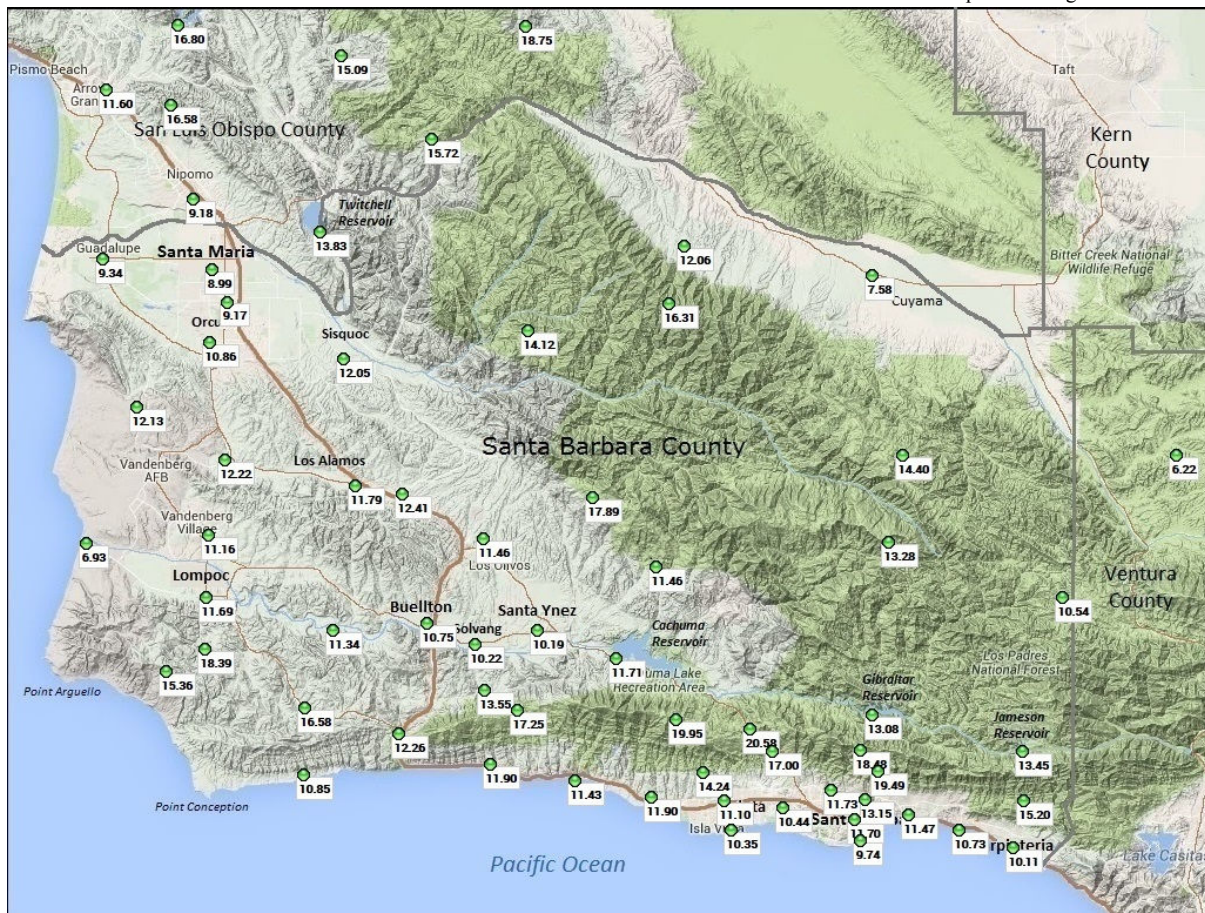


Figure 16 – County Wide WY2016 Rainfall Map

County of Santa Barbara Groundwater Basins Status Report



**Public Works Department
Water Resources Division
*Water Agency***

130 East Victoria Street
Santa Barbara, CA 93101
(805) 568-3440

October 14, 2014

On the cover (clockwise from top right):

Bales of alfalfa in the Cuyama Valley

Example of a groundwater production well

Lettuces grown in the Santa Maria Valley

County of Santa Barbara Groundwater Basins Status Report

Public Works Department Water Resources Division *Water Agency*

130 East Victoria Street
Santa Barbara, CA 93101
(805) 568-3440
www.countyofsb.org/pwd/water

October 14, 2014

Board of Supervisors

First District - Salud Carbajal
Second District - Janet Wolf, Vice Chair
Third District - Doreen Farr
Fourth District - Peter Adam
Fifth District - Steve Lavagnino, Chair

Mona Miyasato, County Executive Officer

Report Prepared By

Matt Naftaly, P.H., Water Agency Manager
Fray A. Crease, Senior Program Specialist

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County of Santa Barbara

Groundwater Basins Status Report

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Figure 4:	South Coast Groundwater Basins Map
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TABLES:

Table 1:	Major Groundwater Basins Status
Table 2:	CASGEM Basin Monitoring Summary
Table 3:	Santa Barbara County Water-Year Rainfall Comparison
Table 4:	State Water Project Table A and 5% Deliveries
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APPENDIX A:

Figure A1-A5:	South Coast Groundwater Basins Hydrographs
Figure A6-A12:	Santa Ynez River Watershed Groundwater Basin Hydrographs
Figure A13-A23:	Lompoc Groundwater Basin Hydrographs
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APPENDIX B:

Table B1:	Historical Water Level Comparison
Figure B1-B5:	South Coast Groundwater Basins Level Comparison
Figure B6-B12:	Santa Ynez River Watershed Groundwater Basin Level Comparison
Figure B13-B23:	Lompoc Groundwater Basin Level Comparison
Figure B24-B27:	San Antonio Valley Groundwater Basin Level Comparison
Figure B28-B35:	Santa Maria Groundwater Basin Level Comparison
Figure B36-B39:	Cuyama Valley Groundwater Basin Level Comparison

Introduction

By some measures, the last three years have constituted the most severe drought of modern record, both locally and state-wide. On January 17, 2014 the Governor of California declared a State of Emergency due to drought conditions and the Santa Barbara County Board of Supervisors followed with a local emergency for Drought and Water Supply Conditions on January 21, 2014. On June 17, 2014 the County Drought Task Force presented to the Board of Supervisors a status report on the ongoing county-wide drought and water supply status. At that time, the Water Agency was directed to produce an expedited report on the status of local groundwater basins. This interim report is produced a year ahead of the usual groundwater report triennial cycle mandated by the Board of Directors in 2006. A full report will be produced in accordance with the Santa Barbara County Comprehensive Plan and submitted to the Board of Directors of the Water Agency in the spring of 2015.

This report discusses the status of the County's groundwater basins as it relates to the recent drought. There is a section on the development of the current drought and compares it to other dry periods of record. Table 1 summarizes each basin's characteristics and what is known about its status in regard to the balance of groundwater recharged and groundwater removed. Appendix A contains hydrographs for representative wells in each basin. From these it is possible to examine water levels for the recent dry period and throughout the period of record. Appendix B contains water level comparisons for each hydrograph well showing in graphical and tabular format how recent water levels compare to those throughout the period of record.

Terminology

A brief explanation of the terminology used in this report is needed since some of the technical terms may not be familiar to the reader and some of the terms used in the field of groundwater are now changing or becoming obsolete. For example, the term *overdraft* is used herein to describe a basin in which the rate of water leaving a basin exceeds that entering it over a long period of time. It should be noted that in using the term it is recognized that basins are similar to reservoirs in that greater extractions may result in lower groundwater levels but also in greater yields due to the ability to capture more water. *Recharge* is the sum of water entering the aquifer from direct percolation of rainfall, seepage from streams or rivers, return flows from irrigation, and artificial replenishment. An *acre-foot* is a unit of volume equal to the volume of a sheet of water one acre in area by one foot in depth, or 43,560 cubic feet.

Within the appendices, the hydrographs showing groundwater levels are labeled using *water surface elevation (WSEL)* which is the elevation of the groundwater above (or in some cases below) an established reference level, which in this case is *mean sea level (MSL)*. Each well's *land surface elevation* is indicated as the elevation in feet of the well's measuring point.

WSEL is determined by subtracting the measured depth to water from the land surface elevation. Similarly, depth to water below the land surface is determined by subtracting *WSEL* from *Land Surface Elevation (LSE)*.

Summary and Conclusions

Depending on their geologic and hydrologic characteristics, groundwater basins may be slow to react to changing climatological and land use conditions. Wet periods and heavy rainfall may take many years to become recharge in groundwater aquifers and be reflected in groundwater elevation measurements. Conversely, a well may recover with discontinued pumping even during a period of drought. However, recent groundwater elevation monitoring shows that many of the County's groundwater basins appear to be responding to the recent dry conditions with lowered water elevations over the last few years. Accordingly, many groundwater elevation measurements taken this year are the lowest of record. It is expected that groundwater levels in many parts of the County will continue to decline in response to the dry period now occurring. Continued drought conditions into the future would of course prolong and exacerbate groundwater impacts. Table 1 shows the County's Groundwater Basin characteristics and supply status.

In general, most South Coast basins are either managed or adjudicated and all have multiple water sources with which to conjunctively manage groundwater. Previous studies indicate that South Coast basins are in a state of long term balance or surplus. Groundwater basins of the Santa Ynez River Valley vary in their status and response to the drought. The Santa Ynez Uplands Basin supply is notably impacted by new Chromium 6 standards. The Santa Ynez Alluvial Groundwater Basin is subject to water rights agreements and therefore less subject to climate related trends. The Buellton Uplands Basin wells show a distinct lowering of water level since the beginning of the drought but the basin was previously determined to be in a long-term state of surplus. Groundwater within the Lompoc Plain is also managed in accordance with Water Rights Decisions. Some hydrographs from the Lompoc Uplands Groundwater Basin (including the Santa Rita Sub-area) show 2014 water levels that are the lowest of record. Past studies indicate that the Lompoc Uplands Basin is in a state of overdraft.

Wells of the San Antonio Valley Groundwater Basin have shown a recent response to dry conditions. Past studies have indicated that the basin is in overdraft. The Santa Maria Groundwater Basin is one of two adjudicated basins in Santa Barbara County and as such, water management is largely dictated by the courts. Recent water levels there are declining but the basin has been determined to not be in a State of overdraft. Cuyama Valley Groundwater Basin was the subject of a recently completed detailed study which concluded that the basin as a whole is in a state of significant overdraft and water levels in most parts of the basin have been declining for decades.

Table 1: Major Groundwater Basins Status

Groundwater Basin (south to north)	Size (sq. mi)	Users	Estimated “Usable” Water in Storage ^{1,2}	Annual Draw	Annual Surplus/Overdraft	Reference
Carpinteria	10	Farmsteads, Agriculture, Carpinteria Valley Water District	16,000	3,750	125	Carpinteria Water District, U.S. Geological Survey
Montecito (Includes Toro Canyon)	7	Farmsteads, Limited Agriculture, Montecito Water District	16,100	500	0	Montecito Water District, County Water Agency
Santa Barbara	7	City of Santa Barbara, Limited Agriculture	10,000	500	2000	USGS, City of Santa Barbara and County Water Agency
Foothill	5	Farmsteads, Limited Agriculture, City of Santa Barbara	5,000	1,000	Managed by City of Santa Barbara	USGS WRI 89-4107
Goleta (West and North-Central)	14	Farmsteads, Agriculture, Goleta Water District, La Cumbre Mutual Water Co.	70,000	4,000	Adjudicated	Goleta Water District
Santa Ynez Uplands	130	Farmsteads, Agriculture, SYRWCD ID#1	900,000	11,000	(2,028)	County Water Agency
Santa Ynez River Alluvial Corridor (includes Santa Rosa Area)	19	Farmsteads, Agriculture, City of Solvang, City of Buellton	90,000	1,000	0	USGS WSP 1107, County Water Agency
Buellton Uplands	26	Farmsteads, Agriculture, City of Solvang	154,000	2,000	800	County Water Agency
Lompoc Basins (includes Terrace, Plain, Uplands (Uplands includes Santa Rita Area))	77	Farmsteads, Agriculture, VVCSD, MHCSD, City of Lompoc, VAFB	170,000	28,000	Terrace not used, Plain managed by WRD 89-18, Uplands (913), (mostly Santa Rita sub area)	U.S. Geological Survey, County Planning Department
San Antonio	110	Farmsteads, Agriculture, VAFB, Los Alamos CSD	800,000	15,000	(9,540)	County Water Agency
Santa Maria	170	Farmsteads, Agriculture, City of Santa Maria, Golden State Water Co. (Orcutt)	1,100,000	130,000	Adjudicated	Adjudication Annual Report, County Water Agency
Cuyama	230	Farmsteads, Agriculture, Ventucopa, New Cuyama CSD	1,500,000	65,000	(29,900)	County Water Agency, USGS SIR 2013-5108

¹ All Amounts listed are *Acre-Feet*

² “*Useable*” or “*working*” water in storage generally denotes that which is above sea level and also above the bottom of the deepest water wells constructed in that specific area

This Update and Future Reports

In order to best present information directly pertinent to the drought as it relates to groundwater, this update varies from the format of the triennial report. Additional information and background not contained in this update can be found in the *Santa Barbara County, 2011 Groundwater Report* received by the Board on May 1, 2012.

This update contains a discussion of the current drought and precipitation as it pertains to groundwater use and recharge. It also presents groundwater measurements and elevation trends for representative wells within the County's groundwater basins. Hydrographs (graphical representations of groundwater elevations) are provided to examine relationships between recent water levels and drought conditions. In order to put the information in the context of water supply, the update provides estimates of useable storage and annual withdraw amounts for major basins (Table 1). It should be noted that groundwater elevations may take up to several years to respond to climatic conditions due to the time it takes for recharge to make its way to the main aquifers. This "lag time" is greatest in areas of deep water and low permeability geologic formations. In cases where lack of alternative supplies have prompted increases in groundwater withdraws, the relationship between dry conditions and groundwater level declines may be more quickly apparent.

As stated in the triennial report,

The information and conclusions contained in this report reflect data developed by the Water Agency and data contained in [other] documents and reports... The Water Agency recognizes that other individuals/agencies might reach different conclusions based on different sources of data or interpretations. This report draws on the best available information, in some cases referencing conclusions from studies conducted over a decade ago. It is recognized that basin conditions may change with changes to water supply, land use, and other factors. Efforts have been made to consider the validity of the conclusions from the reports referenced and adjustments have been made where appropriate. In addition, information from more recent studies is included where applicable and sources of new information are noted in the text.

The importance of groundwater as a resource and the lack of up to date groundwater analyses has prompted the Water Agency to propose periodic in-depth studies of the County's major basins. The Cuyama Valley Water Availability Study is now complete and was brought to the Board of Directors September 9, 2014. In addition, the Water Agency is in the process of informing stakeholders and soliciting comments on an in-depth study of the San Antonio Valley water resources. Staff will return to the Board of directors for direction on the San Antonio Study. More information on these studies is available online at http://ca.water.usgs.gov/user_projects/cuyama/ and <http://www.countyofsb.org/sanantoniogwb/>.

Groundwater Monitoring Programs

Santa Barbara County/United States Geological Survey Cooperative Program

In a cooperative program with the USGS, the Water Agency monitors over 300 groundwater wells annually throughout the County. As part of this program, groundwater quality is also monitored from a limited number of wells. The program provides vital data for tracking groundwater trends and conducting groundwater studies. This cooperative program has been in place for several decades and most of the data is available at <http://waterdata.usgs.gov/nwis/gw>. Other County agencies have similar programs with the USGS for their areas of jurisdiction or make groundwater measurements of their own.

California Statewide Groundwater Elevation Monitoring

In 2009, the California legislature passed SBx7-6, the California Statewide Groundwater Elevation Monitoring Program (CASGEM) which mandates that local agencies track seasonal and long term trends in groundwater elevations in all State designated groundwater basins. Local entities that are eligible to be the designated monitoring entity for any basin within their jurisdiction but do not perform that function may be ineligible for State grants or loans. The Water Agency is the designated monitoring entity for three of the County's major groundwater basins. These and other basins monitored are shown in Table 2.

Table 2: CASGEM Basin Monitoring Summary

CASGEM Basin Summary				
Basin No.	Basin Name	2010 Population	Basin Priority	Monitoring Entity
3-13	Cuyama	1,236	Medium	County Water Agency
3-12	Santa Maria	201,759	High	Twitchell Mgmt Authority
3-14	San Antonio	2,279	Medium	County Water Agency
3-15	Santa Ynez	75,460	Medium	County Water Agency
3-16	Goleta	47,252	Medium	Goleta Water District
3-53	Foothill	17,543	Very Low	City of Santa Barbara
3-17	Santa Barbara	63,966	Very Low	City of Santa Barbara
3-49	Montecito	9,885	Very Low	N/A
3-18	Carpinteria	14,561	Very Low	Carpinteria Valley Water District

Pending Groundwater Legislation

The California Legislature recently adopted significant legislation requiring the study and management of California groundwater basins. (Assembly Bill 1739 (Dickinson) and Senate Bill 1168 and 1319(Pavley) (2014).) The groundwater legislation allows about five years for the development of sustainable groundwater management plans for all basins within

the State that are designated as high or medium priority by the Department of Water Resources.

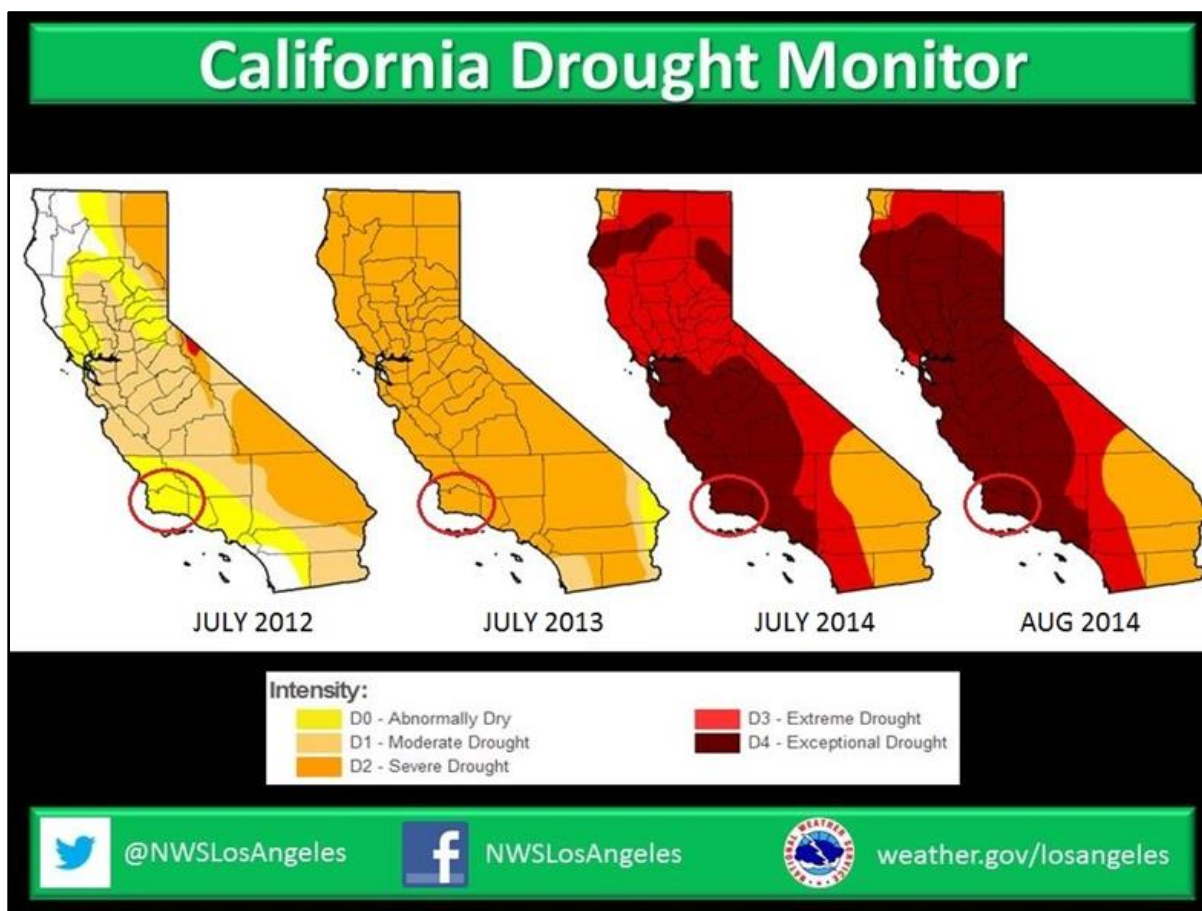
For the purposes of the legislation, sustainability is generally defined as the avoidance of significant economic, social, or environmental impacts. Local entities would be granted the authority to develop plans, collect water extraction data, collect fees, and establish a water allocation system. If local agencies are unable or unwilling to perform these tasks, the State could do so. It is possible that eligible local entities that do not perform this function may lose eligibility for some or all State grant and loan programs.

Climate and Drought

Rainfall in California during the last few years has been significantly below normal. The National Weather Service (NWS-NOAA) issued a “California Drought Monitor” graphic depicting the increased severity of drought conditions within California since 2012 (Figure 1).

The most elevated drought intensity classification (Exceptional Drought) was assigned to Santa Barbara County in July & August 2014 along with other areas of California.

Figure 1: California Drought Monitor



Local Drought Conditions

Santa Barbara County has also been impacted by drought conditions. Figure 2 shows Santa Barbara County-wide rainfall as a percent of normal since the year 2000. It is notable that 2012, 2013, and 2014 constitute the driest three year period ever recorded in Santa Barbara County. In addition, annual rainfall during the current drought period is the lowest ever recorded for many locations in the County (Table 3).

Figure 3, is a three year running average of rainfall at Gibraltar Reservoir. Rainfall at Gibraltar Reservoir is indicative of potential for inflow to the three reservoirs in the Santa Ynez River Watershed which constitute a major supply source for the County's south coast and Santa Ynez Valley. A running average more clearly shows wet and dry trends. Figure 3 shows the severity of the current dry trend.

Figure 2: County Wide Percent of Normal Rainfall

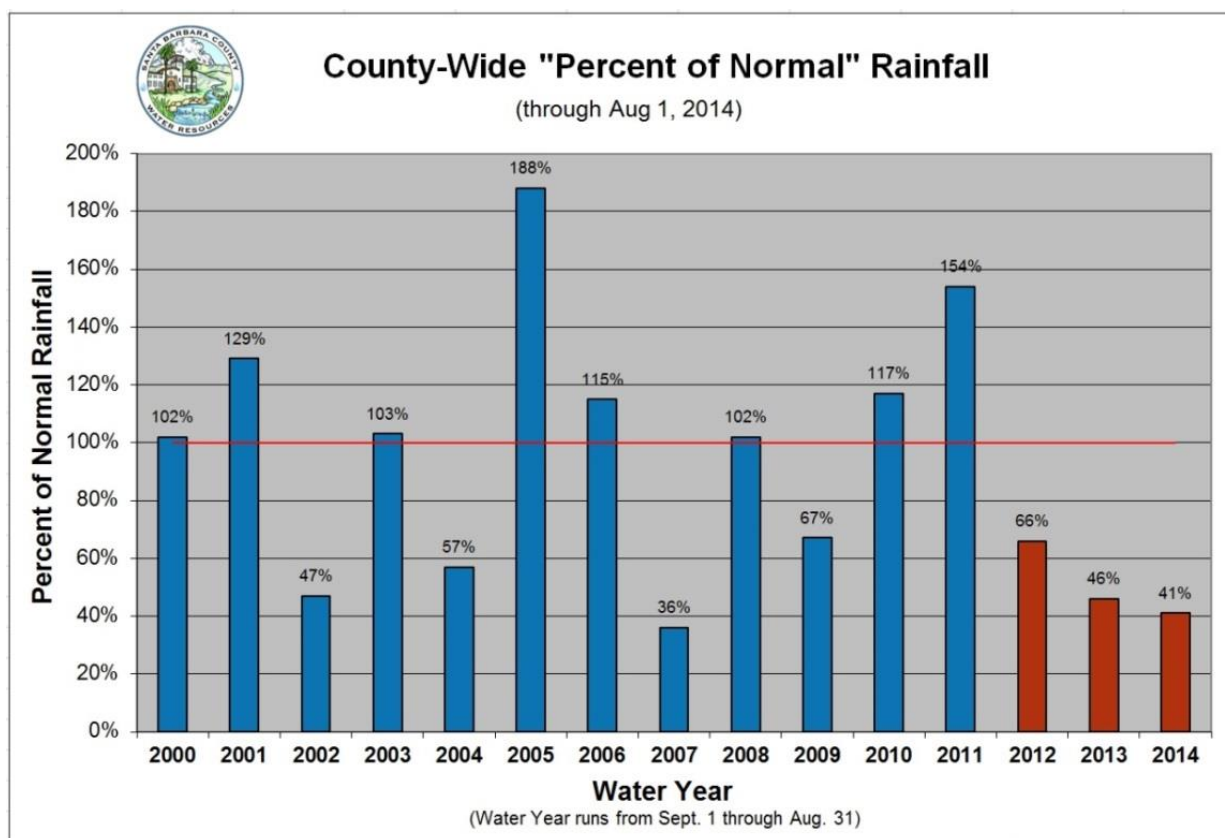
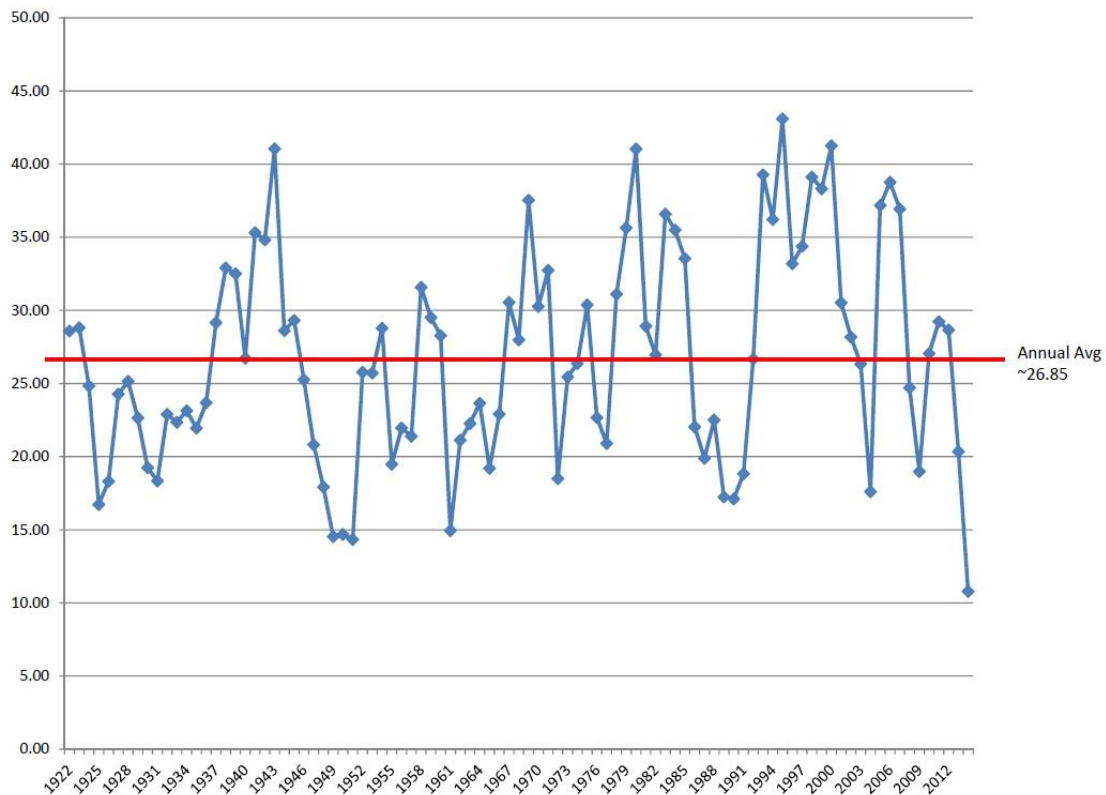


Table 3: Santa Barbara County Water-Year Rainfall Comparison

<div>  Santa Barbara County Water-Year Rainfall Mean, Extremes, 2014, 2013, 2012 </div>						
Location	Mean Annual Rainfall	Minimum Annual Rainfall	Maximum Annual Rainfall	WY 2014 Rainfall	WY 2013 Rainfall	WY 2012 Rainfall
Buellton	17.16"	5.87" (2014)	41.56" (1998)	5.87"	7.79"	11.54"
Cachuma	20.19"	7.33" (2007)	53.37" (1998)	10.49"	7.87"	13.43"
Carpinteria	19.57"	5.83" (2014)	51.48" (1998)	5.83"	8.33"	9.83"
Cuyama	7.80"	1.71" (2014)	19.78" (1998)	1.71"	2.32"	5.09"
Gibraltar	26.74"	8.50" (2013)	73.12" (1998)	11.88"	8.50"	13.54"
Goleta	18.77"	6.88" (2014)	47.93" (1983)	6.88"	11.03"	13.60"
Lompoc	14.74"	5.31" (2007)	34.42" (1983)	7.18"	7.25"	10.62"
Los Alamos	15.44"	5.38" (1924)	36.23" (1998)	6.26"	6.31"	10.56"
San Marcos Pass	34.99"	10.90" (2007)	87.95" (1983)	12.04"	17.96"	18.66"
Santa Barbara	18.55"	6.41" (2007)	46.97" (1998)	8.06"	8.98"	11.62"
Santa Maria	13.77"	4.95" (2014)	32.61" (1998)	4.95"	6.52"	9.49"

Figure 3: Gibraltar Dam 3-Year Running Average Rainfall



Water Supplies

Many local water supplies have been severely reduced due to drought conditions. Storage within Cachuma, Gibraltar, and Jameson Reservoirs is currently at 31 percent, 21 percent, and 24 percent of capacity, respectively. State Water Project (SWP) allocation for 2014 was initially reduced to zero before being increased to 5 percent of Table A amounts (Table 4). Although cloud seeding effectively raises long term water availability, it is of little effect during drought conditions when there are few seed-able storm events.

During drought periods, groundwater supplies may be negatively impacted by several factors. Natural recharge to aquifers is reduced or eliminated during dry years. In addition, agriculture and landscaping that is irrigated with groundwater may require increased groundwater extraction due to the lack of irrigation from natural rainfall. Water purveyors that rely on groundwater as one of, or the only water supply source may be forced to increase extractions to compensate for the reduction in other supplies. The combined effect of such conditions is increased stress on groundwater basins with resultant lowering of groundwater levels.

Table 4: State Water Project Table A and 5% Deliveries

State Water Project and 5% Deliveries in Santa Barbara County (AFY)			
Project Participant	SWP Allocation	Drought Buffer	5% Deliveries
City of Santa Maria	16,200	1,620	810
Golden State Water Company	500	50	25
City of Guadalupe	550	55	28
Vandenberg Air Force Base	5,500	550	275
City of Buellton	578	58	29
City of Solvang	1,500	0	75
Santa Ynez River Water Conservation District ID#1	500	200	25
Raytheon Infrared Operations	50	5	3
Morehart Land Company	200	20	10
La Cumbre Mutual Water Company	1,000	100	50
Goleta Water District**	4,500	450*	225
City of Santa Barbara	3,000	300	150
Montecito Water District	3,000	200	150
Carpinteria Valley Water District	2,000	200	100
Total:	39,078	3,908	1,954

***Goleta has an additional 2,500 AFY of drought buffer, in addition to its 450 AFY, Drought buffer does not have a pipeline or treatment plant capacity associated with it, thus it serves for increased reliability only*

Groundwater Basin Status

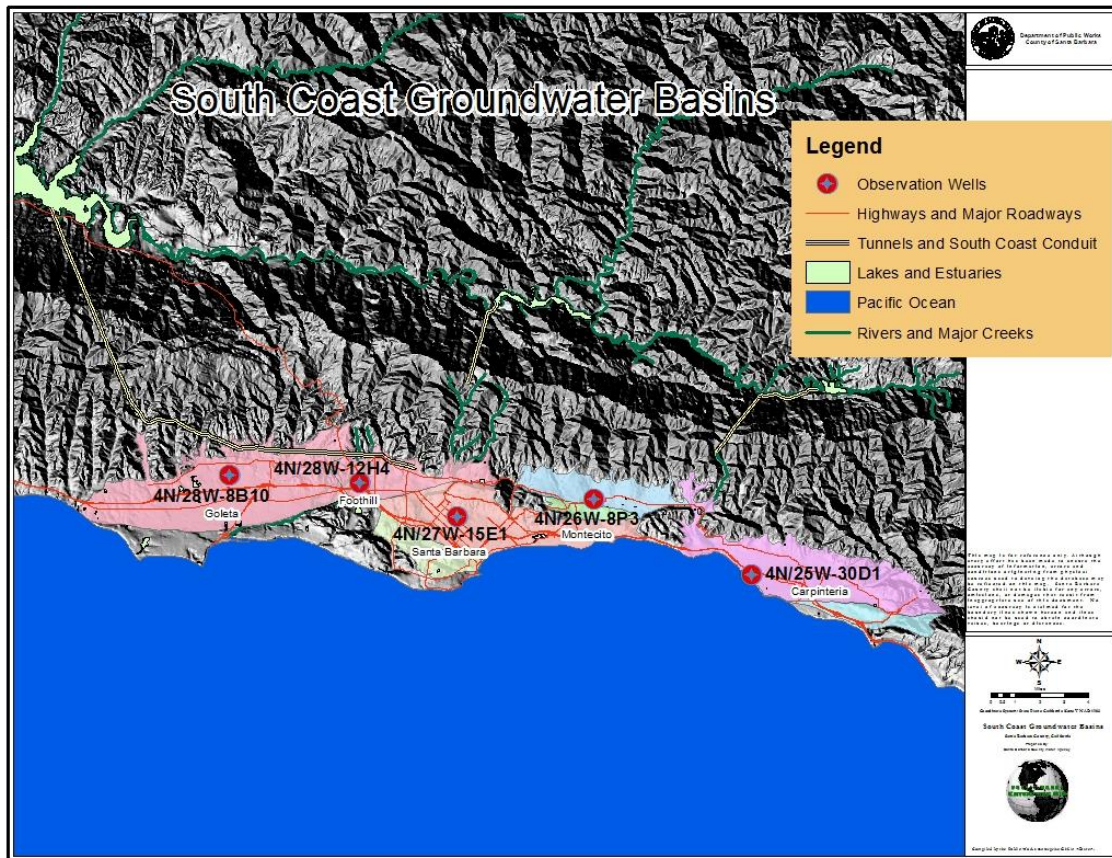
The triennial groundwater report is designed to provide an overview of the groundwater basins, their history, characteristics, and status. For additional information, please refer to the 2011 groundwater report. This update is intended to provide information more specific to the drought conditions of the last few years. Review of this information generally shows a wide spread, short term response of the County's groundwater to the recent drought conditions. However, the exact cause of the response and the long term implications are not necessarily known without further detailed study. Table B1 shows selected groundwater level comparisons of the current drought period to historic levels. Table 5 shows the status of groundwater management plans for the County's major basins.

Table 5: Groundwater Management Plans Status

Groundwater Management Plans Status			
Basin	Public Agency Participants ¹	Status	Year
Buellton Uplands	Santa Ynez River WCD, City of Buellton	Plan Adopted	1995
Carpinteria	Carpinteria Valley WD	Plan Adopted	1996
Foothill	City of Santa Barbara	Plan Adopted	1994
Goleta	Goleta WD	Court Action ²	1989
Goleta	Goleta WD, La Cumbre Mutual Water Co.	Plan Adopted	2010
Lompoc	City of Lompoc	Plan Adopted	2013
Montecito	Montecito WD	Plan Adopted	1998
Santa Barbara	City of Santa Barbara	Plan Adopted	1994
Santa Maria Valley	City of Santa Maria, Santa Maria Valley WCD, Cal Cities	Plan Adopted	1995
Santa Maria Valley	City of Santa Maria, Santa Maria Valley WCD, Cal Cities	Court Action ³	2005
¹ Other participants include private water companies and overlying property owners			
² The "Wright Suit" Settlement stipulates management actions in the North and Central sub-basins			
³ Stipulation Agreement, California Superior Court, County of Santa Clara requires annual reporting on the conditions of the Santa Maria Valley Management Plan			

South Coast Groundwater Basins

Figure 4: South Coast Groundwater Basins Map



The major South Coast Groundwater Basins include from East to West: Carpinteria, Montecito, Santa Barbara, Foothill, and the Goleta Groundwater Basins (Figure 4). These are generally comprised of unconsolidated alluvial material located between the Santa Ynez Mountains and the Pacific Ocean. In many cases, the location of the salt water/fresh water interface is unknown making salt water intrusion a concern with lowering water levels or increased pumping along the coast. In some areas such as the west beaches of Santa Barbara, “sentry” wells are monitored for early indication of salt water intrusion. Of note is that the actual boundaries between some of these basins may be inferred or assigned where direct physical evidence is missing. The most recent analyses of these basins show them to be in balance or with a slight surplus over the long term (Table 1).

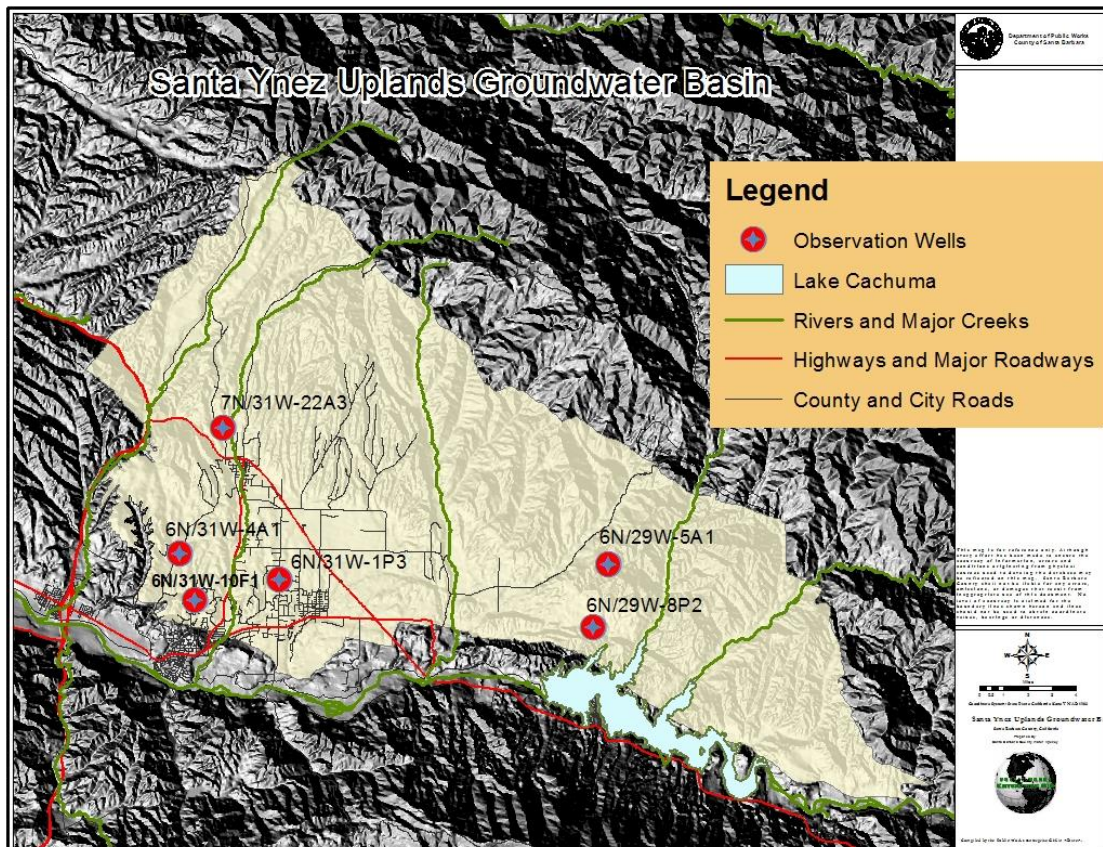
Typical hydrographs from the Carpinteria Basin show lowering of groundwater in the last few years but levels remain well within the highs and lows previously recorded. The hydrograph from the Montecito Basin shows a consistent decline over the period of record (since the early 1960s) and, with the exception of a couple of data points which may not reflect accurate measurements, shows a historic low water elevation. The hydrograph selected for the Santa Barbara Basin shows recent groundwater levels not much lower than previous highs. The

2014 measurement was higher than that of the previous year and nearly equal to that for 2012. A diverse water portfolio and significant control of the basin has allowed the City of Santa Barbara to manage the basin to avoid significant declines since the early 1990s.

Groundwater from the Foothill Basin, located to the Northwest of the City of Santa Barbara, is utilized by the City of Santa Barbara, La Cumbre Mutual Water Company, and private landholders. The Foothill hydrograph shows a pattern similar to that of the Santa Barbara Groundwater Basin of recovery during the 1990s except that water levels have consistently declined since mid-2000 and the 2014 measurement is within a foot or two of the lowest of record. The Goleta Groundwater Basin is one of two adjudicated basins in the County (Wright Vs. Goleta Water District, 1985). As such, there are requirements for its management and water extractions. In general, the hydrograph shows consistent basin recovery beginning in the early 1990s. Water levels have consecutively declined since 2012.

Santa Ynez River Watershed Groundwater Basin

Figure 5: Santa Ynez Uplands Groundwater Basin Map



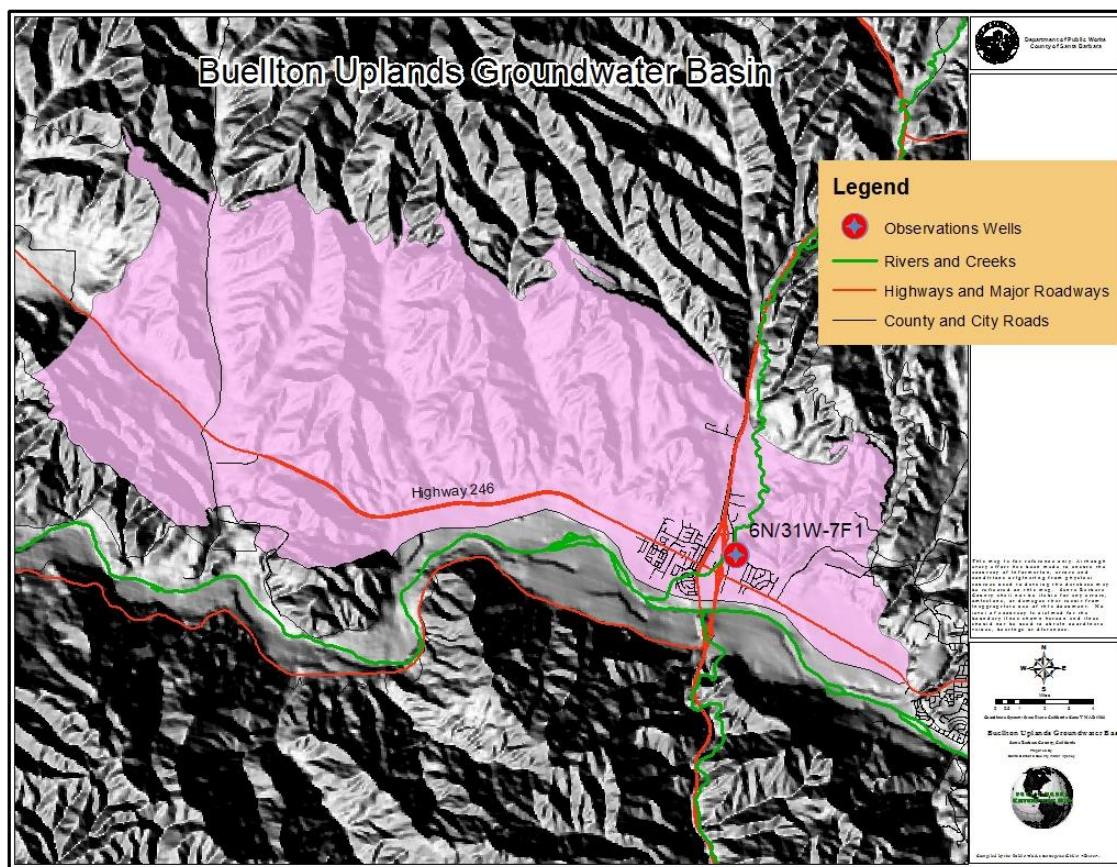
The major groundwater basins within the Santa Ynez River Watershed are, from east to west: Santa Ynez Uplands, Santa Ynez River Alluvial, Buellton Uplands, Lompoc Uplands, Lompoc Plain, and Lompoc Terrace Basins. These basins are adjacent to the Santa Ynez River and

lie between the San Rafael Mountains to the North and east and the Santa Ynez Mountains to the South. Each basin is affected to some extent by water rights agreements and Cachuma Reservoir operations. Primary among these is the Water Rights Order 89-18 and the 2000 Biologic Opinion from the National Marine Fisheries Service.

Water use within the Santa Ynez Uplands Groundwater Basin is primarily for agriculture though there is also urban use within portions of the basin supplied by Santa Ynez Water Conservation District ID#1. Appendix A includes two hydrographs from the Santa Ynez Uplands Groundwater Basin which shows water levels above those of historic lows. However, recent lowering of the Chromium 6 standards has led to great concern over the usability of water within the basin.

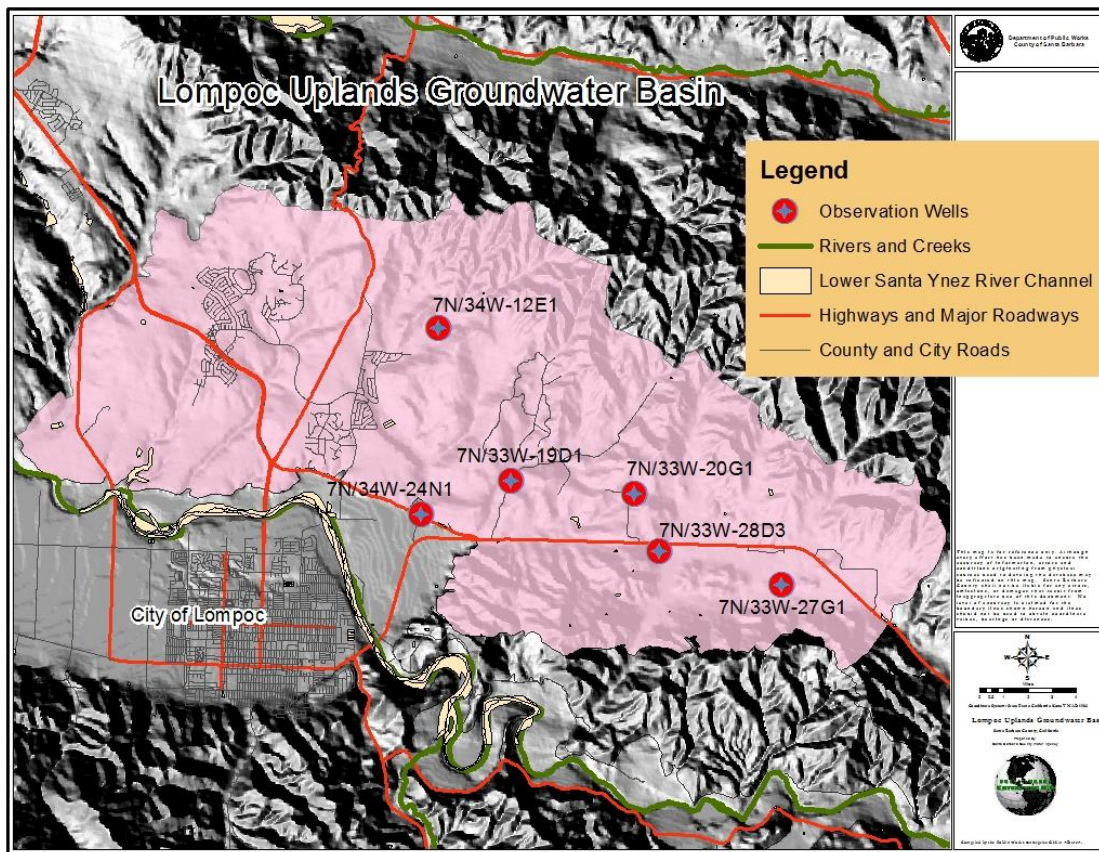
Groundwater within the Santa Ynez River Alluvial Basin is managed in accordance with Water Rights Decision 89-18. Therefore, water levels fluctuate in response to water available according to the Decision. To date, there is still water available for replenishment of the Water Rights account. In past studies, the Buellton Uplands Groundwater Basin was found be in a state of surplus. Sample hydrographs from the Buellton Uplands however show water levels for 2014 that are the lowest of record.

Figure 6: Buellton Uplands Groundwater Basin Map



Lompoc Groundwater Basin

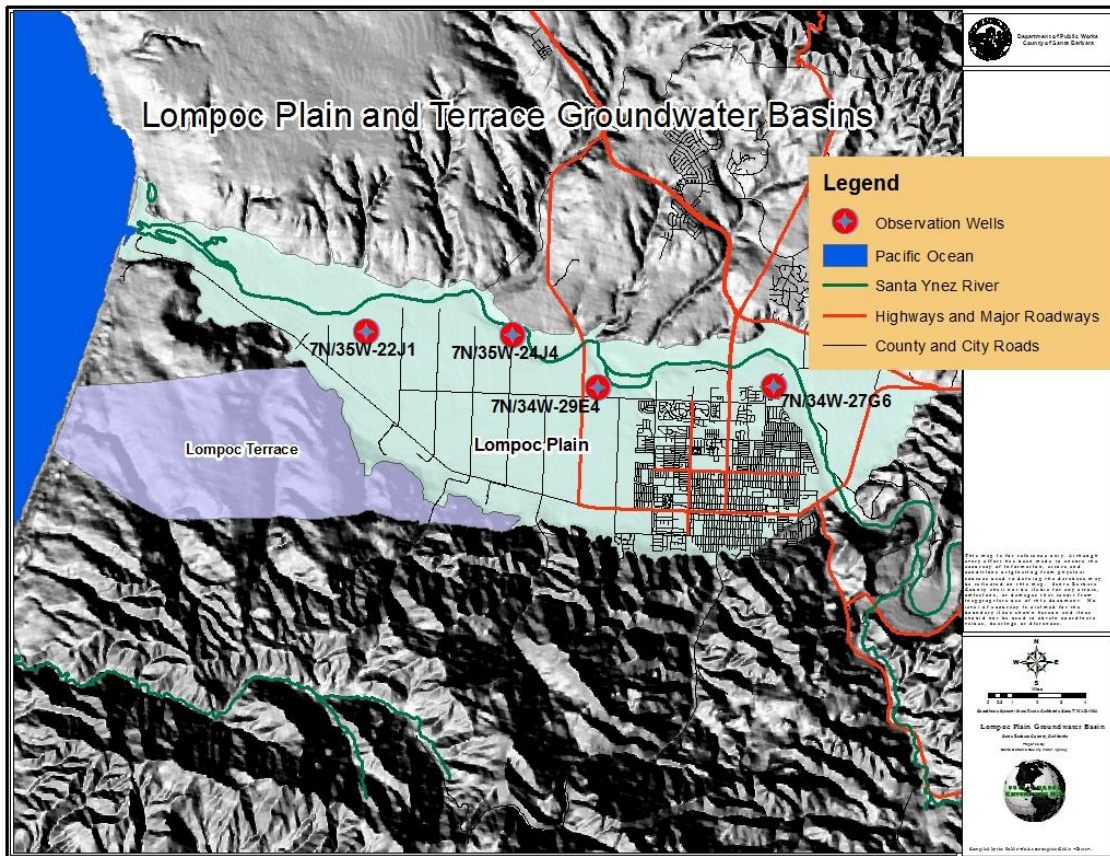
Figure 7: Lompoc Uplands Groundwater Basin Map



In Lompoc area basins, many hydrographs show consecutive years of decline in water surface elevation in the last few years. The water elevation in some wells is currently lower than any previously recorded. Groundwater within the Lompoc Plain is managed in accordance with Water Rights Decision 89-18. Therefore, water levels would not be expected to decline in response to climate but in response to the water available according to the Decision. In fact, water levels in wells from the Lompoc Plain are generally not the lowest of record and show only modest declines in recent years most likely due to releases from Cachuma.

Some hydrographs from the Lompoc Uplands Groundwater Basin (including the Santa Rita Sub-area) show 2014 water levels that are the lowest of record. Others not exhibiting this trend have not been pumped for several years due to water quality or other issues. The Lompoc Uplands Groundwater Basin has been determined to have a long term overdraft of around 900 acre feet per year (AFY).

Figure 8: Lompoc Plain and Terrace Groundwater Basin Map



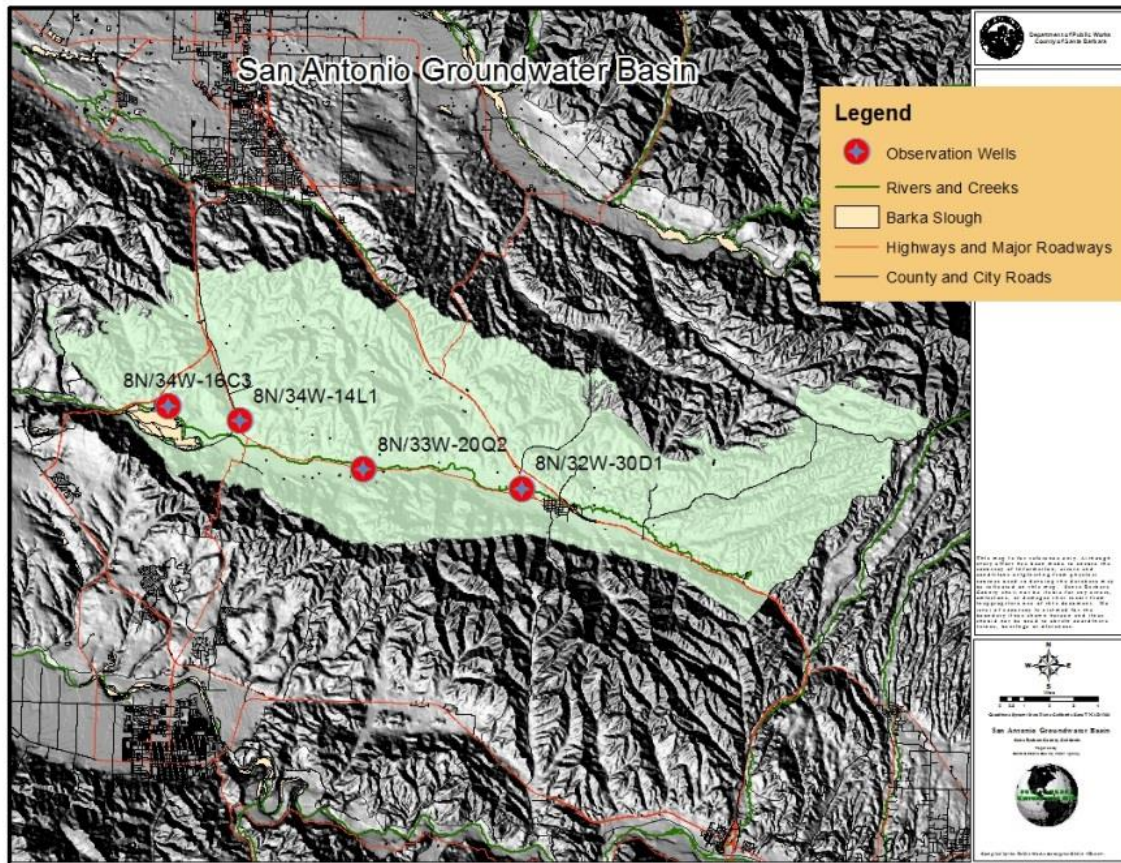
San Antonio Valley Groundwater Basin

The San Antonio Groundwater Basin is located mid County and is about 30 miles in length from east to west. Rock units surfacing at the west end of the basin force water to the surface creating Barka Slough and eliminating the possibility of salt water intrusion into the aquifer. All water used within the San Antonio Valley is from the groundwater basin. Vandenberg Air Force Base (VAFB) uses water from the San Antonio Basin in addition to its State Water allocation to meet the Base's water demand. The vast majority of water demand within the basin is from agriculture, a major component of which is viticulture. The basin also supplies ranching operations and the urban water demand of the town of Los Alamos. Historic studies have indicated an overdraft of about 9,500 AFY in the basin (Appendix A and Table 1).

The Water Agency has proposed a detailed study of the San Antonio Basin similar to that conducted in the Cuyama Groundwater Basin and received by the Board of Directors on September 9, 2014. Staff will return to the Board of directors for direction on the San Antonio Study.

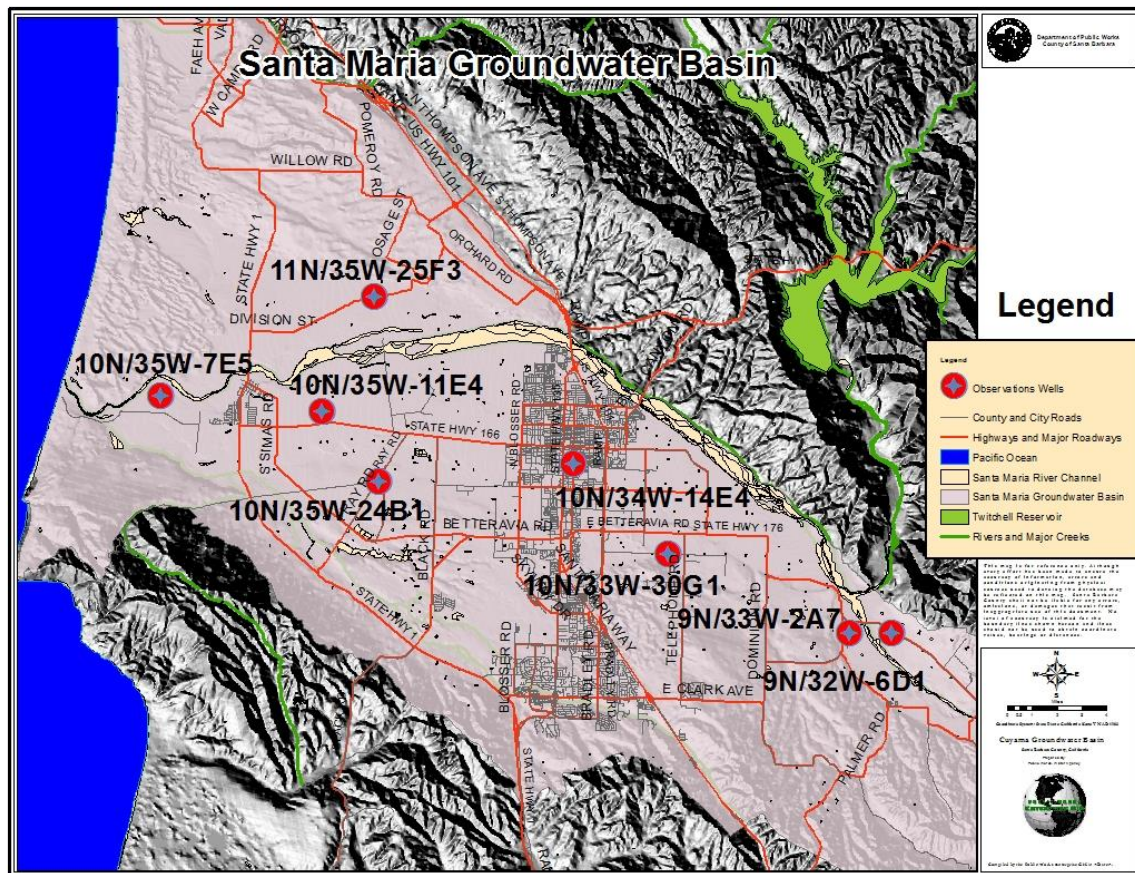
Appendix A includes four hydrographs for the San Antonio Basin. Well Numbers 16C3, 14L1, 20Q2, and 30D1 are located in Barka Slough, Northwest part of the basin, mid basin, and west of Los Alamos, respectively. Although each has a distinct hydrograph, there are some trends in common. For example, the wells tended toward recovery around 1997, the approximate time that State Water became available to VAFB, thereby allowing a reduction in VAFB extractions from the basin. Similarly, the water level has been generally declining during the recent dry years. However, in some cases this is part of a larger period of decline lasting from the mid-2000s.

Figure 9: San Antonio Valley Groundwater Basin Map



Santa Maria Groundwater Basin

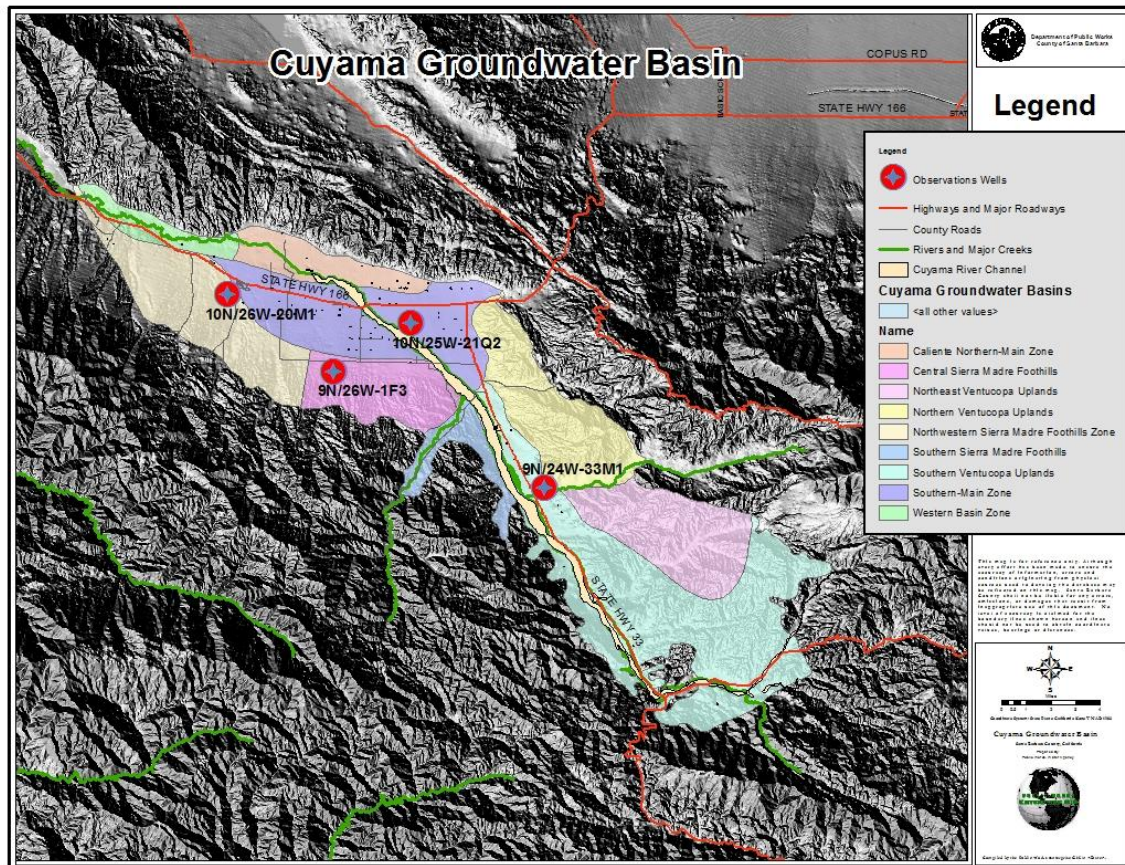
Figure 10: Santa Maria Groundwater Basin Map



The Santa Maria Groundwater Basin is one of two adjudicated basins in Santa Barbara County and as such, water management is largely dictated by the courts. All of the hydrographs included in this report for the Santa Maria Groundwater Basin show consecutive declining groundwater levels over the last three dry years and several show groundwater levels that are the lowest of record. Other hydrographs show water levels at their lowest elevations in 1991, at the end of the previous severe drought. The basin is managed and not believed to be in a state of overdraft.

Cuyama Valley Groundwater Basin

Figure 11: Cuyama Valley Groundwater Basin Map

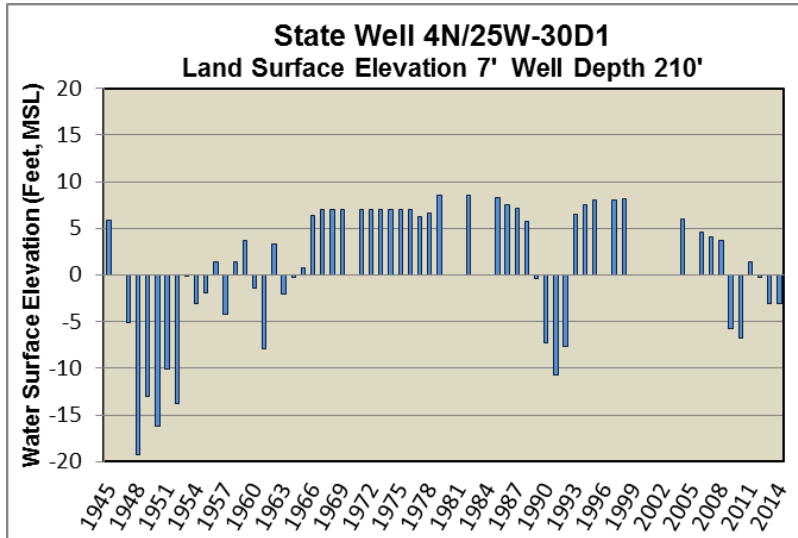
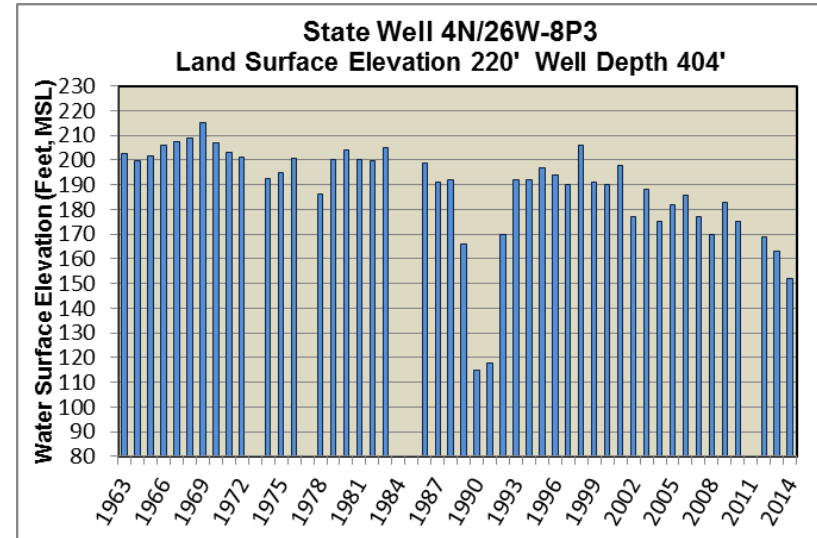
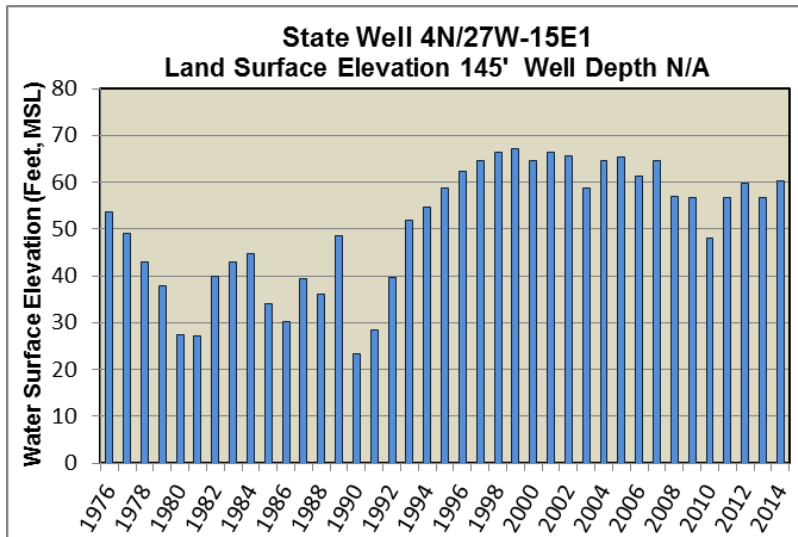
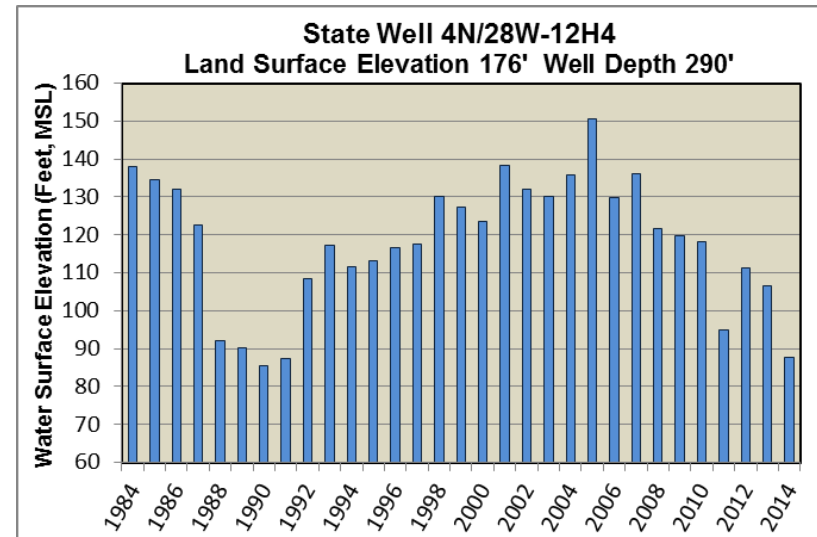


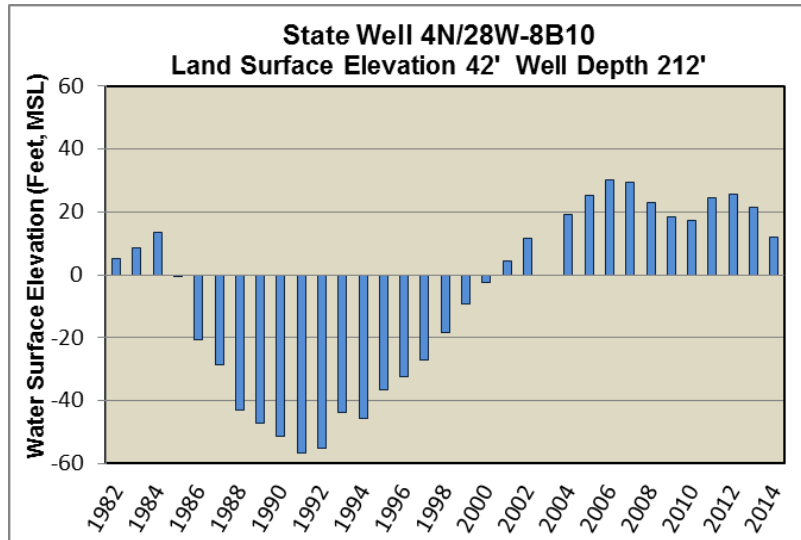
The Water Agency has recently completed a detailed study of the Cuyama Valley Groundwater Basin. Therefore, the status of groundwater there is well understood. The study and recent groundwater level measurements show significant groundwater level declines throughout history and over the last three years. In some areas, historical groundwater level declines exceed 400 feet. Three of the four hydrographs included in this report show 2014 groundwater levels to be the lowest of record. The hydrograph not showing this trend is from a well located in a sub-basin in which there is frequent recharge. Long term overdraft within the basin is nearly 30,000 AFY.

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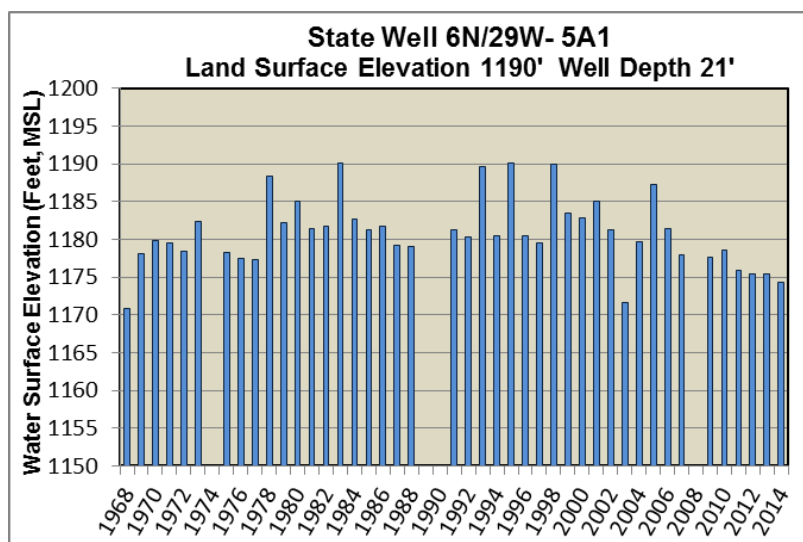
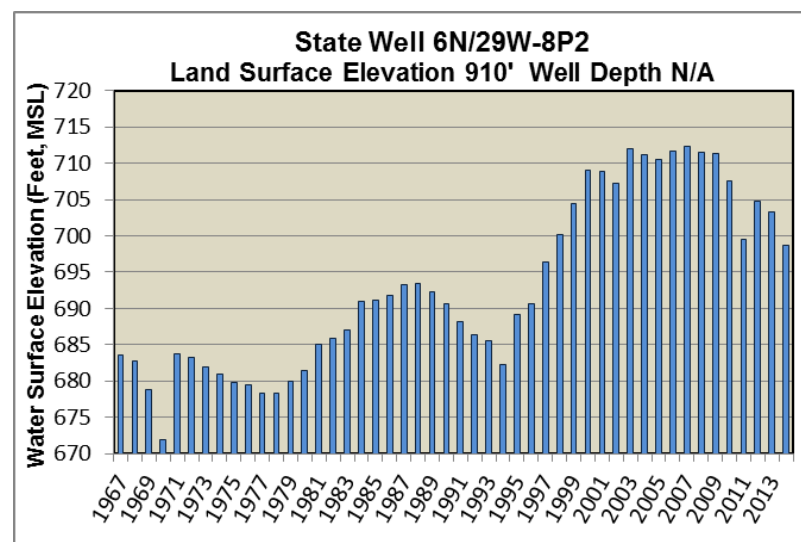
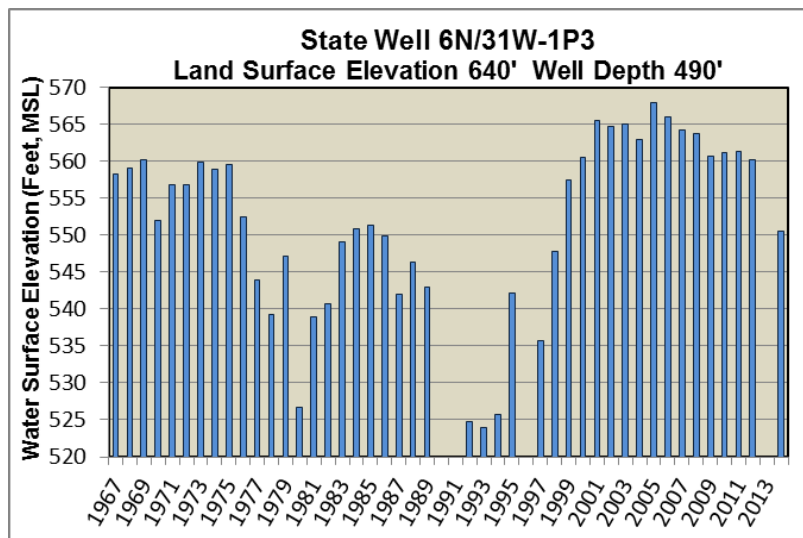
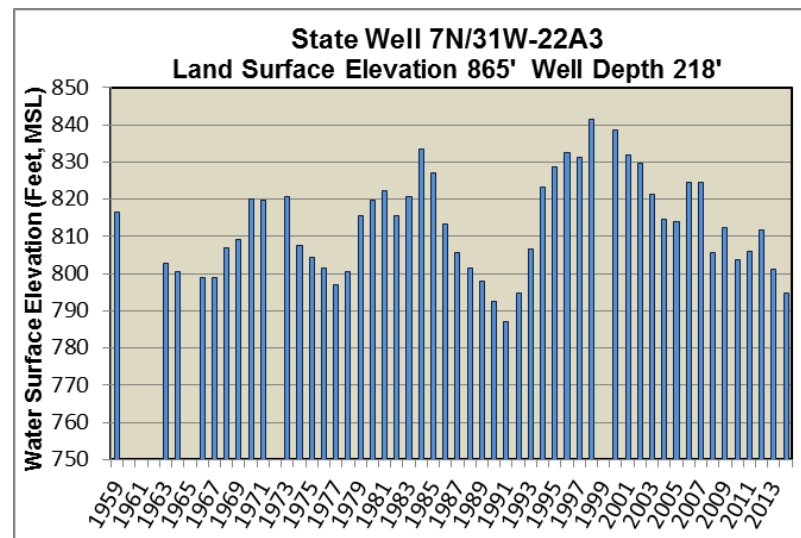
APPENDIX A

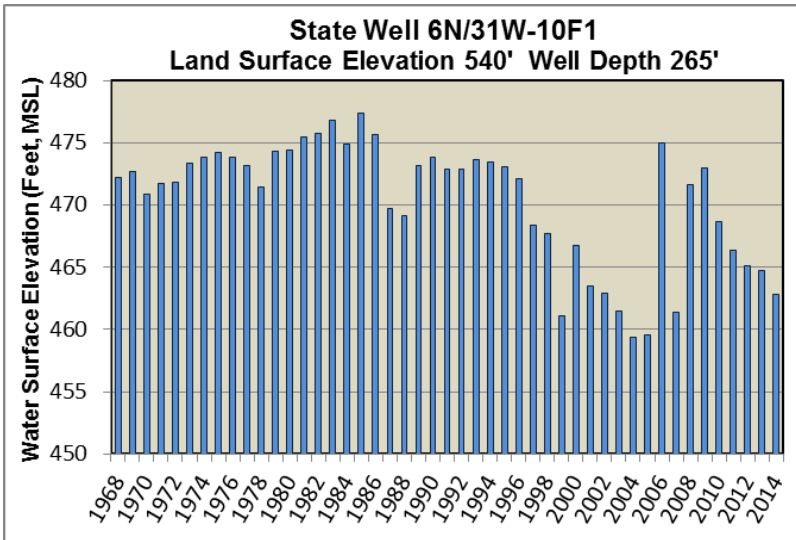
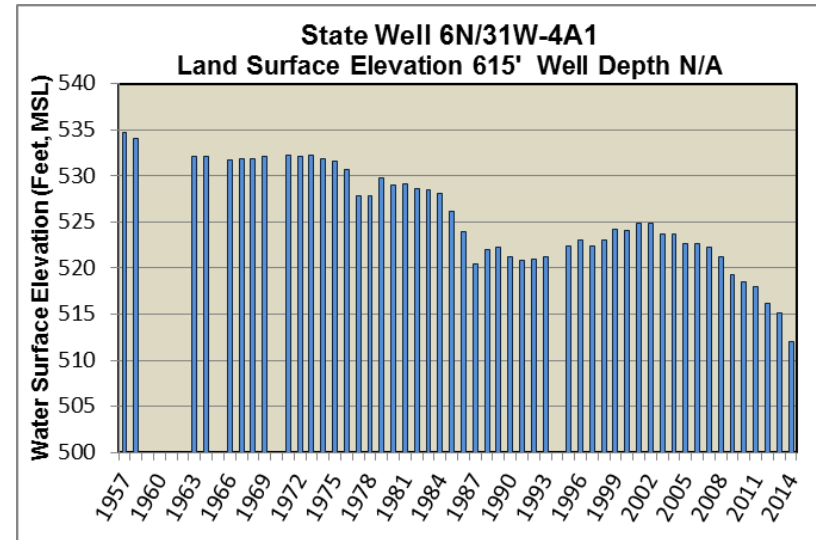
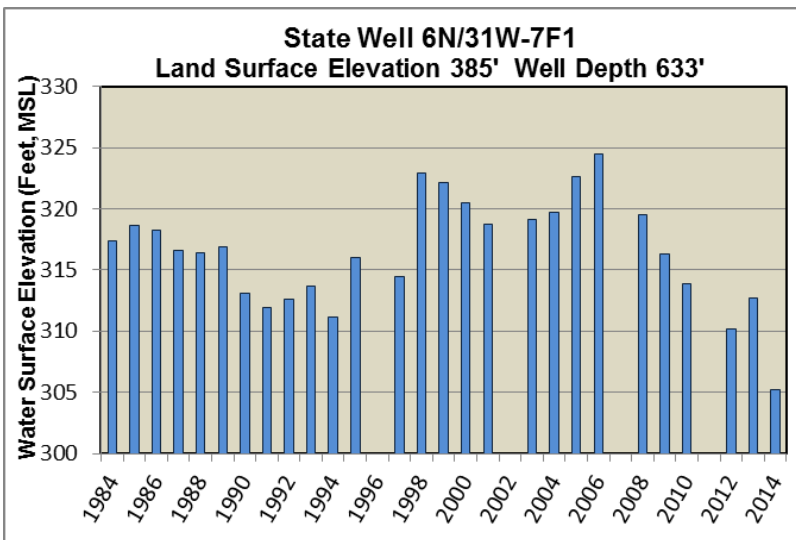
Figures A1-A5: South Coast Groundwater Basins Hydrographs



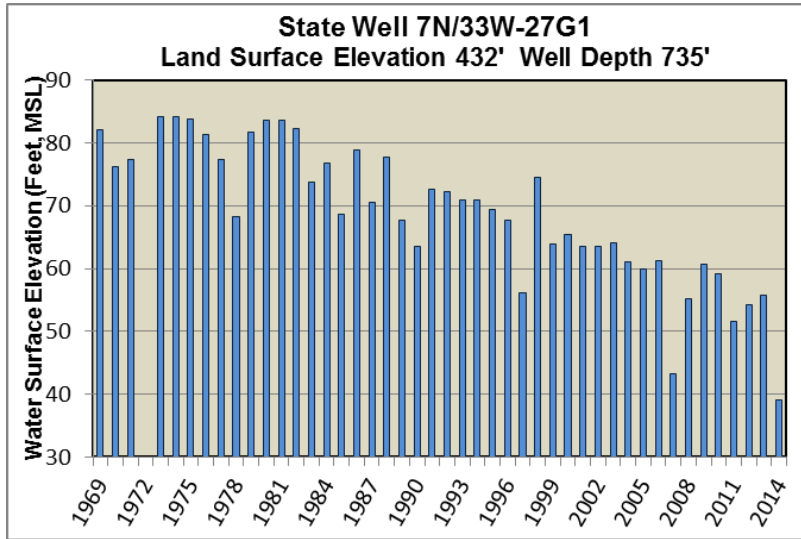
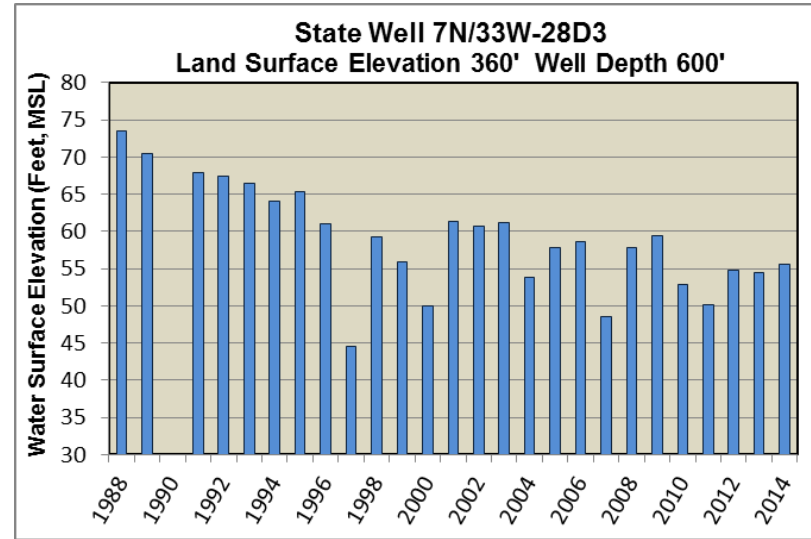
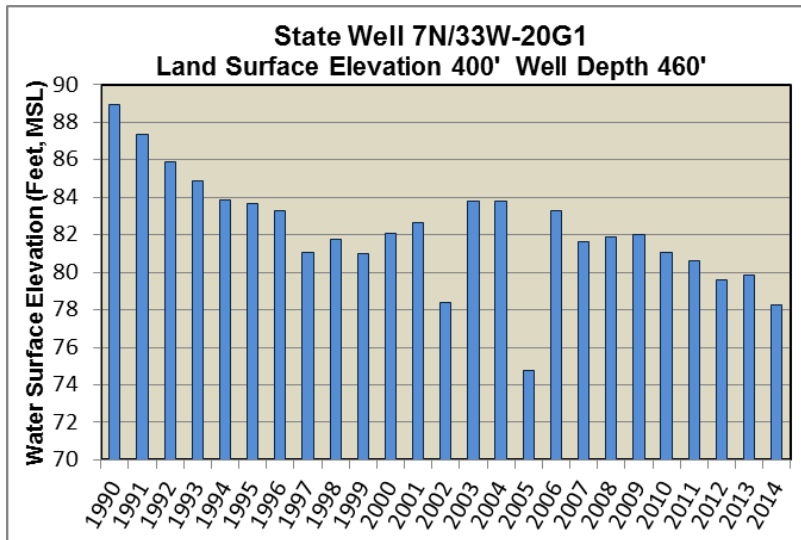
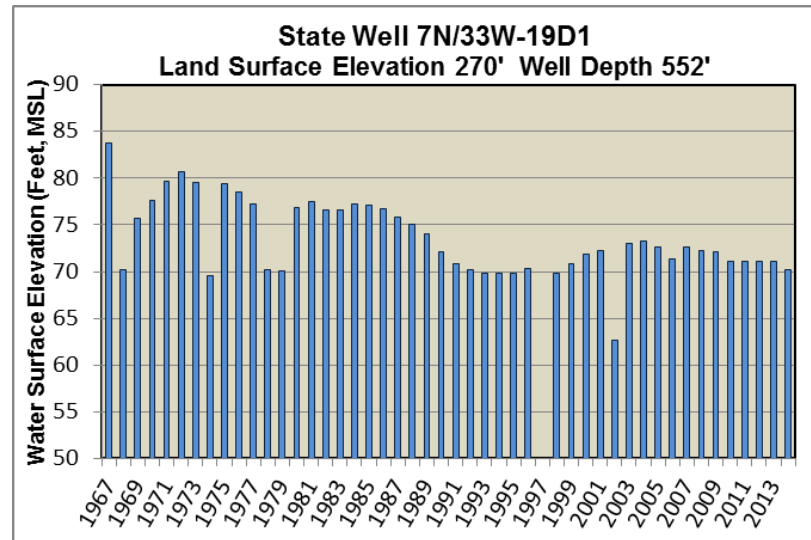


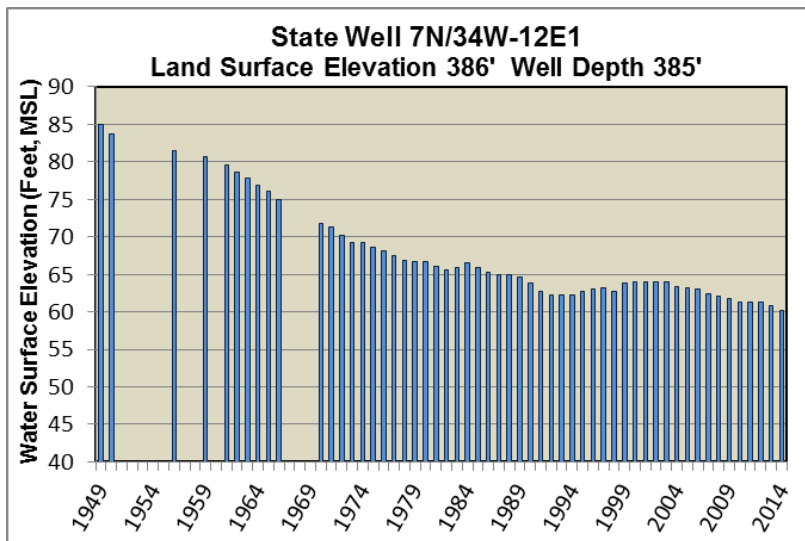
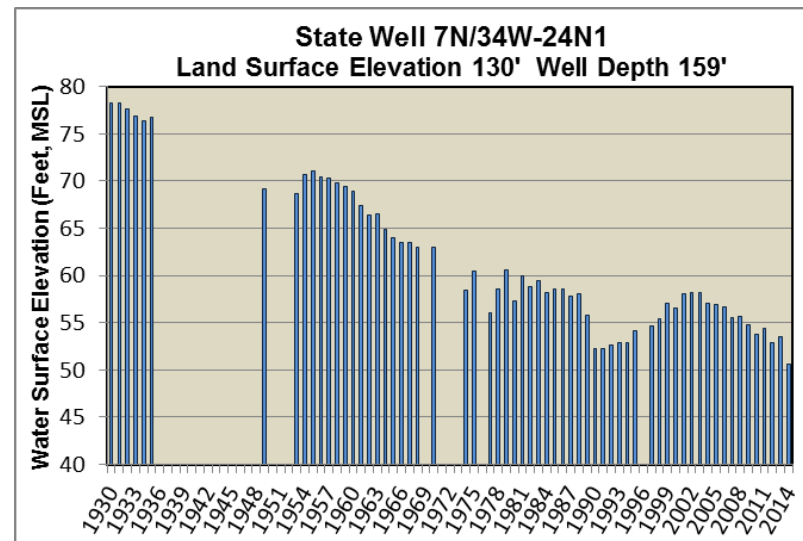
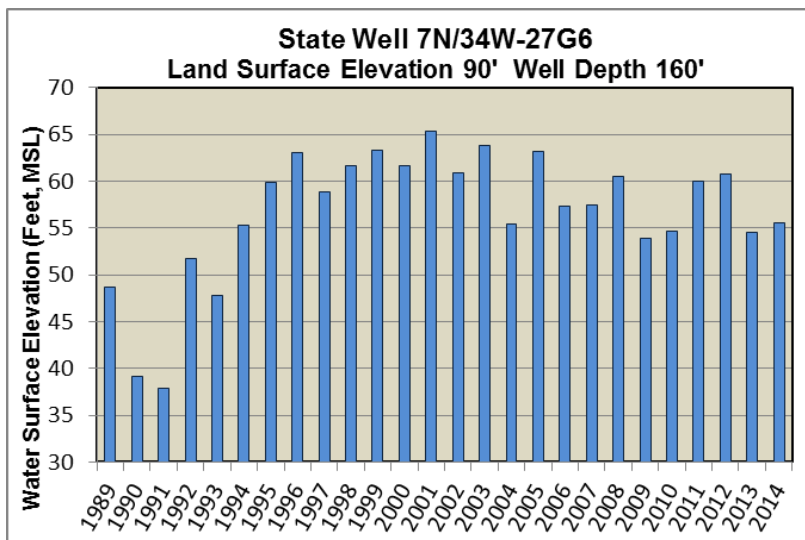
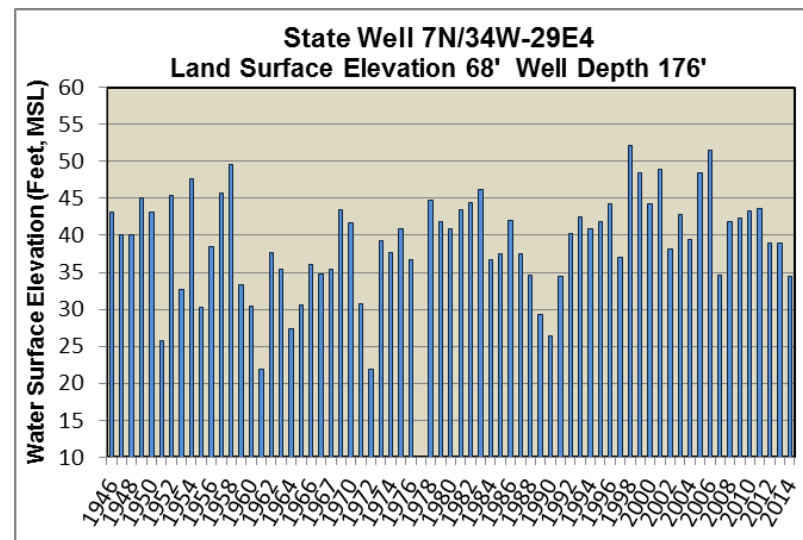
Figures A6-A12: Santa Ynez River Watershed Groundwater Basin Hydrographs

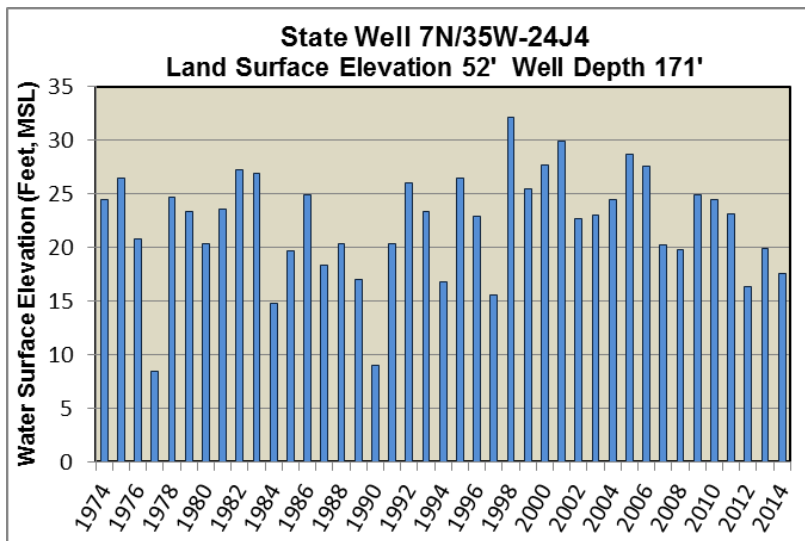
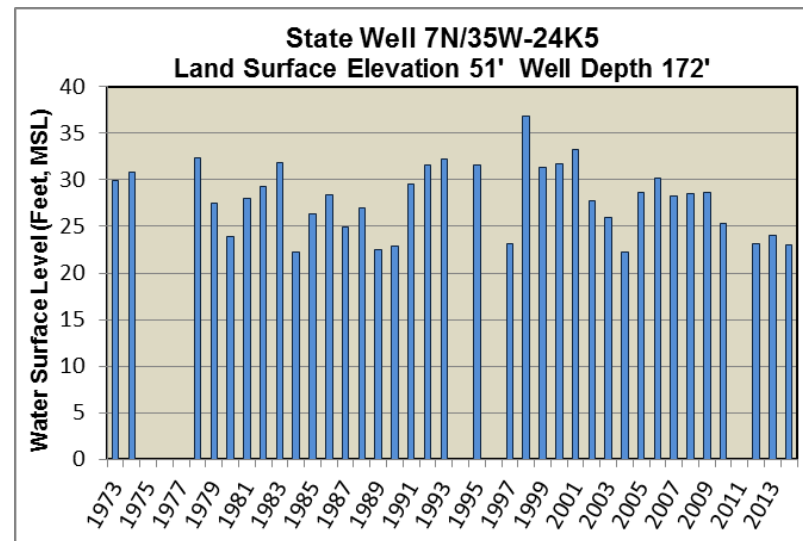
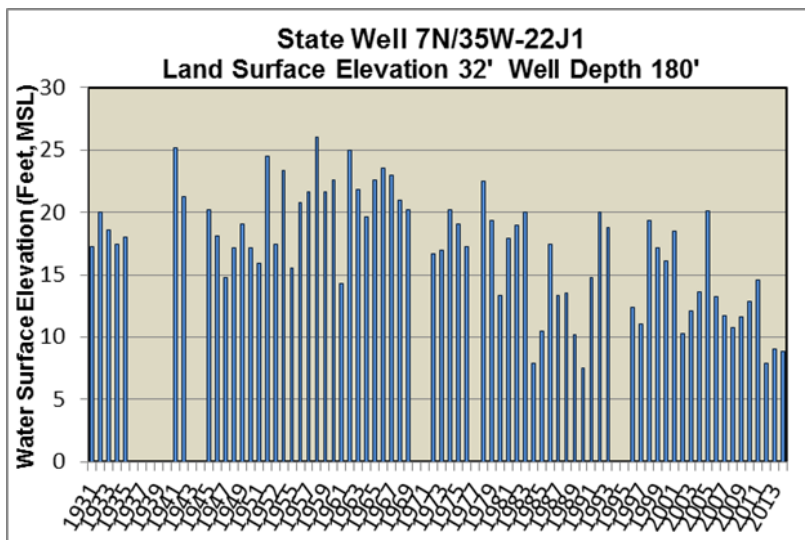




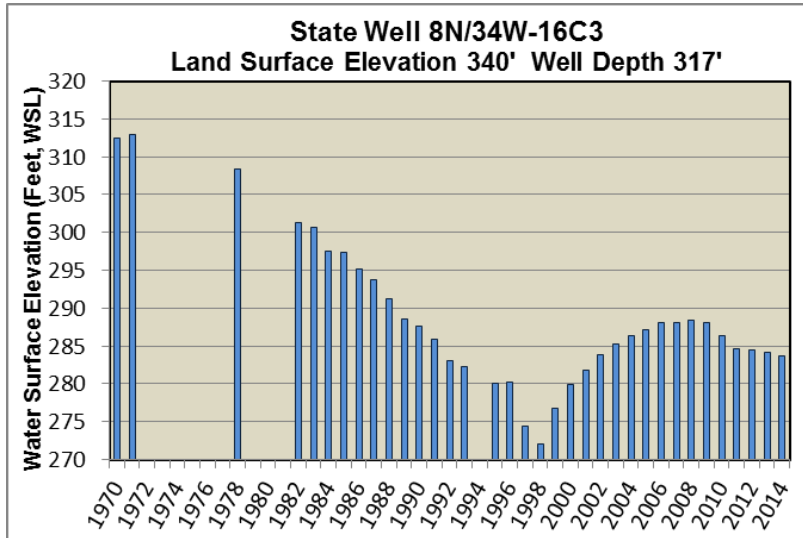
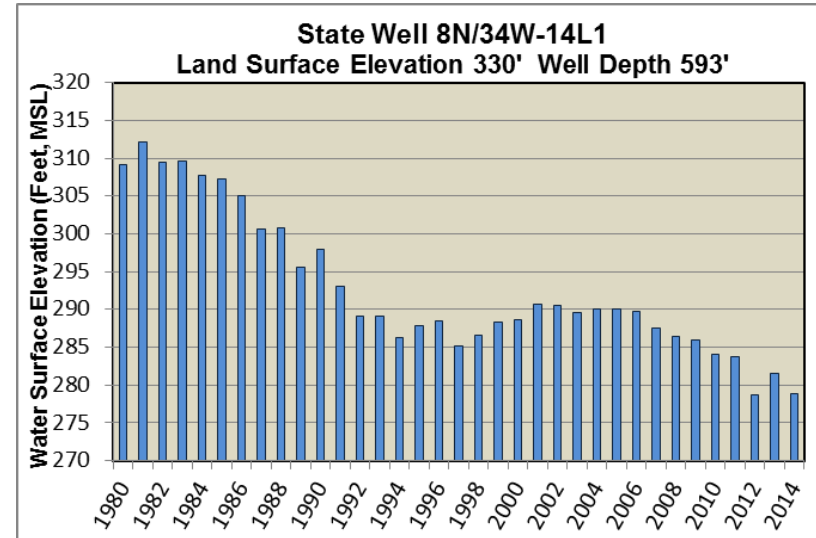
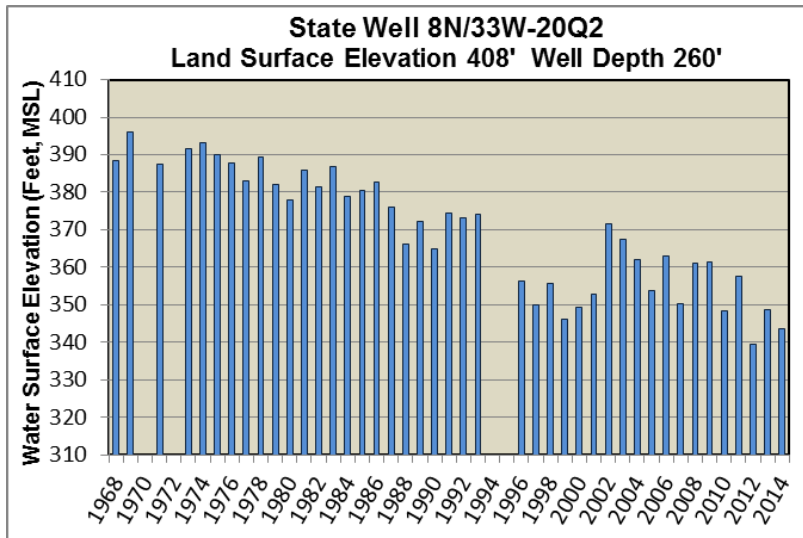
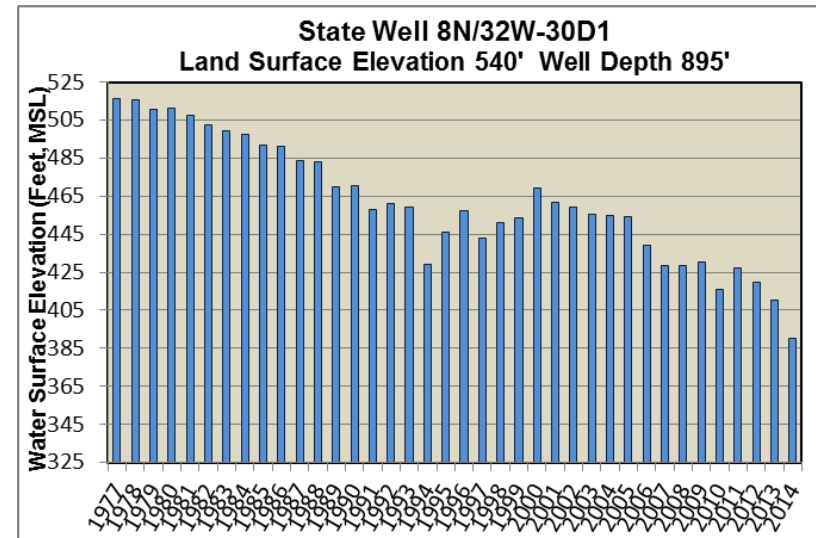
Figures A13-A23: Lompoc Groundwater Basin Hydrographs



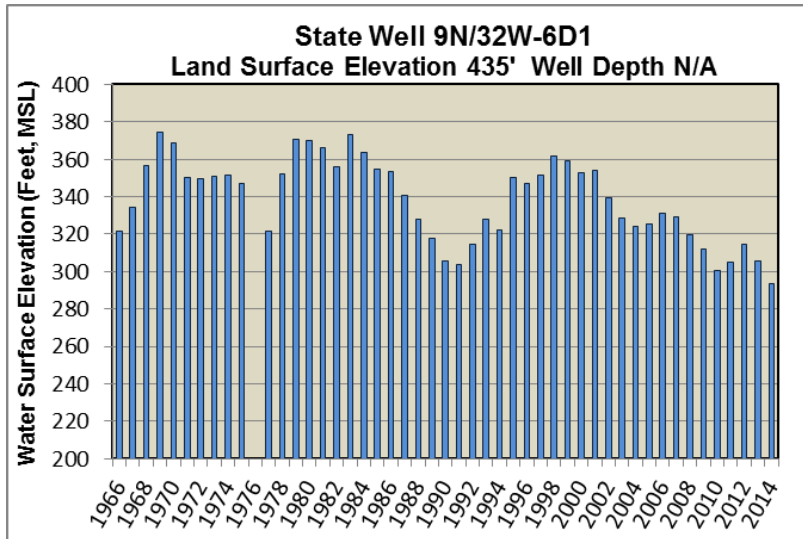
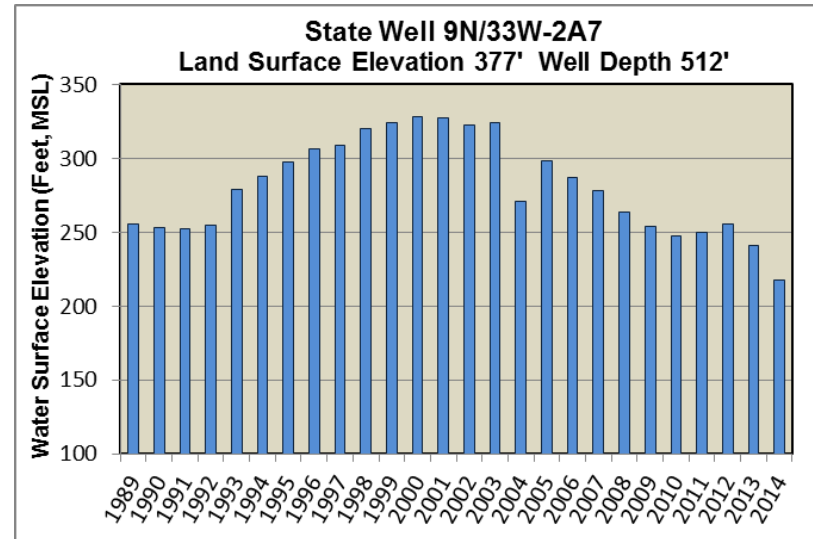
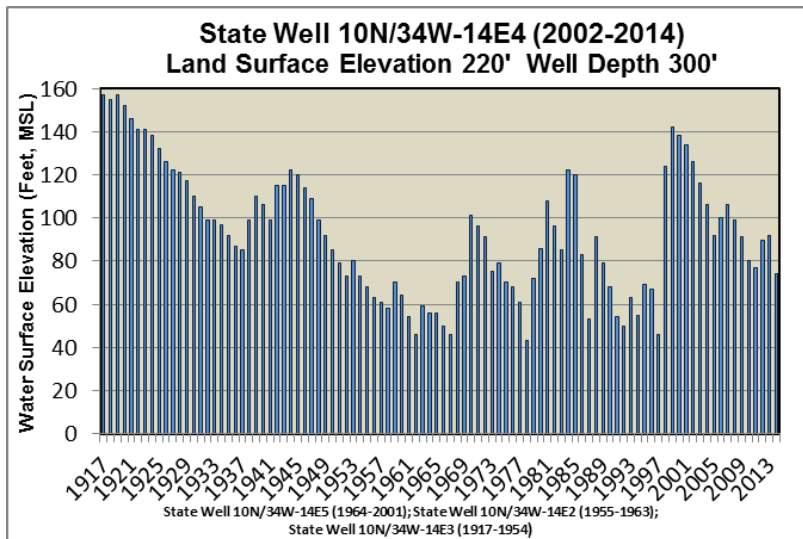
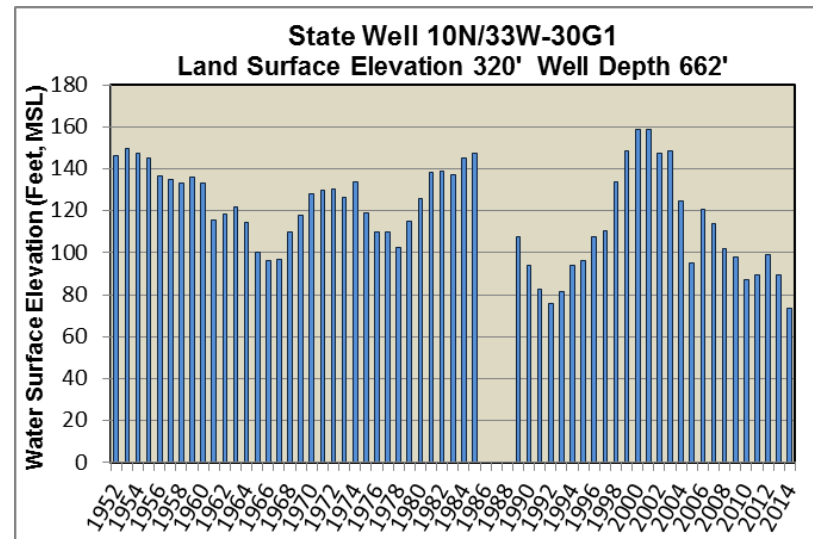


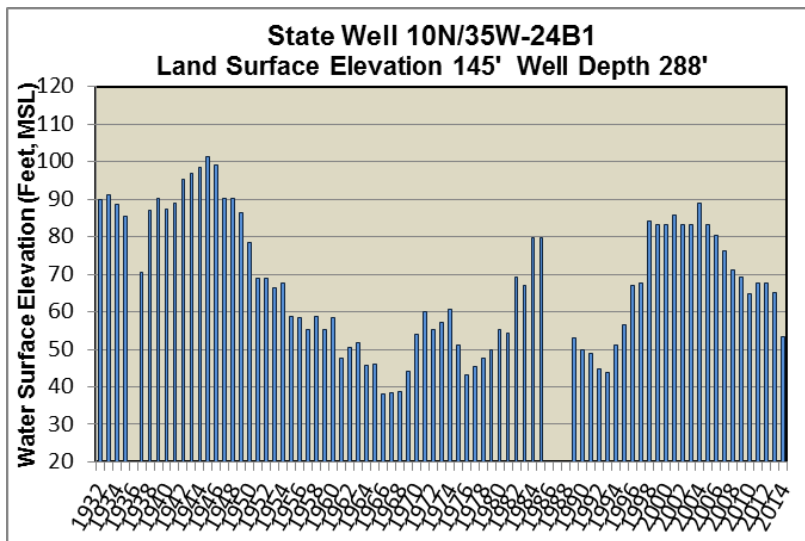
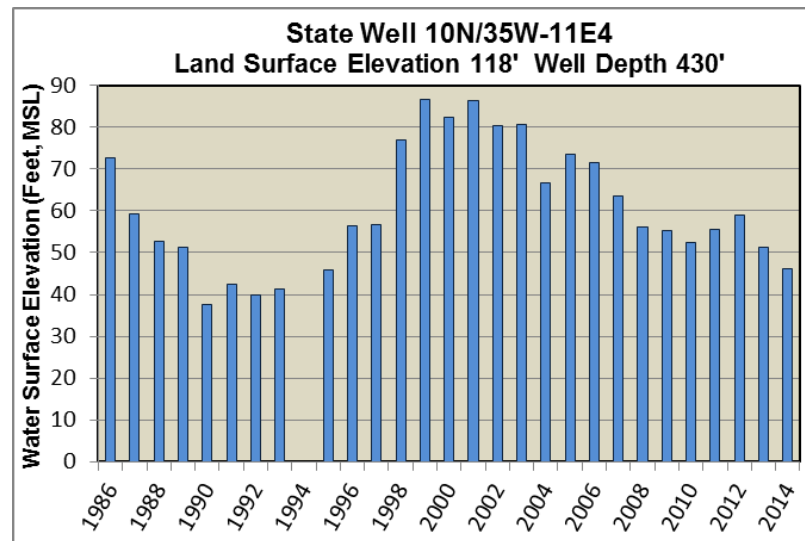
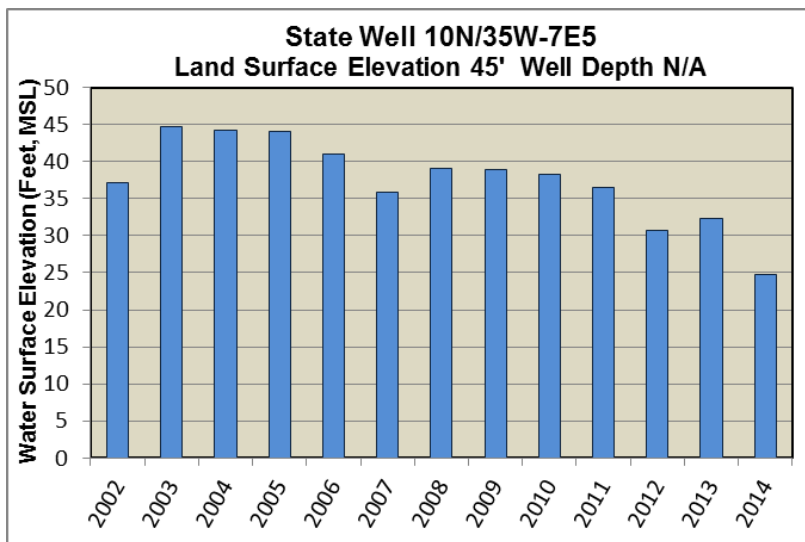
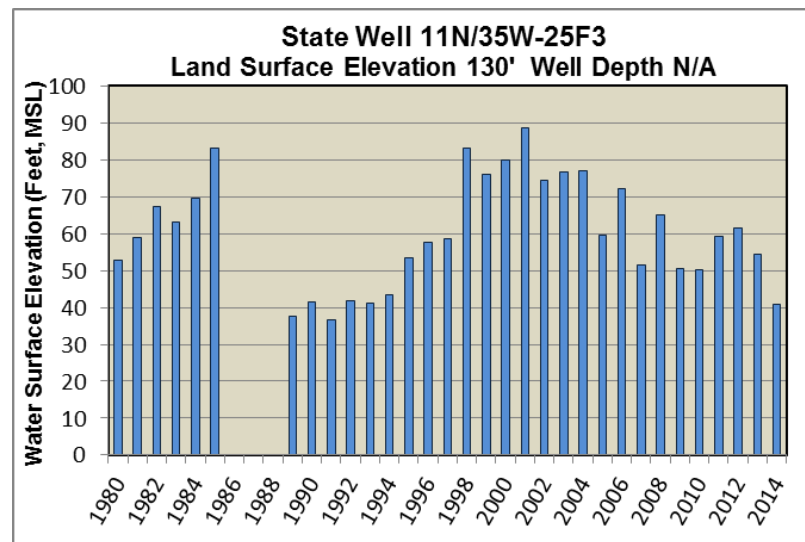


Figures A24-A27: San Antonio Valley Groundwater Basin Hydrographs

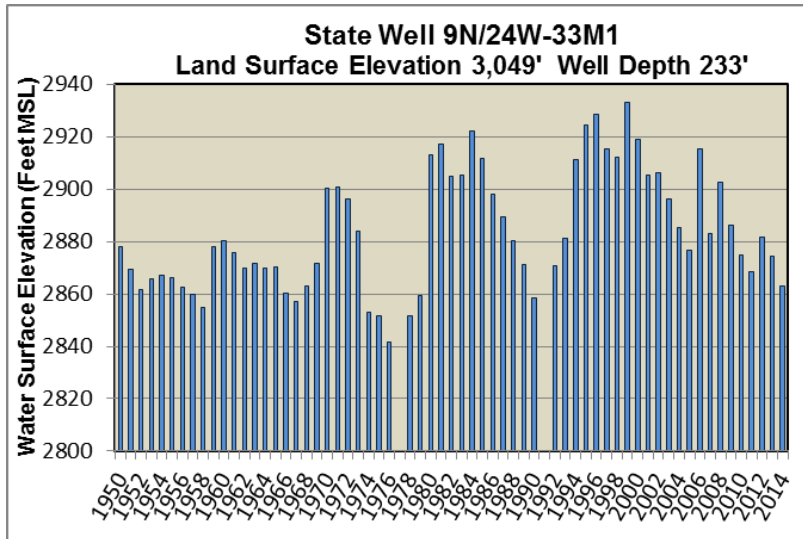
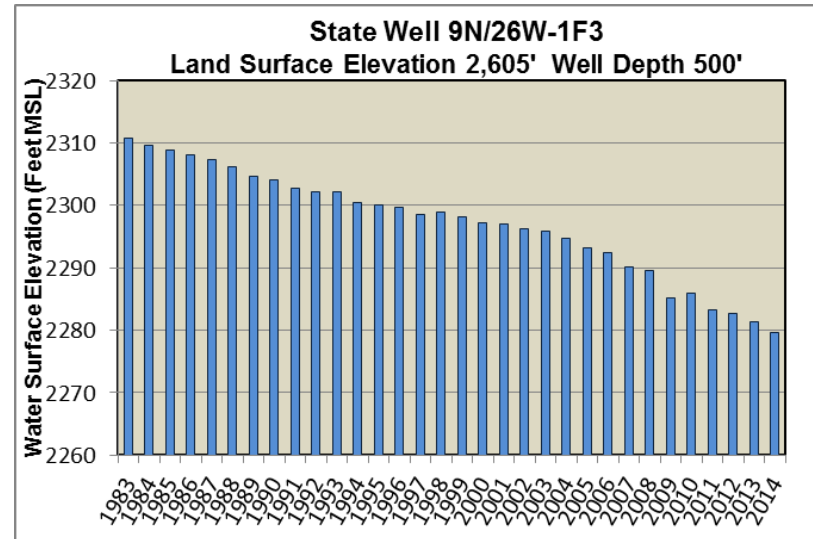
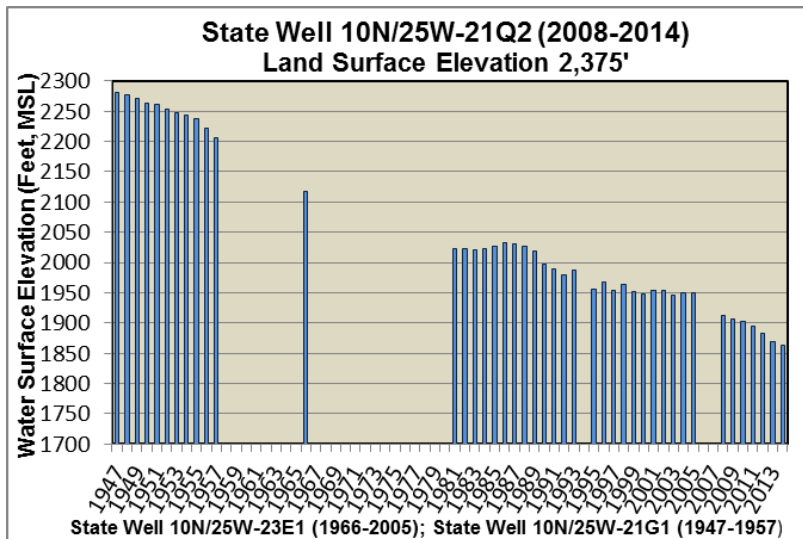
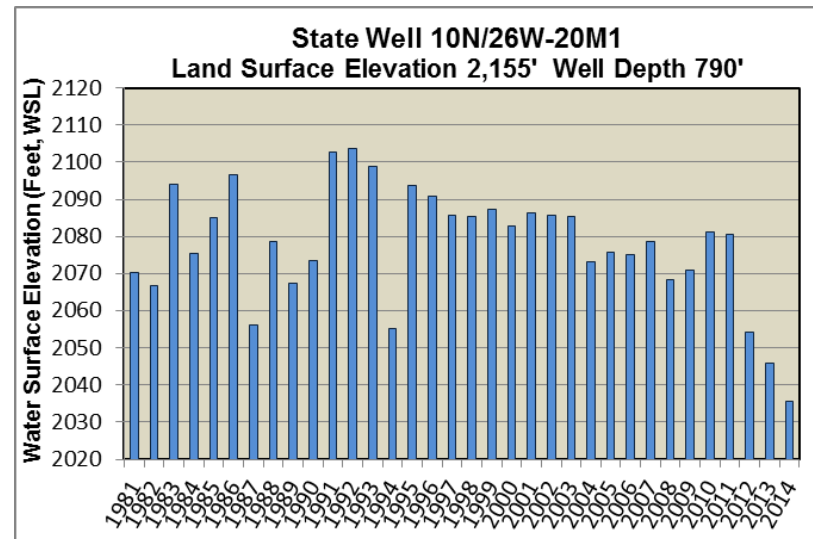


Figures A28-A35: Santa Maria Groundwater Basin Hydrographs





Figures A36-A39: Cuyama Valley Groundwater Basin Hydrographs



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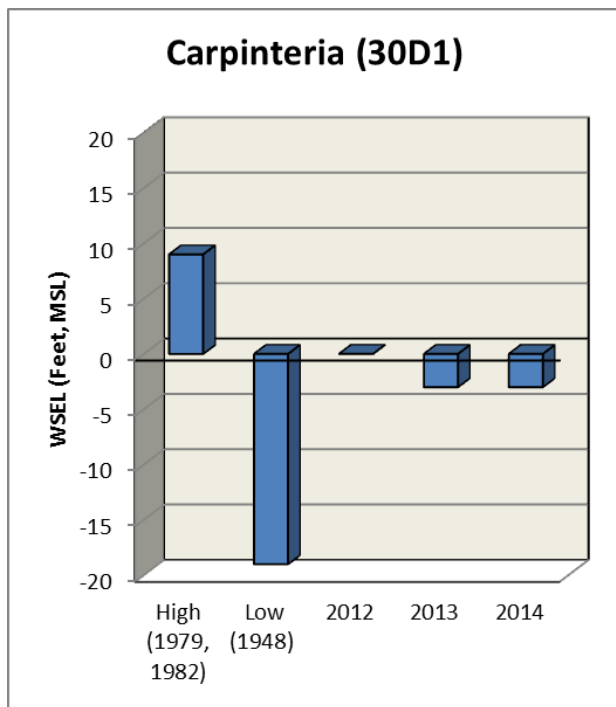
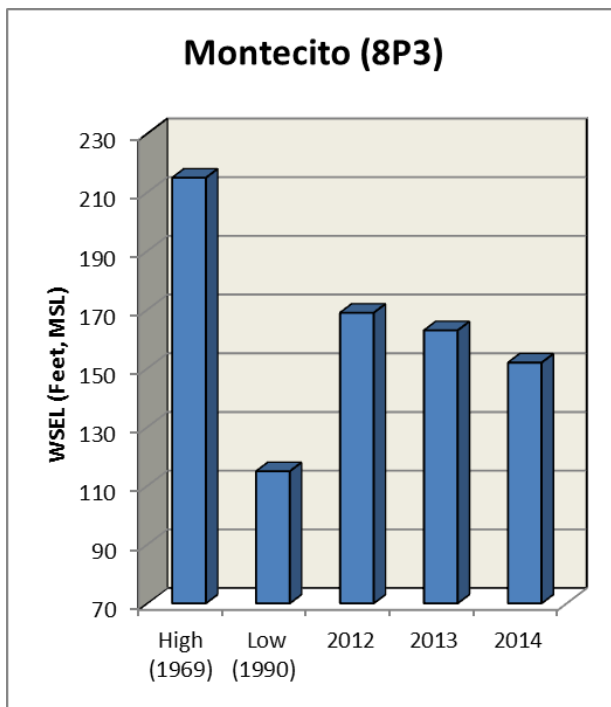
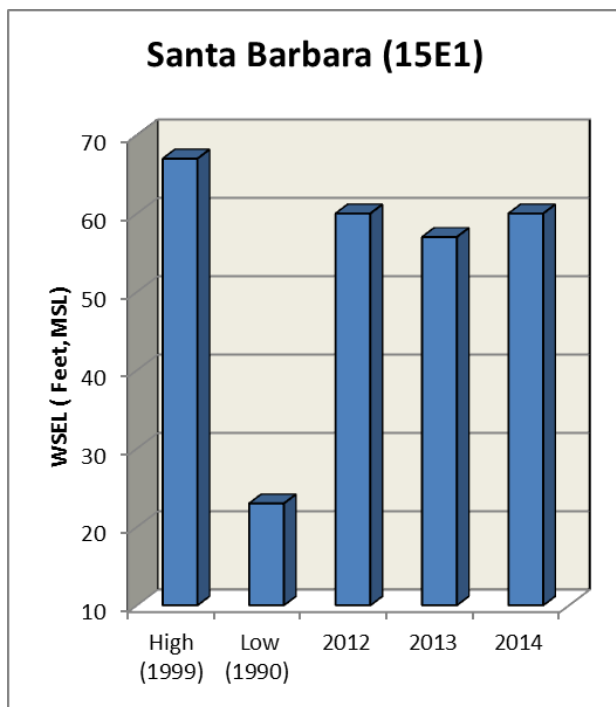
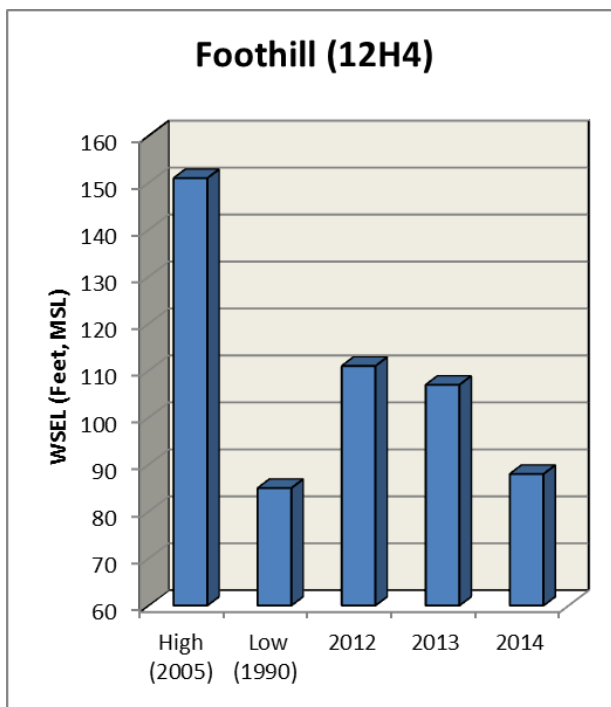
APPENDIX B

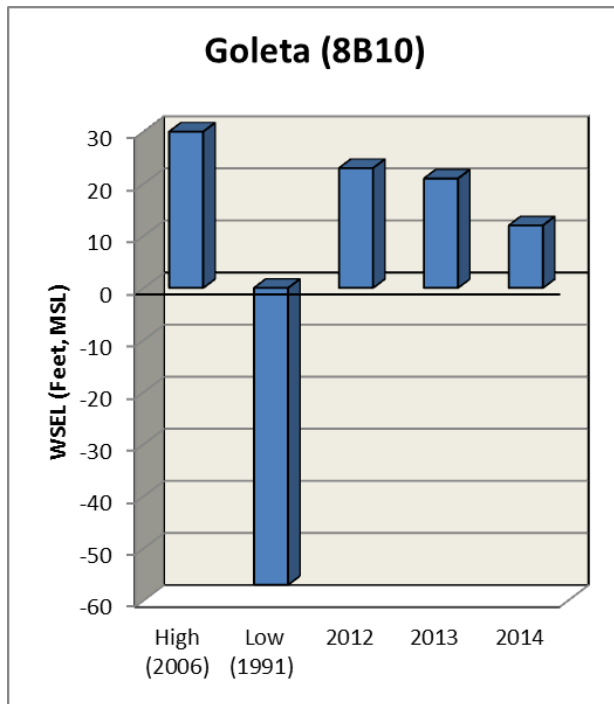
Table B1: Historical Water Level Comparison

Basin	Subarea	Well Number	Year of First Record	Historic (Year) High	Historic (Year) Low	2012	2013	2014
South Coast	Carpinteria	4N/25W-30D1	1945	9 (1979, 1982)	-19 (1948)	0	-3	-3
	Montecito	4N/26W-8P3	1963	215 (1969)	115 (1990)	169	163	152
	Santa Barbara	4N/27W-15E1	1976	67 (1999)	23 (1990)	60	57	60
	Foothill	4N/28W-12H4	1984	151 (2005)	85 (1990)	111	107	88
	Goleta	4N/28W-8B10	1982	30 (2006)	-57 (1991)	26	21	12
Santa Ynez	Santa Ynez Uplands	6N/29W-5A1	1968	1190 (1983, 1993, 1995, 1998)	1171 (1968)	1175	1175	1174
	Santa Ynez Uplands	6N/29W-8P2	1967	712 (2003, 2006-07)	672 (1970)	705	703	699
	Santa Ynez	6N/31W-1P3	1967	568 (2005)	524 (1993)	560	N/A	551
	Lower Foxen Canyon	7N/31W-22A3	1959	841 (1998)	787 (1991)	812	801	795
	Fredenburg Canyon	6N/31W-10F1	1968	477 (1983, 1985)	459 (2004)	465	465	463
	Ballard Canyon	6N/31W-4A1	1957	535 (1957)	512 (2014)	516	515	512
	Buellton Uplands	6N/31W-7F1	1984	325 (2006)	305 (2014)	310	313	305
Lompoc	Santa Rita	7N/33W-27G1	1969	84 (1973-75, 1980-81)	39 (2014)	54	56	39
	Santa Rita	7N/33W-28D3	1988	74 (1988)	45 (1997)	55	54	56
	Santa Rita / Lompoc Uplands	7N/33W-20G1	1990	89 (1990)	75 (2005)	80	80	78
	Lompoc Uplands / Cebada	7N/33W-19D1	1967	84 (1967)	63 (2002)	71	71	70
	Lompoc Uplands	7N/34W-12E1	1949	85 (1949)	60 (2014)	61	61	60
	Lompoc Uplands	7N/34W-24N1	1930	78 (1930-32)	51 (2014)	53	53	51

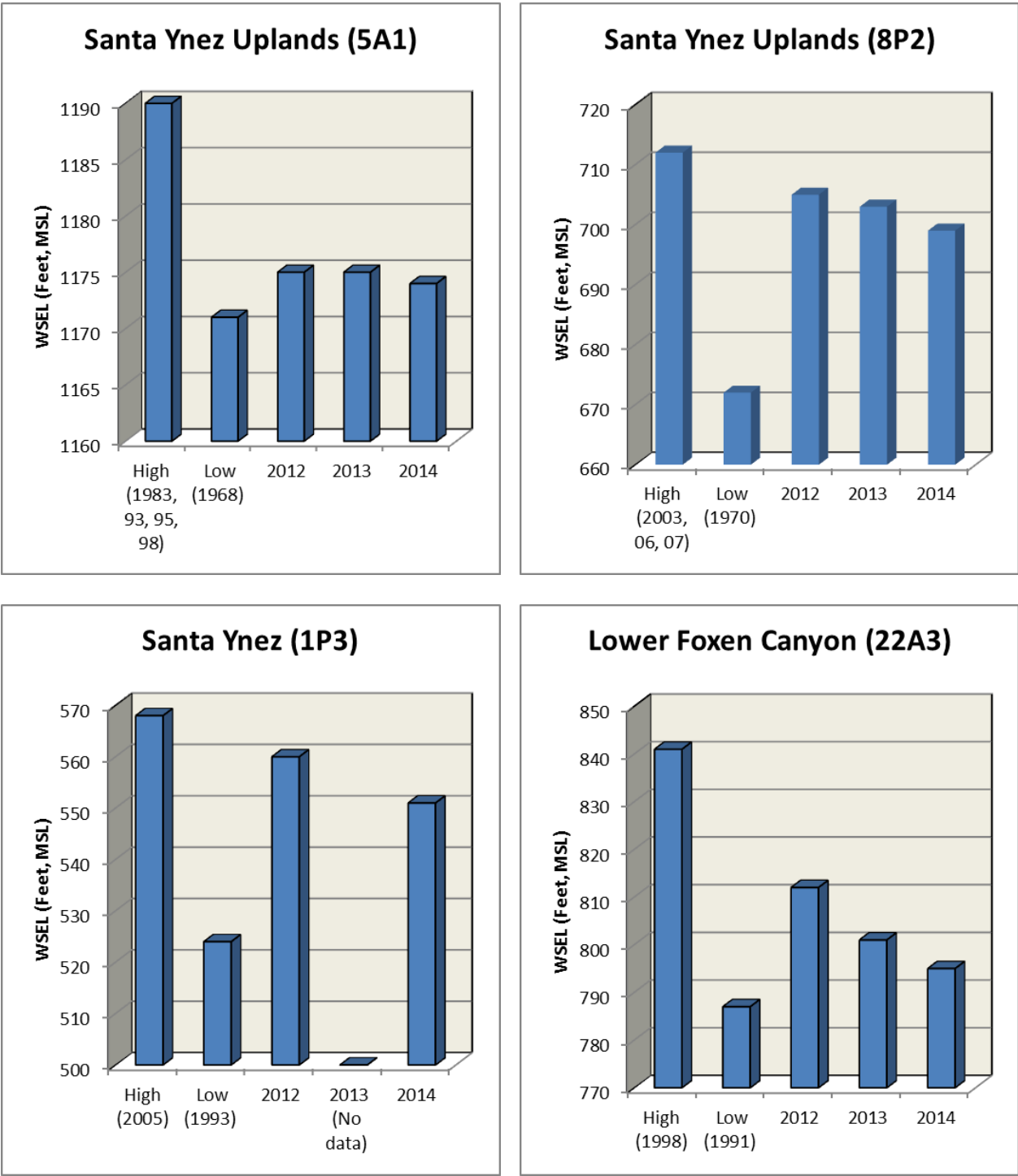
	Lompoc Plain	7N/34W-27G6	1989	65 (2001)	38 (1991)	61	55	56
	Lompoc Plain	7N/34W-29E4	1946	52 (1998)	22 (1961, 1972)	39	39	34
	Lompoc Plain	7N/35W-24J4	1974	32 (1998)	8 (1977)	16	20	18
	W. Lompoc Plain	7N/35W-22J1	1931	26 (1958)	8 (1984, 1990, 2012)	8	9	9
San Antonio	Barka Slough	8N/34W-16C3	1970	313 (1970-71)	272 (1978)	285	284	284
	Lower Harris Canyon	8N/34W-14L1	1980	312 (1981)	279 (2012, 2014)	279	281	279
	Mid San Antonio	8N/33W-20Q2	1968	396 (1969)	339 (2012)	339	349	344
	W. of Los Alamos	8N/32W-30D1	1977	516 (1977)	390 (2014)	420	410	390
Santa Maria	Santa Maria Mesa	9N/32W-6D1	1966	374 (1969)	303 (1991)	315	306	294
	Garey	9N/33W-2A7	1989	328 (2000-01)	217 (2014)	255	241	217
	Santa Maria Central	10N/34W-14E4 (E5, E2, E3)	1917	157 (1917, 1919)	43 (1978)	90	92	74
	SM Central / Orcutt Uplands Transition	10N/33W-30G1	1952	159 (2000-01)	74 (2014)	99	89	74
	Lower Orcutt Creek	10N/35W-24B1	1932	101 (1945)	38 (1966-67)	68	65	53
	Santa Maria Western	10N/35W-11E4	1986	87 (1999)	37 (1990)	59	51	46
	Guadalupe West	10N/35W-7E5	2002	45 (2003)	25 (2014)	31	32	25
	Oso Flaco	11N/35W-25F3	1980	89 (2001)	37 (1991)	62	54	41
Cuyama	Ventucopa Uplands	9N/24W-33M1	1950	2933 (1999)	2842 (1976)	2882	2874	2863
	Sierra Madre Foothills	9N/26W-1F3	1983	2311 (1983)	2280 (2014)	2283	2281	2280
	Main Zone	10N/25W-21Q2 (23E1, 21G1)	1947	2281 (1947)	1863 (2014)	1883	1869	1863
	Sierra Madre Foothills Main Zone Transition	10N/26W-20M1	1981	2104 (1992)	2036 (2014)	2054	2046	2036

Figures B1-B5: South Coast Groundwater Basins Level Comparison

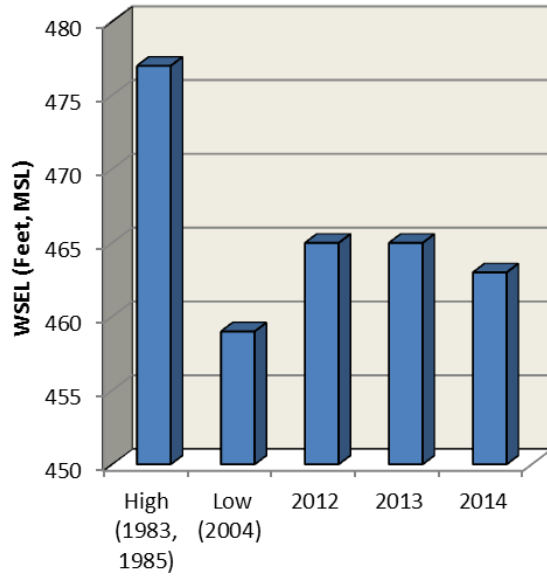




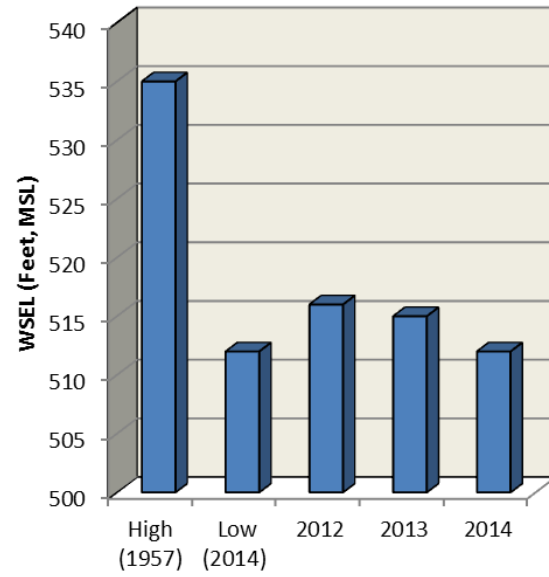
Figures B6-B12: Santa Ynez River Watershed Groundwater Basin Level Comparison



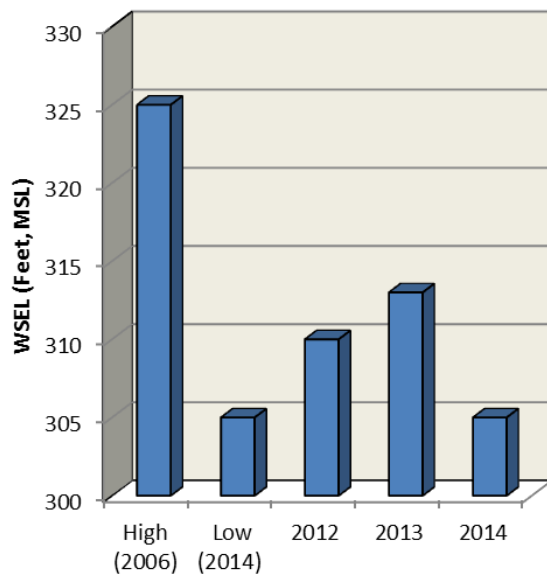
Fredenborg Canyon (10F1)



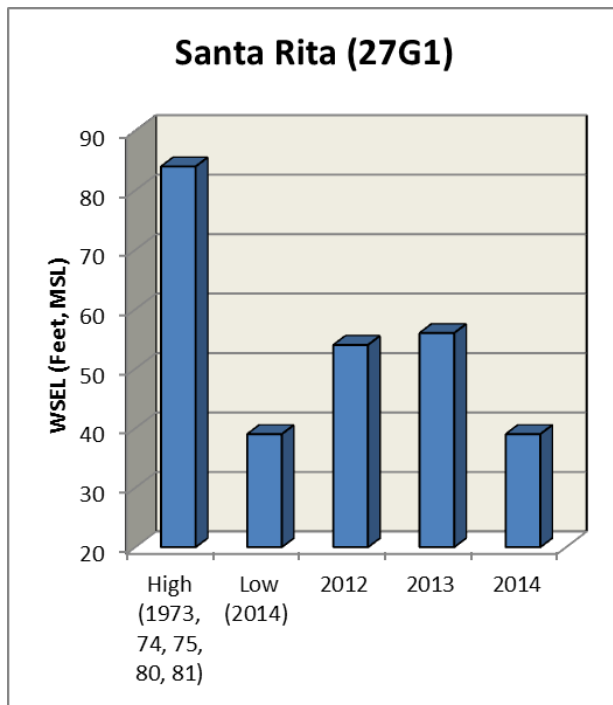
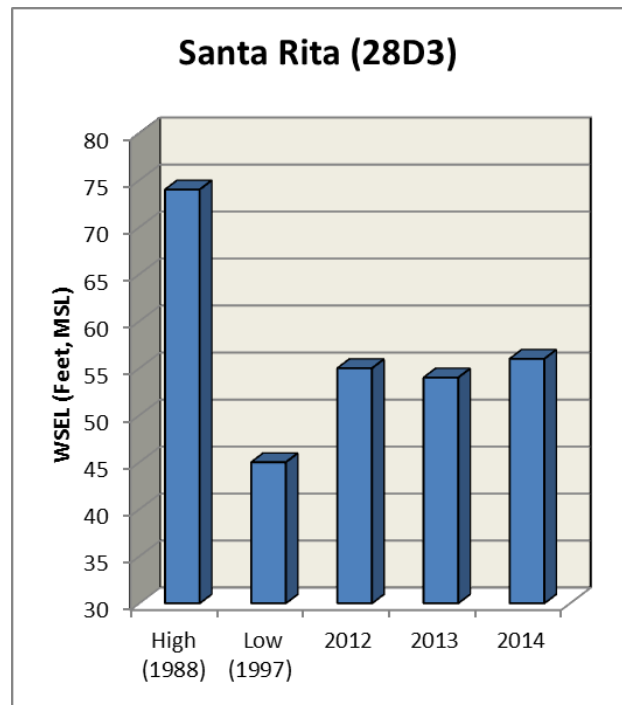
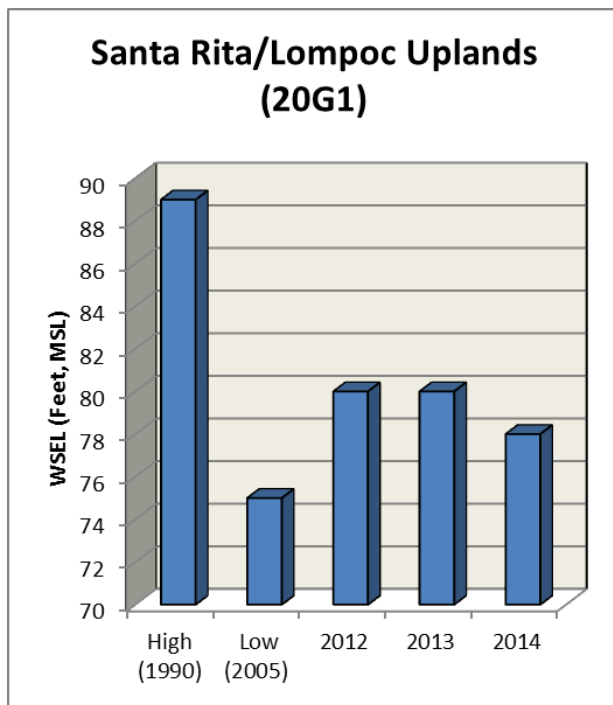
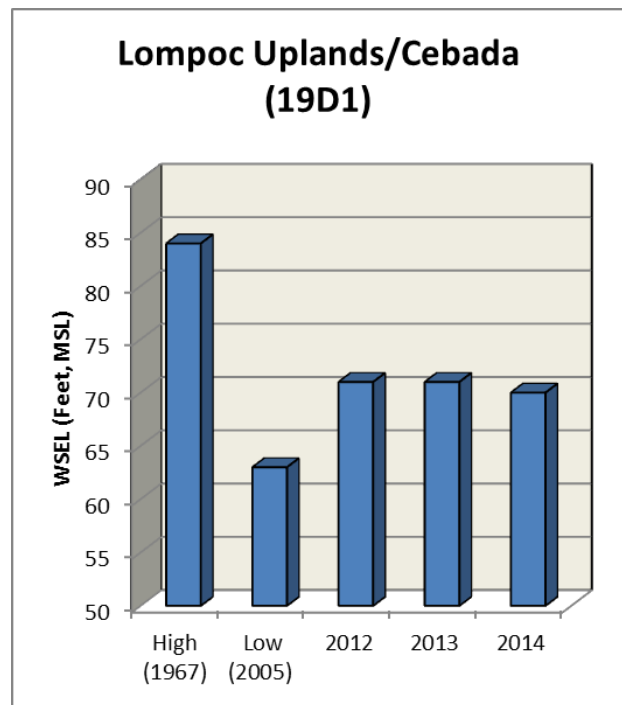
Ballard Canyon (4A1)



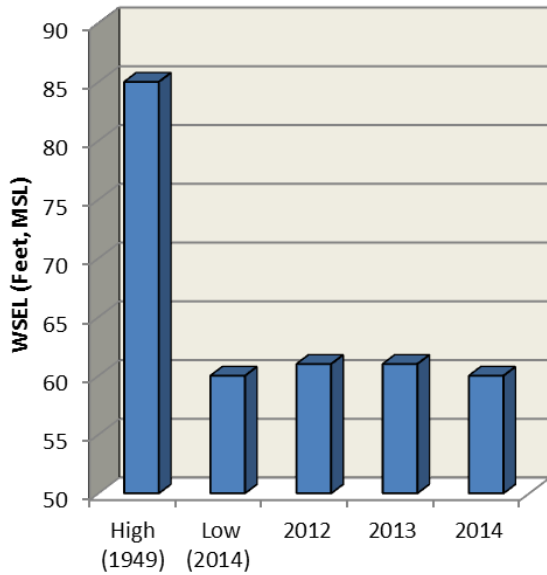
Buellton Uplands (7F1)



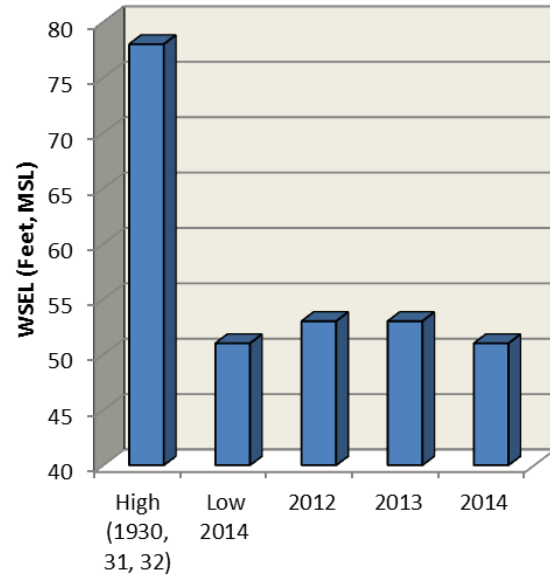
Figures B13-B23: Lompoc Groundwater Basin Level Comparison



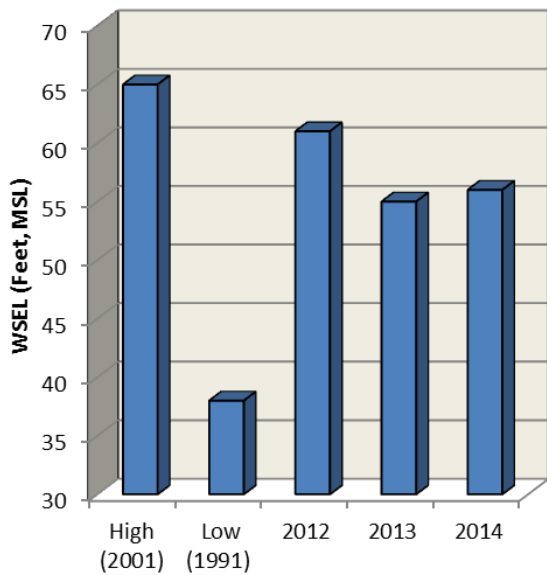
Lompoc Uplands (20E1)



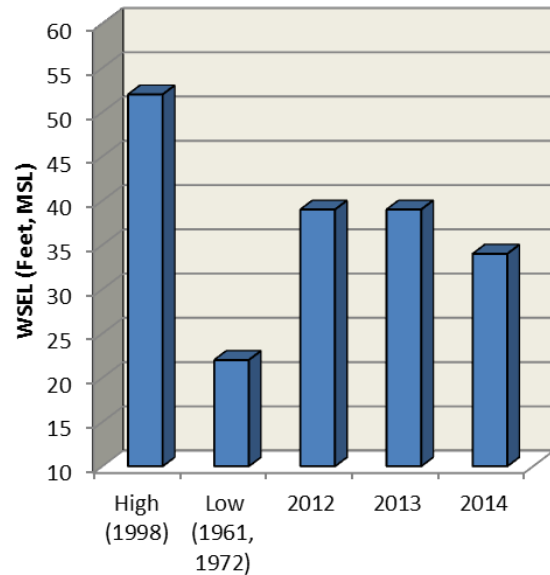
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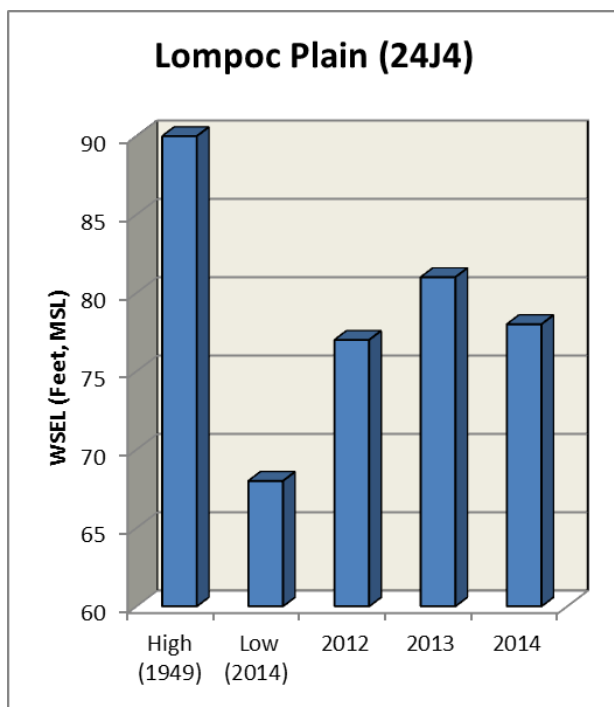
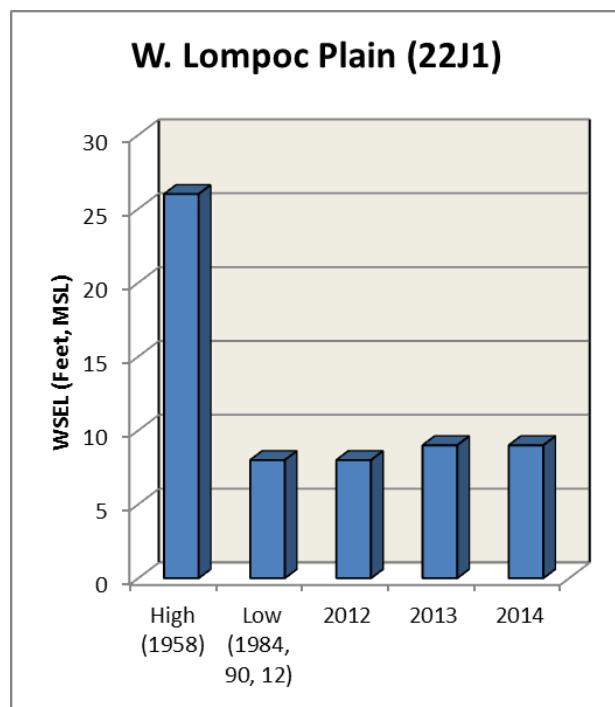


Lompoc Plain (27G6)

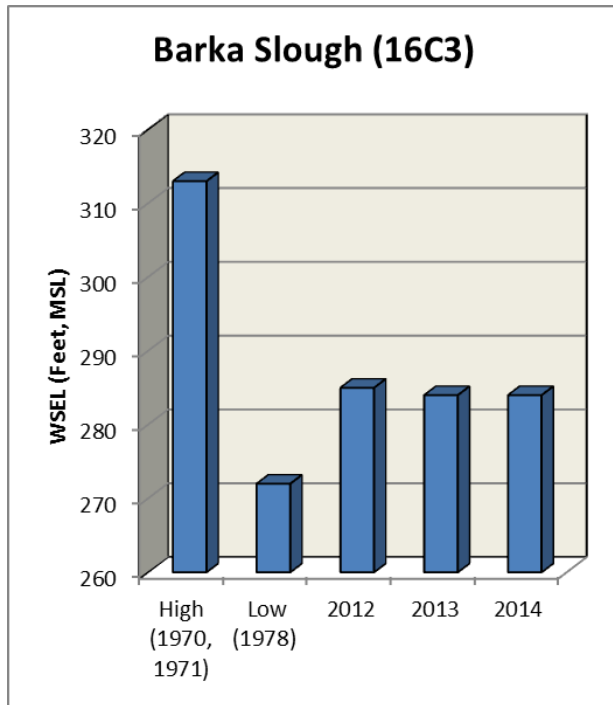
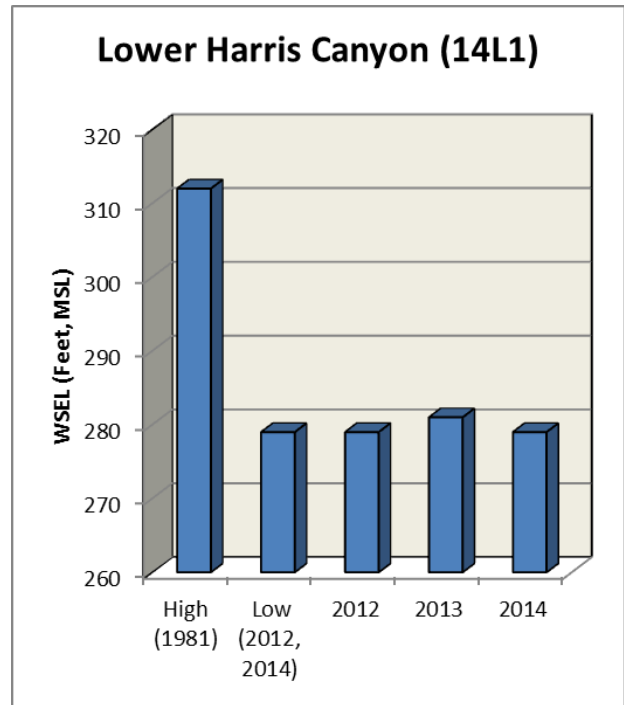
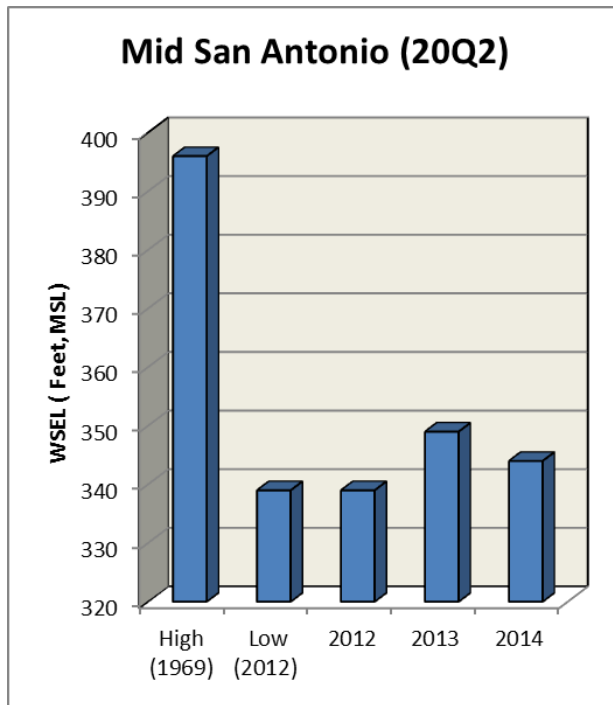
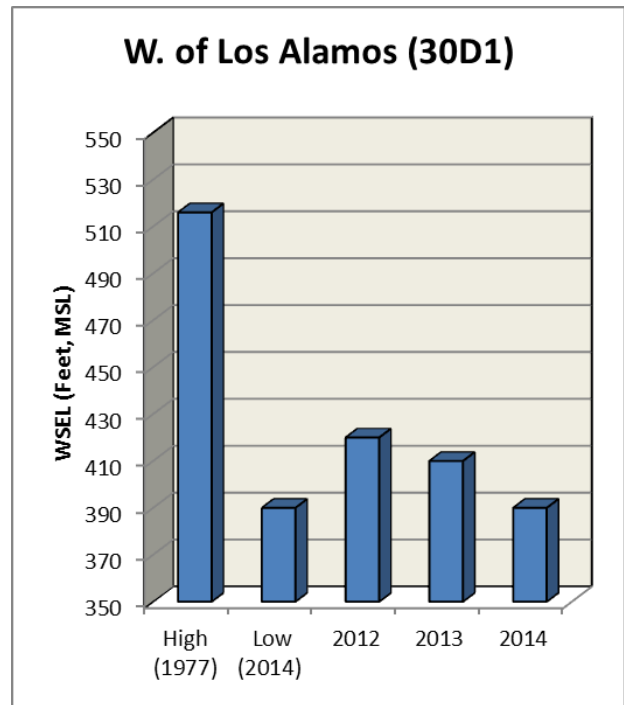


Lompoc Plain (29E4)

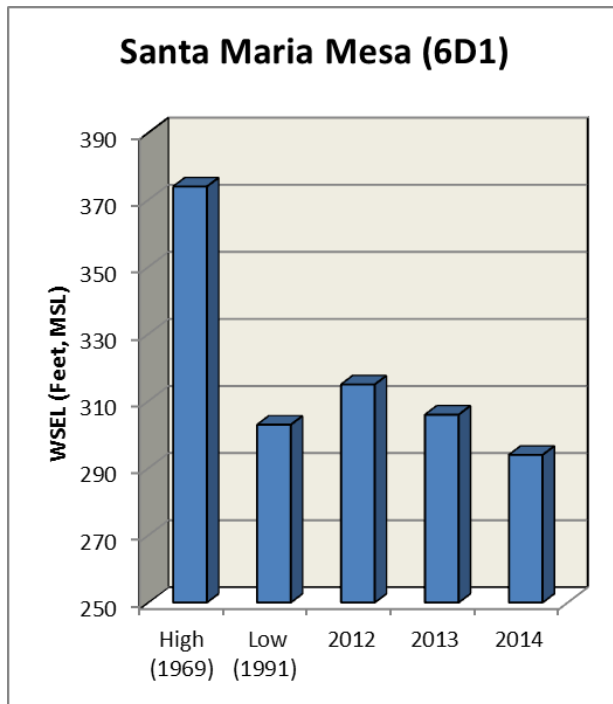
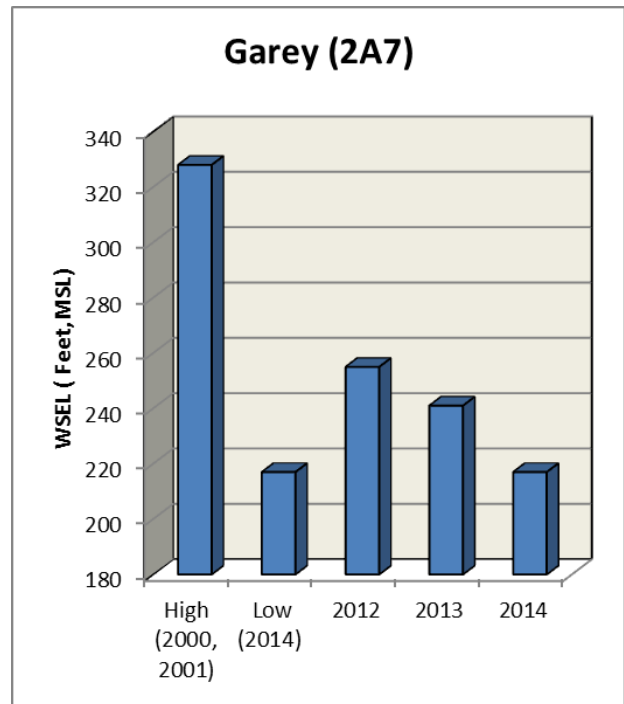
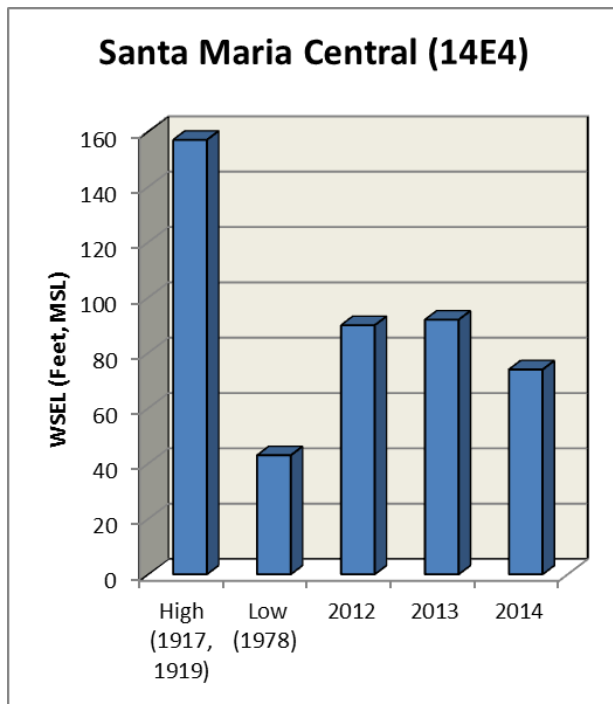
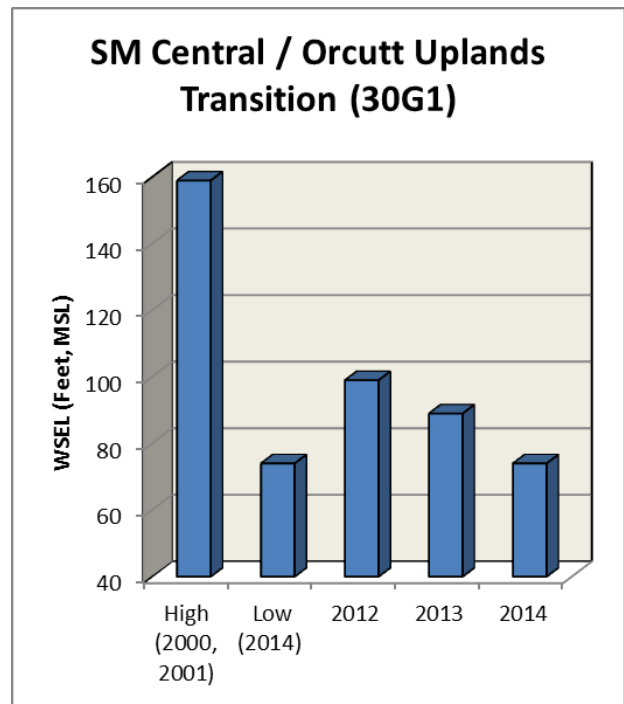




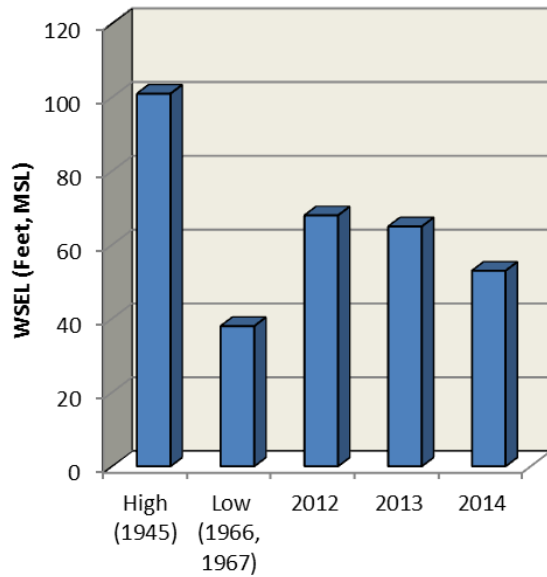
Figures B24-B27: San Antonio Valley Groundwater Basin Level Comparison



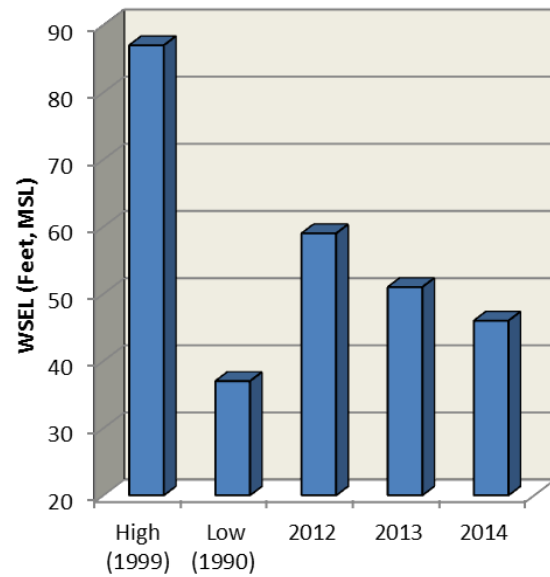
Figures B28-B35: Santa Maria Groundwater Basin Level Comparison



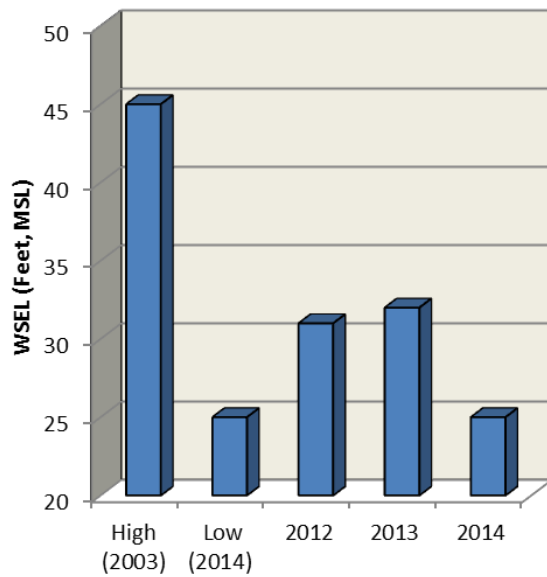
Lower Orcutt Creek (24B1)



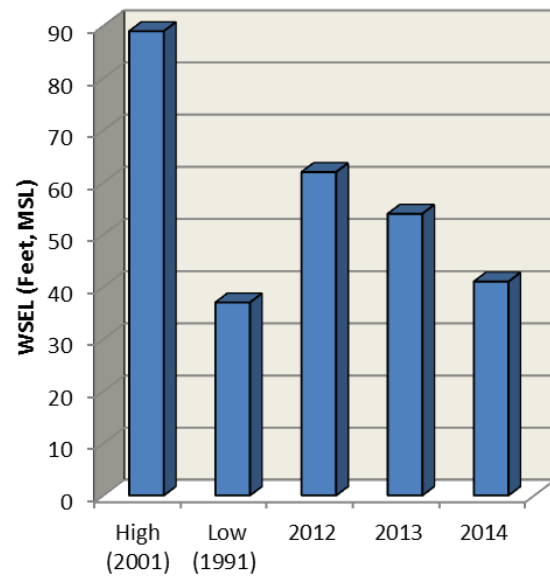
Santa Maria Western (11E4)



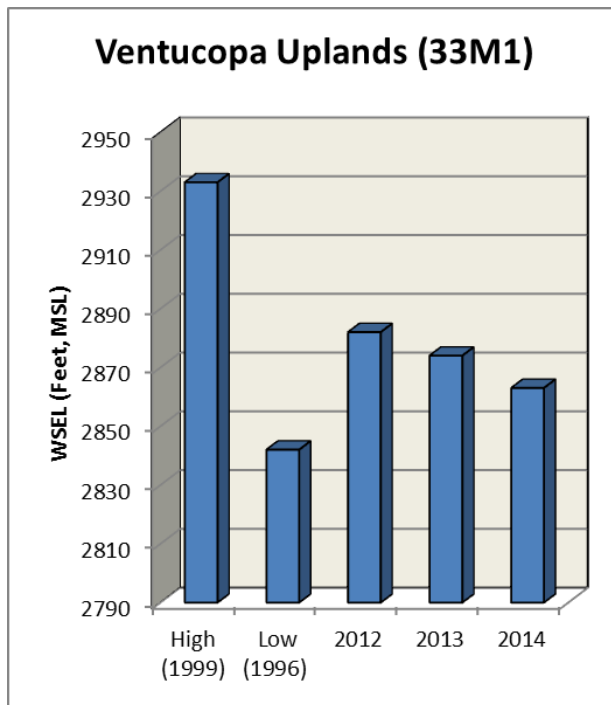
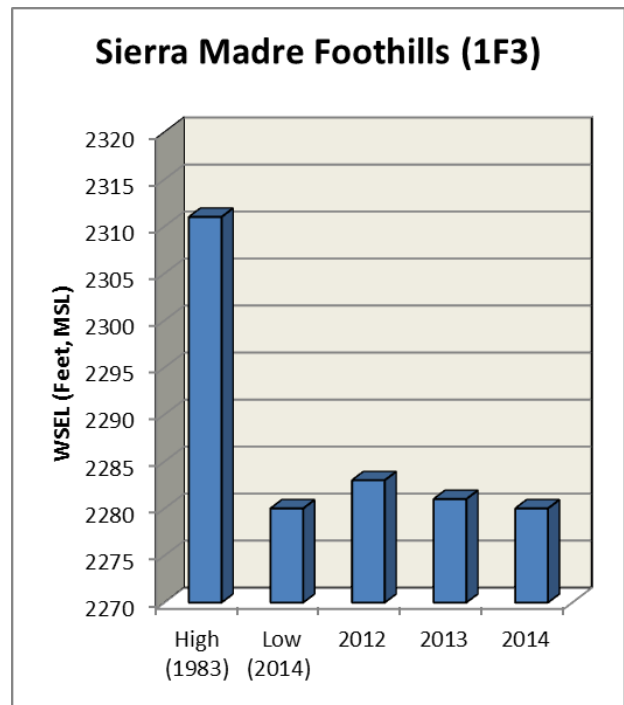
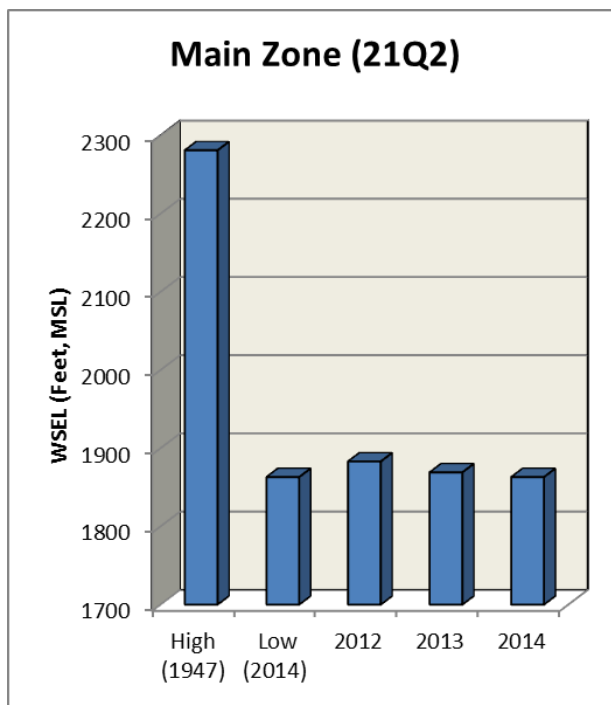
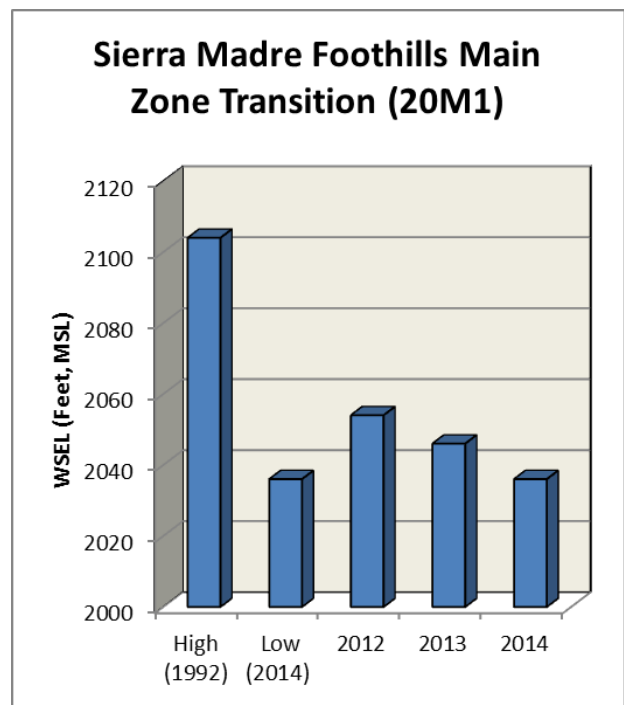
Guadalupe West (7E5)



Oso Flaco (25F3)



Figures B36-B39: Cuyama Valley Groundwater Basin Level Comparison





**BOARD OF SUPERVISORS
AGENDA LETTER**

Agenda Number:

Clerk of the Board of Supervisors
105 E. Anapamu Street, Suite 407
Santa Barbara, CA 93101
(805) 568-2240

Department Name: Planning and Development
Department No.: 053
For Agenda Of: March 5, 2019
Placement: Departmental
Estimated Tme: 15 minutes
Continued Item: Yes
If Yes, date from: February 5, 2019
Vote Required: Majority

TO: Board of Supervisors

FROM: Department Director(s) Dianne M. Black, Director, Planning & Development
(805) 568-2086
Contact Info: Jeff Wilson, Deputy Director, Development Review Division
(805) 568-2518

SUBJECT: Adopt Findings Requiring Preparation of a Focused EIR for the North Fork Ranch Frost Ponds Minor Conditional Use Permit, Fifth Supervisorial District

County Counsel Concurrence

As to form: Yes

Auditor-Controller Concurrence

As to form: N/A

Recommended Actions:

On February 5, 2018, the Board of Supervisors considered appeal case number 18APL-00000-00019, filed by Mr. Matt Turrentine of Brodiaea, Inc., the project applicant, of the County Planning Commission's, September 12, 2018, determination that the proposed Final Mitigated Negative Declaration (MND), case number 16NGD-00000-00004 prepared for the North Fork Ranch Frost Ponds project, case number 16CUP-00000-00005, is inadequate and that a focused Environmental Impact Report (EIR) is required. The project site is located at 7400 Highway 166, approximately nine miles west of the community of New Cuyama, Fifth Supervisorial District. The application involves Assessor's Parcel No. 147-010-045.

Staff recommends that your Board take the following actions:

- a) Determine that the Mitigated Negative Declaration, case no. 17NGD-000-00004, is inadequate and make the finding (Attachment 1) that an EIR is required because there is substantial evidence in the record supporting a fair argument that the project may have a significant effect on the environment;
- b) Deny the appeal, case no. 18APL-00000-00019, thereby affirming the Planning Commission's action; and
- c) Direct staff to prepare a Focused EIR on issues associated with water use impacts from operation of the frost ponds and associated frost protection system, potential biological resource impacts, and potential flooding impacts to State Route 166.

Summary Text:

On September 12, 2018, the County Planning Commission reviewed the North Fork Ranch Frost Ponds Project (16CUP-00000-00005). The Commission concluded that the Mitigated Negative Declaration prepared for the project was not adequate and directed staff to prepare a focused EIR evaluating the Project's water use impacts, impacts to biological resources, and potential flooding impacts to State Route 166. The Planning Commission's decision was appealed by the Project applicant.

At the February 5, 2019 hearing on appeal 18APL-00000-00019, the Board affirmed the action of the Planning Commission and provided conceptual direction to staff to prepare a focused EIR for the Project. The Board also continued the public hearing to March 5, 2019 and directed staff to prepare findings that an EIR is required to evaluate the potential environmental impacts of the proposed Project. CEQA Findings for the project are included as Attachment 1. After preparation of the focused EIR, the Project would return to the Planning Commission for further consideration and action on the CUP

Fiscal and Facilities Impacts:

Budgeted: Yes

The costs for processing appeals are provided through a fixed appeal fee and funds in Planning and Development's adopted budget. Total costs for processing the appeal are approximately \$9,040 (40 hours). The costs are partially offset by the appeal fee of \$610.66. Funding for processing this appeal is budgeted in the Permitting Budget Program, as shown on page D-272 of the adopted FY 2018-2019 budget.

Attachments:

Attachment 1: Findings

Attachment 2: December 11, 2018, Board Letter and Attachments

Attachment 3: County of Santa Barbara Groundwater Basins Status Report, 2014

ATTACHMENT 1: FINDINGS

North Fork Ranch Frost Ponds Project Case No. 18APL-00000-00019

1.0 FINDINGS

The Board of Supervisors has considered the Mitigated Negative Declaration (MND), Case No. 17NGD-00000-00004 (Planning Commission Staff Report, Attachment D of Attachment 2 to the Board Letter dated December 11, 2018, and incorporated herein by reference), together with the written and oral comments received before and during the public hearing on March 5, 2019. After considering the documents and information cited above, the Board of Supervisors finds that there is substantial evidence in the record to support a fair argument that the North Fork Ranch Frost Ponds Project (Project) may have a significant effect on the environment and that a focused EIR must be prepared to address the issues related to the Project's water use impacts from operation of the frost ponds and associated frost protection system; impacts to biological resources; and potential flooding impacts to State Route 166.

The required permit for the proposed project is a discretionary Conditional Use Permit. The proposed project, as described in the Project Description states that it includes construction and operation of three frost ponds (each with the water storage capacity of 49 acre-feet) would occupy a total area of approximately 15.6 acres, and that construction would take approximately one year. The frost ponds would be supplied by existing agricultural wells and would store water to be used for frost protection at the North Fork Ranch Vineyards. Frost protection would be achieved by sustained spray irrigation when frost has the potential to damage the grape vines and would generally be required during the months of February, March and April. The reservoirs would be maintained at a full condition between February and April and at other times of year, a maximum of three feet of well-supplied water would be maintained in the reservoirs.

1.1 Water Use by Frost Protection System:

After considering all of the evidence in the record, the Board finds that environmental review must analyze water use impacts from the entire frost protection system (reservoirs and spray irrigation system) based on the Project's large size, and location in and use of water from the critically over drafted Cuyama Valley Groundwater Basin. There is substantial information in the record which shows that water use impacts from the frost ponds and associated frost protection system may exceed the groundwater use significance threshold of 31 acre feet per year (AFY) adopted for the Cuyama Valley Groundwater Basin and that the Basin is in a critical overdraft situation with a long-term overdraft of nearly 30,000 AFY. Evidence to support this finding includes, but is not limited to, the following documents incorporated herein by reference: (1) Letter dated February 1, 2019 and attachments from the Law Office of Marc Chytilo and (2) the County of Santa Barbara Groundwater Basins Status Report (dated October 14, 2014). Based on substantial evidence supporting a fair argument of a potentially significant water use impact, it is the independent judgment and analysis of the Board of Supervisors that an environmental impact report (EIR) is required to fully analyze the potential water use impacts of the proposed frost ponds and associated frost protection system.

1.2 Biological Resources:

The construction of the proposed reservoirs could adversely impact approximately 15.6 acres of habitat suitable for a range of native species including special status plants and animals. The project site biological resource surveys were conducted during a period of extended drought and substantial evidence of a fair argument has been presented that the drought may have adversely influenced the validity of rare plant surveys conducted for the Project and a complete assessment of the Project's impacts on biological resources. Evidence to support this finding includes, but is not limited to, the following documents incorporated herein by reference: (1) Letter dated February 1, 2019 and attachments from the Law Office of Marc Chytilo, (2) Letter dated September 6, 2018 by Dr. Gliessman (Attachment 4 to the Board Letter dated December 11, 2018) that identified 25 threatened plant species, including four that have been collected in the past in the Project's immediate vicinity, and (3) Letter dated January 31, 2019 by Dr. Gliessman. Based on substantial evidence supporting a fair argument of a potentially significant impact to biological resources, it is the independent judgment and analysis of the Board of Supervisors that an EIR is required to fully address the proposed Project's impact on biological resources.

1.3 Potential flooding to State Route 166:

Based on information provided in a letter from the California Department of Transportation (Caltrans) dated July 7, 2017, the potential exists for catastrophic failure of the proposed reservoir berms and inundation of portions of State Route 166. Based on substantial evidence supporting a fair argument of a potentially significant flooding impact that may result from the Project, it is the independent judgment and analysis of the Board of Supervisors that an EIR is required to fully evaluate the Project's potential flooding impacts.

ATTACHMENT 2
DECEMBER 11, 2018, BOARD LETTER AND ATTACHMENTS

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The December 11, 2018, Board Letter and Attachments prepared for the North Fork Ranch Frost Ponds Projects are available at:

<https://santabarbara.legistar.com/LegislationDetail.aspx?ID=3772248&GUID=2B807909-FECA-4662-BD7D-600AD2A2C1BD&Options=&Search=>

ATTACHMENT 3
COUNTY OF SANTA BARBARA GROUNDWATER BASINS STATUS
REPORT, 2014

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