



A Tradition of Stewardship
A Commitment to Service

GRADING PERMIT APPLICATION

Planning, Building & Environmental Services

1195 Third Street, Suite 210

Napa, CA 94559-3082

(707) 253-4417

Applicant Information (if different from property owner):

1. Name (First and Last or Company Name)

PPI Engineering

Street Address

2800 Jefferson Street

City

Napa

State

CA

Zip

94558

Phone Number

707-253-1806

Applicant Title

Consultant

E-mail Address

jbushey@ppiengineering.com

Property Owner Information:

2. Name (First and Last or Company Name)

Samuel and Henry Eakle

Street Address

4720 Hardin Road

City

St. Helena

State

CA

Zip

94574

Phone Number

707-974-0063

E-mail Address

david@eakledevelopment.com

Project Information:

3. Site Address:

4720 Hardin Road

Assessor's Parcel No.:

018-160-022

4. Project Description (Attach drawings to application):

Construction of a 23 acre-feet water storage reservoir.

5. Approximate Area of Disturbance:

3 acres

6. Will natural drainage be affected? Yes No

7. Cut Information:

7a. Estimated Quantity (CY)

21,600

7b. Estimated Depth (FT)

18

8. Fill Information:

8a. Estimated Quantity (CY)

21,600

8b. Estimated Depth (FT)

16

9. If creating a reservoir:

Estimated Storage (AC-FT)

23

Application Fees:

Application fee for processing a grading permit is based on an hourly fee of \$146 per hour in accordance with the Napa County Policy Manual Section 75.020 as revised by the Board of Supervisors on July 31, 2018, Resolution 2018-102. All grading permit applications require a \$2,000.00 deposit to file. There will be a 3.3% surcharge added per Section 75.015. Any portion of a deposit not used for issuance of a grading permit (including inspections) shall be refunded to applicant.

**THE APPLICANT IS RESPONSIBLE FOR OBTAINING ANY PERMITS
REQUIRED BY OTHER AGENCIES.**

I HEREBY CERTIFY THAT THE INFORMATION SUPPLIED BY MYSELF OR MY REPRESENTATIVE IN CONNECTION WITH THIS PERMIT APPLICATION IS TRUE.

Signature of Owner:

Sam Eakle

Date:

3/24/21

Signature of Applicant:

Sam Eakle

Date:

3/24/21



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AGENT AUTHORIZATION

Only the Owner, Contractor or their Authorized Agent may submit plans for permits. To authorize a third party agent, the agent must bring this signed form, or a wet signed letter, which identifies them and the person they are representing, and for what jobs they may obtain permits. The letter must contain all the information requested on this form.

This form must accompany ALL applications that are being filed by an Authorized Agent.

Faxes Are Not Accepted.

As the owner of the property, I understand that the application for any permit (i.e. Grading, Building, Plumbing, Mechanical and/or Electrical, etc.) must be signed by the Owner of the property, his/her duly Authorized Agent, or licensed Contractor. This procedure also applies to the Contractor's Agents.

I understand that I may designate a third party, such as a tenant or person in my employ, to sign the application for a permit on my behalf. I further understand that the person's only responsibility or function is to acquire a permit on my behalf.

I am aware that the responsibility for the construction and compliance to codes and ordinances is entirely mine and I accept the same.

Therefore, as the owner or authorized agent of the above listed property,

I do hereby authorize (Please Print) James Bushey

To apply/obtain a permit from Napa County for an Agricultural Reservoir

in my name by affixing my name followed by their Signature on the application.

OWNER: Tom Cable

OWNER ADDRESS: 4720 Hardin Rd, St. Helena, CA 94574

OWNER PHONE #: 707-974-0063

AUTHORIZED AGENT: James Bushey

AUTHORIZED AGENT PHONE #: (707) 484-1296

AUTHORIZED AGENT ADDRESS: 2800 Jefferson St. Napa 94558

CONTRACTOR/ENGINEER/ARCHITECT CALIFORNIA LICENSE #: C49931



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Planning, Building & Environmental Services

1195 Third Street, Suite 210
Napa, CA 94559
www.countyofnapa.org

David Morrison
Director

PROJECT GUIDANCE FOR STORMWATER QUALITY COMPLIANCE

PROJECT INFORMATION

Project Name

Eagle Agricultural Reservoir

Project Number

Project Address

4720 Hardin Road, St. Helena Ca 94574

Assessor's Parcel Number

018-160-022

Existing Development Permits Under Review or Issued

Grading Permit

EROSION & SEDIMENT CONTROL PLAN (ESCP) APPLICABILITY

Under Provision E.10 of a statewide Phase II municipal stormwater NPDES permit reissued by the California State Water Resource Control Board in 2013, requires Napa County to establish and enforce an erosion and sediment control program to minimize the discharge of sediment and construction related pollutants. All individuals undertaking public or private construction or ground disturbing activities must take steps to prevent the discharge of pollutants resulting from these activities. Specified projects that require local permits or trigger ground disturbance thresholds must prepare plans describing the BMPs that will be implemented. Refer to Napa County's Erosion and Sediment Control Plan Guidance Table 3, Levels of Erosion and Sediment Control Requirements, for a summary of the general levels of requirements that are further described in the guidance document. Please respond to the following questions.

- | | | | | |
|--|-----|-------------------------------------|--------------------------|---|
| 1. Does the project require a Grading Permit? | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| 2. Does the project proposed soil disturbance greater or equal to 10,000 square feet? | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| Proposed Disturbed Soil Area: | 3 | sq.ft. | <input type="checkbox"/> | acres <input checked="" type="checkbox"/> |
| 3. Does the project propose soil disturbance on slopes greater or equal to 5%? | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| Maximum Percent Slope: | 20% | | | |
| 4. Does the project propose installation of new and/or reconstructed storm drains which discharge to a municipal storm system or receiving water body? | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> |

For County Use Only:

	High	Medium	Low	N/A
Threat to Water Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Construction General Permit WDID# (if applicable):



POST-CONSTRUCTION STORMWATER CONTROL PLAN (SCP) APPLICABILITY

Under Provision E.12 of a statewide Phase II municipal stormwater NPDES permit reissued by the California State Water Resource Control Board in 2013, requires Napa County to regulate development projects to control pollutants in runoff from newly created or replaced impervious surface. Prior to submittal of a use, building, or grading permit, applicants must determine the Project Type, Project Requirements and submittal requirements. Refer to Napa County's BASMAA Post- Construction Manual Table 1-1, Requirements at a Glance, for a summary of project type requirements.

TYPE OF PROJECT:

Single Family Dwelling* Larger Plan of Development

Commercial / Industrial / Non-Residential Roads / Linear-Utility Project (LUP)

Total New or Replaced Impervious Surface Area (sq.ft.):

Total Pre-Project Impervious Surface Area (sq.ft.): Total

Post-Project Impervious Surface Area (sq.ft.):

*Single-Family home or dwelling unit means a dwelling unit containing not more than one kitchen, designed to be occupied by not more than one family, and includes a manufactured home as defined in Section 18.08.360 which is installed on a permanent foundation and certified under the National Manufactured Housing Construction and Safety Standards Act of 1974 (42 U.S.C. Sections 5401 and following).

For County Use Only:

	Single-Family Dwelling	Small Project	Regulated Project	Roads & LUPs	N/A
Project Category	<input type="checkbox"/>				

Operation & Maintenance Agreement Required: Yes No

I hereby certify that the information presented herein by myself or my representative is accurate and complete. Incorrect information on proposed activities or uses may delay your application(s) or permit(s).

Name of Owner / Agent:

Title:

Signature of Owner / Agent

Date:



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A Commitment to Service

Planning, Building & Environmental Services
1195 Third Street, Suite 210
Napa, CA 94559
www.countyofnapa.org

David Morrison
Director

May 17, 2021

PPI Engineering
2800 Jefferson Street
Napa, CA 94558

Copy to property owner:
Samuel and Henry Eakle
4720 Hardin Road
St Helena, CA 94574

**Re: (FIRST) Plan review comments for: ENG21-00013
23-acre foot water storage reservoir at: 4720 Hardin Rd, St Helena, APN: 018-160-022-000]**

Dear Applicant,

Thank you for submitting a permit application for Napa County's review. This letter contains plan review comments from each concerned division in the Planning, Building & Environmental Services Department. The Department's goal is to provide you with one consolidated plan review comment letter. In most cases, re-submitted plans shall be reviewed within 14 days provided they are complete and revised as noted in the plan review comments. Re-submittals that have been substantially altered or re-designed shall be reviewed within 28 days and may incur additional plan review fees.

Re-submitted plans will not be routed for plan review until we have received complete and revised sets of grading and drainage plans to include all reports, attachments, calculations, permit resubmittal form, and any additional fees or deposits owed. We encourage digital submittals. During your initial submittal, you should have received a link with instructions on submitting to the PBES Engineering Digital Cloud. Please note that these digital links are project specific. If you do not have this link for the above named project, please reach out to the reviewing engineer directly. Alternately, you may contact the Engineering Division General Inbox at Engineering@countyofnapa.org to obtain one. Please include a reference to the project number with all correspondence. Please submit a response letter addressing each of the plan review comments along with the revisions clouded on the plan set. Please be aware that this is an identification of information known to be necessary at this time to continue processing of your application. Further review of your project may necessitate the request for additional information, including supplemental reports. Plan review comments begin on the following page.

Page 1 of 4

Planning Division
(707) 253-4417

Building Division
(707) 253-4417

Engineering & Conservation
(707) 253-4417

Environmental Health
(707) 253-4471

Parks & Open Space
(707) 259-5933

CURRENT PLAN REVIEW STATUS BY DIVISION.			
DIVISION	REVIEW STATUS	REVIEWERS NAME	CONTACT INFO
ENGINEERING	SEE COMMENTS	DANIEL HORNETT	707-299-1358
PLANNING	SEE COMMENTS	PAMELA ARIFIAN	707-259-5934

PLAN REVIEW COMMENTS BY DIVISION

ENGINEERING DIVISION COMMENTS:

1. Section 2.4(C) of the Specifications Report says that the liner shall not require benching into the embankment, however, section A-A on sheet C2.0 calls for benching the liner into the cut slope. Please revise for consistency.
2. Provide information on the water source and demonstrate any infrastructure necessary for diversion, conveyance, etc.
3. Please provide an analysis demonstrating that the overflow structure has the capacity to drain the 10-year storm without additional head and the 100-year storm without overtopping the embankment.
4. Please list the required geotechnical special inspections on the plans cover sheet
5. Provide a setback to the property line of at least H/5 where H is the height of the embankment.
6. Per the recommendations of PJC & Associates in the geotechnical report, provide a subdrain in all keyways.
7. Update the plans to include an Erosion and Sediment Control Plan (ESCP) describing the erosion and sediment Best Management Practices (BMPs) that will be implemented to minimize the discharge of sediment during construction. The ESCP shall illustrate the total limit of disturbance, construction access, staging and stockpiling of materials, handling of concrete waste, site lavatory locations, and address installation of all applicable temporary erosion and sediment control Best Management Practices (BMPs) to protect local waterways and limit the threat to water quality. Please refer to Napa County's Erosion and Sediment Control Plan Guidance ("NCSPPP Erosion and Sediment Control Plan Guidance") available on the County's webpage for additional information on preparing these plans. The ESCP shall also include a note on plans explaining any BPMs that will be used for stabilizing post-construction soils to protect exposed soils from being removed from the project site by stormwater flows.
<https://www.countyofnapa.org/DocumentCenter/View/2964/Erosion-and-Sediment-Control-Plan-Guidance-for-Applicants-and-Review-Staff-PDF>
 - a. Please illustrate the total area of limit of soil disturbance.
 - b. Construction Site Entrance/Access
 - c. Concrete Washout
 - d. Portable Toilet/Lavatory
 - e. Staging Area/Equipment and Stockpile Management Area
 - f. Please address installation of all applicable temporary erosion and sediment control (i.e. straw wattles, silt fencing, gravel pea bags, vehicle wash area, and drop inlet protection on-site and off-site, etc.). Please include the installation details of all the BMPS.

PLANNING DIVISION COMMENTS:

1. Please indicate whether any trees would be removed; if tree removal will occur, identify the number, species and diameter at breast height (DBH).
 2. Provide a Biological Resources Reconnaissance Survey prepared by a qualified professional biologist (refer to enclosed Guidelines for Preparing Biological Resources Reconnaissance Surveys).
 3. Provide information on the water source, including any relevant information regarding water rights (if diverted from stream), or provide a Water Availability Analysis (WAA - refer to enclosed WAA Guidance Document) if sourced from groundwater. Should subsurface water be collected and pumped to the reservoir, the County will need an evaluation from a qualified biologist confirming the presence or absence of Groundwater Dependent Ecosystems (GDE's). Refer to the enclosed memorandum for guidance on the definition of GDEs and how to identify and map them. Please note that, while the memo is not specific to your project, it describes the technical information needed in order for the County to continue processing your application as required by CEQA). The biologist will need to clearly define and illustrate the entirety of the project area with emphasis on the proposed subdrain infrastructure relative to the location(s) of any GDEs.
 4. Provide a Cultural Resources Survey prepared by a qualified professional archaeologist (refer to enclosed Guidelines for Preparing Cultural Resource Surveys).
-
-

Effective Codes: All plans shall be designed under the effective building codes: 2019 California Building Code, National Pollutant Discharge Elimination System (NPDES) Water Quality Order No. 2013-0001- DWQ, the latest Napa County Road and Street Standards, and the current Napa County Code.

Processing: Thank you in advance for providing the above material. Please insure that all revised plans, reports, or other resubmitted documents are clearly marked "revised" and dated. Upon completion of corrections, please submit digital sets of corrected plans, to the Napa County Permit Center.

Digital Resubmittal Instructions:

1. Please send an email with a copy of the completed application resubmittal form (attached to this letter) to our general division inbox at: Engineering@countyofnapa.org notifying staff of your intention to resubmit.
2. Once we receive the resubmittal form, Engineering staff will email you to confirm receipt of the form and will re-send the cloud link.

3. You may then upload all electronic files (resubmittal form, plans, reports, etc.) for our review.
4. We ask that you please name the files using SUBMITTAL # (2, 3, etc) followed by the Napa County project number and document type for ease of our reviewers.
5. Please submit you any additional payments to our main office. We are taking the payments in person at our front desk but you may also make the payment over the phone via credit card (707) 253-4417 or you may mail in a check. Please make sure to include a reference to the Napa County permit number with your payment.
6. Once the payment has been made and all documents uploaded to our cloud, please send another email to Engineering@countyofnapa.org
7. After we receive confirmation of receipt of the plans and payment, we will send you a confirmation email and begin the review and processing of your resubmittal.

Approval: Upon approval of the plans by all reviewing divisions. Engineering staff will contact you and request at least TWO hard copies of the complete and revised sets of grading and drainage plans to include all reports, attachments, and calculations for stamping and permit issuance.

If you have any questions about this letter or other matters relating to your application, permitting staff can be reached at (707) 253-4417. For general review status please send an email to the reviewing engineer at: daniel.hornett@countyofnapa.org. Napa County handouts and forms can be found online at www.countyofnapa.org/PBES

Sincerely,

Daniel Hornett

Assistant Engineer

County of Napa | Engineering Division

Planning, Building & Environmental Services Department

1195 Third Street, 2nd Floor | Napa | CA | 94559

ph: **(707) 299-1358**

Email: daniel.hornett@countyofnapa.org



VINEYARD DESIGN
EROSION CONTROL
WATER DEVELOPMENT
DRAINAGE
PERMITTING
GPS/GIS

2800 Jefferson Street
Napa, California 94558
707-253-1806
www.ppiengineering.com

MEMORANDUM

Date: June 10, 2022

To: Daniel Hornett, Engineering Division
Napa County Planning, Building & Environmental Services
1195 Third Street, Suite 210
Napa, CA 91559

From: James Bushey, P.E.
Annalee Sanborn 

Cc: Brent Edwards, P.E., Edwards Engineering

Re: Response to FIRST Plan Review Comments for: ENG21-00013
23-Acre Foot Water Storage Reservoir at
4720 Hardin Rd, St Helena, APN: 018-160-022-000

This memo provides responses to the first plan review comments provided by Napa County Planning, Building, & Environmental Services on May 17, 2021 regarding the above-referenced permit application. The project has been updated to address each comment.

ENGINEERING DIVISION COMMENTS:

Responses to Engineering Division comments are provided in a letter dated June 6, 2022 from Edwards Engineering, enclosed herein.

PLANNING DIVISION COMMENTS:

1. Please indicate whether any trees would be removed; if tree removal will occur, identify the number, species and diameter at breast height (DBH).

Response: Five valley oak (*Quercus lobata*) trees will be removed for the project, as discussed further in the Biological Resources Reconnaissance Report prepared by

Kjeldsen Biological Consulting dated February 2022. Refer to page 16 of the enclosed BRRS Report for the full discussion of the trees proposed for removal.

2. Provide a Biological Resources Reconnaissance Survey prepared by a qualified professional biologist (refer to enclosed Guidelines for Preparing Biological Resources Reconnaissance Surveys).

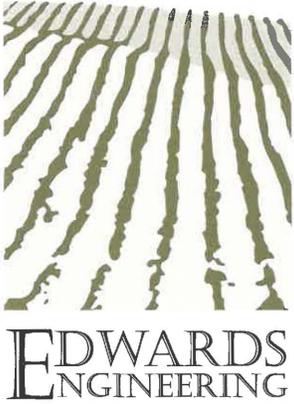
Response: *A BRRS Report dated February 2022 has been prepared by Kjeldsen Biological Consulting and is included with this resubmittal.*

3. Provide information on the water source, including any relevant information regarding water rights (if diverted from stream), or provide a Water Availability Analysis (WAA - refer to enclosed WAA Guidance Document) if sourced from groundwater. Should subsurface water be collected and pumped to the reservoir, the County will need an evaluation from a qualified biologist confirming the presence or absence of Groundwater Dependent Ecosystems (GDE's). Refer to the enclosed memorandum for guidance on the definition of GDEs and how to identify and map them. Please note that, while the memo is not specific to your project, it describes the technical information needed in order for the County to continue processing your application as required by CEQA). The biologist will need to clearly define and illustrate the entirety of the project area with emphasis on the proposed subdrain infrastructure relative to the location(s) of any GDEs.

Response: *The proposed water source will be shallow perched subsurface water that is currently collected in the existing drainage system in the vineyard adjacent to the proposed reservoir. Water from this existing subsurface drainage system is currently pumped to existing storage tanks that are shown on the revised Site Plan and used to irrigate the vineyard. The proposed reservoir would provide additional storage for the subsurface water that is already being captured and utilized. No groundwater or surface water would be collected in the reservoir. The biologist reviewed the area and did not identify any groundwater dependent ecosystems (GDEs) that would be adversely affected by the proposed reservoir. Refer to page 24 of the BRRS Report included with this resubmittal.*

4. Provide a Cultural Resources Survey prepared by a qualified professional archaeologist (refer to enclosed Guidelines for Preparing Cultural Resource Surveys).

Response: *A Cultural Resources Survey Report dated June 11, 2021 has been prepared by Flaherty Cultural Resource Services and is included with this resubmittal.*



1305 E STREET
NAPA | CALIFORNIA | 94559

PHONE:
(707) 258-6297

FAX:
(707) 258-8971

June 6, 2022

Ms. Annalee Sanborn
Senior Project Manager
PPI Engineering, Inc.
2800 Jefferson Street
Napa, CA 94558

RE: Eakle Reservoir Project, 4720 Hardin Rd, St. Helena (APN 018-160-022-000)
ENG21-00013

Dear Annalee,

Following are responses to Napa County's comments in the engineering plan review dated May 17, 2021 for the above referenced project.

1. *Section 2.4(C) of the Specifications Report says that the liner shall not require benching into the embankment, however, section A-A on sheet C2.0 calls for benching the liner into the cut slope. Please revise for consistency.*

The specifications state that the liner shall be benched into existing ground but as the liner will be constructed simultaneously with the embankment, benching of liner into embankment is not required. Section A-A is consistent with this recommendation – benching is shown where the liner is below original grade but is not shown where the liner is select material placed during construction of the embankment.

2. *Provide information on the water source and demonstrate any infrastructure necessary for diversion, conveyance, etc.*

There is an existing subsurface drainage system located within the vineyard that outlets to an existing sump in the northerly corner of the existing vineyard. Water from this sump is currently pumped to water storage tanks located near the proposed reservoir. These tanks and the conveyance pipeline from the sump to the tanks has been added to Sheets 1 & 2 of the Plans. Upon completion of construction of the new reservoir, the pipeline to the tanks will be outletted to the new reservoir.

3. *Please provide an analysis demonstrating that the overflow structure has the capacity to drain the 10-year storm without additional head and the 100-year storm without overtopping the embankment.*

The overflow structure was designed such that it will convey the 100-year storm with one-foot minimum of residual freeboard. A copy of our hydrology and hydraulic analysis for the overflow pipe are attached.

4. *Please list the required geotechnical special inspections on the plans cover sheet.*

There are no required geotechnical special inspections required for this project. However, as outlined in Sections 2000 and 2200 of the Specifications, the project Geotechnical Engineer will be retained by the Owner during construction to periodically measure compaction, inspect subgrade, and identify suitable materials for the clay liner. A final report summarizing any testing shall, upon completion of construction, be provided by the Geotechnical Engineer to the Owner. A copy of this report will be provided to Napa County prior to closing out the Grading Permit.

5. *Provide a setback to the property line of at least $H/5$ where H is the height of the embankment.*

The catch point of the embankment is located ± 12 -feet from the property line along the northwesterly edge of the project. The maximum embankment height is ± 16 -feet which would require a 3.2-foot setback to meet the $H/5$ requirement. The setback from catchpoint to property line which was not previously noted on the drawings, has been added to the Grading Plan as 10-foot minimum.

6. *Per the recommendations of PJC & Associates in the geotechnical report, provide a subdrain in all the keyways.*

During design of the pond, Edwards proposed to PJC moving the subdrains from the bottom of the keyway to outside the toe of the fill. PJC agreed with this change though we did not have PJC update their report at that time. Attached is a letter from PJC approving this change to their recommendations.

7. *Update the plans to include an Erosion and Sediment Control Plan (ESCP) describing the erosion and sediment Best Management Practices (BMPs) that will be implemented to minimize the discharge of sediment during construction. The ESCP shall illustrate the total limit of disturbance, construction access, staging and stockpiling of materials, handling of concrete waste, site lavatory locations, and address installation of all applicable temporary erosion and sediment control Best Management Practices (BMPs) to protect local waterways and limit the threat to water quality. Please refer to Napa County's Erosion and Sediment Control Plan Guidance ("NCSPPP Erosion and Sediment Control Plan Guidance") available on the County's webpage for additional information on preparing these plans. The ESCP shall also include a note on plans explaining any BMPs that will be used for stabilizing post-construction soils to protect exposed soils from being removed from the project site by stormwater flows.*

The requested items have been added to Sheets 1 & 2 of Plans.

Ms. Annalee Sanborn
June 6, 2022
Page 3 of 3

If you require additional information or have any questions, please call me at 707-258-6297.

Sincerely,



Brent Edwards, P.E.



4720 Hardin rd

Legend

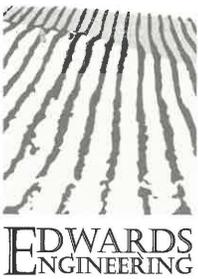
- 📍 4720 Hardin Rd
- 🔴 Drainage
- 🔵 Mainline
- 🟡 Sump
- 🟢 Tanks and pipe from sump

4720 Hardin Rd

Google Earth

500 ft





PROJECT: EAKLE- HARDIN RD
HYDROLOGY

DATE: 2-21-21
JOB NO.: EKLHAR-R
COMP. BY: BAE
CHKD. BY: _____
SHEET 1 OF 1

PET ATTACHED NOAA ISOPHYETAL - $P_{100} = 8.0''$

$T_c = 0.1$ HR - MINIMUM PER NRCS TR-55

AREA OF WATERSHED = 2.64 ACRES

CN = 98 - IMPERVIOUS AREAS - NRCS TR55

STORM DISTRIBUTION - TYPE 1A - NRCS TR55

$Q_{100} = 5.26$ cfs - SEE ATTACHED REPORT



[Handwritten signature]

Hydrology Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

Sunday, Feb 21 2021

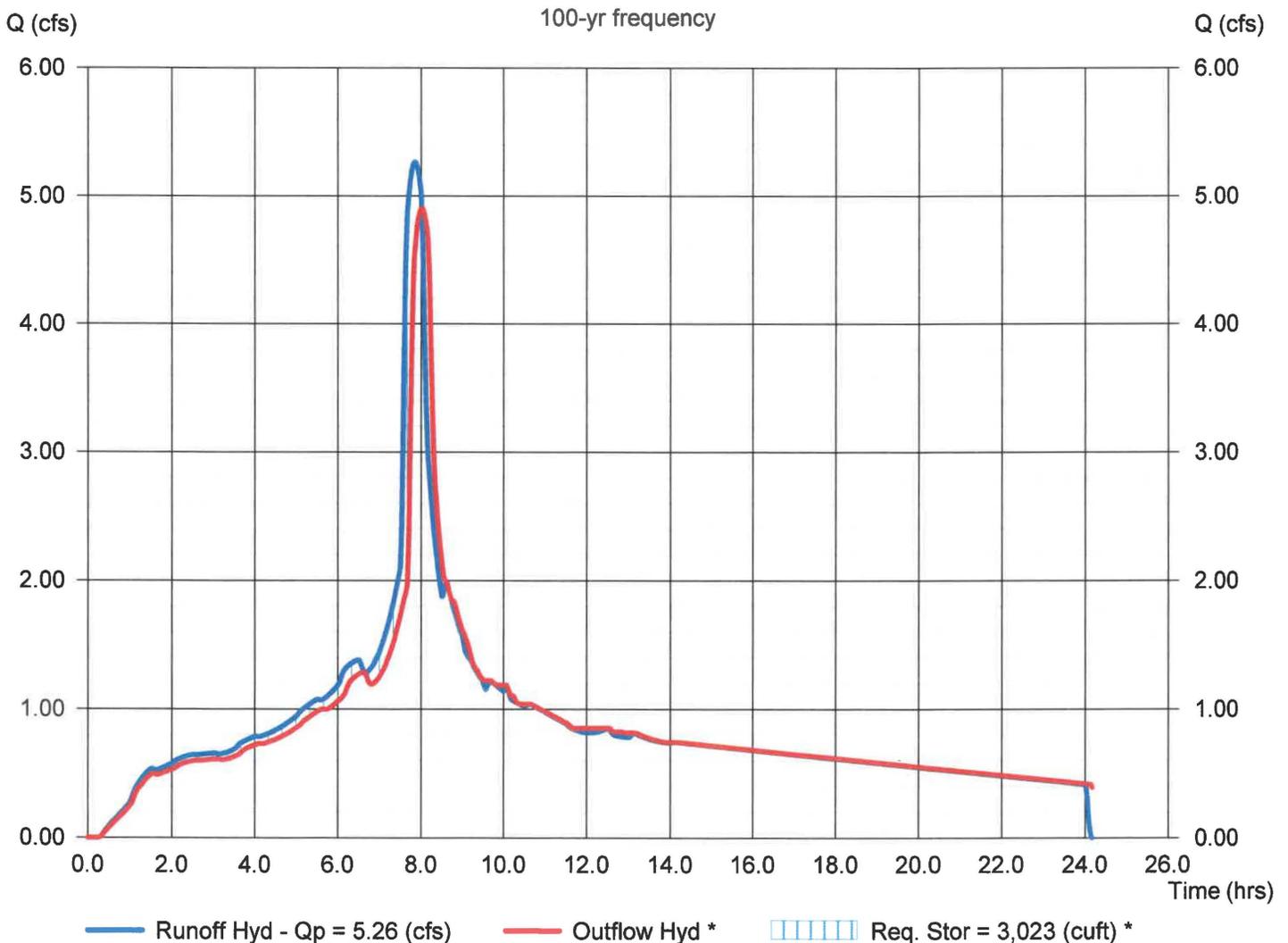
Eakle - Hardin Road

Hydrograph type = SCS
Storm frequency (yrs) = 100
Drainage area (ac) = 2.640
Basin Slope (%) = n/a
Tc method = User
Total precip. (in) = 8.00
Storm duration (hrs) = 24

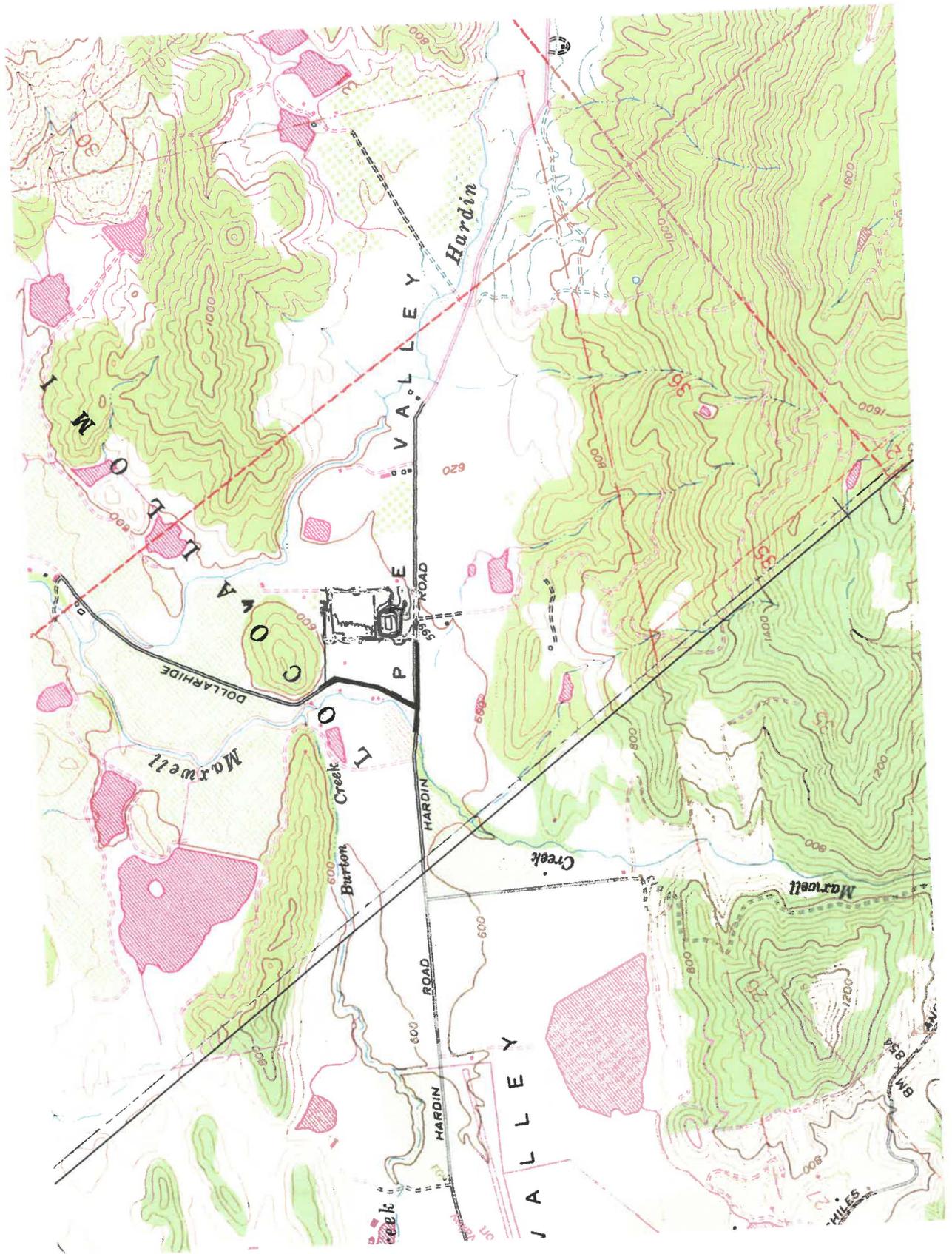
Peak discharge (cfs) = 5.262
Time interval (min) = 1
Curve number (CN) = 98
Hydraulic length (ft) = n/a
Time of conc. (min) = 6
Storm Distribution = Type IA
Shape factor = 484

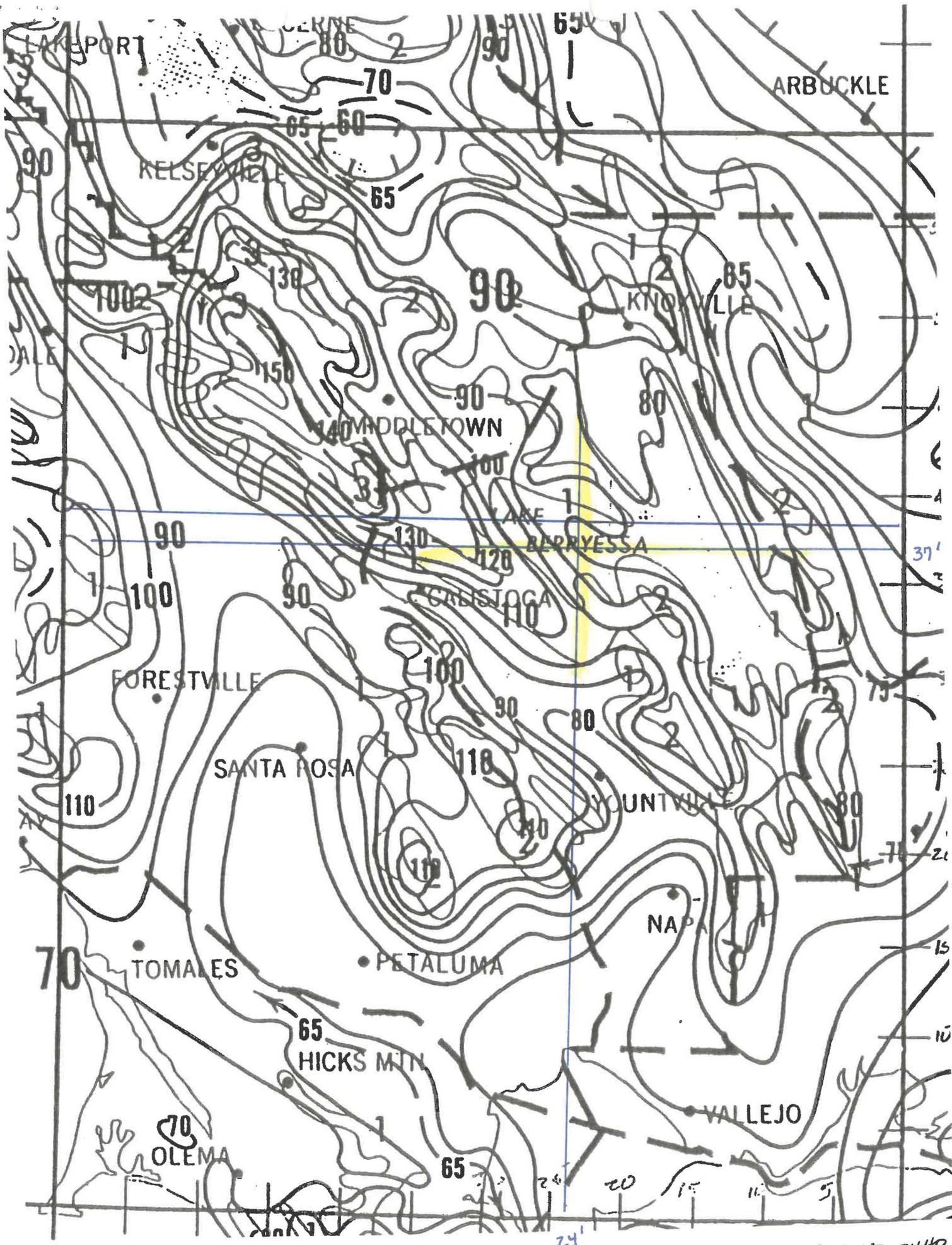
Hydrograph Volume = 76,692 (cuft); 1.761 (acft)

Runoff Hydrograph



* Estimated





100 yr, 24hr

Table 2-2a.—Runoff curve numbers for urban areas¹

Cover description	Average percent impervious area ²	Curve numbers for hydrologic soil group—			
		A	B	C	D
<i>Fully developed urban areas (vegetation established)</i>					
Open space (lawns, parks, golf courses, cemeteries, etc.) ³ :					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) ⁴ ...		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
<i>Developing urban areas</i>					
Newly graded areas (pervious areas only, no vegetation) ⁵		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

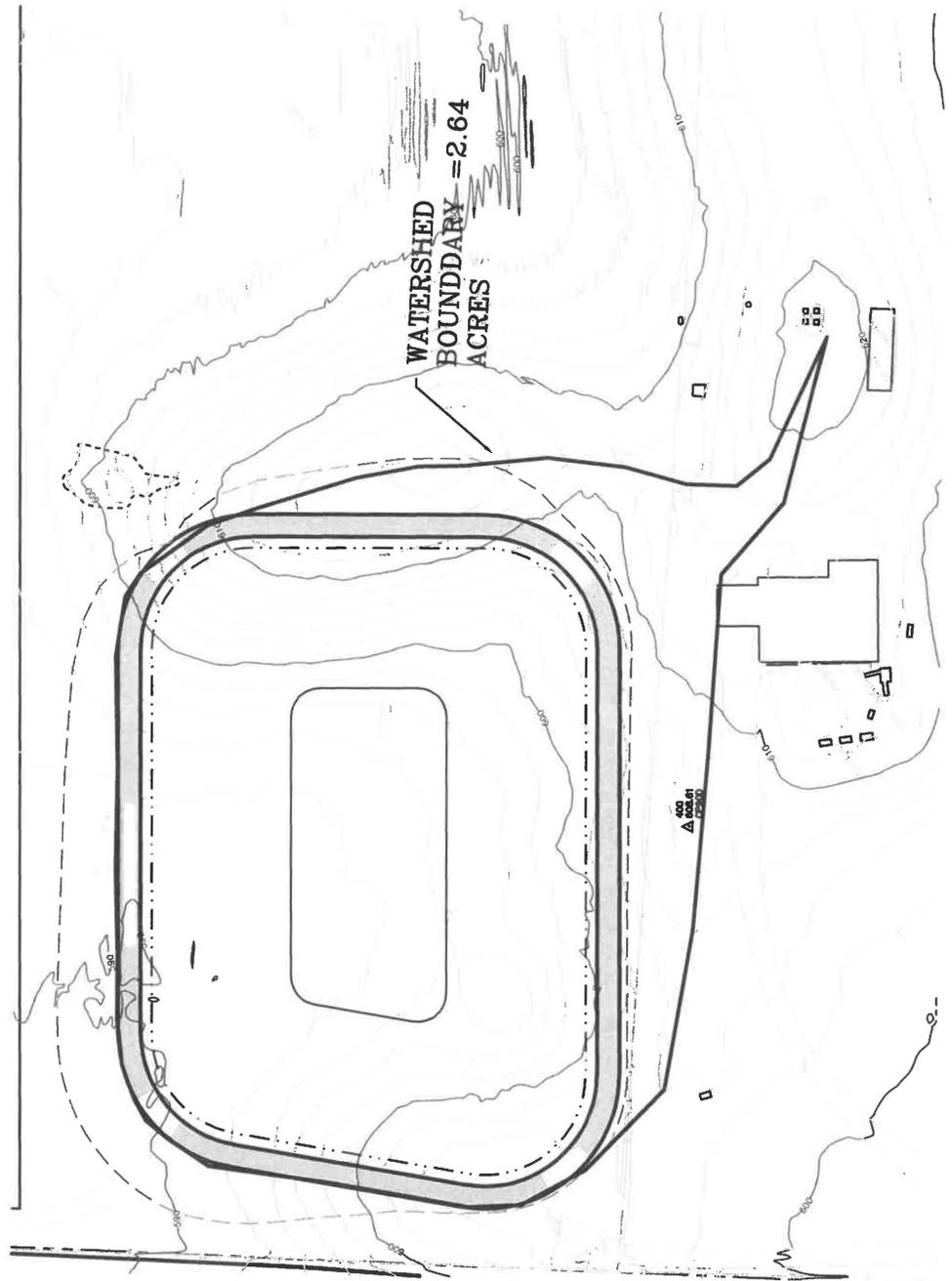
¹Average runoff condition, and $I_a = 0.2S$.

²The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

³CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

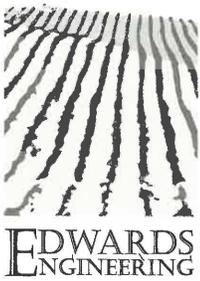
⁴Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

⁵Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4, based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.



WATERSHED
BOUNDARY = 2.64
ACRES

400
400.00
400.00



PROJECT:

EAKLE-HARDIN RD
OVERFLOW PIPE

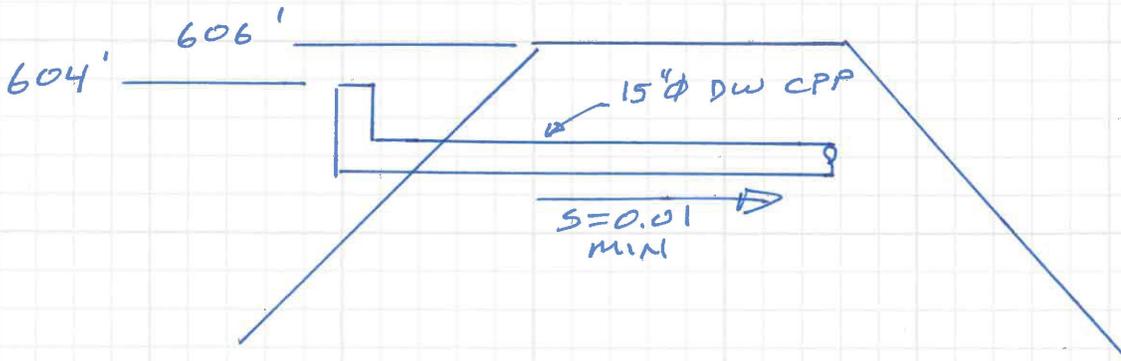
DATE: 2-21-21

JOB NO.: EKL HAR-I

COMP. BY: BAE

CHKD. BY: _____

SHEET 1 OF L



$$Q_{100} = 5.26 \text{ cfs}$$

PER NRCS NOMOGRAPH, H_{REQ} FOR 5.26 cfs = 0.8'
WHICH LEAVES 1.2-FT RESIDUAL FREEBOARD

AT $S = 0.01$ & $n = 0.012$ (DUAL WALL CPP),
 $d_{100} = 0.72'$ O.K.



B. Edwards

Channel Report

<Name>

Circular

Diameter (ft) = 1.25

Invert Elev (ft) = 100.00

Slope (%) = 0.01

N-Value = 0.001

Calculations

Compute by: Known Q

Known Q (cfs) = 5.26

Highlighted

Depth (ft) = 0.72

Q (cfs) = 5.260

Area (sqft) = 0.73

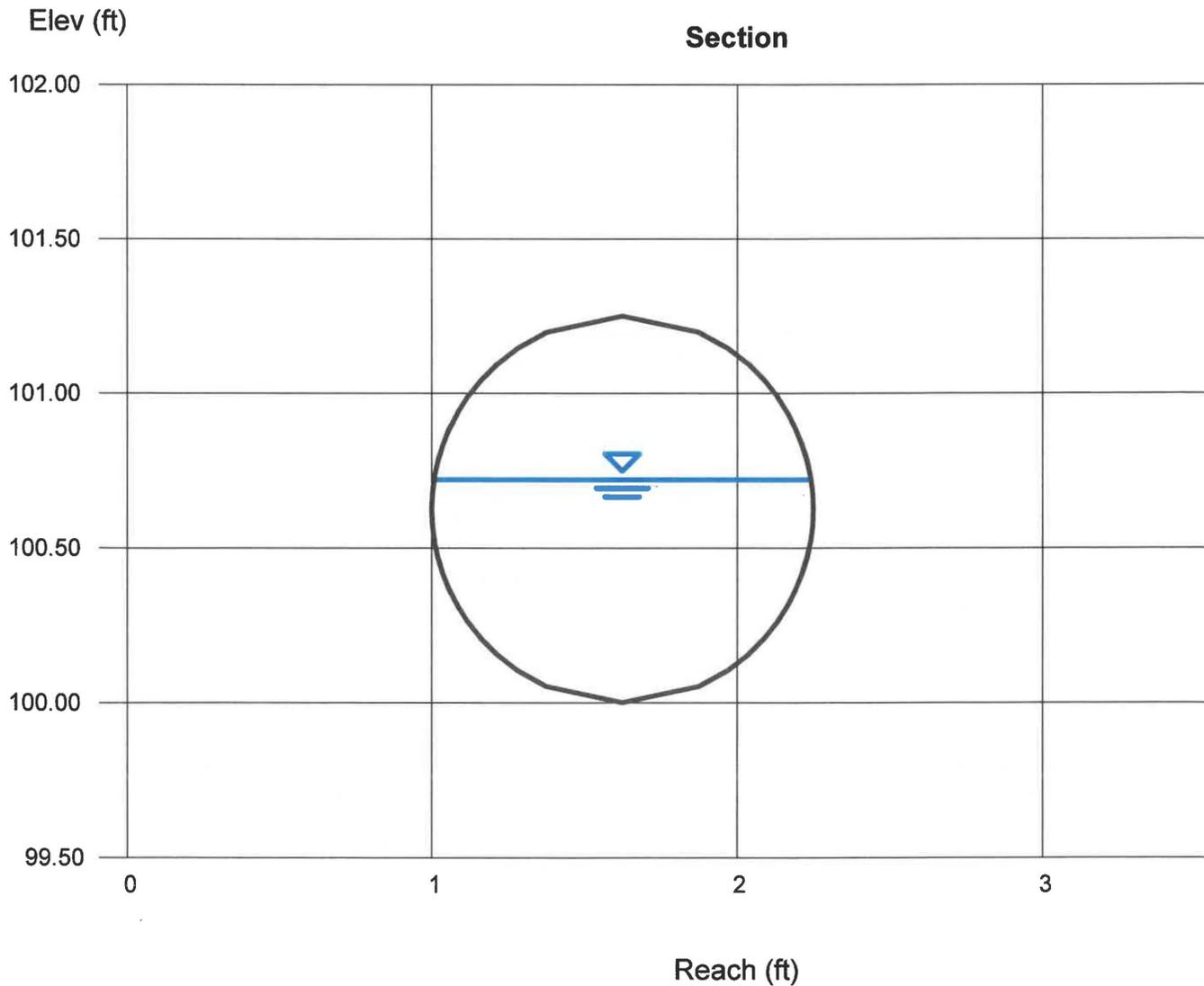
Velocity (ft/s) = 7.17

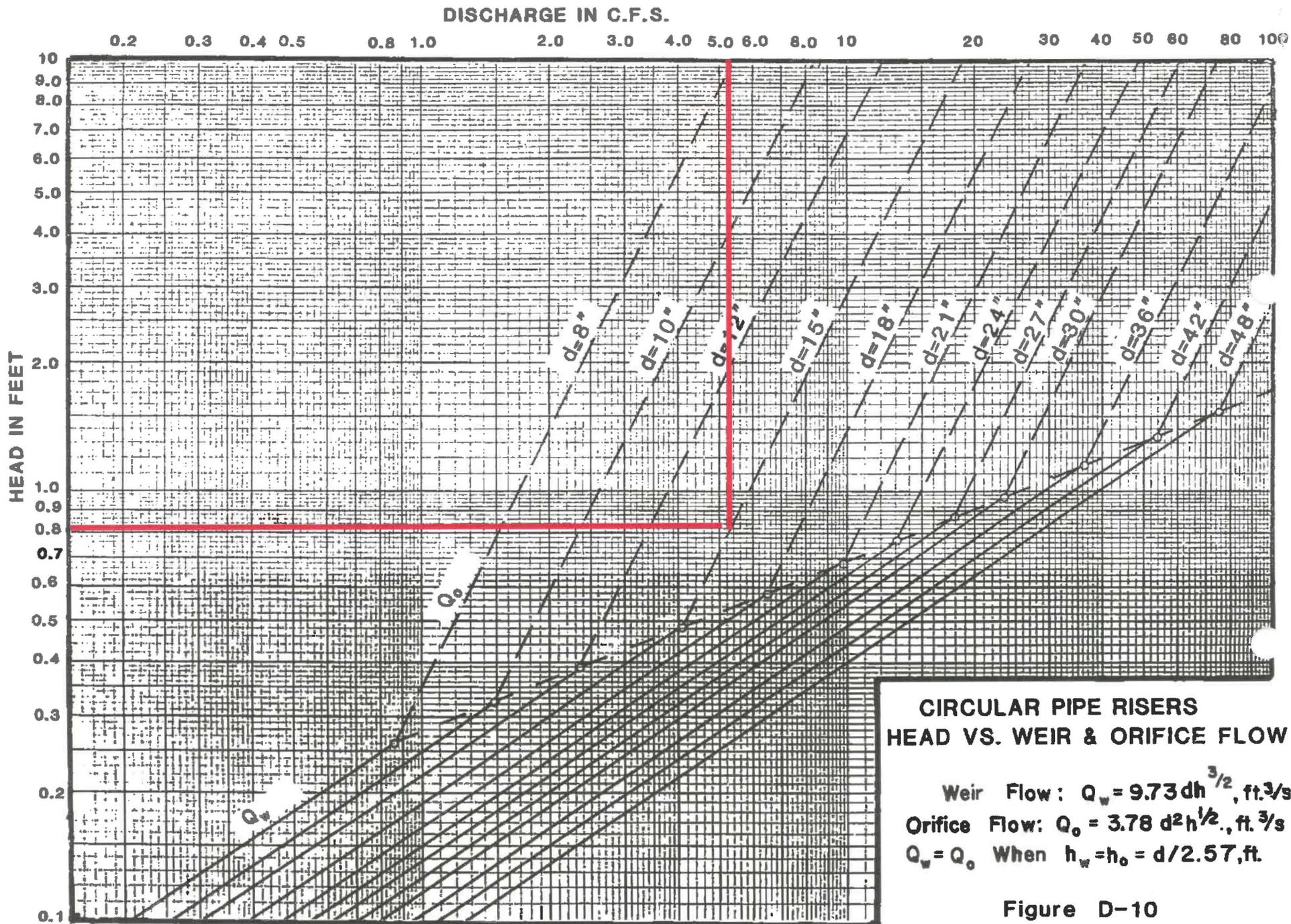
Wetted Perim (ft) = 2.16

Crit Depth, Y_c (ft) = 0.93

Top Width (ft) = 1.24

EGL (ft) = 1.52







PJC & Associates, Inc.

Consulting Engineers & Geologists

June 1, 2022

Job No. S2007.01

Edwards Engineering, Inc.
Attention: Brent Edwards
1305 E Street
Napa, CA 94559

**Subject: Toe Drain
Proposed Eakle Reservoir
4720 Hardin Road
Saint Helena, California**

References: Report titled, "Geotechnical Investigation, Proposed Eakle Reservoir, 4720 Hardin Road, Saint Helena, California" prepared by PJC & Associates, Inc., dated December 1, 2020.

Civil Plans, Sheets 1 through 3, prepared by Edwards Engineering, dated March 18, 2021.

PJC & Associates, Inc. (PJC) is pleased to submit this letter presenting the addressing the proposed toe drain. PJC previously performed a geotechnical investigation for the project and presented the results in a written report dated December 1, 2020.

It is our understanding that it is proposed to substitute the keyway subdrain recommended in geotechnical report with a toe drain as shown on the above referenced plans. Based on our review, we judge that the substitution should not significantly impact the embankment stability and should likely prevent seepage through the face of the embankment.

We trust that this is the information that you require at this time. If you have any questions concerning the content of this letter please call.

Sincerely,

PJC & Associates, Inc.

Anthony J. DeMartini
Geotechnical Engineer
GE 2750, California





A Tradition of Stewardship
A Commitment to Service

PERMIT RESUBMITTAL

This form must be filled out and returned with all the information requested in the comment letter. In order to assist us in determining which divisions and agencies need to review your plans when your resubmittal is turned in, **all corrections and changes must be clearly identified on the plans by revision cloud and delta, additional changes must also be identified below, and a comment response letter submitted.** Plans will not be accepted without this form. Clearly and concisely identify the major changes that may impact the plan review status of Fire, Planning, Engineering and Environmental Health (EH).

Permit # **ENG21-00013**

Date **6/10/2022**

FOR OFFICE USE ONLY	
ROUTING <input type="checkbox"/> Fire <input type="checkbox"/> Planning <input type="checkbox"/> Engineering <input type="checkbox"/> EH	Bin:
Plan Checker:	

APPLICANT

Please resubmit **three (3)** new complete plan sets. If you were given a "Red Marked" set (generally set A), you will need to return it with the resubmittal.

Resubmittal Number: 1 2 3 4
(Check one)

Issued Permit Not Issued

PRIMARY CONTACT

Primary Contact Name: James Bushey		Project Name: 23 AF Reservoir	
Firm: PPI Engineering		APN#: 018-160-022	
Site Address: 4720 Hardin Road	City: St. Helena	State: CA	Zip: 94574
Address: 2800 Jefferson Street	City: Napa	State: CA	Zip: 94558
Phone: 707-253-1806	Fax:	Email: jbushey@ppiengineering.com	

CORRECTIONS/CHANGES to PLANS

<input checked="" type="checkbox"/> Only corrections identified as needed in the Comment Letter.	<input checked="" type="checkbox"/> The following has been submitted in response to a Unified Letter: (3) complete sets of plans, 2 each supplemental documents
<input type="checkbox"/> These additional changes were made:	<input type="checkbox"/> (3) partial sets (to be inserted by applicant)
1. _____	
2. _____	
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	
8. _____	Change in Project Valuation (construction cost)*: <u> \$ 0.00 </u>
9. _____	*If the valuation is deemed to be less than industry standards and/or the valuation calculator, staff will make the necessary adjustment.
	Please use the back of this page if you have more changes to identify.

01/01/2020

Signature: *James Bushey* Date: 6/8/22

I understand that this information provided clearly represents all the revisions to the resubmittal. Any changes to the plans and documents that are not clearly clouded may cause my project to be re-routed and subject to delay.



A Tradition of Stewardship
A Commitment to Service

Planning, Building & Environmental Services
1195 Third Street, Suite 210
Napa, CA 94559
www.countyofnapa.org

David Morrison
Director

July 19, 2022

PPI Engineering
2800 Jefferson Street
Napa, CA 94558

Copy to property owner:
Samuel and Henry Eakle
4720 Hardin Road
St Helena, CA 94574

**Re: (SECOND) Plan review comments for: ENG21-00013
23-acre foot water storage reservoir at: 4720 Hardin Rd, St Helena, APN: 018-160-022-000]**

Dear Applicant,

Thank you for submitting a permit application for Napa County's review. This letter contains plan review comments from each concerned division in the Planning, Building & Environmental Services Department. The Department's goal is to provide you with one consolidated plan review comment letter. In most cases, re-submitted plans shall be reviewed within 14 days provided they are complete and revised as noted in the plan review comments. Re-submittals that have been substantially altered or re-designed shall be reviewed within 28 days and may incur additional plan review fees.

Re-submitted plans will not be routed for plan review until we have received complete and revised sets of grading and drainage plans to include all reports, attachments, calculations, permit resubmittal form, and any additional fees or deposits owed. We encourage digital submittals. During your initial submittal, you should have received a link with instructions on submitting to the PBES Engineering Digital Cloud. Please note that these digital links are project specific. If you do not have this link for the above named project, please reach out to the reviewing engineer directly. Alternately, you may contact the Engineering Division General Inbox at Engineering@countyofnapa.org to obtain one. Please include a reference to the project number with all correspondence. Please submit a response letter addressing each of the plan review comments along with the revisions clouded on the plan set. Please be aware that this is an identification of information known to be necessary at this time to continue processing of your application. Further review of your project may necessitate the request for additional information, including supplemental reports. Plan review comments begin on the following page.

Page 1 of 4

Planning Division
(707) 253-4417

Building Division
(707) 253-4417

Engineering & Conservation
(707) 253-4417

Environmental Health
(707) 253-4471

Parks & Open Space
(707) 259-5933

CURRENT PLAN REVIEW STATUS BY DIVISION.			
DIVISION	REVIEW STATUS	REVIEWERS NAME	CONTACT INFO
ENGINEERING	SEE COMMENTS	DANIEL HORNETT	707-299-1358
CONSERVATION	SEE COMMENTS	PAMELA ARIFIAN	707-259-5934

PLAN REVIEW COMMENTS BY DIVISION

ENGINEERING DIVISION COMMENTS:

1. The Construction General Permit has expired. Please reinstate prior to beginning construction.
-

CONSERVATION DIVISION COMMENTS:

1. Given the limited distribution of individual Valley oak trees within the County, Valley oak trees/individuals are considered a species of limited distribution and shall be protected to the maximum extent feasible pursuant to Napa County General Plan Policy CON-24(c). As such, revise the reservoir design to avoid all Valley oak trees located on the parcel and provide them with a with a root protection zone (RPZ) buffer that is one-third larger than their driplines. The RPZ buffer shall not contain any development or equipment staging/storage activities, and a permanent barrier or other adequate demarcation of the RPZ, as acceptable to the County, shall be indicated on the plans.
2. It appears from historic aerials from as recent as 2018 that the parcel contained several Valley oak trees, including some that existed on land with slopes over 5% that were removed without benefit of a permit as required by NCC Section 18.108.100(B). Refer to the attached figure that shows in red circles some of the trees that appear to have been removed without benefit of a permit on slopes over 5%.

Based on the attached historic aerial (2018) and the submitted biological report prepared by Kjeldsen (February 2022), which identifies the remaining 5 Valley oak trees proposed for removal at 8", 10", 12", 12" and 40" diameter at breast height (dbh), it is estimated that the trees removed without benefit of a permit include at least 14 trees, at least 9 of which that appear to have been over 15" dbh in size.

A Valley Oak Tree Replacement Plan is required for the trees that were removed on slopes over 5%. The Valley Oak Tree Replacement Plan shall be prepared by a biologist or other qualified professional, for review and approval by the Conservation Division prior to approval of a grading permit. The Valley Oak Tree Replacement Plan shall include details about the number and estimated size of Valley oaks removed without benefit of a permit and the requisite replacement ratio (see below), an implementation and monitoring schedule with dates and timeframes, planting details, and maintenance or management specifications that includes an overall 80% survival rate for plantings after 5 years.

Given the special-status nature of Valley oak trees, the replacement plan shall replace the trees removed at the following ratio based on estimated diameter-at-breast-height (dbh), consistent with California Department of Fish & Wildlife protocol:

- 4:1 for trees with 5-10 inches dbh
 - 5:1 for trees with 10-15 inches dbh
 - 10:1 for trees with 15 or more inches dbh
-
-

Effective Codes: All plans shall be designed under the effective building codes: 2019 California Building Code, National Pollutant Discharge Elimination System (NPDES) Water Quality Order No. 2013-0001- DWQ, the latest Napa County Road and Street Standards, and the current Napa County Code.

Processing: Thank you in advance for providing the above material. Please insure that all revised plans, reports, or other resubmitted documents are clearly marked “revised” and dated. Upon completion of corrections, please submit digital sets of corrected plans, to the Napa County Permit Center.

Digital Resubmittal Instructions:

1. Please send an email with a copy of the completed application resubmittal form (attached to this letter) to our general division inbox at: Engineering@countyofnapa.org notifying staff of your intention to resubmit.
2. Once we receive the resubmittal form, Engineering staff will email you to confirm receipt of the form and will re-send the cloud link.
3. You may then upload all electronic files (resubmittal form, plans, reports, etc.) for our review.
4. We ask that you please name the files using SUBMITTAL # (2, 3, etc) followed by the Napa County project number and document type for ease of our reviewers.
5. Please submit you any additional payments to our main office. We are taking the payments in person at our front desk but you may also make the payment over the phone via credit card (707) 253-4417 or you may mail in a check. Please make sure to include a reference to the Napa County permit number with your payment.

(Second Review) ENG21-00013

6. Once the payment has been made and all documents uploaded to our cloud, please send another email to Engineering@countyofnapa.org
7. After we receive confirmation of receipt of the plans and payment, we will send you a confirmation email and begin the review and processing of your resubmittal.

Approval: Upon approval of the plans by all reviewing divisions. Engineering staff will contact you and request at least TWO hard copies of the complete and revised sets of grading and drainage plans to include all reports, attachments, and calculations for stamping and permit issuance.

If you have any questions about this letter or other matters relating to your application, permitting staff can be reached at (707) 253-4417. For general review status please send an email to the reviewing engineer at: daniel.hornett@countyofnapa.org. Napa County handouts and forms can be found online at www.countyofnapa.org/PBES

Sincerely,

Daniel Hornett

Assistant Engineer

County of Napa | Engineering Division

Planning, Building & Environmental Services Department

1195 Third Street, 2nd Floor | Napa | CA | 94559

ph: **(707) 299-1358**

Email: daniel.hornett@countyofnapa.org



ECP Map

Napa County PBES, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Napa Co. PBES

COUNTY OF NAPA, PLANNING, BUILDING, AND ENVIRONMENTAL SERVICES DEPARTMENT

DATE: 6/27/2022

LEGEND

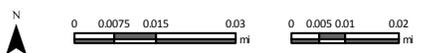
Slope - Non-Watershed

- 0 - 5
- 5.01 - 15
- 15.01 - 30
- 30.01+

- Red: Band_1
- Green: Band_2
- Blue: Band_3

- City Limits
- County Boundary
- Parcels

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From: [Bird, Alicia@Wildlife](mailto:Bird,Alicia@Wildlife)
To: [Arifian, Pamela](mailto:Arifian,Pamela)
Subject: RE: Valley Oak Replacement
Date: Tuesday, June 28, 2022 9:11:37 AM

[External Email - Use Caution]

Hi Pamela,

This is the language we usually have in our agreements:

“Each category of plantings (e.g., oaks, other trees, shrubs, etc.) shall have a minimum of 80% survival at the end of the minimum monitoring period and plantings shall attain 70% cover after 3 years and 75% cover after 5 years.”

Hope that helps!
Alicia

From: Arifian, Pamela <pamela.arifian@countyofnapa.org>
Sent: Monday, June 27, 2022 2:53 PM
To: Bird, Alicia@Wildlife <Alicia.Bird@Wildlife.ca.gov>
Subject: RE: Valley Oak Replacement

You don't often get email from pamela.arifian@countyofnapa.org. [Learn why this is important](#)

WARNING: This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Hi Alicia,

Follow up question for you, please: does CDFW require a success rate (e.g., 80% survival after 5 years) for oak mitigation plans? The 80% after 5 years is usually what the County uses, but if CDFW is more strict for valley oaks, please let me know.

Thanks!

Pam Arifian
Planner III
Napa County Planning, Building, & Environmental Services Department
1195 Third Street, 2nd Floor, Napa CA 94559
(707) 259-5934
www.countyofnapa.org

From: Bird, Alicia@Wildlife <Alicia.Bird@Wildlife.ca.gov>
Sent: Wednesday, June 22, 2022 8:42 AM
To: Arifian, Pamela <pamela.arifian@countyofnapa.org>
Subject: RE: Valley Oak Replacement

[External Email - Use Caution]

Good morning Pamela,

For oak trees we typically require the following replacement ratios by diameter at breast height:

- 4:1 for trees 5 to 10 inches DBH
- 5:1 for trees greater than 10 inches to 15 inches DBH
- 10:1 for trees greater than 15-inch DBH

I hope that is helpful!

Alicia

From: Arifian, Pamela <pamela.arifian@countyofnapa.org>
Sent: Wednesday, June 22, 2022 8:09 AM
To: Rippert, Jennifer@Wildlife <Jennifer.Rippert@Wildlife.ca.gov>
Cc: Bird, Alicia@Wildlife <Alicia.Bird@Wildlife.ca.gov>
Subject: RE: Valley Oak Replacement

You don't often get email from pamela.arifian@countyofnapa.org. [Learn why this is important](#)

WARNING: This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Thanks Jennifer.

Hi Alicia, good to “meet” you. Looking forward to hearing from you; thanks in advance!

Pam

Pam Arifian
Planner III
Napa County Planning, Building, & Environmental Services Department
1195 Third Street, 2nd Floor, Napa CA 94559
(707) 259-5934
www.countyofnapa.org

From: Rippert, Jennifer@Wildlife <Jennifer.Rippert@Wildlife.ca.gov>

Sent: Wednesday, June 22, 2022 8:07 AM
To: Arifian, Pamela <pamela.arifian@countyofnapa.org>
Cc: Bird, Alicia@Wildlife <Alicia.Bird@Wildlife.ca.gov>
Subject: RE: Valley Oak Replacement

[External Email - Use Caution]

Hi Pam,

I have taken a new role and am no longer helping out with Napa projects. However, I have copied Alicia Bird, who is the new CDFW environmental scientist for Napa County. She can point you in the right direction regarding oak mitigation.

Best,
Jen

Jen Rippert
Senior Environmental Scientist (Specialist) | 📞 Cell: 916-906-1101
California Department of Fish & Wildlife | North Central Region
1701 Nimbus Road, Rancho Cordova | Jennifer.Rippert@wildlife.ca.gov

From: Arifian, Pamela <pamela.arifian@countyofnapa.org>
Sent: Tuesday, June 21, 2022 11:31 AM
To: Rippert, Jennifer@Wildlife <Jennifer.Rippert@Wildlife.ca.gov>
Subject: Valley Oak Replacement

You don't often get email from pamela.arifian@countyofnapa.org. [Learn why this is important](#)

WARNING: This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Good morning Jennifer,

I am working on a permit application for a parcel in Pope Valley and noticed from historic aerials that they removed two large valley oaks on slopes over 5% without benefit of a permit. Does CDFW have a standard ratio for requiring replants of valley oak trees (e.g., 5:1), please? Napa County's standard requirement for replacement of trees "inadvertently" removed without a permit is 2:1 but that does not account for the special status nature of valley oaks, which is why I'm hoping you can offer guidance on a more appropriate replant ratio, please.

Thanks in advance!
Pam

Pam Arifian
Planner III
Napa County Planning, Building, & Environmental Services Department
nd

1195 Third Street, 2 Floor, Napa CA 94559
(707) 259-5934
www.countyofnapa.org

Joe Branum Tree Care, Inc.

Arborists specializing in shade tree preservation

**P.O. Box 63
Calistoga, CA 94515
(707) 942-8954
Fax (707) 942-5578
License # 808827
ISA Certification # WE-7191-A**

**David Eakle
4720 Hardin Road
St. Helena, CA 94574**

**Daniel Hornett
Napa County Engineering Division
1195 Third Street, Second Floor
Napa, CA 94559**

Dear Daniel Hornett,

Please see below observations of tree removals of property located at 4720 Hardin Road, St. Helena.

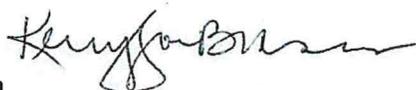
Four Valley Oak (*Quercus lobata*) approximately 50" DBH.
Three Valley Oaks (*Quercus lobata*) approximately 14" DBH.
Five Valley Oaks (*Quercus lobata*) approximately 10" DBH.
There are old signs of fire damage in one Valley Oak (not by open burn).

This land and area was established in the 1800's for Ag and livestock and continues this use to current day. Obvious structural decay, summer limb drop and weather event failures of trees in this area are normal and naturally occurring.

Based on a culture of farming and Ag, the observation of normal tree failures and then reactions by the families to remove trees thought to be unsafe or hazardous for farming practices and family safety for over 100 years. We would expect property owners to maintain a safe environment which means removing unhealthy and hazardous trees. We can discuss that farming is working bottom lands as hillsides are showing greater oak population. A positive reaction would be to have all farm families and corporations plant 1 to 20 trees annually or care for existing hillside trees by thinning, remove sick and dying trees to allow for less competition, reduction of fuel loads, and have a more vital stand of trees. Planting 100 trees in drought conditions with not enough space for them to grow is a poor use of time and energy and this will most likely result in more tree failures.

My opinion after looking at the trees named above, is that they were injured, diseased or already dead when removed for safety.

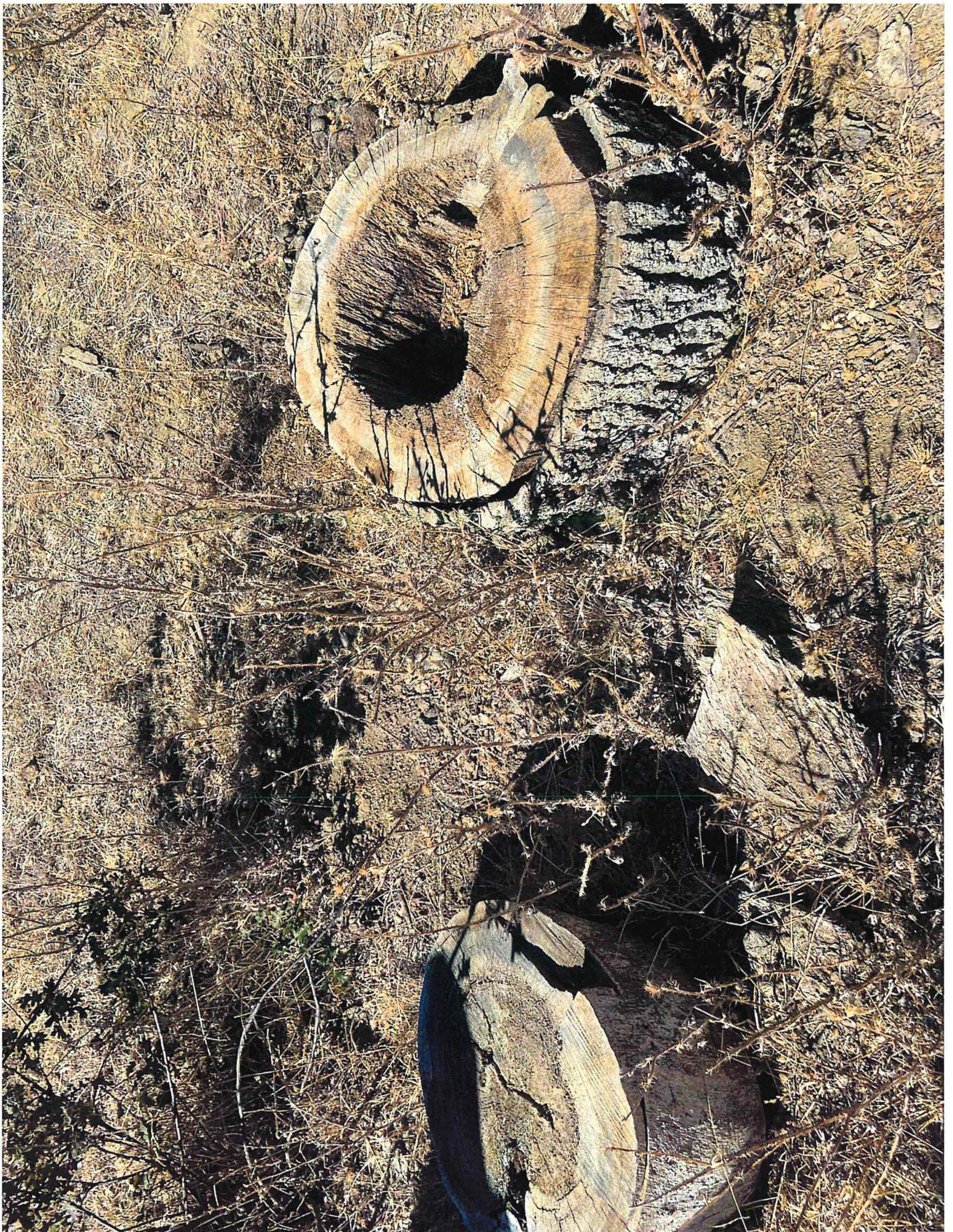
Thank you,



Joe Branum
707-396-0216















EDWARDS
ENGINEERING

1305 E STREET
NAPA | CALIFORNIA | 94559

PHONE:
(707) 258-6297

FAX:
(707) 258-8971

www.edwardsengineering.net

August 25, 2022

Ms. Annalee Sanborn
Senior Project Manager
PPI Engineering, Inc.
2800 Jefferson Street
Napa, CA 94558

RE: Eakle Reservoir Project, 4720 Hardin Rd, St. Helena (APN 018-160-022-000)
ENG21-00013

Dear Annalee,

Napa County's second Plan review comments letter date July 19, 2022 asks that the reservoir be redesigned in order to avoid the removal of several trees along the easterly edge of the proposed reservoir.

During the initial design of the reservoir, we explored the option of moving the easterly edge of the proposed reservoir such that it did not impact these trees. The resulting reservoir capacity was not adequate to serve the water storage needs of the existing vineyard. Topographic and ground feature constraints on the other three sides of the reservoir did not allow expansion of the reservoir in either of those directions.

Therefore, it is not feasible to avoid the impacted trees and meet the requirements of the project.

If you require additional information, please contact me at your convenience.

Sincerely

Brent Edwards, P.E.





VINEYARD DESIGN
EROSION CONTROL
WATER DEVELOPMENT
DRAINAGE
PERMITTING
GPS/GIS

2800 Jefferson Street
Napa, California 94558
707-253-1806
www.ppiengineering.com

MEMORANDUM

Date: March 22, 2023

To: Daniel Hornett, Engineering Division
Napa County Planning, Building & Environmental Services (PBES)
1195 Third Street, Suite 210
Napa, CA 91559

From: James Bushey, P.E.
Annalee Sanborn

Cc: Brent Edwards, P.E., Edwards Engineering

Re: Response to SECOND Plan Review Comments for: ENG21-00013
23-Acre Foot Water Storage Reservoir at
4720 Hardin Rd, St Helena, APN: 018-160-022-000

This memo provides responses to the second plan review comments provided by Napa County Planning, Building, & Environmental Services on July 19, 2022 regarding the above-referenced permit application. In addition to the second plan review comment letter, PPI Engineering and landowner David Eakle met with County staff numerous times to discuss the project on the following dates and with brief summaries:

- August 9, 2022 via Zoom. PPI Engineering met with Daniel Hornett and Pam Arifian of PBES to discuss the infeasibility of redesigning the reservoir and maintaining its 23 acre-foot (AF) capacity and a letter of infeasibility was requested from the Engineer-of-Record. The past tree removal was discussed and PPI described the hazardous nature of the dead and dying trees and that stumps were left in-place and therefore may not have constituted 'earth-disturbing' that would require a permit. The County requested an arborist report documenting the hazardous condition of the trees.
- December 7, 2022 at County office. PPI Engineering met with Patrick Ryan and Pam Arifian of PBES and provided the previously-requested documentation, which included a letter from an arborist documenting the failing health of the trees and a letter from Brent

Edwards, P.E. of Edwards Engineering disclosing that the reservoir could not be redesigned and maintain the necessary 23 AF capacity. At that meeting, the County stated that even with evidence of infeasibility and evidence of the failing health of the trees, they would require mitigation for all past removal and would require the redesign of the reservoir to avoid any remaining valley oak trees.

- December 12, 2022 at project site. PPI Engineering and David Eakle met with Daniel Hornett and Pam Arifian of PBES to review the site, the stumps of the hazardous trees, and the remaining valley oak trees. No changes to the County's comments from the December 7th meeting arose as a result of December 12th meeting.

The project has been updated to address each comment. The comments are provided first in regular text with responses in *italics* below.

ENGINEERING DIVISION COMMENTS:

1. The Construction General Permit has expired. Please reinstate prior to beginning construction.

Response: *Noted. The Construction General Permit Waiver noted on Sheet 1 of the Plans was submitted on March 4, 2021 with construction initially anticipated to occur in the 2021 grading season. This waiver will be renewed prior to construction, but given the uncertainties of the permit process timing will not be requested until there is more assurance about when the reservoir may be constructed.*

CONSERVATION DIVISION COMMENTS:

1. Given the limited distribution of individual Valley oak trees within the County, Valley oak trees/individuals are considered a species of limited distribution and shall be protected to the maximum extent feasible pursuant to Napa County General Plan Policy CON-24(c). As such, revise the reservoir design to avoid all Valley oak trees located on the parcel and provide them with a with a root protection zone (RPZ) buffer that is one-third larger than their driplines. The RPZ buffer shall not contain any development or equipment staging/storage activities, and a permanent barrier or other adequate demarcation of the RPZ, as acceptable to the County, shall be indicated on the plans.

Response: *The reservoir has been redesigned to avoid the valley oak trees that were previously proposed for removal. The reservoir was reduced in capacity to 18 AF. Updated reservoir plans prepared by Edwards Engineering dated March 21, 2023 are included with this resubmittal.*

2. It appears from historic aerials from as recent as 2018 that the parcel contained several Valley oak trees, including some that existed on land with slopes over 5% that were removed without benefit of a permit as required by NCC Section 18.108.100(B). Refer to the attached figure that shows in red circles some of the trees that appear to have been removed without benefit of a permit on slopes over 5%.

Based on the attached historic aerial (2018) and the submitted biological report prepared by Kjeldsen (February 2022), which identifies the remaining 5 Valley oak trees proposed for removal at 8", 10", 12", 12" and 40" diameter at breast height (dbh), it is estimated that the trees removed without benefit of a permit include at least 14 trees, at least 9 of which that appear to have been over 15" dbh in size.

A Valley Oak Tree Replacement Plan is required for the trees that were removed on slopes over 5%. The Valley Oak Tree Replacement Plan shall be prepared by a biologist or other qualified professional, for review and approval by the Conservation Division prior to approval of a grading permit. The Valley Oak Tree Replacement Plan shall include details about the number and estimated size of Valley oaks removed without benefit of a permit and the requisite replacement ratio (see below), an implementation and monitoring schedule with dates and timeframes, planting details, and maintenance or management specifications that includes an overall 80% survival rate for plantings after 5 years.

Given the special-status nature of Valley oak trees, the replacement plan shall replace the trees removed at the following ratio based on estimated diameter-at-breast-height (dbh), consistent with California Department of Fish & Wildlife protocol:

- 4:1 for trees with 5-10 inches dbh
- 5:1 for trees with 10-15 inches dbh
- 10:1 for trees with 15 or more inches dbh

Response: A Valley Oak Tree Replacement Plan has been prepared by Kjeldsen dated February 17, 2023 and is included with this resubmittal.



A Tradition of Stewardship
A Commitment to Service

PERMIT RESUBMITTAL

This form must be filled out and returned with all the information requested in the comment letter. In order to assist us in determining which divisions and agencies need to review your plans when your resubmittal is turned in, **all corrections and changes must be clearly identified on the plans by revision cloud and delta, additional changes must also be identified below, and a comment response letter submitted.** Plans will not be accepted without this form. Clearly and concisely identify the major changes that may impact the plan review status of Fire, Planning, Engineering and Environmental Health (EH).

Permit # ENG21-00013

Date 3/22/2023

Resubmittal Number: 1 2 3 4
(Check one)

FOR OFFICE USE ONLY	
ROUTING	Bin:
<input type="checkbox"/> Fire	
<input type="checkbox"/> Planning	
<input type="checkbox"/> Engineering	
<input type="checkbox"/> EH	
Plan Checker:	

APPLICANT

Please resubmit **three (3)** new complete plan sets. If you were given a "Red Marked" set (generally set A), you will need to return it with the resubmittal.

Issued Permit Not Issued

PRIMARY CONTACT

Primary Contact Name: <u>James Bushey</u>	Project Name: <u>18 AF Reservoir</u>
Firm: <u>PPI Engineering</u>	APN#: <u>018-160-022</u>
Site Address: <u>4720 Hardin Road</u>	City: <u>St. Helena</u> State: <u>CA</u> Zip: <u>94574</u>
Address: <u>2800 Jefferson Street</u>	City: <u>Napa</u> State: <u>CA</u> Zip: <u>94558</u>
Phone: <u>707-253-1806</u>	Fax: _____ Email: <u>jbushey@ppiengineering.com</u>

CORRECTIONS/CHANGES to PLANS

The following has been submitted in response to a Unified Letter:

Only corrections identified as needed in the Comment Letter. (3) complete sets of plans, 2 each supplemental documents

These additional changes were made: (3) partial sets (to be inserted by applicant)

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

Change in Project Valuation (construction cost)*: <u>\$ 0.00</u>
*If the valuation is deemed to be less than industry standards and/or the valuation calculator, staff will make the necessary adjustment.
Please use the back of this page if you have more changes to identify.

01/01/2020

Signature: *James Bushey*

Date: 3/23/23

I understand that this information provided clearly represents all the revisions to the resubmittal. Any changes to the plans and documents that are not clearly clouded may cause my project to be re-routed and subject to delay.