1027 Pine Hollow Court Project
Initial Study/Mitigated Negative Declaration

CITY OF CLAYTON

Founded 1857 .. Incorporated 1964

City of Clayton
Community Development Department
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June 2026

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INTRODUCTION

The 1027 Pine Hollow Court Project proposes to subdivide the 4.42-acre project site into 17 residential lots, located at 1027 Pine Hollow Court in Clayton, California. The 17 residential lots would range from 2,915 square feet (sf) to 6,720 sf, with an average lot size of 4,584 sf. The proposed project would require City approval of a General Plan Amendment from Rural Estate (RD) to Single-Family Medium Density (MD), a Zoning Amendment from Public Facility (PF) to Planned Development (PD), a Vesting Tentative Subdivision Map, a Site Plan Review Permit, and a Tree Removal Permit.

This Initial Study/Mitigated Negative Declaration (IS/MND) identifies potentially significant environmental impacts for the following environmental areas:

- Biological Resources;
- Cultural Resources;
- Geology and Soils;
- Hazards and Hazardous Materials;
- Noise; and
- Tribal Cultural Resources.

Environmental analysis determined that measures were available to mitigate potential adverse impacts to insignificant levels. As a result, a Mitigated Negative Declaration has been prepared pursuant to Public Resources Code (PRC) Section 21064.5, and Article 6 of the California Environmental Quality Act (CEQA) Guidelines.

Pursuant to the requirements of CEQA Guidelines Section 15071, this Mitigated Negative Declaration describes the proposed project; identifies, analyzes, and evaluates the potential significant environmental impacts, which may result from the proposed project; and identifies measures to mitigate adverse environmental impacts. With implementation of the included mitigation measures, the project would not have a significant impact on the environment.

PROJECT/APPLICANT INFORMATION

1.	Project Title:	1027 Pine Hollow Court Project
2.	Lead Agency Name and Address:	City of Clayton 6000 Heritage Trail Clayton, CA 94517
3.	Contact Person and Phone Number:	Kraig Chalem Senior Planner City of Clayton (925) 673-7343
4.	Project Location:	1027 Pine Hollow Court Clayton, CA 94517
5.	Project Sponsor's Name and Address:	Ponderosa Homes II, Inc. 5020 Franklin Drive, Suite 200 Pleasanton, CA 94588
6.	Existing General Plan Designation:	Rural Estate (RD)
7.	Existing Zoning Designation:	Public Facility (PF)

8. Project Description Summary:

The 1027 Pine Hollow Court Project (proposed project) would include the removal of on-site trees; demolition of the storage structures in the northern portion of the site, as well as the single-family residence in the southern portion of the site; and the subdivision of the site into 17 residential lots ranging from 2,915 sf to 6,720 sf, with an average lot size of 4,584 sf. Primary access to the site would be provided by one new driveway on Pine Hollow Court, along the western boundary of the site. Of the 17 residential lots, four would front onto Pine Hollow Court, and an internal roadway network would provide access to the 13 remaining lots.

The proposed project would require City approval of a General Plan Amendment from RD to MD, a Zoning Amendment from PF to PD, a Vesting Tentative Subdivision Map, a Site Plan Review Permit, and a Tree Removal Permit.

9. Status of Native American Consultation Pursuant to Public Resources Code Section 21080.3.1:

In compliance with Assembly Bill (AB) 52 (PRC Section 21080.3.1), the City of Clayton sent project notification letters through certified mail to representatives of the Wilton Rancheria and the Confederated Villages of Lisjan Nation on January 6, 2026. Both the Wilton Rancheria and the Confederated Villages of Lisjan Nation responded with requests to consult, and provided mitigation measures to be implemented as part of the proposed project. The requested mitigation measures have been incorporated into this IS/MND.

The environmental factors checked below would be potentially affected by this project. The following Evaluation of Environmental Impacts identifies at least one impact that is “Less Than Significant with Mitigation Incorporated" for each of the checked environmental factors.

☐ **Aesthetics**	☐ **Agriculture and Forest Resources**	☐ **Air Quality**
✖ **Biological Resources**	✖ **Cultural Resources**	☐ **Energy**
✖ **Geology and Soils**	☐ **Greenhouse Gas Emissions**	✖ **Hazards and Hazardous Materials**
☐ **Hydrology and Water Quality**	☐ **Land Use and Planning**	☐ **Mineral Resources**
✖ **Noise**	☐ **Population and Housing**	☐ **Public Services**
☐ **Recreation**	☐ **Transportation**	✖ **Tribal Cultural Resources**
☐ **Utilities and Service Systems**	☐ **Wildfire**	☐ **Mandatory Findings of Significance**

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

X I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case since the Project proponent has made revisions in the Project and has agreed to the mitigation measures listed in "Section V. List of Mitigation Measures." I further find that the mitigation measures and the information in this study constitute a MITIGATED NEGATIVE DECLARATION in accordance with Section 15071 of the State CEQA Guidelines.

☐ I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature Date

Kraig Chalem
Senior Planner

BACKGROUND

This IS/MND identifies and analyzes the potential environmental impacts of the current proposal for the proposed project. The information and analysis presented in this document is organized in accordance with the order of the CEQA checklist in Appendix G of the CEQA Guidelines. If the analysis provided in this document identifies potentially significant environmental effects of the project, mitigation measures that should be applied to the project are prescribed.

The impact discussions for each section of this IS/MND have been largely based on technical studies prepared for the proposed project, as well as information in the Clayton General Plan and the Clayton General Plan EIR.

PROJECT DESCRIPTION

A description of the project location and setting, the components of the project, and project entitlements is provided below.

Site Location and Setting

The project site consists of approximately 4.42 acres of land located at 1027 Pine Hollow Court in the City of Clayton, California (see Figure 1 and Figure 2). The site is identified by Assessor's Parcel Number (APN) 119-050-036. The project site is designated RD by the City of Clayton General Plan and is zoned PF.

The project site is developed with one single-family residence, associated storage structures, a water well-house, and contains scattered trees. The occupied single-family residence is located in the southwestern portion of the project site, and the storage structures associated with the existing residence, consisting of a barn and a garden shed, are located in the northwestern portion of the site. The existing single-family residence and the two storage structures would be demolished as part of the proposed project. The water well-house is located within the southeastern corner of the project site and would be properly abandoned as part of the proposed project. A total of 64 trees are located throughout the site or have canopies that overlap the site, including different types of oak, pine, sequoia, and other species. However, of the 64 trees, 35 are in poor condition, 21 are in fair condition, and eight are in good condition.

The western and central portions of the site are relatively flat, whereas the eastern portion of the site slopes down toward Mitchell Creek, beyond which is the Town Center area of the City. The slope drops approximately 50 feet to the eastern site boundary.

The project site is bordered by Mt. Diablo Elementary School and an existing trail and pedestrian bridge to the north; Mitchell Creek to the east and commercial businesses in the Town Center down the hill further to the east, across Oak Street; and single-family residences to the south, across High Street, and west, across and to the south of the termination of Pine Hollow Court.

Figure 1
Regional Location Map



*Figure not OCR compatible

Figure 2
Project Vicinity Map



Project Components

The proposed project would require City approval of a Vesting Tentative Map, a General Plan Amendment from RD to MD, a Zoning Amendment from PF to PD, a Site Plan Review Permit, and a Tree Removal Permit. Each of the project approvals is discussed in detail below.

Vesting Tentative Map

The proposed project would include the subdivision of the 4.42-acre project site into 17 residential lots (see Figure 3). The 17 residential lots would range from 2,915 sf to 6,720 sf, with an average lot size of 4,584 sf (see Figure 4). The vesting tentative map would also include three parcels. Parcel A would be located on the northern frontage of the project site and would include a 6,534-sf parcel to accommodate storm drain treatment facilities. Parcel B would be located in the eastern portion of the project site and would include a 78,710-sf open space hillside area. Parcel C would be located centrally on the project site and would include a 19,035-sf space for public utility easements, emergency vehicle access, and private access easements.

Residential Development

The 17 residential lots would be developed with four different floor plans. Floor Plan 1 would have a 1,398-sf footprint and would consist of a two-story, four bedroom and 2.5 bathroom residence with an attached two-car tandem garage (see Figure 5). Floor Plan 2 would have a 2,351-sf footprint and would consist of a two-story, four bedroom and three bathroom residence with an attached two-car garage (see Figure 6). Floor Plan 3 would have a 2,628-sf footprint and would consist of a two-story, five bedroom and three bathroom residence with an attached two-car garage (see Figure 7). Floor Plan 4 would have a 2,769-sf footprint and would consist of a two-story, five bedroom and three bathroom residence with an attached two-car garage (see Figure 8). The residential development included as a part of the proposed project would be managed by a homeowner's association.

Site Access and Circulation

Primary access to the site would be provided by one new driveway off of Pine Hollow Court, which is located along the western boundary of the site. Of the 17 residential lots, four would front onto Pine Hollow Court, and an internal roadway network would provide access to the 13 remaining lots. The internal roadway network within the project site would consist of private streets maintained by the homeowner's association with rights-of-way (ROWs) ranging from 25.5 to 35.5 feet. The proposed project would include five-foot sidewalks on the northern side of proposed A Street and the eastern side of proposed B Street. In addition, the proposed project would include improvements to Pine Hollow Court, including widening the existing half-street to a full-width public street with a 45-foot ROW and developing a five-foot sidewalk along a portion the project site's western frontage.

Landscaping and Fencing Improvements

The proposed project would incorporate landscaping features throughout the project site, including trees, shrubs, and groundcover. Trees to be planted within the site would include sour gum, Chinese pistache, coast live oak, valley oak, blue oak, Brisbane box, eastern redbud, crape myrtle, and Pacific service berry.

Figure 3
Preliminary Site Plan

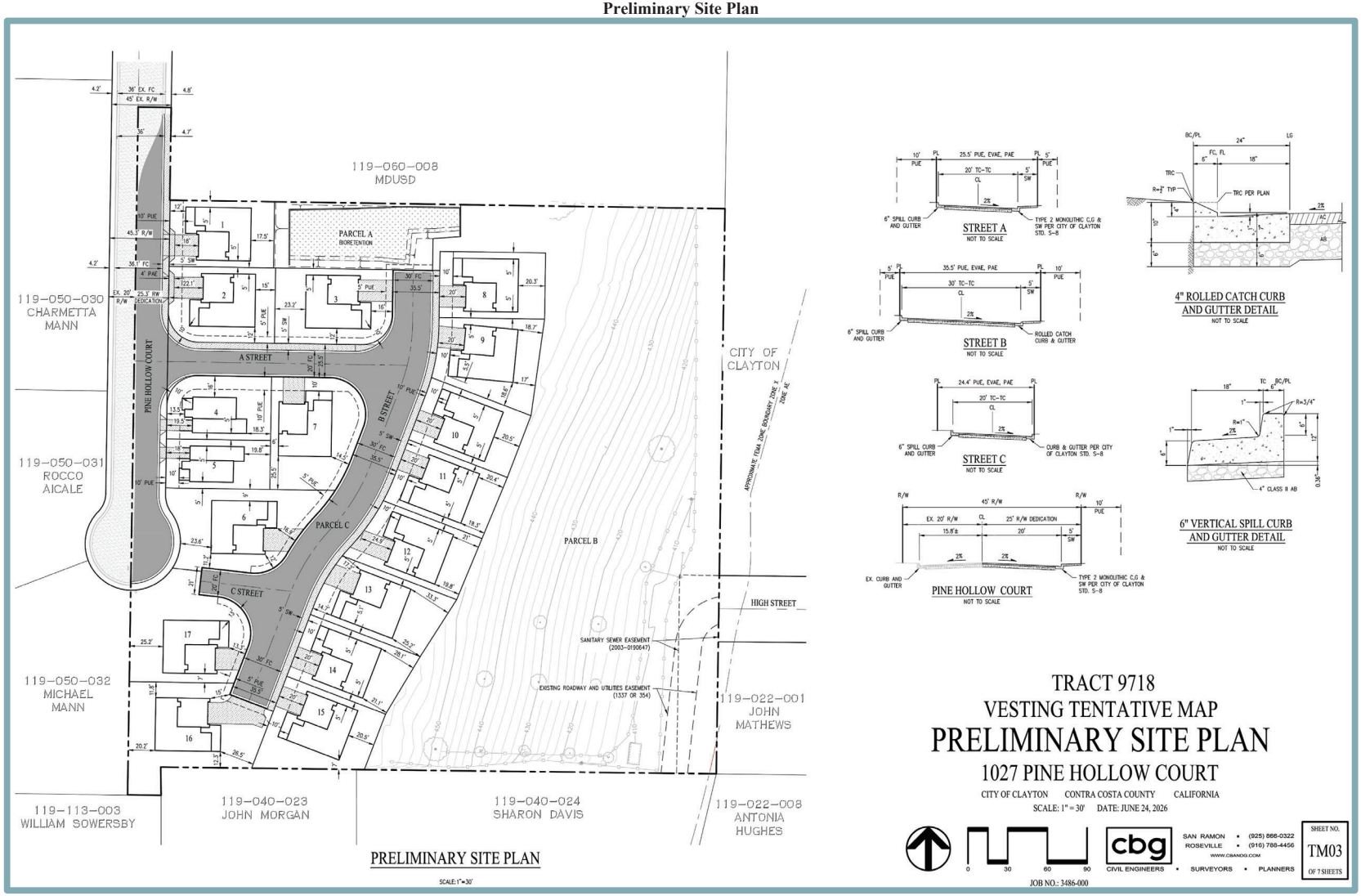


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Figure 4
Lotting Plan

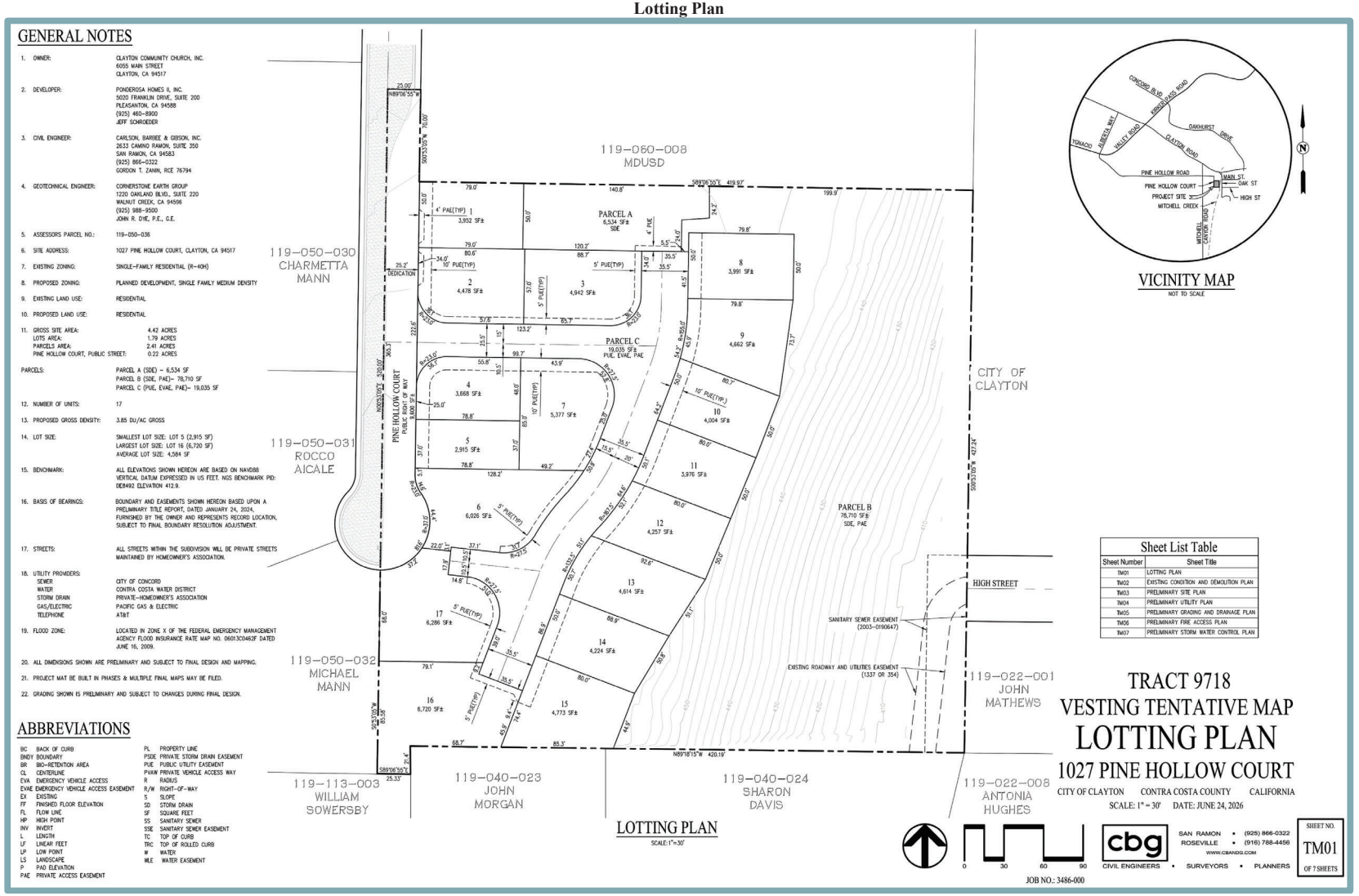


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Figure 5
Floor Plan 1

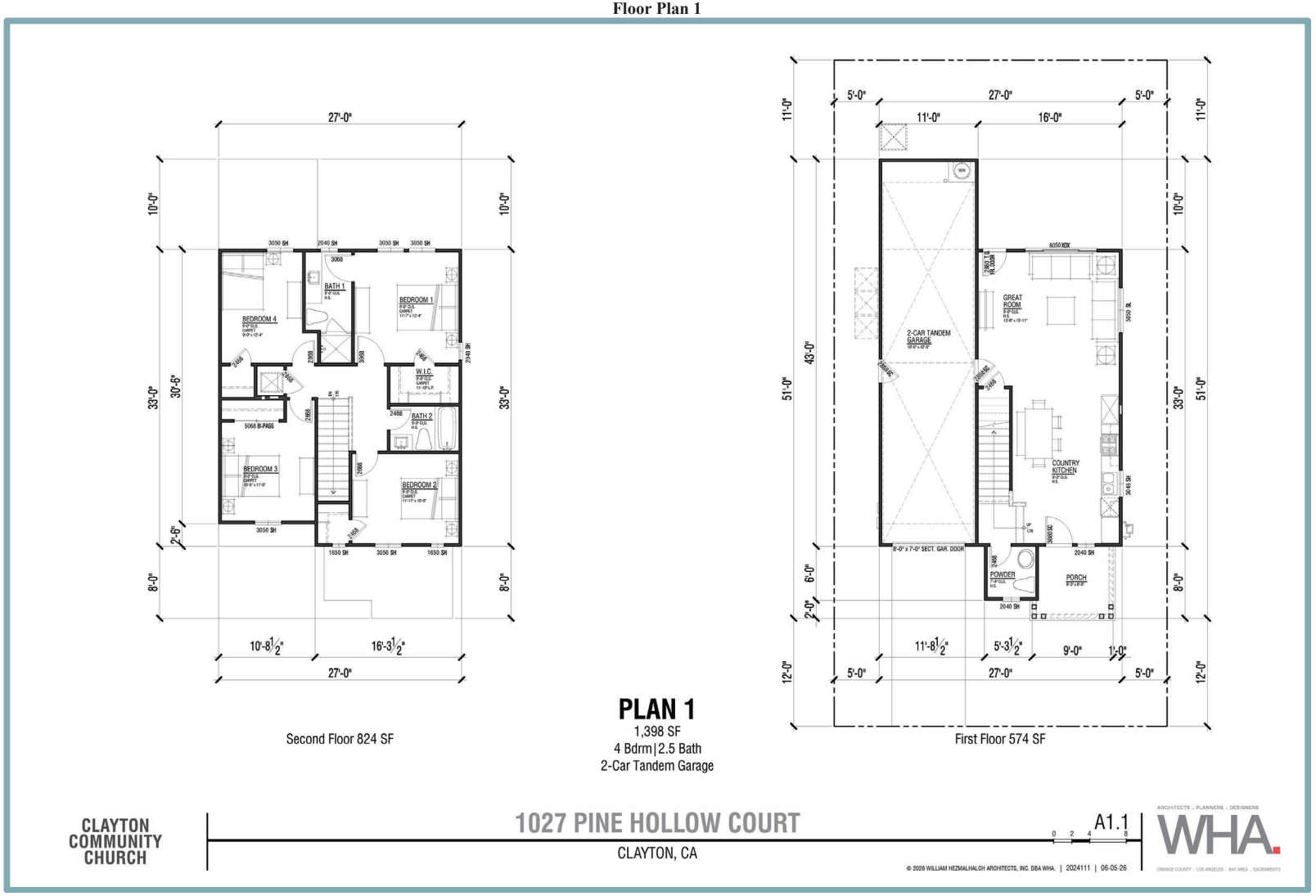


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Figure 6
Floor Plan 2

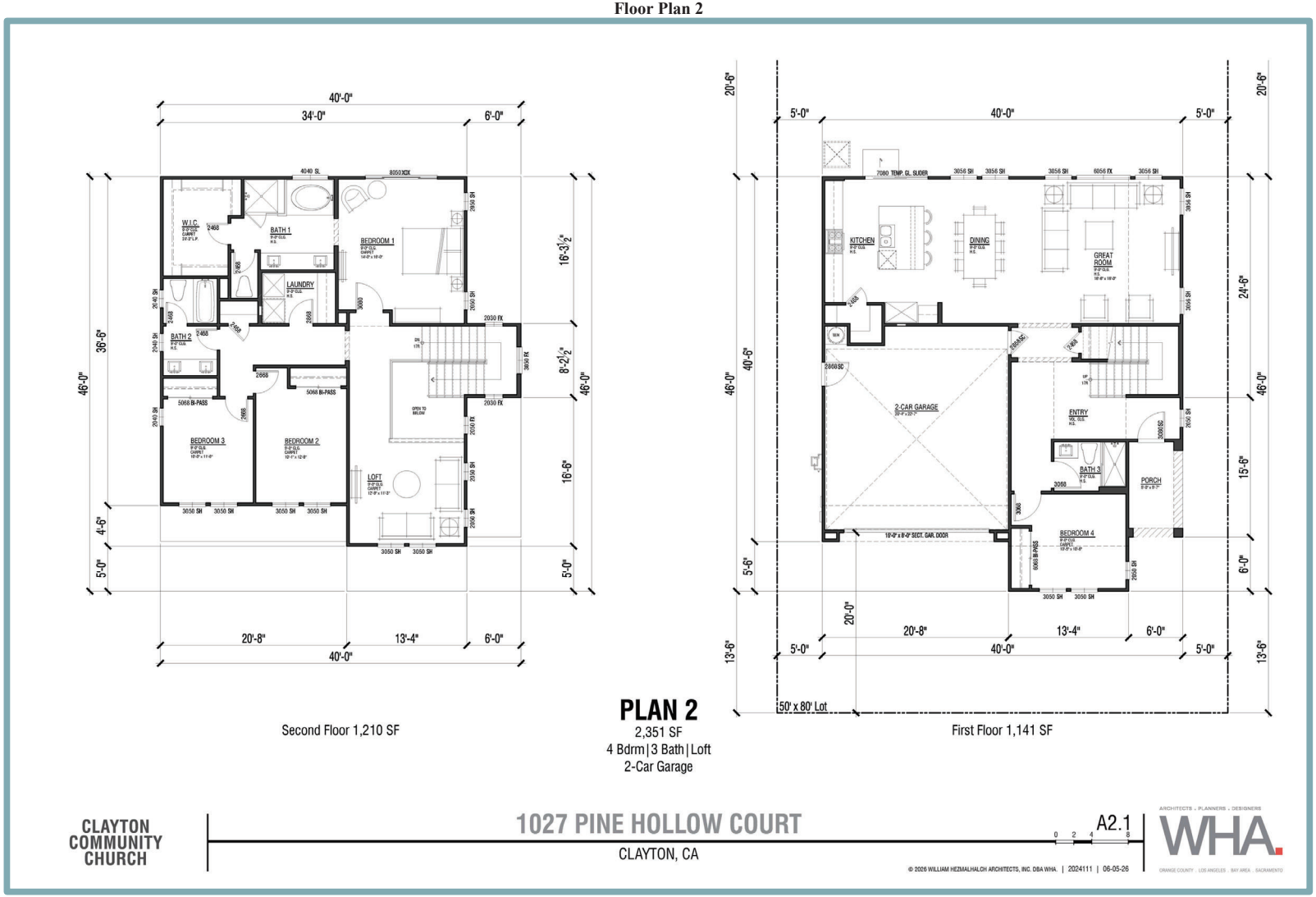


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Figure 7
Floor Plan 3

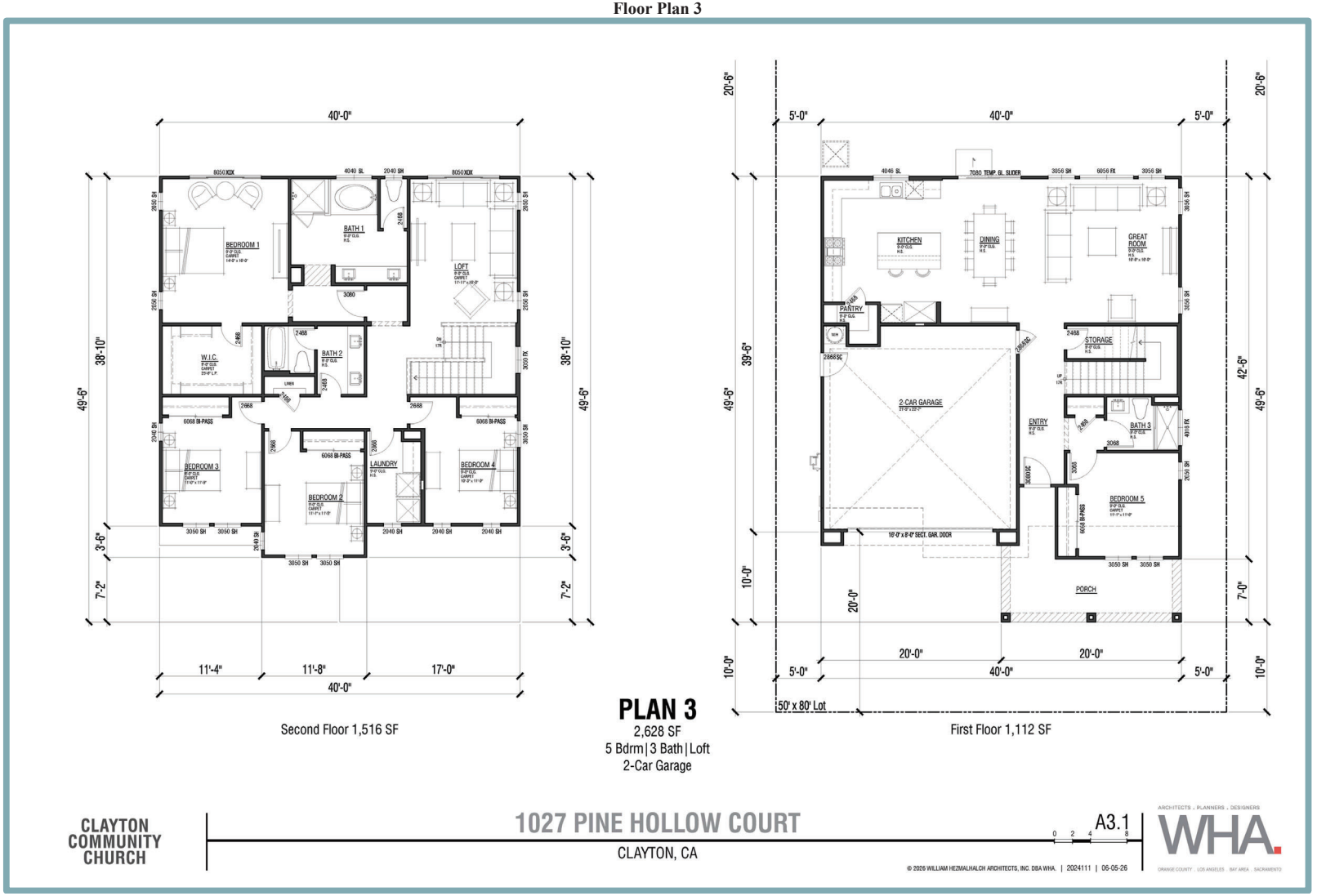


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Figure 8
Floor Plan 4

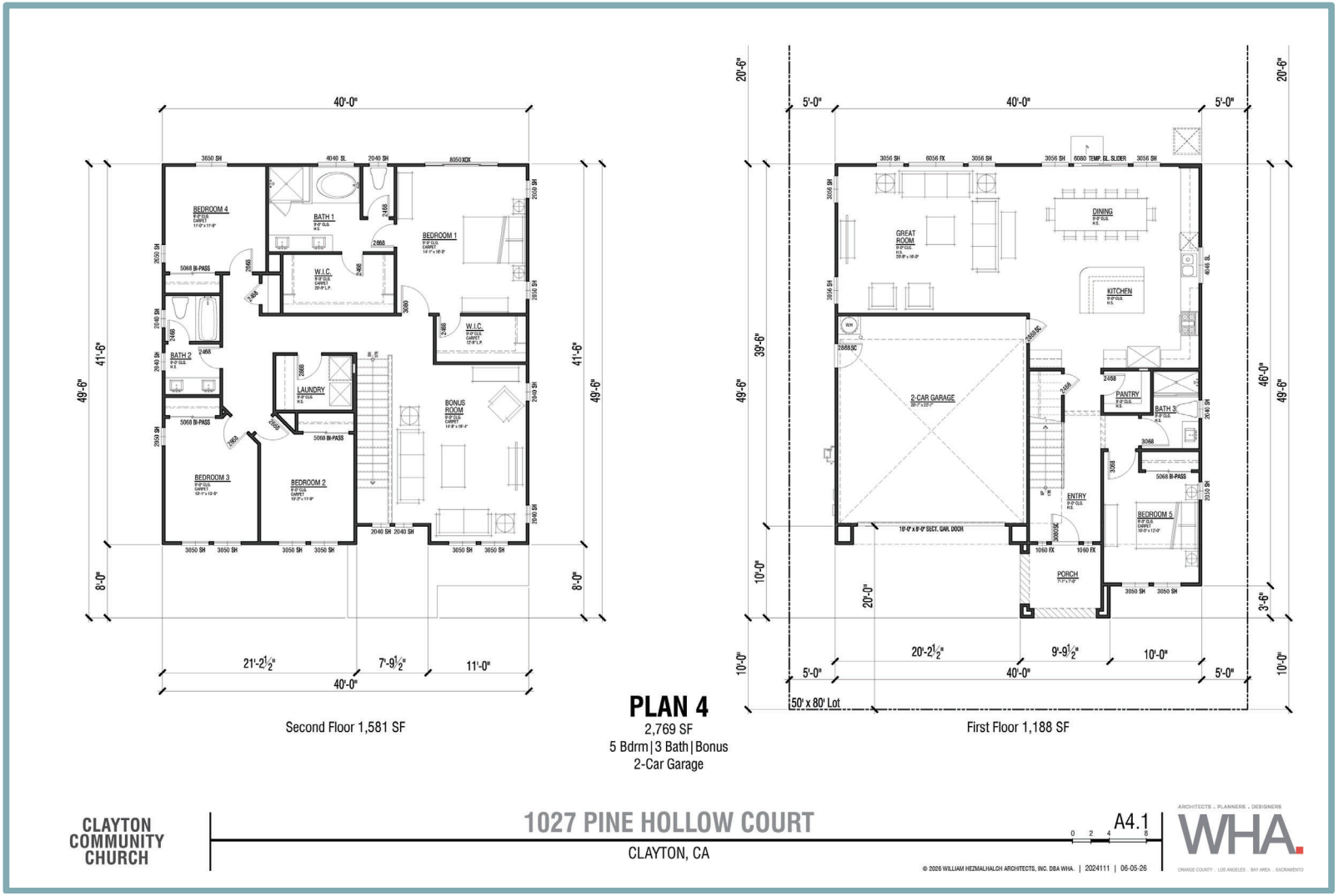


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Fencing improvements included as part of the proposed project would consist of the construction of a six-foot wooden fence along the borders of the residential lots on the project site's northern, southern, and western boundaries. A six-foot open view fence would border the bioretention area in the northern portion of the project site and the residential lots in the eastern portion of the project site.

Utilities

Water and sewer service for the proposed development would be provided through connections and improvements to existing infrastructure located in the site vicinity. The proposed project would include the replacement of the existing four-inch water line within Pine Hollow Court with an eight-inch water line, as well as the installation of a new eight-inch potable water connection to the line (see Figure 9). The proposed eight-inch water line would provide water to the residences throughout the project site. A new eight-inch sanitary sewer line would be routed throughout the project site, across hillside Parcel B, and then to a point of connection to an existing eight-inch sanitary sewer line in High Street on the project site's eastern frontage.

With respect to stormwater, the project site would include one drainage management area (DMA), which would drain into a bioretention area in the northern portion of the project site prior to discharging into the open space hillside parcel in the northeastern portion of the project site (see Figure 10). The proposed project would include the development of a network of catch basins, manholes, and storm drain lines ranging from 15- to 18-inches.

The storm drain lines would direct flows into a manhole, pumping stormwater into the bioretention area in the northern portion of the project site, before flowing to the drainage release area in the open space hillside parcel in the northeastern portion of the project site. The bioretention area would provide for treatment by filtering stormwater through layers of biotreatment soil and rock riprap. The open space hillside parcel would include an 18-inch perforated corrugated metal pipe (CMP) storm drain line, rock riprap, and field inlets/junction boxes in order to allow treated stormwater flows to discharge into the hillside.

Following implementation of the proposed project, Pacific Gas and Electric Company (PG&E) would provide electricity to the project site. The project applicant has indicated that the proposed project will not use natural gas.

General Plan Amendment

The proposed project would include a General Plan Amendment to change the 4.42-acre project site from RD to MD. The purpose of designating the site as MD is to provide for moderately dense single-family development that is consistent with existing suburban uses to the west and south. According to the City of Clayton General Plan Land Use Element,[1] the designation allows for a minimum of 3.1 dwelling units per acre (du/ac) and a maximum of 5.0 du/ac. The proposed project would include a density of approximately 3.85 gross du/ac, which is consistent with the MD land use designation.

[1] City of Clayton. *2000 General Plan Land Use Element* [pg. II-6]. Amended January 17, 2023.

Figure 9
Preliminary Utility Plan

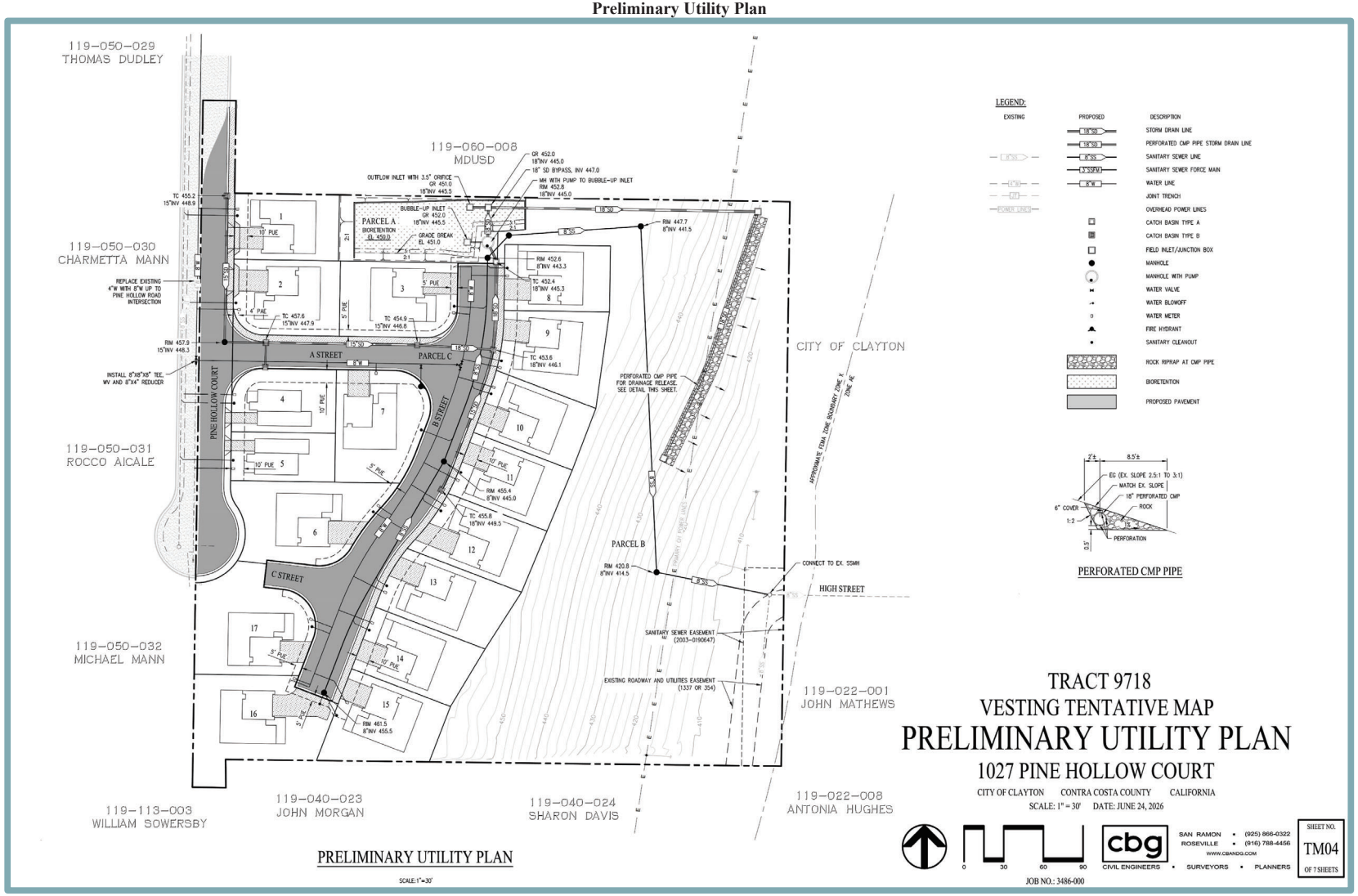


*Figure not OCR compatible

Figure 10
Preliminary Stormwater Control Plan

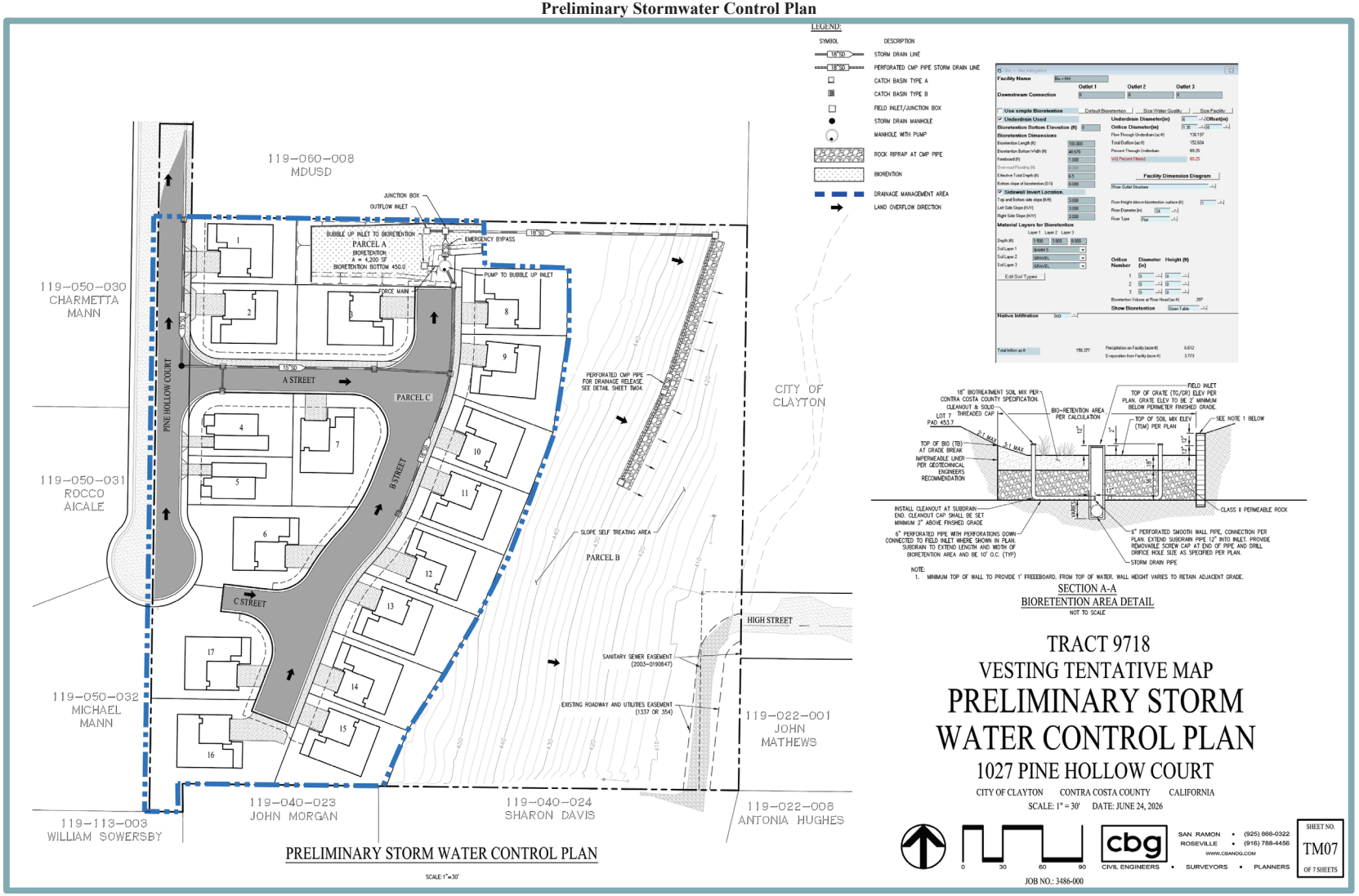


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Rezone

The proposed project would include a rezone of the project site from PF to PD. According to the City of Clayton Municipal Code Section 17.28.010, the purpose of the PD zone is to allow for an integrated, comprehensively-planned area located on a single tract or contiguous tracts of land under a single or joint ownership which allows flexibility in the land use controls typically required by other City zones.[2] Approval of a rezone would ensure compatibility with surrounding land uses, and maintain substantial compliance with the City's General Plan following the amendment discussed above.

Site Plan Review Permit

The proposed project would require approval of a Site Plan Review Permit for the subdivision of the site into 17 residential lots. Pursuant to the City of Clayton Municipal Code Section 17.44.020, construction projects over 16 feet in height and greater than 750 sf are subject to the approval of a Site Plan Review Permit. The Municipal Code Section 17.44.040 identifies several standards of review for Site Plan Review Permit applications, some of which are related to environmental concerns and will be addressed in this IS/MND, such as preservation of general safety (e.g., seismic conditions, landslide, flooding, fire, and traffic).

Tree Removal Permit

Pursuant to the City's Tree Protection Ordinance (Chapter 15.70 of the Municipal Code), a Tree Removal Permit is required for the removal of any tree with a trunk diameter of six inches or greater. The Tree Protection Ordinance also calls for the protection of certain species of trees. The proposed project would include the removal of 58 of the 64 trees located on-site or with canopies that overlap the site, all of which are protected under the City's Ordinance; therefore, the proposed project would require approval of a Tree Removal Permit.

Discretionary Actions

As discussed in detail above, the proposed project would require the following approvals from the City of Clayton:

- General Plan Amendment;
- Zoning Amendment;
- Vesting Tentative Map;
- Site Plan Review Permit; and
- Tree Removal Permit.

[2] City of Clayton. *Municipal Code.* Available at: https://library.municode.com/ca/clayton/codes/municipal_code. Accessed September 22, 2025.

LIST OF MITIGATION MEASURES

Mitigation Measure 1. *Special-status plant surveys shall be conducted in accordance with CNPS and CDFW protocols throughout the project site within three years prior to the commencement of construction. The CNPS and CDFW protocols require that the surveys be conducted at the time of year that the target species are most identifiable; this often requires multiple survey visits to capture the identifiable period of all target species. If special-status plant species are not found, further mitigation would not be required. If special-status plants are found and will be impacted, a mitigation plan shall be developed and approved by the City. Mitigation for the transplantation/establishment of rare plants will result in a no net loss of individual plants after a five (5) year monitoring period. If the plant found is a perennial, then mitigation could consist of digging up the plant and transplanting it to a suitable nearby avoided area prior to construction. If the plant found is an annual, then mitigation could consist of collecting seed-bearing soil and spreading it in a suitable nearby avoided area prior to construction.*

A report summarizing the survey shall be provided to the City of Clayton within 14 days of the completed survey.

Mitigation Measure 2. *Initial ground-disturbing work (e.g., grading, vegetation removal, staging) shall take place between September 1 and March 31 (i.e., outside the colony active period), if feasible, to avoid impacts on special-status bumble bees.*

If completing all initial ground-disturbing work between September 1 and March 31 is not feasible, then a qualified biologist conducting biological resource surveys within California shall conduct a pre-construction survey for special-status bumble bees in the area proposed for impact no more than 14 days prior to the commencement of construction activities. The survey shall occur during the period from one hour after sunrise to two hours before sunset, with temperatures between 65 degrees Fahrenheit and 90 degrees Fahrenheit, with low wind and no rain. If the timing of the start of construction makes the survey infeasible due to the temperature requirements, the surveying biologist shall select the most appropriate days based on the National Weather Service seven-day forecast, and shall survey at a time of day that is closest to the temperature range stated above. The survey duration shall be commensurate with the extent of suitable floral resources (which represent foraging habitat) present within the area proposed for impact and the level of effort shall be based on the metric of a minimum of one person-hour of searching per three acres of suitable floral resources/foraging habitat. A meandering pedestrian survey shall be conducted throughout the area proposed for impact in order to identify patches of suitable floral resources. Suitable floral resources for Crotch bumble bee include species in the following families: Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, and Lamiaceae. Suitable floral resources for western bumble bee include species in the following families: Asteraceae, Fabaceae, Rhamnaceae, and Rosaceae, as well as plants in the genera Eriogonum and Penstemon.

At a minimum, pre-construction survey methods shall include the following:

- *Search areas with floral resources for foraging bumble bees. Observed foraging activity may indicate a nest is nearby, and therefore, the survey duration shall be increased when foraging bumble bees are present.*

- *If Crotch bumble bees are observed, watch the individuals and observe their flight patterns. Attempt to track their movements between foraging areas and the nest.*
- *Visually look for nest entrances. Observe burrows, any other underground cavities, logs, or other possible nesting habitat.*
- *If floral resources or other vegetation preclude observance of the nest, small areas of vegetation may be removed via hand removal, line trimming, or mowing to a height of no less than four inches to assist with locating the nest.*
- *Look for concentrated special-status bumble bee activity.*
- *Listen for the humming of a nest colony.*
- *If bumble bees are observed, attempt to photograph the individual and identify the species.*

The biologist conducting the survey shall record when the survey was conducted, a general description of any suitable foraging habitat/floral resources present, a description of observed bumble bee activity, a list of bumble bee species observed, a description of any vegetation removed to facilitate the survey, and their determination of if survey observations suggest a special-status bumble bee nest(s) may be present or if construction activities could otherwise harm special-status bumble bees. The report shall be submitted to the City of Clayton prior to the commencement of construction activities.

If bumble bees are not located during the pre-construction survey or the bumble bees located are definitively identified as common (i.e., not special-status) species, then further mitigation or coordination with the City and/or CDFW is not required.

If any sign(s) of a bumble bee nest is observed, and/or if it cannot be established that the species present is not a special-status bumble bee, then construction shall not commence until either 1) the bumble bees present are positively identified as common (i.e., not special status) by an experienced bumble bee taxonomist, or 2) the completion of coordination with CDFW to identify appropriate Biological Resources Assessment mitigation measures, which may include, but not be limited to, waiting until the colony active season ends; establishment of nest buffers; or obtaining an Incidental Take Permit (ITP) from CDFW.

The project proponent is recommended, but not required, to also survey the proposed impact areas the year before construction begins in order to avoid potential last-minute delays associated with identifying special-status bumble bees on-site immediately prior to construction activities. To be most effective, this optional survey should follow the protocol outlined above.

If, after coordination with CDFW, impacts to special-status bumble bees cannot be avoided, the project proponent shall obtain an ITP from CDFW prior to the City's approval of permits authorizing construction, and the project proponent shall implement all conditions identified in the ITP. Mitigation required by the ITP may include but will not be limited to, the project proponent translocating nesting substrate in accordance with the latest scientific research to another suitable location (i.e., a location that supports similar or better floral resources as the impact area), enhancing floral resources on areas of the project site that will remain appropriate habitat, worker awareness training, and/or other measures specified by CDFW.

A report summarizing the survey shall be provided to the City of Clayton within 14 days of the completed survey. If special-status bumble bees are not found, further mitigation is not required.

Mitigation Measure 3. *Prior to any ground disturbance related to project activities, a USFWS/CDFW approved biologist shall conduct a preconstruction survey in areas identified in the planning surveys as having potential western burrowing owl habitat. The surveys shall establish the presence or absence of western burrowing owl and/or habitat features and evaluate use by owls in accordance with CDFW survey guidelines.*

On the project site, the biologist shall survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint to identify burrows and owls. Adjacent parcels under different land ownership shall not be surveyed. Surveys should take place near sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owls shall be identified and mapped. Surveys shall take place no more than 30 days prior to construction. During the breeding season (February 1– August 31), surveys shall document whether burrowing owls are nesting in or directly adjacent to disturbance areas. During the nonbreeding season (September 1–January 31), surveys shall document whether burrowing owls are using habitat in or directly adjacent to any disturbance area. Survey results shall be valid only for the season (breeding or nonbreeding) during which the survey is conducted.

If burrowing owls are found during the breeding season (February 1 – August 31), the project proponent shall avoid all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the nest is occupied by adults or young. Avoidance shall include establishment of a non-disturbance buffer zone (described below). Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation or that the juveniles from the occupied burrows have fledged. During the nonbreeding season (September 1 – January 31), the project proponent should avoid the owls and the burrows they are using, if possible. Avoidance shall include the establishment of a buffer zone (described below).

During the breeding season, buffer zones of at least 250 feet in which no construction activities can occur shall be established around each occupied burrow. Buffer zones of 160 feet shall be established around each burrow being used during the nonbreeding season. The buffers shall be delineated by highly visible, temporary construction fencing.

If occupied burrows are not avoided, passive relocation shall be implemented. Owls should be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors should be in place for 48 hours prior to excavation. The project area should be monitored daily for one week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation. Plastic tubing or a similar structure should be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

A report summarizing the survey shall be provided to the City of Clayton within 14 days of the completed survey. If western burrowing owl nests are not found, further mitigation is not required.

Mitigation Measure 4(a). *A preconstruction nesting bird survey shall be conducted by a qualified biologist on the project site and within a 500-foot radius of proposed construction areas, where access is available, no more than 14 days prior to the initiation of construction. If there is a break in construction activity of more than two weeks, subsequent surveys shall be conducted.*

If active raptor nests are found, construction activities shall not take place within 500 feet of the nest until the young have fledged. If active songbird nests are found, a 100-foot no disturbance buffer shall be established. The no-disturbance buffers may be reduced if a smaller buffer is proposed by the project biologist, and approved by the City, after taking into consideration the natural history of the species of bird nesting, the proposed activity level adjacent to the nest, habituation to existing or ongoing activity, and nest concealment (if there are visual or acoustic barriers between the proposed activity and the nest). A qualified biologist shall visit the nest as needed to determine when the young have fledged the nest and are independent of the site, or the nest can be left undisturbed until the end of the nesting season.

A report summarizing the survey shall be provided to the City of Clayton within 14 days of the completed survey. If raptor or songbird nests or nests of birds protected by the MBTA are not found, further mitigation is not required.

Mitigation Measure 4(b). *Should construction activities cause a nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest as a result of construction activities, then the exclusionary buffer shall be increased such that activities are far enough from the nest to stop the agitated behavior. The exclusionary buffer shall remain in place until the chicks have fledged or as otherwise determined by a qualified biologist. Construction activities may only resume within the buffer zone after a follow-up survey by the Project Biologist has been conducted and a report has been prepared and submitted to the City, indicating that the nest (or nests) are no longer active and that new nests have not been identified.*

Mitigation Measure 5. *If the project does not avoid impacts to suitable habitat for Townsend's big-eared bat, a preconstruction survey shall be required to determine whether the site is occupied immediately prior to construction or whether the site shows signs of recent previous occupation. Preconstruction surveys are used to determine what avoidance and minimization requirements are triggered before construction and whether construction monitoring is necessary.*

If the species is discovered or if evidence of recent prior occupation is established, construction shall be scheduled in order to minimize impacts on Townsend's big-eared bat. Hibernation sites with evidence of prior occupation shall be sealed before the hibernation season (November–March), and nursery sites shall be sealed before the nursery season (April–August). If the site is occupied, then the action shall occur either prior to or after the hibernation season for hibernacula and after August 15 for nursery colonies. Construction shall not take place as long as the site is occupied.

A report summarizing the survey shall be provided to the City of Clayton within 14 days of the completed survey. If Townsend's big-eared bat or hibernation sites are not found, further mitigation is not required.

Mitigation Measure 6. *A qualified biologist shall conduct a bat habitat assessment of all potential roosting habitat features within the proposed development footprint. The habitat assessment shall identify all potentially suitable roosting habitat and may be conducted up to one year prior to the start of construction. A report summarizing the survey shall be provided to the City of Clayton within 14 days of the completed survey. If roosting bats are not found, further mitigation is not required.*

If potential roosting habitat is identified within the areas proposed for development, the biologist shall survey the potential roosting habitat. Ideally, this survey should be conducted during the active season (generally April through October or from January through March on days with temperatures in excess of 50 degrees Fahrenheit) to determine the presence of roosting bats. The surveys are recommended to be conducted using methods that are considered acceptable by the CDFW and bat experts. Methods may include evening emergence surveys, acoustic surveys, inspecting potential roosting habitat with fiberoptic cameras, or a combination thereof.

If roosting bats are identified within any of the trees or buildings planned for removal, or if presence is assumed, then the qualified bat biologist shall specify appropriate exclusion methods according to where the roosting bats are located and what season the exclusion must occur. These exclusion methods may include two-step tree removal or building exclusion, as detailed below.

In general, the trees/buildings shall be removed outside of pup season only on days with temperatures in excess of 50 degrees Fahrenheit. Pup season is generally during the months of May through August. Two-step tree removal involves removal of all branches of the tree that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree. Building exclusion methods may include such techniques as installation of passive one-way doors, or the installation of netting when the bats are not present to prevent their reoccupation. Once the bats have been excluded, tree removal may occur. Removal of trees/buildings where roosting habitat is not identified during the survey is recommended to be conducted from January through March on days with temperatures in excess of 50 degrees Fahrenheit to avoid potential impacts to foliage-roosting bat species.

Mitigation Measure 7. *The following tree protection measures shall be implemented pursuant to the recommendations listed in the Preliminary Arborist Report, to the extent feasible:*

- *The applicant shall submit for review and approval by the City of Clayton a Tree Protection Plan to identify the location of the existing trees to be retained, as identified in the Preliminary Arborist Report;*
- *The project applicant shall include all recommendations provided in the Preliminary Arborist Report by HortScience within the Tree Protection Plan. The Tree Protection Plan shall meet the standards provided in Section 15.70.45 of the Municipal Code, and shall include, but not necessarily be limited to, the establishment of TPZs and protective fencing around trees to be preserved; temporary irrigation systems to be provided for each tree; the installation and maintenance of at least two inches of wood chip mulch within the protected soils within each TPZ; air spade trenching; root pruning and clearance pruning; and the prohibition of oil, gas, chemicals, vehicles, construction equipment, machinery, and other construction materials within the dripline of trees to be preserved.*

Mitigation Measure 8. *A tree replacement plan for the removal of protected tree species shall be prepared in accordance with Municipal Code Section 15.070.040 A.1. or A.2., or, subject to determination by the Community Development Director or Planning Commission, the applicant must pay an in-lieu fee to the City for the purchase and installation of trees of equivalent value.*

Mitigation Measure 9. *Prior to the issuance of a grading permit, the grading plan shall include a requirement (via notation) indicating that if cultural resources or human remains are encountered during site grading or other site work, all such work shall be halted immediately within 100 feet of the area of discovery and the contractor shall immediately notify the City of the discovery. In such case, the City, at the expense of the project applicant, shall retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit to the City for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the vicinity of the discovery, as identified by the qualified archaeologist, shall not be allowed until the preceding steps have been taken. Please see also mitigation measures 18 through 21.*

Mitigation Measure 10. *Prior to approval of the improvement plans for the project, all recommendations from the Geotechnical Investigations prepared by Cornerstone Earth Group shall be incorporated into the improvement plans to the satisfaction of the City Engineer.*

In addition, the applicant shall retain a California Registered Geotechnical Engineer to review the geotechnical aspects of the project's structural, civil, and landscape plans and specifications, allowing sufficient time to provide the design team with any comments prior to issuing plans for construction. The Geotechnical Engineer shall perform field observations during earthwork and foundation construction to confirm project compliance with project plans, project specifications, and the recommendations provided in Cornerstone Earth Group's Geotechnical Investigation. The on-site Geotechnical Engineer shall have the authority to provide supplemental recommendations as necessary based on site conditions. Compliance with the recommendations of the Geotechnical Engineer shall be provided to the City Engineer.

Mitigation Measure 11. *Prior to the issuance of a grading permit, the project applicant shall prepare to the satisfaction of the City Engineer, an erosion control plan that utilizes standard construction practices to limit the erosion effects during construction of the proposed project. Actions should include, but are not limited to:*

- *Hydro-seeding;*
- *Placement of erosion control measures within drainage ways and ahead of drop inlets;*
- *The temporary lining (during construction activities) of drop inlets with "filter fabric";*
- *The placement of straw wattles along slope contours;*
- *Use of a designated equipment and vehicle "wash-out" location;*
- *Use of siltation fences;*
- *Use of on-site rock/gravel road at construction access points; and*
- *Use of sediment basins and dust palliatives.*

Mitigation Measure 12. *Implement Mitigation Measure 10.*

Mitigation Measure 13. *In the event that a paleontological resource is inadvertently discovered during project-related work, regardless of the depth of excavation or location, work shall be halted within 50 feet (15 meters) of the find and a qualified paleontologist (Society of Vertebrate Paleontology [SVP] 2010) and the City shall be notified. The resources shall be examined by the qualified paleontologist at the developer's expense, for the purpose of recording, protecting, or curating the discovery as appropriate. Construction activities could continue in other areas.*

If the find is determined to be significant under SVP criteria, the find shall be left in place without further disturbance, or if avoidance is not feasible, then additional work, such as fossil recovery excavation (salvage) and curation at a certified repository, such as the University of California Museum of Paleontology (UCMP), may be warranted and would be discussed in consultation with the City, and any other relevant regulatory agency, as appropriate. The qualified paleontologist shall submit to the City for review and approval a report of the findings and method of curation or protection of the resource(s).

Mitigation Measure 14. *Prior to initiation of any ground disturbance activities, the applicant shall hire a licensed well contractor to obtain a well abandonment permit from Contra Costa Health Services and properly abandon the on-site well to the satisfaction of the Contra Costa Health Services Department. Proof of abandonment shall be provided to the City of Clayton Community Development Department and City Engineer.*

Mitigation Measure 15. *Prior to issuance of a demolition permit for any on-site structures, the Developer shall consult with certified Asbestos and/or Lead Risk Assessors to complete and submit for review to the City of Clayton Community Development Director an asbestos and lead survey. If ACMs or lead-containing materials are not discovered during the survey, further mitigation related to ACMs or lead containing materials will not be required. If ACMs and/or lead-containing materials are discovered by the survey, the project applicant shall prepare a work plan to demonstrate how the on-site ACMs and/or lead-containing materials shall be removed in accordance with current California Occupational Health and Safety (Cal-OSHA) Administration regulations and disposed of in accordance with all California Environmental Protection Agency regulations, prior to the demolition and/or removal of the on-site structures. The applicant shall submit the work plan to the City for review and approval.*

Mitigation Measure 16. *To the maximum extent practical, the following measures should be incorporated into the project construction plans:*

- *Pursuant to Section 15.01.101 of the Clayton Municipal Code, all grading and excavation, construction, demolition, renovation, and other works of improvement shall occur only between the hours of 7:00 A.M. and 5:00 P.M., Monday through Friday.*
- *The project shall utilize temporary construction noise control measures, including the use of temporary noise barriers, or other appropriate measures as mitigation for noise generated during construction of projects.*
- *All noise-producing project equipment and vehicles using internal-combustion engines shall be equipped with manufacturers-recommended mufflers and be maintained in good working condition.*

- *All mobile or fixed noise-producing equipment used on the project site that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while in the course of project activity.*
- *Electrically powered equipment shall be used instead of pneumatic or internal-combustion-powered equipment, where feasible.*
- *Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.*
- *Project area and site access road speed limits shall be established and enforced during the construction period.*
- *Nearby residences shall be notified of construction schedules so that arrangements can be made, if desired, to limit their exposure to short-term increases in ambient noise levels.*

The requirements above shall be included, via notation, on the final grading plan submitted for review and approval by the City prior to grading permit issuance.

Mitigation Measure 17. *Any compaction required within 26 feet of existing structures adjacent to the project site shall be accomplished by using static drum rollers, rather than vibratory compactors/rollers, which use weight instead of vibrations to achieve soil compaction. As an alternative, preconstruction crack documentation and construction vibration monitoring could be conducted to ensure that construction vibrations do not cause damage to any adjacent structures. The requirements above shall be included, via notation, on the final grading plan submitted for review and approval by the City prior to grading permit issuance.*

Mitigation Measure 18. ***Native American Monitoring.*** *The project proponent shall contact the Confederated Villages of Lisjan Nation (CVLN) and Wilton Rancheria at least two weeks prior to ground disturbing activities, including any archaeological, geotechnical, or other testing involving ground disturbance to notify the Tribes of these activities should the Tribe(s) choose to monitor. Depending on the results of monitored geotechnical testing and surface survey, the Tribe shall prepare a monitoring plan or determine that monitoring is not required. If monitoring is determined to be necessary for this project, Tribal monitor(s) shall be retained and have the authority to halt and redirect work should any archeological or tribal cultural resources be identified during monitoring. If archeological or Tribal cultural resources are encountered during ground disturbing activities, work within 100 feet of the find must halt and the find must be evaluated for listing in the CRHR and NRHP. Monitoring may be reduced or halted at the discretion of the CVLN or Wilton Rancheria monitor, in consultation with the lead agency, as warranted by conditions such as encountering bedrock, sediments being excavated are fill, negative findings during the first 50 percent of the entire area of ground disturbance, etc. If monitoring is reduced to spot checking, spot checking shall occur when ground disturbing activities move to a new location within the project site and/or when ground disturbance will extend to depths not previously reached (unless those depths are within bedrock).*

Mitigation Measure 19. ***Unanticipated Discovery of Tribal Cultural Resources.*** *If cultural resources of Native American origin are identified during grading or excavation of the proposed project, all ground disturbing activities within 100 feet shall cease until a representative from the Wilton Rancheria and Confederated Villages of Lisjan Nation is consulted by the lead agency. If the lead agency in consultation with the consulting Tribe(s), determines that the resource is a*

tribal cultural resource and thus significant under CEQA and/or the Tribe, the lead agency shall retain a Tribal monitor and, if applicable, a qualified archeologist, to prepare a mitigation plan, which shall be implemented by the lead agency in accordance with state guidelines and in consultation with the consulting Tribe(s). The mitigation plan shall include avoidance of the resource if at all feasible. If avoidance of the resource is not feasible, the plan shall outline appropriate treatment of the resource in coordination with the consulting Tribe. Examples of appropriate mitigation for tribal cultural resources include, but are not limited to: protecting the cultural character and integrity of the resources, protecting traditional use of the resources, protecting the confidentiality of the resources, permanent conservation easements with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places, and/or protecting the resource.

Mitigation Measure 20. Halt Work/Coroner's Evaluation/Impact to Previously Undiscovered Human Remains. *If human remains are encountered during construction and/or other ground disturbing activities, all work within 100 feet of the remains shall be redirected and the County Coroner shall be notified immediately. At the same time, an archeologist shall be contacted to assess the situation. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission (NAHC) within 24 hours of this identification. The NAHC shall identify a Native American Most Likely Descendent (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and any associated funerary objects. There shall be no pictures taken or testing done on the Native American human remains. All bone, until identified as non-human remains, shall be treated as potential human remains and the appropriate protocols followed. The archeologist shall record information, as appropriate and in accordance with the recommendations of the MLD and/or Tribal representative. Upon completion of the archeologist's assessment, a report shall be prepared documenting methods and results, as well as recommendations made in consultation with the MLD, regarding the treatment of the human remains and any associated archeological materials. The report shall be submitted to the lead agency, the NWIC and the consulting Tribe. Tribal representatives will rebury the Native American human remains and associated funerary objects with the appropriate dignity, either; in accordance with the recommendations of the MLD if available or in the project vicinity at a location agreed upon between the Tribe and the project proponent, which would be accessible to Tribal members in perpetuity and would not be subject to further disturbance. The discovery and reburial is to be kept confidential and secure to prevent any further disturbance. The location of the reburial shall be documented with GPS coordinates and a Department of Parks and Recreation 523a Primary Record form, and that information shall be submitted to the NWIC.*

Mitigation Measure 21. *Surface Survey and Site Visit. Once vegetation has been removed within the portion of the project area where ground disturbing activity is planned, the Tribe shall have the opportunity to conduct a surface survey to identify Tribal Cultural Resources that may be visible on the surface. At this time, if determined necessary by the Tribe based on the results of surface survey and any monitored geotechnical or other ground disturbing testing that may be required, the project proponent shall arrange a site visit with the Tribe and agree on an appropriate location for reburial on site in the event that any tribal cultural resources are inadvertently discovered during project construction. This location would be accessible to Tribal members in perpetuity and would not be subject to further disturbance through methods such as a*

conservation easement or deed restriction. Any discovery and reburial is to be kept confidential and secure to prevent any further disturbance.

EVALUATION OF ENVIRONMENTAL IMPACTS

1. AESTHETICS.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Have a substantial adverse effect on a scenic vista?	□	□	X	□
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	□	□	□	X
c.	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	□	□	X	□
d.	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	□	□	X	□

a. Would the project have a substantial adverse effect on a scenic vista?.....Less-Than-Significant Impact

Discussion (a.)

For purposes of this analysis, scenic vistas would be officially designated mountain ranges, ridgelines, or bodies of water as viewed from a highway, public space, or other area designated for the express purpose of viewing and sightseeing. The City of Clayton General Plan identifies the protection of scenic resources as a core concern for future development and planning. Impacts to the views of open spaces or vistas would diminish the rural character of the City, and should be avoided. However, the City's General Plan does not contain any policies that address specific scenic vistas, nor does the General Plan define or identify any specific scenic vistas. Thus, the proposed project would not have a substantial adverse effect on a scenic vista, and a ***less-than-significant*** impact would occur.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway? ..... No Impact

Discussion (b.)

According to the California Scenic Highway Mapping System, two highways in Contra Costa County are officially-designated State Scenic Highway corridors:[3] Interstate 680 (I-

[3] California Department of Transportation. *California State Scenic Highway System Map*. Available at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed October 2025.

680), from the Alameda County line to the junction with State Route (SR) 24; and SR 24 from the east portal of the Caldecott Tunnel to I-680 near Walnut Creek. Neither of the aforementioned corridors provide views of Clayton or the project site. Accordingly, the proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, or historic buildings within a State Scenic Highway. Thus, the project would result in ***no impact***.

c. In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? .....Less-Than-Significant Impact

Discussion (c.)

The project site is developed with one single-family residence, associated storage structures, a water well-house, and contains scattered trees. Surrounding land uses include Mt. Diablo Elementary School and an existing trail and pedestrian bridge to the north; Mitchell Creek and commercial businesses in the Town Center down the hill to the east; and single-family residences to the west and south. The subject question (1.c) of the CEQA Checklist distinguishes between non-urbanized and urbanized areas. The Clayton General Plan indicates that its "…planning area includes two fairly discrete use patterns: the urbanized area and a transitional area which includes the Marsh Creek Road Specific Plan area."[4] As the project site is not located within the Marsh Creek Road Specific Plan area, it follows that the site is located in the urbanized area of the planning area, according to the City's General Plan. Therefore, in accordance with CEQA Checklist question 1.c., the relevant threshold is whether the project would conflict with applicable zoning and other regulations governing scenic quality, rather than whether the project would substantially degrade the existing visual character or quality of public views of the site and its surroundings.

The City of Clayton's Site Plan Review process would require that the proposed development would not conflict with applicable zoning and other regulations governing scenic quality. The proposed project would be required to obtain a Site Plan Review Permit in accordance with the City of Clayton Municipal Code Chapter 17.44, which would ensure that the proposed project is consistent with the General Plan and would not conflict with applicable zoning and other regulations governing scenic quality.

The proposed project would comply with applicable policies set forth by the General Plan for the MD land use designation. In addition, the project would be subject to applicable regulations and standards set forth in the City of Clayton Municipal Code Chapter 17.28, Planned Development District, including requirements pertaining to density, open space,

[4] City of Clayton. *2000 General Plan Basis for Planning* [pg. I-13]. Amended January 17, 2023.

circulation/parking, and landscape design. Finally, new landscaping would be provided primarily bordering the proposed buildings and in the bioretention area in the northern portion of the project site, consistent with the requirements established by City of Clayton Municipal Code Chapter 17.80, Landscape Water Conservation Standards. The proposed project would be required to comply with the applicable water efficient landscape standards in Section 17.80.050 of the Municipal Code related to plant design, irrigation systems, water features, and grading and soil preparation.

Furthermore, consistent with the project site's existing General Plan land use designation and zoning, the project site has already been anticipated for urban development.

Based on the above, the proposed project would not conflict with applicable zoning and other regulations governing scenic quality, and a ***less-than-significant*** impact would occur.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? .....Less-Than-Significant Impact

Discussion (d.)

With the exception of the single-family residence in the southwestern portion of the project site and associated storage buildings in the northwestern portion of the site, the site is primarily undeveloped. As such, existing sources of light and glare on the site are limited. Development of the residential subdivision would introduce new sources of light and/or glare to the site where few currently exist. Potential sources of nighttime light would include, but not be limited to, interior light spilling through windows and exterior lighting. During the day, sources of glare could include light reflected off windows.

The project would be required to comply with Chapter 8.09 of the City's Municipal Code, which prohibits the installation or maintenance of outdoor light fixtures that would cause an undue annoyance to persons on neighboring parcels in residential zoning districts. Compliance with Chapter 8.09 of the City's Municipal Code would be ensured during the Site Plan Review Permit process mentioned previously. Given compliance with the foregoing regulations, the surrounding residences would be shielded from nighttime light generated by the proposed project by fencing and landscaping trees and shrubs within the project site and along the frontages of the surrounding residences.

Because the proposed project would comply with local regulations governing outdoor lighting, the average light level generated by the proposed project would not be considered substantial, and proposed fencing and landscaping elements would otherwise help shield new sources of light or glare. Therefore, the proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area, and a ***less-than-significant*** impact would occur.

2. AGRICULTURE RESOURCES.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:					
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping Program of the California Resources Agency, to non-agricultural use?	□	□	□	X
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	□	□	□	X
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	□	□	□	X
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	□	□	□	X
e.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	□	□	□	X

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use? ..... No Impact

Discussion (a.)

According to the California Department of Conservation Farmland Mapping and Monitoring Program, the proposed project site is classified as Urban and Built-Up Land.[5] The site does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, and, thus, the project would not convert such lands to non-agricultural use. Therefore, ***no impact*** would occur as a result of the proposed project.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract? ..... No Impact

Discussion (b.)

The project site is not used for agricultural purposes and is currently zoned PF. Pursuant to the City's Municipal Code Chapter 17.33, Public Facility District, the purpose of the PF zone is to provide areas for public facilities such as government offices, public safety

[5] California Department of Conservation. *California Important Farmland Finder.* Available at: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed October 2025.

facilities, community centers, museums, schools, parks and recreational areas, and the Community Library. The PF zone does not allow agricultural activities, and the City has a separate Agricultural (A) zoning district, the purpose of which is to allow all types of agriculture including general farming, horticulture, floriculture, non-retail nurseries and greenhouses, aviaries, apiaries, forestry, and similar agricultural uses. In addition, the site is not under a Williamson Act contract. As such, the proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. Thus, the project would result in ***no impact***.

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? ..... No Impact

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use? ..... No Impact

Discussion (c. and d.)

The project site is not considered forest land (as defined in PRC Section 12220[g]) or timberland (as defined by PRC Section 4526), and the site is not zoned Timberland Production (as defined by Government Code Section 51104[g]). The site contains an existing single-family residence, associated storage structures, a water well-house, and scattered trees, and is surrounded by existing development. Therefore, the proposed project would have ***no impact*** with regard to conversion of forest land or any potential conflict with forest land, timberland, or Timberland Production zoning.

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? ..... No Impact

Discussion (e.)

With the exception of the single-family residence in the southwest portion of the site and the associated storage buildings in the northwestern portion of the site, the project site is primarily characterized as undeveloped land with scattered trees. The project site is located near existing residential development, commercial development, and an elementary school. Agricultural activities do not currently occur on the site, nor do such activities occur in any areas near the project site. Therefore, the proposed development would not involve other changes in the existing environment, due to their location or nature, that could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use and, thus, ***no impact*** would occur.

3. AIR QUALITY.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a.	Conflict with or obstruct implementation of the applicable air quality plan?	□	□	X	□
b.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	□	□	X	□
c.	Expose sensitive receptors to substantial pollutant concentrations?	□	□	X	□
d.	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	□	□	X	□

a. Would the project conflict with or obstruct implementation of the applicable air quality plan? .....Less-Than-Significant Impact

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? .....Less-Than-Significant Impact

Discussion (a. and b.)

The City of Clayton is located in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air District (BAAD). The SFBAAB area is currently designated as a nonattainment area for the State and federal ozone, State and federal fine particulate matter ($PM_{2.5}$), and State respirable particulate matter (PM_{10}) ambient air quality standards (AAQS). The SFBAAB is designated attainment or unclassified for all other AAQS. It should be noted that on January 9, 2013, the U.S. Environmental Protection Agency (USEPA) issued a final rule to determine that the Bay Area has attained the 24-hour $PM_{2.5}$ federal AAQS. Nonetheless, the Bay Area must continue to be designated as nonattainment for the federal $PM_{2.5}$ AAQS until such time as the BAAD submits a redesignation request and a maintenance plan to the USEPA, and the USEPA approves the proposed redesignation. The USEPA has not yet approved a request for redesignation of the SFBAAB; therefore, the SFBAAB remains in nonattainment for 24-hour $PM_{2.5}$.

In compliance with regulations, due to the nonattainment designations of the area, the BAAD periodically prepares and updates air quality plans that provide emission reduction strategies to achieve attainment of the AAQS, including control strategies to reduce air pollutant emissions through regulations, incentive programs, public education, and partnerships with other agencies. The current air quality plans are prepared in cooperation with the Metropolitan Transportation Commission and the Association of Bay Area Governments (ABAG).

The most recent federal ozone plan is the 2001 Ozone Attainment Plan, which was adopted on October 24, 2001 and approved by the California Air Resources Board (CARB) on November 1, 2001. The plan was submitted to the USEPA on November 30, 2001 for review and approval. The most recent State ozone plan is the 2017 Clean Air Plan, adopted on April 19, 2017. The 2017 Clean Air Plan was developed as a multi-pollutant plan that provides an integrated control strategy to reduce ozone, PM, toxic air contaminants (TACs), and greenhouse gases (GHGs). Although a plan for achieving the State PM_{10} standard is not required, the BAAD has prioritized measures to reduce PM in developing the control strategy for the 2017 Clean Air Plan. The control strategy serves as the backbone of the BAAD's current PM control program.

The aforementioned air quality plans contain mobile source controls, stationary source controls, and transportation control measures to be implemented in the region to attain the State and federal AAQS within the SFBAAB. Adopted BAAD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. The BAAD's established significance thresholds associated with development projects for emissions of the ozone precursors reactive organic compounds (ROG) and nitrogen oxide (NO_X), as well as for PM_{10}, and $PM_{2.5}$, expressed in pounds per day (lbs/day) and tons per year (tons/yr), are listed below in Table 1.

Table 1
BAAD Thresholds of Significance

	Construction	Operational	
Pollutant	**Average Daily Emissions (lbs/day)**	**Average Daily Emissions (lbs/day)**	**Maximum Annual Emissions (tons/year)**
ROG	54	54	10
NO_x	54	54	10
PM_{10} (exhaust)	82	82	15
$PM_{2.5}$ (exhaust)	54	54	10

Source: BAAQMD, CEQA Guidelines, April 2023.

By exceeding the BAAD's mass emission thresholds for operational emissions of ROG, NO_X, PM_{10}, or $PM_{2.5}$, a project would be considered to conflict with or obstruct implementation of the BAAD's air quality planning efforts.

Particulate matter can be split into two categories: fugitive and exhaust. The BAAD thresholds of significance for exhaust are presented in Table 1. BAAD does not maintain quantitative thresholds for fugitive emissions of PM_{10} or $PM_{2.5}$; rather, BAAD requires all projects within the district's jurisdiction to implement Basic Construction Mitigation Measures (BCMMs) related to dust suppression.

The proposed project's construction and operational emissions were quantified using the California Emissions Estimator Model (CalEEMod) software version 2022.1.1.33 - a Statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including construction data, vehicle mix, trip length, average speed, compliance with the 2022 California Building Standards Code (CBSC), etc. Where project-specific information is available, such information should be applied in the model.

Accordingly, the proposed project's modeling assumes the following project and/or site-specific information:

- Construction would begin in March 2027 and occur over an approximately two-year period;
- The proposed project would be operational by 2029;
- Approximately 1,000 cubic yards (CY) of soil would be exported during site preparation;
- Approximately 2,000 CY of soil would be imported during grading;
- Approximately 3,000 sf of building material would be demolished and exported during demolition;
- The hauling trip lengths for the site preparation and grading phases were adjusted to be 0.9-mile to be consistent with project-specific information provided by the project applicant;
- The proposed residential units would be built with electric fireplaces; and
- The proposed project would not use natural gas during operations.

The proposed project's estimated emissions associated with construction and operations and the project's contribution to cumulative air quality conditions are provided below. All CalEEMod results are included as Appendix A to this IS/MND.

Construction Emissions

During construction of the proposed project, various types of equipment and vehicles would temporarily operate on the project site. Construction exhaust emissions would be generated from construction equipment, vegetation clearing and earth movement activities, construction worker commutes, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project construction activities also represent sources of fugitive dust, which includes PM emissions. As construction of the proposed project would generate air pollutant emissions intermittently within the site and vicinity, until all construction has been completed, construction is a potential concern because the project is in a non-attainment area for ozone, PM_{10}, and $PM_{2.5}$.

According to the CalEEMod modeling results, buildout of the proposed project would result in maximum unmitigated construction criteria air pollutant emissions as shown in Table 2.

As shown in the table, the proposed project's construction emissions would be below the applicable thresholds of significance for ROG, NO_X, PM_{10}, and $PM_{2.5}$.

Table 2 Maximum Unmitigated Construction Emissions (lbs/day)			
Pollutant	**Proposed Project Emissions**	**Threshold of Significance**	**Exceeds Threshold?**
ROG	3.10	54	**NO**
NO_X	28.00	54	**NO**
PM_{10}*	1.20	82	**NO**
$PM_{2.5}$*	1.10	54	**NO**
Note: * *Denotes emissions from exhaust only. BAAD has not yet adopted PM thresholds for fugitive emissions.* *Source: CalEEMod, November 2025 (see Appendix A).*			

All projects within the jurisdiction of the BAAD are required to implement all of the BAAD's BCMMs, which would be required by the City as conditions of approval:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
7. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
8. Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a six- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
9. Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.

The proposed project's required implementation of the BAAD's BCMMs listed above for the project's construction activities would help to further minimize construction-related emissions.

Overall, because the proposed project would be below the applicable thresholds of significance for construction emissions, project construction would not result in a significant air quality impact.

Operational Emissions

Operational emissions of ROG, NO_X, and PM would be generated by the proposed project from both mobile and stationary sources. Day-to-day activities, such as future vehicle trips to and from the project site, would make up the majority of the mobile emissions. Emissions would also occur from area sources, such as operations from landscape maintenance equipment exhaust.

According to the CalEEMod results, buildout of the proposed project would result in maximum unmitigated operational criteria air pollutant emissions as shown in Table 3.

Table 3
Maximum Unmitigated Operational Emissions

Pollutant	Proposed Project Emissions		Threshold of Significance		Exceeds Threshold?
	lbs/day	tons/yr	lbs/day	tons/yr	
ROG	1.50	0.25	54	10	**NO**
NO_X	0.49	0.08	54	10	**NO**
PM_{10}*	0.01	<0.005	82	15	**NO**
$PM_{2.5}$*	0.01	<0.005	54	10	**NO**

Note:
* *Denotes emissions from exhaust only. BAAD has not yet adopted PM thresholds for fugitive emissions.*

Source: CalEEMod, November 2025 (see Appendix A).

As shown in the table, operations of the proposed project would be below the applicable thresholds of significance. Thus, operations of the project would not be considered to conflict with air quality plans during project operations.

Conclusion

As stated previously, the applicable regional air quality plans include the 2001 Ozone Attainment Plan and the 2017 Clean Air Plan. According to BAAD, if a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation, the project may be considered consistent with the air quality plans.

As discussed above, the proposed project would result in construction and operational emissions below the applicable thresholds of significance. Therefore, the proposed project would not conflict with or obstruct implementation of the applicable air quality plans, violate any air quality standards or contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in any criteria air pollutant, and impacts would be considered ***less than significant.***

c. Would the project expose sensitive receptors to substantial pollutant concentrations? .....Less-Than-Significant Impact

Discussion (c.)
Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health

problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution.

Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest existing sensitive receptor is a single-family residence southwest of the site, approximately 15 feet from the site's southwestern boundary. Additionally, Mt. Diablo Elementary School is located approximately 20 feet to the north of the project site.

The major pollutant concentrations of concern are localized carbon monoxide (CO) emissions and TAC emissions, as well as regional effects of emissions of criteria pollutants, all of which are addressed in further detail below.

Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. Emissions of CO are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood. CO emissions are particularly related to traffic levels.

In order to provide a conservative indication of whether a project would result in localized CO emissions that would exceed the applicable threshold of significance, the BAAD has established screening criteria for localized CO emissions. According to BAAD, a proposed project would result in a less-than-significant impact related to localized CO emission concentrations if all of the following conditions are true for the project:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

While BAAD has established the foregoing screening criteria for potential impacts, it should be noted that the SFBAAB has been in attainment of California AAQS (CAAQS) and National AAQS (NAAQS) for CO for more than 20 years. Due to the continued attainment of CAAQS and NAAQS, and advances in vehicle emissions technologies, the likelihood that any single project would create a CO hotspot is minimal.

Based on the trip generation from the Transportation Analysis Report prepared by TJKM for the proposed project, the proposed project would generate approximately 151 new daily

trips.[6] Thus, the proposed project would not conflict with the level of service (LOS) standards set forth under the City of Clayton General Plan and Contra Costa Transportation Authority (CCTA) Congestion Management Program.

Because the proposed project is expected to generate approximately 151 new daily trips, traffic associated with the proposed development would not increase traffic volumes at any affected intersection to more than 44,000 vehicles per hour. Furthermore, areas where vertical and/or horizontal mixing is limited due to tunnels, underpass, or similar features do not exist in the project area. Therefore, based on the BAAD's screening criteria for localized CO emissions, the proposed project would not be expected to result in substantial levels of localized CO at surrounding intersections or generate localized concentrations of CO that would exceed standards or cause health hazards.

TAC Emissions

Another category of environmental concern is TACs. The CARB's Air Quality and Land Use Handbook: A Community Health Perspective (Handbook) provides recommended setback distances for sensitive land uses from major sources of TACs, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks associated with TACs are a function of both the concentration of emissions and the duration of exposure, where the higher the concentration and/or the longer the period of time that a sensitive receptor is exposed to pollutant concentrations would correlate to a higher health risk. As previously noted, the nearest off-site sensitive receptor is the single-family residence located approximately 15 feet from the southwestern boundary of the project site; Mt. Diablo Elementary School is also located approximately 20 feet to the north of the project site.

Operational-related emissions of TACs are typically associated with stationary diesel engines or land uses that involve heavy diesel truck traffic or idling. The proposed project would not involve long-term operation of any stationary diesel engine or other major on-site stationary source of TACs. Residential uses, such as the proposed project, do not typically involve long-term operation of any stationary sources of TACs. Therefore, the proposed project would not expose any existing sensitive receptors to any new permanent or substantial TAC emissions during operations.

Short-term, construction-related activities could result in the generation of TACs, specifically DPM, from on-road haul trucks and off-road equipment exhaust emissions. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. Health risks are typically associated with exposure to high concentrations of TACs over extended periods of time (e.g., 30 years or greater), whereas the construction period associated with the proposed project would likely be limited to approximately two years. All construction equipment and operation thereof would be regulated per the In-Use Off-Road Diesel Vehicle

[6] TJKM Transportation Consultants. *Draft Transportation Analysis Report 1027 Pine Hollow Court City of Clayton, CA*. October 14, 2025.

Regulation, which is intended to help reduce emissions associated with off-road diesel vehicles and equipment, including DPM. Project construction would also be required to comply with all applicable BAAD rules and regulations, particularly associated with permitting of air pollutant sources.

During construction, only portions of the project site would be disturbed at a time. Operation of construction equipment would occur on such portions of the site intermittently throughout the course of a day over the overall construction period. Because construction equipment on-site would not operate for any long periods of time and would be used at varying locations within the site, associated emissions of DPM would not occur at the same location (or be evenly spread throughout the entire project site) for long periods of time. Due to the temporary nature of construction and the relatively short duration of potential exposure to associated emissions, sensitive receptors in the area would not be exposed to pollutants for a permanent or substantially extended period of time. Furthermore, any one nearby sensitive receptor would be exposed to varying concentrations of DPM emissions throughout the construction period. According to BAAD, research conducted by CARB indicates that DPM is highly dispersive in the atmosphere. Thus, emissions at the project site would be dispersed at the nearest sensitive receptors, and the concentration of DPM at the nearest sensitive receptors would be lower than the concentration of DPM at the source of emissions.

Considering the limited nature of construction activities, the regulated and intermittent nature of the operation of construction equipment, the highly dispersive nature of DPM, and the distance of the nearest sensitive receptor from the project site, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time, during development the project, would be low. For the aforementioned reasons, project construction would not be expected to expose sensitive receptors to substantial pollutant concentrations.

Criteria Pollutants

The BAAD thresholds of significance were established with consideration given to the health-based air quality standards established by the NAAQS and CAAQS, and are designed to aid the district in achieving attainment of the NAAQS and CAAQS.[7] Although the BAAD's thresholds of significance are intended to aid achievement of the NAAQS and CAAQS for which the SFBAAB is in nonattainment, the thresholds of significance do not represent a level above which individual project-level emissions would directly result in public health impacts. Nevertheless, a project's compliance with BAAD's thresholds of significance provides an indication that criteria pollutants released as a result of project implementation would not inhibit attainment of the health-based regional NAAQS and CAAQS. Because project-related emissions would not exceed the BAAD's thresholds, and, thus, would not inhibit attainment of regional NAAQS and CAAQS, the criteria pollutants emitted during project implementation would not be anticipated to result in measurable health impacts to sensitive receptors. Accordingly, the proposed project would not expose sensitive receptors to excess concentrations of criteria pollutants.

[7] Bay Area Air Quality Management District. *2022 California Environmental Quality Act Guidelines*. April 2022.

Conclusion

Based on the above discussion, the proposed project would not expose any sensitive receptors to substantial concentrations of pollutants, including localized CO, TACs, or criteria pollutants, during construction or operation. Therefore, the proposed project would result in a ***less-than-significant*** impact related to the exposure of sensitive receptors to substantial pollutant concentrations.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? .....Less-Than-Significant Impact

Discussion (d.)

Emissions such as those leading to odors have the potential to adversely affect sensitive receptors within the project area. Pollutants of principal concern include emissions leading to odors, emission of dust, or emissions considered to constitute air pollutants. Air pollutants have been discussed in sections "a" through "c" above. Therefore, the following discussion focuses on emissions of odors and dust.

Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The presence of an odor impact is dependent on several variables including: the nature of the odor source; the frequency of odor generation; the intensity of odor; the distance of odor source to sensitive receptors; wind direction; and sensitivity of the receptor.

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantification of significant odor impacts is relatively difficult. Typical odor-generating land uses include, but are not limited to, wastewater treatment plants, landfills, and composting facilities. The proposed project would not introduce any such land uses.

Construction activities often include diesel-fueled equipment and heavy-duty diesel trucks, which can create odors associated with diesel fumes, which could be found to be objectionable. However, as discussed above, construction activities would be temporary, and operation of construction equipment would be regulated and intermittent. Project construction would also be required to comply with all applicable BAAD rules and regulations, particularly associated with permitting of air pollutant sources. The aforementioned regulations would help to minimize air pollutant emissions, as well as any associated odors. Accordingly, substantial objectionable odors would not occur during construction activities or affect a substantial number of people.

In addition, the BAAD rules and regulations would act to reduce construction related dust, which would ensure that construction of the proposed project does not result in substantial emissions of dust. Following project construction, the project site would not include any exposed topsoil. Thus, project operations would not include any substantial sources of dust.

For the aforementioned reasons, construction and operation of the proposed project would not result in emissions (such as those leading to odors) adversely affecting a substantial number of people, and a ***less-than-significant*** impact would occur.

4. BIOLOGICAL RESOURCES.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	□	X	□	□
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	□	□	X	□
c.	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	□	□	X	□
d.	Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	□	□	X	□
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	□	X	□	□
f.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?	□	□	X	□

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (a.)

The following discussion is based primarily upon a Biological Resources Assessment (BRA) prepared for the project site by Madrone Ecological Consulting (see Appendix B).[8]

The following discussion describes the sensitive biological resources that have the potential to be present within the project site based on the BRA. Sensitive biological resources include habitats and/or individual plant and animal species that have special recognition by federal, State, or local conservation agencies. For purposes of this analysis, special-status animal species are defined as animals protected under the California and Federal

[8] Madrone Ecological Consulting. *Biological Resources Assessment, Pine Hollow Court.* November 2025.

Endangered Species Acts (CESA and FESA, respectively), or other regulations, and species that are considered rare by the scientific community. Special-status plant species are defined as plants that are protected under the CESA and FESA or listed as rare by California Department of Fish and Wildlife (CDFW) and the California Native Plant Society (CNPS). Special-status species include:

- Animals and plants listed or proposed for listing as threatened or endangered under the CESA (Fish and Game Code §2050 et seq.; 14 California Code of Regulations [CCR] §670.1et seq.) or the FESA (50 Code of Federal Regulations [CFR] 17.11);
- Animals and plants that are candidates for possible future listing as threatened or endangered under the FESA (50 CFR 17; FR Vol. 64, No. 205, pages 57533-57547, October 25, 1999); and under the CESA (California Fish and Game Code §2068);
- Animals that meet the definition of endangered, rare, or threatened under the CEQA (14 CCR §15380) that may include species not found on either State or Federal Endangered Species lists;
- Animals that are designated as "species of special concern" by CDFW (2016);
- Animal species that are designated as “fully protected” under California (Fish and Game Code 3511, 4700, 5050, and 5515);
- Bat Species that are designated on the Western Bat Working Group’s (WBWG) Regional Bat Species Priority Matrix as Medium or High Priority species; and
- Plants that are listed by CNPS Rare Plant Program as rank 1A – plants presumed extirpated in California and either rare or extinct elsewhere, 1B – plants rare, threatened or endangered in California or elsewhere, 2A – plants presumed extirpated in California but common elsewhere, 2B – plants rare, threatened or endangered in California by common elsewhere, and 3 – plants about which more is needed.

In addition to regulations for special-status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Under the MBTA, destroying active nests, eggs, and young is illegal. The presence of species with legal protection under the ESA often represents a major constraint to development, particularly when the species are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a take of these species.

The project site is located within the boundaries of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (ECCCHCP/NCCP), which is intended to provide an effective framework to protect natural resources in the County. However, the project site is designated as “urban” by the ECCCHCP/NCCP; therefore, the proposed project would be considered exempt from the provisions of the ECCCHCP/NCCP, pursuant to Section 16.55.030 of the Clayton Municipal Code. Mitigation measures identified in this IS/MND would be required to avoid possible inadvertent take of federally and State-designated special-status species which may occur on or near the project site.

Madrone Ecological conducted field surveys of the project area on March 7, 2025, April 15, 2025, and June 30, 2025. During the field surveys, the biologist walked the entire project site in meandering transects to evaluate biological resource conditions at the site. Concurrent with the field surveys, Madrone Ecological conducted protocol-level special-status plant surveys and an aquatic resources delineation in accordance with U.S. Army

Corps of Engineers (USACE) protocol. According to the field survey findings, the western portion of the project site is a relatively flat terrace, which drops down a moderately steep hill through an abandoned walnut orchard to Mitchell Creek, just east of the project site. The majority of the project site is comprised of annual brome grassland, which is dominated by ripgut brome (*Bromus diandrus*) and wild oat (*Avena fatua*). A number of native and non-native forbs are also prevalent, including Menzies' fiddleneck *(Amsinckia menziesii)*, common fiddleneck *(Amsinckia intermedia)*, field marigold *(Calendula arvensis)*, purple vetch *(Vicia benghalensis)*, winter vetch *(Vicia villosa ssp. varia)*, black mustard *(Brassica nigra)*, Italian thistle (*Carduus pycnocephalus*), and milk thistle (*Silybum marianum*). The majority of the on-site trees are valley oaks and blue oaks. Several fruit trees exist around the on-site residence, as well as scattered black walnut trees which appear to be stump sprouts from a historic orchard, and a few very large Italian stone pines. A thin band of valley oak riparian woodland occurs along Mitchell Creek and is dominated by valley oak and California buckeye.

As part of the BRA, the California Natural Diversity Database (CNDDB), the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) database, the CNPS Rare and Endangered Plant Inventory, the WBWG Species Matrix, and the East Bay Chapter of the CNPS's *Database of Rare, Unusual, and Significant Plants of Alameda and Contra Costa Counties,* were used to determine what special-status species are known to have occurred within a five-mile radius of the project area. The BRA classified vegetation communities in accordance with the CNPS *Manual of California Vegetation, Second Edition*, plant taxonomy was based on the nomenclature in the Jepson eFlora, and bird taxonomy was based on information from the eBird database by Cornell University Lab of Ornithology.

Of the special-status species occurrences identified in the database searches, Madrone Ecological determined that five plant species and 11 wildlife species have a low to moderate potential to occur within the project site based on habitat requirements. In addition, the BRA noted that birds protected under the MBTA could occur within existing trees in the project area. Such species are discussed in further detail below.

Special-Status Plants

The following discussions summarize the potential for the proposed project to result in adverse effects to special-status plants.

Bent-flowered fiddleneck (Amsinckia lunaris)
Bent-flowered fiddleneck is not listed pursuant to either the federal or California ESAs, but is designated as a California Rare Plant Rank (CRPR) 1B.2 species. The bent-flowered fiddleneck is an herbaceous annual that occurs in chaparral, cismontane woodland, and valley and foothill grasslands. Bent-flowered fiddleneck blooms from March through June and is known to occur at elevations ranging from approximately 10 feet to 1,640 feet above mean sea level (MSL). Bent-flowered fiddleneck has not been documented within five miles of the project site; however, marginally suitable habitat for the species is present in the annual brome grasslands throughout the project site (see Figure 11). As such, if bent-flowered fiddleneck is present on the project site, construction activities associated with the proposed project could result in adverse effects and a potentially significant impact could occur.

Figure 11
Project Site Vegetation Communities

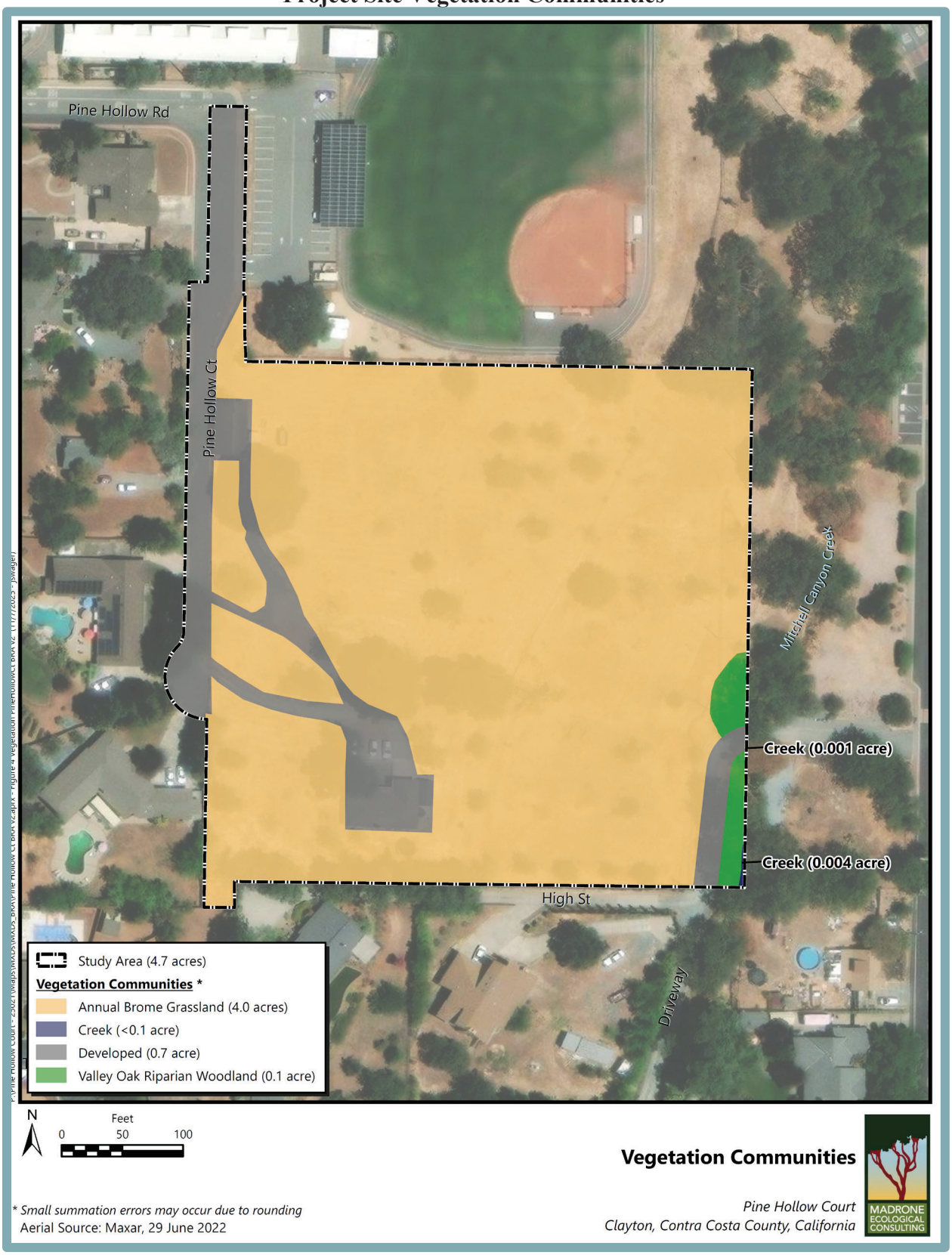


*Figure not OCR compatible

Mt. Diablo Fairy Lantern (Calochortus pulchellus)
Mt. Diablo fairy lantern is not federally or State-listed, but the species is classified as a CRPR List 1B.2 species. This species is a perennial bulb that occurs in chaparral, cismontane, and riparian woodlands, and valley and foothill grasslands. Mt. Diablo fairy lantern blooms April through June and is known to occur from approximately 98 feet to 2,755 feet above MSL. Nineteen occurrences of Mt. Diablo fairy lantern have been documented within five miles of the project site in the CNDDB, the nearest of which is located approximately 1.5 miles south of the site in Mitchell Canyon. Marginally suitable habitat for the species is present in the annual brome grasslands throughout the project site. As such, if Mt. Diablo fairy lantern is present on the project site, construction activities associated with the proposed project could result in adverse effects and a potentially significant impact could occur.

Fragrant Fritallary (Fritillaria liliacea)
Fragrant fritillary is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. The species is a perennial bulbiferous herb that is found in cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland, often on serpentine soils. Fragrant fritillary blooms from February through April and is known to occur from 10 feet to 1,345 feet above MSL. Fragrant fritillary has not been documented in the CNDDB within five miles of the project site; however, one occurrence of the species was recorded in CalFlora approximately five miles southwest of the project site. Marginally suitable habitat for the species is present in the annual brome grasslands throughout the project site. As such, if fragrant fritillary is present on the project site, construction activities associated with the proposed project could result in adverse effects and a potentially significant impact could occur.

Showy Golden Madia (Madia radiata)
Showy golden madia is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species. The species is an herbaceous annual that occurs in cismontane woodland and valley and foothill grasslands. Showy golden madia blooms between March and May and is known to occur at elevations ranging from 82 feet to 3,986 feet above MSL. One CNDDB record of showy golden madia has been documented approximately 4.5 miles east of the project site, and several records in the same general location are documented in the California Consortium of Herbaria (CCH). However, all of the records are from the late 1800's and early to mid-1900's; the species has not been documented in the Bay Area since 1941. Marginally suitable habitat for the species is present in the annual brome grasslands throughout the project site. As such, if showy golden madia is present on the project site, construction activities associated with the proposed project could result in adverse effects and a potentially significant impact could occur.

Shining Navarretia (Navarretia nigelliformis ssp. radians)
Shining navarretia is not federally or State listed, but the species is classified as a CRPR List 1B.2 species. Shining navarretia is an annual herb primarily associated with forb-rich openings in cismontane woodland and valley and foothill grassland, often on clay soils. Shining navarretia occurs at elevations between approximately 210 feet and 3,280 feet, and typically blooms from April through July. The species has not been documented in the CNDDB within five miles of the project site; however, marginally suitable habitat for the species is present within the annual brome grasslands throughout the project site. As such,

if shining navarretia is present on the project site, construction activities associated with the proposed project could result in adverse effects and a potentially significant impact could occur.

Special-Status Wildlife

The following discussions summarize the potential for the proposed project to result in adverse effects to special-status wildlife.

Crotch Bumble Bee (Bombus crotchii)
Crotch's bumble bee is a candidate for listing under CESA. Although a decision on the listing has not yet been published, a decision could be published by the time that construction begins on the proposed project. In California, the Crotch bumble bee inhabits open grasslands and scrub habitats. The species was historically common in the Central Valley of California, but now appears to be absent from most of the region, including within the center of the species' historic range. One occurrence of Crotch bumble bee has been documented within five miles of the project site, located approximately 2.5 miles north, within the City of Antioch. The occurrence was documented in 1926 and the exact location is unknown. An additional CNDDB record of Crotch bumble bee was documented approximately four miles southeast of the project site in 1951.

The annual grasslands within the project site appear to support appropriate floral resources at least during the spring, but very few ground squirrel burrows are present to represent potential nesting and overwintering habitat. Nonetheless, the annual grasslands within the project site could provide suitable habitat for Crotch bumble bee. As such, if Crotch bumble bee is present on the project site, construction activities associated with the proposed project could result in adverse effects and a potentially significant impact could occur.

Western Bumble Bee (Bombus occidentalis)
The western bumble bee is a candidate for listing under the CDFW. While the western bumble bee was historically known throughout the mountains and northern coast of California, the species is now largely confined to high elevation sites and a small handful of records on the northern California coast. Meadows and grasslands with blended floral resources are appropriate habitats for the western bumble bee.

Four records of western bumble bee have been documented within five miles of the project site, the most recent of which is from 1974. The annual grasslands within the project site appear to support appropriate floral resources at least during the spring, but very few ground squirrel burrows are present to represent potential nesting and overwintering habitat. Nonetheless, the annual grasslands within the project site could provide suitable habitat for the western bumble bee. As such, if western bumble bee is present on the project site, construction activities associated with the proposed project could result in adverse effects and a potentially significant impact could occur.

California Red-Legged Frog (Rana draytonii)
The California red-legged frog (CRLF) is federally listed as threatened and is a CDFW species of special concern. CRLF is the largest native frog in the western United States, ranging from 1.5 to five inches in length. The CRLF was historically known throughout Pacific slope drainages and parts of the Central Valley from Shasta County, California, to

Baja, Mexico. The current range is greatly reduced, with most remaining populations occurring along the coast from Marin County to Ventura County and in isolated locations in the foothills of the western slope of the Sierra Nevada.

CRLF breeding habitat includes coast lagoons, marshes, springs, permanent and semi-permanent natural ponds, and ponded and backwater portions of streams. Upland and riparian areas provide important habitat during summer when CRLF are known to aestivate in dense vegetation, burrows, and leaf litter. CRLF breed from November through April, and larvae generally metamorphose by mid to late summer.

Thirty records of CRLF have been documented within five miles of the project site, the closest of which is located 1.2 miles south of the site, in a cattle pond between Mitchell Creek and Donner Creek. Mitchell Creek is shallow throughout the project area and does not contain any pools or deeper refugia. As such, the creek represents only marginally suitable aquatic dispersal habitat for the species, and the adjacent riparian woodland similarly represents marginally suitable upland aestivation habitat. The proposed project would not impact Mitchell Creek. In addition, the impacts to valley oak woodland are comprised of a small amount of grading away from the creek, with tree removal not anticipated and impacts not proposed within the riparian woodland area. Thus, the impacts to valley oak woodland are not expected to impact CRLF. Therefore, impacts to CRLF are not anticipated.

Northwestern Pond Turtle (Actinemys marmorata)
The northwestern pond turtle (NWPT) is a federally proposed threatened species and is considered a CDFW species of special concern. The NWPT occupies a wide variety of permanent and ephemeral aquatic habitats. The NWPT also may spend a significant amount of time in upland terrestrial habitats. Both adult and juvenile NWPT favor aquatic habitats with access to areas of deep water with underwater refugia and emergent basking sites. Both flowing water habitats (e.g., rivers and streams) and isolated waters (e.g., ponds and reservoirs) are used by NWPT.

Only one occurrence of NWPT has been recorded within five miles of the project site in the CNDDB, and that record is located 4.9 miles south of the site, in Pine Pond, near Pine Creek in Mount Diablo State Park. Mitchell Creek is shallow throughout the project area and does not contain any pools or dense in-channel vegetation to function as refugia. As such, Mitchell Creek represents only marginally suitable aquatic dispersal habitat for this species, and the species is unlikely to utilize adjacent upland habitat. As impacts to Mitchell Creek are not proposed, impacts to NWPT are not anticipated.

Burrowing Owl (Athene cunicularia)
The burrowing owl is not listed pursuant to either the California or federal ESAs; however, the species is a candidate for listing under CESA and is designated as a species of special concern by the CDFW. The burrowing owl typically inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. The species typically uses burrows created by fossorial mammals, most notably the California ground squirrel, but may also use man-made structures such as culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. The breeding season extends from February 1 through August 31.

Three documented occurrences of burrowing owl have been recorded within five miles of the project site. The small, isolated nature of the site, the density of the grassland, and the almost complete lack of ground squirrel burrows, make the annual brome grasslands within the project site extremely marginal habitat for this species. However, if burrowing owl is present on the project site, construction activities associated with the proposed project could result in adverse effects and a potentially significant impact could occur.

White-Tailed Kite (Elanus leucurus)
White-tailed kite is not federally or State-listed, but is a CDFW fully protected species. The species is a yearlong resident in the Central Valley and is primarily found in or near foraging areas such as open grasslands, meadows, farmlands, savannahs, and emergent wetlands. White-tailed kites typically nest from March through June in trees within riparian, oak woodland, and savannah habitats of the Central Valley and Coast Range.

White-tailed kite has not been documented within five miles of the project site in the CNDDB; however, foraging white-tailed kites have been documented numerous times in the eBird database. The species has not been documented nesting in the vicinity of the project site. Due to the small, isolated nature of the site, the annual brome grasslands within the project site represent marginal foraging habitat for white-tailed kite. However, if white-tailed kite is present on the project site, construction activities associated with the proposed project could result in adverse effects and a potentially significant impact could occur.

Loggerhead Shrike (Lanius ludovicianus)
The loggerhead shrike is not listed and protected pursuant to either the California or federal ESAs, but is considered a CDFW species of special concern. Loggerhead shrikes nest in small trees and shrubs in woodland and savannah vegetation communities, and forage in open habitats throughout California. The nesting season ranges from March through June.

Loggerhead shrikes have not been documented within five miles of the project site in the CNDDB; however, the species has been documented several times in the eBird database. Due to the small, isolated nature of the site, the annual brome grasslands within the project site represent marginal foraging habitat for loggerhead shrike, and the trees and shrubs within the project site represent marginal nesting habitat. However, if loggerhead shrike is present on the project site, construction activities associated with the proposed project could result in adverse effects and a potentially significant impact could occur.

Pallid Bat (Antrozous pallidus)
Pallid bat is not federally or State-listed, but is considered a CDFW species of special concern and is classified by the WBWG as a high-priority species. Pallid bats favor roosting sites in crevices of rock outcrops, caves, abandoned mines, hollow trees, and human-made structures such as barns, attics, and sheds. Although pallid bats are gregarious, they tend to group in smaller colonies of 10 to 100 individuals.

Two documented occurrences of pallid bat have been recorded within five miles of the project site. Tree hollows and exfoliating bark on trees within the project site, as well as the barn located in the northwestern portion of the project site, provides suitable roosting habitat for pallid bat. As such, if pallid bat is present on the project site, construction activities associated with the proposed project could result in adverse effects and a potentially significant impact could occur.

Townsend's Big-Eared Bat (Corynorhinus townsendii)
Townsend's big-eared bat is not listed pursuant to either the federal or California ESAs; however, the species is considered a species of special concern by the CDFW. The species has been reported from a wide variety of habitat types and elevations from sea level to 10,827 feet above MSL. Habitats used include coniferous forests, mixed mesophytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. The distribution of Townsend's big-eared bat is strongly associated with the availability of caves and cave-like roosting habitat, including abandoned mines, buildings, bridges, rock crevices, and hollow trees. Foraging habitat for the species generally consists of edge habitats along streams adjacent to and within a variety of wooded habitats. The species often travels long distances when foraging and large home ranges have been documented in California.

Two documented occurrences of Townsend's big-eared bat have been recorded within five miles of the project site. However, both of the records are from the 1920s and 1930s. The barn located in the northwestern portion of the project site provides only marginally suitable roosting habitat for Townsend's big-eared bat due to the frequency of human use. However, if Townsend's big-eared bat is present on the project site, construction activities associated with the proposed project could result in adverse effects and a potentially significant impact could occur.

Western Red Bat (Lasiurus blossevillii)
Western red bat is not federally or State listed, but is considered a CDFW species of special concern, and is classified by the WBWG as a high-priority species. Western red bat is typically solitary, roosting primarily in the foliage of trees or shrubs. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat, particularly willows, cottonwoods, and sycamores, used for foraging.

Western red bat has not been documented in the CNDBB within five miles of the project site. Trees throughout the project site represent suitable roosting habitat for western red bat. The open areas within the project site also provide suitable foraging habitat for the species. As such, if western red bat is present on the project site, construction activities associated with the proposed project could result in adverse effects and a potentially significant impact could occur.

Hoary Bat (Lasiurus cinereus)
The hoary bat is not federally or State listed, but the species is classified by the WBWG as a medium-priority species. Hoary bats are solitary and roost primarily in foliage of both coniferous and deciduous trees, near the ends of branches at the edge of a clearing. The species may also occasionally roost in caves, beneath a rock ledge, in a woodpecker hole, in a grey squirrel nest, under a wood plank, or clinging to the side of a building.

One occurrence of hoary bat has been documented within five miles of the project site in the 1950s. Trees throughout the project site represent suitable roosting habitat for hoary bat. The open areas within the project site provide suitable foraging habitat for the species. As such, if hoary bat is present on the project site, construction activities associated with the proposed project could result in adverse effects and a potentially significant impact could occur.

Birds Protected by the MBTA
According to the BRA, the trees present on the proposed project site could serve as nesting locations for common and sensitive passerine and raptor species protected under the MBTA. Site construction activities, including tree removal during the active nesting season (February 1 to August 31), would have the potential to cause the failure or abandonment of active nests of migratory birds. Impacts to nesting birds, their eggs, and/or young caused by implementation of the project would be regarded as a potentially significant impact.

Conclusion

Based on the above, in the absence of appropriate mitigation, construction activities associated with the proposed project could result in adverse effects to special-status plant and wildlife species, as well as nesting raptors and songbirds protected by the MBTA. Thus, a ***potentially significant*** impact could occur.

Mitigation Measure(s)
Implementation of the following mitigation measures would reduce the above potential impacts to a *less-than-significant* level.

Special-Status Plant Species

Mitigation Measure 1. *Special-status plant surveys shall be conducted in accordance with CNPS and CDFW protocols throughout the project site within three years prior to the commencement of construction. The CNPS and CDFW protocols require that the surveys be conducted at the time of year that the target species are most identifiable; this often requires multiple survey visits to capture the identifiable period of all target species. If special-status plant species are not found, further mitigation would not be required. If special-status plants are found and will be impacted, a mitigation plan shall be developed and approved by the City. Mitigation for the transplantation/establishment of rare plants will result in a no net loss of individual plants after a five (5) year monitoring period. If the plant found is a perennial, then mitigation could consist of digging up the plant and transplanting it to a suitable nearby avoided area prior to construction. If the plant found is an annual, then mitigation could consist of collecting seed-bearing soil and spreading it in a suitable nearby avoided area prior to construction.*

A report summarizing the survey shall be provided to the City of Clayton within 14 days of the completed survey.

Crotch and Western Bumble Bees

Mitigation Measure 2. *Initial ground-disturbing work (e.g., grading, vegetation removal, staging) shall take place between September 1 and March 31 (i.e., outside the colony active period), if feasible, to avoid impacts on special-status bumble bees.*

If completing all initial ground-disturbing work between September 1 and March 31 is not feasible, then a qualified biologist conducting biological resource surveys within California shall conduct a pre-construction survey for special-status bumble bees in the area proposed for impact no more than 14 days prior to the commencement of construction activities. The survey shall occur during the period from one hour after sunrise to two hours before sunset, with temperatures between 65 degrees Fahrenheit and 90 degrees Fahrenheit, with low wind and no rain. If the timing of the start of construction makes the survey infeasible due to the temperature requirements, the surveying biologist shall select the most appropriate days based on the National Weather Service seven-day forecast, and shall survey at a time of day that is closest to the temperature range stated above. The survey duration shall be commensurate with the extent of suitable floral resources (which represent foraging habitat) present within the area proposed for impact and the level of effort shall be based on the metric of a minimum of one person-hour of searching per three acres of suitable floral resources/foraging habitat. A meandering pedestrian survey shall be conducted throughout the area proposed for impact in order to identify patches of suitable floral resources. Suitable floral resources for Crotch bumble bee include species in the following families: Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, and Lamiaceae. Suitable floral resources for western bumble bee include species in the following families: Asteraceae, Fabaceae, Rhamnaceae, and Rosaceae, as well as plants in the genera Eriogonum and Penstemon.

At a minimum, pre-construction survey methods shall include the following:

- *Search areas with floral resources for foraging bumble bees. Observed foraging activity may indicate a nest is nearby, and therefore, the survey duration shall be increased when foraging bumble bees are present.*
- *If Crotch bumble bees are observed, watch the individuals and observe their flight patterns. Attempt to track their movements between foraging areas and the nest.*
- *Visually look for nest entrances. Observe burrows, any other underground cavities, logs, or other possible nesting habitat.*
- *If floral resources or other vegetation preclude*

observance of the nest, small areas of vegetation may be removed via hand removal, line trimming, or mowing to a height of no less than four inches to assist with locating the nest.

- *Look for concentrated special-status bumble bee activity.*
- *Listen for the humming of a nest colony.*
- *If bumble bees are observed, attempt to photograph the individual and identify the species.*

The biologist conducting the survey shall record when the survey was conducted, a general description of any suitable foraging habitat/floral resources present, a description of observed bumble bee activity, a list of bumble bee species observed, a description of any vegetation removed to facilitate the survey, and their determination of if survey observations suggest a special-status bumble bee nest(s) may be present or if construction activities could otherwise harm special-status bumble bees. The report shall be submitted to the City of Clayton prior to the commencement of construction activities.

If bumble bees are not located during the pre-construction survey or the bumble bees located are definitively identified as common (i.e., not special-status) species, then further mitigation or coordination with the City and/or CDFW is not required.

If any sign(s) of a bumble bee nest is observed, and/or if it cannot be established that the species present is not a special-status bumble bee, then construction shall not commence until either 1) the bumble bees present are positively identified as common (i.e., not special status) by an experienced bumble bee taxonomist, or 2) the completion of coordination with CDFW to identify appropriate Biological Resources Assessment mitigation measures, which may include, but not be limited to, waiting until the colony active season ends; establishment of nest buffers; or obtaining an Incidental Take Permit (ITP) from CDFW.

The project proponent is recommended, but not required, to also survey the proposed impact areas the year before construction begins in order to avoid potential last-minute delays associated with identifying special-status bumble bees on-site immediately prior to construction activities. To be most effective, this optional survey should follow the protocol outlined above.

If, after coordination with CDFW, impacts to special-status

bumble bees cannot be avoided, the project proponent shall obtain an ITP from CDFW prior to the City's approval of permits authorizing construction, and the project proponent shall implement all conditions identified in the ITP. Mitigation required by the ITP may include but will not be limited to, the project proponent translocating nesting substrate in accordance with the latest scientific research to another suitable location (i.e., a location that supports similar or better floral resources as the impact area), enhancing floral resources on areas of the project site that will remain appropriate habitat, worker awareness training, and/or other measures specified by CDFW.

A report summarizing the survey shall be provided to the City of Clayton within 14 days of the completed survey. If special-status bumble bees are not found, further mitigation is not required.

Western Burrowing Owl

Mitigation Measure 3. *Prior to any ground disturbance related to project activities, a USFWS/CDFW approved biologist shall conduct a preconstruction survey in areas identified in the planning surveys as having potential western burrowing owl habitat. The surveys shall establish the presence or absence of western burrowing owl and/or habitat features and evaluate use by owls in accordance with CDFW survey guidelines.*

On the project site, the biologist shall survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint to identify burrows and owls. Adjacent parcels under different land ownership shall not be surveyed. Surveys should take place near sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owls shall be identified and mapped. Surveys shall take place no more than 30 days prior to construction. During the breeding season (February 1– August 31), surveys shall document whether burrowing owls are nesting in or directly adjacent to disturbance areas. During the nonbreeding season (September 1–January 31), surveys shall document whether burrowing owls are using habitat in or directly adjacent to any disturbance area. Survey results shall be valid only for the season (breeding or nonbreeding) during which the survey is conducted.

If burrowing owls are found during the breeding season (February 1 – August 31), the project proponent shall avoid all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the

nest is occupied by adults or young. Avoidance shall include establishment of a non-disturbance buffer zone (described below). Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation or that the juveniles from the occupied burrows have fledged. During the nonbreeding season (September 1 – January 31), the project proponent should avoid the owls and the burrows they are using, if possible. Avoidance shall include the establishment of a buffer zone (described below).

During the breeding season, buffer zones of at least 250 feet in which no construction activities can occur shall be established around each occupied burrow. Buffer zones of 160 feet shall be established around each burrow being used during the nonbreeding season. The buffers shall be delineated by highly visible, temporary construction fencing.

If occupied burrows are not avoided, passive relocation shall be implemented. Owls should be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors should be in place for 48 hours prior to excavation. The project area should be monitored daily for one week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent reoccupation. Plastic tubing or a similar structure should be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

A report summarizing the survey shall be provided to the City of Clayton within 14 days of the completed survey. If western burrowing owl nests are not found, further mitigation is not required.

Nesting Raptors, Songbirds, and Other Birds Protected by the MBTA

Mitigation Measure 4(a). *A preconstruction nesting bird survey shall be conducted by a qualified biologist on the project site and within a 500-foot radius of proposed construction areas, where access is available, no more than 14 days prior to the initiation of construction. If there is a break in construction activity of more than two weeks, subsequent surveys shall be conducted.*

If active raptor nests are found, construction activities shall not take place within 500 feet of the nest until the young have fledged. If active songbird nests are found, a 100-foot no

disturbance buffer shall be established. The no-disturbance buffers may be reduced if a smaller buffer is proposed by the project biologist, and approved by the City, after taking into consideration the natural history of the species of bird nesting, the proposed activity level adjacent to the nest, habituation to existing or ongoing activity, and nest concealment (if there are visual or acoustic barriers between the proposed activity and the nest). A qualified biologist shall visit the nest as needed to determine when the young have fledged the nest and are independent of the site, or the nest can be left undisturbed until the end of the nesting season.

A report summarizing the survey shall be provided to the City of Clayton within 14 days of the completed survey. If raptor or songbird nests or nests of birds protected by the MBTA are not found, further mitigation is not required.

Mitigation Measure 4(b). *Should construction activities cause a nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest as a result of construction activities, then the exclusionary buffer shall be increased such that activities are far enough from the nest to stop the agitated behavior. The exclusionary buffer shall remain in place until the chicks have fledged or as otherwise determined by a qualified biologist. Construction activities may only resume within the buffer zone after a follow-up survey by the Project Biologist has been conducted and a report has been prepared and submitted to the City, indicating that the nest (or nests) are no longer active and that new nests have not been identified.*

Townsend's Big-Eared Bat

Mitigation Measure 5. *If the project does not avoid impacts to suitable habitat for Townsend's big-eared bat, a preconstruction survey shall be required to determine whether the site is occupied immediately prior to construction or whether the site shows signs of recent previous occupation. Preconstruction surveys are used to determine what avoidance and minimization requirements are triggered before construction and whether construction monitoring is necessary.*

If the species is discovered or if evidence of recent prior occupation is established, construction shall be scheduled in order to minimize impacts on Townsend's big-eared bat. Hibernation sites with evidence of prior occupation shall be sealed before the hibernation season (November–March),

and nursery sites shall be sealed before the nursery season (April–August). If the site is occupied, then the action shall occur either prior to or after the hibernation season for hibernacula and after August 15 for nursery colonies. Construction shall not take place as long as the site is occupied.

A report summarizing the survey shall be provided to the City of Clayton within 14 days of the completed survey. If Townsend's big-eared bat or hibernation sites are not found, further mitigation is not required.

Other Roosting Bats

Mitigation Measure 6. *A qualified biologist shall conduct a bat habitat assessment of all potential roosting habitat features within the proposed development footprint. The habitat assessment shall identify all potentially suitable roosting habitat and may be conducted up to one year prior to the start of construction. A report summarizing the survey shall be provided to the City of Clayton within 14 days of the completed survey. If roosting bats are not found, further mitigation is not required.*

If potential roosting habitat is identified within the areas proposed for development, the biologist shall survey the potential roosting habitat. Ideally, this survey should be conducted during the active season (generally April through October or from January through March on days with temperatures in excess of 50 degrees Fahrenheit) to determine the presence of roosting bats. The surveys are recommended to be conducted using methods that are considered acceptable by the CDFW and bat experts. Methods may include evening emergence surveys, acoustic surveys, inspecting potential roosting habitat with fiberoptic cameras, or a combination thereof.

If roosting bats are identified within any of the trees or buildings planned for removal, or if presence is assumed, then the qualified bat biologist shall specify appropriate exclusion methods according to where the roosting bats are located and what season the exclusion must occur. These exclusion methods may include two-step tree removal or building exclusion, as detailed below.

In general, the trees/buildings shall be removed outside of pup season only on days with temperatures in excess of 50 degrees Fahrenheit. Pup season is generally during the months of May through August. Two-step tree removal

involves removal of all branches of the tree that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree. Building exclusion methods may include such techniques as installation of passive one-way doors, or the installation of netting when the bats are not present to prevent their reoccupation. Once the bats have been excluded, tree removal may occur. Removal of trees/buildings where roosting habitat is not identified during the survey is recommended to be conducted from January through March on days with temperatures in excess of 50 degrees Fahrenheit to avoid potential impacts to foliage-roosting bat species.

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service? .....Less-Than-Significant Impact

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?.....Less-Than-Significant Impact

Discussion (b. and c.)

The site is located in a developed area, with public uses and residential developments surrounding the site on all sides. According to the BRA prepared for the project site, a 0.005-acre section of Mitchell Creek is located along the eastern edge of the project site. However, Mitchell Creek would not be disturbed by development of the proposed project as the development footprint of the proposed residences would not encroach upon the creek; the eastern portion of the site would remain as open space. In addition, a thin band of Valley oak riparian woodland occurs along Mitchell Creek along the eastern edge of the project site. While a small portion of the Valley oak riparian woodland would be impacted by the proposed project, the work would consist of a small area of work below the canopy of a single tree, and impacts are not anticipated. The nearest improvements taking place in proximity to Mitchell Creek would be the proposed sewer line work, which would be installed on the easterly slope facing Mitchell Creek. The sewer drainage line would include riprap rock slope protection to prevent erosion and provide for energy dissipation. Treated stormwater from the project site would flow overland to Mitchell Creek, which is consistent with the existing conditions. Thus, treated stormwater generated by the proposed project would be able to sheet flow down the slope, consistent with existing conditions. Therefore, physical changes to the site would not involve filling, removal, degradation, or

hydrological interruption of federally protected wetlands, riparian habitats, or sensitive communities.

Based on the above, the project would not have a substantial adverse effect on any riparian habitat, or other sensitive natural community or in federally protected wetlands on or near the project site. Consequently, a ***less-than-significant*** impact would occur.

d. Would the project interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites? .....Less-Than-Significant Impact

Discussion (d.)

The project site is bordered by Pine Hollow Court to the west and is surrounded by existing development on all sides. Such features present a partial barrier to wildlife movement. The site does not contain any existing waterways that would provide habitat for native resident or migratory fish. Mitchell Creek, which runs along the eastern border of the project site, would not be disturbed by development of the proposed project, nor would the easterly slope of the project site be developed, such that wildlife could continue to move through the Mitchell Creek corridor area upon implementation of the proposed project. Therefore, the proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, and a ***less-than-significant*** impact would occur.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? .... Less-Than-Significant With Mitigation Incorporated

Discussion (e.)

The proposed project would be required to comply with all relevant policies and ordinances of the City of Clayton, including the Tree Protection Ordinance (Chapter 15.70 of the Municipal Code). The Tree Protection Ordinance calls for the protection of certain species of trees, and a Tree Removal Permit when removal of any tree with a trunk diameter of six inches or greater is proposed.

A Preliminary Arborist Report was prepared by HortScience for the proposed project (see Appendix C).[9] The Preliminary Arborist Report evaluated a total of 64 live trees, including five off-site trees. All of the 64 live trees are considered Protected Trees under the Tree Ordinance. Of the 64 trees, 35 were in poor condition, 21 were in fair condition, and eight were in good condition. The Preliminary Arborist Report recommends preserving all five of the off-site protected trees and removing 58 on-site trees due to their health and the project design. The Preliminary Arborist Report recommends the potential preservation of

[9] HortScience, Bartlett Consulting. *Preliminary Arborist Report: 1027 Pine Hollow Court, Clayton, CA*. May 2025.

one blue oak tree, the successful retention of which is predicated on strict adherence to preservation guidelines outlined below. Pursuant to the City's Tree Protection Ordinance, removal of healthy, protected trees would require replacement based on cumulative trunk diameter. Of the 64 trees protected under the City's Ordinance, 17 are considered by the arborist to have high or moderate suitability for preservation. However, pursuant to the City's Municipal Code Section 15.70.040, a Tree Replacement Plan is required for the removal of all protected trees. Thus, tree replacement pursuant to the City's Tree Protection Ordinance for the proposed removal of 58 on-site trees would be required.

Recommendations for tree preservation provided in the Preliminary Arborist Report include, but are not limited to, the implementation of Tree Protection Zones (TPZs), fencing, temporary irrigation systems, and pruning. In addition, because the proposed project would result in impacts to Protected Trees, the applicant would be required to mitigate for the loss of Protected Trees by planting replacement trees and/or paying an in-lieu fee. In addition, to protect any trees that are located within 50 feet of construction from indirect impacts, the applicant would be required to prepare a Tree Protection Plan as outlined in the Tree Ordinance. Without implementation of the aforementioned protection measures, the proposed project could conflict with policies protecting biological resources, and a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

Mitigation Measure 7. *The following tree protection measures shall be implemented pursuant to the recommendations listed in the Preliminary Arborist Report, to the extent feasible:*

- *The applicant shall submit for review and approval by the City of Clayton a Tree Protection Plan to identify the location of the existing trees to be retained, as identified in the Preliminary Arborist Report;*
- *The project applicant shall include all recommendations provided in the Preliminary Arborist Report by HortScience within the Tree Protection Plan. The Tree Protection Plan shall meet the standards provided in Section 15.70.45 of the Municipal Code, and shall include, but not necessarily be limited to, the establishment of TPZs and protective fencing around trees to be preserved; temporary irrigation systems to be provided for each tree; the installation and maintenance of at least two inches of wood chip mulch within the protected soils within each TPZ; air spade trenching; root pruning and clearance pruning; and the prohibition of oil, gas, chemicals, vehicles, construction equipment, machinery, and other construction materials within the dripline of trees to be preserved.*

Mitigation Measure 8. *A tree replacement plan for the removal of protected tree species shall be prepared in accordance with Municipal Code Section 15.070.040 A.1. or A.2., or, subject to determination by the Community Development Director or Planning Commission, the applicant must pay an in-lieu fee to the City for the purchase and installation of trees of equivalent value.*

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan? ..... Less-Than-Significant-Impact

Discussion (f.)

The ECCCHCP/NCCP was prepared in 2007 and the City of Clayton became a signatory in January 2008. The ECCCHCP/NCCP is intended to provide a coordinated, regional approach to special-status species conservation and development regulation. A total of 28 species are covered under the ECCCHCP/NCCP. The ECCCHCP/NCCP provides streamlined permits from the USFWS and CDFW for covered species for new urban development projects and a variety of public infrastructure projects. Development fees within the ECCCHCP/NCCP area are assessed based on fee zones and land cover types.[10]

Although the City of Clayton is a participating agency and the project site is located within the ECCCHCP/NCCP boundaries, pursuant to the City's Municipal Code Section 16.55.030, the proposed project is exempt because the project site is identified as an Urban land cover type in the ECCCHCP/NCCP. Because the project is exempt as a regulated development project under the ECCCHCP/NCCP, conformance with the adopted plan is not required, conflicts with the Plan are not anticipated, and fees would not be assessed. However, the project has been designed or conditioned through mitigation specified in this IS/MND to avoid possible inadvertent take of special-status species, which would be consistent with the general goals of the ECCCHCP/NCCP. Based on the above, a ***less-than-significant*** impact would occur.

[10] East Contra Costa County Habitat Conservation Plan Association. *Final East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan*. October 10, 2007.

5. CULTURAL RESOURCES.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	□	□	X	□
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	□	X	□	□
c.	Disturb any human remains, including those interred outside of dedicated cemeteries.	□	X	□	□

a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?..... Less-Than-Significant-Impact

Discussion (a.)

An Archaeological Survey Report was conducted for the project site by Alta Archaeological Consulting (Alta), which included a Cultural Resources Survey conducted on July 16, 2020.[11] As part of the Archaeology Survey Report, Alta requested a records search at the Northwest Information Center (NWIC). The NWIC search found that previous studies have not been conducted for the project site, but seven previous cultural resource studies were conducted within 0.25-mile of the project site. Four cultural resources were found during the previous studies; one of the cultural resources (P-07-000105/CA-CCO-222H) is considered to be a mixed-component site with elements of both the precontact era and historic era, while three of the cultural resources are considered to be of the historic era.

The three historic and one mixed-component sites identified are located approximately 500 feet northeast of the project area, above Mt. Diablo Creek. The mixed-component site, identified as P-07-000105/CA-CCO-222H, consists of a very large habitation site composed of midden, burials, hearths, and a complex of artifacts that indicate habitation to approximately 2,800 Before Present (B.P.). The site is also considered significant due to its association with Joel Clayton and George Keller, who settled on the land circa 1910 and had the house and barn constructed on the land. However, due to the distance between the project site and the identified sites, substantial adverse impacts to the historic resources identified in the previous cultural studies are not anticipated.

The existing single-family home located on the project site was built circa 1950.[12] The existing on-site barn was built in the early 1920s. The barn was built by Will Frank (1884-1969), with the help of some of his eight brothers, on the Frank family farm of almost 20

[11] Alta Archaeological Consulting. *Archaeological Survey Report: Clayton Community Church Project, Clayton, Contra Costa County, California*. December 12, 2020.

[12] Personal communication between Janet Easton and Nick Pappani, Vice President, Raney Planning and Management, Inc. December 17, 2020.

acres at the time. The original barn on the property was built in the 1850's, and was in poor condition by 1920, when Will Frank needed a larger, better constructed barn.[13]

The Frank family ranch is discussed on page 26 of the Clayton Heritage Preservation 1994 Task Force Report (Task Force Report).[14] The City of Clayton relies on this report, prepared by the Heritage Preservation Task Force and accepted by the City Council, to determine whether structures are considered historically significant. The Task Force, which was comprised of Historical Society members and former representatives of Clayton City Council and Planning Commission, had a stated mission to "identify the remaining things of historical importance to Clayton, to prioritize them, and to develop plans to preserve those that can be preserved." As such, the Task Force Report generally supplements and, in some cases, provides more detailed guidance on historical resources than what the General Plan may provide alone.

The Task Force Report refers to a collection of historic houses on Pine Hollow Court, which does not include the on-site 1950s-era residence. The Task Force Report also refers to "structures" on Pine Hollow Court, but does not give any description of which structures are being referred to. The Task Force Report is broken into various sections, one of which is entitled, "Privately Owned Historic Buildings," where, according to the Table of Contents, "Will Frank Family Houses" is listed. This suggests the focus of the Task Force Report is on the homes associated with the Will Frank Family ranch, not the "structures" that are generally referenced on page 26 of the Report. In addition, the current barn is a replacement of the original 19th century barn on the Frank family property. Accordingly, the current barn is not considered historically significant.

Therefore, the project would have a ***less-than-significant*** impact with respect to causing a substantial adverse change in the significance of a historical resource.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? ..... Less-Than-Significant With Mitigation Incorporated

c. Would the project disturb any human remains, including those interred outside of formal cemeteries? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (b., c.)

On July 16, 2020, Alta conducted a field survey of the entire project site. Ground surface visibility was varied, with some areas providing good visibility (around 80 percent) in areas that had been subject to a recent fire and vegetation clearing, while other areas less so, with visibility around 25 percent due to heavy grass cover. The project site was surveyed using intensive pedestrian survey coverage with transects at approximately 10-meter intervals. A total of eight shovel and boot scrapes were used to scrape the ground surface to expose

[13] Personal communication between Janet Easton and Nick Pappani, Vice President, Raney Planning and Management, Inc. December 17, 2020.

[14] City of Clayton. *Clayton Heritage Preservation Task Force Report* [pg. 26]. September 1994.

mineral soils; the top five to 10 centimeters of project site soils were determined to be composed of some organics and highly compacted clayey loam. The downslope portion of the project site was not subject to survey because development is not proposed in the eastern slope area. Overall, the field survey did not detect archaeological resources, nor human remains.

According to the Archaeological Survey Report, most Pleistocene-age landforms have little potential for harboring buried archaeological resources as they developed prior to human migration into North America. However, Pleistocene surfaces buried below younger Holocene deposits do have a potential for containing archaeological deposits. The project site is located within pre-Pleistocene deposits and is underlain by alluvial terrace deposits and Perkins loam. As such, the project site would be considered to have a very low probability to contain buried archaeological deposits.

As part of the Archaeological Survey Report, Alta contacted the Native American Heritage Commission (NAHC) to request a review of the Sacred Lands File (SLF). The response letter provided by the NAHC indicated that the search of the SLF had a positive result, indicating the possible presence of tribal cultural resources on the project site.

The entire project area has undergone previous disturbance as a result of the grading for orchard farming that has occurred off and on for over a century on the parcel. Further, the upper terrace location, above Mitchell Creek, and the presence of P-07-000105/CA-CCO-222H northeast at the confluence of Mitchell Creek and Mt. Diablo Creek, suggests that the focus of precontact settlement was at that location and not the project parcel.

Despite the negative findings for precontact archaeological resources, the positive SLF result, the proximity to Mitchell Creek, and the presence of archaeological sites upstream and east of the project area increases the probability of encountering additional evidence of precontact occupation along this riverine corridor. Therefore, the proposed project could have a ***potentially significant*** impact to archaeological resources.

Mitigation Measure(s)

The following mitigation measure would reduce the potential impact from the proposed project to a *less-than-significant* level.

Mitigation Measure 9. *Prior to the issuance of a grading permit, the grading plan shall include a requirement (via notation) indicating that if cultural resources or human remains are encountered during site grading or other site work, all such work shall be halted immediately within 100 feet of the area of discovery and the contractor shall immediately notify the City of the discovery. In such case, the City, at the expense of the project applicant, shall retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit to the City for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the vicinity of the discovery, as identified by the*

qualified archaeologist, shall not be allowed until the preceding steps have been taken. Please see also mitigation measures 18 through 21.

6. ENERGY

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	□	□	X	□
b.	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	□	□	X	□

a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?.....Less-Than-Significant Impact

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency? .....Less-Than-Significant Impact

Discussion (a. and b.)

The main forms of available energy supply are electricity, natural gas, and oil. A description of the 2022 California Green Building Standards Code and the Building Energy Efficiency Standards, with which the proposed project would be required to comply, as well as discussions regarding the proposed project's potential effects related to energy demand during construction and operations are provided below.

California Green Building Standards Code

The 2022 California Green Building Standards Code, otherwise known as the CALGreen Code (CCR Title 24, Part 11), is a portion of the CBSC, which became effective with the rest of the CBSC on January 1, 2023.[15] The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices. The CALGreen standards regulate the method of use, properties, performance, types of materials used in construction, alteration, repair, improvement, and rehabilitation of a structure or improvement to property. The provisions of the code apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout California. Requirements of the CALGreen Code include, but are not limited to, the following measures:

- Compliance with relevant regulations related to future installation of electric vehicle (EV) charging infrastructure in residential and non-residential structures;

[15] California Building Standards Commission. *2022 California Green Building Standards Code.* 2023.

- Indoor water use consumption is reduced through the establishment of maximum fixture water use rates;
- Outdoor landscaping must comply with the California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), or a local ordinance, whichever is more stringent, to reduce outdoor water use;
- Diversion of 65 percent of construction and demolition waste from landfills;
- Incentives for installation of electric heat pumps, which use less energy than traditional heating, ventilation, and air conditioning (HVAC) systems and water heaters;
- Required solar photovoltaic (PV) systems and battery storage standards for certain buildings; and
- Mandatory use of low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring, and particle board.

Building Energy Efficiency Standards

The 2022 Building Energy Efficiency Standards is a portion of the CBSC, which expands upon energy-efficiency measures from the 2019 Building Energy Efficiency Standards, and went into effect starting January 1, 2023. The 2022 standards provide for additional efficiency improvements beyond the 2019 standards. The proposed project would be subject to all relevant provisions of the most recent update of the CBSC, including the Building Energy Efficiency Standards. Adherence to the most recent CALGreen Code and Building Energy Efficiency Standards would ensure that the proposed structures would consume energy efficiently.

Construction Energy Use

Construction of the proposed project would involve on-site energy demand and consumption related to use of oil in the form of gasoline and diesel fuel for construction worker vehicle trips, hauling and materials delivery truck trips, and operation of off-road construction equipment. In addition, diesel-fueled portable generators may be necessary to provide additional electricity demands for temporary on-site lighting, welding, and for supplying energy to areas of the site where energy supply cannot be met via a hookup to the existing electricity grid. Even during the most intense period of construction, due to the different types of construction activities (e.g., site preparation, grading, building construction), only portions of the project site would be disturbed at a time, with operation of construction equipment occurring at different locations on the project site, rather than a single location. Project construction would not involve the use of natural gas appliances or equipment.

All construction equipment and operation thereof would be regulated by the CARB's In-Use Off-Road Diesel Vehicle Regulation. The In-Use Off-Road Diesel Vehicle Regulation is intended to reduce emissions from in-use, off-road, heavy-duty diesel vehicles in California by imposing limits on idling, requiring all vehicles to be reported to CARB, restricting the addition of older vehicles into fleets, and requiring fleets to reduce emissions by retiring, replacing, or repowering older engines, or installing exhaust retrofits. In addition, as a means of reducing emissions, construction vehicles are required to become cleaner through the use of renewable energy resources. The In-Use Off-Road Diesel Vehicle Regulation would therefore help to improve fuel efficiency for equipment used in

construction of the proposed project. Technological innovations and more stringent standards are being researched, such as multi-function equipment, hybrid equipment, or other design changes, which could help to further reduce demand on oil and limit emissions associated with construction.

Based on the above, the temporary increase in energy use occurring during construction of the proposed project would not result in a significant increase in peak or base demands or require additional capacity from local or regional energy supplies. In addition, construction activities would be required to comply with all applicable regulations related to energy conservation and fuel efficiency, which would help to reduce the temporary increase in demand.

Operational Energy Use

Following implementation of the proposed project, PG&E would provide electricity to the project site. The project applicant has indicated that the proposed project will not use natural gas. Energy use associated with operation of the proposed project would be typical of residential uses, requiring electricity for interior and exterior building lighting, air conditioning (HVAC), electronic equipment, machinery, refrigeration, appliances, security systems, and more. Maintenance activities during operations, such as landscape maintenance, would involve the use of electric or gas-powered equipment. In addition to on-site energy use, the proposed project would result in transportation energy use associated with vehicle trips generated by the proposed project.

The proposed residential project would be subject to all relevant provisions of the most recent update of the CBSC, including the Building Energy Efficiency Standards. Adherence to the most recent CALGreen Code and the Building Energy Efficiency Standards would ensure that the proposed structures would consume energy efficiently through the incorporation of such features as efficient water heating systems, high performance attics and walls, and high efficacy lighting. Required compliance with the CBSC would ensure that the building energy use associated with the proposed project would not be wasteful, inefficient, or unnecessary. In addition, electricity supplied to the project site by PG&E would comply with the State's Renewable Portfolio Standard (RPS), which requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 and to 60 percent by 2030. Thus, a portion of the energy consumed during operation of the proposed project would originate from renewable sources.

The CARB prepared the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan),[16] which builds upon previous efforts to reduce GHG emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. Appendix D of the 2022 Scoping Plan provides suggestions for prioritizing various types of mitigation, such as on-site GHG-reducing design features and mitigation measures. Appendix D includes the methods to reduce vehicle miles traveled (VMT), support building decarbonization, and provide access to shared mobility services or transit, as well as EV charging. Appendix D provides further suggestions for prioritizing other mitigation

[16] California Air Resources Board. *2022 Scoping Plan for Achieving Carbon Neutrality.* November 16, 2022.

types, including non-local off-site mitigation, and voluntary offsets issued by a recognized and reputable voluntary carbon registry. The requirements of the CBSC CALGreen Code and the 2022 Building Energy Efficiency Standards described above, with which the proposed project must comply, would be consistent with the intention of the 2022 Scoping Plan and the recommended actions included in Appendix D of the 2022 Scoping Plan.

With regard to transportation energy use, the proposed project would comply with all applicable regulations associated with vehicle efficiency and fuel economy. In addition, as discussed in Section 17, Transportation, of this IS/MND, the project area is currently provided transit service by the Central Contra Costa Transit Authority. Pedestrians and bicyclists could access the closest transit stops on Clayton Road through a continuous path of sidewalks and crosswalks from the project site. Transit service would provide access to public facilities in the City of Clayton from the project site. Furthermore, as the proposed project is only intended to serve the Clayton community, VMT would not be increased due to vehicle trips from larger areas. The site's access to public transit and proximity to surrounding residences would reduce VMT and, consequently, fuel consumption associated with the proposed project. Therefore, by providing for pedestrian connectivity with the surrounding area, the proposed project would result in reduced vehicle use and reduced emissions generation.

Conclusion

Based on the above, construction and operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources or conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Thus, a ***less-than-significant*** impact would occur.

7. GEOLOGY AND SOILS.

Issues			Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:						
a.	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					
	i.	Rupture of a known earthquake fault, as delineated on the most recent Alquist - Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	□	□	X	□
	ii.	Strong seismic ground shaking?	□	□	X	□
	iii.	Seismic-related ground failure, including liquefaction?	□	□	X	□
	iv.	Landslides?	□	X	□	□
b.	Result in substantial soil erosion or the loss of topsoil?		□	X	□	□
c.	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		□	X	□	□
d.	Be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial risks to life or property?		□	X	□	□
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?		□	□	□	X
f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	□	

a-i. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of a known fault? .....Less-Than-Significant Impact

a-ii. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?.....Less-Than-Significant Impact

a-iii. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction? .....Less-Than-Significant Impact

Discussion (a-i., a-ii, aiii.)

A Geotechnical Investigation was prepared for the proposed project by Cornerstone Earth Group (see Appendix D).[17] The Geotechnical Investigation includes a recent field exploration conducted on the project site in 2025, which consisted of four borings drilled with track-mounted, hollow-stem auger equipment on the southern portion of the project site and along the top of the eastern facing slope. The Geotechnical Investigation also incorporates the findings of the previous field exploration conducted by Cornerstone Earth Group in 2017 and the previous feasibility study prepared in 2013. According to the Geotechnical Investigation, the proposed project site is not located within an Alquist-Priolo Fault Zone; however, large earthquakes have historically occurred in the San Francisco Bay Area. The nearest active fault is the Greenville Fault, located 1.1 miles from the site. Other active faults in the region include the Concord-Green Valley, North Calaveras, Hayward, West Napa, and Rodgers Creek faults. Given that the faults do not cross the project site, the potential for ground rupture is low.

Although the project site is not located in the near vicinity of any active or potentially active faults, an earthquake of moderate to high magnitude could cause considerable ground shaking at the project site. However, the City's Municipal Code Chapter 15.02 requires all new buildings to be properly engineered in accordance with the CBSC, which includes engineering standards appropriate for the seismic area in which the project site is located. Projects designed in accordance with the CBSC should be able to: 1) resist minor earthquakes without damage; 2) resist moderate earthquakes without structural damage, but with some non-structural damage; and 3) resist major earthquakes without collapse, but with some structural, as well as non-structural damage. In addition, the proposed project would require heavy construction, and individual components used in the construction of the project would be constructed to industry-standard design specifications and requirements, including American Society for Testing and Materials (ASTM) standards. Therefore, as the proposed project would comply with all applicable CBSC recommendations and industry-standard design specifications and requirements, the project would not be anticipated to be substantially affected by ground shaking.

During strong seismic shaking, cyclically induced stresses can cause increased pore pressures within the soil matrix that can result in liquefaction triggering soil softening due to shear stress loss, potentially significant ground deformation due to settlement within sandy liquefiable layers as pore pressures dissipate, and/or flow failures in sloping ground or where open faces are present (i.e., lateral spreading). Limited field and laboratory data are available regarding ground deformation due to settlement; however, in clean sand layers, settlement on the order of two to three percent of the liquefied layer thickness can occur. Soils most susceptible to liquefaction are loose, non-cohesive soils that are saturated and are bedded with poor drainage, such as sand and silt layers bedded with a cohesive cap.

[17] Cornerstone Earth Group. *Geotechnical Investigation: Pine Hollow Residential Development, 1027 Pine Hollow Court, Clayton, California.* June 3, 2025.

According to the Geotechnical Investigation, the site development area is not located within a State-designated liquefaction hazard zone. While the eastern edge of the project site is located within a liquefaction hazard zone for areas immediately adjacent to Mitchell Creek, development is not proposed for that portion of the site. The field exploration conducted for the project site primarily encountered medium stiff to stiff cohesive soils underlain by Pleistocene-aged alluvial soils. While a localized layer of loose clayey sand was encountered in Boring EB-1 in the 2025 field exploration, located in the western portion of the project site, this layer appears to be localized and relatively shallow. Based on the above, Cornerstone Earth Group concluded that the potential for liquefaction to occur at the project site would be low.

Based on the above the proposed project would not expose people or structures to substantial adverse effects including the risk of loss, injury, or death involving the rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zone Map, strong seismic ground shaking, and seismically-induced liquefaction, resulting in a ***less-than-significant*** impact.

a-iv. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related landslides? ..... Less-Than-Significant Impact With Mitigation Incorporated

c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? ..... Less-Than-Significant Impact With Mitigation Incorporated

Discussion (a-iv., and c.)

The Geotechnical Investigation included a recent field exploration conducted on the project site in 2025 and incorporates the findings of the previous field exploration conducted by Cornerstone Earth Group in 2017 and the previous feasibility study prepared in 2013. The previous feasibility study conducted in 2013 included the excavation of six test pits on the east-facing slope and encountered a layer of clayey topsoil that was soft to medium stiff, with stiff to very hard sandy lean clay below. The field exploration conducted in 2017 included four drilled borings on the western portion of the project site and encountered soft to very stiff, moist to wet lean clay and sandy lean clay, underlain by loose to medium dense clayey sand. The recent field exploration conducted in 2025 included four borings drilled to depths ranging from 15 to 20 feet on the southern portion of the project site and along the top of the eastern facing slope, and encountered stiff, moist sandy lean clay, underlain by dense clayey sand and very stiff to hard lean clay. The proposed project's potential effects related to liquefaction, subsidence/settlement, landslides, and lateral spreading are discussed in detail below.

Subsidence/Settlement

Subsidence is the settlement of soils of very low density generally from either oxidation of organic material, or desiccation and shrinkage, or both, following drainage. Subsidence takes place gradually, usually over a period of several years.

According to the Geotechnical Investigation, as the soils encountered at the project site were predominantly medium stiff to very stiff clays overlying medium dense sands and older alluvial soils, the potential for significant differential settlement affecting the proposed project is low. However, some of the surficial clayey soils encountered during the field exploration were soft to medium stiff, and may be moderately compressible and may not provide uniform support for the proposed residential structures. Therefore, the Geotechnical Investigation concluded that the proposed project would require shallow surficial soils to be over-excavated and re-compacted prior to placing new fill in building pad areas in order to reduce the potential for differential settlement.

Landslides

Seismically-induced landslides are triggered by earthquake ground shaking. The risk of landslide hazard is greatest in areas with steep, unstable slopes. The field exploration conducted for the proposed project did not reveal any recent indications of slope movement or landslides on the east-facing slope located on the project site. In addition, Cornerstone Earth Group reviewed historic aerial photographs of the project site and determined that past slope movement was not indicated. However, the Geotechnical Investigation reported that experience with similar sites in the project area indicates that natural or cut slopes steeper than 3:1 may be susceptible to shallow sloughing or minor debris flow movement within the upper clay soils mantling the hillside. Thus, because the existing slope within the eastern portion of the project site is inclined at about 3:1, the potential for impacts related to landslide to occur is considered low to moderate. Therefore, the Geotechnical Investigation recommends that new grading or improvements constructed near the top of the existing slope be adequately keyed, benched, and drained in order to reduce the potential for landslide.

Lateral Spreading

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face, such as an excavation, channel, or open body of water; typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of an exposed slope. The project site is located approximately 200 feet to the west of Mitchell Creek. The toe of the existing 3:1 slope in the eastern portion of the project site is approximately 40 to 80 feet from the top of the creek bank, which is approximately five to eight feet deep. Although the stream is likely underlain by Holocene-aged alluvial soils, the Geotechnical Investigation determined that the potential for liquefaction at the site appears to be low. In addition, residential development is not proposed on the eastern slope nor near Mitchell Creek. Therefore, the potential for lateral spreading to impact the proposed project would be low.

Conclusion

From a geotechnical standpoint, provided that the recommendations included in the project-specific Geotechnical Investigation are implemented into project design, the geological and soil conditions on the site would be adequate to support development of the proposed project. However, because conformance with such recommendations cannot be ensured, a ***potentially significant*** impact could occur related to settlement and landslide.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

Mitigation Measure 10. *Prior to approval of the improvement plans for the project, all recommendations from the Geotechnical Investigations prepared by Cornerstone Earth Group shall be incorporated into the improvement plans to the satisfaction of the City Engineer.*

In addition, the applicant shall retain a California Registered Geotechnical Engineer to review the geotechnical aspects of the project's structural, civil, and landscape plans and specifications, allowing sufficient time to provide the design team with any comments prior to issuing plans for construction. The Geotechnical Engineer shall perform field observations during earthwork and foundation construction to confirm project compliance with project plans, project specifications, and the recommendations provided in Cornerstone Earth Group's Geotechnical Investigation. The on-site Geotechnical Engineer shall have the authority to provide supplemental recommendations as necessary based on site conditions. Compliance with the recommendations of the Geotechnical Engineer shall be provided to the City Engineer.

b. Would the project result in substantial soil erosion or the loss of topsoil? .... Less-Than-Significant Impact with Mitigation Incorporated

Discussion (b.)
Construction of the proposed project would involve grading of the development footprint to accommodate the proposed site improvements. Minimal ground disturbance would occur on the eastern slope due to installation of the proposed sewer pipe and stormwater pipe and associated rock riprap area. After grading, but prior to the overlaying of the ground surface with structures, topsoil of the disturbed portions of the site would be exposed, and the earth surfaces would be susceptible to erosion from wind and water. During the grading and excavation phases of construction, appropriate measures consistent with the Clayton Stormwater Management Ordinance and other applicable regulations (e.g., State Regional Water Quality Control Board National Pollutant Discharge Elimination System [NPDES] regulations) would be required to be implemented in order to control erosion on the site and minimize the impacts related to loss of topsoil. See Section 10, Hydrology and Water

Quality, of this IS/MND for further discussion regarding the relationship of erosion to water quality. Because the proposed project could result in soil erosion or the loss of topsoil associated with grading and excavation of the project site during construction, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

Mitigation Measure 11. *Prior to the issuance of a grading permit, the project applicant shall prepare to the satisfaction of the City Engineer, an erosion control plan that utilizes standard construction practices to limit the erosion effects during construction of the proposed project. Actions should include, but are not limited to:*

- *Hydro-seeding;*
- *Placement of erosion control measures within drainage ways and ahead of drop inlets;*
- *The temporary lining (during construction activities) of drop inlets with "filter fabric";*
- *The placement of straw wattles along slope contours;*
- *Use of a designated equipment and vehicle "wash-out" location;*
- *Use of siltation fences;*
- *Use of on-site rock/gravel road at construction access points; and*
- *Use of sediment basins and dust palliatives.*

d. Would the project be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial risks to life or property? .... Less-Than-Significant Impact with Mitigation Incorporated

Discussion (d.)

Expansive soils can undergo significant volume change with changes in moisture content. Specifically, such soils shrink and harden when dried and expand and soften when wetted. Expansive soils can shrink or swell and cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundation. Building damage due to volume changes associated with expansive soil can be reduced by a variety of solutions. If structures are underlain by expansive soils, foundation systems must be capable of tolerating or resisting any potentially damaging soil movements, and building foundation areas must be properly drained. Exposed soils must be kept moist prior to placement of concrete for foundation construction. Shrink/swell potential is measured by a soil's linear extensibility, with a low potential rating less than three percent, moderate between three percent and six percent, high between six percent and nine percent, and very high potential above nine percent.

As a part of the Geotechnical Investigation, Cornerstone Earth Group performed Plasticity Index (PI) tests on samples representative of the entire project site taken during the recent and previous field explorations, the results of which indicate low to moderate expansion potential to wetting and drying cycles. Thus, the proposed project has the potential to create substantial direct or indirect risks to life or property related to being located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994). Therefore, without implementation of the mitigation recommended by the Geotechnical Investigation, the proposed project could create substantial direct or indirect risks to life or property, and a ***potentially significant*** impact could occur.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

Mitigation Measure 12. *Implement Mitigation Measure 10.*

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? ..... No Impact

Discussion (e.)
The proposed project would be connected to the City of Clayton's sewer system through a connection to an existing eight-inch sanitary sewer line in High Street on the project site's eastern frontage and would not require the installation or use of septic tanks. Therefore, the proposed project would have ***no impact*** regarding having soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems.

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? .... Less-Than-Significant Impact with Mitigation Incorporated

Discussion (f.)
Unique geologic features within the City of Clayton are not noted within the City's General Plan. Consequently, implementation of the proposed project would not be anticipated to have the potential to result in direct or indirect destruction of unique geologic features. The City's General Plan does not indicate the presence of any paleontological resources within the City Planning Area.

The majority of the surrounding area is developed and paleontological resources are not known to have been encountered in the vicinity. Although existing paleontological resources are not expected to occur on-site, the potential exists for previously unknown paleontological resources to exist within the project site. Therefore, ground-disturbing activity associated with the development of the proposed project, such as grading, trenching, or excavating, could disturb or destroy such resources.

Based on the above, the proposed project could result in the direct or indirect destruction

of a unique paleontological resource, and a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

Mitigation Measure 13. *In the event that a paleontological resource is inadvertently discovered during project-related work, regardless of the depth of excavation or location, work shall be halted within 50 feet (15 meters) of the find and a qualified paleontologist (Society of Vertebrate Paleontology [SVP] 2010) and the City shall be notified. The resources shall be examined by the qualified paleontologist at the developer's expense, for the purpose of recording, protecting, or curating the discovery as appropriate. Construction activities could continue in other areas.*

If the find is determined to be significant under SVP criteria, the find shall be left in place without further disturbance, or if avoidance is not feasible, then additional work, such as fossil recovery excavation (salvage) and curation at a certified repository, such as the University of California Museum of Paleontology (UCMP), may be warranted and would be discussed in consultation with the City, and any other relevant regulatory agency, as appropriate. The qualified paleontologist shall submit to the City for review and approval a report of the findings and method of curation or protection of the resource(s).

8. GREENHOUSE GAS EMISSIONS

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
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	□

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?.....Less-Than-Significant Impact

b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? .....Less-Than-Significant Impact

Discussion (a. and b.)

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. An individual project's GHG emissions are at a micro-scale level relative to global emissions and effects to global climate change; however, an individual project could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

Implementation of the proposed project would contribute to increases of GHG emissions. Estimated GHG emissions attributable to project development would be primarily associated with increases of carbon dioxide (CO_2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O) associated with area sources, mobile sources or vehicles, utilities (electricity and natural gas), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the project would be mobile source emissions. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e$/yr).

The proposed project is located within the jurisdictional boundaries of BAAD. The most recent BAAD Air Quality Guidelines were released in April 2023.[18] The updated GHG thresholds address more recent climate change legislation, including Senate Bill (SB) 32 and provide qualitative thresholds related to Buildings and Transportation.

[18] Bay Area Air Quality Management District. *2022 California Environmental Quality Act Guidelines*. April 2023.

Construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change. Neither the City nor BAAD has an adopted threshold of significance for construction-related GHG emissions and does not require quantification. Nonetheless, the proposed project's construction GHG emissions, as well as operational emissions, have been estimated using CalEEMod under the same assumptions discussed in Section 3, Air Quality, of this IS/MND (see Appendix A). The emissions estimates prepared for the proposed project determined that unmitigated construction of the project would result in total GHG emissions of 420 $MTCO_2e$ over the entire construction period.

Potential impacts related to operational GHG emissions resulting from implementation of the proposed project are considered in comparison with BAAD's adopted thresholds of significance below.

BAAD Thresholds of Significance

The BAAD's adopted thresholds of significance for GHG emissions are qualitative, and address recent climate change legislation, including SB 32. According to the thresholds of significance, a project must either include specific project design elements (e.g., exclude use of natural gas, achieve a specific reduction in project-generated VMT below the regional average) or be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).[19]

The City of Clayton has not adopted a Climate Action Plan (CAP). Thus, the City of Clayton has not adopted a local GHG reduction strategy under CEQA Guidelines Section 15183.5(b). Therefore, the following analysis focuses on the new BAAD GHG thresholds related to specific project design elements.

According to the BAAD's thresholds of significance, in order to find a less than significant GHG impact, projects must include, at a minimum, the following project design elements:

1. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development);
2. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines;
3. The project will achieve a reduction in project-generated VMT below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted SB 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA; and
4. The project will achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

In order to be consistent with the first criterion, the proposed project would be required to include all electric appliances and plumbing. As discussed above in the project description,

[19] Bay Area Air Quality Management District. *2022 California Environmental Quality Act Guidelines*. April 2023.

the project applicant has indicated that the proposed project would not use natural gas during operations. Thus, the proposed project would be consistent with the first criterion.

Regarding the second criterion, as discussed in Section 6, Energy, of this IS/MND, the proposed project would comply with all applicable federal, State, and local regulations regarding energy use during both project construction and project operations. Therefore, as discussed therein, the proposed project would not result in any wasteful, inefficient, or unnecessary energy usage. Thus, the proposed project would be consistent with the second criterion.

With respect to the third criterion, as discussed in Section 17, Transportation, of this IS/MND, the City of Clayton average home-based VMT per capita was calculated to be 28.04. Therefore, the impact threshold of 15 percent below the Citywide average home-based VMT per capita equates to 23.83. The project is projected to generate a VMT per capita of 20.40, which is below the aforementioned impact threshold. Thus, the proposed project would be consistent with the third criterion.

With respect to the fourth criterion, the proposed project would be subject to the single-family residential standards set forth in the CALGreen Code. Pursuant to the 2022 CALGreen Code, single-family residential projects are required to install a listed raceway to accommodate a dedicated 208/240-volt branch circuit for each unit, which would be suitable for EV charging. Compliance with the aforementioned CalGreen Code requirement would be sufficient to comply with the Tier 2 CALGreen standards, as required by BAAD. Additionally, the project applicant has confirmed that each single-family residence would install a listed raceway to accommodate EV charging. Thus, the proposed project would be consistent with the fourth criterion.

As previously noted, the CARB prepared the 2022 Scoping Plan, which builds upon previous efforts to reduce GHG emissions and is designed to continue to shift the California economy away from dependence on fossil fuels. Appendix D of the 2022 Scoping Plan provides suggestions for prioritizing various types of mitigation, such as on-site GHG-reducing design features and mitigation measures. Similar to the 2022 Scoping Plan, BAAD identified the necessary design elements required of new land use projects and plans being built today in order to achieve California's long-term climate goal of carbon neutrality by 2045. If these design elements are incorporated into the design and construction of a project, then the project would contribute its portion of what is necessary to achieve California's long-term climate goals - its "fair share" - and a lead agency reviewing the project under CEQA can conclude that the project would not make a cumulatively considerable contribution to global climate change.

Based on the above, BAAD's thresholds of significance are consistent with the 2022 Scoping Plan. Therefore, if a development project is consistent with BAAD's thresholds of significance, it can be assumed that the project would also be consistent with the 2022 Scoping Plan. As such, because the proposed project would be consistent with BAAD's required thresholds of significance, the proposed project would also be consistent with the 2022 Scoping Plan.

Conclusion

Based on the above, the proposed project would not be considered to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and a ***less-than-significant*** impact would occur.

9. HAZARDS AND HAZARDOUS MATERIALS.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	□	□	X	□
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	□	X		□
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	□	□	X	□
d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	□	□	□	X
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	□	□	□	X
f.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	□	□	X	□
g.	Expose people or structures, either directly or indirectly, to the risk of loss, injury or death involving wildland fires?	□	□	X	□

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?.....Less-Than-Significant Impact

Discussion (a.)

Residential developments are not typically associated with the routine transport, use, disposal, or generation of substantial amounts of hazardous materials. Future operations of the proposed residences on the project site could involve the use of common household cleaning products, fertilizers, and herbicides, any of which could contain potentially hazardous chemicals; however, such products would be expected to be used in accordance with label instructions. Due to the regulations governing use of such products and the amount that could reasonably be used on the site, routine use of such products during project operation would not represent a substantial risk to public health or the environment.

Construction activities associated with the proposed project would involve the use of heavy equipment, which would contain fuels and oils, and various other products such as concrete, paints, and adhesives. Small quantities of potentially toxic substances (e.g., petroleum and other chemicals used to operate and maintain construction equipment)

would be used at the project site and transported to and from the site during construction. However, the project contractor would be required to comply with all California Health and Safety Codes regulating the handling, storage, and transportation of hazardous and toxic materials.

Based on the above, the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and a ***less-than-significant*** impact would occur.

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment? ..... Less-Than-Significant Impact With Mitigation Incorporated

Discussion (b.)

The following discussion provides an analysis of potential hazards and hazardous materials associated with upset or accident conditions related to the proposed construction activities and existing on-site conditions.

Construction

Construction activities would involve the use of heavy equipment, which would contain fuels, oils, and hydraulic fluid. In addition, various other products such as concrete, paints, and adhesives would likely be used on-site. However, the project contractor would be required to comply with all California Health and Safety Codes and local ordinances regulating the temporary handling, storage, and transportation of hazardous and toxic materials, as overseen by the California Environmental Protection Agency (EPA) and Department of Toxic Substances Control (DTSC). Should an accidental release of hazardous materials occur during construction, the City (or City crews) and/or contractor is required to notify the Contra Costa Fire Protection District (CCCFPD), who would then monitor the conditions and recommend appropriate remediation measures.

Existing On-Site Hazardous Conditions

A Phase I Environmental Site Assessment (ESA) was prepared by Geocon Consultants, Inc. for the purpose of identifying potential recognized environmental conditions (RECs) associated with the project site (see Appendix E).[20] The Phase I ESA included a survey of the site and a review of historical documentation, aerial photography, regulatory agency files, and environmental sites radius reports. According to the Phase I ESA, an orchard was cultivated at the site starting in at least 1939. While a portion of the orchard trees remain on-site, the site is no longer used for agricultural purposes. The Phase I ESA did not identify any evidence of stained soil or pavement, stressed vegetation, or evidence of hazardous substances or petroleum products. In addition, evidence of underground storage tanks

[20] Geocon Consultants, Inc. *Phase I Environmental Site Assessment Report, Clayton Community Church, 1027 Pine Hollow Court, Clayton, California.* October 8, 2020.

(USTs) or aboveground storage tanks (ASTs) was not observed at the site. The site is not located within the vicinity of any properties that would pose an environmental hazard to the project site. The project site is included on the HAZNET and Hazardous Waste Tracking System (HWTS) databases for the generating, proper storing, and offsite disposal of 50 gallons of waste oil and 300 pounds of organic solids in 2013. Violations were not reported, and the listing does not present a current hazard at the site.

Potential hazards and hazardous materials identified on the project site as part of the Phase I ESA are described in the following sections.

Contaminated Soils
Because of the previous orchard operations at the project site, the potential exists that residual pesticides or heavy metals associated with prior herbicide application could be present within the shallow on-site soils. Furthermore, early 20th century aerial photographs depict agricultural activities taking place within properties surrounding the project site up until 1979; nearby agricultural fields were not completely replaced by residential housing until at least 1993.

It is important to recognize that, in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (*CBIA*), the California Supreme Court held that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the project's impact on the environment—and not the environment's impact on the project—that compels an evaluation of how future residents or users could be affected by exacerbated conditions." (*Id.* at pp. 377-378.) As a result, the existence of contaminated soil or groundwater within the vicinity of a proposed project, "without any accompanying disturbance or other physical change" to the contamination, is not considered "a significant impact requiring CEQA review and mitigation." (*Parker Shattuck Neighbors v. Berkeley City Council* [2013] 222 Cal.App.4th 768, 781 [holding development of a project on a site identified on the Cortese list and that included contaminated soil would only constitute a significant impact for the purposes of CEQA if the proposed project disturbed the contaminated soil].) For example, in *East Sacramento Partnerships for a Livable City v. City of Sacramento* (2016) 5 Cal.App.5th 281, the petitioner argued that the EIR failed to analyze health risks associated with "potential for off-site subsurface gas (methane) migration" from an adjacent former landfill site. (*Id*. at pp. 295-297.) Citing the *CBIA* decision, the Third District Court of Appeal rejected petitioner's argument because concerns that a project would be "an unhealthy place to live" exceeds CEQA's scope. (*Id*. at p. 296.) In reaching its holding, the court stated "nowhere in the [CEQA] statute is there any provision … plainly delegating power for the agency to determine whether a project must be screened on the basis of how the environment affects its residents or users." (*Ibid*., quoting *CBIA*, *supra*, 62 Cal.4th at p. 387.)

In light of the California Supreme Court's decision and related appellate decisions discussed above, the potential presence of residual pesticides or heavy metals would only be considered to result in a significant CEQA impact if the proposed project would exacerbate an existing condition. While soil sampling for residual pesticides has not been performed, the proposed project would not involve substantial excavation, and all exposed

surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day during construction, pursuant to BAAD rules, thus ensuring that fugitive dust does not become airborne. As a result, construction and operation of the proposed project would not exacerbate existing conditions beneath the project site with respect to mobilizing residual soil contaminants should they be present.

Water Well

A water well-house is located within the southeastern corner of the project site. It is unknown when the well was last used, although the property owner has stated that the well has not been used since the Clayton Community Church owned the property. Prior to development of the proposed project, the existing water well would need to be properly abandoned in accordance with regulatory permitting requirements if not planned for use during site grading operations and subsequent redevelopment. Improper abandonment of a water well could result in groundwater quality issues if surface water runoff, containing urban or other pollutants, enters the well. In addition, any undocumented subsurface structures encountered during site clearing/grading operations (i.e., USTs, septic systems, water wells, etc.) would similarly need to be properly removed or abandoned in place in accordance with applicable Contra Costa County permit requirements.

Asbestos-Containing Materials and Lead-Based Paint

Existing on-site structures include a single-family residence within the southern portion of the project site, a barn structure along the western project boundary, and an additional storage structure along the northern project boundary. The structures were built prior to 1970, and it is reasonable to assume that the structures were also painted prior to 1970. Therefore, the potential exists for asbestos-containing materials (ACM) and lead-based paint (LBP) to be present in building materials. Because the proposed project would include demolition of the two existing barn/storage structures, the potential exists for construction workers to be exposed to ACM and LBP.

Conclusion

Based on the above, the potential exists for the proposed project to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment. Therefore, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

The following mitigation measure would reduce the above potential impact to a *less-than-significant* level.

Mitigation Measure 14. *Prior to initiation of any ground disturbance activities, the applicant shall hire a licensed well contractor to obtain a well abandonment permit from Contra Costa Health Services and properly abandon the on-site well to the satisfaction of the Contra Costa Health Services Department. Proof of abandonment shall be provided to the City of Clayton Community Development Department and City Engineer.*

Mitigation Measure 15. *Prior to issuance of a demolition permit for any on-site*

structures, the Developer shall consult with certified Asbestos and/or Lead Risk Assessors to complete and submit for review to the City of Clayton Community Development Director an asbestos and lead survey. If ACMs or lead-containing materials are not discovered during the survey, further mitigation related to ACMs or lead containing materials will not be required. If ACMs and/or lead-containing materials are discovered by the survey, the project applicant shall prepare a work plan to demonstrate how the on-site ACMs and/or lead-containing materials shall be removed in accordance with current California Occupational Health and Safety (Cal-OSHA) Administration regulations and disposed of in accordance with all California Environmental Protection Agency regulations, prior to the demolition and/or removal of the on-site structures. The applicant shall submit the work plan to the City for review and approval.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? .....Less-Than-Significant Impact

Discussion (c.)

The nearest school relative to the project site is Mt. Diablo Elementary School, which is located directly north of the site. As discussed under question 'a' above, operation of the proposed project would not include any activities that would involve the routine emission or handling of substantial amounts of hazardous or acutely hazardous materials. Hazardous material uses would be limited to landscaping products such as fertilizer, pesticides, as well as typical commercial and maintenance products (cleaning agents, degreasers, paints, batteries, and motor oil). Proper handling and usage of such materials in accordance with label instructions would ensure that adverse impacts to human health or the environment would not result. Thus, operation of the proposed project would not create a significant hazard to the public or the environment through hazardous emissions or the handling of hazardous or acutely hazardous materials.

Additionally, construction activities associated with the proposed project would involve the use of heavy equipment, which would contain fuels and oils, and various other products such as concrete, paints, and adhesives. However, as discussed above, project contractors are required to comply with all California Health and Safety Codes regulating the handling, storage, and transportation of hazardous and toxic materials.

Therefore, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school, and a ***less-than-significant*** impact would occur.

d. Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?..... No Impact

Discussion (d.)

Government Code Section 65962.5 requires the California Environmental Protection Agency to annually develop an updated Cortese List. The components of the Cortese List include the DTSC Hazardous Waste and Substances Site List.[21] The Cortese List also includes the list of leaking underground storage tank (LUST) sites from the State Water Resources Control Board's (SWRCB) GeoTracker database,[22] the list of solid waste disposal sites identified by the SWRCB, and the list of active Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO) from the SWRCB.[23] The foregoing databases were included in the review of the project site as part of the Phase I ESA. The Phase I ESA did not identify the project site as containing any LUSTs, and the project site is not listed on the other databases that comprise the remaining components of the Cortese List. Thus, the proposed project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would not create a significant hazard to the public or the environment, and ***no impact*** would occur.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?..... No Impact

Discussion (e.)

The nearest airport to the proposed project site is the Buchanan Field Airport, located approximately 7.26 miles to the west of the site. Therefore, the proposed project site is not located within an airport land use plan or within the vicinity of a public or private airport. As such, the project would not result in a safety hazard for people residing or working in the project area, and ***no impact*** would occur.

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? .....Less-Than-Significant Impact

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[21] Department of Toxic Substances Control. *DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List)*. Available at: https://dtsc.ca.gov/dtscs-cortese-list/. Accessed October 2025.

[22] State Water Resource Control Board. *GeoTracker*. Available at: https://geotracker.waterboards.ca.gov/map/?global_id=T0607302824. Accessed October 2025.

[23] State Water Resources Control Board. *Active CDO and CAO*. Available at: https://calepa.ca.gov/sitecleanup/corteselist/. Accessed October 2025.

Discussion (f.)

According to the City of Clayton General Plan, the primary exit routes out of the City to the north are Pine Hollow Road, Clayton Road, and Concord Boulevard. To the south, the primary exit route out of the City is Marsh Creek Road. During operation, the proposed project would provide adequate access for emergency vehicles consistent with California Fire Code requirements and would not interfere with potential evacuation or response routes used by emergency response teams.

Although the proposed project would include improvements to Pine Hollow Court, the improvements would not significantly impede vehicle traffic in the event of a major evacuation; rather, the widening of Pine Hollow Court to incorporate two traffic lanes would effectively improve emergency and evacuation access to and from the project site. Furthermore, during project construction, all equipment and materials would be staged on-site and would not substantially interfere with existing roadway operations. Therefore, the proposed project would result in a ***less-than-significant*** impact associated with impairing implementation of, or physically interfering with, an adopted emergency response plan or emergency evacuation plan.

g. Would the project expose people or structures, either directly or indirectly, to the risk of loss, injury or death involving wildland fires? .....Less-Than-Significant Impact

Discussion (g.)

Issues related to wildfire hazards are discussed in Section 20, Wildfire, of this IS/MND. As noted therein, the project site is not located within a State Responsibility Area or a Very High Fire Hazard Severity Zone (VHFHSZ).[24] The nearest VHFHSZ is located approximately 0.26-mile to the south of the project site. Thus, the potential for wildland fires to reach the project site would be limited. In addition, in compliance with the California Building Code (CBC) (specifically Section 903.2.1.3, Group A-3), the design of the proposed project would be required to include automatic fire sprinklers, and fire alarm systems would be incorporated pursuant to California Fire Code (CFC) requirements. Such features would help to address fire situations within the site, which would reduce the demand for fire protection services from the project site. Fire services to the Clayton area are provided by the CCCFPD, with the nearest station located approximately 0.4-mile east of the site.

The proposed project is required to be designed in compliance with all applicable State and local standards and recommendations for new development, such as the CCCFPD's requirements for providing a water supply system for fire protection, and providing adequate emergency and fire access. As discussed further in Section 17, Transportation, of this IS/MND, Figure 13 shows that the internal roadways on the project site would be adequate for emergency vehicle access. In addition, the project would be required to provide "defensible space" around on-site structures consistent with CCCFPD guidelines. Therefore, the proposed project would not expose people or structures, either directly or

[24] California Department of Forestry and Fire Protection. *Fire Hazard Severity Zones Map*. Available at: https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones. Accessed October 2025.

indirectly, to the risk of loss, injury or death involving wildland fires, and ***less-than-significant*** impact would occur.

10. HYDROLOGY AND WATER QUALITY

Issues			Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:						
a.	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		□	□	X	□
b.	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?		□	□	X	□
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:		□	□	□	□
	i.	Result in substantial erosion or siltation on- or off-site;			X	
	ii.	Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			X	
	iii.	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
	iv.	Impede or redirect flood flows?			X	
d.	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?		□	□	□	X
e.	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?		□	□	X	□

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? .....Less-Than-Significant Impact

Discussion (a.)
Water quality and runoff issues associated with construction and operation of the proposed project are discussed in detail below.

Construction

During the early stages of construction activities, topsoil would be exposed due to grading and excavation of the site. After grading and prior to overlaying the ground surface with impervious surfaces and structures, the potential exists for wind and water erosion to discharge sediment and/or urban pollutants into stormwater runoff, which could adversely affect water quality downstream.

The SWRCB regulates stormwater discharges associated with construction activities where clearing, grading, or excavation results in a land disturbance of one or more acres. The City's NPDES permit requires applicants to show proof of coverage under the State's

General Construction Permit prior to receipt of any construction permits. Pursuant to the City's Municipal Code Section 13.12.070, any discharge that may result in or contribute to a violation of the City's NPDES permit is prohibited. Because the proposed project would disturb more than one acre of land, the proposed project would be subject to the requirements of the State's General Construction Permit, which would minimize the potential for polluted runoff to leave the site during construction activities.

The State's General Construction Permit requires a Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the site and implemented during construction. The SWPPP would be kept on-site during construction activity and made available upon request to a representative of the City of Clayton or the San Francisco Bay Regional Water Quality Control Board (RWQCB). In addition, a Notice of Intent (NOI) would be filed with the RWQCB. In accordance with the Construction General Permit, the project site would also be inspected during construction before and after storm events and every 24 hours during extended storm events in order to identify maintenance requirements for the implemented BMPs and to determine the effectiveness of the implemented BMPs. As a "living document", the site-specific SWPPP that would be prepared for the proposed project would be modified, if necessary, as construction activities progress. A Qualified SWPPP Practitioner (QSP) would ensure compliance with the SWPPP through regular monitoring and visual inspections during construction activities. The QSP for the project would amend the SWPPP and revise project BMPs, as determined necessary through field inspections, to protect against substantial erosion or siltation on- or off-site. With implementation of the required SWPPP and BMPs, construction of the proposed project would not result in a violation of water quality standards and/or degradation of water quality. Final BMPs for the proposed project construction would be chosen in consultation with the applicable California Stormwater Quality Association Stormwater BMP Handbooks and implemented by the project contractor.

Operation

Following project buildout, with the exception of the open space hillside area in the eastern portion of the project site, the surface of the site would be covered with either impervious surfaces or landscaped areas, and topsoil would not be exposed. As such, the potential for erosion and associated impacts to water quality would be reduced. However, the addition of impervious surfaces on the site would result in the generation of urban runoff during project operations, which could contain pollutants if the runoff comes into contact with vehicle fluids on parking surfaces and/or landscape fertilizers and herbicides. During the dry season, vehicles and other urban activities may release contaminants onto the impervious surfaces, where they would accumulate until the first storm event. During the initial storm event, or first flush, the concentrated pollutants would be transported by way of stormwater runoff from the site to the stormwater drainage system and eventually a downstream waterway. Typical urban pollutants that would likely be associated with the proposed project include sediment, pesticides, oil and grease, nutrients, metals, bacteria, and trash. In addition, stormwater runoff could cause soil erosion if not properly addressed, which would provide a more lucrative means of transport for pollutants to enter the waterways.

The project site is developed with one single-family residence, associated storage structures, a water well-house, and contains scattered trees. Development of the project

would include the construction of 17 homes, as well as new internal roads and driveways. Such development would result in an increase in impervious surfaces within the site as compared to existing conditions.

All municipalities within Contra Costa County (and the County itself) are required to develop more restrictive surface water control standards for new development projects as part of the renewal of the Countywide NPDES permit. The City's Municipal Code Section 13.12.050 requires City approval of a Stormwater Control Plan for all development projects that meet the criteria in the most recent version of the Contra Costa Clean Water Program Stormwater C.3. Guidebook. The County C.3 Stormwater Standards require new development and redevelopment projects that create or alter 10,000 sf or more of impervious area to contain and treat all stormwater runoff from the project site. Given that the proposed project would create more than 10,000 sf of impervious area, the proposed project would be subject to the requirements of the SWRCB and the RWQCB, including the C.3 Standards, which are included in the City's NPDES General Permit. Compliance with such requirements would ensure that impacts to water quality standards or waste discharge requirements would not occur during operation of the proposed project.

With respect to stormwater, the project site would include one DMA, which would drain into a bioretention area in the northern portion of the project site prior to discharging onto the open space hillside parcel in the northeastern portion of the project site (see Figure 10). The proposed project would include the development of a network of catch basins, manholes, and storm drain lines ranging from 15- to 18-inches.

The storm drain lines would direct flows into a manhole, pumping stormwater into the bioretention area in the northern portion of the project site, before flowing to the drainage release area in the open space hillside parcel in the northeastern portion of the project site. The bioretention area would provide for treatment by filtering stormwater through layers of biotreatment soil and rock riprap. The open space hillside parcel would include an 18-inch perforated CMP storm drain line, rock riprap, and field inlets/junction boxes in order to allow stormwater flows to discharge into the hillside. Consistent with C.3 Standards, the proposed bioretention area would be sized to meet or exceed the minimum volume requirement necessary to adequately handle all runoff from the proposed impervious surfaces and landscaping. Thus, during operation, the proposed project would comply with all relevant water quality standards and waste discharge requirements and would not degrade water quality.

Conclusion

Based on the above, the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Therefore, a ***less-than-significant*** impact would occur.

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?.....Less-Than-Significant Impact

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? .....Less-Than-Significant Impact

Discussion (b. and e.)

The Contra Costa Water District (CCWD) provides domestic water service to Clayton. The primary source of CCWD water is the Sacramento River Contra Costa Water District Canal – the CCWD does not rely extensively on groundwater supplies. The construction of the proposed residential lots and associated improvements would result in a net increase in impervious surfaces within the project site; however, the surface area would not be large enough to significantly affect groundwater recharge. Furthermore, the eastern portion of the project site would remain undeveloped open space. Additionally, the bioretention area within the site would allow for stormwater to infiltrate into the surrounding soil, thereby allowing the continued contribution to groundwater recharge at the site.

Based on the above, the proposed project would not substantially deplete groundwater supplies or recharge at the site such that the project may impede sustainable groundwater management of the basin and would not conflict with an applicable groundwater management plan or water quality control plan. Thus, a ***less-than-significant*** impact would occur.

ci. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site? .....Less-Than-Significant Impact

cii. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite? .....Less-Than-Significant Impact

ciii. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?.....Less-Than-Significant Impact

Discussion (ci., cii., and ciii.)
As discussed above, the project site would include one DMA, which would drain into a bioretention area in the northern portion of the project site prior to discharging onto the open space hillside parcel in the northeastern portion of the project site. The proposed project would include the development of a network of catch basins, manholes, and storm drain lines ranging from 15- to 18-inches.

The storm drain lines would direct flows into a manhole, pumping stormwater into the bioretention area in the northern portion of the project site, before flowing to the drainage release area in the open space hillside parcel in the northeastern portion of the project site. The bioretention area would provide for treatment by filtering stormwater through layers of biotreatment soil and rock riprap. The open space hillside parcel would include an 18-inch perforated CMP storm drain line, rock riprap, and field inlets/junction boxes in order to allow stormwater flows to discharge onto the hillside, consistent with existing conditions. The bioretention basin would be designed and constructed according to criteria from the Contra Costa Clean Water Program Stormwater C.3 Guidebook. Consistent with the C.3 Standards, the field inlets/junction boxes located in the bioretention basin would ensure that the rate and amount of treated runoff eventually entering the creek would not exceed pre-development levels.

In order to ensure that the proposed project's stormwater treatment facilities remain adequate, long-term maintenance would be required. Routine maintenance of the facilities is necessary to ensure that infiltration of water is unobstructed, erosion is prevented, and soils are held together by biologically active plant roots. Proper operation and maintenance of the stormwater management facilities would be the sole responsibility of the property owner. In accordance with Clayton Municipal Code Section 13.12.050, implementation of an approved Stormwater Control Plan and submittal of an approved Stormwater Control Operation and Maintenance Plan by the applicant shall be a condition precedent to a final building inspection or the issuance of a certificate of occupancy. All inspections and remedial actions would be logged in a Stormwater BMP Inspection and Maintenance Log.

Based on the above, the proposed project would not substantially alter the existing drainage pattern of the site or area in a manner which would result in erosion, siltation, or flooding on- or off-site, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff. Consequently, the proposed project would result in a ***less-than-significant*** impact.

civ. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would Impede or redirect flood flows?.....Less-Than-Significant Impact

Discussion (civ.)
Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), (Map Number ID: 06013C0304G), effective March 21, 2017, the proposed

development area is within Zone X, which is described by FEMA as an area determined to be outside the 0.2 percent annual chance floodplain (see Figure 12).[25] In addition, dams or levees are not located upstream of the proposed project site; thus, flooding due to dam or levee failure would not occur. Because the proposed development area is not within a 100-year floodplain, the proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would impede or redirect flood flows. Therefore, impacts would be ***less-than-significant***.

d. Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? ..... No Impact

Discussion (d.)

A seiche is defined as a wave generated by rapid displacement of water within a reservoir or lake, due to an earthquake that triggers land movement within the water body or land sliding into or beneath the water body.

The project site is not located near a water body that is susceptible to seiche hazard. Furthermore, due to the distance from the project site to the nearest coastline, the project site would not be subject to tsunami hazards. As discussed above, the project site is not located in a FEMA-designated flood hazard area.

Therefore, the proposed project would not risk release of pollutants due to project inundation by flooding, tsunami, or seiche, and ***no impact*** would occur.

[25] Federal Emergency Management Agency. *FEMA National Flood Hazard Layer (NFHL) Viewer.* Available at: https://msc.fema.gov/portal/home. Accessed November 2025.

Figure 12
FEMA Flood Hazard FIRMette 06013C0304G

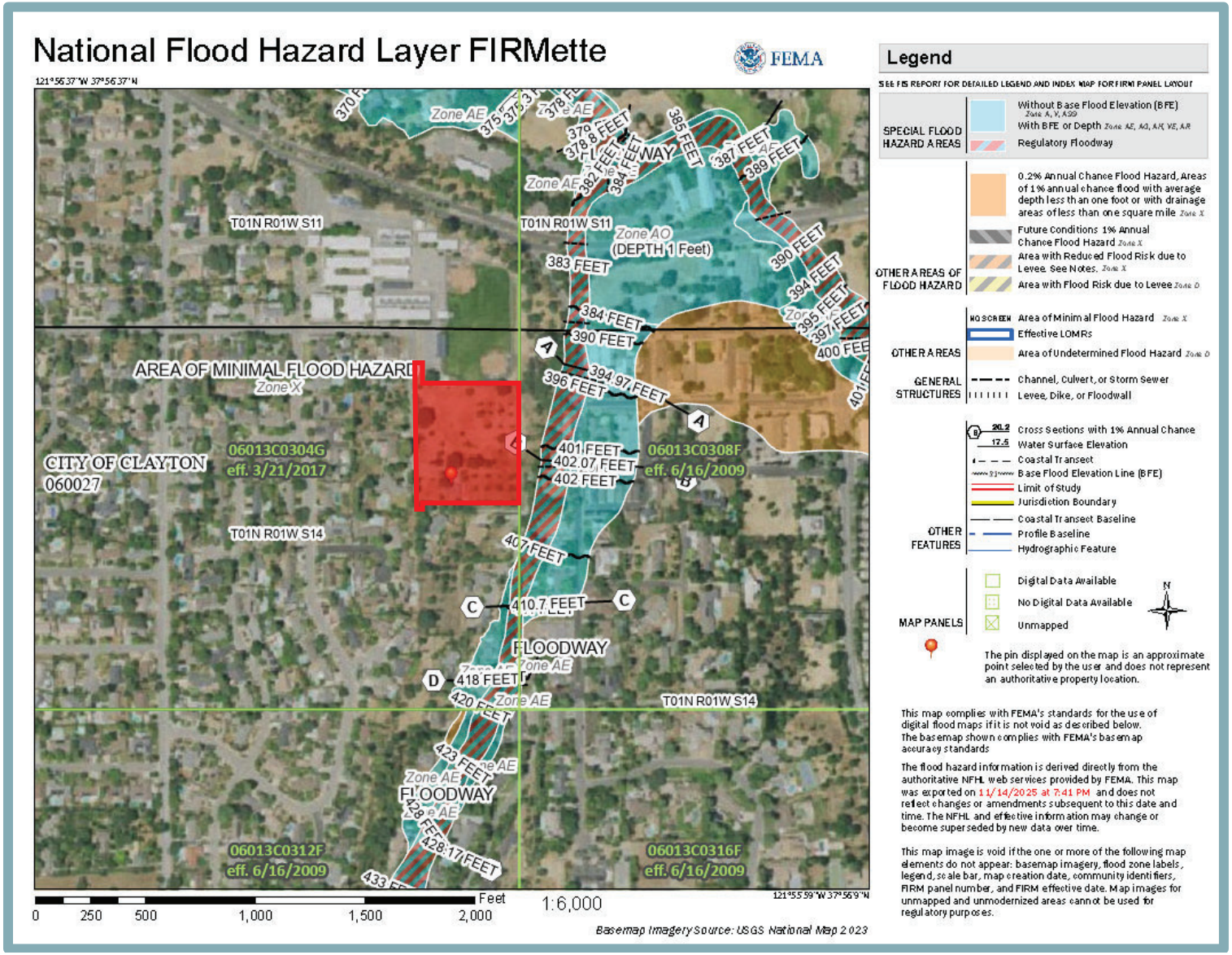


*Figure not OCR compatible

11. LAND USE.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Physically divide an established community?	□	□	□	X
b.	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	□	□	X	□

a. Would the project physically divide an established community? ..... No Impact

Discussion (a.)

A project risks dividing an established community if the project would introduce infrastructure or alter land use so as to change the land use conditions in the surrounding community, or isolate an existing land use. Currently, the project site is developed with one single-family residence, associated storage structures, and a water well-house. The project site is bordered by Mt. Diablo Elementary School and an existing trail and pedestrian bridge to the north, Mitchell Creek and commercial businesses in the Town Center down the hill to the east, and single-family residences to the west and south. The existing single-family residence located within the southwestern portion of the project site and associated storage structures located in the northwestern portion of the project site would be demolished as a part of the proposed project. The proposed residences would be consistent with the scale, type, and intensity of the existing development in the project area and would serve as an extension of the existing surrounding residential development. The proposed project would not involve any features that would divide an established community, such as construction of major highways or roadways, storm channels, bridges, or utility transmission lines. As such, the proposed project would not physically divide an established community, and ***no impact*** would occur.

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?..... Less-Than-Significant Impact

Discussion (b.)

The proposed project would not conflict with any City policies and regulations adopted for the purpose of avoiding or mitigating an environmental effect. For example, as discussed in Section 1, Aesthetics, of the IS/MND, the proposed project would comply with Chapter 8.09 of the City's Municipal Code, which prohibits the installation or maintenance of outdoor light fixtures that would cause an undue annoyance. The proposed project would also comply with the City of Clayton Noise Element, as demonstrated in Section 13, Noise, of the IS/MND. Additionally, as discussed in Section 4, Biological Resources, the proposed project would comply with Chapter 15.70, Tree Protection, of the City's Municipal Code. As further discussed in Section 16, Recreation, of the IS/MND, the proposed project would comply with Section 16.12.010 of the Municipal Code, requiring the payment of an in-lieu

parkland dedication fee. As such, the project would not conflict with any applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect, and a ***less-than-significant*** impact would occur.

12. MINERAL RESOURCES.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	□	□	□	X
b.	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	□	□	□	X

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? ..... No Impact

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? ..... No Impact

Discussion (a. and b.)

According to the Contra Costa County General Plan, the nearest mineral resource or mineral resource recovery site within the City of Clayton is the Cemex Quarry, located approximately 0.65-mile southwest of the project site. Because the project site is not within the immediate vicinity of the Cemex Quarry or any of the other identified areas of important mineral deposits, the project would not interfere with existing access to such deposits. Therefore, the proposed project would have ***no impact*** to mineral resources.

13. NOISE.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project result in:					
a.	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	□	X	□	□
b.	Generation of excessive groundborne vibration or groundborne noise levels?	□	X	□	□
c.	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	□	□	□	X

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? .... Less-Than-Significant With Mitigation Incorporated

Discussion (a.)

The following sections present information regarding sensitive noise receptors in proximity to the project site, applicable noise standards, the existing noise environment, and the potential for the proposed project to result in noise impacts during project construction and operation. The following terms are referenced in the sections below:

- Decibel (dB): A unit of sound energy intensity. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels. All references to dB in this analysis are A-weighted unless noted otherwise.
- Community Noise Equivalent Level (CNEL): The cumulative noise exposure over a 24-hour period. Weighting factors of +5 and +10 dBA are applied to the evening and nighttime periods, respectively, to account for the greater sensitivity of people to noise during those periods.
- Average, or equivalent, sound level (L_{eq}): The L_{eq} corresponds to a steady-state A-weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour).
- Day-Night Average Level (L_{dn}): The average sound level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 PM to 7:00 AM) hours.
- Maximum Sound Level (L_{max}): The maximum sound level over a given time-period.

- Median Sound Level (L_{50}): The sound level exceeded 50 percent of the time over a given time period.

Sensitive Noise Receptors

Some land uses are considered more sensitive to noise than others, and, thus, are referred to as sensitive noise receptors. Land uses often associated with sensitive noise receptors generally include residences, schools, libraries, hospitals and passive recreational areas. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise. In the vicinity of the project site, sensitive land uses include Mt. Diablo Elementary School to the north and existing single-family residences located to the south and west of the project site. However, school uses are typically considered to be noise-generating, rather than noise-sensitive. The nearest residential receptors are located within 15 feet to the south of where project construction would occur.

Standards of Significance

For transportation noise sources (traffic, rail, aircraft) affecting new developments, the Noise Element of the City of Clayton General Plan establishes an exterior noise level standard of 60 dB L_{dn}, applied at outdoor activity areas. The intent of this standard is to provide an acceptable exterior noise environment for outdoor activities. Additionally, the City of Clayton utilizes an interior transportation noise level standard of 45 dB L_{dn} or less for new development.

In addition, the City of Clayton Municipal Code Section 15.01.101 limits all grading, excavation, construction, demolition, renovation, and other works of improvement within the City of Clayton to only occur between the hours of 7:00 AM to 5:00 PM, Monday through Friday.

The City has not adopted any formal standard for evaluating temporary construction noise which occurs within allowable hours. Therefore, for short-term noise associated with project construction, the California Department of Transportation (Caltrans) increase criteria of 12 dBA is applied to existing sensitive receptors in the project vicinity. The 12 dBA increase is approximately equivalent to a doubling of sound energy and has historically been the standard of significance for Caltrans projects.

The Federal Interagency Committee on Noise (FICON) has also developed guidance for determining increases in project-related traffic noise. The criteria shown in Table 4 was developed by FICON as a means of developing thresholds for impact identification for project-related traffic noise level increases. FICON's significance thresholds are used to identify the significance of an incremental increase in noise levels.

Table 4
FICON Noise Exposure Increases for Determining Level of Significance

Noise Exposure without Project	Potential Significant Impact
< 60 dB CNEL	+5 dB or more
60-65 dB CNEL	+3 dB or more
>65 dB CNEL	+1.5 dB or more

Source: Federal Interagency Committee on Noise (FICON), 2000.

The use of the FICON standards is considered conservative relative to thresholds used by other agencies in the State. For example, the California Energy Commission (CEC) considers project-related noise level increases between 5 to 10 dB significant, depending on local factors. Therefore, the use of the FICON standards, which set the threshold for finding significant noise impacts as low as 1.5 dB, provides a conservative approach to the impact assessment for the proposed project and are used as the applicable noise increase threshold to analyze project-generated operational traffic noise, as discussed in further detail below.

Impact Analysis

The following sections provide an analysis of potential noise impacts associated with construction and operation of the proposed project.

Construction Noise
During construction of the proposed project, heavy-duty equipment would be used for grading, excavation, paving, and building construction, which would temporarily increase ambient noise levels when in use. Noise levels would vary depending on the type of equipment used, how the equipment is operated, and how well the equipment is maintained. In addition, noise exposure at any single point outside the project site would vary depending on the proximity of construction activities to that point. Standard construction equipment, such as graders, backhoes, dozers, and dump trucks would be used in association with project construction.

Table 5 shows maximum noise levels associated with typical construction equipment. Based on the table, activities involved in typical construction would generate maximum noise levels up to 90 dB at a distance of 50 feet. As one increases the distance between equipment, or increases separation of areas with simultaneous construction activity, dispersion and distance attenuation reduce the effects of combining separate noise sources. The noise levels from a source decrease at a rate of approximately 6 dB per every doubling of distance from the noise source. Construction of the proposed project would be required to comply with the limited construction hours set forth by Section 15.01.101 of the City's Municipal Code.

Table 5
Construction Equipment Noise

Type of Equipment	Maximum Level at 50 feet (dBA)
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

Source: Federal Highway Administration. Roadway Construction Noise Model User's Guide. January 2006.

Construction equipment is predicted to generate noise levels of up to 90 dBA L_{max} at 50 feet. Construction noise is evaluated as occurring at the center of the site, rather than the project site boundaries, to represent average noise levels generated over the duration of construction across the project site. The nearest noise-sensitive residential uses are located approximately 250 feet from the center of the project site. At such distance, maximum construction noise levels would be up to 76 dBA. Thus, temporary noise increases associated with construction activities, such as noise from internal combustion engines and construction equipment, including generators and air compressors, could be potentially significant. In addition, construction-related noise could result in sleep interference at existing noise-sensitive receptors in the vicinity of the project site if construction activities were to occur outside the normal daytime hours. Enforcement of time restrictions specified in the City's Municipal Code and the use of noise-dampened equipment would be required to ensure that the temporary or periodic increase in ambient noise levels in the project vicinity associated with construction of the proposed project would not be considered substantial.

Operational Noise

Residences are not typically associated with the generation of substantial noise. Operation of the proposed project would include typical residential noise, which would be compatible with the adjacent existing residential uses. The proposed project is not anticipated to contribute a measurable operational noise level increase to the existing ambient noise environment at any sensitive receptor locations. Therefore, a less-than-significant impact would occur with regard to on-site operational noise.

The FICON criteria established in Table 4 are used to assess increases in ambient noise environment. As such, where existing traffic noise levels are less than 60 dB L_{dn}, a five dB L_{dn} increase in roadway noise levels would be considered significant.

The Environmental Noise and Vibration Assessment conducted for the Clayton Community Church Project that was previously proposed for development on the project site assessed the existing ambient noise environment by conducting long-term ambient noise level measurements at three locations on the project site.[26] According to the Environmental Noise and Vibration Assessment, the measured ambient day-night average levels within the project area is 47 dB L_{dn}. In addition, significant development has not occurred in the site vicinity since the preparation of the previous Environmental Noise and Vibration Assessment conducted for the Clayton Community Church Project; the ambient noise levels presented therein are thus considered to be applicable to the proposed project. Thus, the threshold of significance for Pine Hollow Road would be a five dB increase in roadway noise levels from 47 dB. Generally, a doubling in traffic volumes is required to increase traffic noise levels by five dB. Due to the residential nature and relatively small size of the proposed project, substantial daily vehicle trips sufficient to double traffic volumes would not be generated on local roadways as a result of the proposed project. Consequently, even with buildout of the proposed project, noise levels along Pine Hollow Road within the project vicinity would not increase by five dB. As such, the proposed project would not be anticipated to substantially increase traffic noise in the project vicinity.

[26] Bollard Acoustical Consultants, Inc. *Environmental Noise and Vibration Assessment, Clayton Community Church.* January 28, 2021.

Based on the above, operation of the proposed project would not result in noise increases that would result in significant effects on sensitive receptors in the project vicinity.

Conclusion

Based on the above, operation of the proposed project would not substantially increase ambient noise levels in the project area. However, the proposed project could result in the generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance during construction. Therefore, considering the potential for construction activities to result in temporary increases in noise levels in the project area, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would ensure that the above potential impact is reduced to a *less-than-significant* level.

Mitigation Measure 16. *To the maximum extent practical, the following measures should be incorporated into the project construction plans:*

- *Pursuant to Section 15.01.101 of the Clayton Municipal Code, all grading and excavation, construction, demolition, renovation, and other works of improvement shall occur only between the hours of 7:00 A.M. and 5:00 P.M., Monday through Friday.*
- *The project shall utilize temporary construction noise control measures, including the use of temporary noise barriers, or other appropriate measures as mitigation for noise generated during construction of projects.*
- *All noise-producing project equipment and vehicles using internal-combustion engines shall be equipped with manufacturers-recommended mufflers and be maintained in good working condition.*
- *All mobile or fixed noise-producing equipment used on the project site that are regulated for noise output by a federal, state, or local agency shall comply with such regulations while in the course of project activity.*
- *Electrically powered equipment shall be used instead of pneumatic or internal-combustion-powered equipment, where feasible.*
- *Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.*

- *Project area and site access road speed limits shall be established and enforced during the construction period.*
- *Nearby residences shall be notified of construction schedules so that arrangements can be made, if desired, to limit their exposure to short-term increases in ambient noise levels.*

The requirements above shall be included, via notation, on the final grading plan submitted for review and approval by the City prior to grading permit issuance.

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels? ..... Less-Than-Significant With Mitigation Incorporated

Discussion (b.)
Similar to noise, vibration involves a source, a transmission path, and a receiver. However, noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities (PPV) in inches per second (in/sec). Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of PPV.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 6, which was developed by Caltrans, shows the vibration levels that would normally be required to result in damage to structures. As shown in the table, the threshold for architectural damage to structures is 0.20 in/sec PPV and continuous vibrations of 0.10 in/sec PPV, or greater, would likely cause annoyance to sensitive receptors.

The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading, utilities placement, and paving occur. Table 7 shows the typical vibration levels produced by construction equipment at various distances. The most substantial source of groundborne vibrations associated with project construction would be the use of vibratory compactors. Use of vibratory compactors/rollers could be required during construction of impervious surfaces.

The proposed project would only cause elevated vibration levels during construction, as the proposed project would not involve any uses or operations that would generate substantial groundborne vibration. Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours. Because sensitive receptors are located within 15 feet of the project site's southern boundary, construction

vibration levels could exceed the 0.20 in/sec threshold at distances of 26 feet or less, and the existing single-family residences could be impacted by construction-related vibrations, especially vibratory compactors/rollers. Thus, construction vibrations could exceed acceptable levels.

Table 6
Effects of Vibration on People and Buildings

PPV		Human Reaction	Effect on Buildings
mm/sec	in/sec		
0.15 to 0.30	0.006 to 0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10 to 15	0.4 to 0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: Caltrans. Transportation Related Earthborne Vibrations. TAV-02-01-R9601. February 20, 2002.

Table 7
Vibration Levels for Various Construction Equipment

Type of Equipment	PPV at 25 feet (in/sec)	PPV at 50 feet (in/sec)	PPV at 100 feet (in/sec)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210	0.074	0.026

Source: Federal Transit Administration. Transit Noise and Vibration Impact Assessment Guidelines. May 2006.

Based on the above, because the proposed project could expose people to or generate excessive groundborne vibration during project construction, a ***potentially significant*** impact could occur.

Mitigation Measure(s)

Implementation of the following mitigation measure would ensure that the above potential impact is reduced to a *less-than-significant* level.

Mitigation Measure 17. *Any compaction required within 26 feet of existing structures adjacent to the project site shall be accomplished by using static drum rollers, rather than vibratory compactors/rollers, which use weight instead of vibrations to achieve soil compaction. As an alternative, preconstruction crack documentation and construction vibration monitoring could be conducted to ensure that construction vibrations do not cause damage to any adjacent structures. The requirements above shall be included, via notation, on the final grading plan submitted for review and approval by the City prior to grading permit issuance.*

c. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? ..... No Impact

Discussion (c.)

The nearest airport to the proposed project site is the Buchanan Field Airport, located approximately 7.26 miles to the northwest of the site. Aircraft-related noise, if audible at the project site, would be extremely minimal. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels associated with air traffic and ***no impact*** would occur.

14. POPULATION AND HOUSING.

ISSUES		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	□	□	X	□
b.	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	□	□	X	□

a. Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)? .....Less-Than-Significant Impact

Discussion (a.)

The proposed project would include the development of 17 single-family residences. Using the City of Clayton average persons per household value of 2.76, the proposed project would result in an estimated population of approximately 47 residents.[27] Based on the 2020 Census, the U.S. Census Bureau estimates the population of Clayton to be approximately 11,070 people. The increase in population associated with the proposed project would constitute a 0.42 percent increase in the City's total population, which would not be considered substantial growth. Furthermore, as discussed in Section 19, Utilities and Service Systems, of this IS/MND, adequate utility infrastructure would be available to support the proposed project. Similarly, as discussed in Section 15, Public Services, public service providers, such as local police and fire departments, would be capable of accommodating the demands of the proposed project. Therefore, the proposed project would not induce substantial unplanned population growth either directly or indirectly, and a ***less-than-significant*** impact would occur.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?.....Less-Than-Significant Impact

Discussion (b.)

The project site is developed with one single-family residence, associated storage structures, and a water well-house. The proposed project would include the demolition of the existing on-site single-family residence. However, the proposed project would develop 17 single-family residences, adding to the housing stock and available housing options within the City of Clayton and replacing the existing single-family residence. Thus, the

[27] U.S. Census Bureau. *Clayton city, California: Households and Families.* Available at: https://data.census.gov/table/ACSST5Y2023.S1101?q=Clayton+city,+California. Accessed November 2025.

proposed project would not displace substantial numbers of housing or people, necessitating the construction of replacement housing elsewhere, and a ***less-than-significant*** impact would occur.

15. PUBLIC SERVICES.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
a.	Fire protection?	□	□	X	□
b.	Police protection?	□	□	X	□
c.	Schools?	□	□	X	□
d.	Parks?	□	□	X	□
e.	Other public facilities?	□	□	X	□

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection? .....Less-Than-Significant Impact

Discussion (a.)

The CCCFPD provides fire prevention, suppression, and emergency medical response for advanced and basic life support to nine cities, including Clayton, and much of the unincorporated territory in the central and western portions of Contra Costa County. The CCCFPD comprises 34 fire stations, 40 companies, and over 500 employees.[28] The entire City is within three driving miles of Fire Station #11, which means that the entire General Plan Planning Area is within a five-minute emergency response time, assuming an average driving speed of 35 miles per hour.[29] The nearest fire station (Fire Station #11) is located at 6500 Center Street, approximately 0.4-mile east of the project site.

The proposed project would be subject to the 2019 CFC as adopted by Chapter 15.09 of the Municipal Code. In addition, pursuant to Chapter 3.18 of the City of Clayton Municipal Code, the proposed project would be subject to payment of the City's Fire Development Protection impact fee, which is used to fund new and expanded fire protection facilities. The development impact fee for fire protection service is $300 per single-family residential unit. The proposed project would be subject to all applicable development impact fees. Revenues generated through impact fees on new development would pay for any new fire facilities deemed necessary by the City, all of which would be required to be designed in compliance with applicable regulations and standards, and if necessary, undergo analysis of all potential environmental impacts under CEQA.

[28] Contra Costa County, California. *Fire Protection Districts.* Available at: https://www.contracosta.ca.gov/1550/Fire-Protection-Districts. Accessed November 2025.

[29] City of Clayton. *6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments, Draft Environmental Impact Report* [pg. 4.15-1]. August 2022.

Considering the project site's proximity to an existing fire station and the project's payment of applicable development impact fees, the proposed project would not result in the need for new or altered services related to fire protection. Therefore, the proposed project would result in a ***less-than-significant*** impact related to fire protection services.

b. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection? .....Less-Than-Significant Impact

Discussion (b.)

Police protection services would be provided to the proposed project by the Clayton Police Department. The Clayton Police Department is headquartered at Clayton City Hall, approximately 0.13-mile north of the project site. The entire City is within a five-minute emergency response time from the police department, assuming an average driving speed of 35 miles per hour.[30] The current staffing of the police department consists of two civilian staff, seven sworn officers, three sergeants, and the Chief of Police. The average response time to Priority 1 calls is approximately two to three minutes, and the average response time to all other calls is approximately five to 10 minutes.[31] The City of Clayton aims to maintain a five minute response time for 90 percent of all emergency calls for police assistance.[32]

The proposed project would develop 17 single-family residences and result in a population increase of approximately 47 residents. As such, the minor population growth associated with the proposed project would not necessitate the construction of new or expanded facilities.

Based on the above, the proposed project would not result in the need for new or physically altered police protection facilities, the construction of which could cause an environmental impact, and a ***less-than-significant*** impact would occur.

c. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain

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30 City of Clayton. *6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments, Draft Environmental Impact Report* [pg. 4.15-2]. August 2022

31 *Ibid*.

32 City of Clayton Department of Community Development. *Clayton 2000 General Plan, Growth Management Element* [pg. 8]. Amended July 19, 2016.

acceptable service ratios, response times or other performance objectives for schools? .....Less-Than-Significant Impact

Discussion (c.)

The City of Clayton is located within the Mt. Diablo Unified School District (MDUSD), which operates 31 elementary schools, nine middle schools, and five high schools throughout the cities of Clayton, Concord, Martinez, Pittsburg, Pleasant Hill, Walnut Creek, and the unincorporated community of Bay Point. Mt. Diablo Elementary and Diablo View Middle Schools serve the City of Clayton. MDUSD's school facilities in the 2019/2020 school year had a collective capacity of 34,411 students, and student enrollment was 30,724.[33] As the proposed project would only include the construction of 17 new residences, a substantial increase in students would not occur as a result of the proposed project. However, in order to fund the expansion of existing facilities and the construction of new facilities associated with accommodating the increase in student population, the MDUSD collects School Impact Fees (SIFs) from new development. The proposed project would be required to pay SIFs at $5.17 per sf of residential development.[34] According to SB 50, payment of the necessary school impact fees for the project would be considered full and satisfactory CEQA mitigation. Proposition 1A/SB 50 prohibits local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any "[…] legislative or adjudicative act […] involving […] the planning, use, or development of real property" (Government Code 65996[b]). As such, payment of developer fees would be considered sufficient to reduce any potential impacts related to school services.

Based on the above, the proposed project would not result in the need for new or physically altered schools, and a ***less-than-significant*** impact would occur.

d. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks?.....Less-Than-Significant Impact

Discussion (d.)

The City of Clayton has seven public parks on approximately 25.3 acres, with the nearest public park to the project site being The Grove Park located approximately 0.19-mile to the east of the site. As discussed in Section 14, Population and Housing, of this IS/MND, the proposed project would generate a population increase of approximately 47 persons. The City of Clayton maintains approximately 2.25 acres of parkland per 1,000 residents, and the City anticipates an additional 2,364 residents from implementation of General Plan

[33] City of Clayton. *6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments, Draft Environmental Impact Report* [pg. 4.15-2]. August 2022.

[34] Mt. Diablo Unified School District. *Developer Fee.* Available at: https://www.mdusd.org/departments/business-services/fiscal-services/new-page. Accessed November 2025.

buildout.[35] In order to maintain consistency with State and federal guidelines requiring five acres of parkland per 1,000 residents, the City would need to dedicate an additional 11.8 acres of parkland. Therefore, the City of Clayton is already in a deficit of parkland even without buildout of the proposed project. The proposed project does not include the necessary acreage of parkland to meet the demand of 47 new residents, which would be approximately 0.24-acre, or 10,454 sf of parkland. Pursuant to Section 16.12.010 of the Municipal Code, because the proposed project would develop less than 50 parcels, the proposed project would be required to pay an in-lieu parkland dedication fee equal to the land value of the portion of the local park required to serve the needs of the residents of the proposed project. Payment of all applicable fees would be considered sufficient to ensure that that adequate parkland be provided within the City, and a ***less-than-significant*** impact would occur.

e. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities? .....Less-Than-Significant Impact

Discussion (e.)

The City of Clayton contains one library: the Clayton Community Library. Two additional Contra Costa County libraries are located near Clayton: the Concord Library and the Ygnacio Valley Library. Implementation of the proposed project would result in an increase in demand for public and governmental facilities through the development of new residences. However, in comparison to the City's total population, an increase of 47 residents would not be expected to result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service for any other public services. In addition, pursuant to Chapter 3.16 of the Municipal Code, the proposed project would be subject to a Community Development Fee of $450 per residential unit, which could be used for new or expanded library or City administration facilities. Therefore, a ***less-than-significant*** impact would occur.

[35] City of Clayton. *6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments, Draft Environmental Impact Report* [pg. 4.15-17]. August 2022.

16. RECREATION.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	□	□	X	□
b.	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	□	□	X	□

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? .....Less-Than-Significant Impact

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? .....Less-Than-Significant Impact

Discussion (a. and b.)

As discussed in Section 14, Population and Housing, the proposed project would include the development of 17 single-family residences, which is anticipated to include an increase in population of 47 residents. An increase in demand on recreational facilities associated with the population increase could occur.

Section 16.12.010 of the Municipal Code requires developments that include new dwelling units to dedicate parkland or pay park impact fees. As discussed in Section 15, Public Services, the Clayton General Plan requires five acres of parkland per 1,000 residents; thus, the City would be required to dedicate an additional 11.8 acres of parkland upon buildout of the General Plan. Therefore, the City of Clayton is already in a deficit of parkland even without buildout of the proposed project. The proposed project does not include the necessary acreage of parkland to meet the demand of 47 new residents, which would be approximately 0.24-acre, or 10,454 sf of parkland. Pursuant to Section 16.12.010 of the Municipal Code, because the proposed project would develop less than 50 parcels, the proposed project would be required to pay an in-lieu parkland dedication fee equal to the land value of the portion of the local park required to serve the needs of the residents of the proposed project. The payment of all applicable fees would ensure that adequate parkland be provided within the City, and existing recreational facilities would not experience impacts due to increased population growth. In addition, the proposed project is located 0.19-mile to The Grove Park. As such, future residents of the proposed project would have access to existing recreational facilities, thereby reducing any demand for parks associated with the increase in population due to the proposed project.

Based on the above, the proposed project would not result in an increased use of existing recreational facilities, nor would the proposed project include or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Thus, a ***less-than-significant*** impact would occur.

17. TRANSPORTATION.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	□	□	X	□
b.	Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	□	□	X	□
c.	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	□	□	X	□
d.	Result in inadequate emergency access?	□	□	X	□

a. Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? .....Less-Than-Significant Impact

Discussion (a.)

The law has changed with respect to how transportation-related impacts may be addressed under CEQA. Previously, lead agencies used a performance metric entitled LOS to assess the significance of such impacts, with greater levels of congestion considered to be more significant than lesser levels. Enacted as part of SB 743 (2013), PRC Section 21099(b)(1), directed the Governor's Office of Land Use and Climate Innovation (LCI) to prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed CEQA Guidelines addressing "criteria for determining the significance of transportation impacts of projects within transit priority areas. Those criteria shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses."

Pursuant to SB 743, the Natural Resources Agency promulgated CEQA Guidelines Section 15064.3 in late 2018, which became effective in early 2019. Subdivision (a) of that section provides that "[g]enerally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, VMT refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact."

See question 'b' for a discussion of VMT.

Pedestrian, Bicycle, and Transit Facilities

The following provides a discussion of the proposed project's potential impacts to pedestrian, bicycle, and transit facilities.

Pedestrian and Bicycle Facilities
Pedestrian facilities are comprised of crosswalks, sidewalks, pedestrian signals, and off-street paths, which provide safe and convenient routes for pedestrians to access destinations such as institutions, businesses, public transportation, and recreation facilities. Bicycle facilities include the following:

- Bike Paths (Class I) – Paved trails that are separated from roadways;
- Bike Lanes (Class II) – Lanes on roadways designated for use by bicycles through striping, pavement legends, and signs;
- Bike Routes (Class III) – Designated roadways for bicycle use by signs or other markings, and may or may not include additional pavement width for cyclists; and
- Separated Bikeway (Class IV) – Exclusive to the use of bicycles similar to a Class II facility but includes a separation between the bike facility and through vehicular traffic. Separation facilities may include flexible posts, inflexible physical barriers, or on-street parking. Class IV facilities also allow for two-way bicycle traffic.

Currently, sidewalks do not exist along the project site's frontage with Pine Hollow Court. The proposed project would include improvements to Pine Hollow Court, including widening the existing half-street to a full-width public street with a 45-foot ROW and the installation of a five-foot sidewalk along a portion of the project site's western frontage, as well as along A Street and B Street within the project site. All new sidewalks would be required to comply with the Americans with Disabilities Act (ADA) and would conform to the existing pedestrian network in the project vicinity.

The nearest existing bicycle facility to the project site is a Class II bikeway located along Clayton Road, approximately 0.12-mile to the north of the project site. Other designated bike lanes are not located within the project site vicinity, and would not be impacted by the proposed improvements to Pine Hollow Court. Thus, the proposed project would not result in substantial modification or the removal of any existing or planned bicycle or pedestrian facilities or preclude the implementation of any proposed or existing off-street trails in the project vicinity, and a less-than-significant impact would occur related to bicycle facilities.

Transit Services and Facilities
Public transit service in the City of Clayton is provided through the Central Contra Costa Transit Authority, or County Connection Transit, Bus Routes 10 and 310. Routes 10 and 310 depart from the Concord Bay Area Rapid Transit (BART) station and end at Clayton Road and Clayton Library. The nearest stops to the project site are the Clayton Road and Clayton Library bus stop located approximately 0.19-mile northeast of the project site, and the Clayton Road and Mitchell Canyon Road bus stop located approximately 0.22-mile northwest of the project site.

County Connection Transit ridership averages approximately 3.5 million passengers each year. As such, an estimated maximum increase of 47 new residents would not be considered a substantial increase in transit demand; thus, any demand added to the transit system could be adequately accommodated by the existing/planned transit system. The proposed project would not result in substantial modification or the removal of any existing or planned transit facilities or preclude the implementation of any proposed or existing facilities in the project vicinity. Thus, a less-than-significant impact would occur related to transit services and facilities.

Conclusion

Based on the above, adequate transit, roadway, bicycle, and pedestrian facilities would be available for the proposed project and the project would not conflict with any existing or planned transportation facilities in the project vicinity. Therefore, a ***less-than-significant*** impact would occur.

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (c)?.....Less-than-Significant Impact

Discussion (b.)

The following is based on a VMT Analysis prepared for the proposed project by TJKM Transportation Consultants (TJKM) (see Appendix F).[36]

Table 8 summarizes the results of the VMT analysis prepared for the proposed project. According to the VMT Analysis, the City of Clayton baseline VMT per capita is 28.04. The Contra Costa Transportation Authority (CCTA) Growth Management Program (GMP) Implementation Guide establishes thresholds of significance for VMT based on LCI's Technical Advisory. Pursuant to the GMP Implementation Guide, a residential project's impact is deemed significant if home-based VMT per capita is higher than 85 percent of the home-based VMT per resident in the subject municipality or unincorporated CCTA subregion, or 85 percent of the existing County-wide average home-based VMT per resident, whichever is less stringent. The VMT threshold applied to the proposed project is 85 percent of 28.04, or 23.83 VMT per capita.

Table 8
VMT Analysis Results

Per Capita VMT				
City of Clayton Residential VMT per Capita	**Impact Threshold**	**Project Area Existing Conditions**	**Project Area Existing Plus Project Conditions**	**Threshold Exceeded?**
28.04	23.83	19.27	20.40	No
Source: TJKM, October 2025.				

According to the VMT Analysis prepared for the proposed project, and as shown in Table 8, the results of the Alameda-Contra Costa County (AlaCC) Activity-Based Model determined that the VMT per capita for the proposed project would be 20.40, which is below the 23.83 VMT per capita threshold.

Given that the per-capita VMT associated with the proposed project would be below the threshold of significance of 23.83 VMT per capita, the proposed project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), and a ***less-than-significant*** impact would occur.

[36] TJKM Transportation Consultants. *Vehicle Miles Traveled (VMT) Analysis for 1027 Pine Hollow Court in Clayton, California.* October 22, 2025.

c. Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? .....Less-Than-Significant Impact

d. Would the project result in inadequate emergency access?.....Less-Than-Significant Impact

Discussion (c. and d.)

Although the proposed project includes alterations to Pine Hollow Road, all such improvements would be required to comply with local and State standards, which would ensure that the alterations to the existing transportation network would not result in hazards due to a geometrical design feature. Furthermore, during project construction, public roads in the vicinity would remain open and available for use by emergency vehicles and other traffic. In addition, the new internal roadway provides two hammerhead roadway turnarounds to allow access for emergency vehicles. As shown in Figure 13, the internal roadways would provide adequate emergency vehicle access.

Based on the above, the proposed project would not substantially increase hazards due to design features or incompatible uses, and emergency access to the site would be adequate. Therefore, the project would result in a ***less-than-significant*** impact.

Figure 13
Preliminary Fire Access Plan

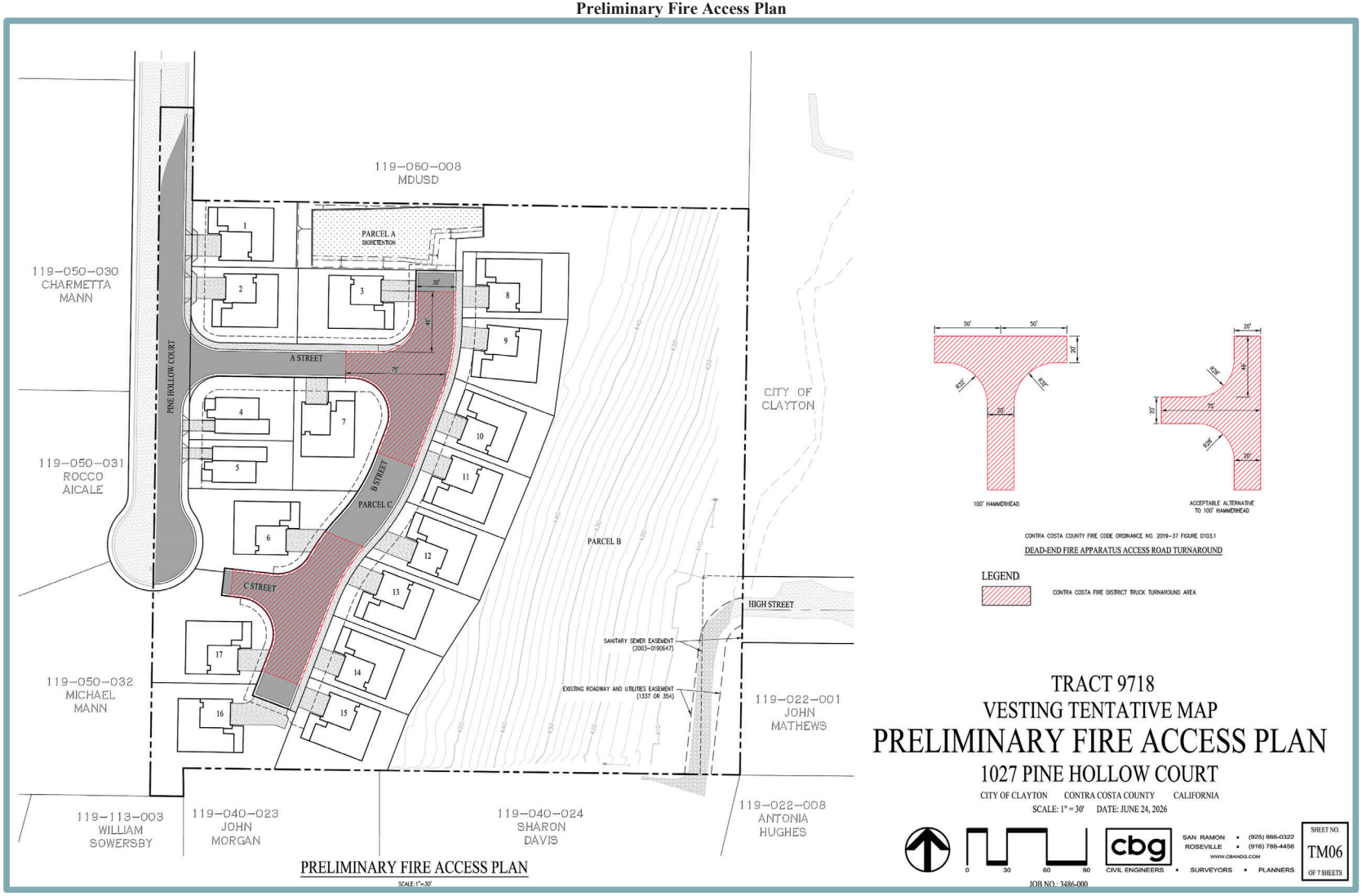


*Figure not OCR compatible

18. TRIBAL CULTURAL RESOURCES

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:					
a.	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).	□	X	□	□
b.	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	□	X	□	□

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?..... Less-Than-Significant Impact with Mitigation Incorporated

b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources

Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe? ..... Less-Than-Significant Impact with Mitigation Incorporated

Discussion (a. and b.)
Tribal cultural resources are generally defined by Public Resources Code 21074 as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe. In compliance with AB 52 consultation requirements, notification letters were distributed through certified mail to representatives of the Wilton Rancheria and the Confederated Villages of Lisjan Nation on January 6, 2026. Both the Wilton Rancheria and the Confederated Villages of Lisjan Nation responded with requests to consult, and provided mitigation measures to be implemented as part of the proposed project. The requested mitigation measures have been incorporated into this IS/MND, as presented below.

As discussed previously, an Archaeological Survey Report was conducted for the project site by Alta.[37] Alta requested a SLF search be performed by the NAHC for the immediate project area as part of the Archaeological Survey Report. The Sacred Lands File search returned positive results for the presence of Native American cultural resources in the project area. Additionally, a California Historical Resources Information System (CHRIS) search performed by the NWIC found that four cultural resources exist within a 0.25-mile of the project site; one of the sites, identified as P-07-000105, is a very large multi-component site consisting of a large habitation site, and is composed of midden, burials, hearths, and a complex of artifacts that indicate habitation to approximately 2,800 B.P.

Given the positive results of the NAHC Sacred Lands File search, the findings of the CHRIS search, and input from the tribes, the possibility exists that development of the proposed project could result in a substantial adverse change in the significance of a tribal cultural resource if uncovered during grading or other ground-disturbing activities. Thus, a ***potentially significant*** impact to tribal cultural resources could occur.

Mitigation Measure(s)
The following mitigation measures would reduce the above potential impact to a *less-than-significant* level.

Mitigation Measure 18. ***Native American Monitoring.*** *The project proponent shall contact the Confederated Villages of Lisjan Nation (CVLN) and Wilton Rancheria at least two weeks prior to ground disturbing activities, including any archaeological, geotechnical, or other testing involving ground disturbance to notify the Tribes of these activities should the Tribe(s) choose to monitor. Depending on the results of monitored*

[37] Alta Archaeological Consulting. *Archaeological Survey Report: Clayton Community Church Project, Clayton, Contra Costa County, California*. December 12, 2020.

geotechnical testing and surface survey, the Tribe shall prepare a monitoring plan or determine that monitoring is not required. If monitoring is determined to be necessary for this project, Tribal monitor(s) shall be retained and have the authority to halt and redirect work should any archeological or tribal cultural resources be identified during monitoring. If archeological or Tribal cultural resources are encountered during ground disturbing activities, work within 100 feet of the find must halt and the find must be evaluated for listing in the CRHR and NRHP. Monitoring may be reduced or halted at the discretion of the CVLN or Wilton Rancheria monitor, in consultation with the lead agency, as warranted by conditions such as encountering bedrock, sediments being excavated are fill, negative findings during the first 50 percent of the entire area of ground disturbance, etc. If monitoring is reduced to spot checking, spot checking shall occur when ground disturbing activities move to a new location within the project site and/or when ground disturbance will extend to depths not previously reached (unless those depths are within bedrock).

Mitigation Measure 19. ***Unanticipated Discovery of Tribal Cultural Resources.*** *If cultural resources of Native American origin are identified during grading or excavation of the proposed project, all ground disturbing activities within 100 feet shall cease until a representative from the Wilton Rancheria and Confederated Villages of Lisjan Nation is consulted by the lead agency. If the lead agency in consultation with the consulting Tribe(s), determines that the resource is a tribal cultural resource and thus significant under CEQA and/or the Tribe, the lead agency shall retain a Tribal monitor and, if applicable, a qualified archeologist, to prepare a mitigation plan, which shall be implemented by the lead agency in accordance with state guidelines and in consultation with the consulting Tribe(s). The mitigation plan shall include avoidance of the resource if at all feasible. If avoidance of the resource is not feasible, the plan shall outline appropriate treatment of the resource in coordination with the consulting Tribe. Examples of appropriate mitigation for tribal cultural resources include, but are not limited to: protecting the cultural character and integrity of the resources, protecting traditional use of the resources, protecting the confidentiality of the resources, permanent conservation easements with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places, and/or protecting the resource.*

Mitigation Measure 20. ***Halt Work/Coroner's Evaluation/Impact to Previously Undiscovered Human Remains.*** *If human remains are encountered during construction and/or other ground disturbing activities, all work within 100 feet of the remains shall be redirected and the County Coroner shall be notified immediately. At the same time, an archeologist shall be contacted to assess the situation. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission (NAHC) within 24 hours of this identification. The NAHC shall identify a Native American Most Likely Descendent (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and any associated funerary objects. There shall be no pictures taken or testing done on the Native American human remains. All bone, until identified as non-human remains, shall be treated as potential human remains and the appropriate protocols followed. The archeologist shall record information, as appropriate and in accordance with the recommendations of the MLD and/or Tribal representative. Upon completion of the archeologist's assessment, a report shall be prepared documenting methods and results, as well as recommendations made in consultation with the MLD, regarding the treatment of the human remains and any associated archeological materials. The report shall be submitted to the lead agency, the NWIC and the consulting Tribe. Tribal representatives will rebury the Native American human remains and associated funerary objects with the appropriate dignity, either; in accordance with the recommendations of the MLD if available or in the project vicinity at a location agreed upon between the Tribe and the project proponent, which would be accessible to Tribal members in perpetuity and would not be subject to further disturbance. The discovery and reburial is to be kept confidential and secure to prevent any further disturbance. The location of the reburial shall be documented with GPS coordinates and a Department of Parks and Recreation 523a Primary Record form, and that information shall be submitted to the NWIC.*

Mitigation Measure 21. ***Surface Survey and Site Visit.*** *Once vegetation has been removed within the portion of the project area where ground disturbing activity is planned, the Tribe shall have the opportunity to conduct a surface survey to identify Tribal Cultural Resources that may be visible on the surface. At this time, if determined necessary by the Tribe based on the results of surface survey and any monitored geotechnical or other ground disturbing testing that may be required, the project proponent shall arrange a site visit with the Tribe and agree on an appropriate location for reburial on site in*

the event that any tribal cultural resources are inadvertently discovered during project construction. This location would be accessible to Tribal members in perpetuity and would not be subject to further disturbance through methods such as a conservation easement or deed restriction. Any discovery and reburial is to be kept confidential and secure to prevent any further disturbance.

19. UTILITIES AND SERVICE SYSTEMS.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Would the project:					
a.	Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	□	□	X	□
b.	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	□	□	X	□
c.	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	□	□	X	□
d.	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	□	□	X	□
e.	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	□	□	X	□

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?.....Less-Than-Significant Impact

Discussion (a.)

Brief discussions of water, sewer service, electrical, and telecommunications that would serve the proposed project are included below.

Water

The proposed project would include the replacement of the existing four-inch water line within Pine Hollow Court with an eight-inch water line, as well as the installation of a new eight-inch potable water connection to the line (see Figure 9). The proposed eight-inch water line would provide water to the residences throughout the project site. Potable water service for the project would be provided by the CCWD upon completion of financial arrangements and installation of all necessary water facilities, in accordance with current CCWD and CCCFPD standards. Thus, the proposed project would not require the construction of new off-site water conveyance facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Sewer

As part of the proposed project, a new eight-inch sanitary sewer line would be routed throughout the project site to an existing eight-inch sanitary sewer line in High Street on the project site's eastern frontage. Given that the proposed project would develop 17 single-family units, with approximately 47 residents, and the City has already anticipated residential development on the project site, the proposed project would not result in substantially increased wastewater generation relative to what has been anticipated by the City and accounted for in local planning efforts. In addition, the City of Concord has confirmed that connection with the existing sanitary sewer line in High Street would be adequate to serve the proposed project. As such, the existing sewer infrastructure in the project vicinity would be adequate to serve the proposed project, and construction of substantial new or expanded off-site sewer infrastructure would not be required.

Stormwater Systems

Issues related to stormwater infrastructure are discussed in Section 10, Hydrology and Water Quality, of this IS/MND. As noted therein, the project site would include one DMA, which would drain into a bioretention area in the northern portion of the project site prior to discharging onto the open space hillside parcel in the northeastern portion of the project site (see Figure 10). The proposed project would include the development of a network of catch basins, manholes, and storm drain lines ranging from 15- to 18-inches.

The storm drain lines would direct flows into a manhole, pumping stormwater into the bioretention area in the northern portion of the project site, before flowing to the drainage release area in the open space hillside parcel in the northeastern portion of the project site. The bioretention area would provide for treatment by filtering stormwater through layers of biotreatment soil and rock riprap. The open space hillside parcel would include an 18-inch perforated CMP storm drain line, rock riprap, and field inlets/junction boxes in order to allow stormwater flows to discharge onto the hillside. Consistent with C.3 Standards, the proposed bioretention area would be sized to meet or exceed the minimum volume requirement necessary to adequately handle all runoff from the proposed impervious surfaces and landscaping. Thus, the proposed project would not require the construction of new off-site stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Other Utilities

Electricity and telecommunications utilities would be provided by way of connections to existing infrastructure located within the immediate project vicinity. PG&E would provide electricity services to the project site. The project applicant has indicated that the proposed project will not use natural gas. The proposed project would not require major upgrades to, or extension of, existing infrastructure. Thus, impacts to electricity, natural gas, and telecommunications infrastructure would be less than significant.

Conclusion

Based on the above, the project would result in a ***less-than-significant*** impact related to the relocation or construction of new or expanded water, wastewater treatment, or

stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?.....Less-Than-Significant Impact

Discussion (b.)

According to the CCWD's 2020 Urban Water Management Plan (UWMP), the CCWD does not anticipate any supply deficits in normal years and single-dry years.[38] In future years, multiple dry-year conditions may result in cumulative deficit of water supplies to demand starting sometime after 2025 but definitely projected by 2030. The CCWD's water supply reliability goal is to meet 100 percent of demand in normal years and a minimum of 85 percent of demand during a drought. Any potential supply shortfalls experienced during dry year conditions would be met through the combination of a short-term conservation program or short-term water purchases. CCWD's currently available and planned supplies would be sufficient to meet the District's goal and estimated water demands during average, single-dry, and multiple-dry year conditions during the next 25 years. Given that the CCWD UWMP takes into account future buildout of the service area, and the proposed project would only represent a population increase of approximately 47 residents, water use associated with development of the proposed project site would not substantially exceed the level that has been generally anticipated by the CCWD and the City. Furthermore, the project design would be required to adhere to CBSC requirements for water conservation, such as low-flow plumbing fixtures, as well as the City's water-conserving guidelines for landscaping, as set forth in Chapter 17.80 of the Municipal Code.

Based on the above, sufficient water supplies would be available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. Thus, a ***less-than-significant*** impact would occur.

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?.....Less-Than-Significant Impact

Discussion (c.)

The wastewater collection system within the City of Clayton is owned by Clayton and maintained by the City of Concord. Concord has a contract with Central Contra Costa Sanitary District (CCCSD) to treat wastewater. The CCCSD treatment plant currently treats an average of daily dry-weather flow of 34 million gallons per day (MGD) and 41 MGD of dry-weather flow by 2035. The CCCSD treatment plant's permitted physical capacity is 54 MGD. According to the Growth Management Element of the City of Clayton's General Plan, the plant's maximum capacity of 54 MGD is projected to accommodate buildout until

[38] Contra Costa Water District. *2020 Urban Water Management Plan for the Contra Costa Water District.* June 2021.

the year 2040.[39] Given that the proposed project is would only develop 17 single-family units and result in a population increase of approximately 47 residents, wastewater generation associated with buildout of the project site would not substantially exceed what has been generally anticipated by the City and accounted for in the CCCSD's planning efforts.

Given the CCCSD treatment plant's current surplus capacity, and the fact that the project would result in a minimal increase in the demand for wastewater treatment capacity, adequate capacity exists to accommodate the slight increase in sewer demand that would be created by the proposed project. Therefore, the proposed project would not exceed treatment requirements of the RWQCB, and the CCCSD would be capable of serving the project's projected demand in addition to the CCCSD's existing commitments. Thus, a ***less-than-significant*** impact would occur.

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? .....Less-Than-Significant Impact

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? .....Less-Than-Significant Impact

Discussion (d. and e.)

Solid waste from the City of Clayton is disposed of at Keller Canyon County Landfill. Keller Canyon County Landfill covers 1,399 acres of land, of which 244 acres are permitted for disposal. The maximum permitted throughput for the site allows up to 3,500 tons of waste per day to be managed at the facility. According to the California Department of Resources Recycling and Recovery (CalRecycle), the Keller Canyon Landfill has a remaining capacity of 63,408,410 cubic yards out of a total permitted capacity of 75,018,280 or 85 percent remaining capacity.[40] As such, adequate capacity exists to accommodate the relatively modest amount of waste that would be generated by the proposed project.

The City is required by AB 939 to ensure that it achieves and maintains the diversion and recycling mandates of the State. Construction of the project would comply with the construction and demolition debris recycling requirements of Chapter 15.80 of the City's Municipal Code, which requires that a waste management plan be prepared for both demolition and new construction. The waste management plan must address all materials that would not be acceptable for disposal in the sanitary landfill. Therefore, as the project is required to comply with the City's Municipal Code, and sufficient capacity exists at the Keller Canyon County Landfill, implementation of the proposed project would result in a ***less-than-significant*** impact related to solid waste services.

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[39] City of Clayton. *City of Clayton General Plan Section XI: Growth Management Element* [pg. 16]. Amended July 19, 2016.

[40] California Department of Resources Recycling and Recovery (CalRecycle). *Facility/Site Summary Details: Keller Canyon Landfill (07-AA-0032)*. Available at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4407?siteID=228. Accessed November 2025.

20. WILDFIRE.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:					
a.	Substantially impair an adopted emergency response plan or emergency evacuation plan?	□	□	X	□
b.	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	□	□	X	□
c.	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	□	□	X	□
d.	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	□	□	X	□

a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan? .....Less-Than-Significant Impact

b. Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? .....Less-Than-Significant Impact

c. Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?.....Less-Than-Significant Impact

d. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?.....Less-Than-Significant Impact

Discussion (a., b., c., and d.)

According to the California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program, the project site is not located within or near a State

Responsibility Area or lands classified as a VHFHSZ.[41] The nearest VHFHSZ is approximately 0.26-mile south of the project site. However, according to the Diablo Fire Safe Council, the City of Clayton is located within a Wildfire Urban Interface (WUI). The WUI is defined as an area in which wildlands and communities are sufficiently close to each other to present a credible risk of fire spreading from one to another.[42]

Fire protection services for the Clayton area are provided by the CCCFPD, with the nearest station to the site located on Center Street, approximately 0.4-mile east of the project site. As such, the CCCFPD would be capable of quickly reaching the project site in the event of a wildfire. The potential for wildfire to reach the project site is relatively limited due to surrounding development to the north, east, south, and west, which would act as a fire break in the event of a wildfire. In addition, the proposed project would include improvements to Pine Hollow Court, including widening the existing half-street to a full-width public street with a 45-foot ROW. The improvements to Pine Hollow Court would improve emergency vehicle access to the existing homes on Pine Hollow Court and the project site.

Additionally, development of the proposed project would remove approximately 2.61 acres of combustible grasses within the site, which would substantially reduce the wildfire hazard risk associated with the currently sparsely developed project site. Section 8.08.010 of the City's Municipal Code prohibits dead trees, dry dead shrubs, combustible refuse and waste, or any material growing upon the streets, sidewalks, or upon private property within the City, which by reason of their size, manner of growth, and location, obstruct a public right of way, endanger public health or safety, or constitute a fire hazard to any building, improvements, crops or other property, or when dry will, in reasonable probability, constitute such a fire hazard. Compliance with Section 8.08.010 of the City's Municipal Code and the removal of approximately 2.61 acres of combustible grasses would reduce wildfire hazard risk on the project site.

The proposed project would be designed in compliance with all applicable State and local standards and recommendations for new development, such as the CCCFPD's requirements for providing a water supply system for fire protection, and providing adequate emergency and fire access. The project would be required to provide "defensible space" around on-site structures consistent with CCCFPD guidelines. In addition, in compliance with the CBSC (specifically Section 903.2.1.3, Group A-3), the proposed project would include automatic fire sprinklers, and fire alarm systems would be incorporated pursuant to CFC requirements. Such features would help to address fire situations within the site, which would reduce the demand for fire protection services from the project site. It is also noted that the proposed project does not include installation of any above-ground powerlines that could exacerbate wildfire risk if placed in close proximity to vegetation.

Based on the above, the proposed project would not be subject to substantial risks related to wildfires, and a ***less-than-significant*** impact would occur.

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[41] California Department of Forestry and Fire Protection. *Fire Hazard Severity Zones Map*. Available at: https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones. Accessed October 2025.

[42] Diablo Fire Safe Council. *Community Wildfire Protection Plan Contra Costa County, 2019 Update.* May 26, 2020.

21. MANDATORY FINDINGS OF SIGNIFICANCE.

Issues		Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a.	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 or eliminate important examples of the major periods of California history or prehistory?	□	□	X	□
b.	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	□
c.	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	□	□	X	□

a. 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 or eliminate important examples of the major periods of California history or prehistory? .....Less-Than-Significant Impact

Discussion (a.)

As discussed in Section 4, Biological Resources, of this IS/MND, while a limited potential exists for Crotch and western bumble bee, nesting raptors and songbirds, birds protected by the MBTA, Townsend's big-eared bat and other roosting bats to occur on-site, implementation of Mitigation Measure 1 through Mitigation Measure 6 would ensure that any impacts related to special-status species would be reduced to a less-than-significant level.

The project site contains an existing single-family residence and associated storage structures, which would be demolished prior to project construction. While the structures would be demolished, the structures are not considered to be historic. Therefore, implementation of the proposed project is not anticipated to have the potential to result in significant impacts related to historic resources. Nevertheless, Mitigation Measure 9 would ensure that in the event that historic resources are discovered within the project site, such

resources would be protected in compliance with the requirements of CEQA and other State standards.

Considering the above, the proposed project would not degrade the quality of the environment, substantially reduce or impact the habitat of fish or wildlife species, cause fish or wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Therefore, a ***less-than-significant*** impact would occur.

b. 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)? .....Less-Than-Significant Impact

Discussion (b.)

The proposed project, in conjunction with other development within the City of Clayton, could incrementally contribute to cumulative impacts in the area. However, as demonstrated in this IS/MND, all potential environmental impacts that could occur as a result of project implementation would be reduced to a less-than-significant level through compliance with the mitigation measures included in this IS/MND, as well as applicable General Plan policies, Municipal Code standards, and other applicable local and State regulations.

All cumulative impacts related to air quality, noise, and transportation are either less than significant after mitigation or less than significant and do not require mitigation. Given the scope of the project, any incremental effects would not be considerable relative to the effects of all past, current, and probable future projects. In addition, the proposed project would include the development of 17 single-family units and would result in a population increase of approximately 47 residents; thus, the proposed project would not result in substantially greater impacts beyond that which has been anticipated in the City's planning documents. Therefore, when viewed in conjunction with other closely related past, present, or reasonably foreseeable future projects, development of the proposed project would not result in a cumulatively considerable contribution to cumulative impacts, and the project's incremental contribution to cumulative impacts would be ***less than significant***.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? .....Less-Than-Significant Impact

Discussion (c.)

As described in this IS/MND, the proposed project would comply with all applicable General Plan policies, Municipal Code standards, other applicable local and State regulations, and mitigation measures included herein. In addition, as discussed in Section 7, Geology and Soils; Section 9, Hazards and Hazardous Materials; and Section 13, Noise,

of this IS/MND, the proposed project would not cause substantial effects to human beings, including effects related to exposure to hazardous materials and noise, after mitigation. Therefore, the proposed project would result in a ***less-than-significant*** impact.

VIII. STAFF AND SOURCES

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The following documents are referenced information sources utilized for this analysis:

1. Alta Archaeological Consulting. *Archaeological Survey Report: Clayton Community Church Project, Clayton, Contra Costa County, California*. December 12, 2020.
2. Bay Area Air Quality Management District. *2022 California Environmental Quality Act Guidelines*. April 2023.
3. Bollard Acoustical Consultants, Inc. *Environmental Noise and Vibration Assessment, Clayton Community Church*. January 28, 2021.
4. California Air Resources Board. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005.
5. California Building Standards Commission. *2022 California Green Building Standards Code*. 2023.
6. California Department of Forestry and Fire Protection. *Fire Hazard Severity Zones Map.* Available at: https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones. Accessed October 2025.
7. California Department of Resources Recycling and Recovery (CalRecycle). *Facility/Site Summary Details: Keller Canyon Landfill (07-AA-0032).* Available at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/4407?siteID=228. Accessed November 2025.
8. California Department of Transportation. *California State Scenic Highway System Map*. Available at: https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa. Accessed October 2025.
9. City of Clayton. *2000 General Plan Basis for Planning*. Amended January 17, 2023
10. City of Clayton. *2000 General Plan Land Use Element*. Amended January 17, 2023.
11. City of Clayton. *6th Cycle Housing Element Update and Associated Land Use Element and Zoning Code Amendments, Draft Environmental Impact Report*. August 2022.
12. City of Clayton. *Municipal Code*. Available at: https://library.municode.com/ca/clayton/codes/municipal_code. Accessed September 22, 2025.
13. City of Clayton Department of Community Development. *Clayton 2000 General Plan, Growth Management Element*. Amended July 19, 2016.
14. Contra Costa County, California. *Fire Protection Districts*. Available at: https://www.contracosta.ca.gov/1550/Fire-Protection-Districts. Accessed November 2025.
15. Contra Costa Water District. *2020 Urban Water Management Plan for the Contra Costa Water District.* June 2021.

16. Cornerstone Earth Group. *Geotechnical Investigation: Pine Hollow Residential Development, 1027 Pine Hollow Court, Clayton, California*. June 3, 2025.
17. Department of Toxic Substances Control. *DTSC's Hazardous Waste and Substances Site List – Site Cleanup (Cortese List)*. Available at: https://dtsc.ca.gov/dtscs-cortese-list/. Accessed October 2025.
18. Diablo Fire Safe Council. *Community Wildfire Protection Plan Contra Costa County, 2019 Update*. May 26, 2020.
19. Federal Emergency Management Agency. *FEMA National Flood Hazard Layer (NFHL) Viewer*. Available at: https://msc.fema.gov/portal/home. Accessed November 2025.
20. Geocon Consultants, Inc. *Phase I Environmental Site Assessment Report, Clayton Community Church, 1027 Pine Hollow Court, Clayton, California*. October 8, 2020.
21. Madrone Ecological Consulting. *Biological Resources Assessment, Pine Hollow Court.* November 2025.
22. Mt. Diablo Unified School District. *Developer Fee*. Available at: https://www.mdusd.org/departments/business-services/fiscal-services/new-page. Accessed November 2025.
23. Personal communication between Janet Easton and Nick Pappani, Vice President, Raney Planning and Management, Inc. December 17, 2020.
24. State Water Resources Control Board. *Active CDO and CAO*. Available at: https://calepa.ca.gov/sitecleanup/corteselist/. Accessed October 2025.
25. State Water Resource Control Board. *GeoTracker.* Available at: https://geotracker.waterboards.ca.gov/map/?global_id=T0607302824. Accessed October 2025.
26. TJKM Transportation Consultants. *Draft Transportation Analysis Report 1027 Pine Hollow Court City of Clayton, CA*. October 14, 2025.
27. TJKM Transportation Consultants. *Vehicle Miles Traveled (VMT) Analysis for 1027 Pine Hollow Court in Clayton, California*. October 22, 2025.
28. U.S. Census Bureau. *Clayton city, California: Households and Families*. Available at: https://data.census.gov/table/ACSST5Y2023.S1101?q=Clayton+city,+California. Accessed November 2025.

APPENDIX A

1027 Pine Hollow Court Custom Report

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5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

8. User Changes to Default Data

8.1. Justifications

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	1027 Pine Hollow Court
Construction Start Date	3/1/2027
Operational Year	2029
Lead Agency	City of Clayton
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.6
Precipitation (days)	14
Location	37.94009499630618, -121.93808994112173
County	Contra Costa
City	Clayton
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1341
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.33

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Single Family Housing	17	Dwelling Unit	2.4	33,150	87,120	—	49	—

City Park	0.26	Acre	0.26	0.00	11,291	11,291	—	—
Other Non-Asphalt Surfaces	0.85	Acre	0.85	0.00	0.00	—	—	—
Other Asphalt Surfaces	0.15	Acre	0.15	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.7	3.1	28	29	0.05	1.2	20	21	1.1	10	11	—	5,451	5,451	0.22	0.05	0.51	5,472
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.7	3.1	28	29	0.05	1.2	20	21	1.1	10	11	—	5,438	5,438	0.22	0.11	0.04	5,459
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.9	1.8	12	14	0.02	0.50	7.1	7.6	0.46	3.6	4.1	—	2,524	2,524	0.10	0.03	0.12	2,534
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.35	0.32	2.3	2.5	< 0.005	0.09	1.3	1.4	0.08	0.66	0.75	—	418	418	0.02	< 0.005	0.02	420

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	3.7	3.1	28	29	0.05	1.2	20	21	1.1	10	11	—	5,451	5,451	0.22	0.05	0.51	5,472
2028	2.7	2.5	9.8	14	0.03	0.32	0.07	0.39	0.29	0.02	0.31	—	2,638	2,638	0.11	0.03	0.28	2,649
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	3.7	3.1	28	29	0.05	1.2	20	21	1.1	10	11	—	5,438	5,438	0.22	0.11	0.04	5,459
2028	2.7	2.5	9.8	14	0.03	0.32	0.07	0.39	0.29	0.02	0.31	—	2,633	2,633	0.11	0.03	0.01	2,645
2029	2.6	2.4	9.4	14	0.03	0.29	0.07	0.36	0.27	0.02	0.28	—	2,630	2,630	0.11	0.03	0.01	2,642
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.8	1.5	12	14	0.02	0.50	7.1	7.6	0.46	3.6	4.1	—	2,524	2,524	0.10	0.03	0.12	2,534
2028	1.9	1.8	7.0	10	0.02	0.23	0.05	0.28	0.21	0.01	0.22	—	1,886	1,886	0.08	0.02	0.09	1,895
2029	0.35	0.33	1.1	1.7	< 0.005	0.03	0.01	0.04	0.03	< 0.005	0.03	—	318	318	0.01	< 0.005	0.01	319
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.33	0.28	2.3	2.5	< 0.005	0.09	1.3	1.4	0.08	0.66	0.75	—	418	418	0.02	< 0.005	0.02	420
2028	0.35	0.32	1.3	1.9	< 0.005	0.04	0.01	0.05	0.04	< 0.005	0.04	—	312	312	0.01	< 0.005	0.01	314
2029	0.06	0.06	0.21	0.32	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	—	53	53	< 0.005	< 0.005	< 0.005	53

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.5	1.5	0.42	5.8	0.01	0.01	1.2	1.2	0.01	0.31	0.31	7.5	1,449	1,457	0.83	0.05	3.6	1,497

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.4	1.4	0.49	4.4	0.01	0.01	1.2	1.2	0.01	0.31	0.31	7.5	1,359	1,367	0.83	0.06	0.32	1,405
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.4	1.4	0.45	4.6	0.01	0.01	1.2	1.2	0.01	0.30	0.30	7.5	1,242	1,250	0.81	0.05	1.7	1,287
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.26	0.25	0.08	0.85	< 0.005	< 0.005	0.21	0.21	< 0.005	0.05	0.06	1.2	206	207	0.13	0.01	0.28	213

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.60	0.55	0.41	4.8	0.01	0.01	1.2	1.2	0.01	0.31	0.31	—	1,277	1,277	0.05	0.05	3.4	1,295
Area	0.94	0.93	0.01	0.97	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	107	107	0.02	< 0.005	—	108
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	59	59	0.01	< 0.005	—	59
Water	—	—	—	—	—	—	—	—	—	—	—	1.2	6.6	7.8	0.12	< 0.005	—	12
Waste	—	—	—	—	—	—	—	—	—	—	—	6.3	0.00	6.3	0.63	0.00	—	22
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24	0.24
Total	1.5	1.5	0.42	5.8	0.01	0.01	1.2	1.2	0.01	0.31	0.31	7.5	1,449	1,457	0.83	0.05	3.6	1,497
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.57	0.52	0.49	4.4	0.01	0.01	1.2	1.2	0.01	0.31	0.31	—	1,189	1,189	0.05	0.05	0.09	1,206
Area	0.85	0.85	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	104	104	0.02	< 0.005	—	105
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	59	59	0.01	< 0.005	—	59

Water	—	—	—	—	—	—	—	—	—	—	—	1.2	6.6	7.8	0.12	< 0.005	—	12
Waste	—	—	—	—	—	—	—	—	—	—	—	6.3	0.00	6.3	0.63	0.00	—	22
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24	0.24
Total	1.4	1.4	0.49	4.4	0.01	0.01	1.2	1.2	0.01	0.31	0.31	7.5	1,359	1,367	0.83	0.06	0.32	1,405
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.55	0.50	0.45	4.2	0.01	0.01	1.2	1.2	0.01	0.30	0.30	—	1,173	1,173	0.05	0.05	1.4	1,190
Area	0.89	0.89	< 0.005	0.48	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	3.8	3.8	< 0.005	< 0.005	—	3.9
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	59	59	0.01	< 0.005	—	59
Water	—	—	—	—	—	—	—	—	—	—	—	1.2	6.6	7.8	0.12	< 0.005	—	12
Waste	—	—	—	—	—	—	—	—	—	—	—	6.3	0.00	6.3	0.63	0.00	—	22
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24	0.24
Total	1.4	1.4	0.45	4.6	0.01	0.01	1.2	1.2	0.01	0.30	0.30	7.5	1,242	1,250	0.81	0.05	1.7	1,287
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.10	0.09	0.08	0.76	< 0.005	< 0.005	0.21	0.21	< 0.005	0.05	0.06	—	194	194	0.01	0.01	0.24	197
Area	0.16	0.16	< 0.005	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.64	0.64	< 0.005	< 0.005	—	0.64
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	9.7	9.7	< 0.005	< 0.005	—	9.8
Water	—	—	—	—	—	—	—	—	—	—	—	0.20	1.1	1.3	0.02	< 0.005	—	1.9
Waste	—	—	—	—	—	—	—	—	—	—	—	1.0	0.00	1.0	0.10	0.00	—	3.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Total	0.26	0.25	0.08	0.85	< 0.005	< 0.005	0.21	0.21	< 0.005	0.05	0.06	1.2	206	207	0.13	0.01	0.28	213

3. Construction Emissions Details

3.1. Demolition (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.6	2.2	20	19	0.03	0.80	—	0.80	0.73	—	0.73	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	0.62	0.62	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.27	0.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	47	47	< 0.005	< 0.005	—	47
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.8	7.8	< 0.005	< 0.005	—	7.8
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.47	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	116	116	< 0.005	0.01	0.01	118
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.01	0.62	0.29	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	480	480	0.04	0.08	0.02	504
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.6	1.6	< 0.005	< 0.005	< 0.005	1.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.6	6.6	< 0.005	< 0.005	0.01	6.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.27	0.27	< 0.005	< 0.005	< 0.005	0.27
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.1	1.1	< 0.005	< 0.005	< 0.005	1.1

3.3. Site Preparation (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.6	3.1	28	28	0.05	1.2	—	1.2	1.1	—	1.1	—	5,298	5,298	0.21	0.04	—	5,316
Dust From Material Movement	—	—	—	—	—	—	20	20	—	10	10	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.6	3.1	28	28	0.05	1.2	—	1.2	1.1	—	1.1	—	5,298	5,298	0.21	0.04	—	5,316
Dust From Material Movement	—	—	—	—	—	—	20	20	—	10	10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.2	1.0	9.2	9.3	0.02	0.39	—	0.39	0.35	—	0.35	—	1,742	1,742	0.07	0.01	—	1,748
Dust From Material Movement	—	—	—	—	—	—	6.5	6.5	—	3.3	3.3	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.7	1.7	< 0.005	0.07	—	0.07	0.06	—	0.06	—	288	288	0.01	< 0.005	—	289
Dust From Material Movement	—	—	—	—	—	—	1.2	1.2	—	0.61	0.61	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.64	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	148	148	< 0.005	0.01	0.50	151
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.8	4.8	< 0.005	< 0.005	0.01	5.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.54	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	136	136	< 0.005	0.01	0.01	138
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.8	4.8	< 0.005	< 0.005	< 0.005	5.1
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.17	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	45	45	< 0.005	< 0.005	0.07	46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.6	1.6	< 0.005	< 0.005	< 0.005	1.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.5	7.5	< 0.005	< 0.005	0.01	7.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.28

3.5. Grading (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	1.9	1.6	14	17	0.03	0.60	—	0.60	0.55	—	0.55	—	2,960	2,960	0.12	0.02	—	2,970
Dust From Material Movement	—	—	—	—	—	—	7.1	7.1	—	3.4	3.4	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.9	1.6	14	17	0.03	0.60	—	0.60	0.55	—	0.55	—	2,960	2,960	0.12	0.02	—	2,970
Dust From Material Movement	—	—	—	—	—	—	7.1	7.1	—	3.4	3.4	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.2	1.4	< 0.005	0.05	—	0.05	0.05	—	0.05	—	243	243	0.01	< 0.005	—	244
Dust From Material Movement	—	—	—	—	—	—	0.58	0.58	—	0.28	0.28	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	40	40	< 0.005	< 0.005	—	40

Dust From Material Movement	—	—	—	—	—	—	0.11	0.11	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.55	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	127	127	< 0.005	< 0.005	0.43	129
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.01	0.14	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39	39	0.01	0.01	0.05	41
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.47	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	116	116	< 0.005	0.01	0.01	118
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	0.01	0.15	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39	39	0.01	0.01	< 0.005	41
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.7	9.7	< 0.005	< 0.005	0.02	9.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.2	3.2	< 0.005	< 0.005	< 0.005	3.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.6	1.6	< 0.005	< 0.005	< 0.005	1.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.53	0.53	< 0.005	< 0.005	< 0.005	0.55

3.7. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.2	1.0	9.4	13	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.4	1.9	< 0.005	0.05	—	0.05	0.05	—	0.05	—	352	352	0.01	< 0.005	—	353
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.25	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	58	58	< 0.005	< 0.005	—	58
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.02	0.02	0.02	0.19	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	47	47	< 0.005	< 0.005	< 0.005	48
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	47	47	< 0.005	0.01	< 0.005	49
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.0	7.0	< 0.005	< 0.005	0.01	7.1
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.9	6.9	< 0.005	< 0.005	0.01	7.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.2	1.2	< 0.005	< 0.005	< 0.005	1.2
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.1	1.1	< 0.005	< 0.005	< 0.005	1.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.2	0.99	8.9	13	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.2	0.99	8.9	13	0.02	0.30	—	0.30	0.28	—	0.28	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	0.71	6.4	9.3	0.02	0.22	—	0.22	0.20	—	0.20	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.2	1.7	< 0.005	0.04	—	0.04	0.04	—	0.04	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.21	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51	51	< 0.005	< 0.005	0.16	51
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46	46	< 0.005	0.01	0.09	48
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.18	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	47	47	< 0.005	< 0.005	< 0.005	47
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46	46	< 0.005	0.01	< 0.005	48
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	34	34	< 0.005	< 0.005	0.05	34
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33	33	< 0.005	< 0.005	0.03	35
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.6	5.6	< 0.005	< 0.005	0.01	5.7
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.5	5.5	< 0.005	< 0.005	< 0.005	5.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.2	0.97	8.6	13	0.02	0.28	—	0.28	0.25	—	0.25	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.0	1.5	< 0.005	0.03	—	0.03	0.03	—	0.03	—	286	286	0.01	< 0.005	—	287

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.19	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	47	47	< 0.005	< 0.005	—	48
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.17	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	46	46	< 0.005	< 0.005	< 0.005	46
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	45	45	< 0.005	0.01	< 0.005	47
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.5	5.5	< 0.005	< 0.005	0.01	5.6
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.3	5.3	< 0.005	< 0.005	< 0.005	5.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.92	0.92	< 0.005	< 0.005	< 0.005	0.93
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.89	0.89	< 0.005	< 0.005	< 0.005	0.93
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.79	0.66	6.1	8.8	0.01	0.24	—	0.24	0.22	—	0.22	—	1,350	1,350	0.05	0.01	—	1,355
Paving	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.17	0.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37	37	< 0.005	< 0.005	—	37
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.1	6.1	< 0.005	< 0.005	—	6.1
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.62	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	155	155	< 0.005	0.01	0.01	157
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.3	4.3	< 0.005	< 0.005	0.01	4.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.71	0.71	< 0.005	< 0.005	< 0.005	0.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.1	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134

Architectural Coating	1.3	1.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.10	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16	16	< 0.005	< 0.005	—	16
Architectural Coatings	0.16	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.6	2.6	< 0.005	< 0.005	—	2.6
Architectural Coatings	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.5	9.5	< 0.005	< 0.005	< 0.005	9.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.1	1.1	< 0.005	< 0.005	< 0.005	1.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.19	0.19	< 0.005	< 0.005	< 0.005	0.19
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.1	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	1.3	1.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.13	0.11	0.81	1.1	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	1.3	1.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.58	0.80	< 0.005	0.01	—	0.01	0.01	—	0.01	—	96	96	< 0.005	< 0.005	—	96
Architectural Coatings	0.95	0.95	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.11	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16	16	< 0.005	< 0.005	—	16
Architectural Coatings	0.17	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10	10	< 0.005	< 0.005	0.03	10

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.3	9.3	< 0.005	< 0.005	< 0.005	9.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.8	6.8	< 0.005	< 0.005	0.01	6.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.1	1.1	< 0.005	< 0.005	< 0.005	1.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Architectural Coating (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.79	1.1	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134

Architect Coatings	1.3	1.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20	20	< 0.005	< 0.005	—	20
Architectural Coatings	0.20	0.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.2	3.2	< 0.005	< 0.005	—	3.3
Architectural Coatings	0.04	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.2	9.2	< 0.005	< 0.005	< 0.005	9.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.4	1.4	< 0.005	< 0.005	< 0.005	1.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.60	0.55	0.41	4.8	0.01	0.01	1.2	1.2	0.01	0.31	0.31	—	1,277	1,277	0.05	0.05	3.4	1,295
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.60	0.55	0.41	4.8	0.01	0.01	1.2	1.2	0.01	0.31	0.31	—	1,277	1,277	0.05	0.05	3.4	1,295
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.57	0.52	0.49	4.4	0.01	0.01	1.2	1.2	0.01	0.31	0.31	—	1,189	1,189	0.05	0.05	0.09	1,206
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.57	0.52	0.49	4.4	0.01	0.01	1.2	1.2	0.01	0.31	0.31	—	1,189	1,189	0.05	0.05	0.09	1,206
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.10	0.09	0.08	0.76	< 0.005	< 0.005	0.21	0.21	< 0.005	0.05	0.06	—	194	194	0.01	0.01	0.24	197
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.10	0.09	0.08	0.76	< 0.005	< 0.005	0.21	0.21	< 0.005	0.05	0.06	—	194	194	0.01	0.01	0.24	197

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	59	59	0.01	< 0.005	—	59
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	59	59	0.01	< 0.005	—	59
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	59	59	0.01	< 0.005	—	59
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	59	59	0.01	< 0.005	—	59
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	9.7	9.7	< 0.005	< 0.005	—	9.8
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	9.7	9.7	< 0.005	< 0.005	—	9.8

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	104	104	0.02	< 0.005	—	105
Consumer Products	0.72	0.72	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.09	0.08	0.01	0.97	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.6	2.6	< 0.005	< 0.005	—	2.6
Total	0.94	0.93	0.01	0.97	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	107	107	0.02	< 0.005	—	108
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	104	104	0.02	< 0.005	—	105
Consumer Products	0.72	0.72	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.85	0.85	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	104	104	0.02	< 0.005	—	105
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	0.00	0.43	0.43	< 0.005	< 0.005	—	0.43
Consumer Products	0.13	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.02	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landsca Equipment	0.01	0.01	< 0.005	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.21	0.21	< 0.005	< 0.005	—	0.21
Total	0.16	0.16	< 0.005	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.64	0.64	< 0.005	< 0.005	—	0.64

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1.2	5.7	6.9	0.12	< 0.005	—	11
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.83	0.83	< 0.005	< 0.005	—	0.83
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.2	6.6	7.8	0.12	< 0.005	—	12
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1.2	5.7	6.9	0.12	< 0.005	—	11
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.83	0.83	< 0.005	< 0.005	—	0.83

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.2	6.6	7.8	0.12	< 0.005	—	12
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.20	0.95	1.1	0.02	< 0.005	—	1.8
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.14	0.14	< 0.005	< 0.005	—	0.14
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.20	1.1	1.3	0.02	< 0.005	—	1.9

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	6.3	0.00	6.3	0.63	0.00	—	22
City Park	—	—	—	—	—	—	—	—	—	—	—	0.01	0.00	0.01	< 0.005	0.00	—	0.04

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.3	0.00	6.3	0.63	0.00	—	22
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	6.3	0.00	6.3	0.63	0.00	—	22
City Park	—	—	—	—	—	—	—	—	—	—	—	0.01	0.00	0.01	< 0.005	0.00	—	0.04
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.3	0.00	6.3	0.63	0.00	—	22
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	1.0	0.00	1.0	0.10	0.00	—	3.7
City Park	—	—	—	—	—	—	—	—	—	—	—	< 0.005	0.00	< 0.005	< 0.005	0.00	—	0.01
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.0	0.00	1.0	0.10	0.00	—	3.7

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24	0.24
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24	0.24
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24	0.24
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24	0.24
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	3/1/2027	3/5/2027	5.0	5.0	—
Site Preparation	Site Preparation	3/8/2027	8/20/2027	5.0	120	—
Grading	Grading	8/23/2027	10/1/2027	5.0	30	—
Building Construction	Building Construction	10/18/2027	3/2/2029	5.0	360	—
Paving	Paving	10/4/2027	10/15/2027	5.0	10.0	—
Architectural Coating	Architectural Coating	11/1/2027	3/16/2029	5.0	360	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	2.0	8.0	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.0	33	0.73
Demolition	Excavators	Diesel	Average	3.0	8.0	36	0.38
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.0	8.0	84	0.37
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.0	8.0	367	0.40
Grading	Graders	Diesel	Average	1.00	8.0	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.0	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.0	8.0	84	0.37
Grading	Excavators	Diesel	Average	1.00	8.0	36	0.38
Building Construction	Cranes	Diesel	Average	1.00	7.0	367	0.29
Building Construction	Forklifts	Diesel	Average	3.0	8.0	82	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.0	14	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.0	7.0	84	0.37
Building Construction	Welders	Diesel	Average	1.00	8.0	46	0.45

Paving	Tractors/Loaders/Back	Diesel	Average	1.00	8.0	84	0.37
Paving	Pavers	Diesel	Average	1.00	8.0	81	0.42
Paving	Paving Equipment	Diesel	Average	2.0	6.0	89	0.36
Paving	Rollers	Diesel	Average	2.0	6.0	36	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	2.0	6.0	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.0	37	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	Worker	15	12	LDA,LDT1,LDT2
Demolition	Vendor	—	8.4	HHDT,MHDT
Demolition	Hauling	7.0	20	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	Worker	18	12	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.4	HHDT,MHDT
Site Preparation	Hauling	1.0	0.90	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	15	12	LDA,LDT1,LDT2
Grading	Vendor	—	8.4	HHDT,MHDT
Grading	Hauling	8.3	0.90	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	6.1	12	LDA,LDT1,LDT2
Building Construction	Vendor	1.8	8.4	HHDT,MHDT
Building Construction	Hauling	0.00	20	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	20	12	LDA,LDT1,LDT2

Paving	Vendor	—	8.4	HHDT,MHDT
Paving	Hauling	0.00	20	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	1.2	12	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.4	HHDT,MHDT
Architectural Coating	Hauling	0.00	20	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	67,129	22,376	0.00	0.00	2,614

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	3,000	0.00
Site Preparation	—	1,000	180	0.00	0.00
Grading	2,000	—	30	0.00	0.00
Paving	0.00	0.00	0.00	0.00	1.2

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	Single Family Housing	0.19	0%
Paving	City Park	0.00	0%
Paving	Other Non-Asphalt Surfaces	0.85	0%
Paving	Other Asphalt Surfaces	0.15	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00	204	0.03	< 0.005
2028	0.00	204	0.03	< 0.005
2029	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	160	162	145	57,875	1,689	1,707	1,530	609,069
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
Single Family Housing	Wood Fireplaces	0	0
Single Family Housing	Gas Fireplaces	0	0
Single Family Housing	Propane Fireplaces	0	0
Single Family Housing	Electric Fireplaces	17	17
Single Family Housing	No Fireplaces	0	0
Single Family Housing	Conventional Wood Stoves	0	0
Single Family Housing	Catalytic Wood Stoves	0	0
Single Family Housing	Non-Catalytic Wood Stoves	0	0
Single Family Housing	Pellet Wood Stoves	0	0
City Park	Wood Fireplaces	0	0
City Park	Gas Fireplaces	0	0
City Park	Propane Fireplaces	0	0
City Park	Electric Fireplaces	0	0
City Park	No Fireplaces	0	0
City Park	Conventional Wood Stoves	0	0
City Park	Catalytic Wood Stoves	0	0
City Park	Non-Catalytic Wood Stoves	0	0
City Park	Pellet Wood Stoves	0	0
Other Non-Asphalt Surfaces	Wood Fireplaces	0	0
Other Non-Asphalt Surfaces	Gas Fireplaces	0	0
Other Non-Asphalt Surfaces	Propane Fireplaces	0	0
Other Non-Asphalt Surfaces	Electric Fireplaces	0	0
Other Non-Asphalt Surfaces	No Fireplaces	0	0
Other Non-Asphalt Surfaces	Conventional Wood Stoves	0	0
Other Non-Asphalt Surfaces	Catalytic Wood Stoves	0	0
Other Non-Asphalt Surfaces	Non-Catalytic Wood Stoves	0	0

Other Non-Asphalt Surfaces	Pellet Wood Stoves	0	0
Other Asphalt Surfaces	Wood Fireplaces	0	0
Other Asphalt Surfaces	Gas Fireplaces	0	0
Other Asphalt Surfaces	Propane Fireplaces	0	0
Other Asphalt Surfaces	Electric Fireplaces	0	0
Other Asphalt Surfaces	No Fireplaces	0	0
Other Asphalt Surfaces	Conventional Wood Stoves	0	0
Other Asphalt Surfaces	Catalytic Wood Stoves	0	0
Other Asphalt Surfaces	Non-Catalytic Wood Stoves	0	0
Other Asphalt Surfaces	Pellet Wood Stoves	0	0

5.10.2. Architectural Coatings

—	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
undefined	67,129	22,376	0.00	0.00	2,614

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	105,143	204	0.0330	0.0040	0.00
City Park	0.00	204	0.0330	0.0040	0.00

Other Non-Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	618,670	1,270,854
City Park	0.00	299,466
Other Non-Asphalt Surfaces	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	12	0.00
City Park	0.02	0.00
Other Non-Asphalt Surfaces	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.5	2.5	10.0

Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.0	4.0	18
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

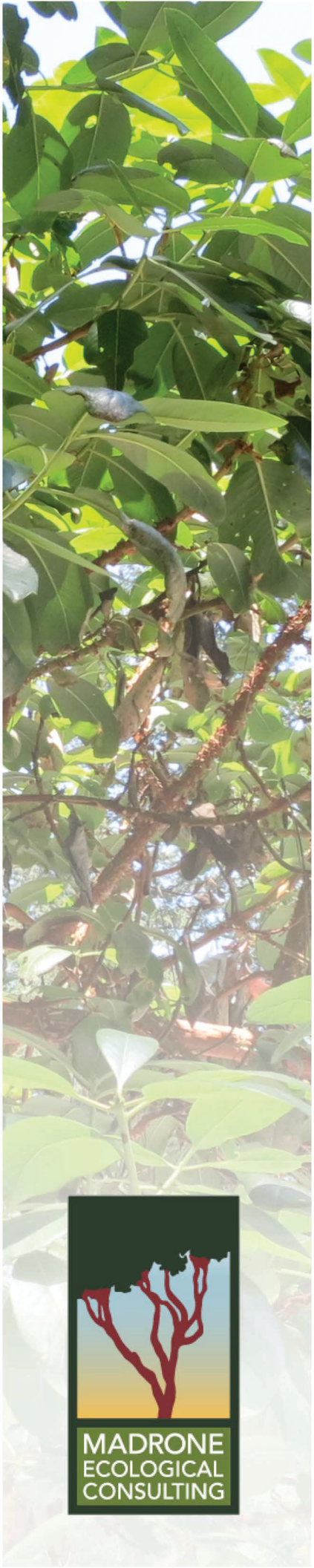
Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	Lot acreage adjusted to represent overall acreage of the project site. The City Park land use is representative of the Parklet and the Storm Water Drainage Basin. The Other Non-Asphalt Surfaces is representative of the area of disturbance due to sanitary sewer lines and the pedestrian trail. The Other Asphalt Surfaces is representative of the improvements to Pine Hollow Court.
Construction: Construction Phases	Based on typical construction practices, architectural coating assumed to start two weeks after the start of building construction and last for the same number of days. Phase timing is based on the project-specific construction schedule provided by the applicant.
Construction: Trips and VMT	The hauling trip length for site preparation and grading phases have been updated to reflect applicant provided information.
Operations: Vehicle Data	The city park land use is representative of the Parklet and the Storm Water Drainage Basin, which would only serve the residents on-site. Thus, the city park land use trip rates have been zeroed out.
Operations: Hearths	Based on applicant provided information, all 17 units have the potential to include electric fireplaces.
Operations: Energy Use	The project applicant has indicated the proposed project would not use natural gas during operations.

APPENDIX B



Biological Resources Assessment

Pine Hollow Court

City of Clayton, Contra Costa County, California

November 2025

MADRONE ECOLOGICAL CONSULTING

Prepared for:
Ponderosa Homes II, Inc.
5020 Franklin Drive, Suite 200
Pleasanton, CA 94588

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Attachments

Attachment A. 1027 Pine Hollow Court Preliminary Site Plan
Attachment B. IPaC Trust Resource Report for the Study Area
Attachment C. CNPS Inventory of Rare and Endangered Plants Query for the "Clayton, California" USGS Quadrangle and Eight Surrounding Quadrangles
Attachment D. Wildlife List
Attachment E. Locally-Rare Plant Species
Attachment F. Special-Status Plant Survey Report for Pine Hollow Court
Attachment G. Preliminary Arborist Report – 1027 Pine Hollow Court

1.0 INTRODUCTION

This report presents the results of a Biological Resources Assessment (BRA) conducted for the Clayton Community Church Project (Study Area) (**Figure 1**). The 4.7-acre Study Area is located east of Pine Hollow Court, north of High Street, west of Mitchell Creek, and south of Mt. Diablo Elementary School in the City of Clayton, Contra Costa County, California. The Study Area is located in a portion of Section 14 of Township 1 North and Range 1 West (MDB&M) of the "*Clayton, California*" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2018) (**Figure 1**).

1.1 Project Description

The Proposed Project is a small residential subdivision with associated roadways and utility infrastructure. The preliminary site plan is included as **Attachment A**.

2.0 REGULATORY SETTING

This section describes federal, state and local laws and policies that are relevant to this assessment of biological resources.

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 protects species that are federally listed as endangered or threatened with extinction. FESA prohibits the unauthorized "take" of listed wildlife species. Take includes harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such activities. Harm includes significant modifications or degradations of habitats that may cause death or injury to protected species by impairing their behavioral patterns. Harassment includes disruption of normal behavior patterns that may result in injury to or mortality of protected species. Civil or criminal penalties can be levied against persons convicted of unauthorized "take." In addition, FESA prohibits malicious damage or destruction of listed plant species on federal lands or in association with federal actions, and the removal, cutting, digging up, damage, or destruction of listed plant species in violation of state law. FESA does not afford any protections to federally listed plant species that are not also included on a state endangered species list on private lands with no associated federal action.

2.1.2 Clean Water Act, Section 404

Section 404 of the Federal Clean Water Act requires that a Department of the Army permit be issued prior to the discharge of dredged or fill material into waters of the United States, including some wetlands. The U.S. Army Corps of Engineers (USACE) administers this program, with oversight from the U.S. Environmental Protection Agency. As of the date of this document, waters of the United States (waters of the U.S.) are defined as follows (40 CFR 120.2):

1. Waters which are:
    i. Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
    ii. The territorial seas; or
    iii. Interstate waters;
2. Impoundments of waters otherwise defined as waters of the U.S. under this definition, other than impoundments of waters identified under item (5) below;
3. Tributaries of waters identified in items (1) or (2) above that are relatively permanent, standing or continuously flowing bodies of water;
4. Wetlands adjacent to the following waters:
    i. Waters identified in item (1) of this section; or
    ii. Relatively permanent, standing or continuously flowing bodies of water identified in items (2) or (3) above and with a continuous surface connection to those waters;
5. Intrastate lakes and ponds not identified in paragraphs (1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in items (1) or (3) above.

Under the current definition of waters of the U.S., "adjacent" means *having a continuous surface connection*.

Waters subject to regulation under Section 404 are referred to as "jurisdictional waters".

2.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter, any native migratory bird, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11.). Likewise, Section 3513 of the California Fish & Game Code prohibits the "take or possession" of any migratory non-game bird identified under the MBTA. Therefore, activities that may result in the injury or mortality of native migratory birds, including eggs and nestlings, would be prohibited under the MBTA.

2.1.4 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (as amended) provides for the protection of bald eagle and golden eagle by prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit [16 USC 668(a); 50 CFR 22]. The USFWS may authorize take of bald eagles and golden eagles for activities where the take is associated with, but not the purpose of, the activity and cannot practicably be avoided (50 CFR 22.26).

2.2 State Regulations

2.2.1 California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires evaluations of project effects on biological resources. Determining the significance of those effects is guided by Appendix G of the CEQA guidelines. These evaluations must consider direct effects on a biological resource within the project site itself, indirect effects on adjacent resources, and cumulative effects within a larger area or region. Effects can be locally important but not significant according to CEQA if they would not substantially affect the regional population of the biological resource. Significant adverse impacts on biological resources would include the following:

- Substantial adverse effects on any species identified as candidate, sensitive, or special-status in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife (CDFW) or the U.S. Fish and Wildlife Service (USFWS) (these effects could be either direct or via habitat modification);
- Substantial adverse impacts to species designated by the California Department of Fish and Game (2009) as Species of Special Concern;
- Substantial adverse effects on riparian habitat or other sensitive habitat identified in local or regional plans, policies, or regulations or by CDFW and USFWS;
- Substantial adverse effects on federally protected wetlands defined under Section 404 of the Clean Water Act (these effects include direct removal, filling, or hydrologic interruption of marshes, vernal pools, coastal wetlands, or other wetland types);
- Substantial interference with movements of native resident or migratory fish or wildlife species population, or with use of native wildlife nursery sites;
- Conflicts with local policies or ordinances protecting biological resources (e.g., tree preservation policies); and
- Conflict with provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan.

2.2.2 State Endangered Species Act

With limited exceptions, the California Endangered Species Act (CESA) of 1984 protects state-designated endangered and threatened species in a way similar to FESA. For projects on private property (i.e., that for which a state agency is not a lead agency), CESA enables CDFW to authorize take of a listed species that is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish & Game Code Section 2081).

2.2.3 California Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles,

birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESAs. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code, § 4700 for mammals, § 3511 for birds, § 5050 for reptiles and amphibians, and § 5515 for fish) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species. CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit.

2.2.4 California Species of Special Concern

The Species of Special Concern (SSC) are defined by CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under the federal or California ESAs or the California Fish and Game Code, but currently satisfies one or more of the following criteria:

- The species has been completely extirpated from the state or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role.
- The species is listed as federally (but not state) threatened or endangered or meets the state definition of threatened or endangered but has not formally been listed.
- The species has or is experiencing serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status.
- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for state threatened or endangered status.

SSC are typically associated with habitats that are threatened. Project-related impacts to SSC, state-threatened or endangered species are considered "significant" under CEQA.

2.2.5 Native Plant Protection Act

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

2.2.6 Clean Water Act, Section 401

Section 401 of the Clean Water Act requires any applicant for a 404 permit in support of activities that may result in any discharge into waters of the U.S. to obtain a water quality certification with the Regional Water Quality Control Board (RWQCB). This program is meant to protect these waters and wetlands by ensuring that waste discharged into them meets state water quality standards. Because the water quality certification

program is triggered by the need for a Section 404 permit (and both programs are a part of the Clean Water Act), the definition of waters of the U.S. under Section 401 is the same as that used by the USACE under Section 404.

2.2.7 California Water Code, Porter-Cologne Act

Waters that are not considered waters of the U.S. may be considered waters of the State of California (waters of the State) under the Porter-Cologne Water Quality Control Act (Porter-Cologne). Porter-Cologne, from Division 7 of the California Water Code, requires any person discharging waste or proposing to discharge waste that could affect the quality of waters of the state to file a report of waste discharge (RWD) with the RWQCB. The RWQCB can waive the filing of a report, but once a report is filed, the RWQCB must either waive or adopt waste discharge requirements (WDRs). Waters of the State are defined as any surface water or groundwater, including saline waters, within the boundaries of the state of California.

2.2.8 California Fish and Game Code, Section 1600 – Streambed and Lake Alteration

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. T o meet this responsibility, the Fish and Game Code, Section 1602, requires notification to CDFW of any proposed activity that may substantially modify a river, stream, or lake. Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will:

- substantially divert or obstruct the natural flow of any river, stream or lake;
- substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

For the purposes of Section 1602, rivers, streams and lakes includes those that are dry for periods of time as well as those that flow year round. If notification is required and CDFW believes the proposed activity is likely to substantially adversely affect fish and wildlife resources, it will require that the parties enter into a Lake or Streambed Alteration Agreement (LSAA).

2.2.9 California Fish and Game Code, Section 3503.5 - Raptor Nests

Section 3503.5 of the Fish and Game Code makes it unlawful to take, possess, or destroy hawks or owls, unless permitted to do so, or to destroy the nest or eggs of any hawk or owl.

2.2.10 California Fish and Game Code, Section 3511, 4700, 5050, and 5515 – Fully Protected Species

California Fish and Game Code identifies "fully protected species" in sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish). The state initially identified fully protected species in the 1960s to identify and provide additional protection to animals that were rare or faced possible extinction.

Subsequent passage of the California Endangered Species Act has offered additional protection to some fully protected species.

Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research, relocation of the bird species for the protection of livestock, or if they are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan (NCCP).

2.3 Local Regulations

2.3.1 City of Clayton Tree Ordinance

Chapter 15.70 of the Clayton City Code (Tree Ordinance) establishes the requirement for a permit or development application required prior to the removal of trees (City of Clayton 2025). The Tree Ordinance defines trees as:

> *a live woody plant having a single perennial stem or a multi-stemmed perennial plant which is over fifteen (15) feet in height at maturity.*

The Tree Ordinance states that a Tree Removal Permit shall be obtained prior to the removal of:

A. A tree with a single trunk or multiple trunks with a cumulative trunk diameter of six (6) inches or greater, located on private or public property; or

B. A tree of any size specifically required to be planted as part of a development application, landscape plan, or tree replacement plan approved by the City after April 1, 2005.

2.3.2 California Native Plant Society – Locally Rare Plants

A list of locally rare plant species has been developed by the East Bay Chapter of the California Native Plant Society (*The Database of Rare, Unusual and Significant Plants of Alameda and Contra Costa Counties*), and is available on-line at https://ebcnps.org/database-of-rare-unusual-and-significant-plants-of-alameda-and-contra-costa-counties/. The plant species included in this database are locally rare and are usually included in CEQA analysis.

2.3.3 East Contra Costa County Habitat Conservation Plan

The Study Area is within the *East Contra Costa County Habitat Conservation Plan / Natural Community Conservation Plan* (ECCCHCP) Area. The ECCCHCP provides regional conservation and development guidelines to protect natural resources while improving and streamlining the permit process for endangered species and wetland regulations. The ECCCHCP provides streamlined permits from the USFWS and CDFW that allows project proponents to receive their endangered species approvals at the local planning counter.

The ECCCHCP requires stream setbacks on many streams within the ECCCHCP area. Chapter 6 of the ECCCHCP identifies the Study Area as an "Urban Area" and identifies the portion of Mitchell Canyon Creek as a reach within an urban area. Table 6-2 of the ECCCHCP states that intermittent streams in urban areas

require a 50-foot setback from the top of bank. Necessary bridges and outfalls are allowed within this setback, up to 15% of the setback area.

3.0 METHODOLOGY

3.1 Literature Review

A list of special-status species with potential to occur within the Study Area was developed by conducting a query of the following databases:

- California Natural Diversity Database (CNDDB) (CNDDB 2025) query of the Study Area and all areas within 5 miles of the Study Area (**Figures 2** and **3**);
- USFWS Information for Planning and Conservation (IPaC) (USFWS 2025) query for the Study Area (**Attachment B**);
- California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2025) query of the "Clayton, California" USGS topo quadrangle, and the eight surrounding quadrangles (**Attachment C**);
- Western Bat Working Group (WBWG) Species Matrix (WBWG 2025); and
- East Bay Chapter of the California Native Plant Society's *The Database of Rare, Unusual and Significant Plants of Alameda and Contra Costa Counties* available on-line at https://ebcnps.org/database-of-rare-unusual-and-significant-plants-of-alameda-and-contra-costa-counties/.

In addition, any special-status species that are known to occur in the region, but that were not identified in any of the above database searches were also analyzed for their potential to occur within the Study Area.

For the purposes of this Biological Resources Assessment, special-status species is defined as those species that are:

- listed as threatened or endangered, or proposed or candidates for listing by the USFWS or National Marine Fisheries Service;
- listed as threatened or endangered and candidates for listing by CDFW;
- identified as Fully Protected species or species of special concern by CDFW;
- identified as Medium or High priority species by the WBWG (WBWG 2025); and
- plant species considered to be rare, threatened, or endangered in California by the CNPS and CDFW [California Rare Plant Rank (CRPR) 1, 2, and 3]:
    - CRPR 1A: Plants presumed extinct.
    - CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere.
    - CRPR 2A: Plants extirpated in California, but common elsewhere.
    - CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere.
    - CRPR 3: Plants about which the CNPS needs more information – a review list.
- Plant species considered to be locally rare by CNPS.

While the locally-rare plant species are locally of sufficient rarity to be considered under CEQA, statewide, they are more common. As a result, these species are not tracked by the spatially-searchable CNDDB or

the CNPS Inventory. There are 22 A-ranked plant species that are not CRPR-listed included in the *Database of Rare, Unusual and Significant Plants of Alameda and Contra Costa Counties* for grasslands below 600 feet in the Concord/Clayton/Walnut Creek area (which includes the Study Area). These species are not included in **Table 1** for brevity, but a list of these species has been provided in **Attachment D** for use in the rare plant survey.

3.2 Field Surveys

Madrone senior biologist Daria Snider conducted field surveys of the Study Area on 30 June 2025 and 7 March and 15 April 2025 to assess the suitability of habitats on-site to support special-status species. Meandering pedestrian surveys were performed on foot throughout the Study Area. Vegetation communities were classified in accordance with *Manual of California Vegetation, Second Edition* as updated online (CNPS 2025), primarily accessed online (CNPS 2025), and plant taxonomy was based on the nomenclature in the Jepson eFlora (Jepson Flora Project 2025). A list of all wildlife species observed during field surveys is included as **Attachment E**.

Concurrent with the 2025 field surveys, Ms. Snider conducted protocol-level special-status plant surveys (**Attachment F**) (Madrone 2025), and an aquatic resources delineation, conducted in accordance with USACE protocol.

4.0 EXISTING CONDITIONS

The Study Area is surrounded by urban residential development to the west and south, a school to the north, and the Mitchell Creek corridor to the east, beyond which is urban commercial development. The western portion of the Study Area is a relatively flat terrace, which drops off down a moderately steep hill through an abandoned walnut orchard to Mitchell Creek, and its associated narrow riparian woodland along the eastern edge of the Study Area (**Figure 4**). Elevations range from approximately 400 feet to 450 feet above mean sea level. The Study Area is almost entirely comprised of annual brome grassland with scattered trees. A barn is present in the northwestern corner, and a rural residence is present just south of the southern boundary of the site. A narrow portion of Pine Hill Court and a gravel driveway occur along the western boundary. A narrow strip of Valley oak (*Quercus lobata*) riparian woodland occurs along Mitchell Canyon Creek along the eastern edge. The majority of the trees within the Study Area are Valley oaks (*Quercus lobata*) and black walnut (*Juglans hindsii*). There are a number of fruit trees around the residence, as well as scattered black walnut, which appear to be stump sprouts from the historic orchard, and a few very large Italian stone pines (*Pinus pinea*).

The majority of the Study Area is comprised of annual brome grassland, which is dominated by ripgut brome (*Bromus diandrus*) and wild oat (*Avena fatua*). A number of native and non-native forbs are also prevalent, including Menzies' fiddleneck (*Amsinckia menziesii*), common fiddleneck (*Amsinckia intermedia*), field marigold (*Calendula arvensis*), purple vetch (*Vicia benghalensis*), winter vetch (*Vicia villosa ssp. varia*), black mustard (*Brassica nigra*), Italian thistle (*Carduus pycnocephalus*), and milk thistle (*Silybum marianum*).

A thin band of Valley oak riparian woodland occurs along Mitchell Canyon Creek. This woodland is dominated by Valley oak and California buckeye (*Aesculus californica*), with an understory dominated by poison-oak (*Toxicodendron diversilobum*). Scattered California bay (*Umbellularia californica*), and toyon (*Heteromeles arbutifolia*) also occur. The herbaceous layer is dominated by sterile brome (*Bromus sterilis*) and goose grass (*Galium aparine*), with Douglas' mugwort (*Artemisia douglasiana*) and Robert's geranium (*Geranium robertianum*) also occurring.

4.1 Aquatic Resources

A protocol-level aquatic resources delineation was conducted for the Study Area, and only one aquatic resource was found; 0.005 acre of the perennial Mitchell Canyon Creek along the eastern edge (**Figure 4**). This feature has a bed comprised of gravel/small cobble and is entirely unvegetated within the channel. Due to some incision, there is virtually no herbaceous hydrophytic vegetation along the banks, but above the banks, it supports the Valley oak riparian woodland described above.

4.2 Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey Database (NRCS 2025), three soil mapping units occur within the Study Area (**Figure 5**): (PaC) Perkins gravelly loam, 2 to 9 percent slopes, (PaD) Perkins gravelly loam, 9 to 15 percent slopes, and Zamora silty clay loam, 0 to 3 percent slopes, MLRA 14. The Perkins and Zamora soils are deep and very deep, well drained soils that formed in alluvium derived from mixed rock sources. (NRCS 2025). They are not derived from serpentine parent material, and are not considered saline, alkaline, or acidic (NRCS 2025).

5.0 RESULTS

Table 1 provides a list of special-status species that were evaluated, including their listing status, habitat associations, and their potential to occur in the Study Area. The following set of criteria was used to determine each species' potential for occurrence on the site:

- Present: Species occurs on the site based on CNDDB records, and/or was observed on the site during field surveys.
- High: The site is within the known range of the species and suitable habitat exists.
- Moderate: The site is within the known range of the species and very limited suitable habitat exists.
- Low: The site is within the known range of the species and there is marginally suitable habitat or the species was not observed during protocol-level surveys conducted on-site.
- Absent: The species was not observed during protocol-level floristic surveys conducted throughout the Study Area.
- No Habitat Present: The site does not contain suitable habitat for the species, or the site is outside the known range of the species.

Figures 2 and **3** are exhibits displaying CNDDB occurrences within five miles of the Study Area. Below is a discussion of all special-status plant and animal species with potential to occur on the site.

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Plants				
Amsinckia grandiflora Large-flowered fiddleneck	FE	CE, CRPR 1B.1	Steep, somewhat mesic slopes in grasslands and woodlands (elevation 885'-1,805').	**No Habitat Present.** Study Area is below the elevational range for the species, and mesic areas are not present.
Amsinckia lunaris Bent-flowered fiddleneck	--	CRPR 1B.2	Found in cismontane woodland, valley and foothill grasslands, and coastal bluff scrub (elevation 10'-1,640').	**Absent.** Suitable habitat is present throughout the Study Area, but this species was not detected during the 2025 protocol-level rare plant survey.
Arctostaphylos auriculata Mt. Diablo manzanita	--	CRPR 1B.3	Found in cismontane woodland and chaparral with sandstone (elevation 445'-2,135').	**No Habitat Present.** Study Area does not contain sandstone chaparral or woodlands.
Arctostaphylos manzanita ssp. *laevigata* Contra Costa manzanita	--	CRPR 1B.2	Grows on rocky soils in chaparral (elevation 1,410' – 3,610').	**No Habitat Present.** Study Area is outside of the elevational range and does not contain rocky chaparral.
Astragalus tener var. tener Alkali milk-vetch	--	CRPR 1B.2	Occurs in playas, valley and foothill grassland (adobe clay), and vernal pools (elevation 5'-195').	**No Habitat Present.** Study Area is outside of the elevational range for the species, and alkaline mesic areas are not present.
Atriplex cordulata var. cordulata Heartscale	--	CRPR 1B.2	Grows in grasslands with sandy alkaline or saline soils (elevation 0'-1,835').	**No Habitat Present.** Alkaline soils are not present within the Study Area.
Atriplex depressa Brittlescale	--	CRPR 1B.2	Prefers meadows or grasslands, chenopod scrub, vernal pools, in alkaline or saline clay soils (elevation 5'-1,050').	**No Habitat Present.** Alkaline soils are not present within the Study Area.
Blepharizonia plumosa Big tarplant	--	CRPR 1B.1	Found on clay soils in grasslands (elevation 98'-1,657').	**No Habitat Present.** Clay soils are not present within the Study Area.

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Calochortus pulchellus Mt. Diablo fairy-lantern	--	CRPR 1B.2	Found in chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland adjacent to habitats (elevation 98'–2,756').	**Absent.** Marginally suitable habitat is present throughout the Study Area, but this species was not detected during the 2025 protocol-level rare plant survey.
Centromadia parryi ssp. *congdonii* Congdon's tarplant	--	CRPR 1B.1	Valley and foothill grassland with alkaline soils (elevation 0'–755').	**No Habitat Present.** Alkaline soils are not present within the Study Area.
Chloropyron molle ssp. *molle* Soft salty bird's-beak	FE	CR, CRPR 1B.2	Favors marshes and swamps with coastal salt (elevation 0'-10').	**No Habitat Present.** No coastal salt marshes or swamps present.
Cicuta maculata var. bolanderi Bolander's water-hemlock	--	CRPR 2B.1	Coastal, fresh, or brackish marshes and swamps (elevation 0'–656').	**No Habitat Present.** No coastal marshes or swamps present.
Cordylanthus nidularius Mt. Diablo bird's-beak	--	CR, CRPR 1B.1	Serpentinite substrates in chaparral (elevation 1,969'–2,625').	**No Habitat Present.** Study Area does not contain serpentine or chaparral.
Cryptantha hooveri Hoover's cryptantha	--	CRPR 1A	Coarse sandy soils in Valley Grassland communities (elevation 30'–492').	**No Habitat Present.** Coarse sandy soils do not occur within the Study Area.
Delphinium californicum ssp. *interius* Hospital Canyon larkspur	--	CRPR 1B.2	Openings in chaparral, mesic areas of cismontane woodland, and coastal scrub habitats (elevation 640'–3,595').	**No Habitat Present.** Study Area does not contain chaparral, woodland, or coastal scrub.
Dirca occidentalis Western leatherwood	--	CRPR 1B.2	Mesic areas in broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, and riparian woodland (elevation 82' – 1,394').	**No Habitat Present.** Study Area does not contain any of the shrub or forest habitats that this species is found in.
Downingia pusilla Dwarf downingia	--	CRPR 2B.2	Mesic areas in valley and foothill grassland, and vernal pools (elevation 3' – 1,460').	**No Habitat Present.** Study Area does not contain mesic areas.

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Eriastrum ertterae Lime Ridge eriastrum	--	CRPR 1B.1	Alkaline or semi-alkaline, sandy substrates in openings or along the edges of chaparral (elevation 656′ – 951′).	**No Habitat Present.** Study Area does not contain alkaline soils, sandy soils, or chaparral.
Eriogonum nudum var. psychicola Antioch Dunes buckwheat	--	CRPR 1B.1	Inland dunes (elevation 0′ – 66′).	**No Habitat Present.** No dunes present.
Eriogonum truncatum Mt. Diablo buckwheat	--	CRPR 1B.1	Sandy soils in chaparral, coastal scrub, valley and foothill grassland (elevation 10′ – 1,148′).	**No Habitat Present.** Study Area does not contain sandy soils.
Eryngium jepsonii Jepson's coyote-thistle	--	CRPR 1B.2	Occurs in vernal pools, valley and foothill grasslands (elevation 10′-985′).	**No Habitat Present.** Study Area does not contain clay soils or mesic areas.
Erysimum capitatum var. angustatum Contra Costa wallflower	FE	CE, CRPR 1B.1	Found in inland dunes (elevation 10′ – 66′).	**No Habitat Present.** No dunes present.
Eschscholzia rhombipetala Diamond-petaled California poppy	--	CRPR 1B.1	Valley and foothill grassland within alkaline, clay soils (elevation 0′-2,300′).	**No Habitat Present.** Study Area does not contain alkaline or clay soils.
Extriplex joaquinana San Joaquin spearscale	--	CRPR 1B.2	Found in seasonal alkali wetlands or alkali sink scrub (elevation 5′-2,740′).	**No Habitat Present.** Study Area does not contain alkaline soils.
Fritillaria liliacea Fragrant fritillary	--	CRPR 1B.2	Found in cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grasslands, often on serpentine soils (elevation 10′-1,350).	**Absent.** Marginally suitable habitat is present in the annual brome grasslands within the Study Area, but this species was not detected during the 2025 protocol-level rare plant survey.
Grimmia torenii Toren's grimmia	--	CRPR 1B.3	Openings, rocky substrates, boulder and rock walls, carbonate substrates, and volcanic substrates in chaparral, cismontane woodland, and lower montane coniferous forest (elevation 1,066′ – 3,806′).	**No Habitat Present.** Study Area does not contain any of the shrub or forest habitats that this species is found in.

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Helianthella castanea Diablo helianthella	--	CRPR 1B.2	Found in azonal soil and rock in shaded broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland (elevation 195′-4,265′).	**No Habitat Present.** Study Area does not contain rocky, azonal soils or any of the shrub or forest habitats that this species is found in.
Hesperolinon breweri Brewer's western flax		CRPR 1B.2	Found in chaparral, cismontane woodland, and valley and foothill grassland with serpentinite soils (elevation 100′- 3,100′).	**No Habitat Present.** Serpentine soils do not occur within the Study Area.
Hoita strobilina Loma Prieta hoita	--	CRPR 1B.1	Found in mesic serpentine soils in chaparral, cismontane woodland, or riparian woodland (elevation 100′-2,820′).	**No Habitat Present.** Serpentine soils do not occur within the Study Area.
Isocoma arguta Carquinez goldenbush	--	CRPR 1B.1	Alkaline soils in valley and foothill grasslands (elevation 3′ – 66′).	**No Habitat Present.** Study Area is outside of this species' distributional range, and no alkaline soils are present.
Lasthenia conjugens Contra Costa goldfields	FE	CRPR 1B.1	Found in mesic areas in cismontane woodland and annual grassland and in alkaline playas and vernal pools (elevation 0′-1,540′).	**No Habitat Present.** Study Area does not contain alkaline soils or mesic areas.
Lathyrus jepsonii var. jepsonii Delta tule pea	None	CRPR 1B.2	Prefers tidally influenced channels, brackish marshes and swamps (elevation 0′-5′).	**No Habitat Present.** No marshes occur within the Study Area.
Lilaeopsis masonii Mason's lilaeopsis	--	CR, CRPR 1B.1	Prefers brackish or freshwater swamps, intertidal marshes, and riparian scrub (elevation 0′-35′).	**No Habitat Present.** No marshes or riparian scrub occur within the Study Area.

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Limosella australis Delta mudwort	--	CRPR 2B.1	Favors freshwater and brackish marshes, swamps, or riparian scrub. Usually found in muddy banks in the Delta. (elevation 0'-10').	**No Habitat Present.** No marshes or riparian scrub occur within the Study Area.
Madia radiata Showy golden madia	--	CRPR 1B.1	Cismontane woodland and valley and foothill grassland (elevation 82' – 3,986').	**Absent.** Suitable habitat for this species is present in the Annual Brome Grasslands throughout the Study Area, but this species was not detected during the 2025 protocol-level rare plant survey.
Malacothamnus hallii Hall's bush-mallow	--	CRPR 1B.2	Found in chaparral and coastal scrub (elevation 32' – 2,493').	**No Habitat Present.** No chaparral or coastal scrub occurs within the Study Area.
Micropus amphibolus Mt. Diablo cottonweed	--	CRPR 3.2	Rocky areas in chaparral, forests and woodlands, and grassland (elevation 145' - 2,705').	**No Habitat Present.** No rocky areas are present within the Study Area.
Monardella antonina ssp. *antonina* San Antonio Hills monardella	--	CRPR 3	Found in chaparral and cismontane woodland (elevation 1,050'-3,280').	**No Habitat Present.** No chaparral or woodland occurs within the Study Area.
Monolopia gracilens Woodland woolythreads	--	CRPR 1B.2	Serpentinite substrates in openings in broadleafed upland forest and chaparral, cismontane woodland, openings in North Coast coniferous forest, and valley and foothill grassland (elevation 328' – 3,937').	**No Habitat Present.** No serpentine soils occur within the Study Area.
Navarretia gowenii Lime Ridge navarretia	--	CRPR 1B.1	Occurs in chaparral (elevation 591' – 1,001').	**No Habitat Present.** Study Area does not contain chaparral.

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Navarretia nigelliformis ssp. *radians* Shining navarretia	--	CRPR 1B.2	Forb-rich openings in valley or foothill grassland, vernal pools, and cismontane woodland sometimes on clay soils (elevation 215′ – 3,281′).	**Absent.** Marginally suitable habitat for this species occurs within the Study Area, but this species was not detected during the 2025 protocol-level rare plant survey.
Neostapfia colusana Colusa grass	FT, CH	CE, CRPR 1B.1	Large vernal pools with clay soils (elevation 16′ – 656′).	**No Habitat Present.** No vernal pools occur within the Study Area.
Oenothera deltoides ssp. *howellii* Antioch Dunes evening-primrose	FE	CE, CRPR 1B.1	Found in inland dunes (elevation 0′ – 98′).	**No Habitat Present.** No dunes present.
Phacelia phacelioides Mt. Diablo phacelia	--	CRPR 1B.2	Rocky areas in chaparral and cismontane woodland habitats (elevation 1,640′–4495′).	**No Habitat Present.** No chaparral or woodland occurs within the Study Area.
Plagiobothrys hystriculus Bearded popcornflower	--	CRPR 1B.1	Often in mesic areas of valley and foothill grassland and vernal pool margins (elevation 0′ – 900′).	**No Habitat Present.** Study Area does not contain mesic areas.
Puccinellia simplex California alkali grass	--	CRPR 1B.2	Alkaline, vernally mesic areas in sinks, flats and lake margins in chenopod scrub, meadows and seeps, valley and foothill grassland, and vernal pools (elevation 7′ – 3,051′).	**No Habitat Present.** Alkaline soils and/or mesic areas do not occur within the Study Area.
Ravenella exigua Chaparral harebell	--	CRPR 1B.2	Chaparral (rocky, usually serpentinite) (elevation 900′-4,100′).	**No Habitat Present.** Study Area does not contain chaparral.
Sanicula saxatilis Rock sanicle	--	CR, CRPR 1B.2	Rocky, scree, and talus substrates in broadleafed upland forest, chaparral, and valley and foothill grassland (elevation 2,034′ – 3,855′).	**No Habitat Present.** Outside of the elevational range of the species, and no rocky substrates occur within the Study Area.
Senecio aphanactis Chaparral ragwort	--	CRPR 2B.2	Sometimes alkaline soils in chaparral, cismontane woodland, coastal scrub (elevation 49′ – 2,625′).	**No Habitat Present.** No chaparral, scrub or woodland occurs within the Study Area.

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Sidalcea keckii Keck's checkerbloom	FE	CRPR 1B.1	Serpentinite clay soils in cismontane woodland and valley and foothill grasslands (elevation 245' - 2,135').	**No Habitat Present.** No serpentine soils occur within the Study Area.
Spergularia macrotheca var. longistyla Long-styled sand-spurrey	--	CRPR 1B.2	Found in alkaline soils in marshes and swamps, meadows and seeps (elevation 0'-855').	**No Habitat Present.** Alkaline soils and/or mesic areas do not occur within the Study Area.
Streptanthus albidus ssp. *peramoenus* Most beautiful jewelflower	--	CRPR 1B.2	Serpentinite soils in chaparral, cismontane woodland, and valley and foothill grassland (elevation 312' – 3,281').	**No Habitat Present.** No serpentine soils occur within the Study Area.
Streptanthus hispidus Mt. Diablo jewelflower	--	CRPR 1B.3	Rocky soils in chaparral and valley and foothill grassland (elevation 1,200' – 3,935').	**No Habitat Present.** Outside of the elevational range of the species, and no rocky substrates occur within the Study Area.
Stuckenia filiformis ssp. *alpina* Northern slender pondweed	--	CRPR 2B.2	Assorted shallow freshwater marshes and swamps (elevation 984' – 7,054').	**No Habitat Present.** No marshes occur within the Study Area.
Stuckenia striata Broadleaf pondweed	--	CRPR 2B.3	Found in marshes and swamps (elevation 230'-7005')	**No Habitat Present.** No marshes occur within the Study Area.
Symphyotrichum lentum Suisun Marsh aster	--	CRPR 1B.2	Occurs in fresh and salt water marshes, often associated with cattails (*Typha* spp.), bulrushes (*Scirpus* spp. or *Schoenoplectus* spp.), and blackberries (*Rubus* spp.) (elevation 0'-10').	**No Habitat Present.** No marshes occur within the Study Area.
Trifolium hydrophilum Saline clover	--	CRPR 1B.2	Grows in marshes, swamps, and vernal pools with alkaline soils (elevation 0'-985').	**No Habitat Present.** Study Area does not contain mesic areas or alkaline soils.
Triquetrella californica Coastal triquetrella	--	CRPR 1B.2	Found in coastal bluff scrub and coastal scrub (elevation 33' – 328').	**No Habitat Present.** No coastal scrub occurs within the Study Area.
Tropidocarpum capparideum Caper-fruited tropidocarpum	--	CRPR 1B.1	Valley and foothill grassland (alkaline hills) (elevation 5'–1,495').	**No Habitat Present.** Study Area does not contain alkaline soils.

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Viburnum ellipticum Oval-leaved viburnum	--	CRPR 2B.3	Found in chaparral, cismontane woodlands, and lower cismontane coniferous forests generally on north-facing slopes or otherwise more mesic areas (elevation 700'-4,600').	**No Habitat Present.** No chaparral or woodland occurs within the Study Area.
Invertebrates				
Bombus crotchii Crotch's bumble bee	--	CC	Occurs in open grasslands and scrub habitats. This species occurs primarily in California including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of southwestern California (William et al 2014). This species was historically common in the Central Valley of California, but now appears to be absent from most of it, especially in the center of its historic range (Williams et al. 2014; Richardson et al 2014).	**Moderate.** The annual grasslands within the Study Area appear to support appropriate floral resources at least during spring, but very few ground squirrel burrows that represent potential nesting and overwintering habitat.
Bombus occidentalis Western bumble bee	--	CC	Meadows and grasslands with the blended floral resources are the appropriate habitat for this sub-species. While the Western bumble bee was historically known throughout the mountains and northern coast of California, it is now largely confined to high elevation sites and a small handful of records on the northern California coast.	**Moderate.** The annual grasslands within the Study Area appear to support appropriate floral resources at least during spring, but very few ground squirrel burrows that represent potential nesting and overwintering habitat.

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Branchinecta lynchi Vernal pool fairy shrimp	FT	--	Occurs in vernal pools.	**No Habitat Present.** No vernal pools are present in the Study Area.
Callophrys mossii bayensis San Bruno elfin butterfly	FE	--	Inhabits rocky outcrops and cliffs in coastal scrub on the San Francisco peninsula. - OR - Found on fog-influenced mountains in San Mateo and Marin counties, and on Mount Diablo (CNDDB 2019). It lives near prolific growths of the larval food plant, broadleaf stonecrop (*Sedum spathulifolium*), which is associated with rocky outcrops (often in the shade) that occur on steep, mainly north- facing slopes from 200 to 5,000 ft.	**No Habitat Present.** Rocky outcrops with extensive populations of broadleaf stonecrop do not occur within the Study Area.
Danaus plexippus Monarch butterfly	FC	--	Migratory species; most prevalent in the Central Valley in summer and early fall. Dependent upon milkweed (*Asclepias* species) plants as their exclusive larval host.	**No Habitat Present.** No milkweed plants were detected within the Study Area.
Fish				
Hypomesus transpacificus Delta smelt	FT	CE	Adults are found in the brackish open surface waters of the Delta and Suisun Bay. Though spawning has never been observed, it is believed to occur in tidally influenced sloughs and drainages on the freshwater side of the mixing zone.	**No Habitat Present.** No tidally influenced drainages are present within the Study Area.

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Amphibians				
Ambystoma californiense California tiger salamander Central California DPS	FT	CT, CSC	Breeds in ponds or other deeply ponded wetlands and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	**No Habitat Present.** This site is an infill within urban development. No ponds are present in the immediate vicinity, and any that may be present further out are separated from the site by urban residential areas.
Rana boylii Foothill yellow-legged frog Central Coast DPS	FT	CE	Prefers gravelly or sandy streams with open banks near woodlands.	**No Habitat Present.** No creek occurs within the Study Area, and this highly aquatic species rarely access uplands adjacent to aquatic habitat. Furthermore, although this species was documented in Mitchell Creek upstream of the Study Area, it is considered extirpated from the area.
Rana draytonii California red-legged frog	FT	CSC	Breeds in permanent to semi-permanent aquatic habitats including lakes, ponds, marshes, creeks, and other drainages.	**Moderate.** Marginally suitable aquatic habitat occurs in Mitchell Creek within the Study Area. This species has been documented in Mitchell Creek and a reservoir upstream of the Study Area. Although the aquatic habitat within the Study Area is not suitable for breeding, there is a very low potential that the species could use Mitchell Creek within the Study Area for dispersal. Given the low quality of the aquatic habitat and the lack of dense vegetation

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name (Common Name)	Federal Status[1]	State Status[1]	Habitat Requirements	Potential for Occurrence
				adjacent, the species is not expected to utilize the uplands within the Study Area.
Spea hammondii Western spadefoot	FPT	CSC	Breeds in vernal pools, seasonal wetlands and associated swales. Forages and hibernates in adjacent grasslands.	**No Habitat Present.** This site is an infill within urban development. No suitable aquatic habitat is present in the immediate vicinity, and any that may be present further out are separated from the site by urban residential areas.
Reptiles				
Actinemys marmorata Northwestern pond turtle	FPT	CSC	Occurs in ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	**Low.** Mitchell Canyon Creek within the Study Area represents marginal aquatic habitat for this species due to the shallow depth and lack of adjacent vegetation. The adjacent riparian woodland represents marginally suitable upland habitat for the species.
Masticophis lateralis euryxanthus Alameda whipsnake	FT	CT	Occurs in coastal scrub and chaparral communities, but also forages in a variety of other communities in the inner Coast Range, including grasslands and open woodlands. Rock outcrops with deep crevices or abundant rodent burrows are important habitat components.	**No Habitat Present.** The Study Area is an infill site that is almost entirely surrounded by urban residential development. A snake would have to follow a very narrow corridor of riparian vegetation almost a mile from the nearest undeveloped habitat, including across several roadways. This seems excessively unlikely. The nearest documented occurrence of

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
				this species is 1.25 miles south of the Study Area (CNDDB 2025).
Phrynosoma blainvillii Coast (Blainville's) Horned Lizard	--	CSC	Open areas of sandy soil and low vegetation in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. Often found in lowlands along sandy washes with scattered shrubs and along dirt roads, and frequently found near ant hills.	**No Habitat Present.** The soils within the Study Area are not sandy, and the grassland is dense. The only open areas are in the immediate vicinity of the occupied residence and along the roadside, where suitable soils are lacking.
Thamnophis gigas Giant garter snake	FT	CT	Occurs in rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	**No Habitat Present.** Outside of the distributional range of the species.
Birds				
Agelaius tricolor Tricolored blackbird	--	CE, CSC	Colonial nester in cattails (*Typha* spp.), bulrushes (*Scirpus* spp. or *Schoenoplectus* spp.), blackberries (*Rubus* spp.), non-native mustards (*Brassica* spp.), thistles (*Cirsium* spp.), and mallows (*Malva* spp.) associated with marsh habitat sand in Triticale agriculture fields. Nesting habitat may be as small as 0.01 acres adjacent to suitable foraging habitat such as grazed grasslands, irrigated pasture, shallow wetlands, and agricultural fields.	**No Nesting Habitat Present.** Dense vegetation does not occur within the Study Area. May forage seasonally.

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Aquila chrysaetos Golden eagle	--	CFP	Forages in open areas including grasslands, savannahs, deserts, and early successional stages of shrub and forest communities. Nests in large trees and cliffs.	**No Habitat Present.** The numerous trees and the small isolated patch size preclude this very large raptor species from foraging within the Study Area.
Athene cunicularia Burrowing owl	--	CC, CSC	Nests in abandoned ground squirrel (*Otospermophilus beecheyi*) burrows associated with open grassland habitats.	**Low.** The small, isolated nature of the site, the density of the grassland, and the almost complete lack of ground squirrel burrows make the Study Area extremely marginal habitat for this species.
Buteo swainsoni Swainson's hawk	--	CT	Nests in large trees, preferably in riparian areas. Forages in fields, cropland, irrigated pasture, and grassland near large riparian corridors. Patches of foraging habitat must be of sufficient size to support this species; CDFG has determined that patches five acres or more in size are the minimum acreage required for viable foraging habitat (CDFG 1994).	**No Habitat Present.** The small isolated patch size preclude this species foraging or nesting.
Circus hudsonius (formerly *C. cyaneus*) Northern harrier	--	CSC	Nests in emergent wetland/marsh, open grasslands, or savannah habitats. Forages in open areas such as marshes, agricultural fields, and grasslands.	**No Habitat Present.** The numerous trees and the small isolated patch size preclude this species presence.
Elanus leucurus White-tailed kite	--	CFP	Open grasslands, fields, and meadows are used for foraging. Isolated trees in close proximity to foraging habitat are used for perching and nesting.	**Low.** The numerous trees and the small isolated patch size make the Study Area extremely marginal foraging habitat for this species.

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Gymnogyps californianus California condor	FE	CE	Forage in foothill grassland, oak savannah, and other open areas.	**No Habitat Present.** The small isolated patch size precludes this species foraging or nesting.
Lanius ludovicianus Loggerhead shrike	--	CSC	Occurs in open areas with sparse trees, shrubs, and other perches.	**Moderate.** The small isolated patch size and the tall, dense grassland make the Study Area low quality habitat for this species.
Rallus obsoletus obsoletus California Ridgway's Rail (formerly *Rallus longirostris obsoletus,* California clapper rail)	FE	CE, CFP	San Francisco and San Pablo Bay tidal marshes and sloughs, with pickleweed (*Salicornia* spp.), cordgrass (*Spartina* spp.), and gum plant (*Grindelia* spp.).	**No Habitat Present.** No tidal marshes occur within the Study Area.
Sternula antillarum browni California least tern	FE	CE	Exposed tidal flats and beaches	**No Habitat Present.** Study Area lacks suitable nesting habitat.
Mammals				
Antrozous pallidus Pallid bat	--	CSC, WBWG H	Day and night roots include crevices in rocky outcrops and cliffs, caves, mines, trees, and various human structures such as bridges, barns, porches, bat boxes, and human-occupied as well as vacant buildings. Roosts generally have unobstructed entrances/exits, and are high above the ground, warm, and inaccessible to terrestrial predators; however, this species has also been found roosting on or near the ground under burlap sacks, stone piles, rags, and baseboards.	**High.** The trees throughout the Study Area and the barn in the northwestern portion of the Study Area provide suitable roosting habitat for this species.

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Corynorhinus townsendii Townsend's big-eared bat	--	CSC, WBWG H	Roosts in caves and cave analogues, such as abandoned mines, buildings, bridges, rock crevices and large basal hollows of coast redwoods (*Sequoia sempervirens*) and giant sequoia (*Sequoiadendron giganteum*). Extremely sensitive to human disturbance (WBWG 2025).	**Low.** The barn in the northwestern portion of the Study Area provides marginally suitable roosting habitat for this species.
Lasiurus frantzii (formerly *L. blossevillii*) Western red bat	--	CSC, WBWG H	Requires large leaf trees such as cottonwoods (*Populus* species), willows (*Salix* species), and fruit/nut trees for daytime roosts. Often associated with wooded habitats that are protected from above and open below. Often found in association with riparian corridors. Requires open space for foraging.	**High.** Trees scattered throughout the site are suitable roosting habitat for this species.
Lasiurus cinereus Hoary bat	--	WBWG M	Roosts primarily in foliage of both coniferous and deciduous trees at the edges of clearings (WBWG 2025).	**High.** The abandoned walnut trees and the Valley oak riparian woodland provide suitable roosting habitat for this species.
Neotoma fuscipes annectens San Francisco dusky footed woodrat	--	CSC	Typically found in dense chaparral, forests and woodlands with heavy undergrowth.	**No Habitat Present.** Dense chaparral or woodlands are not present.
Taxidea taxus American badger	--	CSC	This species prefers dry open fields, grasslands, and pastures.	**No Habitat Present.** The small patch size, low habitat quality, and infill nature of this site preclude this species' presence.

Table 1. Special-Status Species with Potential to Occur within the Study Area

Scientific Name **(Common Name)**	**Federal Status[1]**	**State Status[1]**	**Habitat Requirements**	**Potential for Occurrence**
Vulpes macrotis mutica San Joaquin kit fox	FE	CT	Favors open habitats with scattered shrubby vegetation. Requires loose sandy soils for excavation of dens.	**No Habitat Present.** The small patch size, low habitat quality, and infill nature of this site preclude this species' presence.

[1] *Status Codes:*

CC - CDFW Candidate for Listing *CE - CDFW Endangered* *CFP - CDFW Fully Protected* *CRPR - California Rare Plant Rank* *CR - California Rare*
CSC - CDFW Species of Concern *CT - CDFW Threatened* *FE - Federally Endangered* *FT - Federally Threatened* *FC - Federal Candidate for Listing*
WBWG H - Western Bat Working Group High Threat Rank *WBWG M - Western Bat Working Group Medium Threat Rank*

5.1 Plants

5.1.1 Bent-Flowered Fiddleneck

Bent-flowered fiddleneck (*Amsinckia lunaris*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in chaparral, cismontane woodland, and valley and foothill grasslands (CNPS 2025). Bent-flowered fiddleneck blooms from March through June and is known to occur at elevations ranging from approximately 10 feet to 1,640 feet above MSL (CNPS 2025).

Bent-flowered fiddleneck has not been documented within five miles of the Study Area (CNDDB 2025, CCH 2025, CalFlora 2025). Marginally suitable habitat for this species is present in the Annual Brome Grasslands throughout the Study Area. This species was not observed during the 2025 protocol-level plant surveys throughout the Study Area.

5.1.2 Mt. Diablo Fairy Lantern

Mt. Diablo fairy lantern (*Calochortus pulchellus*) is not federally or state listed, but it is classified as a CRPR List 1B.2 species. This species is perennial bulb that occurs in chaparral, cismontane and riparian woodlands, and valley and foothill grasslands (CNPS 2025). Mt. Diablo fairy lantern blooms from April through June and is known to occur from approximately 98 feet to 2,755 feet above MSL (CNPS 2025).

Nineteen occurrences of Mt. Diablo fairy lantern have been documented within five miles of the Study Area in the CNDDB, the nearest of which is located approximately 1.5 miles south of the site, in Mitchell Canyon (CNDDB 2025). Marginally suitable habitat for this species is present in the Annual Brome Grasslands throughout the Study Area. This species was not observed during the 2025 protocol-level plant surveys throughout the Study Area.

5.1.3 Fragrant Fritillary

Fragrant fritillary (*Fritillaria liliacea*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a perennial bulbiferous herb that is found in cismontane woodland, coastal prairie, coastal scrub, and Valley and foothill grassland, often on serpentine soils (CNPS 2025). Fragrant fritillary blooms from February through April and is known to occur from 10 to 1,345 feet above MSL (CNPS 2025).

Fragrant fritillary has not been documented in the CNDDB within five miles of the Study Area (CNDDB 2025); however, there is one record in CalFlora approximately five miles southwest of the Study Area (CalFlora 2025). Marginally suitable habitat for this species is present in the Annual Brome Grasslands throughout the Study Area. This species was not observed during the 2025 protocol-level plant surveys throughout the Study Area.

5.1.4 Showy Golden Madia

Showy golden madia (*Madia radiata*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in cismontane woodland and Valley and foothill grasslands (CNPS 2025). Showy golden madia blooms between March and May and is known to occur at elevations ranging from 82 to 3,986 feet above MSL (CNPS 2025).

One CNDDB record of showy golden madia has been documented approximately 4.5 miles east of the Study Area, and several records in the same general location are documented in the CCH (CNDDB 2025, CCH 2025). All of these records are from the late 1800's and early to mid1900's; this species has not been documented in the Bay Area since 1941 (CalFlora 2025). Marginally suitable habitat for this species is present in the Annual Brome Grasslands throughout the Study Area. This species was not observed during the 2025 protocol-level plant surveys throughout the Study Area.

5.1.5 Shining Navarretia

Shining navarretia (*Navarretia nigelliformis* ssp. *radians*) is not federally or state listed, but it is classified as a CRPR List 1B.2 species. This annual herb is primarily associated with forb-rich openings in cismontane woodland and valley and foothill grassland, often on clay soils (CNPS 2025). Shining navarretia occurs at elevations between approximately 210 feet and 3,280 feet, and typically blooms from April through July (CNPS 2019).

Shining navarretia has not been documented in the CNDDB within five miles of the Study Area (CNDDB 2025). Marginally suitable habitat for this species is present in the Annual Brome Grasslands throughout the Study Area. This species was not observed during the 2025 protocol-level plant surveys throughout the Study Area.

5.1.6 Locally Rare Plant Species

There are 22 A-ranked plant species that are not CRPR-listed included in the *Database of Rare, Unusual and Significant Plants of Alameda and Contra Costa Counties* for grasslands below 600 feet in the Concord/Clayton/Walnut Creek area (which includes the Study Area). These species are not included in **Table 1** for brevity, but a list of these species has been provided in **Attachment D**. No locally rare plant species were observed during the 2025 protocol-level plant surveys throughout the Study Area.

5.2 Invertebrates

5.2.1 Crotch Bumble Bee

Crotch bumble bee (*Bombus crotchii*) has a limited distribution in southwestern North America. This species occurs primarily in California, including the Mediterranean region, Pacific Coast, West Desert, Great Valley, and adjacent foothills through most of southwestern California. It also occurs in Mexico (Baja California and

Baja California Sur) (Williams et al. 2014) and has been documented in southwest Nevada, near the California border.

In California, *B. crotchii* inhabits open grasslands and scrub habitats. This species occurs primarily in California including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of southwestern California (William et al 2014). This species was historically common in the Central Valley of California, but now appears to be absent from most of it, especially in the center of its historic range (Williams et al. 2014). There is one documented occurrence of this species within five miles of the Study Area located approximately 2.5 miles north within the City of Antioch (CNDDB 2025). This occurrence was documented in 1926 and exact location is unknown.

One CNDDB record of Crotch bumblebee was documented approximately four miles southeast of the Study Area in 1951 (CNDDB 2025). The annual grasslands within the Study Area provide suitable habitat for this species.

5.2.2 Western Bumble Bee

Western bumble bee (*Bombus occidentalis occidentalis*) was historically broadly distributed across the West Coast of North America from southern British Columbia to central California, east through Alberta and western South Dakota, and south to Arizona and New Mexico (Williams et al 2014). In California, it has been documented in Alameda, Alpine, Calaveras, Contra Costa, Del Norte, El Dorado, Fresno, Humboldt, Lake, Lassen, Madera, Marin, Mariposa, Mendocino, Modoc, Monterey, Napa, Nevada, Placer, Plumas, San Benito, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Tehama, Trinity, Tulare, Yolo, and Yuba counties (Xerces Society et al. 2018).

Meadows and grasslands with the blended floral resources are the appropriate habitat for this sub-species. While the Western bumble bee was historically known throughout the mountains and northern coast of California, it is now largely confined to high elevation sites and a small handful of records on the northern California coast (Williams et al. 2014; Xerces Society et al. 2018).

Four records of western bumblebee have been documented within five miles of the Study Area, the most recent of which is from 1974 (CNDDB 2025). The annual grasslands within the Study Area provide suitable habitat for this species.

5.3 Amphibians

5.3.1 California Red-Legged Frog

The California red-legged frog (*Rana draytonii*) (CRLF) is federally listed as threatened and is a CDFW species of special concern. CRLF is the largest native frog in the western United States, ranging from 1.5 to 5 inches in length. Their historic range extends through Pacific slope drainages and parts of the Central Valley from Shasta County, California, to Baja, Mexico. This area includes the Coast Ranges and the west slope of the

Sierra Nevada at elevations below 1,548 m (5,000 feet). The current range is greatly reduced, with most remaining populations occurring along the coast from Marin County to Ventura County and in isolated locations in the foothills of the western slope of the Sierra Nevada (Fellers 2005; Barry and Fellers 2013).

CRLF occur in different habitats depending on life stage, season, and weather conditions. Breeding habitat includes coastal lagoons, marshes, springs, permanent and semi-permanent natural ponds, and ponded and backwater portions of streams. California red-legged frogs also breed in artificial impoundments including stock ponds, irrigation ponds, and siltation ponds. Creeks and ponds with dense growths of woody riparian vegetation, especially willows (*Salix* spp.) are used disproportionally (Hayes and Jennings 1988). The absence of vegetation at an aquatic site does not rule out the possibility of occupancy. Adult CRLF are most often found in areas of dense, shrubby or emergent riparian vegetation near deep [≥ 0.6 - 0.9 m (2 - 3 feet)], still or slow-moving water, especially where dense stands of overhanging willow and an intermixed fringe of cattail (*Typha* sp.) occur adjacent to open water. CRLF breed from November through April (Jennings and Hayes 1994), and larvae generally metamorphose by mid to late summer.

Upland and riparian areas provide important habitat during summer when CRLF are known to aestivate in dense vegetation, burrows and leaf litter. CRLF often disperse from breeding habitats to forage and seek upland refugia and are often found within close proximity to a pond or deep pool in a creek where emergent vegetation, undercut banks, or semi-submerged rootballs afford shelter (USFWS 2005). The diet of CRLF is highly variable. Larvae probably graze on algae, whereas invertebrates are the most common food items of adult frogs. Vertebrates, such as Sierra chorus frogs (*Pseudacris sierra*) and California mice (*Peromyscus californicus*) are frequently eaten by larger frogs. Juvenile frogs are active both during the day and at night, whereas adult frogs are largely nocturnal.

There are 30 records of CRLF that have been documented within five miles of the Study Area, the closest of which (Occurrence #923) is located 1.2 miles south of the site, in a cattle pond between Mitchell Creek and Donner Creek (CNDDB 2025). Mitchell Canyon Creek is shallow throughout the Study Area and does not contain any pools or deeper refugia. As such, it represents only marginally suitable aquatic dispersal habitat for this species, and the adjacent riparian woodland similarly represents marginally suitable upland aestivation habitat.

5.4 Reptiles

5.4.1 Northwestern Pond Turtle

The northwestern pond turtle (NWPT) is a federally proposed threatened species and is considered a CDFW species of special concern. The NWPT occupies a wide variety of permanent and ephemeral aquatic habitats. It also may spend a significant amount of time in upland terrestrial habitats as well. Both adult and juvenile NWPT favor aquatic habitats with access to areas of deep water with underwater refugia and emergent basking sites. Both flowing water habitats (e.g., rivers and streams) and isolated waters (e.g., ponds and reservoirs) are used by NWPT. NWPT are relatively poor swimmers and tend to seek areas with slow, shallow, warmer water, often with emergent vegetation. Ponds that are near to streams are often the favored habitat.

It is often seen basking on logs, mud banks or mats of vegetation, although wild populations are wary and individuals will often plunge for cover after detecting movement from a considerable distance. Although it is an aquatic species with webbed feet, it can move across land in response to fluctuating water levels, an apparent adaptation to the variable rainfall and unpredictable flows that occur in many California drainage basins (Rathbun et al. 1993). In addition, it can over-winter on land or in water or remain active in the winter, depending on environmental conditions (Rathbun et al. 1993, Jennings and Hayes 1994).

Females travel from aquatic sites into open, grassy areas to lay eggs in a shallow nest (Holland 1994, Rathbun et al. 1992). Nests have been reported from 2-400 meters or more away from water bodies (Jennings and Hayes 1994) and are typically 4-6" deep. Nesting sites are typically limited to south-facing slopes or sections of a water body (Geist et al. 2015, Rathbun et al. 1992).

Turtles in streams use upland areas for overwintering activity, while turtles in ponds remained in ponds during the winter season (Rathbun et al. 1993). Abel (2010) found that turtles in stream/lagoon habitats moved to a permanent pond or to upland refugia, partially buried under various substrates, during the first storms of colder months. In pond habitats, turtles will seek refuge in the floating mat of emergent vegetation, such as tule (Abel 2010). This species appears to prefer habitats with areas of extensive cover (logs, algae, vegetation) and basking sites (boulders, logs, vegetative banks) and generally avoids areas of open water (Holland 1994).

Able (2010) found that, during the active season (between March and November), pond turtles made use of deeper water with ready access to submerged escape cover and to a (wood) basking area that can be accessed from nearby cover and were found to be basking more than 30% of the day. This makes basking a dominant requirement of turtles. Manipulation of floating wood within a stream channel increased basking behavior (Able 2010).

There is only one record of NWPT within five miles of the Study Area in the CNDDB, and that record (Occurrence #726) is located 4.9 miles south of the site, in Pine Pond, near Pine Creek in Mount Diabo State Park (CNDDB 2025). Mitchell Canyon Creek is shallow throughout the Study Area and does not contain any pools or dense in-channel vegetation to function as refugia. As such, it represents only marginally suitable aquatic dispersal habitat for this species, and the species is unlikely to utilize adjacent upland habitat.

5.5 Birds

5.5.1 Burrowing Owl

Burrowing owl (*Athene cunicularia*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is designated as a species of special concern by the CDFW. They typically inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. This species typically uses burrows created by fossorial mammals, most notably the California ground squirrel, but may also use man-made structures such as culverts; cement, asphalt, or wood debris piles; or openings beneath

cement or asphalt pavement (CDFG 1995). The breeding season extends from February 1 through August 31 (CBOC 1993, CDFG 1995, CDFG 2012).

There are three documented occurrences of burrowing owl within five miles of the Study Area (CNDDB 2025). The small, isolated nature of the site, the density of the grassland, and the almost complete lack of ground squirrel (*Spermophilis beechyi*) burrows make the annual brome grasslands within the Study Area extremely marginal habitat for this species.

5.5.2 White-Tailed Kite

White-tailed kite (*Elanus leucurus*) is not federally or state listed, but is a CDFW fully protected species. This species is a yearlong resident in the Central Valley and is primarily found in or near foraging areas such as open grasslands, meadows, farmlands, savannahs, and emergent wetlands (Shuford and Gardali 2008). White-tailed kites typically nest from March through June in trees within riparian, oak woodland, and savannah habitats of the Central Valley and Coast Range (Shuford and Gardali 2008).

White-tailed kite has not been documented within five miles of the Study Area in the CNDDB (CNDDB 2025); however, foraging white-tailed kites have been documented numerous times in the eBird database (eBird 2025). This species has not been documented nesting in the vicinity of the Study Area (CNDDB 2025, eBird 2025). Due to the small, isolated nature of the site, the annual brome grasslands within the Study Area represent marginal foraging habitat for white-tailed kite.

5.5.3 Loggerhead Shrike

The loggerhead shrike *(Lanius ludovicianus)* is not listed and protected pursuant to either the California or federal Endangered Species Acts; but is a CDFW species of special concern. Loggerhead shrikes nest in small trees and shrubs in woodland and savannah vegetation communities, and forage in open habitats throughout California (Shuford and Gardali 2008). The nesting season ranges from March through June.

Loggerhead shrikes have not been documented within five miles of the Study Area in the CNDDB (CNDDB 2025); however, they have been documented several times in the eBird database (eBird 2025). Due to the small, isolated nature of the site, the annual brome grasslands within the Study Area represent marginal foraging habitat for loggerhead shrike, and the trees and shrubs within the Study Area represent marginal nesting habitat.

5.6 Mammals

5.6.1 Pallid Bat

Pallid bat (*Antrozous pallidus*) is not federally or state listed, but is considered a CDFW species of special concern, and is classified by the WBWG as a high-priority species. It favors roosting sites in crevices in rock outcrops, caves, abandoned mines, hollow trees, and human-made structures such as barns, attics, and

sheds (WBWG 2025). Though pallid bats are gregarious, they tend to group in smaller colonies of 10 to 100 individuals. It is a nocturnal hunter and captures prey in flight, but unlike most American bats, the species has been observed foraging for flightless insects, which it seizes after landing (WBWG 2025).

There are two documented occurrences of pallid bat within five miles of the Study Area (CNDDB 2025). Tree hollows and exfoliating bark on trees within the Study Area, and the barn in the northwestern portion of the Study Area provide suitable roosting habitat for this species.

5.6.2 Townsend's Big-Eared Bat

The Townsend's big-eared bat (*Corynorhinus townsendii*) is not listed pursuant to either the federal or California Endangered Species Acts; however, this species is considered a species of special concern by CDFW. Townsend's big-eared bat is a fairly large bat with prominent bilateral nose lumps and large rabbit-like ears. This species occurs throughout the west and ranges from the southern portion of British Columbia south along the Pacific coast to central Mexico and east into the Great Plains. This species has been reported from a wide variety of habitat types and elevations from sea level to 10,827 feet. Habitats used include coniferous forests, mixed mesophytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Its distribution is strongly associated with the availability of caves and cave-like roosting habitat including abandoned mines, buildings, bridges, rock crevices, and hollow trees. This species is readily detectable when roosting due to their habit of roosting pendant-like on open surfaces. Townsend's big-eared bat is a moth specialist with over 90 percent of its diet composed of Lepidopterans. Foraging habitat is generally edge habitats along streams adjacent to and within a variety of wooded habitats. This species often travels long distances when foraging and large home ranges have been documented in California (WBWG 2025).

There are two documented occurrences of Townsend's big-eared bat within five miles of the Study Area (CNDDB 2025). Both of these records are from the 1920's and 1930's; we could not find any more recent records. The barn in the northwestern portion of the Study Area provides marginally suitable roosting habitat for this species due to the frequency of human use.

5.6.3 Western Red Bat

Western red bat (*Lasiurus blossevillii*) is not federally or state listed, but is considered a CDFW species of special concern, and is classified by the WBWG as a high-priority species. Western red bat is typically solitary, roosting primarily in the foliage of trees or shrubs (WBWG 2025). Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores) used as foraging (WBWG 2025).

Western red bat has not been documented in the CNDDB within five miles of the Study Area (CNDDB 2025). Trees throughout the Study Area represent suitable roosting habitat for western red bat. The open areas within the Study Area provide suitable foraging habitat for the species.

5.6.4 Hoary Bat

The hoary bat (*Lasiurus cinereus*) is not federally or state listed, but is classified by the WBWG as a Medium priority species. It is considered to be one of the most widespread of all American bats with a range extending from Canada to central Chile and Argentina as well as Hawaii (WBWG 2025). Hoary bats are solitary and roost primarily in foliage of both coniferous and deciduous trees, near the ends of branches at the edge of a clearing (WBWG 2025). This species may also occasionally roost in caves, beneath a rock ledge, in a woodpecker hole, in a grey squirrel nest, under a wood plank, or clinging to the side of a building (WBWG 2025).

One occurrence of hoary bat has been documented within five miles of the Study Area in the 1950's (CNDDB 2025). Trees throughout the Study Area represent suitable roosting habitat for hoary bat. The open areas within the Study Area provide suitable foraging habitat for the species.

5.7 Trees

HortScience Bartlett Consulting (Hort) identified 64 trees within or with canopies that overlap the portion of the Study Area west of High Street (**Attachment G**). This inventory did not include the trees within the Valley oak riparian woodland; however, no impacts are proposed within that area. The 64 inventoried trees are summarized in **Table 2**. Twenty-nine of the existing trees are in fair or better condition, while 35 are in poor condition.

Table 2. Trees Surveyed within the Study Area

		Condition			
Common Name	**Scientific Name**	**Poor**	**Fair**	**Good**	**Total**
Tree of heaven	*Ailanthus altissima*	1	2	1	4
Lemon	*Citrus limon*	1			1
California black walnut	*Juglans hindsii*	28	1		29
Olive	*Olea europaea*		3		3
Italian stone pine	*Pinus pinea*	1	2		3
Almond	*Prunus dulcis*	2	1		3
Coast live oak	*Quercus agrifolia*		1		1
Blue oak	*Quercus douglasii*			2	2
Valley oak	*Quercus lobata*	2	9	5	16
Elderberry	*Sambucus mexicana*		1		1
Giant sequoia	*Sequoiadendron giganteum*		1		1
Total		**35**	**21**	**8**	**64**

5.8 Sensitive Natural Communities

One vegetation community mapped within the Study Area is considered to be a "Sensitive Natural Community" by CDFW: Valley oak riparian woodland. This community occurs along the eastern edge of the site in a narrow band along Mitchell Canyon Creek.

5.9 Wildlife Movement/Corridors

The Study Area is a primarily isolated parcel surrounded by urban development. The only exception is Mitchell Canyon Creek and its associated riparian woodland along the eastern edge. This feature is somewhat degraded and receives substantial pedestrian traffic through the area, and vehicular traffic across the High Street creek crossing. Despite the degradation, this creek corridor is essentially the only natural corridor for wildlife movement in the vicinity and is most likely utilized by wildlife for that purpose. The creek and its associated riparian woodland will be avoided by the Project, and no impacts to wildlife movement or wildlife corridors are anticipated.

5.10 HCP Stream Setbacks

As noted in **Section 2.3.3**, the *East Contra Costa County Habitat Conservation Plan / Natural Community Conservation Plan* (HCP) requires a 50 foot setback from Mitchell Canyon Creek within the Study Area, as shown on **Figure 6**. As shown on **Figure 6**, no improvements are currently planned within the setback apart from a sewer tie-in to an existing sewer line underneath High Street. This utility tie in will not cause any impacts to Mitchell Canyon Creek or the associated riparian woodland, and is an allowable activity within the Stream Setback. Therefore, this Project complies with the HCP Stream Setback.

6.0 IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES

This section details potential impacts to the biological resources discussed above associated with construction of the Project, as discussed in **Section 1.1** and shown in **Attachment A**.

6.1 Aquatic Resources

The only aquatic resources within the Study Area are two slivers of Mitchell Canyon Creek. No impacts to Mitchell Canyon Creek are proposed as part of this project (**Figure 6**).

6.2 Terrestrial Vegetation Communities/Sensitive Natural Communities

A total of 3.7 acres of the Study Area will be impacted by the proposed Project (**Figure 6**). This includes 3.1 acres of annual brome grassland, 0.5 acre of developed areas, and less than 0.1 acre of Valley oak riparian woodland. Approximately 1.0 acre of the Study Area, comprised of 0.8 acre of annual brome grassland, 0.2 acre of developed areas, and 0.1 acre of Valley oak riparian woodland will be avoided by the Project. Although a small area of Valley oak riparian woodland (which is a Sensitive Natural Community) appears to be impacted

on **Figure 6**, this will consist of a very small area of work below the canopy of a single tree to accomplish the sewer line tie in, and no impacts to that tree are anticipated. As a result, no impacts to Sensitive Natural Communities are anticipated as a result of this Project.

6.3 Special-Status Plant Species

The annual brome grassland represents suitable habitat for a variety of special-status plant species. Protocol-level special-status plant surveys were conducted throughout the Study Area with negative results (Madrone 2025). Therefore, no impacts to special-status plant species are anticipated for the Project.

6.4 Crotch and Western Bumble Bee

The Annual Brome Grassland within the Project Area represents suitable habitat for Crotch and western bumblebee, which were recently listed as candidate species under the California ESA. Approximately 3.1 acres of suitable habitat for these species will be impacted by the Project (**Figure 6**). These species could be adversely affected if construction activity results in the removal of nests of either species.

6.5 California Red-Legged Frog

Mitchell Canyon Creek represents marginally suitable aquatic dispersal habitat for California red legged frog, and the adjacent riparian woodland represents marginally suitable upland aestivation habitat. No impacts to Mitchell Canyon Creek are proposed. The impacts to Valley oak woodland are comprised of a small amount of grading underneath one tree well away from the creek that are not expected to have any impact on California red legged frog. Therefore, no impacts to California red-legged frog are anticipated.

6.6 Northwestern Pond Turtle

Mitchell Canyon Creek represents marginally suitable aquatic dispersal habitat for northwestern pond turtle. No impacts to Mitchell Canyon Creek are proposed. Therefore, no impacts to northwestern pond turtle are anticipated.

6.7 Birds

6.7.1 Nesting Raptors and Songbirds

Loggerhead shrike has the potential to nest within the Project area, as do other more common bird species protected by the MBTA. If they were nesting on-site, removal of the nests would impact these species. Furthermore, birds nesting in avoided areas adjacent to construction could be disturbed by construction, which could result in nest abandonment.

6.7.2 Foraging Raptors and Winter Foraging Birds

The annual brome grassland within the Project Area provides marginally suitable foraging habitat for Swainson's hawk, white-tailed kite, and other more common raptors. Approximately 3.1 acres of annual brome grassland will be directly impacted by the proposed Project (**Figure 6**). Given the urban setting of the Project Area, and the low quality of habitat due to the presence of trees throughout the site, the removal of this habitat is not expected to be a significant impact to foraging special-status and more common raptors in the area. As a result, no mitigation for this impact has been recommended.

6.7.3 Burrowing Owl

The annual brome grassland within the Project Area provides marginally suitable habitat for burrowing owl. If ground disturbance occurred while burrowing owls were in burrows, individuals of this species could be injured or killed. Approximately 3.1 acres of annual brome grassland foraging habitat will be directly impacted by the proposed Project (**Figure 6**). Due to the paucity of burrows and the marginal nature of the habitat, the development of the project is not expected to be a significant impact to burrowing owl foraging habitat. As a result, no foraging habitat mitigation for this impact has been recommended.

6.8 Roosting Bats

Abandoned buildings and trees throughout the Project area are habitat for various special-status bat species. If special-status bats were roosting in trees or buildings to be removed by Project construction they could be injured or killed.

6.9 Wildlife Corridors

The only wildlife corridor within the Study Area is Mitchell Canyon Creek and its associated riparian woodland along the eastern edge. The creek and its associated riparian woodland will be avoided by the Project, and no impacts to wildlife movement or wildlife corridors are anticipated.

6.10 Native Trees

The Proposed Project would impact 57 of the 64 Trees (with a cumulative DBH of 1,045 inches) surveyed within the Study Area and avoid seven California black walnuts in poor condition (**Table 3**). Twenty-nine of the 57 impacted trees (with a cumulative DBH of 579 inches) are in fair to better condition and would require mitigation for their removal.

Table 3. Tree Impacts within the Study Area

Common Name	Scientific Name	Condition – Number of Trees (DBH) Poor	Fair	Good	Total
Trees Proposed for Impact					
Tree of heaven	*Ailanthus altissima*	1 (15)	2 (47)	1 (10)	4 (72)
Lemon	*Citrus limon*	1 (25)	-	-	1 (25)
California black walnut	*Juglans hindsii*	21 (373)	1 (10)	-	29 (383)
Olive	*Olea europaea*	-	3 (46)	-	3 (46)
Italian stone pine	*Pinus pinea*	1 (21)	2 (77)	-	3 (98)
Almond	*Prunus dulcis*	2 (15)	1 (19)	-	3 (34)
Coast live oak	*Quercus agrifolia*	-	1 (7)	-	1 (7)
Blue oak	*Quercus douglasii*	-	-	2 (69)	2 (69)
Valley oak	*Quercus lobata*	2 (17)	9 (129)	5 (100)	16 (246)
Elderberry	*Sambucus mexicana*	-	1 (38)	-	1 (38)
Giant sequoia	*Sequoiadendron giganteum*	-	1 (27)	-	1 (27)
Subtotal		*28 (466)*	*21 (400)*	*8 (179)*	*57 (1,045)*
Trees Proposed for Avoidance					
California black walnut	*Juglans hindsii*	7 (133)	-	-	7 (133)
Subtotal		*7 (133)*			*7 (133)*
Total		**35 (599)**	**21 (400)**	**8 (179)**	**64 (1,178)**

7.0 MITIGATION FOR IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES

The following mitigation measures may be required by the City for impacts to sensitive biological resources associated with construction of the Project. The intent of these mitigation measures is to reduce impacts to biological resources to a less than significant level.

7.1 ECCCHCP Application

The Permittee shall apply for coverage under the ECCCHCP to mitigate for all impacts to Covered Species, land cover, and sensitive natural communities. Prior to application approval, additional species surveys may be necessary, and prior to construction applicable development and stream setback encroachment fees shall be paid. The Permittee shall comply with the terms of the ECCCHCP Coverage Certificate, including compliance with all Avoidance and Minimization Measures, which may include pre-construction surveys, construction monitoring, and BMPs. Based on Project Impacts, the following ECCCHCP measures will be required, subject to East Contra Costa County Habitat Conservancy (ECCCHC) confirmation:

7.1.1 Western Burrowing Owl

Preconstruction Surveys

Prior to any ground disturbance related to covered activities, a USFWS/CDFW- approved biologist will conduct a preconstruction survey in areas identified in the planning surveys as having potential burrowing owl habitat. The surveys will establish the presence or absence of western burrowing owl and/or habitat features and evaluate use by owls in accordance with CDFW survey guidelines (California Department of Fish and Game 1995).

On the parcel where the activity is proposed, the biologist will survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint to identify burrows and owls. Adjacent parcels under different land ownership will not be surveyed. Surveys should take place near sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owls will be identified and mapped. Surveys will take place no more than 30 days prior to construction. During the breeding season (February 1– August 31), surveys will document whether burrowing owls are nesting in or directly adjacent to disturbance areas. During the nonbreeding season (September 1–January 31), surveys will document whether burrowing owls are using habitat in or directly adjacent to any disturbance area. Survey results will be valid only for the season (breeding or nonbreeding) during which the survey is conducted.

Avoidance and Minimization and Construction Monitoring

This measure incorporates avoidance and minimization guidelines from CDFW's Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game 1995).

If burrowing owls are found during the breeding season (February 1 – August 31), the project proponent will avoid all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the nest is occupied by adults or young. Avoidance will include establishment of a non-disturbance buffer zone (described below). Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg-laying and incubation or that the juveniles from the occupied burrows have fledged. During the nonbreeding season (September 1 – January 31), the project proponent should avoid the owls and the burrows they are using, if possible. Avoidance will include the establishment of a buffer zone (described below).

During the breeding season, buffer zones of at least 250 feet in which no construction activities can occur will be established around each occupied burrow (nest site). Buffer zones of 160 feet will be established around each burrow being used during the nonbreeding season. The buffers will be delineated by highly visible, temporary construction fencing.

If occupied burrows for burrowing owls are not avoided, passive relocation will be implemented. Owls should be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors should be in place for 48 hours prior to excavation. The project area should be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent

reoccupation (California Department of Fish and Game 1995). Plastic tubing or a similar structure should be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

7.1.2 Townsend's Big-Eared Bat

Preconstruction Surveys

If the project does not avoid impacts to suitable habitat for Townsend's big-eared bat, a preconstruction survey is required to determine whether the sites are occupied immediately prior to construction or whether they show signs of recent previous occupation. Preconstruction surveys are used to determine what avoidance and minimization requirements are triggered before construction and whether construction monitoring is necessary.

Avoidance and Minimization

If the species is discovered or if evidence of recent prior occupation is established, construction will be scheduled such that it minimizes impacts on Townsend's big-eared bat. Hibernation sites with evidence of prior occupation will be sealed before the hibernation season (November–March), and nursery sites will be sealed before the nursery season (April–August). If the site is occupied, then the action will occur either prior to or after the hibernation season for hibernacula and after August 15 for nursery colonies. Construction will not take place as long as the site is occupied.

The locations of all suitable or occupied microhabitat within the inventory area are not known due to survey and mapping limitations. Hibernacula or nursery sites may be located during planning or preconstruction surveys. Avoiding impacts on occupied sites during sensitive periods will minimize disturbance or direct mortality as a result of covered activities, and sealing sites prior to construction will allow bats to reestablish elsewhere.

7.1.3 ECCCHCP Conservation Measures

We anticipate that the ECCCHC will require the Project to comply with the following ECCCHCP Conservation Measures:

- Conservation Measure 1.11. Avoid Direct Impacts on Extremely Rare Plants, Fully Protected Wildlife Species, or Migratory Birds
- Conservation Measure 2.12. Wetland, Pond, and Stream Avoidance and Minimization
- Conservation Measure 1.10. Maintain Hydrologic Conditions and Minimize Erosion
- Conservation Measure 1.7. Establish Stream Setbacks

7.2 Special-Status Plant Species

Special-status plant surveys conducted throughout the Study Area in 2025 were negative within the proposed impact area, but given enough time, plants may become established in areas where suitable habitat exists. Special-status plant surveys shall be conducted in accordance with CNPS and CDFW protocols throughout the Project Area within three years prior to the commencement of construction (if

construction commences prior to 1 March 2028, no additional surveys are necessary). The CNPS and CDFW protocols require that the surveys be conducted at the time of year that the target species are most identifiable; this often requires multiple survey visits to capture the identifiable period of all target species. If no special-status plant species are found, no further mitigation would be required. If special-status plants are found and will be impacted, mitigation for those impacts will be determined during consultation with the City. If the plant found is a perennial, then mitigation could consist of digging up the plant and transplanting it to a suitable nearby avoided area prior to construction. If the plant found is an annual, then mitigation could consist of collecting seed-bearing soil and spreading it in a suitable nearby avoided area prior to construction.

7.3 Crotch and Western Bumble Bee

The Project will impact potential foraging and nesting/overwintering habitat for the Crotch and western bumble bee species (collectively referred to as "special-status bumble bees" throughout this measure). To avoid take of these species the Project proponent shall do the following:

- Initial ground-disturbing work (e.g., grading, vegetation removal, staging) shall take place between 1 September and 31 March (i.e., outside the colony active period), if feasible, to avoid impacts on special-status bumble bees.
- If completing all initial ground-disturbing work between 1 September and 31 March is not feasible, then a senior biologist with 10 or more years of experience conducting biological resource surveys within California shall conduct a pre-construction survey for special-status bumble bees in the area proposed for impact no more than 14 days prior to the commencement of construction activities. The survey shall occur during the period from one hour after sunrise to two hours before sunset, with temperatures between 65° F and 90° F, with low wind and no rain. If the timing of the start of construction makes the survey infeasible due to the temperature requirements, the surveying biologist shall select the most appropriate days based on the National Weather Service seven-day forecast and shall survey at a time of day that is closest to the temperature range stated above. The survey duration shall be commensurate with the extent of suitable floral resources (which represent foraging habitat) present at within the area proposed for impact and the level of effort shall be based on the metric of a minimum of one person-hour of searching per three acres of suitable floral resources/foraging habitat. A meandering pedestrian survey shall be conducted throughout the area proposed for impact in order to identify patches of suitable floral resources. Suitable floral resources for Crotch bumble bee include species in the following families: Apocynaceae, Asteraceae, Boraginaceae, Fabaceae, and Lamiaceae. Suitable floral resources for western bumble bee include species in the following families: Asteraceae, Fabaceae, Rhamnaceae, and Rosaceae, as well as plants in the genera *Eriogonum* and *Penstemon*.
- At a minimum, pre-construction survey methods shall include the following:
    - Search areas with floral resources for foraging bumble bees. Observed foraging activity may indicate a nest is nearby, and therefore, the survey duration shall be increased when foraging bumble bees are present.

- If special-status bumble bees are observed, watch any special-status bumble bees present and observe their flight patterns. Attempt to track their movements between foraging areas and the nest.
- Visually look for nest entrances. Observe burrows, any other underground cavities, logs, or other possible nesting habitat.
- If floral resources or other vegetation preclude observance of the nest, small areas of vegetation may be removed via hand removal, line trimming, or mowing to a height of no less than 4 inches to assist with locating the nest.
- Look for concentrated special-status bumble bee activity.
- Listen for the humming of a nest colony.
- If bumble bees are observed, attempt to photograph the individual and identify it to species.

- The biologist conducting the survey shall record when the survey was conducted, a general description of any suitable foraging habitat/floral resources present, a description of observed bumble bee activity, a list of bumble bee species observed, a description of any vegetation removed to facilitate the survey, and their determination of if survey observations suggest a special-status bumble bee nest(s) may be present or if construction activities could result in take of special-status bumble bees. The report shall be submitted to the County prior to the commencement of construction activities.
- If no bumble bees are located during the pre-construction survey or the bumble bees located are definitively identified as common (i.e., not special-status) species, then no further mitigation or coordination with CDFW is required.
- If any sign(s) of a bumble bee nest is observed, and if it cannot be established the species present is not a special-status bumble bee, then construction shall not commence until either 1) the bumble bees present are positively identification as common (i.e., not special status) by an experienced bumble bee taxonomist, or 2) the completion of coordination with CDFW to identify appropriate mitigation measures, which may include but not be limited to: waiting until the colony active season ends, establishment of nest buffers, or obtaining an Incidental Take Permit (ITP) from CDFW.
- It is recommended, but not required that the Project Applicant also survey the proposed impact areas the year before construction begins in order to avoid potential last-minute delays associated with identifying special-status bumble bees on-site immediately prior to construction activities. To be most effective, this optional survey should follow the protocol outlined above.
- If special-status bees are located, and after coordination with CDFW take of special-status bumble bees cannot be avoided, the Applicant shall obtain an ITP from CDFW prior to County approval of permits authorizing construction, and the applicant shall implement all conditions identified in the ITP. Mitigation required by the ITP may include but will not be limited to, the Project Applicant translocating nesting substrate in accordance with the latest scientific research to another suitable location (i.e., a location that supports similar or better floral resources as the impact area), enhancing floral resources on areas of the Project site that will remain appropriate habitat, worker awareness training, and/or other measures specified by CDFW.

7.4 Nesting Raptors and Songbirds

The following nest survey requirements shall apply if construction activities take place during the typical bird breeding/nesting season (typically February 15 through September 1).

7.4.1 Nesting Bird Survey

A pre-construction nesting bird survey shall be conducted by a qualified biologist on the Project site and within a 500-foot radius of proposed construction areas, where access is available, no more than 14 days prior to the initiation of construction. If there is a break in construction activity of more than two weeks then subsequent surveys shall be conducted.

If active raptor nests are found, no construction activities shall take place within 500 feet of the nest until the young have fledged. If active songbird nests are found, a 100-foot no disturbance buffer will be established. These no-disturbance buffers may be reduced if a smaller buffer is proposed by the Project Biologist and approved by the City after taking into consideration the natural history of the species of bird nesting, the proposed activity level adjacent to the nest, habituation to existing or ongoing activity, and nest concealment (are there visual or acoustic barriers between the proposed activity and the nest). A qualified biologist can visit the nest as needed to determine when the young have fledged the nest and are independent of the site or the nest can be left undisturbed until the end of the nesting season.

7.4.2 Survey Report

A report summarizing the survey(s), shall be provided to the City within 14 days of the completed survey. If no nests are found, no further mitigation is required.

7.4.3 Changes to Buffers and Completion of Nesting

Should construction activities cause a nesting bird do any of the following in a way that would be considered a result of construction activities: vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the exclusionary buffer shall be increased such that activities are far enough from the nest to stop this agitated behavior. The exclusionary buffer shall remain in place until the chicks have fledged or as otherwise determined by a qualified biologist in consultation with the City. Construction activities may only resume within the buffer zone after a follow-up survey by the Project Biologist has been conducted and a report has been prepared indicating that the nest (or nests) are no longer active, and that no new nests have been identified.

7.5 Roosting Bats

To mitigate for potential impacts to roosting bats, the Project proponent shall do the following:

- A qualified biologist shall conduct a bat habitat assessment of all potential roosting habitat features within the proposed development footprint. This habitat assessment shall identify all potentially suitable roosting habitat and may be conducted up to 1 year prior to the start of construction.
- If potential roosting habitat is identified within the areas proposed for development, the biologist shall survey the potential roosting habitat. Ideally, this survey should be conducted during the active season (generally April through October or from January through March on days with temperatures in excess of 50 degrees F) to determine presence of roosting bats. These surveys are recommended to be conducted utilizing methods that are considered acceptable by CDFW and bat experts. Methods may include evening emergence surveys, acoustic surveys, inspecting potential roosting habitat with fiberoptic cameras or a combination thereof.
- If roosting bats are identified within any of the trees or buildings planned for removal, or if presence is assumed, then the qualified bat biologist shall specify appropriate exclusion methods according to where the roosting bats are located and what season the exclusion must occur. These exclusion methods may include two-step tree removal or building exclusion as detailed below. In general, the trees/buildings shall be removed outside of pup season only on days with temperatures in excess of 50 degrees F. Pup season is generally during the months of May through August. Two-step tree removal involves removal of all branches of the tree that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree. Building exclusion methods may include such techniques as installation of passive one-way doors, or the installation of netting when the bats are not present to prevent their reoccupation. Once the bats have been excluded, tree removal may occur.
- Removal of trees/buildings where no roosting habitat is identified during the survey is recommended to be conducted from January through March on days with temperatures in excess of 50 degrees F to avoid potential impacts to foliage-roosting bat species.

7.6 Protected Trees

To mitigate for the loss of Protected Trees, the Project applicant shall obtain a Tree Permit from the City of Clayton prior to the initiation of construction (i.e., ground clearing). This permit process may include completing the permit application form, paying a fee based on the type of application, preparing a site plan and arborist report, and preparing a Tree Replacement Plan to summarize how any impacted Protected Trees will be replaced, if applicable. This can include both planting of new trees and/or paying an in-lieu fee.

In addition, to protect any trees that are located within 50 feet of construction from indirect effects, the Project applicant shall prepare a Tree Protection Plan as outlined in the Tree Ordinance and submit it to the City for review and approval prior to construction.

8.0 REFERENCES

CalFlora. 2025. *Observation Search Portal*. Accessed at https://www.calflora.org/entry/observ.html in March 2025.

California Consortium of Herbaria (CCH). 2025. *Specimen data from the California Consortium of Herbaria Search Portal*. Accessed at https://www.cch2.org/portal/collections/harvestparams.php in March through May 2025.

California Burrowing Owl Consortium (CBOC). 1993. *Burrowing Owl Survey Protocol and Mitigation Guidelines*. Dated April 1993.

California Department of Fish and Game (CDFG). 1995. *Staff Report on Burrowing Owl Mitigation*. Dated September 25, 1995.

California Department of Fish and Game (CDFG). 2012. *Staff Report on Burrowing Owl Mitigation*. Dated March 7, 2012.

California Native Plant Society (CNPS). 2025. *Inventory of Rare and Endangered Plants* (online edition). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org [accessed March 2025].

California Natural Diversity Database (CNDDB). 2025. *RareFind 5*. California Department of Fish and Wildlife. Dated May 2025.

City of Clayton. 2020. *City of Clayton Code of Ordinances; Title 15, Chapter 15.70 Tree Protection*. Available at: https://library.municode.com/ca/clayton/codes/municipal_code?nodeId=TIT15BUCO_CH15.70TRPR_15.70.010PU Accessed November 2020.

eBird. 2025. Location data accessed at https://ebird.org/map/ in May 2025.

HortScience Bartlett Consulting (Hort). 2025. *Preliminary Arborist Report – 1027 Pine Hollow Court*. Prepared for Ponderosa Homes II.

Jepson Flora Project (eds.) 2025. *Jepson eFlora,* http://ucjeps.berkeley.edu/eflora/ [accessed November 2020 through May 2025]

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation, Second Edition*. California Native Plant Society, Sacramento, CA. 1300 pp.

Shuford, W. D., and Gardali, T., editors. 2008. *California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California*. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture (NRCS). 2025. *Web Soil Survey*. Available online at http://websoilsurvey.nrcs.usda.gov/.

U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2025. *IPaC Trust Resource Report for the Project Area*. Generated from http://ecos.fws.gov/ipac/ on 12 June 2025.

U.S. Geological Survey (USGS). 2018. *"Clayton, California"* 7.5-Minute Series Topographic Quadrangle Map. U. S. Geological Survey. Denver, Colorado.

Western Bat Working Group (WBWG). 2025. *Species Matrix and Species Accounts*. Accessed on-line at http://wbwg.org/ in May 2025.

Williams, P. H., R. W. Thorp, L. L. Richardson, and S. R. Colla. 2014. *The Bumble bees of North America: An Identification guide*. Princeton University Press, Princeton.

Xerces Society for Invertebrate Conservation, Defenders of Wildlife, and Central for Food Safety (Xerces). 2018. *A Petition to the State of California Fish and Game Commission to List the Crotch bumble bee (*Bombus crotchii*), Franklin's bumble bee (*Bombus franklini*), Suckley cuckoo bumble bee (*Bombus suckleyi*), and Western bumble bee (*Bombus occidentalis occidentalis*) as Endangered under the California Endangered Species Act.* Submitted in October 2018.

Figures

Figure 1. Site and Vicinity

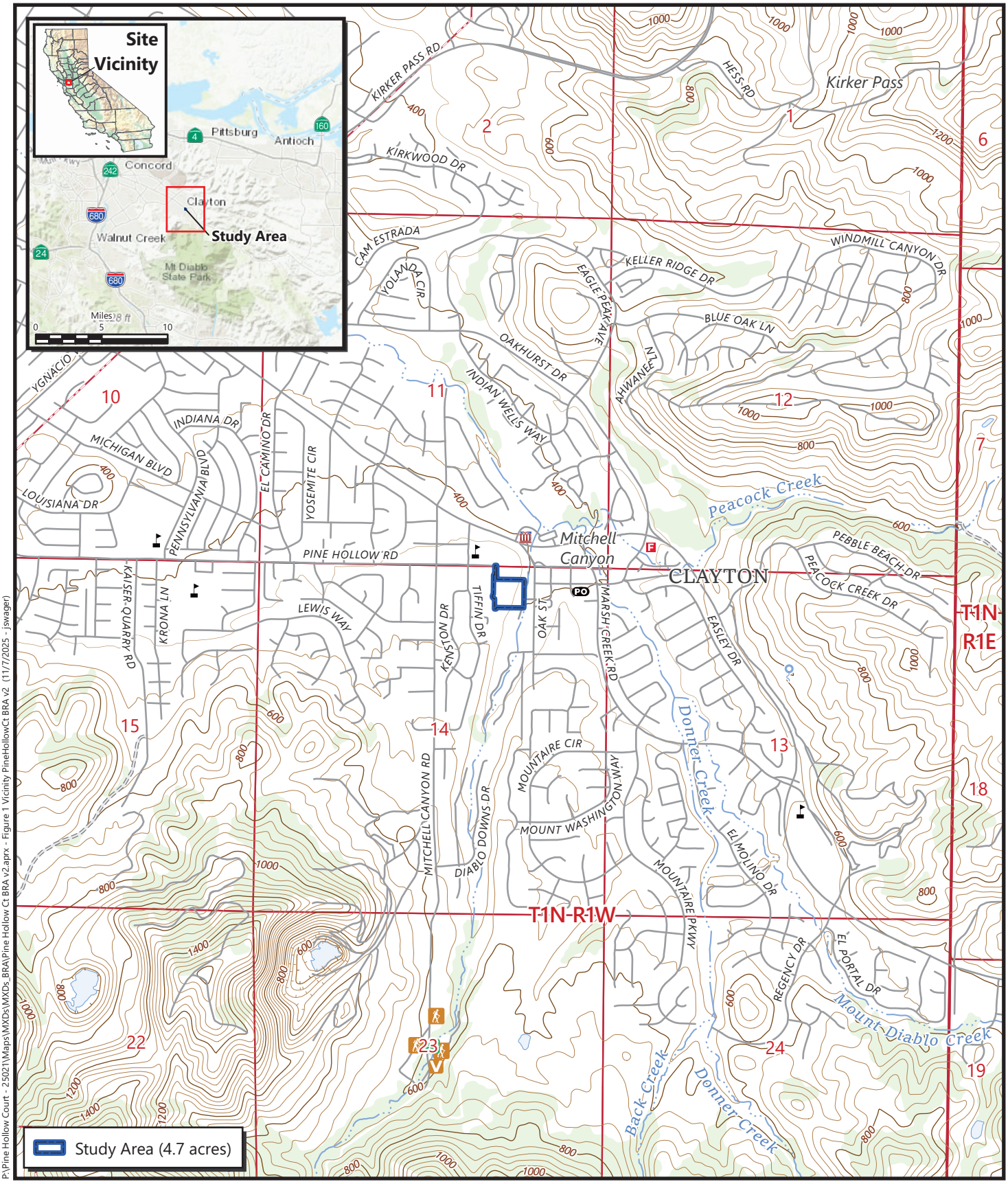
Figure 2. California Natural Diversity Database Occurrences of Plant Species

Figure 3. California Natural Diversity Database Occurrences of Wildlife Species and Critical Habitat

Figure 4. Vegetation Communities

Figure 5. NRCS Soils Map

Figure 6. Project Impacts



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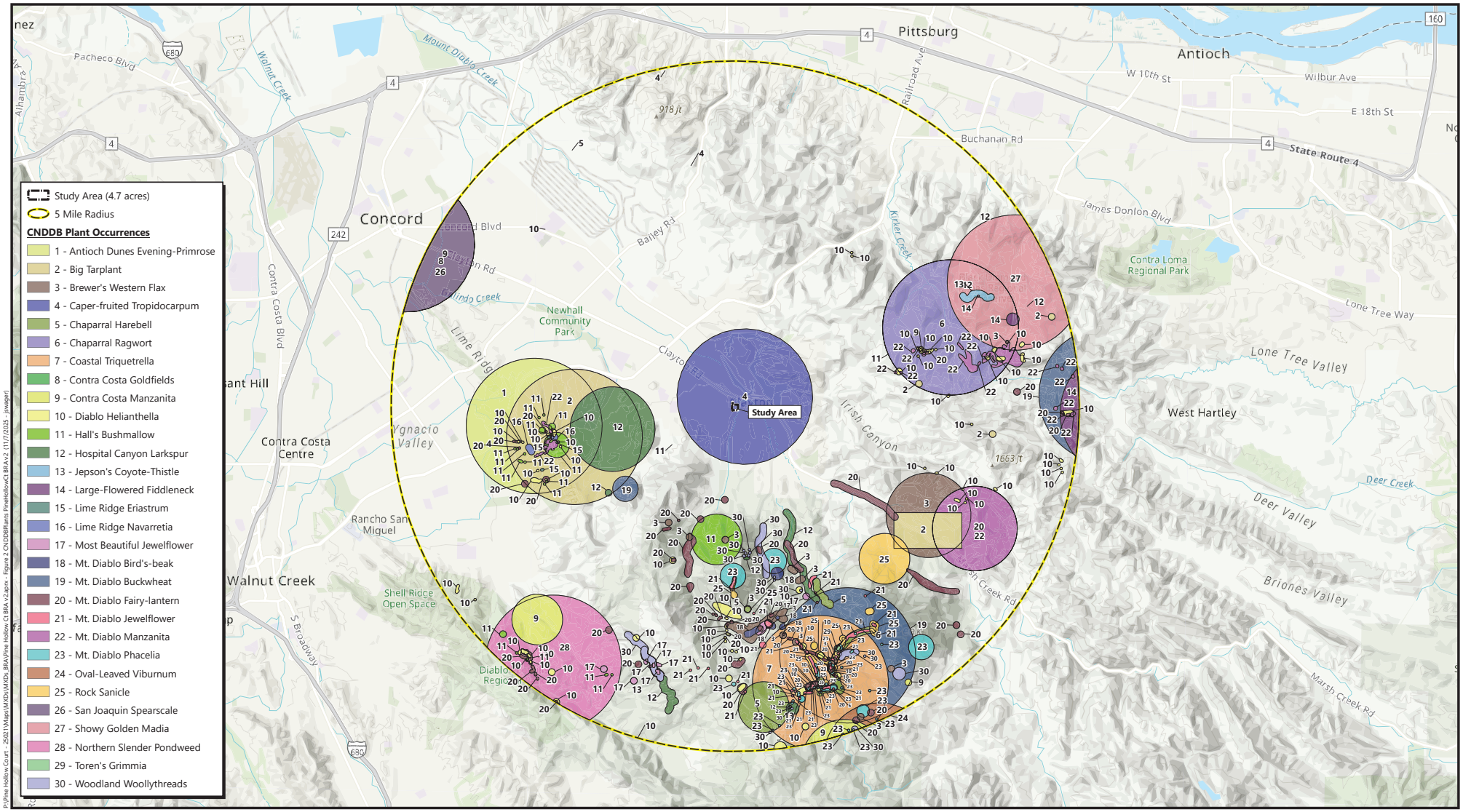
Source: United States Geologic Survey, 2021
Clayton, California" 7.5-Minute Topographic Quadrangle
Sections 11 and 14, Township 1 North, Range 1 West, MDBM
Latitude (NAD83): 37.940112°, Longitude (NAD83): -121.938125°

Figure 1
Site and Vicinity

Pine Hollow Court
Clayton, Contra Costa County, California

MADRONE ECOLOGICAL CONSULTING

*Figure not OCR compatible

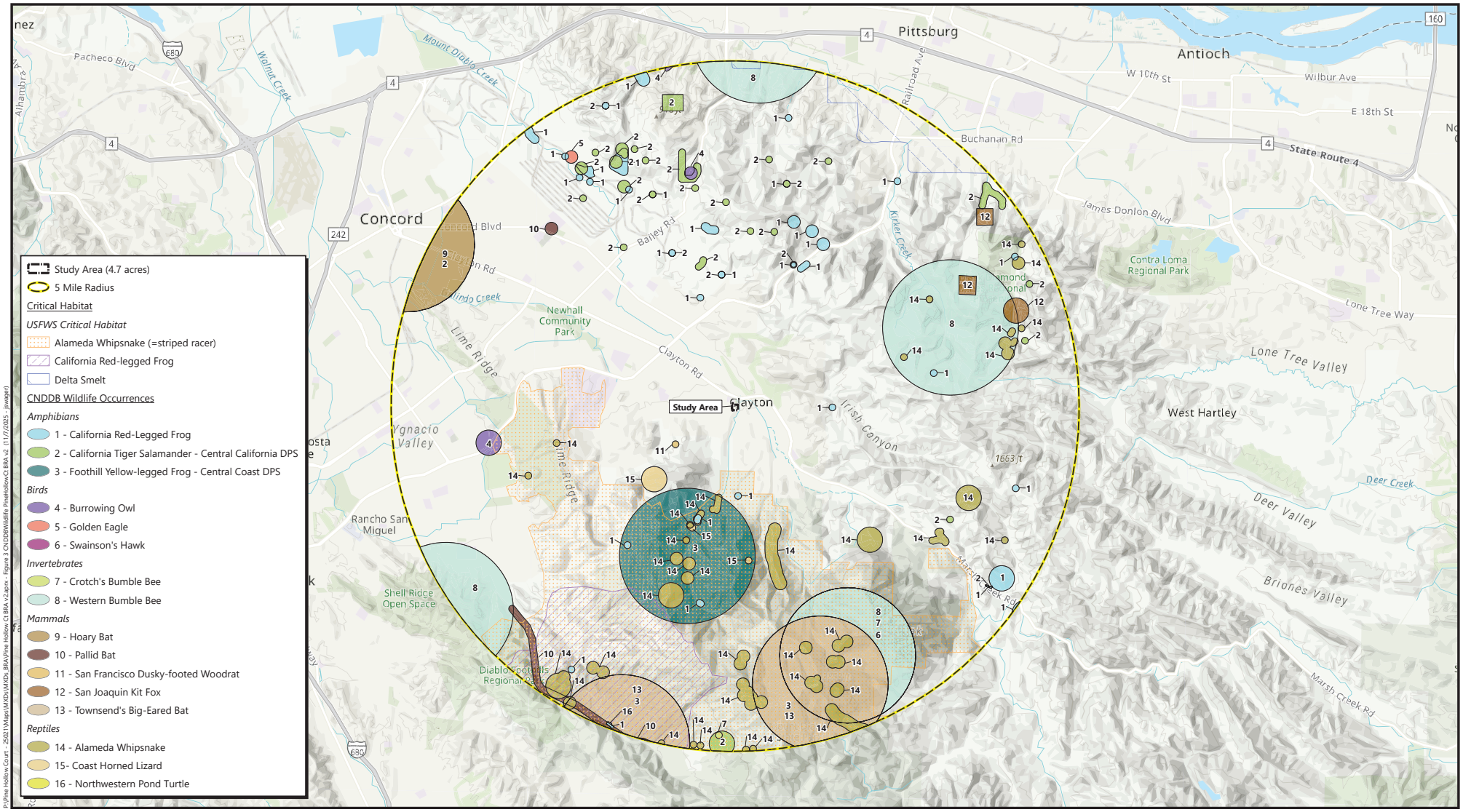


Source: *California Department of Fish and Wildlife*, November 2025
Basemap Source: *ESRI World Topographic Map*

Figure 2
California Diversity Database Occurrences of Plant Species
Pine Hollow Court
Clayton, Contra Costa County, California

MADRONE ECOLOGICAL CONSULTING

*Figure not OCR compatible

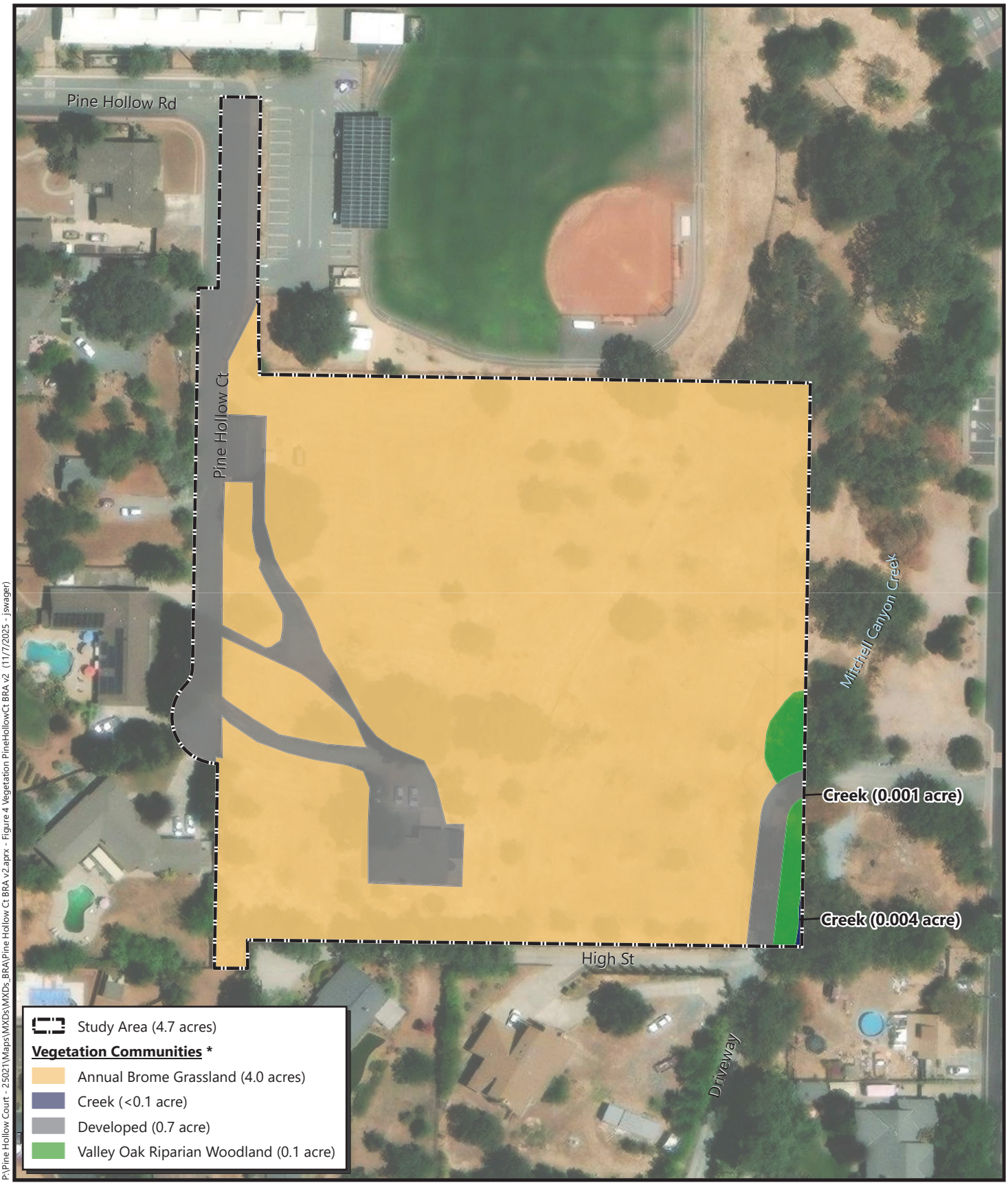


Source: *California Department of Fish and Wildlife*, November 2025
Basemap Source: *ESRI World Topographic Map*

Figure 3
California Diversity Database Occurrences of Wildlife Species and Critical Habitat
Pine Hollow Court
Clayton, Contra Costa County, California

MADRONE ECOLOGICAL CONSULTING

*Figure not OCR compatible



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*Figure not OCR compatible

Figure 4
Vegetation Communities

Pine Hollow Court
Clayton, Contra Costa County, California

MADRONE ECOLOGICAL CONSULTING

** Small summation errors may occur due to rounding*
Aerial Source: Maxar, 29 June 2022



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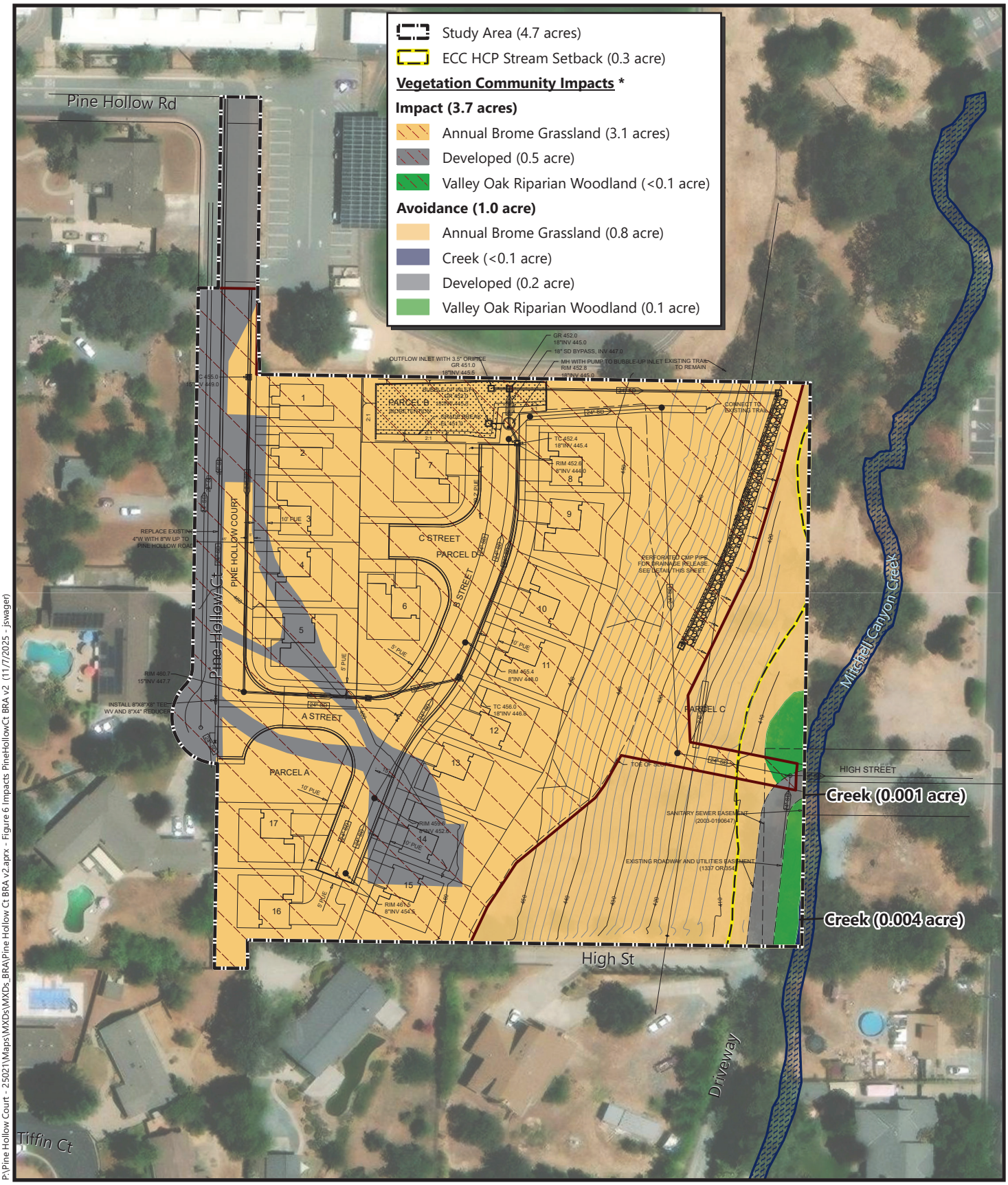
*Figure not OCR compatible

Soil Survey Source: *USDA, Natural Resources Conservation Service Soil Survey Geographic (SSURGO) database for Contra Costa County, California*
Aerial Source: Maxar, 29 June 2022

Figure 5
Natural Resources Conservation Service Soils

Pine Hollow Court
Clayton, Contra Costa County, California

MADRONE ECOLOGICAL CONSULTING



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Feet
0 50 100

*Figure not OCR compatible

Figure 6
Project Impacts

Pine Hollow Court
Clayton, Contra Costa County, California

MADRONE ECOLOGICAL CONSULTING

** Small summation errors may occur due to rounding*
Design Source: CBG
Aerial Source: Maxar, 29 June 2022

Attachments

Attachment A. 1027 Pine Hollow Court Preliminary Site Plan

Attachment B. IPaC Trust Resource Report for the Study Area

Attachment C. CNPS Inventory of Rare and Endangered Plants Query for the "Clayton, California" USGS Quadrangle and Eight Surrounding Quadrangles

Attachment D. Wildlife List

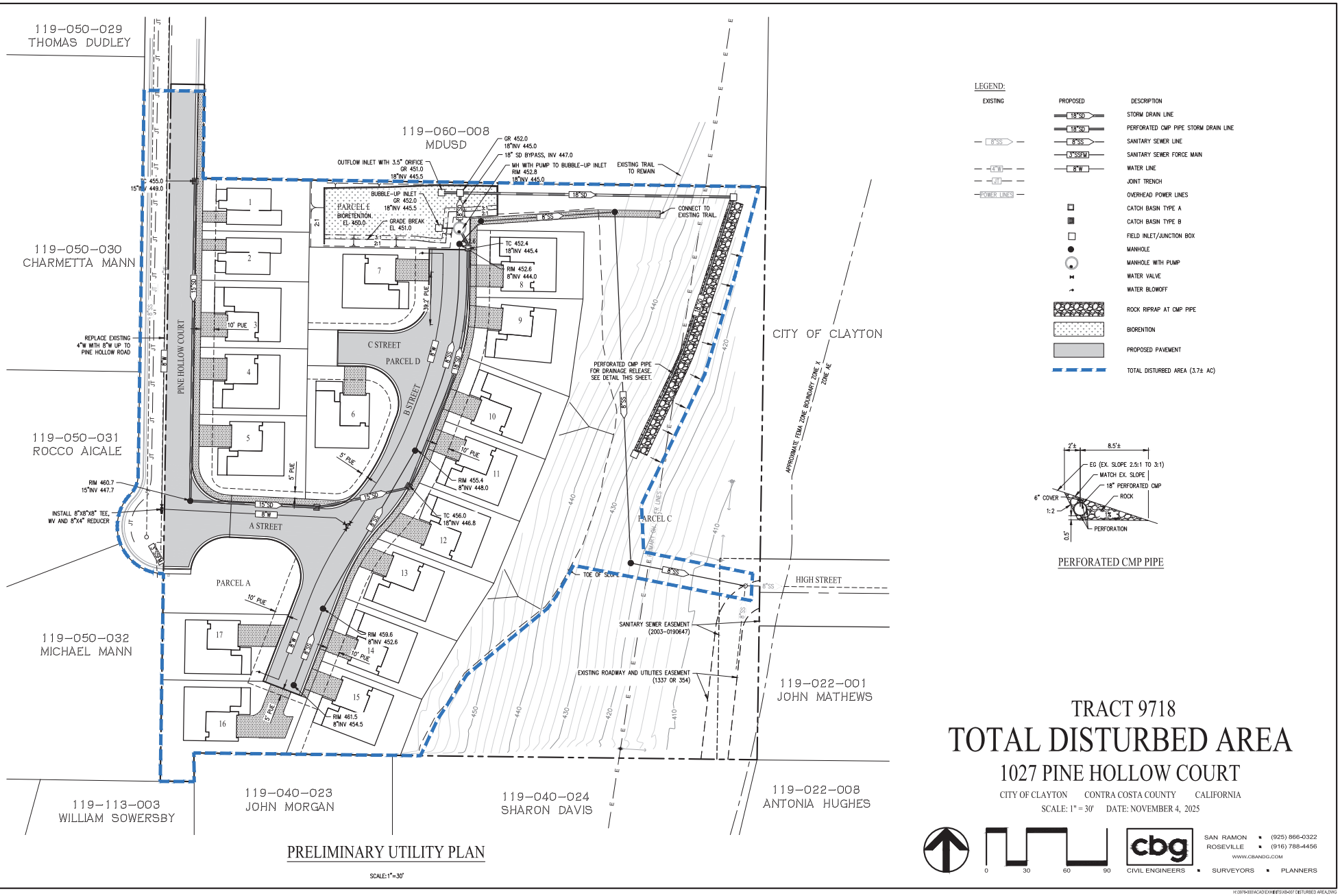
Attachment E. Locally-Rare Plant Species

Attachment F. Special-Status Plant Survey Report for Pine Hollow Court

Attachment G. Preliminary Arborist Report – 1027 Pine Hollow Court

Attachment A

1027 Pine Hollow Court
Preliminary Site Plan



PRELIMINARY UTILITY PLAN

SCALE:1"=30'

*Figure not OCR compatible

Attachment B

IPaC Trust Resource Report
for the Study Area

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

Contra Costa County, California



*Figure not OCR compatible

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building

2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

NOT FOR CONSULTATION

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
San Joaquin Kit Fox Vulpes macrotis mutica Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873	Endangered

Birds

NAME	STATUS
California Condor Gymnogyps californianus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8193	Endangered
California Least Tern Sternula antillarum browni Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8104	Endangered
California Ridgway's Rail Rallus obsoletus obsoletus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4240	Endangered

Reptiles

NAME	STATUS
Alameda Whipsnake (=striped Racer) Masticophis lateralis euryxanthus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5524	Threatened
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

NOT FOR CONSULTATION

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened
Foothill Yellow-legged Frog Rana boylii There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5133	Threatened
Western Spadefoot Spea hammondii No critical habitat has been designated for this species.	Proposed Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS

NOT FOR CONSULTATION

Large-flowered Fiddleneck Wherever found	Amsinckia grandiflora	Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/5558

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

NOT FOR CONSULTATION

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NOT FOR CONSULTATION

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

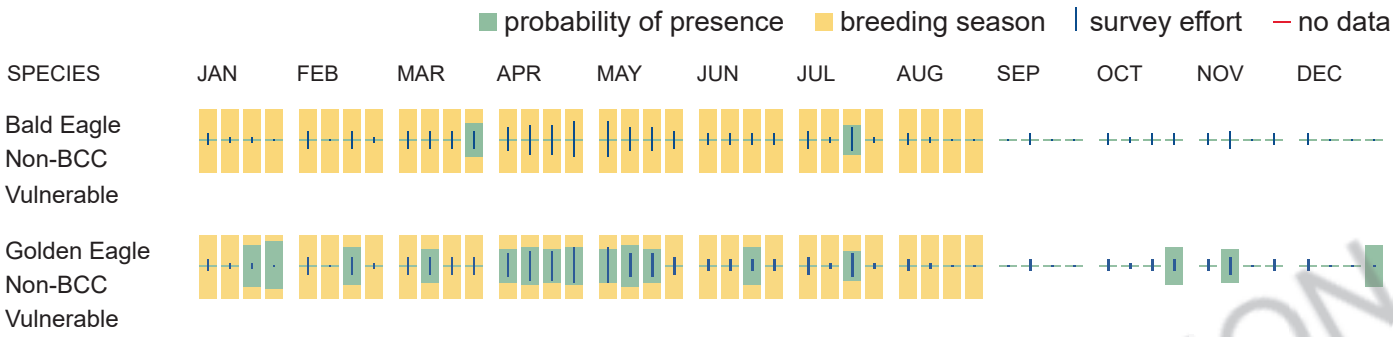
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)

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A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



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Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report
On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds

- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31

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Belding's Savannah Sparrow Passerculus sandwichensis beldingi — Breeds Apr 1 to Aug 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8

Black Swift Cypseloides niger — Breeds Jun 15 to Sep 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8878

Black-chinned Sparrow Spizella atrogularis — Breeds Apr 15 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9447

Bullock's Oriole Icterus bullockii — Breeds Mar 21 to Jul 25

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Spinus lawrencei — Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

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Long-eared Owl asio otus — Breeds Mar 1 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3631

Northern Harrier Circus hudsonius — Breeds Apr 1 to Sep 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/8350

Nuttall's Woodpecker Dryobates nuttallii — Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Santa Barbara Song Sparrow Melospiza melodia graminea — Breeds Mar 1 to Sep 5

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/5513

Western Screech-owl Megascops kennicottii cardonensis — Breeds Mar 1 to Jun 30

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

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Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

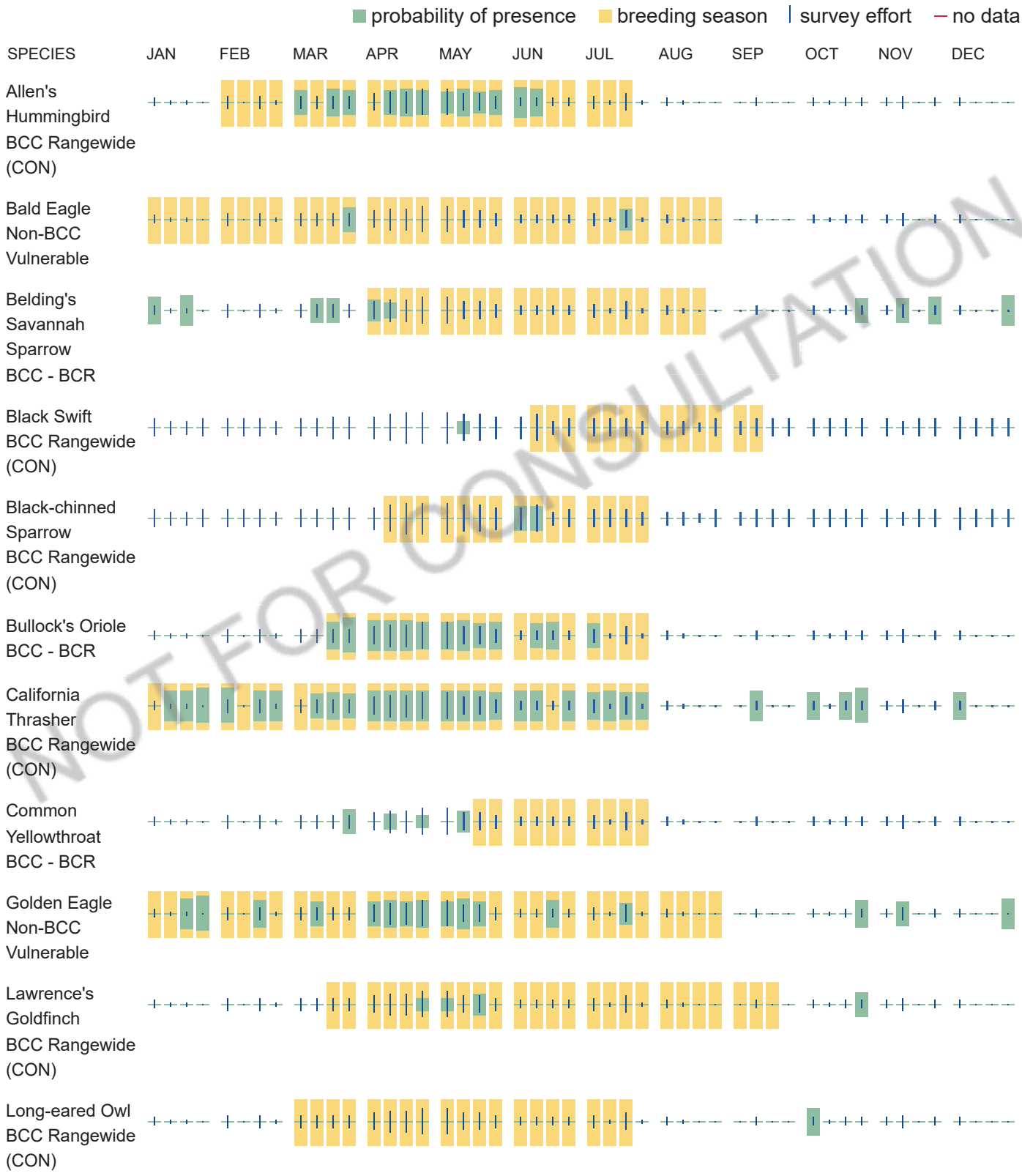
No Data (–)

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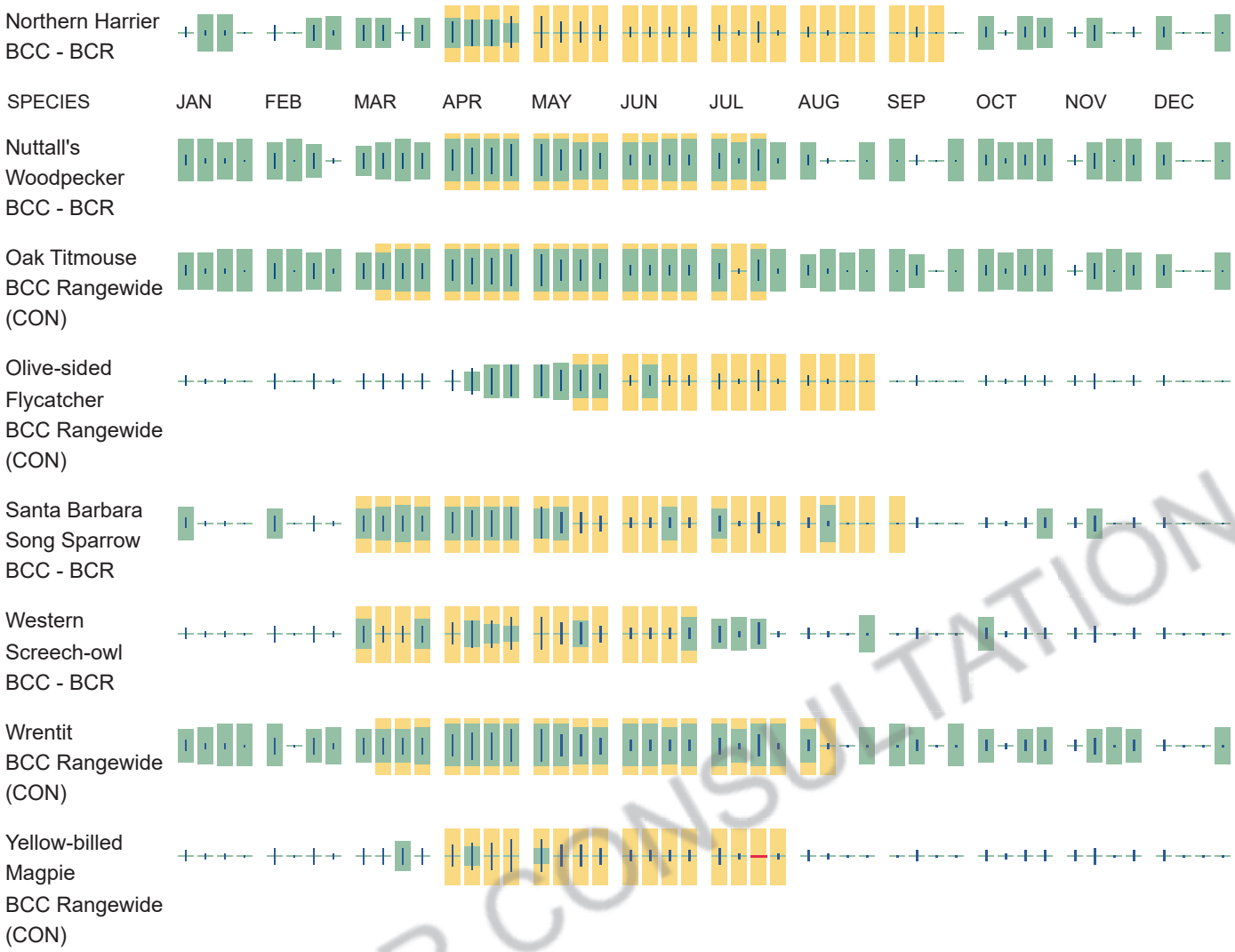
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



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Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential

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susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability

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of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory

(NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND
PFOA

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

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Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Attachment C

CNPS Inventory of Rare and Endangered Plants Query for the "Clayton, California" USGS Quadrangle and Eight Surrounding Quadrangles



CALIFORNIA
NATIVE PLANT SOCIETY

CNPS Rare Plant Inventory

Search Results

55 matches found. Click on scientific name for details

Search Criteria: , CRPR is one of [**1A:1B:2A:2B:3**] , 9-Quad include [**3712177:3712178:3712187:3712188:3812117:3712281:3812118:3812211:3712271**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	FED LIST	STATE LIST	CA RARE PLANT RANK
Amsinckia grandiflora	large-flowered fiddleneck	Boraginaceae	FE	CE	1B.1
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	None	None	1B.2
Arctostaphylos auriculata	Mt. Diablo manzanita	Ericaceae	None	None	1B.3
Arctostaphylos manzanita ssp. *laevigata*	Contra Costa manzanita	Ericaceae	None	None	1B.2
Astragalus tener var. *tener*	alkali milk-vetch	Fabaceae	None	None	1B.2
Atriplex depressa	brittlescale	Chenopodiaceae	None	None	1B.2
Blepharizonia plumosa	big tarplant	Asteraceae	None	None	1B.1
Calochortus pulchellus	Mt. Diablo fairy-lantern	Liliaceae	None	None	1B.2
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	Asteraceae	None	None	1B.1
Chloropyron molle ssp. *molle*	soft salty bird's-beak	Orobanchaceae	FE	CR	1B.2

Cicuta maculata var. *bolanderi*	Bolander's water-hemlock	Apiaceae	None	None	2B.1
Cordylanthus nidularius	Mt. Diablo bird's-beak	Orobanchaceae	None	CR	1B.1
Cryptantha hooveri	Hoover's cryptantha	Boraginaceae	None	None	1A
Delphinium californicum ssp. *interius*	Hospital Canyon larkspur	Ranunculaceae	None	None	1B.2
Downingia pusilla	dwarf downingia	Campanulaceae	None	None	2B.2
Eriastrum ertterae	Lime Ridge eriastrum	Polemoniaceae	None	CE	1B.1
Eriogonum nudum var. *psychicola*	Antioch Dunes buckwheat	Polygonaceae	None	None	1B.1
Eriogonum truncatum	Mt. Diablo buckwheat	Polygonaceae	None	None	1B.1
Eryngium jepsonii	Jepson's coyote-thistle	Apiaceae	None	None	1B.2
Erysimum capitatum var. *angustatum*	Contra Costa wallflower	Brassicaceae	FE	CE	1B.1
Eschscholzia rhombipetala	diamond-petaled California poppy	Papaveraceae	None	None	1B.1
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	None	None	1B.2
Fritillaria liliacea	fragrant fritillary	Liliaceae	None	None	1B.2
Grimmia torenii	Toren's grimmia	Grimmiaceae	None	None	1B.3
Helianthella castanea	Diablo helianthella	Asteraceae	None	None	1B.2
Hesperolinon breweri	Brewer's western flax	Linaceae	None	None	1B.2
Hoita strobilina	Loma Prieta hoita	Fabaceae	None	None	1B.1
Isocoma arguta	Carquinez goldenbush	Asteraceae	None	None	1B.1
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	FE	None	1B.1
Lathyrus jepsonii var. *jepsonii*	Delta tule pea	Fabaceae	None	None	1B.2
Lilaeopsis masonii	Mason's lilaeopsis	Apiaceae	None	CR	1B.1
Limosella australis	Delta mudwort	Scrophulariaceae	None	None	2B.1

Madia radiata	showy golden madia	Asteraceae	None	None	1B.1
Malacothamnus hallii	Hall's bushmallow	Malvaceae	None	None	1B.2
Monolopia gracilens	woodland woollythreads	Asteraceae	None	None	1B.2
Navarretia gowenii	Lime Ridge navarretia	Polemoniaceae	None	None	1B.1
Navarretia nigelliformis ssp. *radians*	shining navarretia	Polemoniaceae	None	None	1B.2
Oenothera deltoides ssp. *howellii*	Antioch Dunes evening-primrose	Onagraceae	FE	CE	1B.1
Phacelia phacelioides	Mt. Diablo phacelia	Hydrophyllaceae	None	None	1B.2
Plagiobothrys hystriculus	bearded popcornflower	Boraginaceae	None	None	1B.1
Puccinellia simplex	California alkali grass	Poaceae	None	None	1B.2
Ravenella exigua	chaparral harebell	Campanulaceae	None	None	1B.2
Sanicula saxatilis	rock sanicle	Apiaceae	None	CR	1B.2
Senecio aphanactis	chaparral ragwort	Asteraceae	None	None	1B.2
Sidalcea keckii	Keck's checkerbloom	Malvaceae	FE	None	1B.1
Spergularia macrotheca var. *longistyla*	long-styled sand-spurrey	Caryophyllaceae	None	None	1B.2
Streptanthus albidus ssp. *peramoenus*	most beautiful jewelflower	Brassicaceae	None	None	1B.2
Streptanthus hispidus	Mt. Diablo jewelflower	Brassicaceae	None	None	1B.3
Stuckenia filiformis ssp. *alpina*	northern slender pondweed	Potamogetonaceae	None	None	2B.2
Stuckenia striata	broadleaf pondweed	Potamogetonaceae	None	None	2B.3
Symphyotrichum lentum	Suisun Marsh aster	Asteraceae	None	None	1B.2
Trifolium hydrophilum	saline clover	Fabaceae	None	None	1B.2
Triquetrella californica	coastal triquetrella	Pottiaceae	None	None	1B.2

Tropidocarpum capparideum	caper-fruited tropidocarpum	Brassicaceae	None	None	1B.1
Viburnum ellipticum	oval-leaved viburnum	Viburnaceae	None	None	2B.3

Showing 1 to 55 of 55 entries

Go to top

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2025. Rare Plant Inventory (online edition, v9.5.1). Website https://www.rareplants.cnps.org [accessed 16 June 2025].

}

Attachment D

Wildlife List

Wildlife Species Observed within the
Pine Hollow Court Study Area
30 June 2020 and 7 March 2025

Species Name	Common name
Birds	
Baeolophus inornatus	Oak titmouse
Buteo lineatus	Red-shouldered hawk
Calypte anna	Anna's hummingbird
Carpodacus mexicanus	House finch
Cathartes aura	Turkey vulture
Corvus corax	Common raven
Dryobates nuttallii	Nuttall's woodpecker
Meleagris gallopavo	Turkey
Melozone crissalis	California towhee
Mimus polyglottos	Northern mockingbird
Sayornis nigricans	Black phoebe
Sturnella neglecta	Western meadowlark
Tyrannus verticalis	Western kingbird
Zenaida macroura	Mourning dove
Mammals	
Spermophilus beecheyi	California ground-squirrel
Reptiles	
Sceloporus occidentalis	Western fence lizard

Attachment E

Locally Rare Plant Species

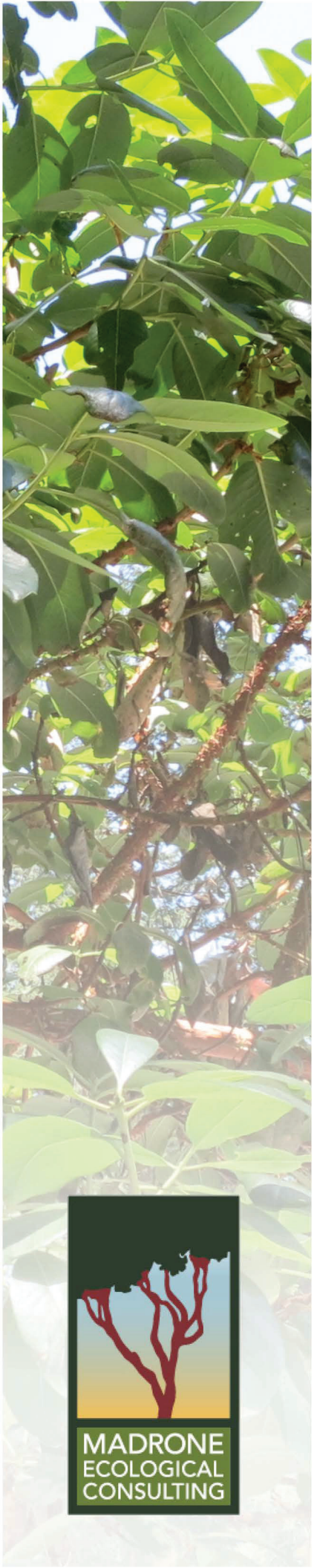
Scientific Name	common name	East Bay CNPS rarity rank	California rarity rank	habitat	elevation (Feet)	county	blooming period
Amsinckia tessellata var. tessellata	desert fiddleneck, devil's lettuce	A2	State Rank CEQA	Grs; Misc	164-7480	ALA, CCA	Feb-Jun
Androsace elongata subsp. acuta	California androsace	*A2	State Rank S3.2?(CEQA) State CNPS Rank 4.2 Global Rank G5?T3T4	DSlp; Grs	<3937	ALA, CCA	Feb-Apr
Astragalus didymocarpus var. didymocarpus	two-seeded milkvetch	A1	State Rank CEQA	Grs	<4429	ALA, CCA?	Feb-May
Blepharizonia plumosa	big tarplant	*A2	State Rank S1(CEQA) State CNPS Rank 1B.1 Global Rank G1	Grs; Scrb	<1640	ALA, CCA	Jul-Nov
California macrophylla	round-leaved filaree	*A2	State Rank S2(CEQA) State CNPS Rank 1B.1 Global Rank G2	Grs; Scrb	<3937	ALA, CCA	Mar-Jul
Castilleja ambigua subsp. ambigua	Johnny-nip	*A1	State Rank S3(CEQA) State CNPS Rank 4.2 Global Rank G4T3T4	CBlf; Grs	<1640	ALA?, CCA?	May-Aug
Centromadia parryi subsp. congdonii	Congdon's tarplant	*A2	State Rank S2(CEQA) State CNPS Rank 1B.2 Global Rank G4T2	Alk; Grs; Wtld	<984	ALA, CCA	Jun-Oct
Cicendia quadrangularis	timwort	A2	State Rank CEQA	Grs	<8858	ALA, CCA	Mar-May
Cirsium quercetorum	brownie thistle	A2	State Rank CEQA	Grs; Wdld	<1640	ALA, CCA	Apr-Aug
Cuscuta californica var. californica	California dodder	A1	State Rank CEQA	Chpl; Grs; Misc	<8202	ALA, CCA	May-Sep
Extriplex joaquinana	San Joaquin spearscale, San Joaquin saltbush	*A2	State Rank CEQA	Alk; Grs; Wtld	<1148	ALA, CCA	Apr-Sep
Gilia tricolor subsp. tricolor	birds-eye gilia	A2	State Rank CEQA	Grs	<3937	ALA, CCA	-
Gilia tricolor subsp. unknown	birds-eye gilia	A1?	State Rank CEQA	Grs		ALA, CCA	-
Lasthenia microglossa	small-ray goldfields	A2	State Rank CEQA	Chpl; Grs; Wtld; Wdld	<3281	ALA, CCA	Mar-May
Lasthenia minor	coastal goldfields, woolly goldfields	A1	State Rank CEQA	Grs	<2297	ALA, CCA	Mar-Jun
Malacothrix coulteri	snake's-head	A1	State Rank CEQA	Grs; Scrb; Snd	<4921	ALA, CCA?	Mar-May

Micropus amphibolus	Mount Diablo cottonseed, Mt. Diablo cottonweed	*A1x	State Rank S3.2?(CEQA) State CNPS Rank 3.2 Global Rank G3	Grs; DSlp; Rck	131-2953	ALA	Mar-Jun
Microseris elegans	elegant microseris	A2	State Rank CEQA	Grs; VnPl	<2297	ALA, CCA	Apr-Jun
Minuartia californica	California sandwort	A1	State Rank CEQA	Chpl; Grs; DSlp; Rck; Snd; Serp	<4921	ALA, CCA	-
Muilla maritima	common muilla	A2	State Rank CEQA	Alk; Grs; Wtld; DSlp; Scrb; Serp; Wdld	<7546	ALA, CCA	Mar-Jun
Navarretia viscidula	sticky navarretia	A1	State Rank CEQA	FMsh; Grs; Snd; VnPl	328-2953	CCA	Jun-Jul
Pentachaeta alsinoides	tiny pentachaeta	A2	State Rank CEQA	Grs	<1804	ALA, CCA	Mar-Jun
Plagiobothrys fulvus var. campestris	field popcornflower, fulvous popcornflower	A2	State Rank CEQA	Grs; Gvl; Snd; Wdld	<1640	ALA, CCA	Mar-May
Ranunculus occidentalis var. occidentalis	western buttercup	A2	State Rank CEQA	Grs; Wdld	<4921	ALA, CCA	Mar-Jul
Sidalcea diploscypha	fringed checkerbloom, fringed sidalcea	A1	State Rank CEQA	Grs; Wdld	<2756	ALA, CCA	Apr-May
Tetrapteron graciliflorum	hill sun cup	A2	State Rank CEQA	Grs; DSlp; Scrb; Wdld	<2625	ALA, CCA	Mar-Apr
Tropidocarpum capparideum	caper-fruited tropidocarpum	*A1x	State Rank S1.1(CEQA) State CNPS Rank 1B.1 Global Rank G1	Alk; Grs	<1312	ALA?, CCA?	Mar-Apr
Tropidocarpum gracile	slender tropidocarpum	A2	State Rank CEQA	Alk; Grs	<4757	ALA, CCA	Mar-May
Vicia hassei	slender vetch	A2	State Rank CEQA	Grs; Scrb	<3937	ALA, CCA	Mar-May

Citation: Lake, Dianne: Rare, Unusual and Significant Plants of Alameda and Contra Costa Counties [web application]. 2020 Berkeley, California: East Bay Chapter of the California Native Plant Society [a non-profit organization]. URL: https://ruspdb.ebcnps.org/cgi-bin/ebrare/ebrare.cgi (Accessed: Nov 17, 2020).

Attachment F

Special-Status Plant Survey Report
for Pine Hollow Court



Special-Status Plant Survey Report

Pine Hollow Court

City of Clayton, Contra Costa County
May 2025

MADRONE ECOLOGICAL CONSULTING

Prepared for:
Ponderosa Homes II, Inc.
5020 Franklin Drive, Suite 200
Pleasanton, CA 94588

Recommended Citation:
Madrone Ecological Consulting, LLC (Madrone). 2025. *Special-Status Plant Survey Report for Pine Hollow Court*. Prepared for Ponderosa Homes II, Inc. Published on 30 May 2025.

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Pine Hollow Court

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Figure 2. Natural Resources Conservation Service Soils

Figure 3. Aquatic Resources

Attachments:

Attachment A: Locally Rare Plant Species

Attachment B: Botanist Qualifications

Attachment C: Target Plant Species Reference Population Information

Attachment D: Plant Species Observed within the Pine Hollow Court Study Area

1.0 INTRODUCTION

This report presents the results of a special-status plant survey conducted for the approximately 4.6-acre Pine Hollow Court property (Study Area). The Study Area is located east of Pine Hollow Court, north of High Street, primarily west of Mitchell Creek, and south of Mt. Diablo Elementary School in the City of Clayton, Contra Costa County, California. The Project Area is located in a portion of Section 14 of Township 1 North and Range 1 West (MDB&M) of the "*Clayton, California*" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2021) (**Figure 1**).

2.0 METHODOLOGY

Madrone Ecological Consulting, LLC (Madrone) biologist Daria Snider conducted a special-status plant survey of the Study Area on 7 March and 15 April 2025. The special-status plant survey was conducted in accordance with the U.S. Fish and Wildlife Service's *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (USFWS 2000), California Department of Fish and Wildlife's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018), and the *CNPS Botanical Survey Guidelines* (CNPS 2001).

A list of special-status plant species with potential to occur within the Study Area was developed by reviewing the following literature, and then refining the list based on habitats present within the Study Area:

- California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2025a) query of CRPR Lists 1A, 1B, 2A, 2B, and 3 within the "Clayton, California" (USGS 2021) and eight surrounding quadrangles;
- the California Natural Diversity Database occurrences of special-status plant species within five miles of the Study Area (CNDDB 2025).

The target species for this survey were:

- Bent-flowered fiddleneck (*Amsinckia lunaris*);
- Mt. Diablo fairy lantern (*Calochortus pulchellus*);
- Fragrant fritillary (*Fritillaria liliacea*);
- Showy golden madia (*Madia radiata*);
- Shining navarretia (*Navarretia nigelliformis* ssp. *radians*); and
- Locally-rare plants identified by the East Bay Chapter of the California Native Plant Society (**Attachment A**).

Meandering pedestrian surveys were conducted throughout the Study Area. The surveys were floristic in nature, which means that all plant species observed on-site were identified to the taxonomic level necessary to determine rarity. Thus, if a special-status plant was present but not on the target list, it would have been detected and documented. Plant taxonomy was based on the nomenclature in the *Jepson eFlora* (Jepson Flora Project 2025). Vegetation communities were classified according to the *Manual of California Vegetation, Second Edition* as updated online (CNPS 2025b). Qualifications for the biologist who conducted the survey are included in **Attachment B,** a list of reference populations of target plants visited is included

in **Attachment C**, and a comprehensive list of all plant species observed during surveys of the Study Area is included in **Attachment D**.

3.0 EXISTING SITE CONDITIONS

The Study Area is surrounded by urban residential development to the west and south, a school to the north, and the Mitchell Creek corridor to the east, beyond which is urban commercial development. The western portion of the Project Area is a relatively flat terrace, which drops off down a moderately steep hill through an abandoned walnut orchard to Mitchell Creek, and its associated narrow riparian woodland along the eastern edge of the Study Area. Elevations range from approximately 400 feet to 450 feet above mean sea level. The Study Area is almost entirely comprised of annual brome grassland with scattered trees. A barn is present in the northwestern corner, and a rural residence is present just south of the southern boundary of the site. A narrow portion of Pine Hill Court and a gravel driveway occur along the western boundary. A narrow strip of Valley oak (*Quercus lobata*) riparian woodland occurs along Mitchell Canyon Creek along the eastern edge. The majority of the trees within the Study Area are Valley oaks (*Quercus lobata*), blue oaks (*Quercus douglasii*), and black walnut (*Juglans hindsii*). There are a number of fruit trees around the residence, as well as scattered black walnut, which appear to be stump sprouts from the historic orchard, and a few very large Italian stone pines (*Pinus pinea*).

The majority of the Study Area is comprised of annual brome grassland, which is dominated by ripgut brome (*Bromus diandrus*) and wild oat (*Avena fatua*). A number of native and non-native forbs are also prevalent, including Menzies' fiddleneck (*Amsinckia menziesii*), common fiddleneck (*Amsinckia intermedia*), field marigold (*Calendula arvensis*), purple vetch (*Vicia benghalensis*), winter vetch (*Vicia villosa ssp. varia*), black mustard (*Brassica nigra*), Italian thistle (*Carduus pycnocephalus*), and milk thistle (*Silybum marianum*).

A thin band of Valley oak riparian woodland occurs along Mitchell Canyon Creek. This woodland is dominated by Valley oak and California buckeye (*Aesculus californica*), with an understory dominated by poison-oak (*Toxicodendron diversilobum*). Scattered California bay (*Umbellularia californica*), and toyon (*Heteromeles arbutifolia*) also occur. The herbaceous layer is dominated by sterile brome (*Bromus sterilis*) and goose grass (*Galium aparine*), with Douglas' mugwort (*Artemisia douglasiana*) and Robert's geranium (*Geranium robertianum*) also occurring.

3.1 Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey Database (NRCS 2025), three soil mapping units occur within the Study Area (**Figure 2**): (PaC) Perkins gravelly loam, 2 to 9 percent slopes, (PaD) Perkins gravelly loam, 9 to 15 percent slopes, and Zamora silty clay loam, 0 to 3 percent slopes, MLRA 14. The Perkins and Zamora soils are deep and very deep, well drained soils that formed in alluvium derived from mixed rock sources. (NRCS 2025). They are not derived from serpentine parent material, and are not considered saline, alkaline, or acidic (NRCS 2025).

3.2 Aquatic Resources

A protocol-level aquatic resources delineation was conducted for the Study Area, and only one aquatic resource was found; a sliver of the perennial Mitchell Canyon Creek along the eastern edge (**Figure 3**). This feature has a bed comprised of gravel/small cobble, and is entirely unvegetated within the channel. Due to some incision, there is virtually no herbaceous hydrophytic vegetation along the banks.

4.0 SURVEY RESULTS

4.1 Bent-Flowered Fiddleneck

Bent-flowered fiddleneck (*Amsinckia lunaris*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in chaparral, cismontane woodland, and valley and foothill grasslands (CNPS 2020). Bent-flowered fiddleneck blooms from March through June and is known to occur at elevations ranging from approximately 10 feet to 1,640 feet above MSL (CNPS 2020).

Marginally suitable habitat for this species is present in the Annual Brome Grasslands throughout the Study Area. This species was not observed during the 2025 protocol-level special status plant survey of the Study Area.

4.2 Mt. Diablo Fairy Lantern

Mt. Diablo fairy lantern (*Calochortus pulchellus*) is not federally or state listed, but it is classified as a CRPR List 1B.2 species. This species is perennial bulb that occurs in chaparral, cismontane and riparian woodlands, and valley and foothill grasslands (CNPS 2020). Mt. Diablo fairy lantern blooms from April through June and is known to occur from approximately 98 feet to 2,755 feet above MSL (CNPS 2020).

Marginally suitable habitat for this species is present in the Annual Brome Grasslands throughout the Study Area. This species was not observed during the 2025 protocol-level special status plant survey of the Study Area.

4.3 Fragrant Fritillary

Fragrant fritillary (*Fritillaria liliacea*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a perennial bulbiferous herb that is found in cismontane woodland, coastal prairie, coastal scrub, and Valley and foothill grassland, often on serpentine soils (CNPS 2020). Fragrant fritillary blooms from February through April and is known to occur from 10 to 1,345 feet above MSL (CNPS 2020).

Marginally suitable habitat for this species is present in the Annual Brome Grasslands throughout the Study Area. This species was not observed during the 2025 protocol-level special status plant survey of the Study Area.

4.4 Showy Golden Madia

Showy golden madia (*Madia radiata*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in cismontane woodland and Valley and foothill grasslands (CNPS 2020). Showy golden madia blooms between March and May and is known to occur at elevations ranging from 82 to 3,986 feet above MSL (CNPS 2020).

Marginally suitable habitat for this species is present in the Annual Brome Grasslands throughout the Study Area. This species was not observed during the 2025 protocol-level special status plant survey of the Study Area.

4.5 Shining Navarretia

Shining navarretia (*Navarretia nigelliformis* ssp. *radians*) is not federally or state listed, but it is classified as a CRPR List 1B.2 species. This annual herb is primarily associated with forb-rich openings in cismontane woodland and valley and foothill grassland, often on clay soils (CNPS 2020). Shining navarretia occurs at elevations between approximately 210 feet and 3,280 feet, and typically blooms from April through July (CNPS 2019).

Marginally suitable habitat for this species is present in the Annual Brome Grasslands throughout the Study Area. This species was not observed during the 2025 protocol-level special status plant survey of the Study Area.

4.6 Locally Rare Plant Species

There are 22 A-ranked plant species that are not CRPR-listed included in the *Database of Rare, Unusual and Significant Plants of Alameda and Contra Costa Counties* for grasslands below 600 feet in the Concord/Clayton/Walnut Creek area (which includes the Project Area) (**Attachment A**). None of these species were observed during the 2025 protocol-level special status plant survey of the Study Area.

5.0 CONCLUSION

No special-status plant species were observed during the 2025 protocol-level special-status plant surveys of the Pine Hollow Court Study Area.

6.0 REFERENCES

California Department of Fish and Wildlife (CDFW). 2018. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. State of California Natural Resource Agency Department of Fish and Wildlife. Dated 20 March 2018. Website https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959 [Accessed January through May 2022].

California Native Plant Society (CNPS). 2001. *CNPS botanical survey guidelines*. Pages 38-40 in California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (D.P. Tibor, editor). Sixth edition. Special Publication No. 1, California Native Plant Society, Sacramento, 387 pp.

California Native Plant Society (CNPS). 2025a. *Inventory of Rare and Endangered Plants (online edition, v9.5)*. California Native Plant Society, Sacramento, CA. Website: http://www.rareplants.cnps.org [Accessed March through May 2025].

California Native Plant Society (CNPS). 2025b. *A Manual of California Vegetation, Online Edition*. California Native Plant Society, Sacramento, CA. Website: http://www.cnps.org/cnps/vegetation/ [March through May 2025].

California Natural Diversity Database (CNDDB). 2025. *RareFind 5*. California Department of Fish and Wildlife. Dated May 2025.

Jepson Flora Project (eds.) 2025. *Jepson eFlora*. Website: http://ucjeps.berkeley.edu/eflora/ [Accessed March through May 2025].

U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). 2025. *Soil Survey Geographic (SSURGO) Database for Contra Costa County, California* [Accessed May 2025].

U.S. Geological Survey (USGS). 2021. "*Clayton, California*" 7.5-Minute Series Topographic Quadrangle. U.S. Geological Survey. Denver, Colorado.

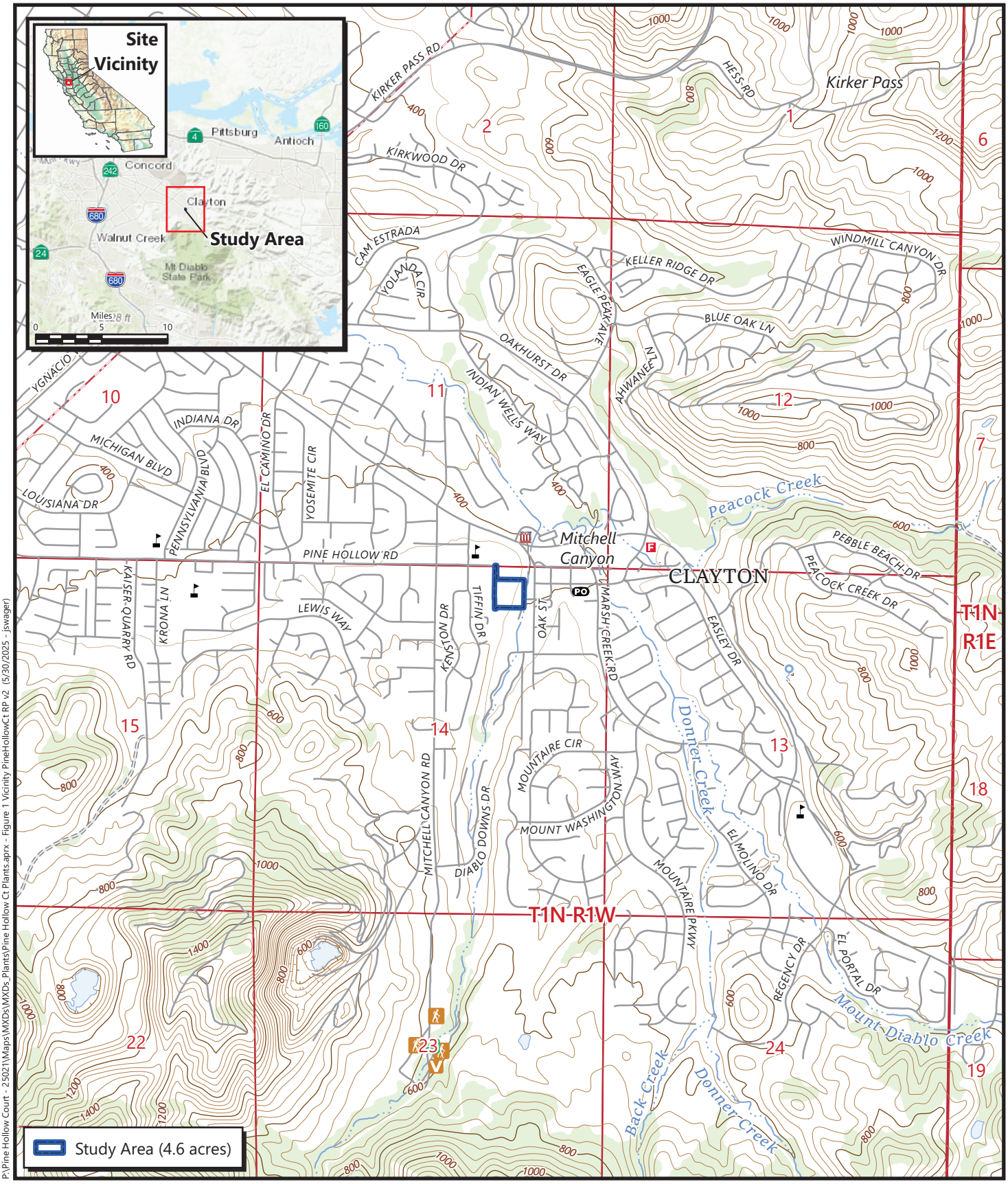
U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2000. *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants*. Sacramento, CA.

Figures

Figure 1. Site and Vicinity Map

Figure 2. Natural Resources Conservation Service Soils

Figure 3. Aquatic Resources



P:\Pine Hollow Court - 25021\Maps\MXDs\MXDs_Plants\Pine Hollow Ct Plants.aprx - Figure 1 Vicinity PineHollowCt RP v2 (5/30/2025 - jswager)

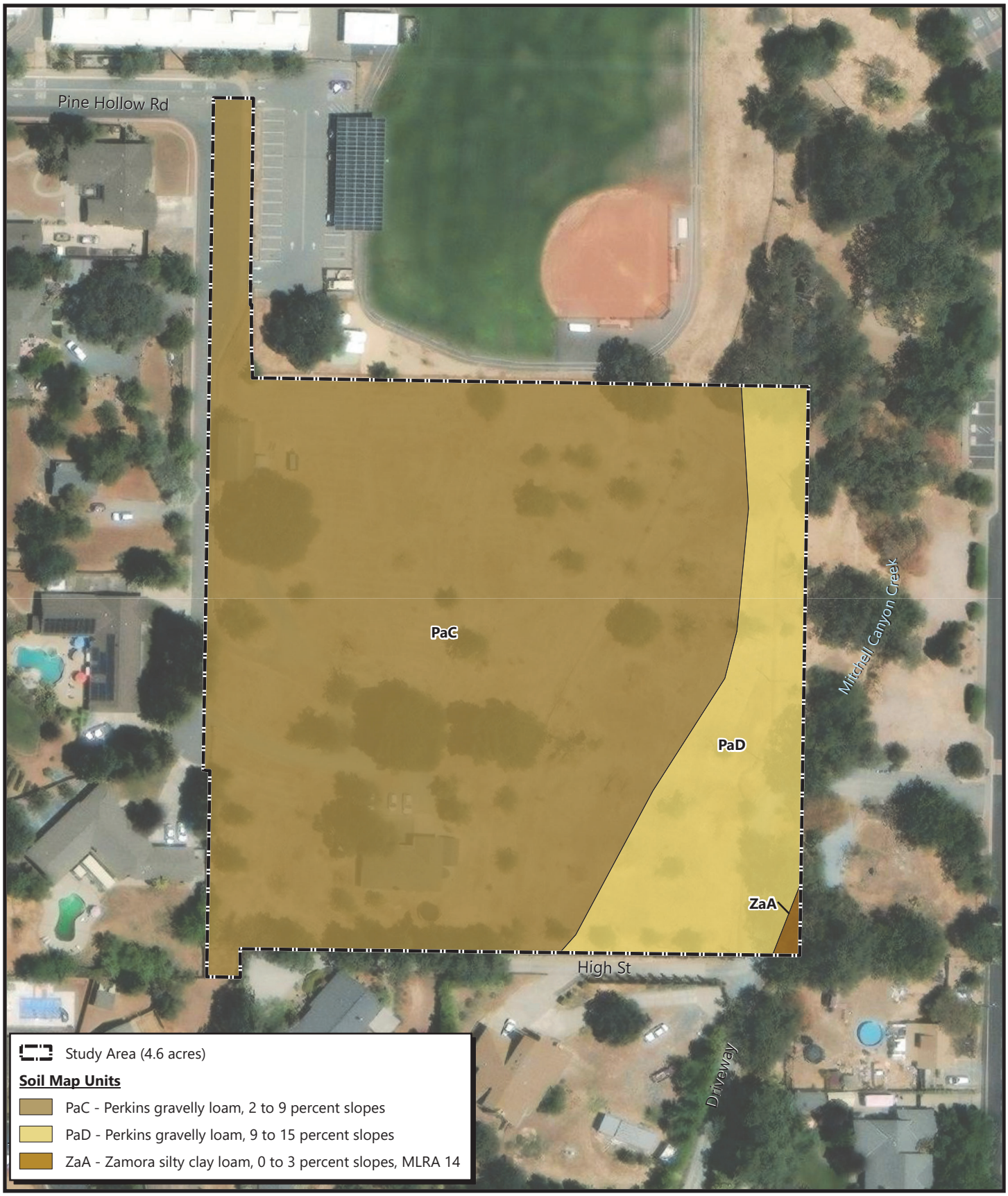
Source: United States Geologic Survey, 2021
Clayton, California" 7.5-Minute Topographic Quadrangle
Sections 11 and 14, Township 1 North, Range 1 West, MDBM
Latitude (NAD83): 37.940106°, Longitude (NAD83): -121.938102°

Figure 1
Site and Vicinity

Pine Hollow Court
Clayton, Contra Costa County, California

MADRONE ECOLOGICAL CONSULTING

*Figure not OCR compatible



P:\Pine Hollow Court - 25021\Maps\MXDs\MXDs_Plants\Pine Hollow Ct Plants.aprx - Figure 2 NRCS PineHollowCt RP v2 (5/30/2025 - jswager)

N

Feet
0 50 100

Soil Survey Source: *USDA, Natural Resources Conservation Service Soil Survey Geographic (SSURGO) database for Contra Costa County, California*
Aerial Source: Maxar, 29 June 2022

Figure 2
Natural Resources Conservation Service Soils

Pine Hollow Court
Clayton, Contra Costa County, California

MADRONE ECOLOGICAL CONSULTING

*Figure not OCR compatible



P:\Pine Hollow Court - 25021\Maps\MXDs\MXDs_Plants\Pine Hollow Ct Plants.aprx - Figure 3 AqRes PineHollowCt RP v2 (5/30/2025 - jswagen)

Figure 3
Aquatic Resources

Pine Hollow Court
Clayton, Contra Costa County, California

MADRONE ECOLOGICAL CONSULTING

Aerial Source: Maxar, 29 June 2022

*Figure not OCR compatible

Attachments

Attachment A: Locally-Rare Plant Species

Attachment B: Botanist Qualifications

Attachment C: Target Plant Species Reference Population Information

Attachment D: Plant Species Observed within the Pine Hollow Court Study Area

Attachment A

Locally-Rare Plant Species

Scientific Name	common name	East Bay CNPS rarity rank	California rarity rank	habitat	elevation (Feet)	county	blooming period
Amsinckia tessellata var. tessellata	desert fiddleneck, devil's lettuce	A2	State Rank CEQA	Grs; Misc	164-7480	ALA, CCA	Feb-Jun
Androsace elongata subsp. acuta	California androsace	*A2	State Rank S3.2?(CEQA) State CNPS Rank 4.2 Global Rank G5?T3T4	DSlp; Grs	<3937	ALA, CCA	Feb-Apr
Astragalus didymocarpus var. didymocarpus	two-seeded milkvetch	A1	State Rank CEQA	Grs	<4429	ALA, CCA?	Feb-May
Blepharizonia plumosa	big tarplant	*A2	State Rank S1(CEQA) State CNPS Rank 1B.1 Global Rank G1	Grs; Scrb	<1640	ALA, CCA	Jul-Nov
California macrophylla	round-leaved filaree	*A2	State Rank S2(CEQA) State CNPS Rank 1B.1 Global Rank G2	Grs; Scrb	<3937	ALA, CCA	Mar-Jul
Castilleja ambigua subsp. ambigua	Johnny-nip	*A1	State Rank S3(CEQA) State CNPS Rank 4.2 Global Rank G4T3T4	CBlf; Grs	<1640	ALA?, CCA?	May-Aug
Centromadia parryi subsp. congdonii	Congdon's tarplant	*A2	State Rank S2(CEQA) State CNPS Rank 1B.2 Global Rank G4T2	Alk; Grs; Wtld	<984	ALA, CCA	Jun-Oct
Cicendia quadrangularis	timwort	A2	State Rank CEQA	Grs	<8858	ALA, CCA	Mar-May
Cirsium quercetorum	brownie thistle	A2	State Rank CEQA	Grs; Wdld	<1640	ALA, CCA	Apr-Aug
Cuscuta californica var. californica	California dodder	A1	State Rank CEQA	Chpl; Grs; Misc	<8202	ALA, CCA	May-Sep
Extriplex joaquinana	San Joaquin spearscale, San Joaquin saltbush	*A2	State Rank CEQA	Alk; Grs; Wtld	<1148	ALA, CCA	Apr-Sep
Gilia tricolor subsp. tricolor	birds-eye gilia	A2	State Rank CEQA	Grs	<3937	ALA, CCA	-
Gilia tricolor subsp. unknown	birds-eye gilia	A1?	State Rank CEQA	Grs		ALA, CCA	-
Lasthenia microglossa	small-ray goldfields	A2	State Rank CEQA	Chpl; Grs; Wtld; Wdld	<3281	ALA, CCA	Mar-May
Lasthenia minor	coastal goldfields, woolly goldfields	A1	State Rank CEQA	Grs	<2297	ALA, CCA	Mar-Jun
Malacothrix coulteri	snake's-head	A1	State Rank CEQA	Grs; Scrb; Snd	<4921	ALA, CCA?	Mar-May

Micropus amphibolus	Mount Diablo cottonseed, Mt. Diablo cottonweed	*A1x	State Rank S3.2?(CEQA) State CNPS Rank 3.2 Global Rank G3	Grs; DSlp; Rck	131-2953	ALA	Mar-Jun
Microseris elegans	elegant microseris	A2	State Rank CEQA	Grs; VnPl	<2297	ALA, CCA	Apr-Jun
Minuartia californica	California sandwort	A1	State Rank CEQA	Chpl; Grs; DSlp; Rck; Snd; Serp	<4921	ALA, CCA	-
Muilla maritima	common muilla	A2	State Rank CEQA	Alk; Grs; Wtld; DSlp; Scrb; Serp; Wdld	<7546	ALA, CCA	Mar-Jun
Navarretia viscidula	sticky navarretia	A1	State Rank CEQA	FMsh; Grs; Snd; VnPl	328-2953	CCA	Jun-Jul
Pentachaeta alsinoides	tiny pentachaeta	A2	State Rank CEQA	Grs	<1804	ALA, CCA	Mar-Jun
Plagiobothrys fulvus var. campestris	field popcornflower, fulvous popcornflower	A2	State Rank CEQA	Grs; Gvl; Snd; Wdld	<1640	ALA, CCA	Mar-May
Ranunculus occidentalis var. occidentalis	western buttercup	A2	State Rank CEQA	Grs; Wdld	<4921	ALA, CCA	Mar-Jul
Sidalcea diploscypha	fringed checkerbloom, fringed sidalcea	A1	State Rank CEQA	Grs; Wdld	<2756	ALA, CCA	Apr-May
Tetrapteron graciliflorum	hill sun cup	A2	State Rank CEQA	Grs; DSlp; Scrb; Wdld	<2625	ALA, CCA	Mar-Apr
Tropidocarpum capparideum	caper-fruited tropidocarpum	*A1x	State Rank S1.1(CEQA) State CNPS Rank 1B.1 Global Rank G1	Alk; Grs	<1312	ALA?, CCA?	Mar-Apr
Tropidocarpum gracile	slender tropidocarpum	A2	State Rank CEQA	Alk; Grs	<4757	ALA, CCA	Mar-May
Vicia hassei	slender vetch	A2	State Rank CEQA	Grs; Scrb	<3937	ALA, CCA	Mar-May

Citation: Lake, Dianne: Rare, Unusual and Significant Plants of Alameda and Contra Costa Counties [web application]. 2020 Berkeley, California: East Bay Chapter of the California Native Plant Society [a non-profit organization]. URL: https://ruspdb.ebcnps.org/cgi-bin/ebrare/ebrare.cgi (Accessed: Nov 17, 2020).

Attachment B

Botanist Qualifications

Special-Status Plant Survey Botanist Qualifications

Daria Snider

Ms. Snider has more than 20 years of experience conducting botanical inventories. As a senior biologist, she specializes in rare plant surveys, wetland delineations, and general biological resource inventories. In addition to rare plant surveys, her botanical experience includes general vegetation surveys, aerial and field vegetation mapping, Certified Arborist tree inventories, CRAM Assessments, floristic monitoring, and invasive species identification and mapping. Ms. Snider's experience includes a wide variety of habitat types, including vernal pools, annual grasslands, oak woodland, riparian communities, coastal sage scrub, chaparral, cismontane and montane forests, and desert. Her geographic expertise covers much of California, from Shasta County in the north to the Mojave Desert and San Gabriel Mountains in the south, and from Sonoma County in the west to the Sierra Nevada foothills and mountains in the east. Her primary focus is on the Sacramento Valley and the adjacent Sierra Nevada foothills.

Attachment C

Target Plant Species
Reference Population Information

Target Plant Species Reference Population Information
for the Pine Hollow Court
Special-Status Plant Survey

Plant Species	Location of Reference Population	Date of Visit	Phenology of Reference Population/ Distinctive Characteristics
Amsinckia lunaris Bent flowered fiddleneck	Briones Regional Park (CNDDB #41)	7 March 2025 7 April 2025	Plants only just emerging; not yet in bloom. A few hundred plants are in full bloom. Flowers are large with two distinct dots on a bent corolla. Growing in a grassland right on the fringe of woodland/chaparral.
Calochortus pulchellus Mt. Diablo fairy lantern	Online Jepson Manual and Calflora	March and April 2025	Yellow spheric, pendant *Calochortus* with bright green foliage and light yellow petals.
Fritillaria liliacea Fragrant fritillary	Jepson Prairie Wetland Preserve (CNDDB Occurrence #1)	7 March 2025	About 40 plants located, all in peak bloom (still some buds present). About as prevalent as normal, but much shorter than normal, potentially due to a hard graze?
Madia radiata Showy golden madia	UC Davis Center for Plant Diversity Herbarium Online Jepson Manual and Calflora	23 April 2019 March and April 2025	Very similar to *M. elegans*, but with distinct small white beak on top of ray fruit.
Navarretia nigelliformis ssp. *radians* Shining navarretia	Southern Antioch (CNDDB Occurrence #81) Private parcel in Deer Valley, south of Antioch	10 April 2025 18 April 2025	This population was ungrazed during the prior year, and the habitat is now overgrown. No plants could be found; potentially due to the early date of the survey, potentially due to vegetation obscuring the ground, where very inconspicuous plants occur, or potentially because the plants are not present this year. Several hundred plants in very early bloom were observed on heavily grazed clay soils. Fewer than 10% of the plants were in bloom.

Attachment D

Plant Species Observed within the Pine Hollow Court Study Area

Plant Species Observed within the Pine Hollow Court Project Area 7 March and 15 April 2025

Family / Species Name	Common Name	Native / Non-Native
ANACARDIACEAE		
Toxicodendron diversilobum	Western poison oak	Native
APIACEAE		
Foeniculum vulgare	Fennel	Non-Native
Torilis arvensis	Tall sock-destroyer	Non-Native
APOCYNACEAE		
Vinca major	Greater periwinkle	Non-Native
ASTERACEAE		
Artemisia douglasiana	Mugwort	Native
Carduus pycnocephalus subsp. pycnocephalus	Italian thistle	Non-Native
Logfia gallica	Daggerleaf cottonrose	Non-Native
Matricaria discoidea	Pineapple weed	Native
Senecio vulgaris	Common groundsel	Non-Native
Silybum marianum	Milk thistle	Non-Native
Taraxacum officinale	Common dandelion	Non-Native
Tragopogon porrifolius	Salsify	Non-Native
BORAGINACEAE		
Amsinckia intermedia	Common fiddleneck	Native
Amsinckia menziesii	Common fiddleneck	Native
Amsinckia retrorsa	Rigid fiddleneck	Native
BRASSICACEAE		
Brassica nigra	Black mustard	Non-Native
Capsella bursa-pastoris	Shepherd's purse	Non-Native
Hirschfeldia incana	Shortpod mustard	Non-Native
Lepidium coronopus	Swine cress	Non-Native
Lobularia maritima	Sweet alyssum	Non-Native
CACTACEAE		
Opuntia ficus-indica	Mission prickly-pear	Non-Native

Plant Species Observed within the Pine Hollow Court Project Area 7 March and 15 April 2025

Family / Species Name	Common Name	Native / Non-Native
CARYOPHYLLACEAE		
Stellaria media	Common chickweed	Non-Native
FABACEAE		
Medicago polymorpha	California burclover	Non-Native
Trifolium glomeratum	Clustered clover	Non-Native
Trifolium hirtum	Rose clover	Non-Native
Trifolium subterraneum	Subterranean clover	Non-Native
Vicia benghalensis	Purple vetch	Non-Native
Vicia sativa subsp. sativa	Spring vetch	Non-Native
Vicia villosa subsp. varia	Winter vetch	Non-Native
Vicia villosa subsp. villosa	Hairy vetch	Non-Native
FAGACEAE		
Quercus agrifolia	Coast live oak	Native
Quercus douglasii	Blue oak	Native
Quercus lobata	Valley oak	Native
Quercus wislizeni	Interior live oak	Native
GERANIACEAE		
Erodium cicutarium	Redstem filaree	Non-Native
Erodium moschatum	Greenstem filaree	Non-Native
Geranium molle	Soft geranium	Non-Native
Geranium robertianum	Robert's geranium	Non-Native
Pelargonium species	Geranium	Non-Native
JUGLANDACEAE		
Juglans hindsii	Northern California black walnut	Native
LAMIACEAE		
Lamium amplexicaule	Henbit	Non-Native
Marrubium vulgare	White horehound	Non-Native
LAURACEAE		
Umbellularia californica	California bay	Native

Plant Species Observed within the Pine Hollow Court Project Area 7 March and 15 April 2025

Family / Species Name	Common Name	Native / Non-Native
MALVACEAE		
Malva parviflora	Cheeseweed	Non-Native
MORACEAE		
Ficus carica	Edible fig	Non-Native
OLEACEAE		
Ligustrum species	Privet	Non-Native
Olea europaea	Olive	Non-Native
OXALIDACEAE		
Oxalis pes-caprae	Bermuda buttercup	Non-Native
PAPAVERACEAE		
Eschscholzia californica	California poppy	Native
PINACEAE		
Pinus pinea	Italian stone pine	Non-Native
PLANTAGINACEAE		
Veronica persica	Persian speedwell	Non-Native
POACEAE		
Arundo donax	Giant reed	Non-Native
Avena barbata	Slender wild oat	Non-Native
Avena fatua	Wild oat	Non-Native
Bromus catharticus var. catharticus	Rescue grass	Non-Native
Bromus diandrus	Ripgut grass	Non-Native
Bromus grandis	Tall brome	Native
Bromus hordeaceus	Soft chess	Non-Native
Bromus sterilis	Sterile brome	Non-Native
Festuca bromoides	Brome fescue	Non-Native
Festuca myuros	Rattail sixweeks grass	Non-Native
Festuca perennis	Rye grass	Non-Native
Hordeum marinum subsp. gussoneanum	Mediterranean barley	Non-Native
Hordeum murinum	Wall barley	Non-Native
Sorghum halepense	Johnson grass	Non-Native

Plant Species Observed within the Pine Hollow Court Project Area 7 March and 15 April 2025

Family / Species Name	Common Name	Native / Non-Native
POACEAE, continued		
Stipa miliacea var. miliacea	Smilo grass	Non-Native
POLYGONACEAE		
Rumex crispus	Curly dock	Non-Native
ROSACEAE		
Heteromeles arbutifolia	Toyon	Native
Prunus dulcis	Almond	Non-Native
Rosa multiflora	Multiflora rosa	Non-Native
RUBIACEAE		
Galium aparine	Goose grass	Native
RUTACEAE		
Citrus limon	Lemon	Non-Native
SAPINDACEAE		
Aesculus californica	California buckeye	Native
SIMAROUBACEAE		
Ailanthus altissima	Tree of heaven	Non-Native
URTICACEAE		
Urtica urens	Dwarf nettle	Non-Native
VIBURNACEAE		
Sambucus mexicana	Elderberry	Native
VISCACEAE		
Phoradendron leucarpum	American mistletoe	Native

Attachment G

Preliminary Arborist Report –
1027 Pine Hollow Court

Preliminary Arborist Report

1027 Pine Hollow Court
Clayton, CA

PREPARED FOR:
Ponderosa Homes II
5020 Franklin Drive, Suite 200
Pleasanton, CA

PREPARED BY:
HortScience | Bartlett Consulting
2550 Ninth St. Suite 112
Berkeley CA

May 2025

HORT SCIENCE
BARTLETT CONSULTING
A Division of The F.A. Bartlett Tree Expert Company

Preliminary Arborist Report

1027 Pine Hollow Court
Clayton, CA

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Tree Assessment Map

Tree Assessment Form

Preliminary Tree Disposition

Preliminary Arborist Report

1027 Pine Hollow Court

Clayton, CA

Introduction and Overview

Ponderosa Homes II is planning to re-develop the property located at 1027 Pine Hollow Court in Clayton. Current site use consists of a single family house, outbuildings and a defunct orchard sloping east down to Mitchell Creek and downtown Clayton. HortScience | Bartlett Consulting, Divisions of The F. A. Bartlett Tree Expert Company, was asked to prepare an **Arborist Report** for the trees on the property as part of the application to the City of Clayton.

This report provides the following information:

1. An assessment of each tree's health, structure, suitability for preservation and protected status within and adjacent to the proposed project area.
2. Evaluation of the impacts to trees associated with constructing the proposed project.
3. Preliminary guidelines for tree preservation during the design, construction and maintenance phases of development.

Tree Assessment Methods

Trees were assessed on February 26, 2025. The assessment included all trees measuring 6 inches in diameter and larger, located within and adjacent to the project area. Tree tags from a previous assessment in 2020 were used, adding new tags to some trees. Tag numbers were discontinuous, ranging from #337 – 409. Nine trees had been removed since 2020, and nine had grown to a size where they could be added to the new total. The assessment procedure was a visual assessment from the ground, consisting of the following steps:

1. Identifying the tree species;
2. Confirming the presence of an existing metal numerical tag and recording its location on a map;
3. Measuring the trunk diameter at a point 54 in. above grade and multi-stem trees at 24 inches;
4. Evaluating the health and structural condition using a scale of 1 – 5:
   - ***5*** - A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species.
   - ***4*** - Tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
   - ***3*** - Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.
   - ***2*** - Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
   - ***1*** - Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormics; extensive structural defects that cannot be abated.
5. Rating the suitability for preservation as "high", "moderate" or "low". Suitability for preservation considers the health, age and structural condition of the tree species, and its potential to remain an asset to the site.

High:	Trees with good health and structural stability that have the potential for longevity at the site.
Moderate:	Trees with somewhat declining health and/or structural defects than can be abated with treatment. The tree will require more intense management and monitoring, and may have shorter life span than those in 'high' category.
Low:	Trees in poor health or with significant structural defects that cannot be mitigated. Tree is expected to continue to decline, regardless of

treatment. The species or individual tree may have characteristics that are undesirable for landscapes, and generally are unsuited for use areas.

Description of Trees

Sixty (64) trees representing 11 species were evaluated. Thirty-five (35) trees (55%) were in poor condition, 21 (33%) were fair and eight (12%) were good. Five off-site trees were included in the assessment. In general species present were ornamental or orchard remnants and commonly observed in the region. Coast live oak, blue oak, valley oak, California black walnut, and giant sequoia are native to California but likely not indigenous to the project site. All trees appeared to have been planted as part of existing landscape treatment. Descriptions of each tree are found in the ***Tree Assessment Form*** and approximate locations are plotted on the ***Tree Assessment Map*** (see Exhibits).

Table 1. Tree condition and frequency of occurrence.
1027 Pine Hollow Court. Clayton, CA.

Common Name	**Scientific Name**	**Condition**				**Total**
		Dead (0)	Poor (1-2)	Fair (3)	Good (4-5)	
Tree of heaven	*Ailanthus altissima*	-	1	2	1	**4**
Lemon	*Citrus limon*	-	1	-	-	**1**
California black walnut	*Juglans hindsii*	-	28	1	-	**29**
Olive	*Olea europaea*	-	-	3	-	**3**
Italian stone pine	*Pinus pinea*	-	1	2	-	**3**
Almond	*Prunus dulcis*	-	2	1	-	**3**
Coast live oak	*Quercus agrifolia*	-	-	1	-	**1**
Blue oak	*Quercus douglasii*	-	-	-	2	**2**
Valley oak	*Quercus lobata*	-	2	9	5	**16**
Elderberry	*Sambucus* sp.	-	-	1	-	**1**
Giant sequoia	*Sequoiadendron giganteum*	-	-	1	-	**1**
Total		**-**	**35**	**21**	**8**	**64**

California black walnut was the most frequently occurring species with 29 trees (45% of the population), comprised of remnants from a former orchard on the site. Condition was predominantly poor (28 trees). Walnut #370 was fair and had a correcting lean southeast, with several removed stems at the base. None of the walnuts were in good condition. Most trees had a large decayed base multiple attachments that had been topped or were extremely sparse (Photo 1, next page). Many oaks had mistletoe growing in the crown. Stem diameters ranged from 7 to 16 inches, with an average diameter of 9 inches.



Photo 1. Most of the California black walnuts were in poor condition with sparse foliage. Several had mistletoe growing in the crown (yellow arrow).



Photo 2. Valley oaks #386 and 387 (R to L) were growing near the south property line fence.

Of sixteen (16) valley oaks, condition was fair (9 trees), good (5 trees), or poor (off-site oaks #406 and 407). Oaks in good condition had vigorous high crowns and ample growing space. Fair condition oaks were crowded along fence lines and had bowed trunks or codominant stems (Photo 2). Diameters were 6 to 27 inches.

Four trees of heaven were assessed. Two were fair, #337 was good, and #409 was poor. Stage of development was young, with single or multiple trunks from 4 to 10 inches. Tree #401 was off-site to the north, growing through the property line fence.

Three olives were in fair condition. Olives #396 and 399 had multiple attachments from 3 to 6 inches in diameter. Olive #398 was 13 inches and had a raised crown with reaction growth where branches had been removed.

Three mature Italian stone pines were growing near the center of the property. Pines #367 and 368 had trunks of 32 and 45 inches, respectively. Both were in fair condition with large raised crowns (Photo 3).



Photo 3. Italian stone pines #369, 368 and 367 (L to R) were growing near the center of the site.

*Figure not OCR compatible

Pine #367 had several tearouts where limbs had failed on the lower trunk. Pine #369 was leaning south and in poor condition. The top of the trunk had broken off and it was extremely suppressed by pine #368. Diameter was 21 inches.

Three small almonds were assessed. Almonds #394 and 400 were poor with branch dieback and poor structure. Almond #382 was fair with multiple attachments arising from the base, crowded and suppressed by nearby shrubs. Stem diameters were 4 to 8 inches.

Among the remaining five species, none was represented by more than one or two trees. These included:

- Blue oaks #339 and 345 were mature trees in good condition. Oak #339 had a diameter of 37 inches and a large spreading crown (Photo 4). Off-site oak #345 was growing in a field to the north and a similarly spreading crown that overhung the property by about 30 feet. Diameter was 32 inches.



Photo 4. Blue oak #339 had a large spreading crown.

*Figure not OCR compatible

- Citrus (lemon) #389 was in poor condition with extensive dieback. It had multiple stems of 9, 9 and 7 inches low in the crown.

- Giant sequoia #392 had been burned at the base and was crowded by nearby trees. Diameter was 27 inches. It was in fair condition with a sparse crown.

- Coast live oak #403 had a diameter of 7 inches. It was growing in a crowded shrub area and leaned east, suppressed by off-site trees. Condition was fair.

Protected Trees in Clayton

The City of Clayton Municipal Code Chapter 15.70 – Tree Protection defines *Protected* trees as certain species of any size (including Elderberry, Oak, and Walnut). The ordinance also requires a tree removal permit for the removal of any tree with a single trunk or multiple trunks with a cumulative trunk diameter of 6 inches or greater. Based on these definitions, all of the trees qualified as *Protected*. *Protected* status of individual trees is described in the ***Tree Assessment Form*** (see Exhibits). A Tree Replacement Plan is required when *Protected* trees are removed per Section 15.70.040. In-lieu fees may be required if replacement trees cannot be planted.

Suitability for Preservation

Before evaluating the impacts that will occur during development, it is important to consider the quality of the tree resource itself, and the potential for individual trees to function well over an extended length of time. Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment and perform well in the landscape. Our goal is to identify trees that have the potential for long-term health, structural stability and longevity within the proposed development.

Evaluation of suitability for preservation considers several factors:

- **Tree health**
  Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees.

- **Structural integrity**
  Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. For example, California black walnut #372 had extensive basal decay and leaned west, with a history of limb failure. This tree is not recommended for preservation.

- **Species response**
  There is a wide variation in the response of individual species to construction impacts and changes in the environment. Tree of heaven, coast live oak and olive are generally tolerant of construction impacts, particularly if properly irrigated before, during and after construction; wet soils should be avoided around olives. Valley oak and Italian stone pine have moderate tolerance of construction impacts. California black walnut and blue oak are intolerant of root impacts.

- **Tree age and longevity**
  Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees such as tree of heaven #337 are better able to generate new tissue and respond to change than older trees such as Italian stone pine #368.

- **Invasiveness**
  Species that spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced. The California Invasive Plant Inventory Database (http://www.cal-ipc.org/paf/) lists species identified as being invasive. Clayton is part of the Central West Floristic Province. Tree of heaven is moderately invasive; olive is invasive on a limited basis.

Each tree was rated for suitability for preservation based upon its age, health, structural condition and ability to safely coexist within a development environment (Table 2, next page). We consider trees with high suitability for preservation to be the best candidates for preservation. We do not normally recommend retention of trees with low suitability for preservation in areas where people or property will be present. Retention of trees with moderate suitability for preservation depends upon the intensity of proposed site changes.

Table 2: Tree suitability for preservation.
1027 Pine Hollow Court. Clayton, CA.

High	Trees in this category had good health and structural stability that have the potential for longevity at the site. Three (3) trees had high suitability for preservation: tree of heaven #337, off-site blue oak #345, and valley oak #379.
Moderate	Trees in this category have fair health and/or structural defects that may be abated with treatment. Trees in this category require more intense management and monitoring and may have shorter lifespans than those in the "high" category. Fourteen (14) trees had moderate suitability for preservation, including 9 valley oaks, Italian stone pines #367 and 368, olives #398 and 399 and blue oak #339.
Low	Trees in this category are in poor health or have significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas. Forty-seven (47) trees had low suitability for preservation, including all 29 California black walnuts, 6 valley oaks, 3 almonds, and 3 trees of heaven.

Preliminary Evaluation of Impacts and Recommendations

Appropriate tree retention develops a practical match between the location and intensity of construction activities and the quality and health of trees. The ***Tree Assessment Form*** was the reference point for tree health, condition, and suitability for preservation. I used the Preliminary Site Plan (17 Lots) prepared by CBG Civil Engineers (4/16/2025) to determine the project area and evaluate impacts to trees. This report is preliminary because no site layout, grading, utility, or other construction plans were reviewed.

The plan proposes demolition of the existing buildings and construction of new single-family homes. The site will be redeveloped from property line to property line and potential impacts to trees will be severe. Opportunities for tree preservation are extremely limited. The project team has explored options to preserve blue oak #339. An open lot is proposed around the oak, with the property lines of Lots 2 and 3 approximately 20 to 25 feet away from the north and south sides of the trunk. The east side of the oak would be clear of development, but the plan proposes a sidewalk approximately 9 feet from the west side of the tree – well within its dripline. Due to species sensitivity of blue oak and the tree's age and condition, it may not survive anticipated impacts from construction.

If oak #339 cannot be preserved with the current plan in Lot 3, the project team is considering building on that lot and instead eliminating the planned residence on Lot 6. A small park with replacement trees may be created there instead.

Based on my assessment of the proposed plan and evaluation of the trees, I recommend removal of 58 trees (all *Protected*) and potential preservation of blue oak #339 (a *Protected* tree), if the sidewalk can be built farther away from the trunk. The oak is not a suitable candidate for transplanting due to the factors mentioned above. Five off-site trees are to be preserved (#345, 401, 406, 407, and 408). Disposition of individual trees is shown in the **Preliminary Tree Disposition** (Exhibits).

A Tree Replacement Plan is required for the removal of all *Protected* trees, per Clayton Municipal Code 15.70.040. The replacement plan must meet the following standards, among others:

1. Each replacement tree shall have a cumulative trunk diameter that is equal to no less than fifty percent (50%) of the trunk diameter of the removed tree, or
2. A cumulative trunk diameter that is equal to no less than thirty-three percent (33%) of the trunk diameter of the removed tree if the replacement tree(s) are of a variety listed in Section 15.70.015.C. as a *Protected* tree (see list of native species).
3. Replacement trees shall not impede the solar access of existing solar panels located on any other property.
4. The replacement trees shall be irrigated on a regular basis until the trees are established.
5. The property owner shall remain responsible for the health and survival of the replacement tree(s) for two (2) years after planting. If a replacement tree dies, is damaged, or removed within the two (2) year period, the property owner shall replace the tree in accordance with the standards in this section and the originally-approved tree replacement plan.

Successful retention of oak #339 is predicated on strict adherence to the ***Preliminary Tree Preservation Guidelines*** (page 7). If the tree is preserved, some amount of canopy and root pruning may be required for this tree during construction.

If oak #339 is removed and a small park is built on Lot 6, a mitigation tree or trees shall be planted as replacement. If a larger native oak such as the blue oak or valley oak (*Q. lobata)* is chosen, one tree equal to no less than 12.21 inches in diameter (33% trunk diameter of oak #339) shall be planted. If replacement tree/s are not Protected species, replacement size shall be equal to no less than 18.5 inches in diameter (50% trunk diameter of oak #339). Selection of replacement trees should take into consideration the anticipated mature size of the trees.

Because the plans are preliminary, there may be opportunities to reduce tree impacts and retain more trees if plans are altered. The ability to preserve trees on this site depends on 1) selecting trees with moderate or good suitability for preservation and 2) establishing a tree protection zone large enough to sustain tree health and stability. All plans should include surveyed tree trunk locations so that impacts can be accurately assessed, and adequate tree protection measures can be determined.

Preliminary Tree Preservation Guidelines

All on-site trees aside from blue oak #339 will be removed. Blue oak #339 will potentially be preserved. Off-site trees #345, 401, 406, 407, and 408 will be retained. The following recommendations will help reduce impacts to trees from development and maintain their health and structural stability through the clearing, grading and construction phases.

Tree Protection Zone for Blue oak #339

1. **A TREE PROTECTION ZONE** shall be identified for the oak, to be established at the outer dripline of the tree on all sides.
    a. Tree protection fences shall be installed to encompass the **TREE PROTECTION ZONE.** Fence the tree to completely enclose the **TREE PROTECTION ZONE** prior to demolition, grubbing or grading. Fence shall be 6-foot-high chain link fencing mounted on 8-foot tall, 2-inch diameter galvanized steel posts, driven 24 inches into the ground, or equivalent as required by the City.
    b. Apply and maintain 4 to 6 inches wood chip mulch within the **TREE PROTECTION ZONE**. Keep the mulch 2 feet from the base of tree trunk.
    c. Fence must be installed prior to beginning demolition and must remain until construction is complete.
    d. No grading, excavation, construction or storage or dumping of materials shall occur within the **TREE PROTECTION ZONE**.
    e. No underground services including utilities, sub-drains, water, or sewer shall be placed in the **TREE PROTECTION ZONE**.
    f. Fence shall posted with signs stating, “TREE PROTECTION FENCE – DO NOT MOVE OR REMOVE WITHOUT APPROVAL FROM CITY ARBORIST”.

Design recommendations

2. Where possible, include the location of all trees within 10 ft. of the project limit. Include trunk locations on all project plans.
3. The project’s perimeter security fence will also serve as the **TREE PROTECTION ZONE**. No grading, excavation, construction or storage of materials should occur outside the project limit.
4. Any changes to the plans affecting the tree or off-site trees should be reviewed by the consulting arborist with regard to tree impacts. These include, but are not limited to, site plans, improvement plans, utility and drainage plans, grading plans, landscape and irrigation plans, and demolition plans.
5. Plan for tree preservation by designing adequate space around trees to be preserved. This is the **TREE PROTECTION ZONE:** No grading, excavation, construction or storage of materials should occur within that zone. Route underground services including utilities, sub-drains, water or sewer around the **TREE PROTECTION ZONE**.
6. Consider the vertical clearance requirements near the tree during design. Avoid designs that would require pruning more than 20% of the tree’s canopy.
7. All plans affecting trees shall be reviewed by the Consulting Arborist with regard to tree impacts. These include, but are not limited to, demolition plans, grading plans, drainage plans, utility plans, and landscape and irrigation plans.
8. Irrigation systems must be designed so that no trenching severs roots larger than 1 inch in diameter will occur within the **TREE PROTECTION ZONE**.

9. **Tree Preservation Guidelines** prepared by the Consulting Arborist, which include specifications for tree protection during demolition and construction, should be included on all plans.
10. Ensure adequate but not excessive water is supplied to the tree; occasional irrigation may be required. Avoid directing runoff toward the tree.

Design recommendations

1. Where possible, include the location of all trees within 10 feet of the project limit. Include trunk locations on all project plans.

2. The project's perimeter security fence will also serve as the **TREE PROTECTION ZONE**. No grading, excavation, construction or storage of materials should occur outside the project limit.

3. All plans affecting trees shall be reviewed by the Consulting Arborist with regard to tree impacts. These include, but are not limited to, demolition plans, grading plans, drainage plans, utility plans, and landscape and irrigation plans.

4. Irrigation systems must be designed so that no trenching severs roots larger than 2 inches in diameter will occur within the **TREE PROTECTION ZONE**.

5. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.

Pre-demolition and pre-construction treatments and recommendations

1. The project's perimeter security fence will also serve as the **TREE PROTECTION ZONE**. No grading, excavation, construction or storage of materials should occur outside the project limit.

2. Off-site trees to be preserved may require pruning to provide clearance for demolition, grading and construction. Tree care firm providing the pruning shall be a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the latest edition of the Best Management Practices for Pruning (International Society of Arboriculture) and the American National Standard for Tree Care Operations (Z133.1) and Pruning (A300).

3. Tree(s) to be removed that have branches extending into the canopy of tree(s) to remain shall be removed by a Certified Arborist or Certified Tree Worker and not by the demolition contractor. The Certified Arborist or Certified Tree Worker shall remove the trees in a manner that causes no damage to the tree(s) and understory to remain.

4. Trees to be removed shall be felled so as to fall away from **TREE PROTECTION ZONE** and avoid pulling and breaking of roots of off-site trees to remain. If roots are entwined, the Consulting Arborist may require first severing the major woody root mass before extracting the trees.

5. All tree work shall comply with the Migratory Bird Treaty Act as well as California Fish and Wildlife code 3503-3513 to not disturb nesting birds. To the extent feasible tree pruning and removal should be scheduled outside of the breeding season. Breeding bird surveys should be conducted prior to tree work. Qualified biologists should be involved in establishing work buffers for active nests.

Recommendations for tree protection during construction

1. Any approved grading, construction, demolition or other work within 5 feet of the **Tree Protection Zone** should be monitored by the Consulting Arborist.

2. Any root pruning that will occur within 5 feet of the **Tree Protection Zone** shall receive the prior approval of and may be supervised by the Consulting Arborist. Roots should be cut with a saw to provide a flat and smooth cut. Removal of roots larger than 2 in. in diameter should be avoided.

3. If roots 2 inches and greater in diameter are encountered during site work and must be cut to complete the construction, the Consulting Arborist must be consulted to evaluate effects on the health and stability of the tree and recommend treatment.

4. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.

Maintenance of impacted trees

Preserved trees will experience a physical environment different from that pre-development. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulch, pest management, and replanting may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority.

Our inspections represent the condition of the tree at the time of inspection. As trees age, the likelihood of failure of branches or entire trees increases. Annual tree inspections are recommended to identify changes to tree health and structure. In addition, trees should be inspected after storms of unusual severity to evaluate damage and structural changes. Initiating these inspections is the responsibility of the client and/or tree owner.

If you have any questions about my observations or recommendations, please contact me.

HortScience | Bartlett Consulting



Pam Nagle
Consulting Arborist and Urban Forester
ISA Certified Arborist #WE-9617A
ISA Tree Risk Assessment Qualified
Registered Consulting Arborist #805

Exhibits

Tree Assessment Map

Tree Assessment Form

Preliminary Tree Disposition



*Figure not OCR compatible

Tree Assessment Map

1027 Pine Hollow Court
Clayton, CA

Prepared for:
Ponderosa Homes II, Inc.
Pleasanton, CA

February 2025

No Scale

Notes:
Base map provided by:
Google Earth

Numbered tree locations are approximate.

HORT SCIENCE
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Tree Assessment

1027 Pine Hollow Court
Clayton, CA
February 2025

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Tree No.	Species	Trunk Diameter (in.)	Cumulative Trunk Diameter (in.)	Canopy radius (ft.) N	E	S	W	Protected Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
337	Tree of heaven	10	10	12	17	15	11	Yes	4	Moderate	Multiple attachments at ~7'; vigorous.
338	Valley oak	8	8	10	14	13	9	Yes	3	Moderate	Leans E. + slightly corrects; codominant stems at 5'; vigorous.
339	Blue oak	37	37	32	38	38	32	Yes	4	Moderate	Multiple attachments at ~12'; large spreading crown; some branch decay + small cavities on lower scaffolds.
340	California black walnut	7,4,4	15	10	11	9	4	Yes	2	Low	Decayed enlarged base; multiple attachments at 2'; poor form + structure.
341	California black walnut	8,4,4,4	20	15	8	8	6	Yes	2	Low	Decayed enlarged base; multiple attachments at 1'; history of limb removal; sparse.
342	California black walnut	8,8,6	22	12	11	8	13	Yes	2	Low	Decayed enlarged base; multiple attachments at 2'; history of limb removal; sparse.
344	California black walnut	9,4,4	17	5	8	6	5	Yes	1	Low	At fence; multiple attachments at ~2'; extensive decay and branch dieback.
345	Blue oak	32	32	25	24	32	28	Yes	4	High	**Off-site;** overhang onto property ~30'; multiple attachments at ~12'; slight lean S.E.; wide spreading crown.
346	Tree of heaven	10,8,4	22	12	10	12	14	Yes	3	Low	Multiple attachments at 2'; sunscald trunk S.E.; upright vase form.
347	California black walnut	10,8	18	12	11	10	14	Yes	2	Low	Codominant stems arise at base w/ 2 decayed stumps in center; high crown w/ mistletoe.
348	California black walnut	8	8	5	4	7	7	Yes	1	Low	Leans W. corrected; poor form + structure; high crown. Trunk decay; removed stems at base E.
349	California black walnut	12,10	22	11	14	13	13	Yes	2	Low	Codominant stems arise at base w/ decayed stump in center; high crown w/ mistletoe.
351	California black walnut	7,7	14	10	7	6	7	Yes	2	Low	Decayed stump E.; codominant stems at 3'; raised high crown.
352	California black walnut	7,7,6	20	11	6	6	7	Yes	1	Low	Decayed base w/ missing stems; multiple attachments arise from base; fused; very poor form + structure.
353	Valley oak	14,13	27	19	17	20	19	Yes	3	Moderate	Codominant stems at ~4' w/ seam; some basal cracking + decay.
354	California black walnut	11,10,9	30	10	10	6	8	Yes	2	Low	Decayed base; multiple attachments at ~3'; extensive branch dieback; mistletoe in crown.
356	California black walnut	9,9	18	9	12	11	9	Yes	1	Low	Burned at base w/ missing stems; codominant stems at ~3'; raised crown; sparse w/ mistletoe.
357	California black walnut	8	8	6	6	6	6	Yes	1	Low	Burned at base w/ missing stems; 1 stem S.W. topped; re-sprouting from base.
358	California black walnut	9,9,7	25	10	10	10	9	Yes	2	Low	Enlarged base; multiple attachments arise from base; raised crown; topped w/ poor form + structure.
359	California black walnut	8	8	8	10	6	7	Yes	2	Low	Burned at base; missing stems S.W.; codominant stems at ~4'; raised crown; topped w/ poor form + structure.
360	California black walnut	7,6	13	10	12	9	8	Yes	1	Low	Burned at base; missing stems S.W.; stump sprouts; raised crown; mistletoe.
361	California black walnut	9,8,7,7	31	7	8	8	8	Yes	2	Low	Multiple attachments arise from base w/ missing stem; raised crown; poor form + structure.

Tree Assessment

1027 Pine Hollow Court
Clayton, CA
February 2025

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Tree No.	Species	Trunk Diameter (in.)	Cumulative Trunk Diameter (in.)	Canopy radius (ft.) N	E	S	W	Protected Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
362	California black walnut	8,8,8	24	10	10	4	12	Yes	2	Low	Multiple attachments arise from base w/ missing stem; twisted form; topped S.E. stem.; branch dieback; mistletoe.
363	California black walnut	5,5,4,2,2	18	7	9	6	6	Yes	2	Low	Codominant stems at ~1' w/ decayed missing stem; history of limb removal w/ reaction growth; some mistletoe.
364	California black walnut	5,5,5,5	20	7	7	7	7	Yes	2	Low	Large twisted base w/ removed stems; multiple attachments at ~4'; extremely poor form + structure; some mistletoe.
365	California black walnut	15,14,14	43	9	18	16	19	Yes	2	Low	Multiple attachments at ~4'; stem decay; raised crown; large vase form.
366	California black walnut	7	7	6	7	6	8	Yes	1	Low	Removed codominant stem E.; stem decay; extremely poor form + structure; suppressed by #367.
367	Italian stone pine	32	32	27	35	28	28	Yes	3	Moderate	Raised crown; tearouts N.W. + S.E.; vigorous.
368	Italian stone pine	45	45	33	34	35	24	Yes	3	Moderate	Codominant stems at 7'; removed stems at attachment; wide raised crown.
369	Italian stone pine	21	21	3	10	20	16	Yes	2	Low	Leans S. + corrects; large removed stem S.W.; top broke off; extremely suppressed by #368.
370	California black walnut	10	10	12	14	9	13	Yes	3	Low	Leans S.E. + corrects; codominant stems at ~8'; removed stems at base; conc. chunks around root zone.
372	California black walnut	11	11	7	7	7	7	Yes	1	Low	Extensive basal decay; leans W.; history of limb failure w/ reaction growth; just poor.
373	California black walnut	9,9,9,8	35	15	16	13	13	Yes	2	Low	Multiple attachments arise from base w/ central missing stem; stem decay; wide open vase crown.
374	California black walnut	9,7	16	8	6	8	9	Yes	2	Low	Multiple attachments arise w/ removed stems E.; stem decay; history of limb failure w/ reaction growth; conc blocks around root zone.
375	Valley oak	13	13	13	12	20	14	Yes	4	Moderate	Correcting bow S.; codominant stems high in crown; rounded high crown.
376	California black walnut	8	8	9	6	6	7	Yes	2	Low	Codominant stems arise from base w/ narrow attachment + decayed missing stem W.; history of limb removal + failures w/ reaction growth; sparse.
377	Valley oak	11,9	20	12	15	15	13	Yes	4	Moderate	Codominant stems at ~3.5' w/ narrow attachment + included bark; raised vase form; vigorous.
379	Valley oak	27	27	22	22	24	23	Yes	4	High	~6' from house corner; slight lean E.; raised crown; large spreading crown; vigorous.
381	California black walnut	8	8	8	11	9	8	Yes	2	Low	Decayed base w/ missing stems; history of limb removal w/ reaction growth.
382	Almond	5,5,5,4	19	12	5	12	13	Yes	3	Low	Multiple attachments arise from base; extremely crowded + suppressed.
383	California black walnut	16	16	12	12	12	12	Yes	2	Low	Decayed missing stems E.; leans W.; extensive decay + sprouting; mistletoe.
386	Valley oak	14	14	22	22	20	10	Yes	3	Moderate	2' from fence; bows E.; codominant stems at 10'.
387	Valley oak	21	21	22	26	22	4	Yes	4	Moderate	At fence; codominant stems @ 10' w/ seam; slight bow E.; crowded by #386.

Tree Assessment

1027 Pine Hollow Court
Clayton, CA
February 2025

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Tree No.	Species	Trunk Diameter (in.)	Cumulative Trunk Diameter (in.)	Canopy radius (ft.) N	E	S	W	Protected Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
389	Lemon	9,9,7	25	10	10	8	8	Yes	2	Low	Codominant stems at 1' w/ narrow attachment; multiple attachments above; extensive branch dieback.
390	Valley oak	17	17	18	11	18	18	Yes	3	Moderate	1' from fence; corrected tilt S.; removed stem S.; codominant stems at ~11'.
391	California black walnut	6,5	11	8	8	0	4	Yes	1	Low	Extensive central basal decay; history of limb failure w/ reaction growth.
392	Giant sequoia	27	27	10	10	12	12	Yes	3	Low	Burned at base; crowded by #393; sparse.
393	Valley oak	17	17	0	18	20	18	Yes	3	Low	2' from fence; leans S.; crowded by #392; multiple attachments high in crown.
394	Almond	7	7	9	7	0	9	Yes	2	Low	Crook in trunk; multiple attachments at ~3"; branch dieback; suppressed.
395	Valley oak	19	19	10	16	20	3	Yes	4	Moderate	3' from fence; multiple attachments high in slightly thin spreading crown.
396	Olive	6,5,4,3	18	16	14	10	3	Yes	3	Low	At fence; multiple attachments arise from base; leans N.; very crowded + suppressed.
397	Valley oak	20	20	7	18	22	15	Yes	3	Low	At fence + pressing against it S.; leans S.; topped N. crown; crowded.
398	Olive	13	13	8	8	8	8	Yes	3	Moderate	Raised crown; multiple attachments @~10' w/ suckers; history of reaction growth.
399	Olive	5,5,5	15	9	7	5	10	Yes	3	Moderate	Raised crown; codominant stems at 2 + 3'; slightly sparse.
400	Almond	8	8	6	7	6	8	Yes	2	Low	Bows N. + corrects; basal damage S.; history of limb removal; poor form + structure.
401	Tree of heaven	8,7,6,4	25	10	10	8	10	Yes	3	Low	**Off-site;** growing thru property line fence; multiple attachments at 2'; vase form.
402	Elderberry	6,6,6,4,4,4,4,4	38	12	12	12	12	Yes	3	Low	Multiple attachments arise from base; history of limb removal; shrub form.
403	Coast live oak	7	7	10	14	0	6	Yes	3	Low	In crowded shrub area w/ #382; leans E.; suppressed by off-site trees.
404	Valley oak	6	6	10	10	4	3	Yes	3	Low	2' from fence; leans N.; extremely suppressed.
405	Valley oak	6	6	6	6	6	6	Yes	3	Moderate	Codominant stems at 7'; suppressed.
406	Valley oak	8	8	0	0	10	15	Yes	2	Low	**Off-site;** at fence; topped; crown weighted N.; leans N.
407	Valley oak	9	9	10	5	0	10	Yes	2	Low	**Off-site;** at fence; topped; bows W.
408	Valley oak	14	14	15	15	15	8	Yes	3	Low	**Off-site;** near fence; overhang onto property ~15'; multiple narrow attachments at ~9'; poor form + structure; crown in low utility lines.
409	Tree of heaven	6,5,4	15	7	9	7	7	Yes	2	Low	1' from bldg; multiple attachments arise from base; upright form; crowded by bldg.

Preliminary Tree Disposition

1027 Pine Hollow Court
Clayton, CA
February 2025

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Tree No.	Species	Trunk Diameter (in.)	Cumulative Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excellent	Proposed disposition	Notes
337	Tree of heaven	10	10	Yes	4	Remove	Within grading
338	Valley oak	8	8	Yes	3	Remove	Within grading
339	Blue oak	37	37	Yes	4	Potentially preserve	At edge of grading
340	California black walnut	7,4,4	15	Yes	2	Remove	Within grading
341	California black walnut	8,4,4,4	20	Yes	2	Remove	At edge of grading; poor condition
342	California black walnut	8,8,6	22	Yes	2	Remove	At edge of grading; poor condition
344	California black walnut	9,4,4	17	Yes	1	Remove	At edge of grading; poor condition
345	Blue oak	32	32	Yes	4	Preserve	Off-site
346	Tree of heaven	10,8,4	22	Yes	3	Remove	At edge of grading
347	California black walnut	10,8	18	Yes	2	Remove	At edge of grading; poor condition
348	California black walnut	8	8	Yes	1	Remove	At edge of grading; poor condition
349	California black walnut	12,10	22	Yes	2	Remove	At edge of grading; poor condition
351	California black walnut	7,7	14	Yes	2	Remove	At edge of grading; poor condition
352	California black walnut	7,7,6	20	Yes	1	Remove	Poor condition
353	Valley oak	14,13	27	Yes	3	Remove	At edge of grading
354	California black walnut	11,10,9	30	Yes	2	Remove	Poor condition

Preliminary Tree Disposition

1027 Pine Hollow Court
Clayton, CA
February 2025

HORT SCIENCE
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Tree No.	Species	Trunk Diameter (in.)	Cumulative Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excellent	Proposed disposition	Notes
356	California black walnut	9,9	18	Yes	1	Remove	Poor condition
357	California black walnut	8	8	Yes	1	Remove	Poor condition
358	California black walnut	9,9,7	25	Yes	2	Remove	Poor condition
359	California black walnut	8	8	Yes	2	Remove	Poor condition
360	California black walnut	7,6	13	Yes	1	Remove	Poor condition
361	California black walnut	9,8,7,7	31	Yes	2	Remove	Poor condition
362	California black walnut	8,8,8	24	Yes	2	Remove	At edge of grading; poor condition
363	California black walnut	5,5,4,2,2	18	Yes	2	Remove	At edge of grading; poor condition
364	California black walnut	5,5,5,5	20	Yes	2	Remove	At edge of grading; poor condition
365	California black walnut	15,14,14	43	Yes	2	Remove	At edge of grading; poor condition
366	California black walnut	7	7	Yes	1	Remove	At edge of grading; poor condition
367	Italian stone pine	32	32	Yes	3	Remove	Within grading
368	Italian stone pine	45	45	Yes	3	Remove	Within grading
369	Italian stone pine	21	21	Yes	2	Remove	Within grading
370	California black walnut	10	10	Yes	3	Remove	Within grading
372	California black walnut	11	11	Yes	1	Remove	Within grading

Preliminary Tree Disposition

1027 Pine Hollow Court
Clayton, CA
February 2025

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Tree No.	Species	Trunk Diameter (in.)	Cumulative Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excellent	Proposed disposition	Notes
373	California black walnut	9,9,9,8	35	Yes	2	Remove	Within grading
374	California black walnut	9,7	16	Yes	2	Remove	Within grading
375	Valley oak	13	13	Yes	4	Remove	Within grading
376	California black walnut	8	8	Yes	2	Remove	Within grading
377	Valley oak	11,9	20	Yes	4	Remove	Within grading
379	Valley oak	27	27	Yes	4	Remove	Within grading
381	California black walnut	8	8	Yes	2	Remove	Within grading; poor condition
382	Almond	5,5,5,4	19	Yes	3	Remove	At edge of grading; poor condition
383	California black walnut	16	16	Yes	2	Remove	Within grading; poor condition
386	Valley oak	14	14	Yes	3	Remove	Edge of grading
387	Valley oak	21	21	Yes	4	Remove	Edge of grading
389	Lemon	9,9,7	25	Yes	2	Remove	Within grading; poor condition
390	Valley oak	17	17	Yes	3	Remove	Edge of grading
391	California black walnut	6,5	11	Yes	1	Remove	At edge of grading; very poor condition
392	Giant sequoia	27	27	Yes	3	Remove	Edge of grading
393	Valley oak	17	17	Yes	3	Remove	Edge of grading
394	Almond	7	7	Yes	2	Remove	At edge of grading; poor condition
395	Valley oak	19	19	Yes	4	Remove	Edge of grading
396	Olive	6,5,4,3	18	Yes	3	Remove	Edge of grading
397	Valley oak	20	20	Yes	3	Remove	Edge of grading
398	Olive	13	13	Yes	3	Remove	Edge of grading

Preliminary Tree Disposition

1027 Pine Hollow Court
Clayton, CA
February 2025

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Tree No.	Species	Trunk Diameter (in.)	Cumulative Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excellent	Proposed disposition	Notes
399	Olive	5,5,5	15	Yes	3	Remove	Edge of grading
400	Almond	8	8	Yes	2	Remove	Poor condition
401	Tree of heaven	8,7,6,4	25	Yes	3	Preserve	Off-site
402	Elderberry	6,6,6,4,4,4 4,4	38	Yes	3	Remove	Edge of grading
403	Coast live oak	7	7	Yes	3	Remove	Edge of grading
404	Valley oak	6	6	Yes	3	Remove	Edge of grading
405	Valley oak	6	6	Yes	3	Remove	Edge of grading
406	Valley oak	8	8	Yes	2	Preserve	Off-site
407	Valley oak	9	9	Yes	2	Preserve	Off-site
408	Valley oak	14	14	Yes	3	Preserve	Off-site
409	Tree of heaven	6,5,4	15	Yes	2	Remove	Within grading

APPENDIX C

Preliminary Arborist Report

1027 Pine Hollow Court
Clayton, CA

PREPARED FOR:
Ponderosa Homes II
5020 Franklin Drive, Suite 200
Pleasanton, CA

PREPARED BY:
HortScience | Bartlett Consulting
2550 Ninth St. Suite 112
Berkeley CA

May 2025

HORT SCIENCE
BARTLETT CONSULTING
A Division of The F.A. Bartlett Tree Expert Company

Preliminary Arborist Report

1027 Pine Hollow Court
Clayton, CA

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1027 Pine Hollow Court

Clayton, CA

Introduction and Overview

Ponderosa Homes II is planning to re-develop the property located at 1027 Pine Hollow Court in Clayton. Current site use consists of a single family house, outbuildings and a defunct orchard sloping east down to Mitchell Creek and downtown Clayton. HortScience | Bartlett Consulting, Divisions of The F. A. Bartlett Tree Expert Company, was asked to prepare an **Arborist Report** for the trees on the property as part of the application to the City of Clayton.

This report provides the following information:

1. An assessment of each tree's health, structure, suitability for preservation and protected status within and adjacent to the proposed project area.
2. Evaluation of the impacts to trees associated with constructing the proposed project.
3. Preliminary guidelines for tree preservation during the design, construction and maintenance phases of development.

Tree Assessment Methods

Trees were assessed on February 26, 2025. The assessment included all trees measuring 6 inches in diameter and larger, located within and adjacent to the project area. Tree tags from a previous assessment in 2020 were used, adding new tags to some trees. Tag numbers were discontinuous, ranging from #337 – 409. Nine trees had been removed since 2020, and nine had grown to a size where they could be added to the new total. The assessment procedure was a visual assessment from the ground, consisting of the following steps:

1. Identifying the tree species;
2. Confirming the presence of an existing metal numerical tag and recording its location on a map;
3. Measuring the trunk diameter at a point 54 in. above grade and multi-stem trees at 24 inches;
4. Evaluating the health and structural condition using a scale of 1 – 5:
   - ***5*** - A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species.
   - ***4*** - Tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
   - ***3*** - Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.
   - ***2*** - Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
   - ***1*** - Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormics; extensive structural defects that cannot be abated.
5. Rating the suitability for preservation as "high", "moderate" or "low". Suitability for preservation considers the health, age and structural condition of the tree species, and its potential to remain an asset to the site.

High:	Trees with good health and structural stability that have the potential for longevity at the site.
Moderate:	Trees with somewhat declining health and/or structural defects than can be abated with treatment. The tree will require more intense management and monitoring, and may have shorter life span than those in 'high' category.
Low:	Trees in poor health or with significant structural defects that cannot be mitigated. Tree is expected to continue to decline, regardless of

treatment. The species or individual tree may have characteristics that are undesirable for landscapes, and generally are unsuited for use areas.

Description of Trees

Sixty (64) trees representing 11 species were evaluated. Thirty-five (35) trees (55%) were in poor condition, 21 (33%) were fair and eight (12%) were good. Five off-site trees were included in the assessment. In general species present were ornamental or orchard remnants and commonly observed in the region. Coast live oak, blue oak, valley oak, California black walnut, and giant sequoia are native to California but likely not indigenous to the project site. All trees appeared to have been planted as part of existing landscape treatment. Descriptions of each tree are found in the ***Tree Assessment Form*** and approximate locations are plotted on the ***Tree Assessment Map*** (see Exhibits).

Table 1. Tree condition and frequency of occurrence.
1027 Pine Hollow Court. Clayton, CA.

Common Name	Scientific Name	Condition				Total
		Dead (0)	Poor (1-2)	Fair (3)	Good (4-5)	
Tree of heaven	*Ailanthus altissima*	-	1	2	1	**4**
Lemon	*Citrus limon*	-	1	-	-	**1**
California black walnut	*Juglans hindsii*	-	28	1	-	**29**
Olive	*Olea europaea*	-	-	3	-	**3**
Italian stone pine	*Pinus pinea*	-	1	2	-	**3**
Almond	*Prunus dulcis*	-	2	1	-	**3**
Coast live oak	*Quercus agrifolia*	-	-	1	-	**1**
Blue oak	*Quercus douglasii*	-	-	-	2	**2**
Valley oak	*Quercus lobata*	-	2	9	5	**16**
Elderberry	*Sambucus* sp.	-	-	1	-	**1**
Giant sequoia	*Sequoiadendron giganteum*	-	-	1	-	**1**
Total		**-**	**35**	**21**	**8**	**64**

California black walnut was the most frequently occurring species with 29 trees (45% of the population), comprised of remnants from a former orchard on the site. Condition was predominantly poor (28 trees). Walnut #370 was fair and had a correcting lean southeast, with several removed stems at the base. None of the walnuts were in good condition. Most trees had a large decayed base multiple attachments that had been topped or were extremely sparse (Photo 1, next page). Many oaks had mistletoe growing in the crown. Stem diameters ranged from 7 to 16 inches, with an average diameter of 9 inches.



Photo 1. Most of the California black walnuts were in poor condition with sparse foliage. Several had mistletoe growing in the crown (yellow arrow).



Photo 2. Valley oaks #386 and 387 (R to L) were growing near the south property line fence.

Of sixteen (16) valley oaks, condition was fair (9 trees), good (5 trees), or poor (off-site oaks #406 and 407). Oaks in good condition had vigorous high crowns and ample growing space. Fair condition oaks were crowded along fence lines and had bowed trunks or codominant stems (Photo 2). Diameters were 6 to 27 inches.

Four trees of heaven were assessed. Two were fair, #337 was good, and #409 was poor. Stage of development was young, with single or multiple trunks from 4 to 10 inches. Tree #401 was off-site to the north, growing through the property line fence.

Three olives were in fair condition. Olives #396 and 399 had multiple attachments from 3 to 6 inches in diameter. Olive #398 was 13 inches and had a raised crown with reaction growth where branches had been removed.

Three mature Italian stone pines were growing near the center of the property. Pines #367 and 368 had trunks of 32 and 45 inches, respectively. Both were in fair condition with large raised crowns (Photo 3).



Photo 3. Italian stone pines #369, 368 and 367 (L to R) were growing near the center of the site.

*Figure not OCR compatible

Pine #367 had several tearouts where limbs had failed on the lower trunk. Pine #369 was leaning south and in poor condition. The top of the trunk had broken off and it was extremely suppressed by pine #368. Diameter was 21 inches.

Three small almonds were assessed. Almonds #394 and 400 were poor with branch dieback and poor structure. Almond #382 was fair with multiple attachments arising from the base, crowded and suppressed by nearby shrubs. Stem diameters were 4 to 8 inches.

Among the remaining five species, none was represented by more than one or two trees. These included:

- Blue oaks #339 and 345 were mature trees in good condition. Oak #339 had a diameter of 37 inches and a large spreading crown (Photo 4). Off-site oak #345 was growing in a field to the north and a similarly spreading crown that overhung the property by about 30 feet. Diameter was 32 inches.



Photo 4. Blue oak #339 had a large spreading crown.

*Figure not OCR compatible

- Citrus (lemon) #389 was in poor condition with extensive dieback. It had multiple stems of 9, 9 and 7 inches low in the crown.

- Giant sequoia #392 had been burned at the base and was crowded by nearby trees. Diameter was 27 inches. It was in fair condition with a sparse crown.

- Coast live oak #403 had a diameter of 7 inches. It was growing in a crowded shrub area and leaned east, suppressed by off-site trees. Condition was fair.

Protected Trees in Clayton

The City of Clayton Municipal Code Chapter 15.70 – Tree Protection defines *Protected* trees as certain species of any size (including Elderberry, Oak, and Walnut). The ordinance also requires a tree removal permit for the removal of any tree with a single trunk or multiple trunks with a cumulative trunk diameter of 6 inches or greater. Based on these definitions, all of the trees qualified as *Protected*. *Protected* status of individual trees is described in the ***Tree Assessment Form*** (see Exhibits). A Tree Replacement Plan is required when *Protected* trees are removed per Section 15.70.040. In-lieu fees may be required if replacement trees cannot be planted.

Suitability for Preservation

Before evaluating the impacts that will occur during development, it is important to consider the quality of the tree resource itself, and the potential for individual trees to function well over an extended length of time. Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment and perform well in the landscape. Our goal is to identify trees that have the potential for long-term health, structural stability and longevity within the proposed development.

Evaluation of suitability for preservation considers several factors:

- **Tree health**
  Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees.

- **Structural integrity**
  Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. For example, California black walnut #372 had extensive basal decay and leaned west, with a history of limb failure. This tree is not recommended for preservation.

- **Species response**
  There is a wide variation in the response of individual species to construction impacts and changes in the environment. Tree of heaven, coast live oak and olive are generally tolerant of construction impacts, particularly if properly irrigated before, during and after construction; wet soils should be avoided around olives. Valley oak and Italian stone pine have moderate tolerance of construction impacts. California black walnut and blue oak are intolerant of root impacts.

- **Tree age and longevity**
  Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees such as tree of heaven #337 are better able to generate new tissue and respond to change than older trees such as Italian stone pine #368.

- **Invasiveness**
  Species that spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced. The California Invasive Plant Inventory Database (http://www.cal-ipc.org/paf/) lists species identified as being invasive. Clayton is part of the Central West Floristic Province. Tree of heaven is moderately invasive; olive is invasive on a limited basis.

Each tree was rated for suitability for preservation based upon its age, health, structural condition and ability to safely coexist within a development environment (Table 2, next page). We consider trees with high suitability for preservation to be the best candidates for preservation. We do not normally recommend retention of trees with low suitability for preservation in areas where people or property will be present. Retention of trees with moderate suitability for preservation depends upon the intensity of proposed site changes.

Table 2: Tree suitability for preservation.
1027 Pine Hollow Court. Clayton, CA.

High	Trees in this category had good health and structural stability that have the potential for longevity at the site. Three (3) trees had high suitability for preservation: tree of heaven #337, off-site blue oak #345, and valley oak #379.
Moderate	Trees in this category have fair health and/or structural defects that may be abated with treatment. Trees in this category require more intense management and monitoring and may have shorter lifespans than those in the "high" category. Fourteen (14) trees had moderate suitability for preservation, including 9 valley oaks, Italian stone pines #367 and 368, olives #398 and 399 and blue oak #339.
Low	Trees in this category are in poor health or have significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas. Forty-seven (47) trees had low suitability for preservation, including all 29 California black walnuts, 6 valley oaks, 3 almonds, and 3 trees of heaven.

Preliminary Evaluation of Impacts and Recommendations

Appropriate tree retention develops a practical match between the location and intensity of construction activities and the quality and health of trees. The ***Tree Assessment Form*** was the reference point for tree health, condition, and suitability for preservation. I used the Preliminary Site Plan (17 Lots) prepared by CBG Civil Engineers (4/16/2025) to determine the project area and evaluate impacts to trees. This report is preliminary because no site layout, grading, utility, or other construction plans were reviewed.

The plan proposes demolition of the existing buildings and construction of new single-family homes. The site will be redeveloped from property line to property line and potential impacts to trees will be severe. Opportunities for tree preservation are extremely limited. The project team has explored options to preserve blue oak #339. An open lot is proposed around the oak, with the property lines of Lots 2 and 3 approximately 20 to 25 feet away from the north and south sides of the trunk. The east side of the oak would be clear of development, but the plan proposes a sidewalk approximately 9 feet from the west side of the tree – well within its dripline. Due to species sensitivity of blue oak and the tree's age and condition, it may not survive anticipated impacts from construction.

If oak #339 cannot be preserved with the current plan in Lot 3, the project team is considering building on that lot and instead eliminating the planned residence on Lot 6. A small park with replacement trees may be created there instead.

Based on my assessment of the proposed plan and evaluation of the trees, I recommend removal of 58 trees (all *Protected*) and potential preservation of blue oak #339 (a *Protected* tree), if the sidewalk can be built farther away from the trunk. The oak is not a suitable candidate for transplanting due to the factors mentioned above. Five off-site trees are to be preserved (#345, 401, 406, 407, and 408). Disposition of individual trees is shown in the **Preliminary Tree Disposition** (Exhibits).

A Tree Replacement Plan is required for the removal of all *Protected* trees, per Clayton Municipal Code 15.70.040. The replacement plan must meet the following standards, among others:

1. Each replacement tree shall have a cumulative trunk diameter that is equal to no less than fifty percent (50%) of the trunk diameter of the removed tree, or
2. A cumulative trunk diameter that is equal to no less than thirty-three percent (33%) of the trunk diameter of the removed tree if the replacement tree(s) are of a variety listed in Section 15.70.015.C. as a *Protected* tree (see list of native species).
3. Replacement trees shall not impede the solar access of existing solar panels located on any other property.
4. The replacement trees shall be irrigated on a regular basis until the trees are established.
5. The property owner shall remain responsible for the health and survival of the replacement tree(s) for two (2) years after planting. If a replacement tree dies, is damaged, or removed within the two (2) year period, the property owner shall replace the tree in accordance with the standards in this section and the originally-approved tree replacement plan.

Successful retention of oak #339 is predicated on strict adherence to the ***Preliminary Tree Preservation Guidelines*** (page 7). If the tree is preserved, some amount of canopy and root pruning may be required for this tree during construction.

If oak #339 is removed and a small park is built on Lot 6, a mitigation tree or trees shall be planted as replacement. If a larger native oak such as the blue oak or valley oak (*Q. lobata)* is chosen, one tree equal to no less than 12.21 inches in diameter (33% trunk diameter of oak #339) shall be planted. If replacement tree/s are not Protected species, replacement size shall be equal to no less than 18.5 inches in diameter (50% trunk diameter of oak #339). Selection of replacement trees should take into consideration the anticipated mature size of the trees.

Because the plans are preliminary, there may be opportunities to reduce tree impacts and retain more trees if plans are altered. The ability to preserve trees on this site depends on 1) selecting trees with moderate or good suitability for preservation and 2) establishing a tree protection zone large enough to sustain tree health and stability. All plans should include surveyed tree trunk locations so that impacts can be accurately assessed, and adequate tree protection measures can be determined.

Preliminary Tree Preservation Guidelines

All on-site trees aside from blue oak #339 will be removed. Blue oak #339 will potentially be preserved. Off-site trees #345, 401, 406, 407, and 408 will be retained. The following recommendations will help reduce impacts to trees from development and maintain their health and structural stability through the clearing, grading and construction phases.

Tree Protection Zone for Blue oak #339

1. **A TREE PROTECTION ZONE** shall be identified for the oak, to be established at the outer dripline of the tree on all sides.
    a. Tree protection fences shall be installed to encompass the **TREE PROTECTION ZONE.** Fence the tree to completely enclose the **TREE PROTECTION ZONE** prior to demolition, grubbing or grading. Fence shall be 6-foot-high chain link fencing mounted on 8-foot tall, 2-inch diameter galvanized steel posts, driven 24 inches into the ground, or equivalent as required by the City.
    b. Apply and maintain 4 to 6 inches wood chip mulch within the **TREE PROTECTION ZONE**. Keep the mulch 2 feet from the base of tree trunk.
    c. Fence must be installed prior to beginning demolition and must remain until construction is complete.
    d. No grading, excavation, construction or storage or dumping of materials shall occur within the **TREE PROTECTION ZONE**.
    e. No underground services including utilities, sub-drains, water, or sewer shall be placed in the **TREE PROTECTION ZONE**.
    f. Fence shall posted with signs stating, “TREE PROTECTION FENCE – DO NOT MOVE OR REMOVE WITHOUT APPROVAL FROM CITY ARBORIST”.

Design recommendations

2. Where possible, include the location of all trees within 10 ft. of the project limit. Include trunk locations on all project plans.
3. The project’s perimeter security fence will also serve as the **TREE PROTECTION ZONE**. No grading, excavation, construction or storage of materials should occur outside the project limit.
4. Any changes to the plans affecting the tree or off-site trees should be reviewed by the consulting arborist with regard to tree impacts. These include, but are not limited to, site plans, improvement plans, utility and drainage plans, grading plans, landscape and irrigation plans, and demolition plans.
5. Plan for tree preservation by designing adequate space around trees to be preserved. This is the **TREE PROTECTION ZONE:** No grading, excavation, construction or storage of materials should occur within that zone. Route underground services including utilities, sub-drains, water or sewer around the **TREE PROTECTION ZONE**.
6. Consider the vertical clearance requirements near the tree during design. Avoid designs that would require pruning more than 20% of the tree’s canopy.
7. All plans affecting trees shall be reviewed by the Consulting Arborist with regard to tree impacts. These include, but are not limited to, demolition plans, grading plans, drainage plans, utility plans, and landscape and irrigation plans.
8. Irrigation systems must be designed so that no trenching severs roots larger than 1 inch in diameter will occur within the **TREE PROTECTION ZONE**.

9. **Tree Preservation Guidelines** prepared by the Consulting Arborist, which include specifications for tree protection during demolition and construction, should be included on all plans.
10. Ensure adequate but not excessive water is supplied to the tree; occasional irrigation may be required. Avoid directing runoff toward the tree.

Design recommendations

1. Where possible, include the location of all trees within 10 feet of the project limit. Include trunk locations on all project plans.

2. The project's perimeter security fence will also serve as the **TREE PROTECTION ZONE**. No grading, excavation, construction or storage of materials should occur outside the project limit.

3. All plans affecting trees shall be reviewed by the Consulting Arborist with regard to tree impacts. These include, but are not limited to, demolition plans, grading plans, drainage plans, utility plans, and landscape and irrigation plans.

4. Irrigation systems must be designed so that no trenching severs roots larger than 2 inches in diameter will occur within the **TREE PROTECTION ZONE**.

5. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.

Pre-demolition and pre-construction treatments and recommendations

1. The project's perimeter security fence will also serve as the **TREE PROTECTION ZONE**. No grading, excavation, construction or storage of materials should occur outside the project limit.

2. Off-site trees to be preserved may require pruning to provide clearance for demolition, grading and construction. Tree care firm providing the pruning shall be a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the latest edition of the Best Management Practices for Pruning (International Society of Arboriculture) and the American National Standard for Tree Care Operations (Z133.1) and Pruning (A300).

3. Tree(s) to be removed that have branches extending into the canopy of tree(s) to remain shall be removed by a Certified Arborist or Certified Tree Worker and not by the demolition contractor. The Certified Arborist or Certified Tree Worker shall remove the trees in a manner that causes no damage to the tree(s) and understory to remain.

4. Trees to be removed shall be felled so as to fall away from **TREE PROTECTION ZONE** and avoid pulling and breaking of roots of off-site trees to remain. If roots are entwined, the Consulting Arborist may require first severing the major woody root mass before extracting the trees.

5. All tree work shall comply with the Migratory Bird Treaty Act as well as California Fish and Wildlife code 3503-3513 to not disturb nesting birds. To the extent feasible tree pruning and removal should be scheduled outside of the breeding season. Breeding bird surveys should be conducted prior to tree work. Qualified biologists should be involved in establishing work buffers for active nests.

Recommendations for tree protection during construction

1. Any approved grading, construction, demolition or other work within 5 feet of the **Tree Protection Zone** should be monitored by the Consulting Arborist.

2. Any root pruning that will occur within 5 feet of the **Tree Protection Zone** shall receive the prior approval of and may be supervised by the Consulting Arborist. Roots should be cut with a saw to provide a flat and smooth cut. Removal of roots larger than 2 in. in diameter should be avoided.

3. If roots 2 inches and greater in diameter are encountered during site work and must be cut to complete the construction, the Consulting Arborist must be consulted to evaluate effects on the health and stability of the tree and recommend treatment.

4. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.

Maintenance of impacted trees

Preserved trees will experience a physical environment different from that pre-development. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulch, pest management, and replanting may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority.

Our inspections represent the condition of the tree at the time of inspection. As trees age, the likelihood of failure of branches or entire trees increases. Annual tree inspections are recommended to identify changes to tree health and structure. In addition, trees should be inspected after storms of unusual severity to evaluate damage and structural changes. Initiating these inspections is the responsibility of the client and/or tree owner.

If you have any questions about my observations or recommendations, please contact me.

HortScience | Bartlett Consulting



Pam Nagle
Consulting Arborist and Urban Forester
ISA Certified Arborist #WE-9617A
ISA Tree Risk Assessment Qualified
Registered Consulting Arborist #805

Exhibits

Tree Assessment Map

Tree Assessment Form

Preliminary Tree Disposition



*Figure not OCR compatible

Tree Assessment Map

1027 Pine Hollow Court
Clayton, CA

Prepared for:
Ponderosa Homes II, Inc.
Pleasanton, CA

February 2025

No Scale

Notes:
Base map provided by:
Google Earth

Numbered tree locations are approximate.

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Tree Assessment

1027 Pine Hollow Court
Clayton, CA
February 2025

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Divisions of The F.A. Bartlett Tree Expert Company

Tree No.	Species	Trunk Diameter (in.)	Cumulative Trunk Diameter (in.)	Canopy radius (ft.) N	E	S	W	Protected Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
337	Tree of heaven	10	10	12	17	15	11	Yes	4	Moderate	Multiple attachments at ~7'; vigorous.
338	Valley oak	8	8	10	14	13	9	Yes	3	Moderate	Leans E. + slightly corrects; codominant stems at 5'; vigorous.
339	Blue oak	37	37	32	38	38	32	Yes	4	Moderate	Multiple attachments at ~12'; large spreading crown; some branch decay + small cavities on lower scaffolds.
340	California black walnut	7,4,4	15	10	11	9	4	Yes	2	Low	Decayed enlarged base; multiple attachments at 2'; poor form + structure.
341	California black walnut	8,4,4,4	20	15	8	8	6	Yes	2	Low	Decayed enlarged base; multiple attachments at 1'; history of limb removal; sparse.
342	California black walnut	8,8,6	22	12	11	8	13	Yes	2	Low	Decayed enlarged base; multiple attachments at 2'; history of limb removal; sparse.
344	California black walnut	9,4,4	17	5	8	6	5	Yes	1	Low	At fence; multiple attachments at ~2'; extensive decay and branch dieback.
345	Blue oak	32	32	25	24	32	28	Yes	4	High	**Off-site;** overhang onto property ~30'; multiple attachments at ~12'; slight lean S.E.; wide spreading crown.
346	Tree of heaven	10,8,4	22	12	10	12	14	Yes	3	Low	Multiple attachments at 2'; sunscald trunk S.E.; upright vase form.
347	California black walnut	10,8	18	12	11	10	14	Yes	2	Low	Codominant stems arise at base w/ 2 decayed stumps in center; high crown w/ mistletoe.
348	California black walnut	8	8	5	4	7	7	Yes	1	Low	Leans W. corrected; poor form + structure; high crown. Trunk decay; removed stems at base E.
349	California black walnut	12,10	22	11	14	13	13	Yes	2	Low	Codominant stems arise at base w/ decayed stump in center; high crown w/ mistletoe.
351	California black walnut	7,7	14	10	7	6	7	Yes	2	Low	Decayed stump E.; codominant stems at 3'; raised high crown.
352	California black walnut	7,7,6	20	11	6	6	7	Yes	1	Low	Decayed base w/ missing stems; multiple attachments arise from base; fused; very poor form + structure.
353	Valley oak	14,13	27	19	17	20	19	Yes	3	Moderate	Codominant stems at ~4' w/ seam; some basal cracking + decay.
354	California black walnut	11,10,9	30	10	10	6	8	Yes	2	Low	Decayed base; multiple attachments at ~3'; extensive branch dieback; mistletoe in crown.
356	California black walnut	9,9	18	9	12	11	9	Yes	1	Low	Burned at base w/ missing stems; codominant stems at ~3'; raised crown; sparse w/ mistletoe.
357	California black walnut	8	8	6	6	6	6	Yes	1	Low	Burned at base w/ missing stems; 1 stem S.W. topped; re-sprouting from base.
358	California black walnut	9,9,7	25	10	10	10	9	Yes	2	Low	Enlarged base; multiple attachments arise from base; raised crown; topped w/ poor form + structure.
359	California black walnut	8	8	8	10	6	7	Yes	2	Low	Burned at base; missing stems S.W.; codominant stems at ~4'; raised crown; topped w/ poor form + structure.
360	California black walnut	7,6	13	10	12	9	8	Yes	1	Low	Burned at base; missing stems S.W.; stump sprouts; raised crown; mistletoe.
361	California black walnut	9,8,7,7	31	7	8	8	8	Yes	2	Low	Multiple attachments arise from base w/ missing stem; raised crown; poor form + structure.

Tree Assessment

1027 Pine Hollow Court
Clayton, CA
February 2025

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Tree No.	Species	Trunk Diameter (in.)	Cumulative Trunk Diameter (in.)	Canopy radius (ft.) N	E	S	W	Protected Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
362	California black walnut	8,8,8	24	10	10	4	12	Yes	2	Low	Multiple attachments arise from base w/ missing stem; twisted form; topped S.E. stem.; branch dieback; mistletoe.
363	California black walnut	5,5,4,2,2	18	7	9	6	6	Yes	2	Low	Codominant stems at ~1' w/ decayed missing stem; history of limb removal w/ reaction growth; some mistletoe.
364	California black walnut	5,5,5,5	20	7	7	7	7	Yes	2	Low	Large twisted base w/ removed stems; multiple attachments at ~4'; extremely poor form + structure; some mistletoe.
365	California black walnut	15,14,14	43	9	18	16	19	Yes	2	Low	Multiple attachments at ~4'; stem decay; raised crown; large vase form.
366	California black walnut	7	7	6	7	6	8	Yes	1	Low	Removed codominant stem E.; stem decay; extremely poor form + structure; suppressed by #367.
367	Italian stone pine	32	32	27	35	28	28	Yes	3	Moderate	Raised crown; tearouts N.W. + S.E.; vigorous.
368	Italian stone pine	45	45	33	34	35	24	Yes	3	Moderate	Codominant stems at 7'; removed stems at attachment; wide raised crown.
369	Italian stone pine	21	21	3	10	20	16	Yes	2	Low	Leans S. + corrects; large removed stem S.W.; top broke off; extremely suppressed by #368.
370	California black walnut	10	10	12	14	9	13	Yes	3	Low	Leans S.E. + corrects; codominant stems at ~8'; removed stems at base; conc. chunks around root zone.
372	California black walnut	11	11	7	7	7	7	Yes	1	Low	Extensive basal decay; leans W.; history of limb failure w/ reaction growth; just poor.
373	California black walnut	9,9,9,8	35	15	16	13	13	Yes	2	Low	Multiple attachments arise from base w/ central missing stem; stem decay; wide open vase crown.
374	California black walnut	9,7	16	8	6	8	9	Yes	2	Low	Multiple attachments arise w/ removed stems E.; stem decay; history of limb failure w/ reaction growth; conc blocks around root zone.
375	Valley oak	13	13	13	12	20	14	Yes	4	Moderate	Correcting bow S.; codominant stems high in crown; rounded high crown.
376	California black walnut	8	8	9	6	6	7	Yes	2	Low	Codominant stems arise from base w/ narrow attachment + decayed missing stem W.; history of limb removal + failures w/ reaction growth; sparse.
377	Valley oak	11,9	20	12	15	15	13	Yes	4	Moderate	Codominant stems at ~3.5' w/ narrow attachment + included bark; raised vase form; vigorous.
379	Valley oak	27	27	22	22	24	23	Yes	4	High	~6' from house corner; slight lean E.; raised crown; large spreading crown; vigorous.
381	California black walnut	8	8	8	11	9	8	Yes	2	Low	Decayed base w/ missing stems; history of limb removal w/ reaction growth.
382	Almond	5,5,5,4	19	12	5	12	13	Yes	3	Low	Multiple attachments arise from base; extremely crowded + suppressed.
383	California black walnut	16	16	12	12	12	12	Yes	2	Low	Decayed missing stems E.; leans W.; extensive decay + sprouting; mistletoe.
386	Valley oak	14	14	22	22	20	10	Yes	3	Moderate	2' from fence; bows E.; codominant stems at 10'.
387	Valley oak	21	21	22	26	22	4	Yes	4	Moderate	At fence; codominant stems @ 10' w/ seam; slight bow E.; crowded by #386.

Tree Assessment

1027 Pine Hollow Court
Clayton, CA
February 2025

HORT SCIENCE
BARTLETT CONSULTING
Divisions of The F.A. Bartlett Tree Expert Company

Tree No.	Species	Trunk Diameter (in.)	Cumulative Trunk Diameter (in.)	Canopy radius (ft.) N	E	S	W	Protected Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
389	Lemon	9,9,7	25	10	10	8	8	Yes	2	Low	Codominant stems at 1' w/ narrow attachment; multiple attachments above; extensive branch dieback.
390	Valley oak	17	17	18	11	18	18	Yes	3	Moderate	1' from fence; corrected tilt S.; removed stem S.; codominant stems at ~11'.
391	California black walnut	6,5	11	8	8	0	4	Yes	1	Low	Extensive central basal decay; history of limb failure w/ reaction growth.
392	Giant sequoia	27	27	10	10	12	12	Yes	3	Low	Burned at base; crowded by #393; sparse.
393	Valley oak	17	17	0	18	20	18	Yes	3	Low	2' from fence; leans S.; crowded by #392; multiple attachments high in crown.
394	Almond	7	7	9	7	0	9	Yes	2	Low	Crook in trunk; multiple attachments at ~3"; branch dieback; suppressed.
395	Valley oak	19	19	10	16	20	3	Yes	4	Moderate	3' from fence; multiple attachments high in slightly thin spreading crown.
396	Olive	6,5,4,3	18	16	14	10	3	Yes	3	Low	At fence; multiple attachments arise from base; leans N.; very crowded + suppressed.
397	Valley oak	20	20	7	18	22	15	Yes	3	Low	At fence + pressing against it S.; leans S.; topped N. crown; crowded.
398	Olive	13	13	8	8	8	8	Yes	3	Moderate	Raised crown; multiple attachments @~10' w/ suckers; history of reaction growth.
399	Olive	5,5,5	15	9	7	5	10	Yes	3	Moderate	Raised crown; codominant stems at 2 + 3'; slightly sparse.
400	Almond	8	8	6	7	6	8	Yes	2	Low	Bows N. + corrects; basal damage S.; history of limb removal; poor form + structure.
401	Tree of heaven	8,7,6,4	25	10	10	8	10	Yes	3	Low	**Off-site;** growing thru property line fence; multiple attachments at 2'; vase form.
402	Elderberry	6,6,6,4,4,4,4,4	38	12	12	12	12	Yes	3	Low	Multiple attachments arise from base; history of limb removal; shrub form.
403	Coast live oak	7	7	10	14	0	6	Yes	3	Low	In crowded shrub area w/ #382; leans E.; suppressed by off-site trees.
404	Valley oak	6	6	10	10	4	3	Yes	3	Low	2' from fence; leans N.; extremely suppressed.
405	Valley oak	6	6	6	6	6	6	Yes	3	Moderate	Codominant stems at 7'; suppressed.
406	Valley oak	8	8	0	0	10	15	Yes	2	Low	**Off-site;** at fence; topped; crown weighted N.; leans N.
407	Valley oak	9	9	10	5	0	10	Yes	2	Low	**Off-site;** at fence; topped; bows W.
408	Valley oak	14	14	15	15	15	8	Yes	3	Low	**Off-site;** near fence; overhang onto property ~15'; multiple narrow attachments at ~9'; poor form + structure; crown in low utility lines.
409	Tree of heaven	6,5,4	15	7	9	7	7	Yes	2	Low	1' from bldg; multiple attachments arise from base; upright form; crowded by bldg.

Preliminary Tree Disposition

1027 Pine Hollow Court
Clayton, CA
February 2025

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Tree No.	Species	Trunk Diameter (in.)	Cumulative Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excellent	Proposed disposition	Notes
337	Tree of heaven	10	10	Yes	4	Remove	Within grading
338	Valley oak	8	8	Yes	3	Remove	Within grading
339	Blue oak	37	37	Yes	4	Potentially preserve	At edge of grading
340	California black walnut	7,4,4	15	Yes	2	Remove	Within grading
341	California black walnut	8,4,4,4	20	Yes	2	Remove	At edge of grading; poor condition
342	California black walnut	8,8,6	22	Yes	2	Remove	At edge of grading; poor condition
344	California black walnut	9,4,4	17	Yes	1	Remove	At edge of grading; poor condition
345	Blue oak	32	32	Yes	4	Preserve	Off-site
346	Tree of heaven	10,8,4	22	Yes	3	Remove	At edge of grading
347	California black walnut	10,8	18	Yes	2	Remove	At edge of grading; poor condition
348	California black walnut	8	8	Yes	1	Remove	At edge of grading; poor condition
349	California black walnut	12,10	22	Yes	2	Remove	At edge of grading; poor condition
351	California black walnut	7,7	14	Yes	2	Remove	At edge of grading; poor condition
352	California black walnut	7,7,6	20	Yes	1	Remove	Poor condition
353	Valley oak	14,13	27	Yes	3	Remove	At edge of grading
354	California black walnut	11,10,9	30	Yes	2	Remove	Poor condition

Preliminary Tree Disposition

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Tree No.	Species	Trunk Diameter (in.)	Cumulative Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excellent	Proposed disposition	Notes
356	California black walnut	9,9	18	Yes	1	Remove	Poor condition
357	California black walnut	8	8	Yes	1	Remove	Poor condition
358	California black walnut	9,9,7	25	Yes	2	Remove	Poor condition
359	California black walnut	8	8	Yes	2	Remove	Poor condition
360	California black walnut	7,6	13	Yes	1	Remove	Poor condition
361	California black walnut	9,8,7,7	31	Yes	2	Remove	Poor condition
362	California black walnut	8,8,8	24	Yes	2	Remove	At edge of grading; poor condition
363	California black walnut	5,5,4,2,2	18	Yes	2	Remove	At edge of grading; poor condition
364	California black walnut	5,5,5,5	20	Yes	2	Remove	At edge of grading; poor condition
365	California black walnut	15,14,14	43	Yes	2	Remove	At edge of grading; poor condition
366	California black walnut	7	7	Yes	1	Remove	At edge of grading; poor condition
367	Italian stone pine	32	32	Yes	3	Remove	Within grading
368	Italian stone pine	45	45	Yes	3	Remove	Within grading
369	Italian stone pine	21	21	Yes	2	Remove	Within grading
370	California black walnut	10	10	Yes	3	Remove	Within grading
372	California black walnut	11	11	Yes	1	Remove	Within grading

Preliminary Tree Disposition

1027 Pine Hollow Court
Clayton, CA
February 2025

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Tree No.	Species	Trunk Diameter (in.)	Cumulative Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excellent	Proposed disposition	Notes
373	California black walnut	9,9,9,8	35	Yes	2	Remove	Within grading
374	California black walnut	9,7	16	Yes	2	Remove	Within grading
375	Valley oak	13	13	Yes	4	Remove	Within grading
376	California black walnut	8	8	Yes	2	Remove	Within grading
377	Valley oak	11,9	20	Yes	4	Remove	Within grading
379	Valley oak	27	27	Yes	4	Remove	Within grading
381	California black walnut	8	8	Yes	2	Remove	Within grading; poor condition
382	Almond	5,5,5,4	19	Yes	3	Remove	At edge of grading; poor condition
383	California black walnut	16	16	Yes	2	Remove	Within grading; poor condition
386	Valley oak	14	14	Yes	3	Remove	Edge of grading
387	Valley oak	21	21	Yes	4	Remove	Edge of grading
389	Lemon	9,9,7	25	Yes	2	Remove	Within grading; poor condition
390	Valley oak	17	17	Yes	3	Remove	Edge of grading
391	California black walnut	6,5	11	Yes	1	Remove	At edge of grading; very poor condition
392	Giant sequoia	27	27	Yes	3	Remove	Edge of grading
393	Valley oak	17	17	Yes	3	Remove	Edge of grading
394	Almond	7	7	Yes	2	Remove	At edge of grading; poor condition
395	Valley oak	19	19	Yes	4	Remove	Edge of grading
396	Olive	6,5,4,3	18	Yes	3	Remove	Edge of grading
397	Valley oak	20	20	Yes	3	Remove	Edge of grading
398	Olive	13	13	Yes	3	Remove	Edge of grading

Preliminary Tree Disposition

1027 Pine Hollow Court
Clayton, CA
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Tree No.	Species	Trunk Diameter (in.)	Cumulative Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excellent	Proposed disposition	Notes
399	Olive	5,5,5	15	Yes	3	Remove	Edge of grading
400	Almond	8	8	Yes	2	Remove	Poor condition
401	Tree of heaven	8,7,6,4	25	Yes	3	Preserve	Off-site
402	Elderberry	6,6,6,4,4,4 4,4	38	Yes	3	Remove	Edge of grading
403	Coast live oak	7	7	Yes	3	Remove	Edge of grading
404	Valley oak	6	6	Yes	3	Remove	Edge of grading
405	Valley oak	6	6	Yes	3	Remove	Edge of grading
406	Valley oak	8	8	Yes	2	Preserve	Off-site
407	Valley oak	9	9	Yes	2	Preserve	Off-site
408	Valley oak	14	14	Yes	3	Preserve	Off-site
409	Tree of heaven	6,5,4	15	Yes	2	Remove	Within grading

APPENDIX D

CORNERSTONE EARTH GROUP

Date:	June 3, 2025
Project No.:	132-17-1
Prepared For:	Mr. Jeff Schroeder **PONDEROSA HOMES** 5020 Franklin Drive, Suite 200 Pleasanton, California 94588
Re:	1027 Pine Hollow Court Clayton, California

Dear Mr. Schroeder:

We are pleased to present the results of our geotechnical investigation for the above referenced development. Our report includes a description of the geotechnical and seismic aspects of the site along with our conclusions and geotechnical recommendations for design of the proposed residential development.

We refer you to the text of the report for detailed recommendations. Your opinion is important to us. If you have any questions concerning our findings, please call and we will be glad to discuss them with you.

Sincerely,

CORNERSTONE EARTH GROUP, INC.

John R. Dye, P.E., G.E.
Senior Principal Engineer

Copies: Addressee, CBG (PDF by email)



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CORNERSTONE EARTH GROUP

TYPE OF SERVICES	Geotechnical Investigation
PROJECT NAME	Pine Hollow Residential Development
LOCATION	1027 Pine Hollow Court Clayton, California
CLIENT	Ponderosa Homes
PROJECT NUMBER	132-17-1
DATE	June 3, 2025



CORNERSTONE EARTH GROUP

Type of Services	**Geotechnical Investigation**
Project Name	**Pine Hollow Residential Development**
Location	**1027 Pine Hollow Court** **Clayton, California**
Client	**Ponderosa Homes**
Client Address	**5020 Franklin Drive, Suite 200** **Pleasanton, CA**
Project Number	**132-17-1**
Date	**June 3, 2025**

Prepared by

Bryan Cervantes Guzman, P.E
Project Engineer



John R. Dye, P.E., G.E.
Senior Principal Engineer
Geotechnical Project Manager



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APPENDIX B: LABORATORY TEST PROGRAM
APPENDIX C: SITE CORROSIVITY EVALUATION

CORNERSTONE EARTH GROUP

Type of Services	**Geotechnical Investigation**
Project Name	**Pine Hollow Residential Development**
Location	**1027 Pine Hollow Court** **Clayton, California**

SECTION 1: INTRODUCTION

This geotechnical report was prepared for the sole use of Ponderosa Homes for the property located in 1027 Pine Hollow Court in Clayton, California. The location of the site is shown on the Vicinity Map, Figure 1. For our use, we were provided with the following documents:

- Conceptual site plan titled, "1027 Pine Hollow Court," prepared by William Hezmalhalch Architects, Inc dated April 26, 2024.
- A set of plans titled, "Tract 9718, Vesting Tentative Map, 1027 Pine Hollow Court, Clayton, CA, Sheets TM01-TM07," prepared by CBG dated June 2, 2025.

As you know, we previously performed geotechnical investigations at the site for a prior development plan and presented our findings in reports dated 2013 and 2017. Subsurface data from those prior investigations was also used as part of this study.

1.1 PROJECT DESCRIPTION

The project site consists of an approximately 4.4-acre parcel (APN: 119-050-036) located at 1027 Pine Hollow Court. Based on our review of the conceptual site plan prepared by William Hezmalhalch Architects, Inc., up to 16 single-family residential homes are being considered for the site. The homes would likely be two stories and be of wood-frame construction with a mat foundation.

Appurtenant streets, utilities, storm water detention basin, landscaping and other improvements necessary for site development are also likely planned. Retaining walls may also be considered along the eastern edge of the site near the top of an existing slope. Structural loads and grading are yet to be determined; however, we assume building loads will be typical for this type of residential construction. Grading will likely include cuts and fills on the order of a few to several feet to grade level pads and streets.

1.2 SCOPE OF SERVICES

Our scope of services was presented in our proposal dated December 17, 2024 and consisted of field and laboratory programs to evaluate physical and engineering properties of the subsurface soils, engineering analysis to prepare recommendations for site work and grading, building foundations, flatwork, retaining walls, and pavements, and preparation of this report. Brief descriptions of our exploration and laboratory programs are presented below.

1.3 EXPLORATION PROGRAM

Recent field exploration consisted of four borings drilled on February 5, 2025 with track-mounted, hollow-stem auger drilling equipment. The borings were drilled to depths ranging from 15 to 20 feet. The borings were backfilled with cement grout in accordance with local requirements; exploration permits were obtained as required by local jurisdictions.

The approximate locations of our exploratory borings are shown on the Site Plan, Figure 2. Details regarding our field program are included in Appendix A.

1.4 PREVIOUS FIELD EXPLORATION

Our previous field exploration performed for prior development plans consisted of two borings (EB-1 and EB-2) drilled using truck-mounted hollow-stem auger drilling equipment on February 16, 2017, and two hand auger borings (EB-3 and EB-4) drilled February 23, 2017. During our previous feasibility study in 2013, we also excavated six test pits (TP-1 to TP-6) on the east-facing slope using rubber-tired backhoe equipment to depths of 4 to 6 feet.

The approximate locations of the previous explorations are also shown on the Site Plan, Figure 2. Copies of the previous exploration logs are included in Appendix A.

1.5 LABORATORY TESTING PROGRAM

In addition to visual classification of samples, the laboratory program focused on obtaining data for foundation design and seismic ground deformation estimates. Testing included moisture contents, dry densities, grain size analyses, washed sieve analyses and Plasticity Index tests. Details regarding our laboratory program are included in Appendix B.

1.6 CORROSION EVALUATION

Three samples from our borings from depths from 2 to 10 feet were tested for saturated resistivity, pH, and soluble sulfates and chlorides. In general, the on-site soils can be characterized as moderately corrosive to buried metal, and non-corrosive to buried concrete.

SECTION 2: REGIONAL SETTING

2.1 GEOLOGICAL SETTING

The site is located in the western Diablo Range of the Coast Ranges structural and geomorphic province of California, which is one mountain range in a series of northwesterly-aligned mountains forming the Coast Ranges geomorphic province of California that stretches from the Oregon border nearly to Point Conception. In the San Francisco Bay area, most of the Coast Ranges have developed on a basement of tectonically mixed Cretaceous- and Jurassic-age (70- to 200-million years old) rocks of the Franciscan Complex. Locally younger sedimentary and volcanic rocks cap these basement rocks. Still younger surficial deposits that reflect geologic conditions for the last million years or so cover most of the Coast Ranges.

Rocks of two main basement complexes juxtaposed by major regional faults are exposed in the East Bay hills and Diablo Range. These are the Franciscan Assemblage and the Coast Range Ophiolite. The basement complexes are unconformably overlain by Mesozoic and Cenozoic sedimentary and volcanic rocks. The two Mesozoic basement complexes are the Franciscan Complex and the Great Valley Complex (Graymer, 2000). The ophiolite rocks are the remnants of arc-related oceanic crust. The Great Valley Sequence is composed of turbidutes (sandstone, conglomerate and shale) of Jurassic and Cretaceous age that were deposited on top of the crustal rocks.

Movement on the many splays of the San Andreas Fault system has produced the dominant northwest-oriented structural and topographic trend seen throughout the Coast Ranges today. This trend reflects the boundary between two of the Earth's major tectonic plates: the North American plate to the east and the Pacific plate to the west. The San Andreas Fault system and its major branching faults is about 40 miles wide in the Bay area and extends from the San Gregorio Fault near the coastline to the Coast Ranges-Central Valley blind thrust at the western edge of the central valley as shown on the Regional Fault Map, Figure 3. The San Andreas Fault is the dominant structure in the system, nearly spanning the length of California, and capable of producing the highest magnitude earthquakes. Many other subparallel or branch faults within the San Andreas system are equally active and nearly as capable of generating large earthquakes. Right-lateral movement dominates on these faults but an increasingly large amount of thrust faulting resulting from compression across the system is now being identified also.

The geologic structure of the site area is severely complicated by folding and faulting associated with the Mt. Diablo anticline and related structures, which are part of an extensive belt of active deformation stretching from the northern Diablo Range to western Sacramento. Mt. Diablo is flanked by the seismically active faults, including the Greenville fault along its southeast side and by the Concord fault along its northwest side (Unruh, 2001; Jennings and Bryant, 2010). Based on regional geologic maps, the site is mapped to be predominantly underlain by older Pleistocene-aged alluvial soils (Helley & Graymer, 1997). Alluvial soils within the adjacent Mitchell Creek watershed are mapped as Holocene-aged alluvial soils.

2.2 REGIONAL SEISMICITY

The San Francisco Bay area region is one of the most seismically active areas in the Country. While seismologists cannot predict earthquake events, geologists from the U.S. Geological Survey have recently updated (in 2015) earlier estimates from their 2014 Uniform California Earthquake Rupture Forecast (Version 3; UCERF3) publication. The estimated probability of one or more magnitude 6.7 earthquakes (the size of the destructive 1994 Northridge earthquake) expected to occur somewhere in the San Francisco Bay Area has been revised (increased) to 72 percent for the period 2014 to 2043 (Aagaard et al., 2016). The faults in the region with the highest estimated probability of generating damaging earthquakes between 2014 and 2043 are the Hayward (33%), Calaveras (26%), and San Andreas Faults (22%). In this 30-year period, the probability of an earthquake of magnitude 6.7 or larger occurring is 22 percent along the San Andreas Fault and 33 percent for the Hayward Fault.

The faults considered capable of generating significant earthquakes are generally associated with the well-defined areas of crustal movement, which trend northwesterly. The table below presents the State-considered active faults within 25 kilometers of the site.

Table 1: Approximate Fault Distances

Fault Name	Distance	
	(miles)	(kilometers)
Greenville	1.1	1.8
Concord-Green Valley	3.6	5.9
Calaveras - North	7.7	12.5
Hayward (Total Length)	16.3	26.2

A regional fault map is presented as Figure 3, illustrating the relative distances of the site to significant fault zones.

SECTION 3: SITE CONDITIONS

3.1 SITE BACKGROUND

We reviewed historic aerial imagery and topographic maps provided online by Historic Aerials (historicaerials.com). A summary of pertinent surface changes at and near the site is as follows:

- 1946: The project site appears to be developed as an orchard field. One residential building and two farmhouses/sheds are observed north and west of the site. Clayton Road is observed in its original configuration.

- 1949: Oak Street appears to be constructed by this time and bounded by multiple residential and commercial buildings.

- 1958: By this time, the existing residence at the southern portion of the property appears to have been constructed. The farmhouse and residential building previously located north of the project are no longer present. Three Mt Diablo Elementary School buildings appear to be constructed by this time.

- 1966: Pine Hollow Court is observed in its original configuration. A gravel driveway is observed at the central part of the project site connecting existing residence to the NW property line. Multiple residential development is observed in the surrounding areas. Mt Diablo Elementary School buildings & softball/baseball field north of project footprint appears to be in the construction phase.

- 1982: Pine Hollow Court appears re-aligned parallelly to western property line to its current configuration. High Street south of property and Mt Diablo Elementary School buildings and softball/baseball field north of project footprint appears to be constructed by this time

- 1993: Clayton Road appears to have been widened, and the new western stretch of the road appears to be to have been constructed. Oak Street, at the interaction with Clayton Road, appears partially aligned to its current configuration.

- 2022: No pertinent surface changes were observed to the project site since the aerial image dated 1966.

3.2 SURFACE DESCRIPTION

The roughly 4½-acre parcel is located on the southeast side of Pine Hollow Court and to the west of the intersection of High Street and Oak Street. The parcel is bound by residential development to the west and south, Clayton Park and Mt. Diablo Elementary School to the north, and Mitchell Creek and Oak Street to the east. A barbed-wire or metal fence borders the property.

The parcel is currently occupied by one single-family residence, a barn and small shed. The remainder of the parcel is undeveloped with the exception of several remnant walnut orchard trees. At the time of our site visit, the parcel was covered with 1- to 2-foot-high grasses and weeds, and several remnant orchard trees and other mature trees. A gravel driveway from Pine Hollow Court extends onto the site near the residence.

Based on our review of available topographic information, site grades currently range from about Elevation 456 to 463 feet along the west side of the site, to about Elevation 410 feet on the southeast end of the site (NAVD 88). The eastern approximately one-third of the site slopes downward to the east at an approximate inclination of about 3:1 (horizontal: vertical). Mitchell Creek was observed just east of the eastern property line. The stream channel is bounded by mature trees and bushes and appears to be about 5 to 8 feet deep along the parcel frontage.

3.3 SUBSURFACE CONDITIONS

Our recent exploration was on the southern half and along the top of the eastern facing slope of the project site. The eastern and southern half of the site is blanketed by 3 to 8 feet of stiff, moist sandy lean clay. The upper 6 inches of the near-surface clays contained significant organics. The upper clay was underlain by dense clayey sand and very stiff to hard lean clay to the maximum depth explored at 20 feet.

Our previous dated explorations performed in February 2017, which were located on the relatively level, western half of the site, encountered 4 to 6 feet of soft to very stiff, moist to wet lean clay and sandy lean clay. The upper 6 to 12 inches of the near-surface clays contained significant organics. The upper clay was underlain by loose to medium dense clayey sand to the maximum depth explored at 10 feet. In 2017, perched ground water was observed flowing through sandy clay/clayey sand soil at a depth of about 3 feet below the surface in Boring EB-4.

Our previous feasibility-level investigation performed in March 2016, was limited to the east-facing slope. Our exploratory test pits (TP-1 through TP-6) encountered an approximately 6- to 12-inch-thick layer of clayey topsoil mantling the slope that was soft to medium stiff and contained abundant organics. Below the surficial topsoil, stiff to very hard sandy lean clay with varying percentages of gravel was observed to depths ranging from 4 to 5 feet.

We performed Plasticity Index (PI) tests on representative samples during our prior and recent exploration. Test results were used to evaluate expansion potential of surficial soils. The results of the surficial PI tests indicated PIs ranging from 9 to 21, indicating low to moderate expansion potential to wetting and drying cycles.

3.3 GROUNDWATER

Groundwater was not encountered in any of our recent borings during drilling; however, the borings were not left open but were immediately backfilled when completed. All measurements were taken at the time of drilling and may not represent the stabilized levels in which groundwater could percolate into the boreholes.

Published data (CGS, Clayton 7.5-minute Quadrangle, 2021) indicated that seasonal and/or historical high groundwater levels in the vicinity of the site are on the order of 20 to 30 feet below the ground surface. Groundwater adjacent to Mitchell Creek is mapped at about 10 feet deep.

During our previous exploration on February 15, 2017, perched ground water was encountered at a depth of approximately 3 feet during drilling for Boring EB-4. As the site had recently received a significant amount of rain, the observed shallow groundwater was estimated to be perched and seasonal and not representative of static groundwater levels. Based on the above, we recommend a groundwater depth of 20 feet below existing grades be used for design. Groundwater along the eastern edge of the site (adjacent to Mitchell Creek) may be as shallow as 10 to 15 feet deep. Fluctuations in groundwater levels occur due to many factors including seasonal fluctuation, underground drainage patterns, regional fluctuations, and other factors.

SECTION 4: GEOLOGIC HAZARDS

4.1 FAULT SURFACE RUPTURE

As discussed above several significant faults are located within 25 kilometers of the site. The site is not located within a State-designated Alquist Priolo Earthquake Fault Zone. As shown in Figure 3, no known surface expression of fault traces is thought to cross the site; therefore, fault surface rupture hazard is not a significant geologic hazard at the site.

4.2 ESTIMATED GROUND SHAKING

Moderate to severe (design-level) earthquakes can cause strong ground shaking, which is the case for most sites within the Bay Area. A peak ground acceleration (PGA) was estimated for analysis using a value equal to F_{PGA}*PGA, as allowed in the 2022 edition of the California Building Code when an exception has been taken per ASCE 7-16, Section 11.4.8. For our analysis we used a PGA_M of 0.98g.

4.3 LIQUEFACTION POTENTIAL

The site development area is not located within a State-designated Liquefaction Hazard Zone (CGS, Clayton Quadrangle, 2021). However, we screened the site for liquefaction during our site exploration by retrieving samples from the site, performing visual classification on sampled materials, and performing various tests to further classify the soil properties. The eastern edge of the parcel is located within a liquefaction hazard zone for areas immediately adjacent to Mitchell Creek. No development is currently planned for this area.

During strong seismic shaking, cyclically induced stresses can cause increased pore pressures within the soil matrix that can result in liquefaction triggering, soil softening due to shear stress loss, potentially significant ground deformation due to settlement within sandy liquefiable layers as pore pressures dissipate, and/or flow failures in sloping ground or where open faces are present (lateral spreading) (NCEER 1998). Limited field and laboratory data is available regarding ground deformation due to settlement; however, in clean sand layers settlement on the order of 2 to 3 percent of the liquefied layer thickness can occur. Soils most susceptible to liquefaction are loose, non-cohesive soils that are saturated and are bedded with poor drainage, such as sand and silt layers bedded with a cohesive cap.

As discussed in the “Subsurface” section above, we primarily encountered medium stiff to stiff cohesive soils underlain by Pleistocene-aged alluvial soils. A localized layer of loose clayey sand was encountered in Boring EB-1; however, this layer appears to be localized and relatively shallow. Based on the above, our screening of the site for liquefaction indicates a low potential for liquefaction and is in general agreement with regional mapping for the site.

4.4 LATERAL SPREADING

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water; typically lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. As failure tends to propagate as block failures, it is difficult to analyze and estimate where the first tension crack will form.

The proposed development area is approximately 200 feet west of Mitchell Creek. The toe of the existing 3:1 slope is about 40 to 80 feet from the top of the creek bank, which is approximately 5 to 8 feet deep. Although the stream is likely underlain by Holocene-aged alluvial soils, the potential for liquefaction at the site is low. Therefore, the potential for lateral spreading to impact the proposed development is considered low. We recommend that improvements be located at least 30 feet from the top of the existing Mitchell Creek bank.

4.5 SEISMIC SETTLEMENT/UNSATURATED SAND SHAKING

Loose unsaturated sandy soils can settle during strong seismic shaking. As the soils encountered at the site were predominantly medium stiff to very stiff clays overlying medium dense sands and older alluvial soils, in our opinion, the potential for significant differential seismic settlement affecting the proposed improvements is low.

4.6 LANDSLIDING

We did not observe recent indications of slope movement or landslides on the east-facing slope. Our review of available historic aerial photographs also did not indicate past slope movement. Our experience with similar sites in the area indicates that natural or cut slopes steeper than 3:1 may be susceptible to shallow sloughing or minor debris flow movement within the upper clay soils mantling the hillside. Since the existing slope is inclined at about 3:1, the potential impact to the proposed development is considered low to moderate, unless the existing slope is steepened. Further discussion is presented in the “Conclusions” section of this report.

4.7 FLOODING

Based on our internet search of the Federal Emergency Management Agency (FEMA) flood map public database, the site is located within Zone X, an area determined to be outside the 0.2% annual chance floodplain. The adjacent Mitchell Creek channel is designated as a special flood hazard area subject to inundation by the 1% annual chance flood (Zone AO), with flood depths of 1 to 3 feet (usually sheet flow on sloping terrain). The flood elevations are shown to range from about 401 to 402 feet at the High Street bridge crossing. We recommend the project civil engineer be retained to confirm this information and verify the base flood elevation, if appropriate.

The Department of Water Resources (DWR), Division of Safety of Dams (DSOD) compiled a database of Dam Failure Inundation Hazard Maps (DSOD, 2015). The generalized hazard maps were prepared by dam owners as required by the State Office of Emergency Services; they are

intended for planning purposes only. Based on our review of these maps, the site not located within a dam failure inundation area.

SECTION 5: CONCLUSIONS

5.1 SUMMARY

From a geotechnical viewpoint, the project is feasible provided the concerns listed below are addressed in the project design. Descriptions of each concern with brief outlines of our recommendations follow the listed concerns.

- Presence of weak surficial soils
- Stability of improvements at top of existing slope
- Presence of moderately expansive soils
- Soil corrosion potential

5.1.1 Weak Surficial Soils

As discussed in the "Subsurface" section, the surficial clayey soils encountered some of our explorations were soft to medium stiff. These surficial soils may be moderately compressible and may not provide uniform support for the proposed residential structures. To reduce the potential for differential settlement, we recommend that the shallow surficial soils be over-excavated and re-compacted prior to placing new fill in building pad areas. Recommendations for weak soil mitigation is discussed in the "Earthwork" section.

5.1.2 Stability of Slope Improvements

As discussed in Section 3, the eastern edge of the site is flanked by an existing natural slope inclined at approximately 3:1 (horizontal:vertical). Preliminary grading plans indicate new residential lots will straddle the crest of the slope and a 2:1 fill slope will likely be required to create level building pads near the top of this slope. Since the shallow surficial soils are relatively weak and may be prone to creep, we recommend that new grading or improvements, such as new fill slopes or retaining walls, constructed near the top of the existing slope be adequately keyed, benched and drained. Recommendations addressing this concern are presented in the "Earthwork" section of this report.

5.1.3 Presence of Moderately Expansive Soils

As discussed, moderately expansive surficial soils were encountered in the surficial soils that blanket the site. Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wetted. If structures are underlain by expansive soils it is important that foundation systems be capable of tolerating or resisting any potentially damaging soil movements. In addition, it is important to limit moisture changes in the surficial soils by using positive drainage away from buildings as

well as limiting landscaping watering. Grading and foundation recommendations addressing this concern are presented in the following sections of this report.

5.1.4 Soil Corrosion Potential

A preliminary soil corrosion screening was performed by JDH Corrosion Consultants based on the results of analytical tests on samples of the near-surface soil. In general, the JDH report concludes that the corrosion potential for buried concrete does not warrant the use of sulfate resistant concrete. However, the corrosion potential for buried metallic structures, such as metal pipes, is considered corrosive to moderately corrosive. JDH recommends that special requirements for corrosion control be made to protect metal pipes. A more detailed discussion of the site corrosion evaluation is presented in Appendix C.

5.2 PLANS AND SPECIFICATIONS REVIEW

We recommend that we be retained to review the geotechnical aspects of the project structural, civil, and landscape plans and specifications, allowing sufficient time to provide the design team with any comments prior to issuing the plans for construction.

5.3 CONSTRUCTION OBSERVATION AND TESTING

As site conditions may vary significantly between the small-diameter borings performed during this investigation, we also recommend that a Cornerstone representative be present to provide geotechnical observation and testing during earthwork and foundation construction. This will allow us to form an opinion and prepare a letter at the end of construction regarding contractor compliance with project plans and specifications, and with the recommendations in our report. We will also be allowed to evaluate any conditions differing from those encountered during our investigation and provide supplemental recommendations as necessary. For these reasons, the recommendations in this report are contingent of Cornerstone providing observation and testing during construction. Contractors should provide at least a 48-hour notice when scheduling our field personnel.

SECTION 6: EARTHWORK

6.1 SITE DEMOLITION

All existing improvements not to be reused for the current development, including all foundations, flatwork, pavements, utilities, and other improvements should be demolished and removed from the site. Recommendations in this section apply to the removal of these improvements, which are currently present on the site, prior to the start of mass grading or the construction of new improvements for the project.

Cornerstone should be notified prior to the start of demolition and should be present on at least a part-time basis during all backfill and mass grading as a result of demolition. Occasionally, other types of buried structures (wells, cisterns, debris pits, etc.) can be found on sites with prior

development. If encountered, Cornerstone should be contacted to address these types of structures on a case-by-case basis.

6.1.1 Demolition of Existing Slabs, Foundations and Pavements

All slabs, foundations, and pavements should be completely removed from within planned building areas. Special care should be taken during the demolition and removal of existing floor slabs, foundations, utilities and pavements to minimize disturbance of the subgrade. Excessive disturbance of the subgrade, which includes either native or previously placed engineered fill, resulting from demolition activities can have serious detrimental effects on planned foundation and paving elements.

Existing foundations are typically mat-slabs, shallow footings, or piers/piles. If slab or shallow footings are encountered, they should be completely removed. If drilled piers are encountered, they should be cut off at least 60-inches below existing grade or the final subgrade elevation, whichever is deeper. The remainder of the drilled pier could remain in place. Foundation elements to remain in place should be surveyed and superimposed on the proposed development plans to determine the potential for conflicts or detrimental impacts to the planned construction. Following review, additional mitigation or planned foundation elements may need to be modified.

6.1.2 Abandonment of Existing Utilities

All utilities should be completely removed from within planned building areas. For any utility line to be considered acceptable to remain within building areas, the utility line must be completely backfilled with grout or sand-cement slurry (sand slurry is not acceptable), the ends outside the building area capped with concrete, and the trench fills either removed and replaced as engineered fill with the trench side slopes flattened to at least 1:1, or the trench fills are determined not to be a risk to the structure. The assessment of the level of risk posed by the particular utility line will determine whether the utility may be abandoned in place or needs to be completely removed. The contractor should assume that all utilities will be removed from within building areas unless provided written confirmation from both the owner and the geotechnical engineer.

Utilities extending beyond the building area may be abandoned in place provided the ends are plugged with concrete, they do not conflict with planned improvements, and that the trench fills do not pose significant risk to the planned surface improvements.

The risk for owners associated with abandoning utilities in place includes the potential for future differential settlement of existing trench fills, and/or partial collapse and potential ground loss into utility lines that are not completely filled with grout.

6.2 SITE CLEARING AND PREPARATION

6.2.1 Site Stripping

The site should be stripped of all surface vegetation, and surface and subsurface improvements to be removed within the proposed development area. Demolition of existing improvements is discussed in the prior paragraphs. [A detailed discussion of removal of existing fills is provided later in this report.] Surface vegetation and topsoil should be stripped to a sufficient depth to remove all material greater than 3 percent organic content by weight. Based on our site observations, surficial stripping should extend about 3 to 4 inches below existing grade in vegetated areas.

6.2.2 Tree and Shrub Removal

Trees and shrubs designated for removal should have the root balls and any roots greater than ½-inch diameter removed completely. Mature trees are estimated to have root balls extending to depths of 2 to 4 feet, depending on the tree size. Significant root zones are anticipated to extend to the diameter of the tree canopy. Grade depressions resulting from root ball removal should be cleaned of loose material and backfilled in accordance with the recommendations in the "Compaction" section of this report.

6.3 RE-COMPACTION OF WEAK SURFICIAL SOILS

As discussed in the "Conclusions" section, weak surficial soils blanket the site. To reduce the potential for differential settlement, the upper 2 feet of soil within future residential building pad areas should be over-excavated and re-compacted prior to placing any new fill. The over-excavation should extend to a lateral distance of at least 3 feet beyond the building footprint. Provided the surficial soils and fills meet the "Material for Fill" requirements below, the soil may be reused when backfilling the excavation. Based on review of the samples collected from our borings, it appears that the fill may be reused. If materials are encountered that do not meet the requirements, such as debris, wood, trash, those materials should be screened out of the remaining material and be removed from the site. Backfill of excavations should be placed in lifts and compacted in accordance with the "Compaction" section below.

6.4 TEMPORARY CUT AND FILL SLOPES

The contractor is responsible for maintaining all temporary slopes and providing temporary shoring where required. Temporary shoring, bracing, and cuts/fills should be performed in accordance with the strictest government safety standards. On a preliminary basis, the upper 8 feet at the site may be classified as OSHA Site C materials. A Cornerstone representative should be retained to confirm the preliminary site classification.

Excavations performed during site demolition and fill removal should be sloped at 2:1 (horizontal:vertical) within the upper 5 feet below building subgrade. Excavations extending more than 5 feet below building subgrade and excavations in pavement and flatwork areas

should be sloped at a 1:1 inclination unless the OSHA soil classification indicates that slope should not exceed 1.5:1.

6.5 SUBGRADE PREPARATION

After site clearing and demolition is complete, and prior to backfilling any excavations resulting from weak soil over-excavation or demolition, the excavation subgrade and subgrade within areas to receive additional site fills, slabs-on-grade and/or pavements should be scarified to a depth of 12 inches, moisture conditioned and compacted in accordance with the “Compaction” section below.

6.6 WET SOIL STABILIZATION GUIDELINES

Native soil and fill materials, especially soils with high fines contents such as clays and silty soils, can become unstable due to high moisture content, whether from high in-situ moisture contents or from winter rains. As the moisture content increases over the laboratory optimum, it becomes more likely the materials will be subject to softening and yielding (pumping) from construction loading or become unworkable during placement and compaction.

If grading is performed during the rainy season, the contractor should anticipate drying the upper 3 feet of on-site soils prior to reusing them as fill. In addition, repetitive rubber-tire loading will likely de-stabilize the soils.

There are several methods to address potential unstable soil conditions and facilitate fill placement and trench backfill. Some of the methods are briefly discussed below. Implementation of the appropriate stabilization measures should be evaluated on a case-by-case basis according to the project construction goals and the site conditions.

6.6.1 Scarification and Drying

The subgrade may be scarified to a depth of 6 to 12 inches and allowed to dry to near optimum conditions, if sufficient dry weather is anticipated to allow sufficient drying. More than one round of scarification may be needed to break up the soil clods.

6.6.2 Removal and Replacement

As an alternative to scarification, the contractor may choose to over-excavate the unstable soils and replace them with dry on-site or import materials. A Cornerstone representative should be present to provide recommendations regarding the appropriate depth of over-excavation, whether a geosynthetic (stabilization fabric or geogrid) is recommended, and what materials are recommended for backfill.

6.6.3 Chemical Treatment

Where the unstable area exceeds about 5,000 to 10,000 square feet and/or site winterization is desired, chemical treatment with quicklime (CaO), kiln-dust, or cement may be more cost-

effective than removal and replacement. Recommended chemical treatment depths will typically range from 12 to 18 inches depending on the magnitude of the instability.

6.7 MATERIAL FOR FILL

6.7.1 Re-Use of On-site Soils

On-site soils with an organic content less than 3 percent by weight may be reused as general fill. General fill should not have lumps, clods or cobble pieces larger than 6 inches in diameter; 85 percent of the fill should be smaller than 2½ inches in diameter. Minor amounts of oversize material (smaller than 12 inches in diameter) may be allowed provided the oversized pieces are not allowed to nest together and the compaction method will allow for loosely placed lifts not exceeding 12 inches.

6.7.2 Potential Import Sources

Non-expansive material should be inorganic with a Plasticity Index (PI) of 15 or less and not contain recycled asphalt concrete where it will be used within the habitable building areas. Imported soil for use as general fill material should be inorganic with a Plasticity Index (PI) of 20 or less and not contain recycled asphalt concrete where it will be used within the habitable building areas. To prevent significant caving during trenching or foundation construction, imported material should have sufficient fines. Samples of potential import sources should be delivered to our office at least 10 days prior to the desired import start date. Information regarding the import source should be provided, such as any site geotechnical reports. If the material will be derived from an excavation rather than a stockpile, potholes will likely be required to collect samples from throughout the depth of the planned cut that will be imported. At a minimum, laboratory testing will include PI tests. Material data sheets for select fill materials (Class 2 aggregate base, ¾-inch crushed rock, quarry fines, etc.) listing current laboratory testing data (not older than 6 months from the import date) may be provided for our review without providing a sample. If current data is not available, specification testing will need to be completed prior to approval.

Environmental and soil corrosion characterization should also be considered by the project team prior to acceptance. Suitable environmental laboratory data to the planned import quantity should be provided to the project environmental consultant; additional laboratory testing may be required based on the project environmental consultant's review. The potential import source should also not be more corrosive than the on-site soils, based on pH, saturated resistivity, and soluble sulfate and chloride testing.

6.8 COMPACTION REQUIREMENTS

All fills, and subgrade areas where fill, slabs-on-grade, and pavements are planned, should be placed in loose lifts 8 inches thick or less and compacted in accordance with ASTM D1557 (latest version) requirements as shown in the table below. In general, clayey soils should be compacted with sheepsfoot equipment and sandy/gravelly soils with vibratory equipment; open-graded materials such as crushed rock should be placed in lifts no thicker than 18 inches and

consolidated in place with vibratory equipment. Each lift of fill and all subgrade should be firm and unyielding under construction equipment loading in addition to meeting the compaction requirements to be approved. The contractor (with input from a Cornerstone representative) should evaluate the in-situ moisture conditions, as the use of vibratory equipment on soils with high moistures can cause unstable conditions. General recommendations for soil stabilization are provided in the "Wet Soil Stabilization Guidelines" section of this report. Where the soil's PI is 20 or greater, the expansive soil criteria should be used.

Table 2: Compaction Requirements

Description	Material Description	Minimum Relative[1] Compaction (percent)	Moisture[2] Content (percent)
General Fill	On-Site Expansive Soils	87 – 92	>3
	Low Expansion Soils	90	>1
Retaining Wall Backfill	Without Surface Improvements	90	>1
	With Surface Improvements	95[4]	>1
Trench Backfill	On-Site Expansive Soils	87 – 92	>3
	Low Expansion Soils	90	>1
Trench Backfill (upper 6 inches of subgrade)	On-Site Low Expansion Soils	95	>1
Crushed Rock Fill	¾-inch Clean Crushed Rock	Consolidate In-Place	NA
Non-Expansive Fill	Imported Non-Expansive Fill	90	Optimum
Flatwork Subgrade	On-Site Expansive Soils	87 - 92	>3
	Low Expansion Soils	90	>1
Flatwork Aggregate Base	Class 2 Aggregate Base[3]	90	Optimum
Pavement Subgrade	On-Site Expansive Soils	87 - 92	>3
	Low Expansion Soils	95	>1
Pavement Aggregate Base	Class 2 Aggregate Base[3]	95	Optimum
Asphalt Concrete	Asphalt Concrete	95 (Marshall)	NA

1 – Relative compaction based on maximum density determined by ASTM D1557 (latest version)
2 – Moisture content based on optimum moisture content determined by ASTM D1557 (latest version)
3 – Class 2 aggregate base shall conform to Caltrans Standard Specifications, latest edition, except that the relative compaction should be determined by ASTM D1557 (latest version)
4 – Using light-weight compaction or walls should be braced

6.8.1 Construction Moisture Conditioning

Expansive soils can undergo significant volume change when dried then wetted. The contractor should keep all exposed expansive soil subgrade (and also trench excavation side walls) moist until protected by overlying improvements (or trenches are backfilled). If expansive soils are allowed to dry out significantly, re-moisture conditioning may require several days of re-wetting (flooding is not recommended), or deep scarification, moisture conditioning, and re-compaction.

6.9 TRENCH BACKFILL

Utility lines constructed within public right-of-way should be trenched, bedded and shaded, and backfilled in accordance with the local or governing jurisdictional requirements. Utility lines in private improvement areas should be constructed in accordance with the following requirements unless superseded by other governing requirements.

All utility lines should be bedded and shaded to at least 6 inches over the top of the lines with crushed rock (⅜-inch-diameter or greater) or well-graded sand and gravel materials conforming to the pipe manufacturer's requirements. Open-graded shading materials should be consolidated in place with vibratory equipment and well-graded materials should be compacted to at least 90 percent relative compaction with vibratory equipment prior to placing subsequent backfill materials.

General backfill over shading materials may consist of on-site native materials provided they meet the requirements in the "Material for Fill" section, and are moisture conditioned and compacted in accordance with the requirements in the "Compaction" section.

Where utility lines will cross perpendicular to strip footings, the footing should be deepened to encase the utility line, providing sleeves or flexible cushions to protect the pipes from anticipated foundation settlement, or the utility lines should be backfilled to the bottom of footing with sand-cement slurry or lean concrete. Where utility lines will parallel footings and will extend below the "foundation plane of influence," an imaginary 1:1 plane projected down from the bottom edge of the footing, either the footing will need to be deepened so that the pipe is above the foundation plane of influence or the utility trench will need to be backfilled with sand-cement slurry or lean concrete within the influence zone. Sand-cement slurry used within foundation influence zones should have a minimum compressive strength of 75 psi.

On expansive soils sites it is desirable to reduce the potential for water migration into building and pavement areas through the granular shading materials. We recommend that a plug of low-permeability clay soil, sand-cement slurry, or lean concrete be placed within trenches just outside where the trenches pass into building and pavement areas.

6.10 PERMANENT CUT AND FILL SLOPES

All permanent fill slopes should have a maximum inclination of 2:1 (horizontal:vertical). Fill slopes should be overbuilt at least 18 inches and trimmed back, exposing engineered fill when complete.

6.10.1 Keyways and Benches

Fill placed on existing ground inclined at 6:1 or greater, should be benched into the existing slope and a keyway constructed at the toe of the fill. Benches should be angled slightly into the slope, be spaced vertically at no greater than 6 feet between benches and extend at least 5 feet into competent soil. Keyways should extend at least 5 feet below lowest existing grade or 2 to 3

feet into competent soil, whichever is deeper. For fill placed on the existing east-facing slope, keyways should be at least 10 feet or 18 feet wide and be angled slightly into the slope (minimum 2 percent inclination) for retaining walls or fill slopes, respectively. The conceptual bench and keyway recommendations for fill slopes or retaining walls along the eastern slope is shown presented in Figure 4.

6.10.2 Fill Drainage

A permanent subsurface drainage system consisting of a series of perforated gravity pipes or drainage strips should be constructed between engineered fill placed within all keyways. This system is intended to intercept perched water flowing through the alluvial soil and transmit it to suitable outlet structures and reduce the potential for hydrostatic pressures building up behind the fills and causing slope instability. The drain lines should be placed at the back of the keyways and benches as shown in Figure 4. Bench drains, if required, should be spaced vertically at no greater than 10 feet.

The drainage system should be constructed as shown in Figure 4 and will consist of a minimum 4-inch-diameter perforated PVC pipe (perforations placed downward). The pipe should consist of SDR 35 or approved equivalent. Subdrain pipes should be bedded and shaded in Caltrans Class 2 Permeable Material (latest version) or ¾-inch crushed rock; if crushed rock is used, the rock should be encapsulated in filter fabric (Mirafi 140N or equivalent). The bedding should be at least 2 inches below the pipe. Drainage material should be at least 18 inches in width and 36 inches in height; where seepage is observed in bench cuts, the height of the drainage material should be increased to at least 12 inches above the height of the observed seepage zone. Alternatively, geocomposite strip drains may be used in lieu of drain rock in fills provided the strip drains extend up the back of benches and keyways at least 36 inches or more, as shown in Figure 4. Strips should overlap by at least 6 inches vertically, if necessary, and at least 12 inches horizontally. Strip drains should not be used where more than 30 feet of fill (vertical) will be placed over them.

The ground surface beneath the subdrain system, as well as the subdrain pipes should slope towards suitable outlet structures at an inclination of at least 1 to 2 percent. Cutoff plugs consisting of compacted clayey soil should be provided where subdrains transition to solid pipe or where they daylight near an outlet point. Suitable outlet structures may consist of connecting the drainage lines to a storm drain system. If the drain lines will outlet overland at the toe of the slope, an appropriate rock spill pad and rodent covers should be provided.

Access ports (cleanouts) with terminal risers should be provided at the upslope boundary of each subsurface drain. Segments of solid discharge pipe should have cleanouts with terminal risers. In addition, the high end and all 90-degree bends of the subdrain pipe should be connected to a riser that extends to the ground surface. The number of cleanouts can be reduced by installing “sweep” 90-degree bends or pairs of 45-degre bends in succession instead of using tight 90-degree bends. Our representative in the field should review the final discharge location at the time of construction.

6.10.3 Plan Review and Construction Monitoring

We should be retained to review the grading and sub-drainage plans so we can provide more specific input regarding the location of keyways and fill drainage for the final plans. A Cornerstone representative should be on site during keyway and fill slope construction. Field modifications to the planned keyway and benching may be required based on encountered field conditions. We recommend that the project civil engineer or land surveyor be retained to survey in place all keyways, sub-drainage lines, solid pipes, and cleanouts, and create an as-built plan. This plan will be of use for any future maintenance or repair work.

6.11 SITE DRAINAGE

Surface runoff should not be allowed to flow over the top of or pond at the top or toe of engineered slopes. Ponding should also not be allowed on or adjacent to building foundations, slabs-on-grade, or pavements. Hardscape surfaces should slope at least 1 to 2 percent towards suitable discharge facilities; landscape areas should slope at least 2 to 3 percent towards suitable discharge facilities. Roof runoff should be directed away from building areas in closed conduits, to approved infiltration facilities, or on to hardscaped surfaces that drain to suitable facilities.

Stormwater discharge on the eastern slope should be located near the base of the slope to minimize saturation of shallow clay soils mantling the hillside. Stormwater improvements on sloping ground, such as rock or gravel dissipator structures, should be underlain by a non-woven geotextile filter fabric such as Mirafi 140N or approved equivalent. Native soil below stormwater discharge improvements should be scarified at least 12 inches, moisture conditioned and re-compacted prior to placement of dissipator structures.

Retention, detention or infiltration facilities should be spaced at least 5 feet from buildings, and preferably at least 3 feet from slabs-on-grade or pavements. These facilities are not recommended where stormwater infiltration may affect slopes at lower elevations on or adjacent to the site. However, if slopes are not present at lower elevations that could potentially be affected, and if retention, detention or infiltration facilities are located within these zones, we recommend that these treatment facilities meet the requirements in the Storm Water Treatment Design Considerations section of this report.

Lined v-ditches should be included at the toe of fill slopes greater than 20 feet high. All v-ditches and drain inlets should be sized to accommodate the design storm events for the upslope tributary area. Concrete-lined v-ditches should be reinforced as required and have adequate control and construction joints and should be constructed neat in excavations; backfill around formed ditches should not be allowed.

6.12 LOW-IMPACT DEVELOPMENT (LID) IMPROVEMENTS

6.12.1 Storm Water Infiltration

To aid in determining if storm water infiltration may be feasible at the site, we provide the following site information that may aid in determining the feasibility of infiltration facilities at the site.

- Based on our exploration and review of regional geologic and USDA soil survey mapping, the near-surface soils at the site consist of low to moderately expansive clays that are likely categorized as Hydrologic Soil Group D. These soils are expected to have infiltration rates on the order of 0.2 inches per hour or less. If site specific infiltration data is needed for storm water design, we recommend that field infiltration testing be performed near planned storm water improvements.

- It should be noted that seasonal high groundwater is mapped at a depth greater than 15 feet and therefore is expected to be at least 10 feet below the base of the infiltration measure.

6.12.2 Storm Water Treatment Design Considerations

If storm water treatment improvements, such as shallow bio-retention swales, basins or pervious pavements, are required as part of the site improvements, we recommend the following items be considered for design and construction.

- If possible, avoid placing bioswales or basins within 10 feet of the building perimeter or within 5 feet of exterior flatwork or pavements.

- Bioswales constructed within 3 feet of proposed buildings may be within the foundation zone of influence for perimeter wall loads. Therefore, where bioswales will parallel foundations and will extend below the “foundation plane of influence,” an imaginary 1:1 plane projected down from the bottom edge of the foundation, the foundation will need to be deepened so that the bottom edge of the bioswale filter material is above the foundation plane of influence.

- If required, the bottom of bioswale or detention areas should include a perforated drain placed at a low point, such as a shallow trench or sloped bottom, to reduce water infiltration into the surrounding soils near structural improvements.

6.12.3 LID Improvements Adjacent to Pavements

If bio-infiltration swales or basins are considered adjacent to proposed streets or exterior flatwork, we recommend that mitigative measures be considered in the design and construction of these facilities to reduce potential impacts to flatwork or pavements. Exterior flatwork, concrete curbs, and pavements located directly adjacent to bio-swales may be susceptible to settlement or lateral movement, depending on the configuration of the bioswale and the setback

between the improvements and edge of the swale. To reduce the potential for distress to these improvements due to vertical or lateral loading, the following options should be considered by the project civil engineer:

- Improvements should be setback from the vertical edge of a bioswale such that there is at least 1 foot of horizontal distance between the edge of improvements and the top edge of the bioswale excavation for every 1 foot of vertical bioswale depth, or

- Concrete curbs for pavements, or lateral restraint for exterior flatwork, located directly adjacent to a vertical bioswale cut should be designed to resist lateral earth pressures and vehicular or fire truck surcharge loading, as discussed in the "Retaining Walls" section of this report.

- Concrete curbs or edge restraint should be adequately keyed into the native soil or engineered to reduce the potential for rotation or lateral movement of the curbs.

6.13 PERMANENT EROSION CONTROL MEASURES

Hillside grading will require periodic maintenance after construction to reduce the potential for erosion and sloughing. At a minimum all slopes should be vegetated by hydroseeding or other landscape ground cover. The establishment of vegetation will help reduce runoff velocities, allow some infiltration and transpiration, trap sediment within runoff, and protect the soil from raindrop impact. Depending on the exposed material type and the slope inclination, more aggressive erosion control measures may be needed to protect slopes for one or more winter seasons while vegetation is being established. For slopes with inclinations of 2:1 (horizontal:vertical) or greater, erosion control may consist of jute netting, straw matting, or erosion control blankets used in combination with hydroseeding.

Both construction and post-construction Storm Water Pollution Prevention Plans (SWPPPs) should be prepared for the project specific requirements. We recommend that final grading plans be provided for our review.

6.14 LANDSCAPE CONSIDERATIONS

Since the near-surface soils are moderately expansive, we recommend greatly reducing the amount of surface water infiltrating these soils near foundations and exterior slabs-on-grade. This can typically be achieved by:

- Using drip irrigation

- Avoiding open planting within 3 feet of the building perimeter or near the top of existing slopes

- Regulating the amount of water distributed to lawns or planter areas by using irrigation timers

- Selecting landscaping that requires little or no watering, especially near foundations.

We recommend that the landscape architect consider these items when developing landscaping plans.

SECTION 7: 2022 CBC SEISMIC DESIGN CRITERIA

7.1 SEISMIC DESIGN CRITERIA

We understand that the project structural design will be based on the 2022 California Building Code (CBC), which provides criteria for the seismic design of buildings in Chapter 16. The "Seismic Coefficients" used to design buildings are established based on a series of tables and figures addressing different site factors, including the soil profile in the upper 100 feet below grade and mapped spectral acceleration parameters based on distance to the controlling seismic source/fault system.

Based on our exploration and review of local geology, the site is underlain by deep alluvial soils with typical SPT "N" values between 15 and 50 blows per foot. Therefore, we have classified the site as Soil Classification D. Because we used site specific data from our explorations and laboratory testing, the site class should be considered as "determined" for the purposes of estimating the seismic design parameters from the code outlined below. The mapped spectral acceleration parameters S_s and S_1 were calculated using the web-based program ATC Hazards by Locations, located at https://hazards.atcouncil.org/, based on the site coordinates presented below and the site classification.

Recommended values in the following table may only be used for design if in the judgement of the project structural engineer an exception can be taken per ASCE 7-16 Section 11.4.8., provided the value of the parameter S_{M1} determined by Eq. (11.4-2) is increased by 50% for all applications of S_{M1}. The table below lists the various factors used to determine the seismic coefficients and other parameters.

Table 3: CBC Site Categorization and Site Coefficients

Classification/Coefficient	Design Value
Site Class	D
Site Latitude	37.939673°
Site Longitude	-121.938359°
0.2-second Period Mapped Spectral Acceleration[1], S_S	2.241g
1-second Period Mapped Spectral Acceleration[1], S_1	0.657g
Short-Period Site Coefficient – Fa	1.0
Long-Period Site Coefficient – Fv	Null
0.2-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects - S_{MS}	2.241g
1-second Period, Maximum Considered Earthquake Spectral Response Acceleration Adjusted for Site Effects – S_{M1}	Null
0.2-second Period, Design Earthquake Spectral Response Acceleration – S_{DS}	1.494g
1-second Period, Design Earthquake Spectral Response Acceleration – S_{D1}	Null
Site Amplification Factor at PGA – F_{PGA}	1.1
Site Modified Peak Ground Acceleration – PGA_M	0.98g

SECTION 8: FOUNDATIONS

8.1 SUMMARY OF RECOMMENDATIONS

In our opinion, the proposed structures may be supported on shallow foundations provided the recommendations in the “Earthwork” section and the sections below are followed. Alternative recommendations for conventional shallow footings or drilled, cast-in-place piers are also provided for sound walls, retaining walls, or other onsite improvements.

8.2 POST-TENSIONED MATS

Residential structures should be supported on post-tensioned (PT) concrete mat foundations designed in accordance with the parameters in the table below based on procedures developed by the Post-Tensioning Institute (latest edition) and the 2022 California Building Code.

Table 4: Post-Tensioned Mat Design Criteria

Differential Movement Condition	Center Lift	Edge Lift
Edge Moisture Variation (feet)	9.0	4.6
Differential Soil Movement (inches)	0.4	0.7

To reduce potential differential movement, all mats should be designed for a maximum average allowable bearing pressure of 500 psf for dead plus live loads; at column or wall loading, the maximum localized bearing pressure should be limited to 3,000 psf. When evaluating wind and seismic conditions, allowable bearing pressures may be increased by one-third. These pressures are net values; the weight of the mat may be neglected for the portion of the mat extending below grade. Top and bottom mats of reinforcing steel should be included as required to help span irregularities and differential settlement.

8.2.1 Mat Foundation Settlement

We estimate static differential settlements of ½ inch across a typical mat foundation and the differential movement listed in the table above for PT-mats.

8.2.2 Lateral Loading

Lateral loads may be resisted by friction between the bottom of mat foundation and the supporting subgrade, and also by passive pressures generated against deepened mat edges. An ultimate frictional resistance of 0.4 applied to the mat dead load, and an ultimate passive pressure based on an equivalent fluid pressure of 450 pcf may be used in design. The structural engineer should apply an appropriate factor of safety (such as 1.5) to the ultimate values above. The upper 12 inches of soil should be neglected when determining passive pressure capacity.

8.2.3 Mat Foundation Construction Considerations

Due to the presence of moderately expansive soils, mat subgrade areas should be kept moist until concrete placement by regular sprinkling to prevent desiccation. If deep drying is allowed to occur, several days of moisture conditioning (flooding of the pads is not recommended) may be required to allow the moisture to re-penetrate the subgrade. If severe drying occurs, reworking and moisture conditioning of the pad may be required. Prior to placement of any vapor retarder and mat construction, the subgrade should be proof-rolled and visually observed by a Cornerstone representative to confirm stable subgrade conditions. The pad moisture should also be checked at least 24 hours prior to vapor barrier or mat reinforcement placement to confirm that the soil has a moisture content of at least 3 percent over optimum in the upper 12 inches.

8.2.4 Moisture Protection Considerations for Mat Foundations

The following general guidelines for concrete mat construction where floor coverings are planned are presented for consideration by the developer, design team, and contractor. These guidelines are based on information obtained from a variety of sources, including the American Concrete Institute (ACI) and are intended to reduce the potential for moisture-related problems causing floor covering failures, and may be supplemented as necessary based on project-specific requirements. The application of these guidelines or not will not affect the geotechnical aspects of the foundation performance.

- Place a 15-mil vapor retarder conforming to ASTM E 1745, Class C requirements or better directly below the concrete mat; the vapor retarder should extend to within 12 to 18 inches from the mat edges and be sealed at all seams and penetrations in accordance with manufacturer's recommendations and ASTM E 1643 requirements. A minimum 2-inch-thick, but no more than 4-inch-thick capillary break, consisting of crushed rock should be placed below the vapor retarder and consolidated in place with vibratory equipment. The mineral aggregate shall be of such size that the percentage composition by dry weight as determined by laboratory sieves will conform to the following gradation:

Sieve Size	Percentage Passing Sieve
1"	100
¾"	90 – 100
No. 4	0 – 10
No. 200	0 – 5

- The concrete water:cement ratio should be 0.45 or less. Mid-range plasticizers may be used to increase concrete workability and facilitate pumping and placement.

- Water should not be added after initial batching unless the slump is less than specified and/or the resulting water:cement ratio will not exceed 0.45.

- Where floor coverings are planned, all concrete surfaces should be properly cured.

- Water vapor emission levels and concrete pH should be determined in accordance with ASTM F1869-98 and F710-98 requirements and evaluated against the floor covering manufacturer's requirements prior to installation.

8.3 CONVENTIONAL SHALLOW FOOTINGS

8.3.1 Allowable Bearing Capacity

Sound walls, low retaining walls and other lightly loaded structures, can be supported on shallow footings bearing on native soil or engineered fill in accordance with the following recommendations. In general, footings should be at least 15 inches wide and extend at least 18 inches below the lowest adjacent grade. If retaining wall footings are to be located on sloping ground and provided the slope is adequately keyed and benched in accordance with the "Earthwork" section, footings should extend at least 36 inches below lowest adjacent grade. Lowest adjacent grade is defined as the deeper of the following: 1) bottom of the adjacent interior slab-on-grade, or 2) finished exterior grade, excluding landscaping topsoil.

Footings constructed to the above dimensions and in accordance with the "Earthwork" recommendations of this report would be capable of supporting maximum allowable bearing pressures of 2,000 psf for dead loads, 3,000 psf for combined dead plus live loads, and 4,000 psf for all loads including wind and seismic. These pressures are based on factors of safety of

3.0, 2.0, and 1.5 applied to the ultimate bearing pressure for dead, dead plus live, and all loads, respectively. These pressures are net values; the weight of the footing may be neglected for the portion of the footing extending below grade (typically, the full footing depth). Top and bottom reinforcing steel should be included in continuous footings to help span irregularities and differential settlement.

8.3.2 Footing Settlement

Based on the allowable bearing pressures presented above, we estimate that the total static footing settlement will be on the order of ½ inch or less, with about ¼ inch of post-construction differential settlement between adjacent foundation elements.

8.3.3 Lateral Loading for Footings

Lateral loads may be resisted by friction between the bottom of footings and the supporting subgrade, and also by passive pressures generated against footing edges. An ultimate frictional resistance of 0.4 applied to the footing dead load, and an ultimate passive pressure based on an equivalent fluid pressure of 450 pcf may be used in design. For footings located on sloping ground, the ultimate passive resistance should be reduced to 350 pcf. The structural engineer should apply an appropriate factor of safety (such as 1.5) to the ultimate values above. The upper 12 and 24 inches of soil should be neglected when determining passive pressure capacity on level or sloping ground.

8.3.4 Spread Footing Construction Considerations

Where utility lines will cross perpendicular to strip footings, the footing should be deepened to encase the utility line, providing sleeves or flexible cushions to protect the pipes from anticipated foundation settlement, or the utility lines should be backfilled to the bottom of footing with sand-cement slurry or lean concrete. Where utility lines will parallel footings and will extend below the "foundation plane of influence," an imaginary 1:1 plane projected down from the bottom edge of the footing, either the footing will need to be deepened so that the pipe is above the foundation plane of influence or the utility trench will need to be backfilled with sand-cement slurry or lean concrete within the influence zone. Sand-cement slurry used within foundation influence zones should have a minimum compressive strength of 75 psi.

Footing excavations should be filled as soon as possible or be kept moist until concrete placement by regular sprinkling to prevent desiccation. A Cornerstone representative should observe all footing excavations prior to placing reinforcing steel and concrete. If there is a significant schedule delay between our initial observation and concrete placement, we may need to re-observe the excavations.

8.4 DRILLED PIERS

8.4.1 Vertical Capacity and Settlement

As an alternative to shallow footings, proposed retaining walls or sound walls may be supported on drilled, cast-in-place, straight-shaft friction piers. The piers should have a minimum diameter of 16 inches and extend to a depth of at least 5 feet below the bottom of the grade beams or lowest adjacent finished grade, whichever is greater. If retaining walls are to be located on sloping ground and provided the slope is adequately keyed and benched in accordance with the "Earthwork" section, the piers should extend at least 5 feet below the base of the keyway elevation.

Adjacent piers centers should be spaced at least three diameters apart, otherwise, a reduction for group effects may be required. Grade beams should span between piers and/or pier caps in accordance with structural requirements.

The vertical capacity of the piers may be designed based on an allowable skin friction of 500 psf for combined dead plus live loads based on a factor of safety of 2.0; dead loads should not exceed two-thirds of the allowable capacities. The allowable skin friction may be increased by one-third for wind and seismic loads. Frictional resistance to uplift loads may be developed along the pier shafts based on an ultimate frictional resistance of 600 psf; the structural engineer should apply an appropriate factor of safety (such as 1.5) to the ultimate uplift capacity.

Total settlement of individual piers should not exceed ½ inch to mobilize static capacities and post-construction differential settlement between adjacent piers should not exceed ¼ inch due to static loads.

8.4.2 Lateral Capacity

Lateral loads exerted on the structure may be resisted by a passive resistance based on an ultimate equivalent fluid pressure of 450 pcf acting against twice the projected area of piers below the grade beam, up to a maximum uniform pressure of 3,000 psf at depth. For piers on sloping ground, an ultimate equivalent fluid pressure of 350 pcf acting against twice the projected area of piers, up to a maximum uniform pressure of 2,500 psf at depth. The upper 12 and 24 inches of soil should be neglected when determining lateral capacity for piers on level or sloping ground. The structural engineer should apply an appropriate factor of safety to the ultimate passive pressures.

8.4.3 Construction Considerations

The excavation of all drilled shafts should be observed by a Cornerstone representative to confirm the soil profile and observe that the piers are constructed in accordance with our recommendations and project requirements. The drilled shafts should be straight, dry, and relatively free of loose material before reinforcing steel is installed and concrete is placed. Due

to the presence of occasional sand layers, the use of temporary casing of each drilled shaft may be required if caving soil conditions are encountered.

SECTION 9: CONCRETE SLABS AND PEDESTRIAN PAVEMENTS

9.1 PEDESTRIAN CONCRETE FLATWORK

Exterior concrete flatwork subject to pedestrian and/or occasional light pick up loading should be at least 4 inches thick and supported on at least 6 inches of non-expansive fill overlying subgrade prepared in accordance with the "Earthwork" recommendations of this report. Flatwork that will be subject to heavier or frequent vehicular loading should be designed in accordance with the recommendations in the "Vehicular Pavements" section below. To help reduce the potential for uncontrolled shrinkage cracking, adequate expansion and control joints should be included. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness. Flatwork should be isolated from adjacent foundations or retaining walls.

9.2 PEDESTRIAN PAVERS

Concrete unit pavers subject to pedestrian and/or occasional light pick up loading should be at least 60 mm thick and supported on at least 6 inches of Class 2 aggregate base overlying subgrade prepared in accordance with the "Earthwork" recommendations of this report. A maximum 1-inch-thick layer of sand may be used as a leveling/setting bed over the aggregate base. Pavers that will be subject to heavier or frequent vehicular loading should be designed in accordance with the recommendations in the "Vehicular Pavements" section below.

SECTION 10: VEHICULAR PAVEMENTS

10.1 ASPHALT CONCRETE

The following asphalt concrete pavement recommendations tabulated below are based on Procedure 608 of the Caltrans Highway Design Manual, estimated traffic indices for various pavement-loading conditions, and on a design R-value of 5. The design R-value was chosen based on engineering judgement considering the variable and expansive soil conditions.

Table 5: Asphalt Concrete Pavement Recommendations

Design Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base* (inches)	Total Pavement Section Thickness (inches)
4.5	2.5	9.5	11.5
5.0	3.0	10.0	13.5
5.5	3.5	11.0	14.5
6.0	3.5	13.0	16.5

*Caltrans Class 2 aggregate base; minimum R-value of 78

Frequently, the full asphalt concrete section is not constructed prior to construction traffic loading. This can result in significant loss of asphalt concrete layer life, rutting, or other pavement failures. To improve the pavement life and reduce the potential for pavement distress through construction, we recommend the full design asphalt concrete section be constructed prior to construction traffic loading. Alternatively, a higher traffic index may be chosen for the areas where construction traffic will use the pavements.

10.2 PORTLAND CEMENT CONCRETE

Portland Cement Concrete (PCC) pavement recommendations were determined based on methods presented in American Concrete Pavement Association (ACPA, 2006). For design, we assumed a worst-case Average Daily Truck Traffic (ADTT) of 5 for the planned residential street pavement. Based on this and a design R-value of 5, we recommend a PCC thickness of at least 6 inches underlain by at least 6 inches of Class 2 aggregate base material. The PCC thickness is based on a concrete compressive strength of at least 3,500 psi. Adequate expansion and control joints should be included. Consideration should be given to limiting the control joint spacing to a maximum of about 2 feet in each direction for each inch of concrete thickness. Due to the expansive surficial soils present, we recommend that construction and expansion joints be keyed or dowelled.

10.3 VEHICULAR CONCRETE UNIT PAVERS

Where vehicular concrete unit pavers are desired in standard traffic areas, we recommend that the pavers be underlain by a 6-inch-thick concrete sub-slab designed as discussed above, including the aggregate base section. Pavers should be placed on a bituminous or mortar setting bed over the concrete sub-slab.

10.4 PAVEMENT CUTOFF

Surface water penetration into the pavement section can significantly reduce the pavement life, due to the native expansive clays. While quantifying the life reduction is difficult, a normal 20-year pavement design could be reduced to less than 10 years; therefore, increased long-term maintenance may be required.

It would be beneficial to include a pavement cut-off, such as deepened curbs, redwood-headers, or “Deep-Root Moisture Barriers” that are keyed at least 4 inches into the pavement subgrade. This will help limit the additional long-term maintenance.

SECTION 11: RETAINING WALLS

11.1 STATIC LATERAL EARTH PRESSURES

The structural design of any site retaining wall should include resistance to lateral earth pressures that develop from the soil behind the wall, any undrained water pressure, and surcharge loads acting behind the wall. Provided a drainage system is constructed behind the

wall to prevent the build-up of hydrostatic pressures as discussed in the section below, we recommend that the walls be designed for the following pressures:

Table 6: Recommended Lateral Earth Pressures

Sloping Backfill Inclination (horizontal:vertical)	Lateral Earth Pressure*	
	Unrestrained – Cantilever Wall	Restrained – Braced Wall
Level	45 pcf	45 pcf + 8H
3:1	55 pcf	55 pcf + 8H
2½:1	60 pcf	60 pcf + 8H
2:1	65 pcf	65 pcf + 8H
Additional Surcharge Loads	1/3 of vertical loads at top of wall	½ of vertical loads at top of wall

* Lateral earth pressures are based on an equivalent fluid pressure
** H is the distance in feet between the bottom of footing and top of retained soil

If adequate drainage cannot be provided behind the wall, an additional equivalent fluid pressure of 40 pcf should be added to the values above for both restrained and unrestrained walls for the portion of the wall that will not have drainage. Damp proofing or waterproofing of the walls may be considered where moisture penetration and/or efflorescence are not desired.

11.2 SEISMIC LATERAL EARTH PRESSURES

The 2022 CBC states that lateral pressures from earthquakes should be considered in the design of retaining walls. At this time, we are not aware of any retaining walls greater than 6 feet for the project. In our opinion, design of walls less than 6 feet high for seismic lateral earth pressures in addition to static earth pressures is not warranted.

11.3 WALL DRAINAGE

Adequate drainage should be provided by a subdrain system behind all walls. This system should consist of a 4-inch minimum diameter perforated pipe placed near the base of the wall (perforations placed downward). The pipe should be bedded and backfilled with Class 2 Permeable Material per Caltrans Standard Specifications, latest edition. The permeable backfill should extend at least 12 inches out from the wall and to within 2 feet of outside finished grade. Alternatively, ½-inch to ¾-inch crushed rock may be used in place of the Class 2 Permeable Material provided the crushed rock and pipe are enclosed in filter fabric, such as Mirafi 140N or approved equivalent. The upper 2 feet of wall backfill should consist of compacted on-site soil. The subdrain outlet should be connected to a free-draining outlet or sump.

Miradrain, Geotech Drainage Panels, or equivalent drainage matting can be used for wall drainage as an alternative to the Class 2 Permeable Material or drain rock backfill. Horizontal strip drains connecting to the vertical drainage matting may be used in lieu of the perforated pipe and crushed rock section. The vertical drainage panel should be connected to the perforated pipe or horizontal drainage strip at the base of the wall, or to some other closed or

through-wall system such as the TotalDrain system from AmerDrain. Sections of horizontal drainage strips should be connected with either the manufacturer's connector pieces or by pulling back the filter fabric, overlapping the panel dimples, and replacing the filter fabric over the connection. At corners, a corner guard, corner connection insert, or a section of crushed rock covered with filter fabric must be used to maintain the drainage path.

Drainage panels should terminate 18 to 24 inches from final exterior grade. The Miradrain panel filter fabric should be extended over the top of and behind the panel to protect it from intrusion of the adjacent soil.

11.4 BACKFILL

Where surface improvements will be located over the retaining wall backfill, backfill placed behind the walls should be compacted to at least 95 percent relative compaction using light compaction equipment. Where no surface improvements are planned, backfill should be compacted to at least 90 percent. If heavy compaction equipment is used, the walls should be temporarily braced.

11.5 FOUNDATIONS

In general, conventional site retaining walls may be supported on a continuous conventional footing or drilled piers designed in accordance with the "Foundations" section of this report.

11.6 SEGMENTED WALLS

Any segmented walls (mechanically stabilized earth walls) that will be constructed on site should be designed in accordance with the soil parameters below. Where segmented walls will retain more than about 3 feet, requiring geogrid reinforcing elements, we recommend the use of wall systems with pinned connections between blocks, not just angled blocks that rely on gravity. These values may need to be field-revised based on review of the existing materials in the wall alignment area, as needed. All walls should be designed to include permeable granular fill behind the walls with an appropriate outlet.

Table 7: Recommended Soil Parameters – Segmented Walls

Material Type	Friction Angle (degrees)	Cohesion (psf)	Soil Moist Unit Weight (pcf)
Reinforced Soil Zone	35	0	130
Retained Soil Zone	32	0	125
Foundation Soil Zone	32	0	125

The above assumes that the reinforced soil zone will consist of imported select fill materials and that the retained and foundation soil zones fill will consist of excavated on-site materials. To reduce the potential for wall movement or creep, imported select fill should be used as the reinforced soil zone behind the wall. Imported select fill in the reinforced soil zone should be

non-expansive, consisting predominantly of sand and gravel with less than 20 percent passing the No. 200 sieve. The manufacturer's recommendations should be followed regarding design and construction. We should be retained to review the design calculations, plans and details for conformance with project requirements.

SECTION 12: LIMITATIONS

This report, an instrument of professional service, has been prepared for the sole use of Ponderosa Homes specifically to support the design of the residential development to be located at 1027 Pine Hollow Court in Clayton, California. The opinions, conclusions, and recommendations presented in this report have been formulated in accordance with accepted geotechnical engineering practices that exist in Northern California at the time this report was prepared. No warranty, expressed or implied, is made or should be inferred.

Recommendations in this report are based upon the soil and groundwater conditions encountered during our subsurface exploration. If variations or unsuitable conditions are encountered during construction, Cornerstone must be contacted to provide supplemental recommendations, as needed.

Ponderosa Homes may have provided Cornerstone with plans, reports and other documents prepared by others. Ponderosa Homes understands that Cornerstone reviewed and relied on the information presented in these documents and cannot be responsible for their accuracy.

Cornerstone prepared this report with the understanding that it is the responsibility of the owner or their representatives to see that the recommendations contained in this report are presented to other members of the design team and incorporated into the project plans and specifications, and that appropriate actions are taken to implement the geotechnical recommendations during construction.

Conclusions and recommendations presented in this report are valid as of the present time for the development as currently planned. Changes in the condition of the property or adjacent properties may occur with the passage of time, whether by natural processes or the acts of other persons. In addition, changes in applicable or appropriate standards may occur through legislation or the broadening of knowledge. Therefore, the conclusions and recommendations presented in this report may be invalidated, wholly or in part, by changes beyond Cornerstone's control. This report should be reviewed by Cornerstone after a period of three (3) years has elapsed from the date of this report. In addition, if the current project design is changed, then Cornerstone must review the proposed changes and provide supplemental recommendations, as needed.

An electronic transmission of this report may also have been issued. While Cornerstone has taken precautions to produce a complete and secure electronic transmission, please check the electronic transmission against the hard copy version for conformity.

Recommendations provided in this report are based on the assumption that Cornerstone will be retained to provide observation and testing services during construction to confirm that

conditions are similar to that assumed for design, and to form an opinion as to whether the work has been performed in accordance with the project plans and specifications. If we are not retained for these services, Cornerstone cannot assume any responsibility for any potential claims that may arise during or after construction as a result of misuse or misinterpretation of Cornerstone's report by others. Furthermore, Cornerstone will cease to be the Geotechnical-Engineer-of-Record if we are not retained for these services.

SECTION 13: REFERENCES

Aagaard, B.T., Blair, J.L., Boatwright, J., Garcia, S.H., Harris, R.A., Michael, A.J., Schwartz, D.P., and DiLeo, J.S., 2016, Earthquake outlook for the San Francisco Bay region 2014–2043 (ver. 1.1, August 2016): U.S. Geological Survey Fact Sheet 2016–3020, 6 p., http://dx.doi.org/10.3133/fs20163020.

American Concrete Pavement Association (ACPA, 2006). *Design of Concrete Pavement for Streets and Roads.*

California Building Code, 2022, Structural Engineering Design Provisions, Vol. 2.

California Department of Conservation Division of Mines and Geology, 1998, Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada, International Conference of Building Officials, February, 1998.

California Geological Survey, 2021, State of California Seismic Hazard Zones, Clayton 7.5-Minute Quadrangle, California: Seismic Hazard Zone Report 130.

CGS. (2021). *Earthquake Zones of Required Investigation.* CGS Homepage. https://maps.conservation.ca.gov/cgs/EQZApp/app/

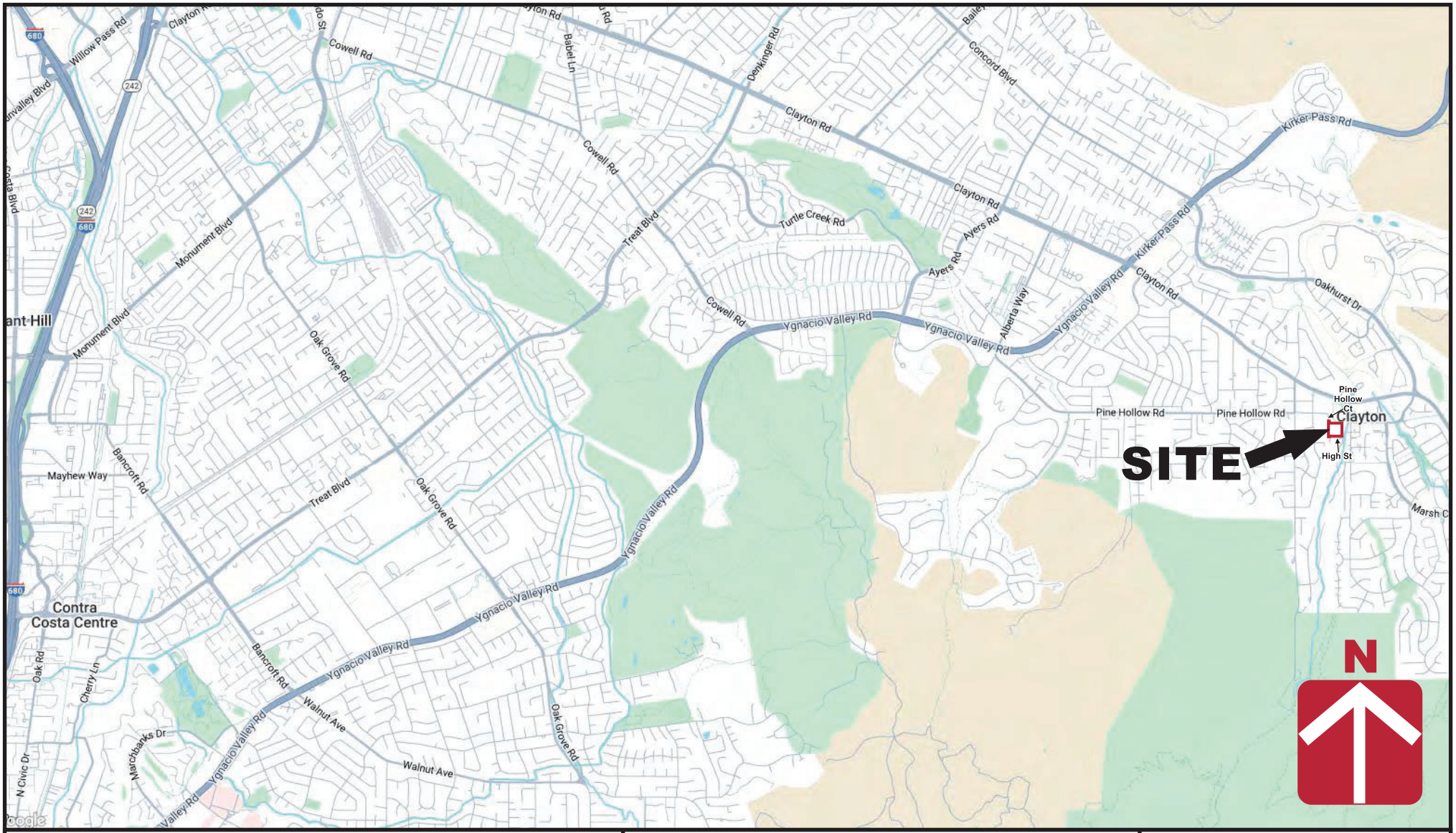
Federal Emergency Management Administration (FEMA), 2019, FIRM City of Clayton California, Community Panel #06013C0304G.

State of California Department of Transportation, Highway Design Manual, Latest Edition.

U.S. Geological Survey, *USGS Earthquake Hazards Program*, 2020, https://earthquake.usgs.gov/nshmp-haz-ws/apps/spectra-plot.html

Working Group on California Earthquake Probabilities, 2015, The Third Uniform California Earthquake Rupture Forecast, Version 3 (UCERF), U.S. Geological Survey Open File Report 2013-1165 (CGS Special Report 228). *KMZ files available at:* www.scec.org/ucerf/images/ucerf3_timedep_30yr_probs.kmz

*Figure not OCR compatible

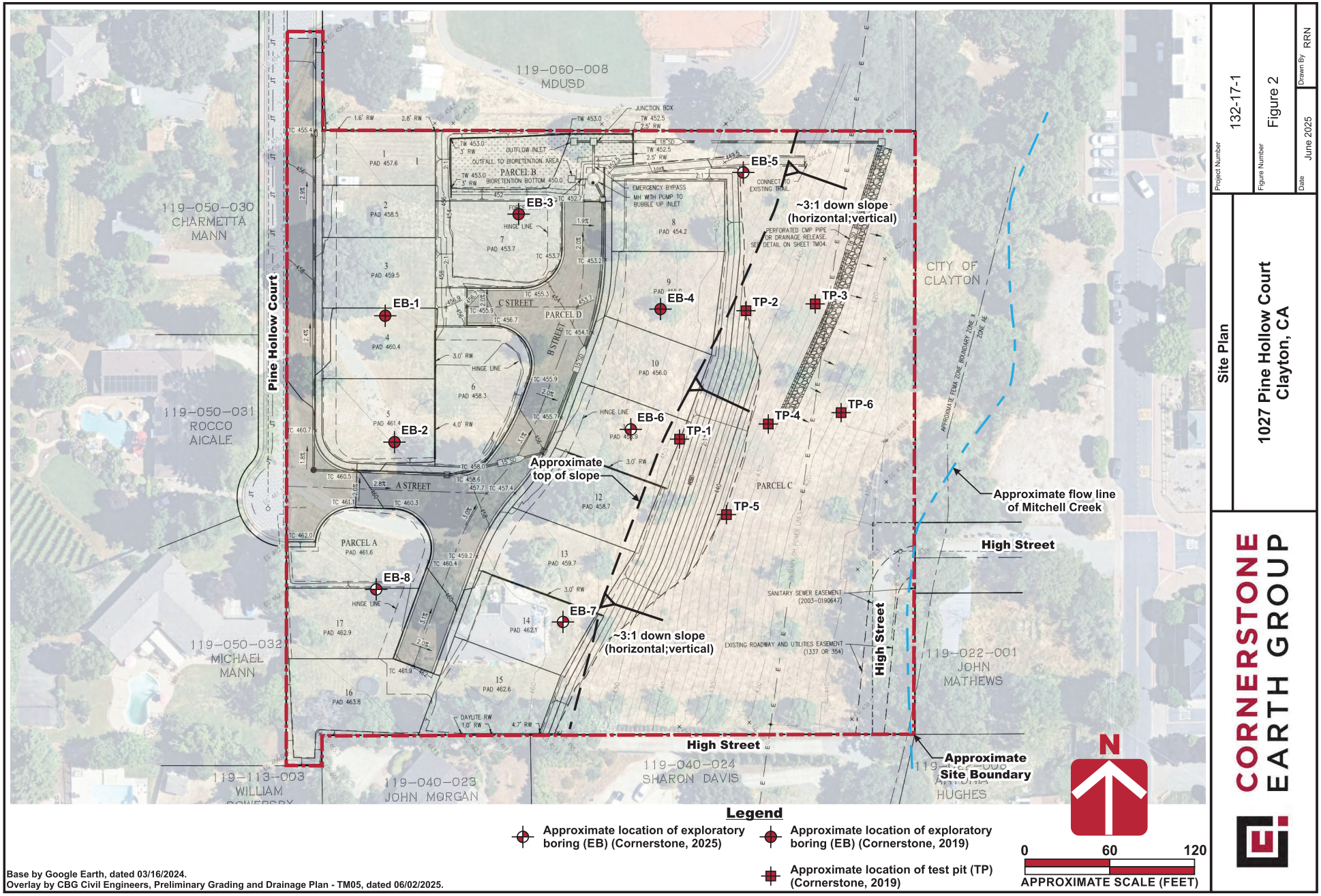


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Vicinity Map

1027 Pine Hollow Court
Clayton, CA

Project Number	132-17-1
Figure Number	Figure 1
Date	June 2025
Drawn By	RRN



Legend

- Approximate location of exploratory boring (EB) (Cornerstone, 2025)
- Approximate location of exploratory boring (EB) (Cornerstone, 2019)
- Approximate location of test pit (TP) (Cornerstone, 2019)

Base by Google Earth, dated 03/16/2024.
Overlay by CBG Civil Engineers, Preliminary Grading and Drainage Plan - TM05, dated 06/02/2025.

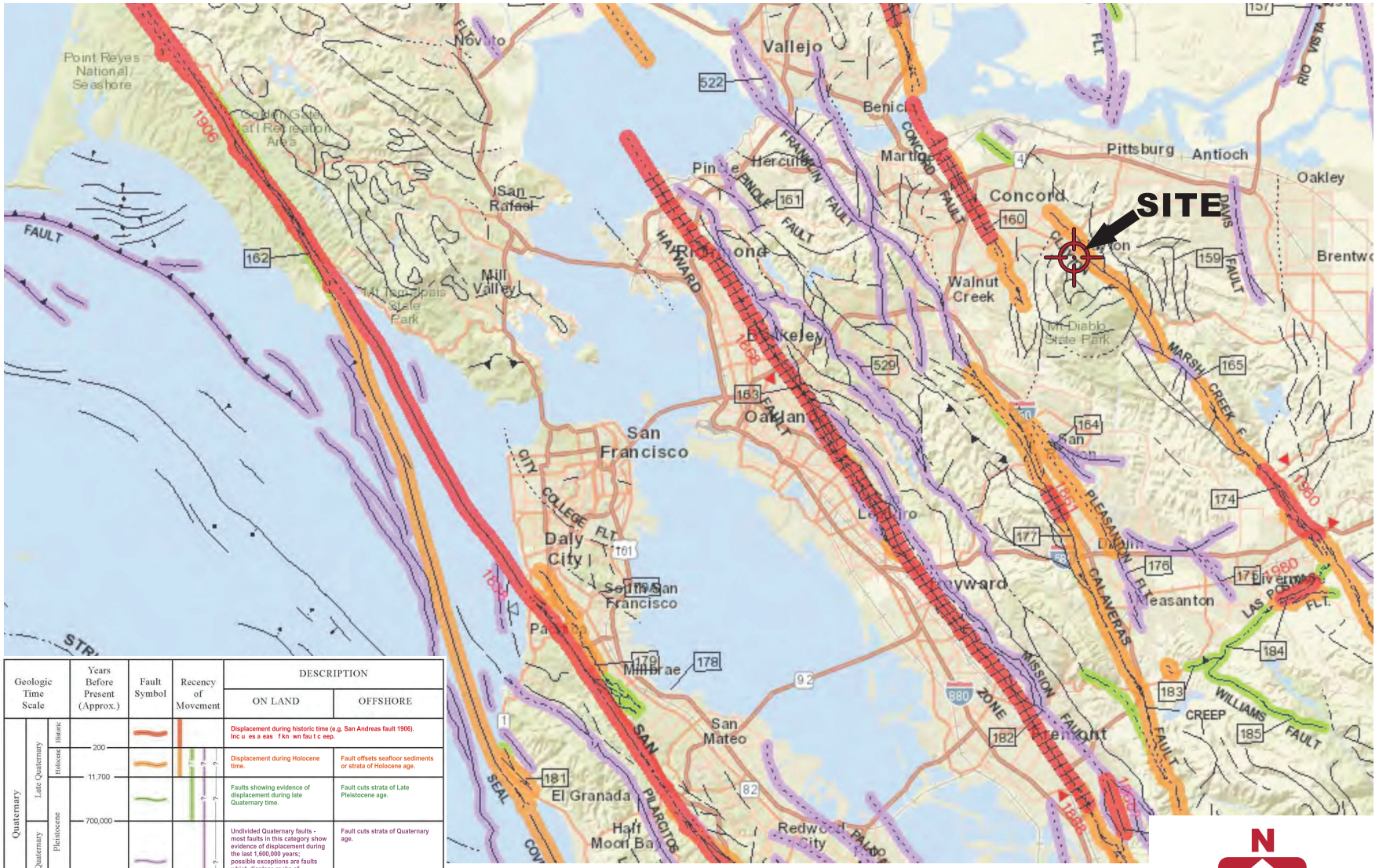
Project Number 132-17-1
Figure Number Figure 2
Drawn By RRN
Date June 2025

Site Plan

1027 Pine Hollow Court
Clayton, CA

CORNERSTONE EARTH GROUP

*Figure not OCR compatible



Base by California Geological Survey - 2010 Fault Activity Map of California (Jennings and Bryant, 2010)

Project Number 132-17-1

Figure Number Figure 3

Drawn By RRN

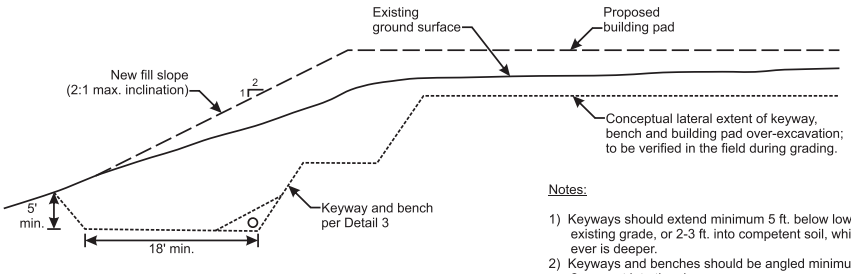
Date February 2025

Regional Fault Map

1027 Pine Hollow Court
Clayton, CA

CORNERSTONE EARTH GROUP

*Figure not OCR compatible

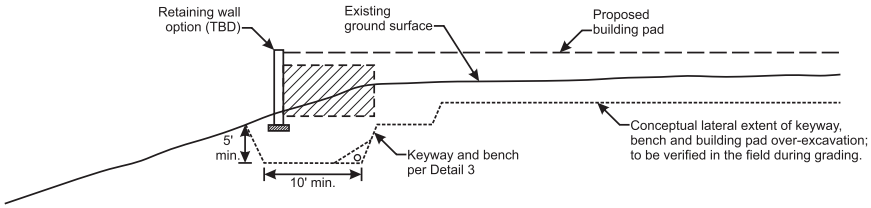


Detail 1 - Conceptual Slope Over-Excavation Detail (Lots 9-16) - Fill Slope Alternative

Not to scale

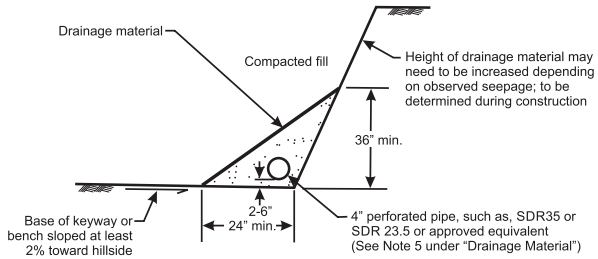
Notes:

1) Keyways should extend minimum 5 ft. below lowest existing grade, or 2-3 ft. into competent soil, whichever is deeper.
2) Keyways and benches should be angled minimum 2 percent into the slope.
3) This detail is preliminary; final dimensions to be determined based on actual conditions in the field
4) Geotechnical Engineer to observe keyway before placement of fill.
5) Place erosion control as specified by civil engineer; see report for details.



Detail 2 - Conceptual Slope Over-Excavation Detail (Lots 9-16) - Retaining Wall Alternative

Not to scale

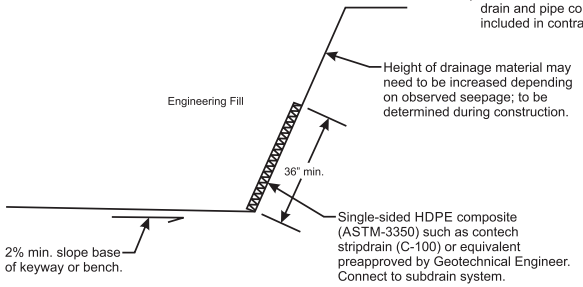


Detail 3 - Typical Bench and Keyway Subdrain

Not to scale

Notes:

1) See mitigation plan and cross sections for locations.
2) Geotechnical engineer to verify location and placement of these subdrains in the field at time of construction.
3) Contractor responsible to install connection of composite to solid discharge lines.
4) Labor and material cost to furnished install geocomposite drain and pipe connections to subdrain system to be included in contractors scope of work.



Detail 4 - Keyway and Bench Geocomposite Subdrain

Not to scale

DRAINAGE MATERIAL

Alternative 1

Class 2 Permeable Material
(Caltrans Standard Specs, latest edition)

Material shall consist of clean, coarse sand and gravel or crushed stone, conforming to the following gradation requirements:

Sieve Size	% Passing Sieve
1"	100
3/4"	90-100
3/8"	40-100
#4	25-40
#8	18-33
#30	5-15
#50	0-7
#200	0-3

Alternative 2

1 /2- to 3/4- inch Clean Crushed Rock or Gravel Wrapped in Filter Fabric

All non-woven filter fabric shall meet the following minimum average roll values unless otherwise specified by Cornerstone Earth Group

Grab Strength (ASTM D-4632):	180 lbs.
Mass Per Unit Area (ASTM D-4751):	5 oz/yd
Apparent Opening Size (ASTM D-4751):	70-100 U.S. std. sieve
Flow Rate (ASTM D-4491):	80 gal/min/ft
Puncture Strength (ASTM D-4833):	80 lbs.

Notes:

1. 1% fall (minimum) along all keyways, benches and subdrain lines.
2. All perforated pipe placed perforations down.
3. All pipe joints shall be glued.
4. All subdrains should be discharged to a free draining outlet approved by the Civil Engineer.
5. Subdrain pipe (perforated or solid connector) should consist of SDR-35 PVC pipe when placed in fills less than 30 feet deep. SDR-23.5 PVC pipe should be used when fill is greater than 30 feet deep.

Project Number 132-17-1

Figure Number Figure 4

Drawn By RRN

Date March 2025

Grading and Mitigation Details

1027 Pine Hollow Court
Clayton, CA

CORNERSTONE EARTH GROUP

*Figure not OCR compatible

APPENDIX A: FIELD INVESTIGATION

The field investigation consisted of a surface reconnaissance and a subsurface exploration program using track-mounted, hollow-stem auger drilling equipment. Four 6-inch-diameter exploratory borings were drilled on February 5, 2025 to depths of approximately 10 to 20 feet. Prior exploratory borings were performed on February 15 and 23, 2017, to depths ranging from about 5 to 10 feet. Test pits were excavated on February 6, 2013 to depths of about 4 to 6 feet. The approximate locations of recent and prior explorations are shown on the Site Plan, Figure 2. The soils encountered were continuously logged in the field by our representative and described in accordance with the Unified Soil Classification System (ASTM D2488). Boring logs, as well as a key to the classification of the soil, are included as part of this appendix.

Exploration locations were approximated using existing site boundaries, a hand held GPS unit, and other site features as references. Exploration elevations were based on interpolation of plan contours. The locations and elevations of the explorations should be considered accurate only to the degree implied by the method used.

Representative soil samples were obtained from the borings at selected depths. All samples were returned to our laboratory for evaluation and appropriate testing. The standard penetration resistance blow counts were obtained by dropping a 140-pound hammer through a 30-inch free fall. The 2-inch O.D. split-spoon sampler was driven 18 inches and the number of blows was recorded for each 6 inches of penetration (ASTM D1586). 2.5-inch I.D. samples were obtained using a Modified California Sampler driven into the soil with the 140-pound hammer previously described. Unless otherwise indicated, the blows per foot recorded on the boring log represent the accumulated number of blows required to drive the last 12 inches. The various samplers are denoted at the appropriate depth on the boring logs.

Field tests included an evaluation of the unconfined compressive strength of the soil samples using a pocket penetrometer device. The results of these tests are presented on the individual boring logs at the appropriate sample depths.

Attached exploration logs and related information depict subsurface conditions at the locations indicated and on the date designated on the logs. Subsurface conditions at other locations may differ from conditions occurring at these exploration locations. The passage of time may result in altered subsurface conditions due to environmental changes. In addition, any stratification lines on the logs represent the approximate boundary between soil types and the transition may be gradual.

BORING NUMBER EB-1

CORNERSTONE EARTH GROUP

PROJECT NAME Clayton Community Church II
PROJECT NUMBER 352-2-2
PROJECT LOCATION Clayton, CA

DATE STARTED 2/15/17 **DATE COMPLETED** 2/15/17
GROUND ELEVATION _____ **BORING DEPTH** 10 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc. **LATITUDE** 37.9402970° **LONGITUDE** -121.9386090°
DRILLING METHOD Mobile B-40, 8 inch Hollow-Stem Auger **GROUND WATER LEVELS:**
LOGGED BY OL **AT TIME OF DRILLING** Not Encountered
NOTES _____ **AT END OF DRILLING** Not Encountered

This log is a part of a report by Cornerstone Earth Group, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf
	0		**Lean Clay with Sand (CL)** soft to medium stiff, moist, reddish brown, fine to coarse sand, low plasticity Liquid Limit = 27, Plastic Limit = 17	6	MC-1B	106	15	10		
				6	MC-2	108	14			
	5		**Clayey Sand with Gravel (GC)** loose, moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	13	MC-3B	116	12			
			becomes medium dense	38	MC-4B	118	12			
	10		Bottom of Boring at 10.0 feet.							
	15									
	20									

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/8/17 11:24 - P:\DRAFTING\GINT FILES\352-2-2 CLAYTON CHURCH II.GPJ

BORING NUMBER EB-2

CORNERSTONE EARTH GROUP

PROJECT NAME Clayton Community Church II
PROJECT NUMBER 352-2-2
PROJECT LOCATION Clayton, CA

DATE STARTED 2/15/17 **DATE COMPLETED** 2/15/17
GROUND ELEVATION _____ **BORING DEPTH** 5 ft.
DRILLING CONTRACTOR Exploration Geoservices, Inc.
LATITUDE 37.9400579° **LONGITUDE** -121.9385893°
DRILLING METHOD Mobile B-40, 8 inch Hollow-Stem Auger
GROUND WATER LEVELS:
LOGGED BY OL
AT TIME OF DRILLING Not Encountered
NOTES _____
AT END OF DRILLING Not Encountered

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf (○ HAND PENETROMETER, △ TORVANE, ● UNCONFINED COMPRESSION, ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL; 1.0 2.0 3.0 4.0)
	0		**Lean Clay with Sand (CL)** medium stiff, moist, reddish brown, fine to coarse sand, low plasticity	7	MC-1B		17			○
			Sandy Lean Clay (CL) very stiff, moist, reddish brown, fine to coarse sand, some fine to coarse subangular to angular gravel, low plasticity	21	MC-2B		15			○
	5		Bottom of Boring at 5.0 feet.							
	10									
	15									
	20									

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/8/17 11:24 - P:\DRAFTING\GINT FILES\352-2-2 CLAYTON CHURCH II.GPJ

BORING NUMBER EB-3

CORNERSTONE EARTH GROUP

PROJECT NAME Clayton Community Church II
PROJECT NUMBER 352-2-2
PROJECT LOCATION Clayton, CA

DATE STARTED 2/15/17 **DATE COMPLETED** 2/15/17
GROUND ELEVATION _____ **BORING DEPTH** 8 ft.
DRILLING CONTRACTOR CK Construction, Inc.
LATITUDE 37.9404932° **LONGITUDE** -121.9382801°
DRILLING METHOD 4 inch Hand Auger
GROUND WATER LEVELS:
LOGGED BY OL
AT TIME OF DRILLING Not Encountered
NOTES _____
AT END OF DRILLING Not Encountered

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf (○ HAND PENETROMETER, △ TORVANE, ● UNCONFINED COMPRESSION, ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL; 1.0 2.0 3.0 4.0)
	0		**Lean Clay with Sand (CL)** soft to medium stiff, moist, reddish brown, fine to coarse sand, low plasticity Liquid Limit = 26, Plastic Limit = 17		MC-1	113	13	9		○
			Sandy Lean Clay (CL) hard, moist, reddish brown, fine to coarse sand, some fine to coarse subangular to angular gravel, low plasticity		MC-2	112	15			>4.5 ○
	5		**Clayey Sand with Gravel (GC)** moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel		MC-3	123	14			
			Sandy Lean Clay (CL) hard, moist, reddish brown, fine to coarse sand, some fine to coarse subangular to angular gravel, low plasticity		MC-4	103	18			>4.5 ○
			Bottom of Boring at 8.0 feet.							
	10									
	15									
	20									

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 3/8/17 11:24 - P:\DRAFTING\GINT FILES\352-2-2 CLAYTON CHURCH II.GPJ

BORING NUMBER EB-4

CORNERSTONE EARTH GROUP

PROJECT NAME Clayton Community Church II
PROJECT NUMBER 352-2-2
PROJECT LOCATION Clayton, CA

DATE STARTED 2/23/17 **DATE COMPLETED** 2/23/17
GROUND ELEVATION _____ **BORING DEPTH** 6 ft.
DRILLING CONTRACTOR CK Construction, Inc.
LATITUDE 37.9403130° **LONGITUDE** -121.9379720°
DRILLING METHOD 4 inch Hand Auger
GROUND WATER LEVELS:
LOGGED BY OL
AT TIME OF DRILLING 3 ft.
NOTES Encountered perched water at 3'
AT END OF DRILLING Not Encountered

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ELEVATION (ft)	DEPTH (ft)	SYMBOL	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf (○ HAND PENETROMETER, △ TORVANE, ● UNCONFINED COMPRESSION, ▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL; 1.0 2.0 3.0 4.0)
	0		**Lean Clay with Sand (CL)** stiff, moist, dark brown to reddish brown, fine to coarse sand, low plasticity		MC-1	106	18			○
			Sandy Lean Clay (CL) very stiff, moist, reddish brown, fine to coarse sand, some fine to coarse subangular to angular gravel, low plasticity		MC					
					MC-3	99	27			○
	5		**Lean Clay (CL)** very stiff, moist, reddish brown, some fine sand, moderate plasticity		MC					
			Clayey Sand with Gravel (GC) moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel							
			Bottom of Boring at 6.0 feet.							
	10									
	15									
	20									

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BORING NUMBER EB-5

CORNERSTONE EARTH GROUP

PROJECT NAME 1027 Pine Hollow Court
PROJECT NUMBER 132-17-1
PROJECT LOCATION Clayton, CA

DATE STARTED 2/5/25 **DATE COMPLETED** 2/5/25
GROUND ELEVATION 454 FT +/- **BORING DEPTH** 20 ft.
DRILLING CONTRACTOR Cuesta Geo **LATITUDE** 37.940573° **LONGITUDE** -121.937721°
DRILLING METHOD MPP Track Rig, 6½ inch Hollow-Stem Auger **GROUND WATER LEVELS:**
LOGGED BY PT ▽ **AT TIME OF DRILLING** Not Encountered
NOTES ▼ **AT END OF DRILLING** Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf
454.0	0	**Sandy Lean Clay (CL)** stiff, moist, dark reddish brown, fine to coarse sand, some fine to coarse subangular to angular gravel, low plasticity	19	MC-1B	92	9			○ 1.0 2.0 3.0 4.0
451.5		**Clayey Sand with Gravel (SC)** dense, moist, brown to light brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	63	MC-2B	110	9		18	
	5		73	MC-3B	106	10			
			45	SPT-4		13			
	10								
442.0		**Lean Clay with Sand (CL)** hard, moist, reddish brown, fine to medium sand, some fine subrounded gravel, low to moderate plasticity	50 5"	MC-5		16			>4.5 ○
	15								
			44	SPT					>4.5 ○
434.0	20	Bottom of Boring at 20.0 feet.							

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 2/18/25 10:21 - P:\DRAFTING\GINT FILES\132-17-1 PINE HOLLOW CT.GPJ

BORING NUMBER EB-6

CORNERSTONE EARTH GROUP

PROJECT NAME 1027 Pine Hollow Court
PROJECT NUMBER 132-17-1
PROJECT LOCATION Clayton, CA

DATE STARTED 2/5/25 **DATE COMPLETED** 2/5/25
GROUND ELEVATION 460 FT +/- **BORING DEPTH** 16 ft.
DRILLING CONTRACTOR Cuesta Geo **LATITUDE** 37.940095° **LONGITUDE** -121.938020°
DRILLING METHOD MPP Track Rig, 6½ inch Hollow-Stem Auger **GROUND WATER LEVELS:**
LOGGED BY PT **AT TIME OF DRILLING** Not Encountered
NOTES **AT END OF DRILLING** Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf
460.0	0	**Sandy Lean Clay (CL)** stiff, moist, dark reddish brown to reddish brown, fine to coarse sand, some fine subangular gravel, low plasticity Liquid Limit = 30, Plastic Limit = 16 8% Gravel, 30% Sand, 37% Silt, 25% Clay	11	MC-1B	96	13	14	62	HP
		becomes hard	36	MC-2B	103	16			>4.5
	5		39	MC-3B	105	16			>4.5
453.0		**Clayey Sand with Gravel (SC)** dense, moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	57	MC-4B	110	11			
	10								
448.0		**Lean Clay with Sand (CL)** hard, moist, reddish brown, fine to medium sand, some fine subrounded gravel, low to moderate plasticity	50 5"	MC-5B	92	21			>4.5
	15		78	SPT					>4.5
444.0		Bottom of Boring at 16.0 feet.							
	20								

UNDRAINED SHEAR STRENGTH, ksf
HP HAND PENETROMETER
TV TORVANE
UC UNCONFINED COMPRESSION
UU UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

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BORING NUMBER EB-7

CORNERSTONE EARTH GROUP

PROJECT NAME 1027 Pine Hollow Court
PROJECT NUMBER 132-17-1
PROJECT LOCATION Clayton, CA

DATE STARTED 2/5/25 **DATE COMPLETED** 2/5/25
GROUND ELEVATION 465 FT +/- **BORING DEPTH** 20 ft.
DRILLING CONTRACTOR Cuesta Geo **LATITUDE** 37.939704° **LONGITUDE** -121.938193°
DRILLING METHOD MPP Track Rig, 6½ inch Hollow-Stem Auger **GROUND WATER LEVELS:**
LOGGED BY PT ▽ **AT TIME OF DRILLING** Not Encountered
NOTES ▼ **AT END OF DRILLING** Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf
465.0	0	**Sandy Lean Clay (CL)** hard, moist, dark reddish brown to reddish brown, fine to coarse sand, some fine subangular gravel, low plasticity	13	MC-1B	99	11			>4.5 ○
463.0		**Clayey Sand with Gravel (SC)** dense, moist, brown, fine to coarse sand, fine to coarse subangular to subrounded gravel	49	MC-2B	102	10			
	5		49	MC-3B	107	10			
	10		58	MC-4B	119	13		21	
452.5		**Clayey Sand (SC)** medium dense, moist, reddish brown, fine to coarse sand, some fine to coarse subangular to subrounded gravel	36	MC-5		9			
	15		32	MC-6		8			
445.0	20	Bottom of Boring at 20.0 feet.							

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

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BORING NUMBER EB-8

CORNERSTONE EARTH GROUP

PROJECT NAME 1027 Pine Hollow Court
PROJECT NUMBER 132-17-1
PROJECT LOCATION Clayton, CA

DATE STARTED 2/5/25 **DATE COMPLETED** 2/5/25
GROUND ELEVATION 468 FT +/- **BORING DEPTH** 10 ft.
DRILLING CONTRACTOR Cuesta Geo **LATITUDE** 37.939742° **LONGITUDE** -121.938619°
DRILLING METHOD MPP Track Rig, 6½ inch Hollow-Stem Auger **GROUND WATER LEVELS:**
LOGGED BY PT **AT TIME OF DRILLING** Not Encountered
NOTES **AT END OF DRILLING** Not Encountered

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ELEVATION (ft)	DEPTH (ft)	DESCRIPTION	N-Value (uncorrected) blows per foot	SAMPLES TYPE AND NUMBER	DRY UNIT WEIGHT PCF	NATURAL MOISTURE CONTENT	PLASTICITY INDEX, %	PERCENT PASSING No. 200 SIEVE	UNDRAINED SHEAR STRENGTH, ksf
468.0	0	**Sandy Lean Clay (CL)** stiff, moist, dark reddish brown to reddish brown, fine to coarse sand, some fine subangular gravel, low plasticity	9	MC-1B	91	13			
465.0		**Clayey Sand with Gravel (SC)** dense, moist, reddish brown to brown, fine to coarse sand, fine to coarse subangular to subrounded gravel Liquid Limit = 40, Plastic Limit = 19 23% Gravel, 31% Sand, 24% Silt, 22% Clay	51	MC-2B	83	12	21	46	
	5		76	MC-3B	107	11			
461.0		**Lean Clay with Sand (CL)** hard, moist, reddish brown, fine to medium sand, some fine subrounded gravel, low to moderate plasticity	41	MC-4B	88	22			>4.5
458.0	10	Bottom of Boring at 10.0 feet.							
	15								
	20								

UNDRAINED SHEAR STRENGTH, ksf
○ HAND PENETROMETER
△ TORVANE
● UNCONFINED COMPRESSION
▲ UNCONSOLIDATED-UNDRAINED TRIAXIAL
1.0 2.0 3.0 4.0

CORNERSTONE EARTH GROUP2 - CORNERSTONE 0812.GDT - 2/18/25 10:21 - P:\DRAFTING\GINT FILES\132-17-1 PINE HOLLOW CT.GPJ

Table A-1: Summary of Test Pit Logs

Test Pit No.	Depth (feet)	USCS Classification	Description
TP-1	0 to ½	CL	Sandy clay, brown, soft to medium stiff, moist, abundant organics (topsoil)
	½ to 2	CL	Sandy clay, brown, medium stiff, moist, moderate plasticity, fine to coarse sand
	2 to 4	CL/CH	Silty clay, brown, stiff, moist, high plasticity, fine sand
	4 to 5	CL	Clay, gray-brown, hard, some sand and fine gravel
TP-2	0 to ½	CL	Sandy clay, soft to medium stiff, moist, abundant organics (topsoil)
	½ to 2½	CL	Sandy clay, brown, medium stiff, moist, moderate plasticity, fine to coarse sand, some angular gravel to 1 inch
	2½ to 4½	CL/CH	Silty Clay, brown, stiff, moist, high plasticity, fine to coarse sand, some fine angular gravel
TP-3	0 to ½	CL	Sandy clay, soft to medium stiff, moist, abundant organics (topsoil)
	½ to 2½	CL	Sandy clay, brown, medium stiff, moist, moderate plasticity, fine to coarse sand, some angular gravel to 1 inch
	2½ to 4	CL/CH	Silty Clay, brown, stiff, moist, high plasticity, fine sand
TP-4	0 to ½	CL	Sandy clay, soft to medium stiff, moist, abundant organics (topsoil)
	½ to 1	CL	Sandy clay, brown, medium stiff, moist, moderate plasticity, fine to coarse sand, some angular gravel
	1 to 4	CL/CH	Silty clay, brown, stiff, moist, high plasticity, fine sand, some rounded gravel
	4 to 5½	CL	Clay, gray-brown, hard, some sand
TP-5	0 to ½	CL	Sandy clay, soft to medium stiff, moist, abundant organics (topsoil)
	½ to 1½	CL	Sandy clay, brown, medium stiff, moist, moderate plasticity, fine to coarse sand, some angular gravel
	1½ to 4	CL/CH	Silty clay, brown, stiff, moist, high plasticity, fine sand, some rounded gravel
	4 to 5	CL	Clay, gray-brown, hard, trace sand
TP-6	0 to ½	CL	Sandy clay, soft to medium stiff, moist, abundant organics (topsoil)
	½ to 3½	CL	Silty clay, brown, stiff, moist, high plasticity, fine sand, some rounded gravel
	3½ to 4½	CL/CH	Sandy clay, brown, medium stiff, moist, moderate plasticity, fine to coarse sand

APPENDIX B: LABORATORY TEST PROGRAM

The laboratory testing program was performed to evaluate the physical and mechanical properties of the soils retrieved from the site to aid in verifying soil classification.

Moisture Content: The natural water content was determined (ASTM D2216) on 22 samples of the materials recovered from the borings. These water contents are recorded on the boring logs at the appropriate sample depths.

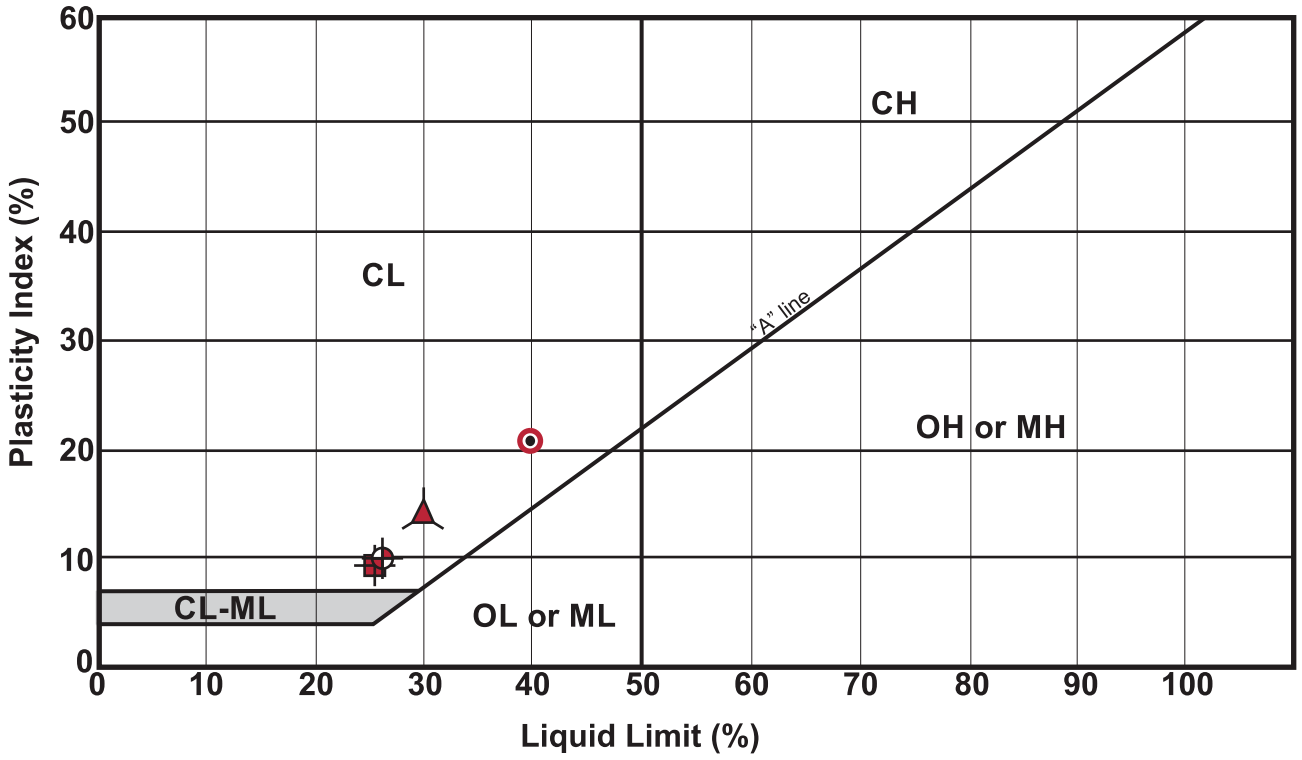
Dry Densities: In place dry density determinations (ASTM D2937) were performed on 26 samples to measure the unit weight of the subsurface soils. Results of these tests are shown on the boring logs at the appropriate sample depths.

Plasticity Index: Four Plasticity Index determinations (ASTM D4318) were performed on samples of the subsurface soils to measure the range of water contents over which this material exhibits plasticity. The Plasticity Index was used to classify the soil in accordance with the Unified Soil Classification System and to evaluate the soil expansion potential. Results of these tests are shown in Figure B-1 and on the boring logs at the appropriate sample depths.

Washed Sieve Analyses: The percent soil fraction passing the No. 200 sieve (ASTM D1140) was determined on four samples of the subsurface soils to aid in the classification of these soils. Results of these tests are shown on the boring logs at the appropriate sample depths.

Grain Size Analyses: The particle size distribution (ASTM D422) was determined on two samples of the near-surface soils to aid in the classification of these soils and determining the percent silt and clay. Results of these tests are shown in Appendix B.

Plasticity Index (ASTM D4318) Testing Summary



Symbol	Boring No.	Depth (ft)	Natural Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index	Silt (%)	Clay (%)	Group Name (USCS - ASTM D2487)
⊕	EB-1	1.5	15	27	17	10	—	—	Lean Clay with Sand (CL)
⊞	EB-3	1.5	13	26	17	9	—	—	Lean Clay with Sand (CL)
▲	EB-6	2.0	13	30	16	14	37	25	Sandy Lean Clay (CL)
◉	EB-8	4.0	12	40	19	21	24	22	Clayey Sand with Gravel (SC) (CL fines)

Samples prepared in accordance with ASTM D421

CORNERSTONE EARTH GROUP

Plasticity Index Testing Summary

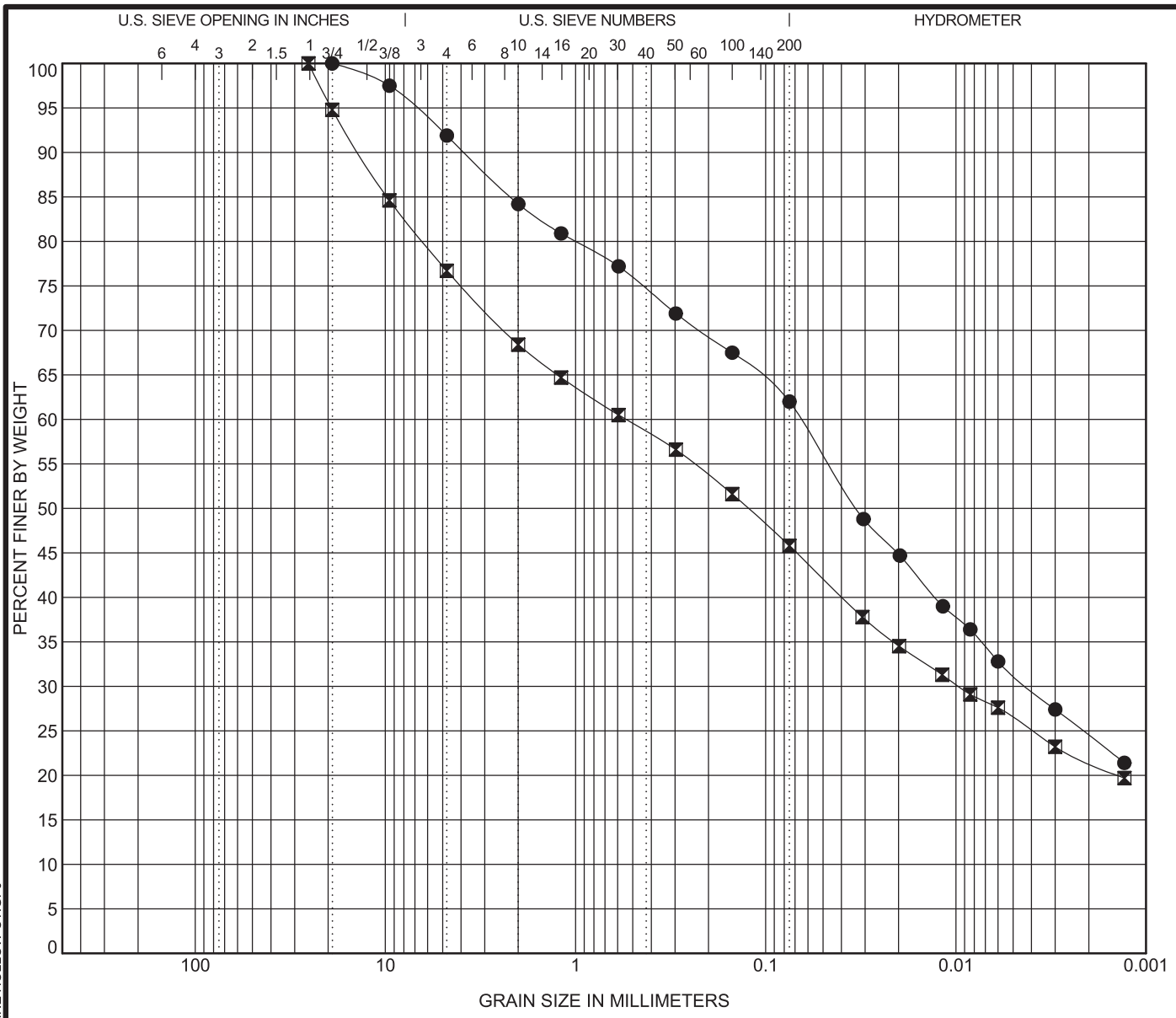
1027 Pine Hollow Court
Clayton, CA

Project Number: 132-17-1

Figure Number: Figure B1

Date: February 2025

Drawn By: FLL



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	EB-6	2.0	Sandy Lean Clay (CL)	30	16	14		
⊠	EB-8	4.0	Clayey Sand with Gravel (SC)	40	19	21		

	Specimen Identification		D100	D50	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	EB-6	2.0	19.05	0.033	0.004		8.1	29.9	37 I 25	
⊠	EB-8	4.0	25.4	0.124	0.01		23.3	30.9	24 I 22	

CORNERSTONE EARTH GROUP

GRAIN SIZE DISTRIBUTION

Project: 1027 Pine Hollow Court

Location: Clayton, CA

Number: 132-17-1

US_GRAIN_SIZE - CORNERSTONE 0812.GDT - 2/18/25 10:22 - P:\DRAFTING\GINT FILES\132-17-1 PINE HOLLOW CT.GPJ

APPENDIX C: SITE CORROSIVITY EVALUATION

JDH CORROSION CONSULTANTS REPORT DATED MARCH 17, 2025

March 17, 2025

Cornerstone Earth Group, Inc.
3697 Mt. Diablo Boulevard, Suite 310
Lafayette, CA 94549

Attention: **Bryan Cervantes Guzman, P.E.**
Project Engineer

Subject: **Site Corrosivity Evaluation**
Pine Hollow Ct GI
Clayton, CA
Project: 132-17-1

Dear Bryan,

In accordance with your request, we have reviewed the laboratory soils data for the above referenced project site. Our evaluation of these results and our corresponding recommendations for corrosion control for the above referenced project foundations and buried site utilities are presented herein for your consideration.

Soil Testing & Analysis

Soil Chemical Analysis

Three (3) soil samples from the project site were chemically analyzed for corrosivity by **Cornerstone Earth Group**. The samples were analyzed for chloride and sulfate concentration, pH and resistivity at 100% saturation. The test results are presented in Cornerstone Earth Group Corrosivity Test Summary dated 2/17,18/2025. The results of the chemical analysis were as follows:

Soil Laboratory Analysis

Chemical Analysis	Range of Results	Corrosion Classification*
Chlorides	2 - 3 mg/kg	Non-corrosive*
Sulfates	13 - 15 mg/kg	Non-corrosive**
pH	7.0 – 7.6	Non-corrosive*
Resistivity at 100% Saturation	2,981 – 3,650 ohm-cm	**Moderately Corrosive***

* With respect to bare steel or ductile iron.
** With respect to mortar coated steel

Discussion

Shallow Reinforced Concrete Foundations

Due to the low levels of water-soluble sulfates found in these soils, there is no special requirement for sulfate resistant concrete to be used at this site. The type of cement used should be in accordance with California Building Code (CBC) for soils which have less than 0.10 percent by weight of water soluble sulfate (SO4) in soil and the minimum depth of cover for the reinforcing steel should be as specified in CBC as well.

Underground Metallic Pipelines

The soils at the project site are generally considered to be “moderately corrosive” to ductile/cast iron, steel and dielectric coated steel based on the saturated resistivity measurements. Therefore, special requirements for corrosion control are required for buried metallic utilities at this site depending upon the critical nature of the piping. Pressure piping systems such as domestic and fire water should be provided with appropriate coating systems and cathodic protection, where warranted. In addition, all underground pipelines should be electrically isolated from above grade structures, reinforced concrete structures and copper lines in order to avoid potential galvanic corrosion problems.

LIMITATIONS

The conclusions and recommendations contained in this report are based on the information and assumptions referenced herein. All services provided herein were performed by persons who are experienced and skilled in providing these types of services and in accordance with the standards of workmanship in this profession. No other warrantees or guarantees, expressed or implied, is provided.

We thank you for the opportunity to be of service to **Cornerstone Earth Group** on this project and trust that you find the enclosed information satisfactory. If you have any questions, or if we can be of any additional assistance, please feel free to contact us at (925) 927-6630.

Respectfully submitted,



Brendon Hurley
JDH CORROSION CONSULTANTS, INC.
Field Technician



Mohammed Ali., P.E.
JDH Corrosion Consultants, Inc.
Senior Corrosion Engineer

CC: File 2025102

Corrosivity Tests Summary

CORNERSTONE EARTH GROUP

Job Number	132-17-1	Date Tested	2/17,18/2025
Job Name	1027 Pine Hollow Court	Tested By	BBA, FL
Location	Clayton, CA		

Sample I.D.			Soil Visual Description	Moisture Content	pH	Temp. at Testing	Resistivity (Ohm-cm) Corrected to 15.5 C°		Chloride Dry Wt.	Sulfate Dry Wt.
Boring	Sample No.	Depth, ft.		%		C°	As Received	Saturated	mg/kg	mg/kg
				ASTM D2216	ASTM G51		G57	ASTM G57	ASTM D4327	ASTM D4327
EB-5	1A	1.5	Dark Reddish Brown Sandy Lean Clay (CL)	11.9	7.0	23.0	-	2,981	2	13
EB-7	3A	5.5	Brown Clayey Sand (SC)	12.2	7.4	22.9	-	3,650	3	15
EB-8	2A	3.5	Reddish Brown Clayey Sand (SC)	12.0	7.6	23.5	-	3,144	3	13

APPENDIX E

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

CLAYTON COMMUNITY CHURCH
1027 PINE HOLLOW COURT
CLAYTON, CALIFORNIA

PREPARED FOR

RANEY PLANNING & MANAGEMENT
1501 SPORTS DRIVE, SUITE A
SACRAMENTO, CALIFORNIA

GEOCON PROJECT NO. E9205-04-01

GEOCON
CONSULTANTS, INC.

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

Project No. E9205-04-01
October 8, 2020

Nick Pappani
Raney Planning & Management
1501 Sports Drive, Suite A
Sacramento, California 95834

Subject: PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT
CLAYTON COMMUNITY CHURCH
1027 PINE HOLLOW COURT
CLAYTON, CALIFORNIA

Dear Mr. Pappani:

This Phase I Environmental Site Assessment (ESA) of the approximate 4.5-acre property (Site) located at 1027 Pine Hollow Court in Clayton, California was completed in accordance with your request. The Site is further identified as Contra Costa County Assessor's Parcel Number 119-050-036-1.

We performed this Phase I ESA for Raney Planning & Management (the Client), on behalf of the Clayton Community Church, to assess the potential for existing hazardous substances and/or petroleum product impacts at the Site prior to redevelopment as a church, parking, driveways, and landscaping. This ESA was performed for the purpose of fulfilling California Environmental Quality Act (CEQA) requirements.

This report summarizes the findings of the Phase I ESA including the potential presence of recognized environmental conditions as defined by the American Society for Testing and Materials (ASTM) *Designation E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.

We appreciate the opportunity to have performed this Phase I ESA for Raney Planning & Management and the Clayton Community Church. Please contact us if you have any questions concerning this report, or if we may be of further service.

Sincerely,

GEOCON CONSULTANTS, INC.

Suzanne Nase
Project Geologist

John E. Juhrend, PE, CEG
Senior Engineer

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PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

1.0 INTRODUCTION

Geocon Consultants, Inc. has performed a Phase I Environmental Site Assessment (ESA) of the property at 1027 Pine Hollow Court (the Site) in Clayton, Contra Costa County, California (Figure 1). This report summarizes the methodology and presents the findings of the Phase I ESA. We performed the Phase I ESA for Raney Planning & Management (Raney, the Client), on behalf of the Clayton Community Church, to assess the potential for existing hazardous substances and/or petroleum product impacts at the Site prior to redevelopment as a church, parking, driveways, and landscaping. This ESA was performed for the purpose of fulfilling California Environmental Quality Act (CEQA) requirements.

1.1 Purpose and Objectives

The purpose of the Phase I ESA was to identify evidence or indications of 'recognized environmental conditions' (REC) as defined by the American Society for Testing and Materials (ASTM) *Designation E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.* Section 1.1.1 of ASTM *Designation E 1527-13* defines an REC as "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.

De minimis conditions are not recognized environmental conditions." De minimis conditions are those that generally do not present a threat to human health or the environment and that generally would not be the subject of the enforcement action if brought to the attention of appropriate governmental agencies.

ASTM *Designation E1527-13* also defines 'Historical' and 'Controlled' RECs (HREC and CREC, respectively). An 'Historical REC' is defined as "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)." A 'Controlled REC' is defined as "a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)." An HREC is not an REC if the property meets current standards for unrestricted residential use. A CREC remains an REC by definition when the property does not meet the unrestricted residential use requirement unconditionally.

We also conducted the Phase I ESA in general accordance with the requirements of 40 Code of Federal Regulations (CFR) Part 312 titled *Standards and Practices for All Appropriate Inquiries,* as required under Sections 101(35)(B)(ii) and (iii) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The purpose of conducting an all appropriate inquiries investigation into the previous ownership and uses of a property is to meet the provisions necessary for the landowner, contiguous property owner, and/or bona fide prospective purchaser to qualify for certain landowner liability protections under CERCLA.

The following principles are an integral part of ASTM *Designation E1527-13*:

- ***"Uncertainty Not Eliminated*** – No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property, and this practice recognizes reasonable limits of time and cost."
- ***"Not Exhaustive*** – All Appropriate Inquiries does not mean an exhaustive assessment of a property. There is a point at which the cost of information obtained or the time required to gather it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. One of the purposes of this practice is to identify a balance between the competing goals of limiting the costs and time demands inherent in performing an environmental site assessment and the reduction of uncertainty about unknown conditions resulting from additional information."
- ***"Level of Inquiry is Variable*** – Not every property will warrant the same level of assessment. Consistent with good commercial and customary practice, the appropriate level of environmental site assessment will be guided by the type of property subject to assessment, the expertise and risk tolerance of the user, and the information developed in the course of the inquiry."

1.2 Scope of Services

The main components of the Phase I ESA and their objectives, as specified by the referenced standards, include the following:

- **Physical Setting:** We reviewed physical setting references to obtain information concerning the topographic, geologic, and hydrogeologic characteristics of the Site and vicinity. Such information may be indicative of the direction and/or extent that a contaminant could migrate in the event of a spill or release.
- **Records Review:** We reviewed publicly available Federal, State, and local regulatory agency records to obtain information that could potentially help identify RECs at or potentially affecting the Site.
- **Site History:** We reviewed historical references to assess the history of previous uses of the Site and surrounding area to identify those that could have led to RECs on or near the Site. Historical sources reviewed included aerial photographs and topographic maps
- **Site Reconnaissance:** We performed a site reconnaissance to observe site conditions and activities for indications of evidence of RECs. The site reconnaissance was for the Site only. Offsite properties and features were viewed solely from the vantage of the Site and public thoroughfares.

1.3 Report Limitations

We prepared this Phase I ESA report exclusively for the Client and acknowledge the Clayton Community Church's use of this report. The information obtained is time sensitive and only relevant for the dates of the records reviewed and the latest site visit. Therefore, the information contained herein is only valid as of the date of the report and will require an update after 180 days to reflect updated records and another site reconnaissance to assess current site conditions.

The Client and Clayton Community Church should recognize that a Phase I ESA is not a comprehensive site characterization and should not be construed as such. The findings and conclusions presented in this report are predicated on the site reconnaissance, information in the specified regulatory records, and information regarding the historical usage of the Site, as presented in this report. The Client and Clayton Community Church should also understand that wetlands, asbestos-containing building materials (ACM), lead-containing paint (LCP), lead in drinking water, radon, mercury related to mining activities, methane, and mold surveys were not included in the scope of services for this Phase I ESA. Assessment for potential naturally occurring hazards such as asbestos and arsenic was also not included.

Therefore, this report should only be deemed conclusive with respect to the information obtained. No guarantee or warranty of the results of the Phase I ESA is implied within this report or any subsequent reports, correspondence or consultation, either express or implied. We strived to conduct the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.

1.4 Data Gaps

A data gap is defined by ASTM *Designation E 1527-13* as "a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information." Data gaps could include such things as insufficient historical information, the inability to interview persons with direct site knowledge (e.g., the owner(s), past owner(s), tenants, workers, etc.) or the lack of access to all parts of a site during the site reconnaissance.

We did not encounter any significant data gaps during the ESA process.

2.0 SITE DESCRIPTION

This section provides information regarding the location and physical characteristics of the Site including its size, topography, geologic, soil, and hydrogeologic conditions.

2.1 Location and General Characteristics

The Site is located at 1027 Pine Hollow Court in Clayton, California. The Site is additionally identified as Contra Costa County assessor's parcel number (APN) 119-050-036-1. A copy of the Contra Costa County assessor's parcel map is in Appendix A. The Site is owned by Clayton Community Church.

The Site is located at the end of a cul-de-sac on Pine Hollow Court in a residential area. The approximate 4.5-acre site is generally vacant with the exception of an existing single-family residence near the southwestern corner and storage structures in the northwestern corner (Figure 2).

2.1.1 Topography

The Site contains a notable southeast-facing slope starting from the northeast corner to the center of the southern boundary. The top portion of the property is relatively flat at approximately 450 feet above mean sea level (msl). The slope drops approximately 50 feet to a lower portion of the property at the southeast corner. Storm water runoff across the Site would likely flow generally from northwest to southeast.

2.1.2 Geologic and Soil Conditions

The Site is located in the eastern portion of the San Francisco Bay and lies at the foot of Mount Diablo. Sediments in the site vicinity consist of Holocene age unconsolidated to semi-consolidated alluvium from igneous and sedimentary rocks, (Preliminary Geologic Map of the Clayton Quadrangle, Contra Costa County, California, Dibblee 1980).

Information concerning the soil conditions onsite was obtained from review of the United States Department of Agriculture, Natural Resources Conservation Service (NRCS) website (http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm). The NRCS website soil survey report indicates that onsite soil consists of Perkins gravelly loam, which is made up of gravelly loam to a depth of 19 inches, with gravelly clay loam from a depth of 19 to 60 inches. The Perkins unit is well-drained with a moderately high infiltration rate (NRCS, 2016).

2.1.3 Hydrologic and Hydrogeologic Conditions

Depth to groundwater is typically more than 80 inches in the Perkins unit. The nearest surface water feature is Mitchell Creek located just outside of the eastern site boundary. The creek is a drainage pathway from Mount Diablo, located south of the Site. The creek was dry at the time of this ESA.

Due to the relatively steep slope on the Site and the close proximity to Mount Diablo, the inferred groundwater flow direction is toward the east to northeast.

2.2 Current and Planned Uses of the Site

The Site consists of mostly vacant land. There is a single-family residence near the southwestern corner. A barn-type building currently used for storage and a garden shed are located in the northwestern corner. It is our understanding that the Clayton Community Church requested that we conduct the Phase I ESA to address due diligence requirements for CEQA. Clayton Community Church plans to develop the Site with a church, paved parking and driveways, with landscaping, all on the upper portion of the Site. No development is planned for the lower portion of the Site.

2.3 Current Uses of Adjoining Properties

The Site is bordered on the north by Mount Diablo Elementary School. Pine Hollow Court, across which are residential properties, is adjacent west of the Site. A vacant lot with native grasses and Mitchell Creek is adjacent east of the Site. High Street, a private road, beyond which are residential properties, is adjacent south of the Site.

3.0 USER–PROVIDED INFORMATION

A complete user questionnaire was received from Raney (Appendix B). No additional information was provided by Raney.

3.1 Environmental Liens or Activity and Use Limitations

Raney indicated that they are not aware of any environmental liens on the Site. There is no other activity and use limitations for the Site.

3.2 Specialized Knowledge

Raney indicated that they have no specialized knowledge regarding past or current uses of the Site of nearby properties that could potentially impair or could have impaired the environmental conditions of the Site.

3.3 Commonly Known or Reasonably Ascertainable Information

3.3.1 Past Use

Raney is aware that the Site was previously occupied by one single family home built in 1958 and orchards.

3.3.2 Site Chemicals, Releases, and Cleanups

Raney is not aware of chemicals storage, chemical spills or releases, or any environmental cleanups on the Site. Raney is not aware of any indicators on Site that would point out the presences or likely presence of contamination on the property.

3.3.3 Fair Market Value

RCD believes that the purchase price of the Site is considered a fair market value.

3.4 Reason for Performing Phase I ESA

RCD requested the Phase I ESA to obtain information regarding the potential for existing hazardous substances and/or petroleum product impacts at the Site for building entitlements.

4.0 RECORDS REVIEW

This section summarizes information we obtained from readily available agency records pertaining to the Site and properties and facilities in the vicinity of the Site.

4.1 Standard Environmental Record Sources

Environmental Data Resources, Inc. (EDR) searched federal, state, and local environmental databases for the Site and properties/facilities within one mile of the Site. The following table summarizes the databases that were searched which have records and the number of properties/facilities listed. Other databases searched that do not list any properties/facilities are not included in the table. A copy of the report: *The EDR Radius Map Report with GeoCheck*, dated June 15, 2020, is presented in Appendix C.

Database Name	Search Radius (Miles)	Number of Listings
FEDERAL DATABASES		
RCRA – Large Quantity Generator (LQG)	0.25	1
STATE, LOCAL, AND TRIBAL DATABASES		
CA Leaking Underground Storage Tank (LUST)	0.5	1
CA UST	0.25	1
CA CERS HAZ WASTE (CalEPA Regulated Site Portal hazardous waste sites)	0.25	1
CA Statewide Environmental Evaluation and Planning System (SWEEPS) UST	0.25	1
HIST UST	0.25	1
CERS TANKS (Cal EPA Regulated Site Portal AST and UST regulated sites)	0.25	1
RCRA NonGen/NLR	0.25	5
Cortese	0.5	1
CA HAZNET - Facility and Manifest Data	Target Property	1*
CA HIST CORTESE (Historical ("Cortese" Hazardous Waste & Substance Site List)	0.5	1
Contra Costa County Site List	0.25	2
Hazardous Waste Tracking System (HWTS)	Target Property	1*
* Indicates that the Site is listed in the database		

4.1.1 Site

The Site is listed on the HAZNET and HWTS databases for generating, properly storing, and offsite disposal of 50 gallons of waste oil and 300 pounds of organic solids in 2013. No violations were noted.

4.1.2 Offsite Properties

Based on the agency database search, none of the listed facilities had reported chemical releases located within approximately ⅛ mile upgradient (¼ mile for LUST facilities or facilities with known, regional groundwater contaminant plumes).

4.1.3 EDR Orphan Summary

The Orphan Summary identifies facilities that have incomplete address information and could not be specifically plotted. The Orphan Summary had no properties listed.

4.2 Other Environmental Record Sources

4.2.1 GeoTracker and EnviroStor

We reviewed the GeoTracker and the DTSC's EnviroStor (http://www.envirostor.dtsc.ca.gov/public/) online databases for environmental assessment and cleanup at the Site and/or properties/facilities within ¼ mile of the Site. No listings were found on either database for the Site and/or nearby properties.

4.2.2 Contra Costa Health Services

We requested available Contra Costa Health Services files pertaining to compliance inspection reports, hazardous substances, USTs, releases, inspection records, etc. for the Site. There were no records for the Site.

4.2.3 Contra Costa County Fire Protection District

We requested available Contra Costa County Fire Protection District records for information pertaining to compliance inspection reports, hazardous substances, USTs, releases, inspection records, etc. for the Site. There were no records for the Site.

4.2.4 California Department of Conservation – Geologic Energy Management Division

We reviewed the California Department of Conservation – Geologic Energy Management Division (CalGEM) website (http://www.consrv.ca.gov/calgem/) for oil or gas wells within the site vicinity. There are no oil or gas wells depicted on the Site or nearby vicinity on the CalGEM maps.

4.2.5 U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration

We reviewed the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) website (www.npms.phmsa.dot.gov) which provides mapped locations of petroleum and natural gas pipelines. The PHMSA website indicates that the nearest hazardous liquid pipeline follows Clayton Road, approximately 2,000 feet east of the Site.

5.0 HISTORICAL USE

We evaluated the historical use of the Site and adjacent properties through review of historical aerial photographs and historical topographic maps provided by EDR. Sanborn Fire Insurance Maps (Sanborn maps) were requested. EDR reported that the property was unmapped. This section summarizes information obtained from these sources.

5.1 Aerial Photographs

We reviewed historical aerial photographs provided by EDR for the years 1939, 1946, 1949, 1950, 1958, 1963, 1966, 1979, 1982, 1993, 1998, 2006, 2009, 2012, and 2016 for indications of past land uses that had the potential to have impacted the Site through the use, storage or disposal of hazardous substances and/or petroleum. Copies of the aerial photographs reviewed are in *The EDR Aerial Photo Decade Package* dated June 15, 2020, in Appendix D. The following table summarizes our observations of the Site and adjacent properties visible on the aerial photographs.

Year(s)	Site	Adjacent and Nearby Properties
1939, 1946, 1949, & 1950 SCALE: 1"=500'	The Site was used for orchards.	Agricultural fields surrounded the Site. The town of Clayton can be seen east of the Site, beyond the creek.
1958 SCALE: 1"=500'	A structure, which is assumed to be the residential home, was present in the southwest corner of the Site	Structures which are assumed to be the elementary school was present northwest of the Site
1963 SCALE: 1"=500'	No apparent changes to the Site.	A residential neighborhood was present southwest of the Site
1966 SCALE: 1"=500'	Some of the trees had been removed from the eastern half of the Site. A driveway was present leading to the house.	The residential neighborhood had expanded west of the Site
1979 & 1982 SCALE: 1"=500'	No apparent changes to the Site.	Much of the agricultural fields near the Site has been replaced by residential neighborhoods.
1993, 1998, 2006, 2009, 2012, & 2016 SCALE: 1"=500'	No apparent changes to the Site.	The nearby agricultural fields have all been replaced by residential housing.

Base on the historical aerial photographs it is difficult to pinpoint when the orchard operations ceased on the Site. However, the historic presence of orchards on Site and the surrounding properties is a potential environmental concern for pesticides.

5.2 Topographic Maps

We reviewed historical topographic maps for the years 1896, 1898, 1912, 1943, 1953, 1968, 1973, 1980, and 2012 (Appendix E) for indications of past land uses that had the potential to have impacted the Site through the use, storage or disposal of hazardous substances and/or petroleum products. The following table summarizes our observations of the Site and adjacent properties on the topographic maps.

Year(s)	Site	Adjacent and Nearby Properties
1896 & 1898 Mount Diablo, CA SCALE: 1:62,500	No indication of land use was depicted on the Site.	Buildings were located north and south of the Site. Sparse development for the town of Clayton was located to the east. Mitchell Creek runs east of the Site.
1912 & 1943 Mount Diablo, CA SCALE: 1: 62,500	Orchards were depicted on the Site.	Agricultural land/orchards use was depicted surrounding the Site. Mount Diablo School was located north of the Site
1953, Clayton, CA SCALE: 1:24,000	A building was depicted on the Site.	Buildings were depicted on the streets east of the Site.
1968, 1973, 1980, & 1994 Clayton, CA SCALE: 1:24,000	No apparent changes to the Site.	Surrounding streets continued to develop.
2012 Clayton, CA SCALE: 1:24,000	No site features or specific land uses were depicted on the Site.	No features or specific land uses were depicted on adjacent or nearby properties.

The history of orchards on Site and the surrounding properties is a potential environmental concern for pesticides.

6.0 SITE RECONNAISSANCE

This section summarizes our observations of the Site and surrounding properties made during the site reconnaissance.

6.1 Methodology and Limiting Conditions

Suzanne Nase, Project Geologist with Geocon Consultants, Inc., performed a site reconnaissance on June 30, 2020. Ms. Nase was met by Mick Wakefield who has lived on site for the past 6.5 years. The site visit consisted of walking throughout the Site and along the site perimeter to observe site features and conditions. The offsite survey was performed by making observations of adjacent properties from the Site and public roads. Photographs of various Site and offsite features are attached.

6.2 Site Setting

The Site is situated in a residential area with the downtown area east of the Site. Site features observed during our reconnaissance are depicted on the Site Map, Figure 2.

6.3 Onsite Survey

As described in Section 2.2, the Site is a fenced lot with a single-family residence near the southwestern corner (Photo 1). Common household chemicals were observed in the house. The house has a below-grade basement, approximately 12 feet by 8 feet, accessed by an outside door (Photo 2). A majority of the Site is vacant with natural grasses and some trees from the previous orchards (Photo 3).

Mr. Wakefield stated that the orchard operations have not occurred while he has been on Site for the past 7 years. To his knowledge, an active orchard has not been on the Site for quite some time. A barn and a garden shed are located in the northwestern corner which are currently used for storage (Photos 4 and 5). No chemicals were observed in either storage structure. A southeast-facing slope divides the Site into upper and lower portions of the property (Photos 6 and 7). A well house is located in the southeast corner of the Site (Photo 8 and 9). It is unknown when the last time the well was used. Mr. Wakefield stated that it has not been used in the past 7 year that Clayton Community Church has owned the property.

No evidence of RECs or other environmental concerns were observed during the site visit.

6.4 Offsite Survey

Adjacent and nearby properties consist of residential, commercial and retail properties. A summary of field observations is listed below:

- North – The Site is bounded by Mount Diablo Elementary School.
- East – The Site is bounded by a vacant lot with native grasses which has Mitchell Creek running through it. Downtown Clayton is east of the creek.
- South – High Street beyond which are private residences.
- West – Pine Hollow Court beyond which are private residences.

No evidence of environmental concern was observed at properties adjoining the Site during the site reconnaissance.

7.0 CONCLUSIONS AND RECOMMENDATIONS

We have performed this Phase I ESA in general conformance with the scope and limitations of ASTM *Designation E 1527-13* at 1027 Pine Hollow Court (APN 119-050-036-1) in Clayton, Contra Costa County, California. The Site is owned by Clayton Community Church. Raney, requested that we conduct the Phase I ESA to address CEQA requirements prior to redevelopment as a church, parking, driveways, and landscaping. The 4.5-acre site is mostly vacant lot with a single-family residence near the southwestern corner and two storage structures in the northwestern corner. Exceptions to, or deletions from, this practice are described in Section 1.4 of this report.

This Phase I ESA has revealed no evidence of RECs or potential environmental concerns in connection with the Site with the exception of the following:

Persistent residual pesticides may be present in shallow onsite soil based on the historical orchard operations at the Site. Soil sampling and analytical testing would be necessary in order to confirm or refute the presence of pesticide impacts at concentrations requiring mitigation based on land use specific regulatory screening levels.

The existing onsite water well should be properly abandoned in accordance with regulatory permitting requirements if not planned for use during site grading operations and subsequent redevelopment.

Any undocumented subsurface structures encountered during site clearing/grading operations (i.e. USTs, septic systems, wells, etc.) should be properly removed or abandoned in place in accordance with any applicable Contra Costa County permit requirements.

8.0 REFERENCES

American Society for Testing and Materials, *Designation E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, 2013.

California State Water Resources Board, GeoTracker, http://geotracker.swrcb.ca.gov/, accessed in June/July 2020

Dibblee, Jr., T.W, *Preliminary Geologic Map of the Clayton Quadrangle, Contra Costa County, California*, 1980.

State of California Department of Conservation, Geologic Energy Management Division – CalGEM, http://www.consrv.ca.gov/calgem/, accessed in June/July 2020.

State of California, Department of Toxic Substances Control, EnviroStor website, http://www.envirostor.dtsc.ca.gov/public/, accessed in June/July 2020.

United States Department of Agriculture, Natural Resources Conservation Service, http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx, accessed in June/July 2020.

United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration website database, www.npms.phmsa.dot.gov, accessed June/July 2020.

9.0 QUALIFICATIONS

This Phase I ESA report was prepared by Ms. Suzanne Nase and reviewed by Mr. John Juhrend, PE, CEG, CEM.

Ms. Nase has a BS degree in Geology and 8 years of experience in environmental investigation and remediation projects involving groundwater and/or soil contamination. She has managed and assisted on a variety of projects for both private and public clients in the transportation, oil and gas, and water industries. Ms. Nase has performed Phase I and II ESAs on a variety of projects within California.

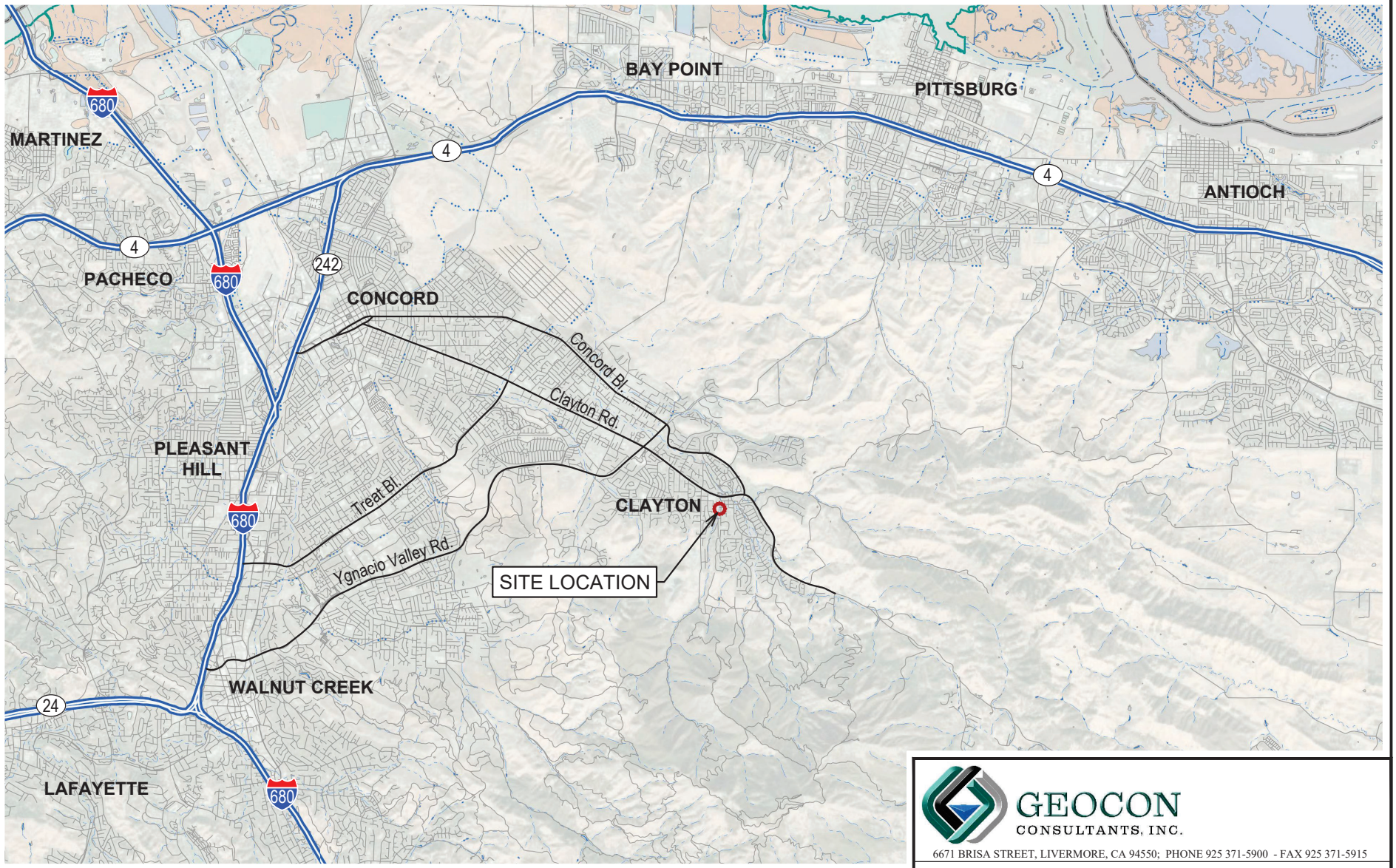
Mr. Juhrend has over 35 years of experience in the environmental and geotechnical consulting industry in California and Nevada. Mr. Juhrend is a California Professional Engineer and Certified Engineering Geologist, with a BS degree in engineering geology and MS degree in civil engineering. His personal experience includes the performance of hundreds of environmental projects including Phase I and Phase II site assessments, remedial investigations and feasibility studies, corrective action programs and litigation support. His primary expertise includes environmental assessments of Brownfields properties, industrial, commercial and residential properties, and transportation corridors.

We declare that, to the best of my professional knowledge and belief, we meet the definition of environmental professional as defined in §312.10 of 40 CFR 312 and we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries investigation in conformance with the standards and practices set forth in 40 CFR Part 312.

Suzanne Nase
Project Geologist

John Juhrend, PE, CEG
Senior Engineer

*Figure not OCR compatible



GEOCON CONSULTANTS, INC.
6671 BRISA STREET, LIVERMORE, CA 94550; PHONE 925 371-5900 - FAX 925 371-5915

Clayton Community Church

1027 Pine Hollow Court, Clayton, California

SITE LOCATION MAP

GEOCON Proj. No. E9205-04-01 | October 2020 | Figure 1

SITE0720.DWG

*Figure not OCR compatible



N

0 40 80

APPROX. SCALE: feet

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Clayton Community Church

1027 Pine Hollow Court, Clayton, California

SITE MAP

GEOCON Proj. No. E9205-04-01 | October 2020 | Figure 1

SITE0720.DWG

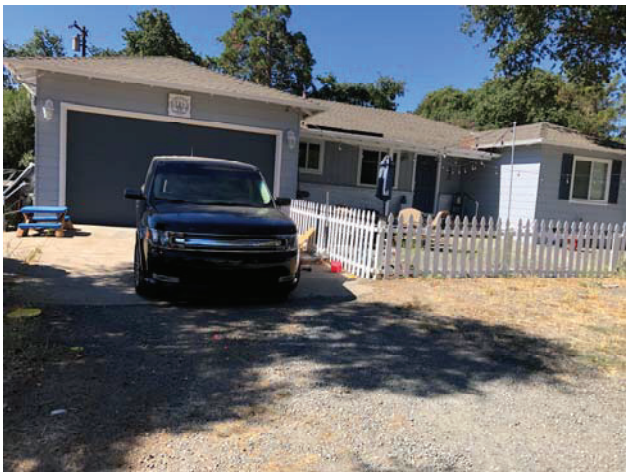


Photo 1 – Single-family residence in southwest corner of the property



Photo 2 – Entrance to below-grade basement. Located on eastern side of the residence



Photo 3 – Approximately two-thirds of the parcel is covered in natural grasses with some trees

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PHOTOGRAPHS 1, 2 & 3		
Clayton Community Church 1027 Pine Hollow Court, Clayton, California		
E9205-04-01		October 2020

*Figure not OCR compatible



Photo 4 – The barn and shed in northwest corner of the property. Both used for storage



Photo 5 – Inside the "barn". No chemicals observed



Photo 6 – Top of southeast facing slope

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PHONE 925.371.5900 – FAX 925.371.5915

PHOTOGRAPHS 4, 5 & 6		
Clayton Community Church 1027 Pine Hollow Court, Clayton, California		
E9205-04-01		October 2020

*Figure not OCR compatible



Photo 7 – Bottom of southeast facing slope



Photo 8 – Well house. Located in the southeast corner of the property



Photo 9 – Inside well house. Has not been used since Clayton Community Church owned the property (~7 years)

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6671 BRISA STREET – LIVERMORE, CA 94550
PHONE 925.371.5900 – FAX 925.371.5915

PHOTOGRAPHS 7, 8 & 9		
Clayton Community Church 1027 Pine Hollow Court, Clayton, California		
E9205-04-01		October 2020

*Figure not OCR compatible

APPENDIX A

Provided by:
PARCELQUEST

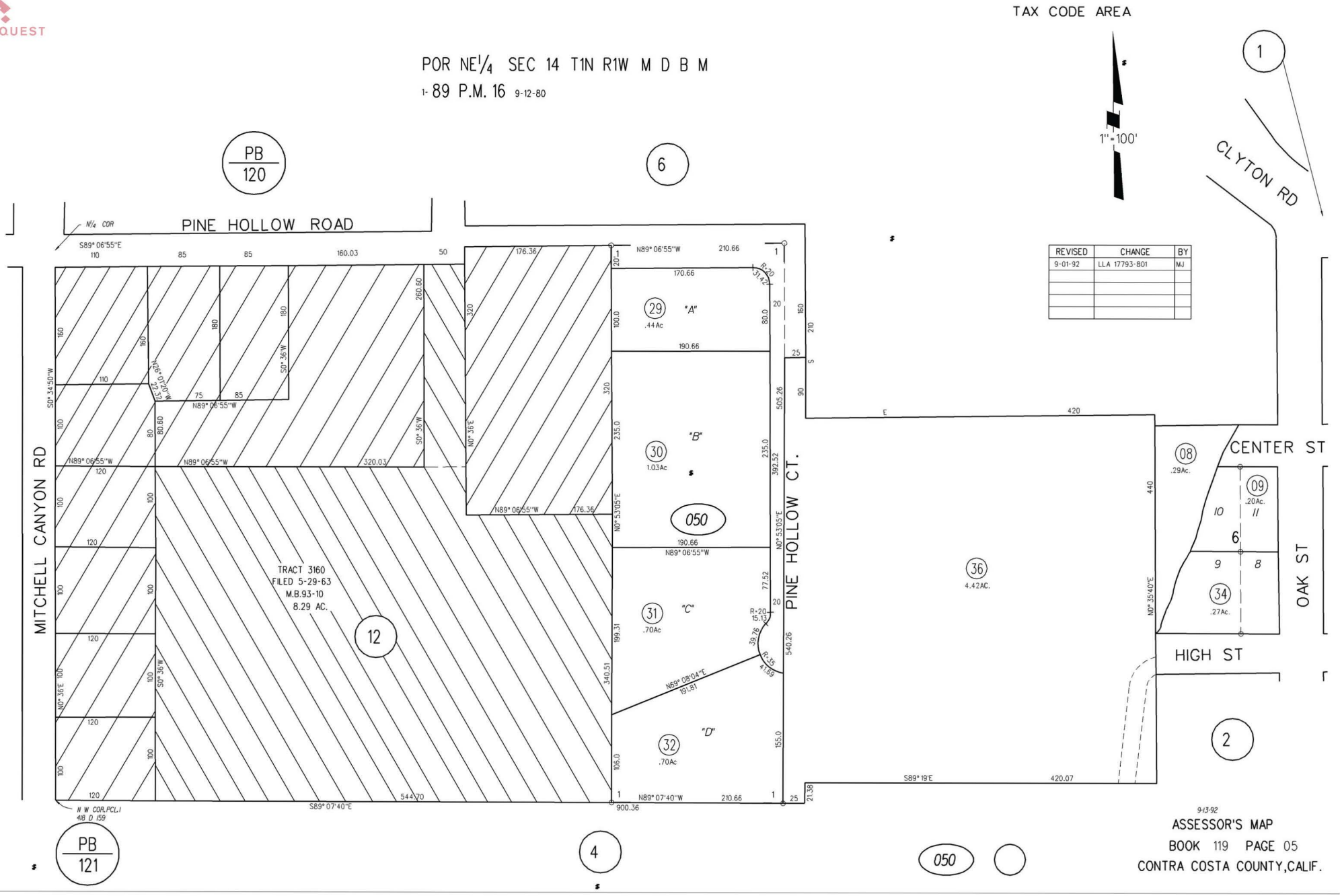


*Figure not OCR compatible

APPENDIX B

AAI Questionnaire

In accordance with ASTM 1527-05 and in order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the user (client or client representative) must provide the following information (if available) to the *environmental professional* (Geocon). Failure to provide this information could result in a determination that "*all appropriate inquiry*" (AAI) is not complete.

1. Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

   No

2. Are you aware of any area use limitations (AULs), such as engineering controls, land use restriction or institutional controls that are in place at the property and/or have been filed or recorded in a registry under federal, trial, state or local law?

   No

3. As the *user* of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property, so that you would have specialized knowledge of the chemicals and processes used by this type of business?

   No

4. Does the purchase price being paid for this property reasonable reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

   Yes

   N/A

5. Are you aware of commonly known or reasonably ascertainable information about the property that would help the *environmental professional* to identify conditions indicative of releases or threatened releases?

   a. Do you know the past uses of the property?

      Yes, orchards & residential

   b. Do you know of specific chemicals that are present or once were present at the property?

      NO

   c. Do you know of spills or chemical releases that have taken place at the property?

      NO

   d. Do you know of any environmental cleanups that have taken place at the property?

      NO

*Handwritten text not OCR compatible.

6. As the *user* of this ESA, based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

NO

In addition to the above questions, certain information should be collected, if available, and provided to the *environmental professional*. This information is intended to assist the *environmental professional*, but is not necessarily required to qualify for one of the LLPs.

7. The reason why the ESA is required (i.e. sale, purchase, exchange, etc.).

Building entitlements

8. The complete name, correct address and/or parcel number for the property (a map or other documentation showing property location and boundaries is helpful).

1027 Pine Hollow Court, Clayton CA 94517
APN: 119 - 050 - 036

9. A description of the property (i.e. acreage, square footage, number of buildings, other structures, age of buildings, above/underground storage tanks, etc.)

- 4.24 acres
- 1 single family home (1958)

10. Knowledge or previous owners and/or previous uses of the property?

orchards & residential

11. Current or previous deeds?

-

12. The site contact name and number.

Mick Wakefield

13. Previous reports available? Any other available documentation, correspondence, etc. concerning the environmental condition of the property?

- Geotechnical Report
- Arborist Report
- Land survey / civil drawings

*Handwritten text not OCR compatible.

APPENDIX C

Clayton Community Church

1027 Pine Hollow Court

Clayton, CA 94517

Inquiry Number: 6093006.8

June 15, 2020

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

06/15/20

Site Name:

Clayton Community Church
1027 Pine Hollow Court
Clayton, CA 94517
EDR Inquiry # 6093006.8

Client Name:

GeoCon Environmental Cons.
6671 Brisa Street
Livermore, CA 94550
Contact: Suzanne Nase

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1998	1"=500'	Flight Date: August 27, 1998	USDA
1993	1"=500'	Acquisition Date: June 12, 1993	USGS/DOQQ
1982	1"=500'	Flight Date: July 05, 1982	USDA
1979	1"=500'	Flight Date: August 16, 1979	USDA
1966	1"=500'	Flight Date: May 15, 1966	USDA
1963	1"=500'	Flight Date: July 16, 1963	EDR Proprietary Aerial Viewpoint
1958	1"=500'	Flight Date: August 13, 1958	USDA
1950	1"=500'	Flight Date: March 12, 1950	USDA
1949	1"=500'	Flight Date: October 13, 1949	USGS
1946	1"=500'	Flight Date: July 22, 1946	USGS
1939	1"=500'	Flight Date: July 25, 1939	USDA

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*Figure not OCR compatible



*Figure not OCR compatible



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INQUIRY #: 6093006.8

YEAR: 1979

= 500'

N

EDR

*Figure not OCR compatible



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*Figure not OCR compatible



*Figure not OCR compatible



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*Figure not OCR compatible

APPENDIX D

Clayton Community Church
1027 Pine Hollow Court
Clayton, CA 94517

Inquiry Number: 6093006.2s
June 15, 2020

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1027 PINE HOLLOW COURT
CLAYTON, CA 94517

COORDINATES

Latitude (North):	37.9400520 - 37° 56' 24.18''
Longitude (West):	121.9381050 - 121° 56' 17.17''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	593311.1
UTM Y (Meters):	4199490.0
Elevation:	449 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5640430 CLAYTON, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140606
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
1027 PINE HOLLOW COURT
CLAYTON, CA 94517

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	CLAYTON COMMUNITY CH	1027 PINE HOLLOW CT	HAZNET, HWTS		TP
2	MIKE AIELLO	5862 FOUR OAKS	RCRA NonGen / NLR	Lower	704, 0.133, NW
3	CITY OF CLAYTON	5919 CLAYTON RD	RCRA NonGen / NLR	Lower	731, 0.138, NNW
A4	PACIFIC BELL	6991 HIGH STREET	RCRA-LQG, CERS HAZ WASTE, SWEEPS UST, HIST UST,...	Lower	1027, 0.195, East
A5	PACIFIC BELL/CLAYTON	6191 HIGH ST	UST	Lower	1027, 0.195, East
A6	JORDAN, WILLIAM	6450 MARSH CREEK RD	RCRA NonGen / NLR	Lower	1045, 0.198, ESE
7	SHUCK, NICHOLAS	5954 WALLACE DRIVE	RCRA NonGen / NLR	Lower	1087, 0.206, NNW
A8	DIABLO VALLEY HORSE	6455 MARSH CREEK RD	LUST, Cortese, HIST CORTESE, CONTRA COSTA CO. SITE...	Lower	1160, 0.220, East
9	TERRI HIGHSMITH	5849 MITCHELL CANYON	RCRA NonGen / NLR	Higher	1276, 0.242, SW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 9 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
CLAYTON COMMUNITY CH 1027 PINE HOLLOW CT CLAYTON, CA 94517	HAZNET GEPAID: CAC002743996 HWTS	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-SQG ---------- RCRA - Small Quantity Generators

RCRA-VSQG ---- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---- Land Use Control Information System
US ENG CONTROLS ---- Engineering Controls Sites List
US INST CONTROLS ---- Institutional Controls Sites List

Federal ERNS list

ERNS ---- Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ---- State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR ---- EnviroStor Database

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---- Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST ---- Leaking Underground Storage Tanks on Indian Land
CPS-SLIC ---- Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST ---- Underground Storage Tank Listing
AST ---- Aboveground Petroleum Storage Tank Facilities
INDIAN UST ---- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP ---- Voluntary Cleanup Priority Listing
VCP ---- Voluntary Cleanup Program Properties

State and tribal Brownfields sites

BROWNFIELDS ---- Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT ---- Waste Management Unit Database

SWRCY Recycler Database
HAULERS Registered Waste Tire Haulers Listing
INDIAN ODI Report on the Status of Open Dumps on Indian Lands
ODI Open Dump Inventory
DEBRIS REGION 9 Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL Delisted National Clandestine Laboratory Register
HIST Cal-Sites Historical Calsites Database
SCH School Property Evaluation Program
CDL Clandestine Drug Labs
Toxic Pits Toxic Pits Cleanup Act Sites
US CDL National Clandestine Laboratory Register
PFAS PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

CA FID UST Facility Inventory Database

Local Land Records

LIENS Environmental Liens Listing
LIENS 2 CERCLA Lien Information
DEED Deed Restriction Listing

Records of Emergency Release Reports

HMIRS Hazardous Materials Information Reporting System
CHMIRS California Hazardous Material Incident Report System
LDS Land Disposal Sites Listing
MCS Military Cleanup Sites Listing
SPILLS 90 SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS Formerly Used Defense Sites
DOD Department of Defense Sites
SCRD DRYCLEANERS State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR Financial Assurance Information
EPA WATCH LIST EPA WATCH LIST
2020 COR ACTION 2020 Corrective Action Program List
TSCA Toxic Substances Control Act
TRIS Toxic Chemical Release Inventory System
SSTS Section 7 Tracking Systems
ROD Records Of Decision
RMP Risk Management Plans
RAATS RCRA Administrative Action Tracking System
PRP Potentially Responsible Parties
PADS PCB Activity Database System
ICIS Integrated Compliance Information System
FTTS FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS Material Licensing Tracking System

COAL ASH DOE - Steam-Electric Plant Operation Data
COAL ASH EPA - Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER - PCB Transformer Registration Database
RADINFO - Radiation Information Database
HIST FTTS - FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS - Incident and Accident Data
CONSENT - Superfund (CERCLA) Consent Decrees
INDIAN RESERV - Indian Reservations
FUSRAP - Formerly Utilized Sites Remedial Action Program
UMTRA - Uranium Mill Tailings Sites
LEAD SMELTERS - Lead Smelter Sites
US AIRS - Aerometric Information Retrieval System Facility Subsystem
US MINES - Mines Master Index File
ABANDONED MINES - Abandoned Mines
FINDS - Facility Index System/Facility Registry System
DOCKET HWC - Hazardous Waste Compliance Docket Listing
UXO - Unexploded Ordnance Sites
ECHO - Enforcement & Compliance History Information
FUELS PROGRAM - EPA Fuels Program Registered Listing
CA BOND EXP. PLAN - Bond Expenditure Plan
CUPA Listings - CUPA Resources List
DRYCLEANERS - Cleaner Facilities
EMI - Emissions Inventory Data
ENF - Enforcement Action Listing
Financial Assurance - Financial Assurance Information Listing
ICE - ICE
HWP - EnviroStor Permitted Facilities Listing
HWT - Registered Hazardous Waste Transporter Database
MINES - Mines Site Location Listing
MWMP - Medical Waste Management Program Listing
NPDES - NPDES Permits Listing
PEST LIC - Pesticide Regulation Licenses Listing
PROC - Certified Processors Database
Notify 65 - Proposition 65 Records
UIC - UIC Listing
UIC GEO - UIC GEO (GEOTRACKER)
WASTEWATER PITS - Oil Wastewater Pits Listing
WDS - Waste Discharge System
WIP - Well Investigation Program Case List
MILITARY PRIV SITES - MILITARY PRIV SITES (GEOTRACKER)
PROJECT - PROJECT (GEOTRACKER)
WDR - Waste Discharge Requirements Listing
CIWQS - California Integrated Water Quality System
CERS - CERS
NON-CASE INFO - NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS - OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS - PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT - SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ - Well Stimulation Project (GEOTRACKER)
MINES MRDS - Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP - EDR Proprietary Manufactured Gas Plants

EDR Hist Auto---------- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner---------- EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 03/23/2020 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PACIFIC BELL EPA ID:: CAT080020050	***6991 HIGH STREET***	***E 1/8 - 1/4 (0.195 mi.)***	***A4***	***13***

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there is 1 LUST site within

approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
DIABLO VALLEY HORSE	***6455 MARSH CREEK RD***	***E 1/8 - 1/4 (0.220 mi.)***	***A8***	***26***

Database: LUST REG 2, Date of Government Version: 09/30/2004
Database: LUST, Date of Government Version: 05/13/2020
Status: Completed - Case Closed
Facility Id: 07-0117
Facility Status: Case Closed
Global Id: T0601300109
date9: 8/17/1994

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PACIFIC BELL/CLAYTON	6191 HIGH ST	E 1/8 - 1/4 (0.195 mi.)	A5	24

Database: UST, Date of Government Version: 03/09/2020
Facility Id: 716444
Facility Id: 07-000-716444

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 01/21/2020 has revealed that there is 1 CERS HAZ WASTE site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PACIFIC BELL	***6991 HIGH STREET***	***E 1/8 - 1/4 (0.195 mi.)***	***A4***	***13***

Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no

longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there is 1 SWEEPS UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PACIFIC BELL	***6991 HIGH STREET***	***E 1/8 - 1/4 (0.195 mi.)***	***A4***	***13***
Status: A Tank Status: A Comp Number: 16444				

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there is 1 HIST UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PACIFIC BELL	***6991 HIGH STREET***	***E 1/8 - 1/4 (0.195 mi.)***	***A4***	***13***
Facility Id: 00000016444				

CERS TANKS: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

A review of the CERS TANKS list, as provided by EDR, and dated 01/21/2020 has revealed that there is 1 CERS TANKS site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PACIFIC BELL	***6991 HIGH STREET***	***E 1/8 - 1/4 (0.195 mi.)***	***A4***	***13***

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/23/2020 has revealed that there are 5 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TERRI HIGHSMITH EPA ID:: CAC003037185	5849 MITCHELL CANYON	SW 1/8 - 1/4 (0.242 mi.)	9	29

Lower Elevation	Address	Direction / Distance	Map ID	Page
MIKE AIELLO	5862 FOUR OAKS	NW 1/8 - 1/4 (0.133 mi.)	2	11

EPA ID:: CAC003016838				
CITY OF CLAYTON EPA ID:: CAH111000303	5919 CLAYTON RD	NNW 1/8 - 1/4 (0.138 mi.)	3	12
JORDAN, WILLIAM EPA ID:: CAC003032994	6450 MARSH CREEK RD	ESE 1/8 - 1/4 (0.198 mi.)	A6	24
SHUCK, NICHOLAS EPA ID:: CAC002966200	5954 WALLACE DRIVE	NNW 1/8 - 1/4 (0.206 mi.)	7	25

Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

A review of the Cortese list, as provided by EDR, and dated 03/23/2020 has revealed that there is 1 Cortese site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
DIABLO VALLEY HORSE Cleanup Status: COMPLETED - CASE CLOSED	***6455 MARSH CREEK RD***	***E 1/8 - 1/4 (0.220 mi.)***	***A8***	***26***

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there is 1 HIST CORTESE site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
DIABLO VALLEY HORSE Reg Id: 07-0117	***6455 MARSH CREEK RD***	***E 1/8 - 1/4 (0.220 mi.)***	***A8***	***26***

CONTRA COSTA CO. SITE LIST: Lists includes sites from the Underground Tank Program, Hazardous Waste Generator Program & Business Plan 12185 Program

A review of the CONTRA COSTA CO. SITE LIST list, as provided by EDR, and dated 02/14/2020 has revealed that there are 2 CONTRA COSTA CO. SITE LIST sites within approximately 0.25 miles of the target property.

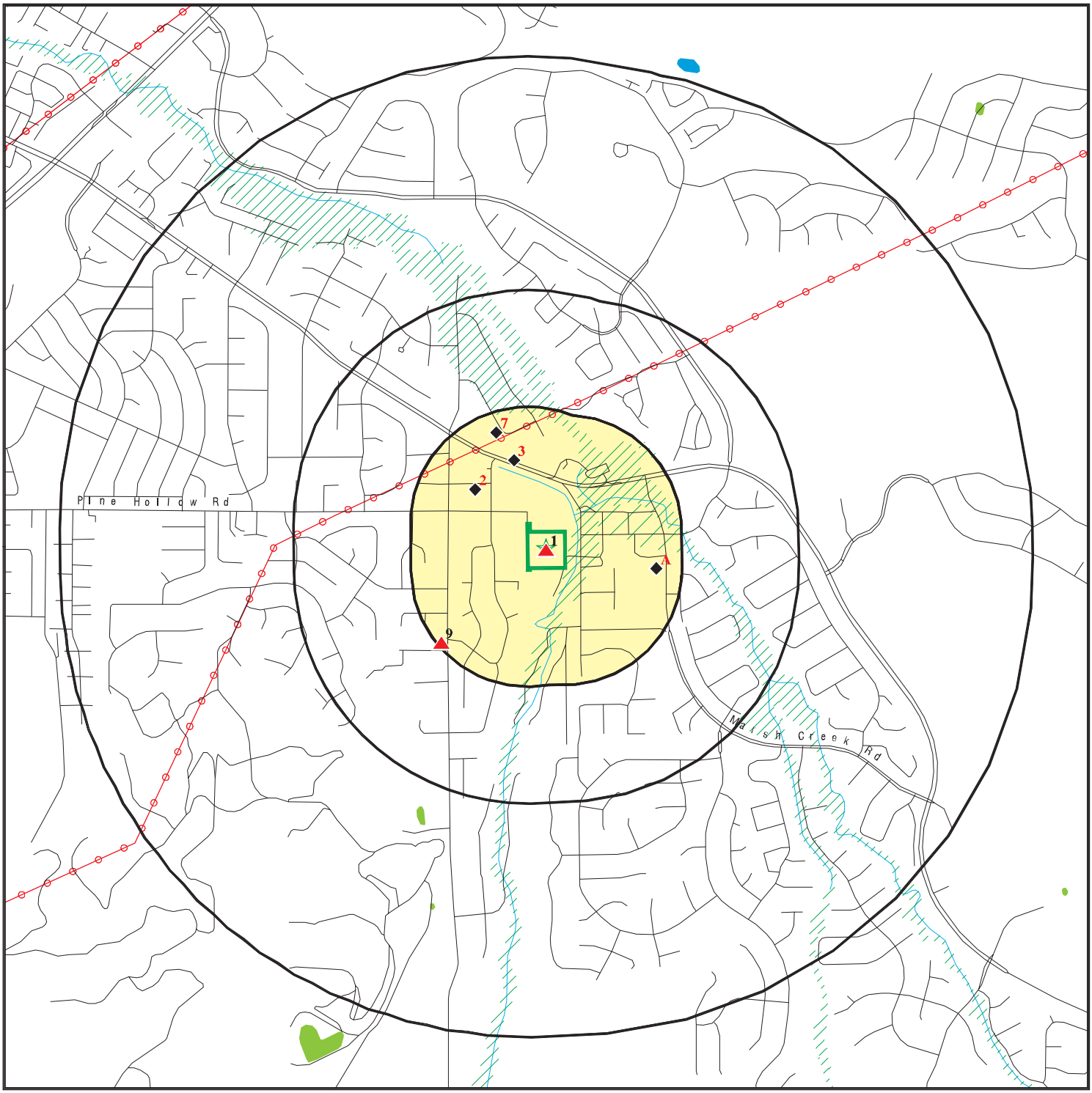
Lower Elevation	Address	Direction / Distance	Map ID	Page
PACIFIC BELL Facility Id: FA0031838	***6991 HIGH STREET***	***E 1/8 - 1/4 (0.195 mi.)***	***A4***	***13***
DIABLO VALLEY HORSE Facility Id: FA0033405	***6455 MARSH CREEK RD***	***E 1/8 - 1/4 (0.220 mi.)***	***A8***	***26***

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

*Figure not OCR compatible

OVERVIEW MAP - 6093006.2S



Target Property
Sites at elevations higher than or equal to the target property
Sites at elevations lower than the target property
Manufactured Gas Plants
National Priority List Sites
Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA
Power transmission lines
Special Flood Hazard Area (1%)
0.2% Annual Chance Flood Hazard
National Wetland Inventory
State Wetlands

Areas of Concern

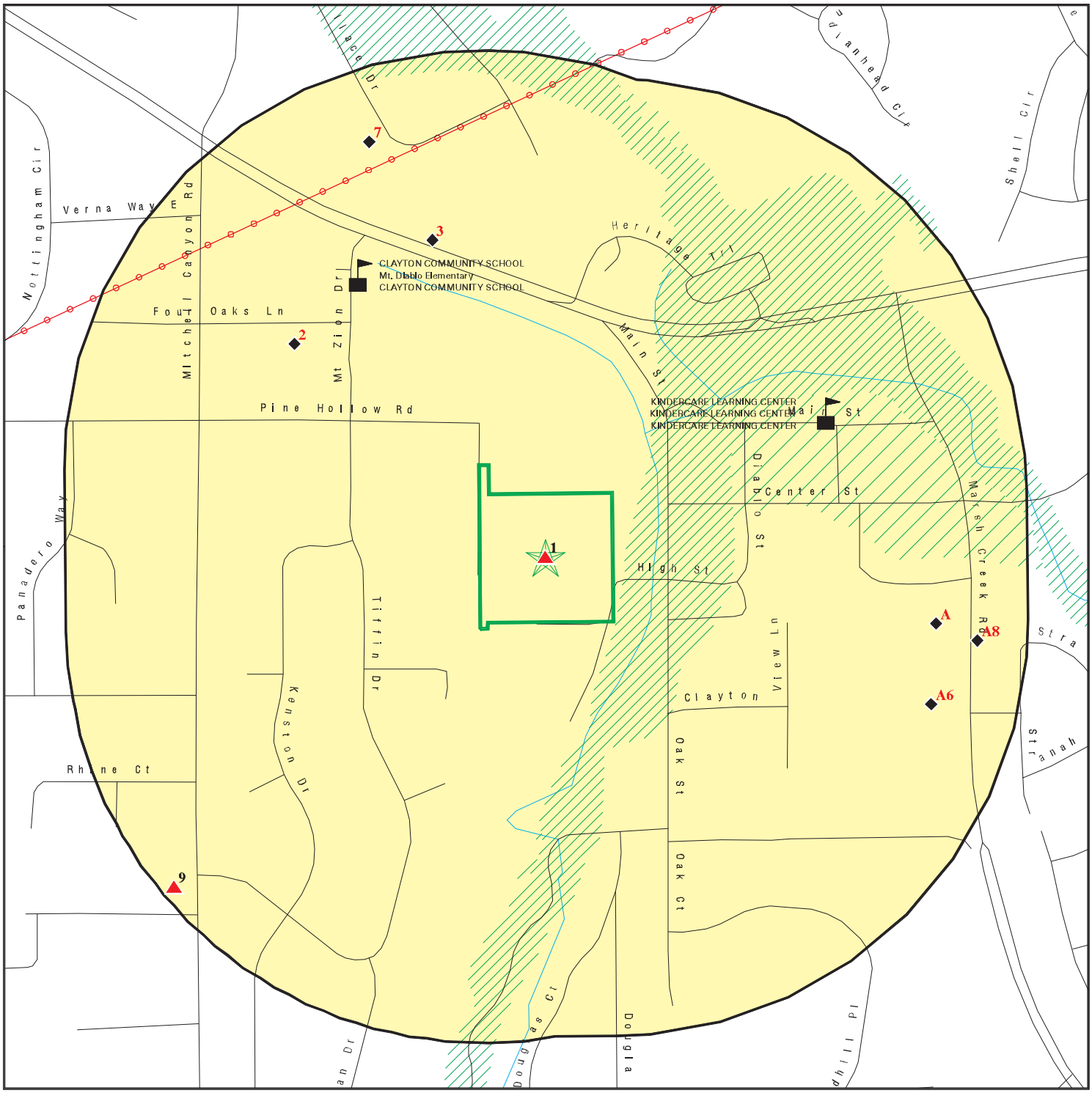
This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Clayton Community Church	CLIENT:	GeoCon Environmental Cons.
ADDRESS:	1027 Pine Hollow Court Clayton CA 94517	CONTACT:	Suzanne Nase
LAT/LONG:	37.940052 / 121.938105	INQUIRY #:	6093006.2s
		DATE:	June 15, 2020 6:54 pm

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*Figure not OCR compatible

DETAIL MAP - 6093006.2S



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Clayton Community Church	CLIENT: GeoCon Environmental Cons.
ADDRESS: 1027 Pine Hollow Court Clayton CA 94517	CONTACT: Suzanne Nase
LAT/LONG: 37.940052 / 121.938105	INQUIRY #: 6093006.2s DATE: June 15, 2020 6:54 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	1	NR	NR	NR	1
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	1	0	NR	NR	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	1	NR	NR	NR	1
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		0	1	NR	NR	NR	1
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	1	NR	NR	NR	1
HIST UST	0.250		0	1	NR	NR	NR	1
CERS TANKS	0.250		0	1	NR	NR	NR	1
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	5	NR	NR	NR	5
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	1	0	NR	NR	1
CUPA Listings	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001	1	0	NR	NR	NR	NR	1
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	1	0	NR	NR	1
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
CONTRA COSTA CO. SITE LIST	0.250		0	2	NR	NR	NR	2
UIC	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
WDR	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001		0	NR	NR	NR	NR	0
CERS	0.001		0	NR	NR	NR	NR	0
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
HWTS	TP	1	NR	NR	NR	NR	NR	1
MINES MRDS	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		2	0	16	0	0	0	18

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1 **CLAYTON COMMUNITY CHURCH** **HAZNET** **S117301118**
Target **1027 PINE HOLLOW CT** **HWTS** **N/A**
Property **CLAYTON, CA 94517**

Actual:
449 ft.

HAZNET:

Name:	CLAYTON COMMUNITY CHURCH
Address:	1027 PINE HOLLOW CT
Address 2:	Not reported
City,State,Zip:	CLAYTON, CA 945171149
Contact:	WILL WEISS
Telephone:	9256739060
Mailing Name:	Not reported
Mailing Address:	6055 MAIN ST
Year:	2013
Gepaid:	CAC002743996
TSD EPA ID:	CAD028409019
CA Waste Code:	221 - Waste oil and mixed oil
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.19
Year:	2013
Gepaid:	CAC002743996
TSD EPA ID:	CAD028409019
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.15

Additional Info:

Year:	2013
Gen EPA ID:	CAC002743996
Shipment Date:	20131028
Creation Date:	12/23/2013 22:15:27
Receipt Date:	20131107
Manifest ID:	010958000JJK
Trans EPA ID:	CAR000030114
Trans Name:	NRC ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	CAR000165274
Trans 2 Name:	INTRINSIC TRANS INC
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CLAYTON COMMUNITY CHURCH (Continued) **S117301118**

Shipment Date:	20131028
Creation Date:	12/23/2013 22:15:27
Receipt Date:	20131107
Manifest ID:	010958000JJK
Trans EPA ID:	CAR000030114
Trans Name:	NRC ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	CAR000165274
Trans 2 Name:	INTRINSIC TRANS INC
TSDF EPA ID:	CAD028409019
Trans Name:	CROSBY & OVERTON INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	221 - Waste oil and mixed oil
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.19
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	CLAYTON COMMUNITY CHURCH
Address:	1027 PINE HOLLOW CT
Address 2:	Not reported
City,State,Zip:	CLAYTON, CA 945171149
EPA ID:	CAC002743996
Inactive Date:	12/16/2013
Create Date:	09/16/2013
Last Act Date:	12/18/2013
Mailing Name:	Not reported
Mailing Address:	6055 MAIN ST
Mailing Address 2:	Not reported
Mailing City,State,Zip:	CLAYTON, CA 94517
Owner Name:	CLAYTON COMMUNITY CHURCH
Owner Address:	6055 MAIN ST
Owner Address 2:	Not reported
Owner City,State,Zip:	CLAYTON, CA 94517
Contact Name:	WILL WEISS
Contact Address:	6055 MAIN ST
Contact Address 2:	Not reported
City,State,Zip:	CLAYTON, CA 94517

NAICS:

EPA ID:	CAC002743996
Create Date:	2013-09-16 10:04:14
NAICS Code:	81311
NAICS Description:	Religious Organizations
Issued EPA ID Date:	2013-09-16 10:04:14
Inactive Date:	2013-12-16 10:04:14
Facility Name:	CLAYTON COMMUNITY CHURCH
Facility Address:	1027 PINE HOLLOW CT
Facility Address 2:	Not reported

CLAYTON COMMUNITY CHURCH (Continued) **S117301118**

Facility City: CLAYTON
Facility County: 07
Facility State: CA
Facility Zip: 945171149

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2 **MIKE AIELLO** **RCRA NonGen / NLR** **1025837248**
NW **5862 FOUR OAKS** **CAC003016838**
1/8-1/4 **CLAYTON, CA 94517**
0.133 mi.
704 ft.

Relative:
Lower

Actual:
439 ft.

RCRA NonGen / NLR:
Date form received by agency: 2019-05-28 00:00:00.0
Facility name: MIKE AIELLO
Facility address: 5862 FOUR OAKS
CLAYTON, CA 94517
EPA ID: CAC003016838
Contact: MIKE AIELLO
Contact address: 5862 FOUR OAKS
CLAYTON, CA 94517
Contact country: Not reported
Contact telephone: 925-348-2298
Contact email: ALEJANDRAMALDONADO@ALLIANCE-ENVIRO.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: MIKE AIELLO
Owner/operator address: 5862 FOUR OAKS
CLAYTON, CA 94517
Owner/operator country: Not reported
Owner/operator telephone: 925-348-2298
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: MIKE AIELLO
Owner/operator address: 5862 FOUR OAKS
CLAYTON, CA 94517
Owner/operator country: Not reported
Owner/operator telephone: 925-348-2298
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No

MIKE AIELLO (Continued) **1025837248**

Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	Yes
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

---

3 **CITY OF CLAYTON** **RCRA NonGen / NLR** **1024784342**
NNW **5919 CLAYTON RD** **CAH111000303**
1/8-1/4 **CLAYTON, CA 94517**
0.138 mi.
731 ft.

Relative:
Lower

Actual:
404 ft.

RCRA NonGen / NLR:

Date form received by agency:	1994-08-10 00:00:00.0
Facility name:	CITY OF CLAYTON
Facility address:	5919 CLAYTON RD CLAYTON, CA 94517-0000
EPA ID:	CAH111000303
Mailing address:	PO BOX 280 CLAYTON, CA 94517-0000
Contact:	RANDALL HATCH
Contact address:	PO BOX 280 CLAYTON, CA 94517-0000
Contact country:	Not reported
Contact telephone:	510-672-6690
Contact email:	Not reported
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	CITY OF CLAYTON
Owner/operator address:	PO BOX 280 CLAYTON, CA 94517
Owner/operator country:	Not reported
Owner/operator telephone:	510-672-6690
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	RANDALL HATCH
Owner/operator address:	PO BOX 280 CLAYTON, CA 94517

CITY OF CLAYTON (Continued) **1024784342**

Owner/operator country:	Not reported
Owner/operator telephone:	510-672-6690
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

A4
East
1/8-1/4
0.195 mi.
1027 ft.

Relative: Lower

Actual: 402 ft.

PACIFIC BELL
6991 HIGH STREET
CLAYTON, CA 94517

Site 1 of 4 in cluster A

RCRA-LQG **1000251172**
CERS HAZ WASTE **CAT080020050**
SWEEPS UST
HIST UST
CERS TANKS
CONTRA COSTA CO. SITE LIST
CERS

RCRA-LQG:

Date form received by agency:	1981-01-19 00:00:00.0
Facility name:	PACIFIC BELL
Facility address:	6991 HIGH STREET CLAYTON, CA 94517
EPA ID:	CAT080020050
Mailing address:	2 NORTH SECOND ST ROOM 1125 SAN JOSE, CA 95113
Contact:	ENVIRONMENTAL MANAGER
Contact address:	6991 HIGH STREET CLAYTON, CA 94517
Contact country:	US
Contact telephone:	408-491-6029
Contact email:	Not reported
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous

PACIFIC BELL (Continued) **1000251172**

waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:
- Owner/operator name: THE PACIFIC TELEPHONE AND TELEGRAPH CO
- Owner/operator address: NOT REQUIRED
  NOT REQUIRED, ME 99999
- Owner/operator country: Not reported
- Owner/operator telephone: 415-555-1212
- Owner/operator email: Not reported
- Owner/operator fax: Not reported
- Owner/operator extension: Not reported
- Legal status: Private
- Owner/Operator Type: Owner
- Owner/Op start date: Not reported
- Owner/Op end date: Not reported

Handler Activities Summary:
- U.S. importer of hazardous waste: No
- Mixed waste (haz. and radioactive): No
- Recycler of hazardous waste: No
- Transporter of hazardous waste: Yes
- Treater, storer or disposer of HW: No
- Underground injection activity: No
- On-site burner exemption: No
- Furnace exemption: No
- Used oil fuel burner: No
- Used oil processor: No
- User oil refiner: No
- Used oil fuel marketer to burner: No
- Used oil Specification marketer: No
- Used oil transfer facility: No
- Used oil transporter: No

Violation Status: No violations found

CERS HAZ WASTE:
- Name: AT&T CALIFORNIA - W1202
- Address: 6191 HIGH ST
- City,State,Zip: CLAYTON, CA 94517
- Site ID: 433329
- CERS ID: 10006066
- CERS Description: Hazardous Waste Generator

SWEEPS UST:
- Name: PACIFIC BELL FLEET
- Address: 6191 HIGH ST
- City: CLAYTON
- Status: Active
- Comp Number: 16444
- Number: 1

PACIFIC BELL (Continued) **1000251172**

Board Of Equalization: 44-001027
Referral Date: 11-15-91
Action Date: 11-15-91
Created Date: 07-22-88
Owner Tank Id: 175
SWRCB Tank Id: 07-000-016444-000001
Tank Status: A
Capacity: 2000
Active Date: 11-15-91
Tank Use: M.V. FUEL
STG: P
Content: DIESEL
Number Of Tanks: 1

HIST UST:
Name: PACIFIC BELL (W1-202)
Address: 6191 HIGH STREET
City,State,Zip: CLAYTON, CA 94517
File Number: 00022D95
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00022D95.pdf
Region: STATE
Facility ID: 00000016444
Facility Type: Other
Other Type: PHONE CO.
Contact Name: E.J. KOEHLER
Telephone: 4155426758
Owner Name: PACIFIC BELL
Owner Address: 370 THIRD STREET
Owner City,St,Zip: SAN FRANCISCO, CA 94107
Total Tanks: 0001

Tank Num: 001
Container Num: D-78-2K
Year Installed: 1978
Tank Capacity: 00002000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: None

Click here for Geo Tracker PDF:

CERS TANKS:
Name: AT&T CALIFORNIA - W1202
Address: 6191 HIGH ST
City,State,Zip: CLAYTON, CA 94517
Site ID: 433329
CERS ID: 10006066
CERS Description: Underground Storage Tank

CONTRA COSTA CO. SITE LIST:
Name: AT&T CALIFORNIA - W1202
Address: 6191 HIGH ST
City: CLAYTON
Facility ID: FA0031838
Billing Status: ACTIVE, BILLABLE

PACIFIC BELL (Continued) **1000251172**

Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HMBP: >10K-100K LBS, 0-19 EMPLOYEES
Region: CONTRA COSTA
Cupa Number: 716444

Name: AT&T CALIFORNIA - W1202
Address: 6191 HIGH ST
City: CLAYTON
Facility ID: FA0031838
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: HWG: REPORTED ZERO
Region: CONTRA COSTA
Cupa Number: 716444

Name: AT&T CALIFORNIA - W1202
Address: 6191 HIGH ST
City: CLAYTON
Facility ID: FA0031838
Billing Status: ACTIVE, BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 716444

CERS:
Name: AT&T CALIFORNIA - W1202
Address: 6191 HIGH ST
City,State,Zip: CLAYTON, CA 94517
Site ID: 433329
CERS ID: 10006066
CERS Description: Chemical Storage Facilities

Violations:
Site ID: 433329
Site Name: AT&T California - W1202
Violation Date: 05-09-2019
Citation: 23 CCR 16 2712(b)(1)(G) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(G)
Violation Description: Failure to comply with one or more of the following overfill prevention equipment requirements: Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm at least five minutes before the tank overfills; or Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling. Install/retrofit overfill prevention equipment that does not use flow restrictors on vent piping to meet overfill prevention equipment requirements when the overfill prevention equipment is installed, repaired, or replaced on and after October 1,- 2018. For USTs installed before October 1, 2018, perform an inspection by October 13, 2018 and every 36 months thereafter. For USTs installed on and after October- 1,- 2018, perform an inspection

PACIFIC BELL (Continued) **1000251172**

at installation and every 36 months thereafter. Inspected within 30 days after a repair to the overfill prevention equipment. Inspected using an applicable manufacturer guidelines, industry codes, engineering standards, or a method approved by a professional engineer. Inspected by a certified UST service technician. Maintain records of overfill prevention equipment inspection for 36 months.

Violation Notes: OBSERVATION: The technician was on site on October 15, 2018 and unable to inspect the UST overfill prevention equipment. The technician was on site on May 9, 2019 and able to inspect the UST overfill prevention equipment. The flapper valve was set at 97%. CORRECTIVE ACTION: The business must maintain and test the overfill prevention system to comply with the new requirements. The business must submit verification to CCHSHMP.
Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Site ID: 433329
Site Name: AT&T California - W1202
Violation Date: 09-10-2019
Citation: 23 CCR 16 2712(b)(1)(F) - California Code of Regulations, Title 23, Chapter 16, Section(s) 2712(b)(1)(F)
Violation Description: "Failure to conduct secondary containment testing, or one or more of the following requirements: Perform the test of the secondary containment system upon installation, within six months of installation and every 36 months thereafter. Perform the test of a secondary containment component within 30 days of a repair or discontinuing vacuum, pressure or hydrostatic monitoring. Use a procedure that demonstrates the system works as well as at installation. Use applicable manufacturer guidelines, industry codes, engineering standard, or professional engineer approval. Performed by a certified service technician. Maintain records of secondary containment testing for 36 months."
Violation Notes: Observation: Facility has failed to do one of the following: 1) Conduct tightness testing of secondary containment at least once every 36 months 2) Underground storage tank owners and operators shall submit a copy of the G Secondary Containment Testing Report FormG to the local agency within 30 days of the completion of the secondary containment test. 3) The owner or operator shall notify the local agency at least 48 hours prior to conducting the secondary containment test. Corrective Action: Notify CCHSHMP of the Secondary Containment Testing date within 48 hours notice and/or Submit a completed G Secondary Containment Testing Report FormG to CCHSHMP within 30 days of the testing date.
Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Site ID: 433329
Site Name: AT&T California - W1202
Violation Date: 07-01-2019
Citation: HSC 6.7 25284 - California Health and Safety Code, Chapter 6.7, Section(s) 25284
Violation Description: Failure to obtain a valid permit to operate from the UPA including but not limited to unpaid permit fees.
Violation Notes: Observation: As of September 6, 2019, the subject facility does not possess a current and valid CUPA Permit. Corrective Action: 1) Conduct

PACIFIC BELL (Continued) **1000251172**

tightness testing of secondary containment at least once every 36 months 1) Immediately Remit payment for all outstanding Certified Unified Program Agency permit fees to CCHS Finance Department (925) 957-5520. and/or 2) Immediately address and correct all outstanding Underground Storage Tank violations and/or any Class I violations in other CUPA programs. A list of outstanding violations is enclosed, if applicable.

Violation Division: Contra Costa County Health Services Department
Violation Program: UST
Violation Source: CERS

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-09-2019
Violations Found: Yes
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-23-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Other/Unknown
Eval Date: 09-10-2019
Violations Found: Yes
Eval Type: Other, not routine, done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-16-2016
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-15-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

PACIFIC BELL (Continued) **1000251172**

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-27-2013
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	09-24-2015
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-16-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Other/Unknown
Eval Date:	12-17-2013
Violations Found:	No
Eval Type:	Other, not routine, done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	UST
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-10-2015
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HMRRP
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	06-19-2014
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	Not reported
Eval Division:	Contra Costa County Health Services Department
Eval Program:	HW
Eval Source:	CERS

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	12-16-2016
Violations Found:	No

PACIFIC BELL (Continued) **1000251172**

Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-09-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-15-2018
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-25-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-10-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-10-2015
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department
Eval Program: UST
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 06-19-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Contra Costa County Health Services Department

PACIFIC BELL (Continued) **1000251172**

Eval Program: HMRRP
Eval Source: CERS

Enforcement Action:
Site ID: 433329
Site Name: AT&T California - W1202
Site Address: 6191 HIGH ST
Site City: CLAYTON
Site Zip: 94517
Enf Action Date: 05-09-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Site ID: 433329
Site Name: AT&T California - W1202
Site Address: 6191 HIGH ST
Site City: CLAYTON
Site Zip: 94517
Enf Action Date: 09-10-2019
Enf Action Type: Notice of Violation (Unified Program)
Enf Action Description: Notice of Violation Issued by the Inspector at the Time of Inspection
Enf Action Notes: Not reported
Enf Action Division: Contra Costa County Health Services Department
Enf Action Program: UST
Enf Action Source: CERS

Coordinates:
Site ID: 433329
Facility Name: AT&T California - W1202
Env Int Type Code: HMBP
Program ID: 10006066
Coord Name: Not reported
Ref Point Type Desc: Unknown
Latitude: 37.939470
Longitude: -121.933790

Affiliation:
Affiliation Type Desc: Environmental Contact
Entity Name: AT&T EH&S Hotline - Option #1
Entity Title: Not reported
Affiliation Address: 308 S. Akard St., 17th Floor
Affiliation City: Dallas
Affiliation State: TX
Affiliation Country: Not reported
Affiliation Zip: 75202
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: 308 S. Akard St., 17th Floor
Affiliation City: Dallas

PACIFIC BELL (Continued) **1000251172**

Affiliation State:	TX
Affiliation Country:	Not reported
Affiliation Zip:	75202
Affiliation Phone:	Not reported
Affiliation Type Desc:	Operator
Entity Name:	AT&T California
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(800) 566-9347
Affiliation Type Desc:	Identification Signer
Entity Name:	Jeremy McGrue
Entity Title:	National EPCRA Manager
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Legal Owner
Entity Name:	Pacific Bell Telephone Company dba AT&T California
Entity Title:	Not reported
Affiliation Address:	308 S. Akard St., 17th Floor
Affiliation City:	Dallas
Affiliation State:	TX
Affiliation Country:	United States
Affiliation Zip:	75202
Affiliation Phone:	(214) 464-1712
Affiliation Type Desc:	UST Tank Operator
Entity Name:	Pacific Bell Telephone Company dba AT&T California
Entity Title:	Not reported
Affiliation Address:	P.O. 5095, ROOM 4W200M
Affiliation City:	San Ramon
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94583
Affiliation Phone:	(800) 566-9347
Affiliation Type Desc:	UST Tank Owner
Entity Name:	Pacific Bell Telephone Company dba AT&T California
Entity Title:	Not reported
Affiliation Address:	308 S. Akard St. Room 1700
Affiliation City:	Dallas
Affiliation State:	TX
Affiliation Country:	United States
Affiliation Zip:	75150
Affiliation Phone:	(800) 566-9347
Affiliation Type Desc:	Document Preparer
Entity Name:	Peter Burnell, Sigma Consultants, Inc.

PACIFIC BELL (Continued) **1000251172**

Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Parent Corporation
Entity Name:	Pacific Bell Telephone Company dba AT&T California
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	UST Property Owner Name
Entity Name:	Pacific Bell Telephone Company dba AT&T California
Entity Title:	Not reported
Affiliation Address:	P.O. 5095, ROOM 4W200M
Affiliation City:	San Ramon
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94583
Affiliation Phone:	(800) 566-9347
Affiliation Type Desc:	CUPA District
Entity Name:	Contra Costa County Health Services Department
Entity Title:	Not reported
Affiliation Address:	4585 Pacheco BlvdSuite 100
Affiliation City:	Martinez
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	94553
Affiliation Phone:	(925) 335-3200
Affiliation Type Desc:	UST Permit Applicant
Entity Name:	Sarah Bullock
Entity Title:	Authorized Agent to AT&T
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(800) 566-9347

A5
East
1/8-1/4
0.195 mi.
1027 ft.

PACIFIC BELL/CLAYTON W1202 — **UST** — **U003784025**
6191 HIGH ST — **N/A**
CLAYTON, CA 94517

Site 2 of 4 in cluster A

Relative:
Lower

Actual:
402 ft.

UST:

Name:	AT&T CALIFORNIA - W1202
Address:	6191 HIGH ST
City,State,Zip:	CLAYTON, CA 94517
Facility ID:	07-000-716444
Permitting Agency:	Contra Costa County Health Services Department
Latitude:	37.939476
Longitude:	-121.9338

Name:	PACIFIC BELL/CLAYTON W1202
Address:	6191 HIGH ST
City,State,Zip:	CLAYTON, CA 94517
Facility ID:	716444
Permitting Agency:	CONTRA COSTA COUNTY
Latitude:	37.940819
Longitude:	-121.932439

A6
ESE
1/8-1/4
0.198 mi.
1045 ft.

JORDAN, WILLIAM — **RCRA NonGen / NLR** — **1025852813**
6450 MARSH CREEK RD — **CAC003032994**
CLAYTON, CA 94517

Site 3 of 4 in cluster A

Relative:
Lower

Actual:
417 ft.

RCRA NonGen / NLR:

Date form received by agency:	2019-09-09 00:00:00.0
Facility name:	JORDAN, WILLIAM
Facility address:	6450 MARSH CREEK RD CLAYTON, CA 94517-1442
EPA ID:	CAC003032994
Contact:	JORDAN, WILLIAM
Contact address:	6450 MARSH CREEK RD CLAYTON, CA 94517-1442
Contact country:	Not reported
Contact telephone:	925-872-7249
Contact email:	MICKIEL@PWSEI.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	JORDAN, WILLIAM
Owner/operator address:	6450 MARSH CREEK RD CLAYTON, CA 94517
Owner/operator country:	Not reported
Owner/operator telephone:	925-872-7249
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

JORDAN, WILLIAM (Continued) **1025852813**

Owner/operator name: JORDAN, WILLIAM
Owner/operator address: 6450 MARSH CREEK RD
CLAYTON, CA 94517
Owner/operator country: Not reported
Owner/operator telephone: 925-872-7249
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Not reported
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

7
NNW
1/8-1/4
0.206 mi.
1087 ft.

SHUCK, NICHOLAS **RCRA NonGen / NLR** **1024746428**
5954 WALLACE DRIVE **CAC002966200**
CLAYTON, CA 94517

Relative:
Lower

Actual:
380 ft.

RCRA NonGen / NLR:
Date form received by agency: 2018-06-12 00:00:00.0
Facility name: SHUCK, NICHOLAS
Facility address: 5954 WALLACE DRIVE
CLAYTON, CA 94517
EPA ID: CAC002966200
Contact: SHUCK, NICHOLAS
Contact address: 5954 WALLACE DRIVE
CLAYTON, CA 94517
Contact country: Not reported
Contact telephone: 925-785-6584
Contact email: MICKIEL@PWSEI.COM
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: SHUCK, NICHOLAS
Owner/operator address: 5954 WALLACE DRIVE
CLAYTON, CA 94517

SHUCK, NICHOLAS (Continued) **1024746428**

Owner/operator country: Not reported
Owner/operator telephone: 925-785-6584
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: SHUCK, NICHOLAS
Owner/operator address: 5954 WALLACE DRIVE
CLAYTON, CA 94517
Owner/operator country: Not reported
Owner/operator telephone: 925-785-6584
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

A8 **DIABLO VALLEY HORSE RANCH** **LUST** **S101294070**
East **6455 MARSH CREEK RD** **Cortese** **N/A**
1/8-1/4 **CLAYTON, CA 94517** **HIST CORTESE**
0.220 mi. **CONTRA COSTA CO. SITE LIST**
1160 ft. **Site 4 of 4 in cluster A** **CERS**

Relative:
Lower

Actual:
405 ft.

LUST REG 2:
Region: 2
Facility Id: 07-0117
Facility Status: Case Closed
Case Number: 70893
How Discovered: Tank Closure
Leak Cause: Structure Failure
Leak Source: Tank
Date Leak Confirmed: Not reported
Oversight Program: LUST

DIABLO VALLEY HORSE RANCH (Continued) **S101294070**

Prelim. Site Assesment Wokplan Submitted: Not reported
Preliminary Site Assesment Began: Not reported
Pollution Characterization Began: Not reported
Pollution Remediation Plan Submitted: Not reported
Date Remediation Action Underway: Not reported
Date Post Remedial Action Monitoring Began: Not reported

LUST:
Name: DIABLO VALLEY HORSE RANCH
Address: 6455 MARSH CREEK RD
City,State,Zip: CLAYTON, CA 94517
Lead Agency: SAN FRANCISCO BAY RWQCB (REGION 2)
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0601300109
Global Id: T0601300109
Latitude: 37.9406033
Longitude: -121.9334646
Status: Completed - Case Closed
Status Date: 08/17/1994
Case Worker: KEB
RB Case Number: 07-0117
Local Agency: CONTRA COSTA COUNTY
File Location: Not reported
Local Case Number: 70893
Potential Media Affect: Under Investigation
Potential Contaminants of Concern: Diesel
Site History: Not reported

LUST:
Global Id: T0601300109
Contact Type: Regional Board Caseworker
Contact Name: KEVIN BROWN
Organization Name: SAN FRANCISCO BAY RWQCB (REGION 2)
Address: 1515 CLAY STREET, SUITE 1400
City: OAKLAND
Email: kebrown@waterboards.ca.gov
Phone Number: Not reported

Global Id: T0601300109
Contact Type: Local Agency Caseworker
Contact Name: SUE LOYD
Organization Name: CONTRA COSTA COUNTY
Address: 4333 PACHECO BLVD.
City: MARTINEZ
Email: sloyd@hsd.co.contra-costa.ca.us
Phone Number: Not reported

LUST:
Global Id: T0601300109
Action Type: Other
Date: 12/15/1989
Action: Leak Discovery

Global Id: T0601300109
Action Type: Other
Date: 12/15/1989
Action: Leak Stopped

DIABLO VALLEY HORSE RANCH (Continued) **S101294070**

Global Id: T0601300109
Action Type: Other
Date: 12/15/1989
Action: Leak Reported

Global Id: T0601300109
Action Type: ENFORCEMENT
Date: 08/17/1994
Action: Closure/No Further Action Letter

LUST:
Global Id: T0601300109
Status: Open - Case Begin Date
Status Date: 12/15/1989

Global Id: T0601300109
Status: Completed - Case Closed
Status Date: 08/17/1994

CORTESE:
Name: DIABLO VALLEY HORSE RANCH
Address: 6455 MARSH CREEK RD
City,State,Zip: CLAYTON, CA 94517
Region: CORTESE
Envirostor Id: Not reported
Global ID: T0601300109
Site/Facility Type: LUST CLEANUP SITE
Cleanup Status: COMPLETED - CASE CLOSED
Status Date: Not reported
Site Code: Not reported
Latitude: Not reported
Longitude: Not reported
Owner: Not reported
Enf Type: Not reported
Swat R: Not reported
Flag: active
Order No: Not reported
Waste Discharge System No: Not reported
Effective Date: Not reported
Region 2: Not reported
WID Id: Not reported
Solid Waste Id No: Not reported
Waste Management Uit Name: Not reported
File Name: Active Open

HIST CORTESE:
edr_fname: DIABLO VALLEY HORSE RANCH
edr_fadd1: 6455 MARSH CREEK
City,State,Zip: CLAYTON, CA 94517
Region: CORTESE
Facility County Code: 7
Reg By: LTNKA
Reg Id: 07-0117

DIABLO VALLEY HORSE RANCH (Continued) **S101294070**

CONTRA COSTA CO. SITE LIST:
Name: DIABLO VALLEY HORSE RANCH
Address: 6455 MARSH CREEK RD
City: CLAYTON
Facility ID: FA0033405
Billing Status: INACTIVE, NON-BILLABLE
Program Status: CONTRA COSTA CO. SITE LIST
Program/Elements: UNDERGROUND STORAGE TANK SITE
Region: CONTRA COSTA
Cupa Number: 770893

CERS:
Name: DIABLO VALLEY HORSE RANCH
Address: 6455 MARSH CREEK RD
City,State,Zip: CLAYTON, CA 94517
Site ID: 238147
CERS ID: T0601300109
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: SUE LOYD - CONTRA COSTA COUNTY
Entity Title: Not reported
Affiliation Address: 4333 PACHECO BLVD.
Affiliation City: MARTINEZ
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Regional Board Caseworker
Entity Name: KEVIN BROWN - SAN FRANCISCO BAY RWQCB (REGION 2)
Entity Title: Not reported
Affiliation Address: 1515 CLAY STREET, SUITE 1400
Affiliation City: OAKLAND
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

9
SW
1/8-1/4
0.242 mi.
1276 ft.

TERRI HIGHSMITH **RCRA NonGen / NLR** **1025856827**
5849 MITCHELL CANYON CT **CAC003037185**
CLAYTON, CA 94517

Relative:
Higher

Actual:
490 ft.

RCRA NonGen / NLR:
Date form received by agency: 2019-10-04 00:00:00.0
Facility name: TERRI HIGHSMITH
Facility address: 5849 MITCHELL CANYON CT
CLAYTON, CA 94517-1334
EPA ID: CAC003037185
Contact: TERRI HIGHSMITH
Contact address: 5849 MITCHELL CANYON CT
CLAYTON, CA 94517-1334
Contact country: Not reported

TERRI HIGHSMITH (Continued) **1025856827**

Contact telephone: 213-399-9292
Contact email: HAYWARD.RECEPTIONIST@SYNERGYCOMPANIES.OR
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: TERRI HIGHSMITH
Owner/operator address: 5849 MITCHELL CANYON CT
CLAYTON, CA 94517
Owner/operator country: Not reported
Owner/operator telephone: 213-399-9292
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: TERRI HIGHSMITH
Owner/operator address: 5849 MITCHELL CANYON CT
CLAYTON, CA 94517
Owner/operator country: Not reported
Owner/operator telephone: 213-399-9292
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Other
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Not reported
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

Count: 0 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/03/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 11/04/2019
Date Data Arrived at EDR: 11/13/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 76

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/14/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/19/2019
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 78

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 01/27/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 01/27/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/10/2020
Date Data Arrived at EDR: 02/11/2020
Date Made Active in Reports: 04/20/2020
Number of Days to Update: 69

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 05/12/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/02/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/15/2019
Date Data Arrived at EDR: 12/17/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 55
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/10/2019
Date Data Arrived at EDR: 12/05/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 67
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/04/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 85
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 72
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 1
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 02/01/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 03/19/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 71

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

MILITARY UST SITES: Military UST Sites (GEOTRACKER)
Military ust sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases
UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/26/2020
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 72

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/02/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/10/2019
Date Data Arrived at EDR: 12/05/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 67

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/04/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 85

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 01/27/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 72
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/18/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/05/2020
Number of Days to Update: 73
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 7
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 11/15/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/23/2020
Number of Days to Update: 69

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 05/01/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 01/27/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 05/14/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/22/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 70

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 12/19/2019
Date Data Arrived at EDR: 12/23/2019
Date Made Active in Reports: 02/21/2020
Number of Days to Update: 60

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 08/01/2019
Date Data Arrived at EDR: 08/02/2019
Date Made Active in Reports: 10/11/2019
Number of Days to Update: 70

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

CERS TANKS: California Environmental Reporting System (CERS) Tanks
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/22/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 70

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 03/03/2020
Date Data Arrived at EDR: 03/05/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 70

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/05/2019
Date Data Arrived at EDR: 12/06/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 70

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/24/2019
Date Data Arrived at EDR: 01/22/2020
Date Made Active in Reports: 03/30/2020
Number of Days to Update: 68

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 1

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/28/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 85

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/06/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/19/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 05/04/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/08/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/20/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 79

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 10/23/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 84

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/05/2019
Date Data Arrived at EDR: 11/20/2019
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 149

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/15/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 34

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019
Date Data Arrived at EDR: 10/11/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 70

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 10/25/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 82

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 42
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/05/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/01/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/08/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/01/2019
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/17/2020
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 49

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 04/29/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 03/31/2020
Date Data Arrived at EDR: 04/01/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 50

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/11/2020
Date Data Arrived at EDR: 02/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 86

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 02/28/2020
Date Made Active in Reports: 05/22/2020
Number of Days to Update: 84

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/05/2020
Date Data Arrived at EDR: 03/06/2020
Date Made Active in Reports: 05/29/2020
Number of Days to Update: 84

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 86

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites
A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74
Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/03/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/05/2020
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 59
Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/07/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 85
Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/19/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6
Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/05/2020
Number of Days to Update: 73
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing
list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64
Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Varies

CUPA SAN FRANCISCO CO: CUPA Facility Listing
Cupa facilities

Date of Government Version: 02/03/2020
Date Data Arrived at EDR: 02/04/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 65

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 12/04/2019
Date Data Arrived at EDR: 01/29/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 71

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Annually

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 01/31/2020
Date Data Arrived at EDR: 01/31/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 69

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 02/27/2020
Date Data Arrived at EDR: 02/28/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 69

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 59

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/20/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 8

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/03/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/23/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 69

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/19/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 04/29/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 05/29/2019
Date Made Active in Reports: 07/22/2019
Number of Days to Update: 54

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/15/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 65

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 65

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/06/2020
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/05/2020
Number of Days to Update: 58

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 02/12/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 72
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 02/10/2020
Date Data Arrived at EDR: 02/11/2020
Date Made Active in Reports: 04/20/2020
Number of Days to Update: 69
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 05/12/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 72
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 03/12/2020
Date Data Arrived at EDR: 03/13/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 69
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2
Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 11/19/2019
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 62
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9
Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13
Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 03/18/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/22/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 70

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System
The Hazardous Waste Tracking System (HWTS) is the Department of Toxic Substances Control?s data repository for hazardous waste Identification (ID) numbers and manifest information. HWTS generates reports on hazardous waste shipments for generators, transporters, and TSDFs.

Date of Government Version: 10/15/2019
Date Data Arrived at EDR: 11/14/2019
Date Made Active in Reports: 02/07/2020
Number of Days to Update: 85

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

PCS: Permit Compliance System
PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/09/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Semi-Annually

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 01/06/2020
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 59

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/20/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/01/2020
Number of Days to Update: 13

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 12/02/2019
Date Data Arrived at EDR: 12/03/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 63

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/18/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/04/2020
Date Made Active in Reports: 06/01/2020
Number of Days to Update: 89

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 04/06/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 02/14/2020
Date Data Arrived at EDR: 02/18/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 66

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 12/27/2019
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 72

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/03/2020
Date Made Active in Reports: 03/05/2020
Number of Days to Update: 62

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 10/08/2019
Date Data Arrived at EDR: 10/10/2019
Date Made Active in Reports: 12/11/2019
Number of Days to Update: 62

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/31/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/13/2019
Date Data Arrived at EDR: 11/14/2019
Date Made Active in Reports: 01/23/2020
Number of Days to Update: 70

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 05/14/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/23/2020
Date Made Active in Reports: 03/30/2020
Number of Days to Update: 67

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 01/31/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/14/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 70

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 01/15/2020
Date Data Arrived at EDR: 01/16/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 76

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/13/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 01/31/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 69

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 01/15/2020
Date Data Arrived at EDR: 01/16/2020
Date Made Active in Reports: 02/07/2020
Number of Days to Update: 22

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/13/2020
Date Data Arrived at EDR: 01/14/2020
Date Made Active in Reports: 03/24/2020
Number of Days to Update: 70

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/14/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/27/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 04/17/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/27/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/27/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/14/2020
Date Made Active in Reports: 03/24/2020
Number of Days to Update: 70

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/14/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/27/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 64

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 02/25/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 03/20/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/18/2019
Date Data Arrived at EDR: 11/20/2019
Date Made Active in Reports: 01/03/2020
Number of Days to Update: 44

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/21/2020
Date Data Arrived at EDR: 03/05/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 69

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 11/06/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 01/08/2020
Number of Days to Update: 62

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 04/13/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/05/2020
Date Data Arrived at EDR: 02/06/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 69

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 05/06/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/04/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/04/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 02/04/2020
Date Made Active in Reports: 04/10/2020
Number of Days to Update: 66

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 05/05/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 02/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/14/2019
Date Data Arrived at EDR: 12/23/2019
Date Made Active in Reports: 02/20/2020
Number of Days to Update: 59

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/31/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/14/2019
Date Data Arrived at EDR: 12/23/2019
Date Made Active in Reports: 02/21/2020
Number of Days to Update: 60

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/31/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List

Cupa facility list

Date of Government Version: 02/12/2020
Date Data Arrived at EDR: 02/13/2020
Date Made Active in Reports: 04/23/2020
Number of Days to Update: 70

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 71

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 12/26/2019
Date Data Arrived at EDR: 01/22/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 70
Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24
Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 01/08/2020
Date Data Arrived at EDR: 01/09/2020
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 57
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/12/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 02/14/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 65

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13
Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 04/22/2020
Date Data Arrived at EDR: 04/24/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 13
Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90
Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51
Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 05/26/2020
Next Scheduled EDR Contact: 09/13/2020
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/04/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 71
Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 03/11/2020
Number of Days to Update: 14

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/18/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/03/2020
Date Made Active in Reports: 03/05/2020
Number of Days to Update: 62

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 04/06/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/04/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 01/23/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/08/2020
Number of Days to Update: 66

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 03/16/2020
Date Data Arrived at EDR: 03/17/2020
Date Made Active in Reports: 05/26/2020
Number of Days to Update: 70

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 05/14/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/23/2020
Date Made Active in Reports: 03/30/2020
Number of Days to Update: 67

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 02/10/2020
Date Data Arrived at EDR: 02/11/2020
Date Made Active in Reports: 04/20/2020
Number of Days to Update: 69

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 05/14/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/26/2019
Date Data Arrived at EDR: 01/24/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 68

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/20/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/29/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 12/26/2019
Date Data Arrived at EDR: 01/24/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 68
Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 01/27/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 71
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 12/12/2019
Date Data Arrived at EDR: 01/15/2020
Date Made Active in Reports: 03/25/2020
Number of Days to Update: 70
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/20/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 01/27/2020
Date Data Arrived at EDR: 02/12/2020
Date Made Active in Reports: 04/23/2020
Number of Days to Update: 71
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 01/30/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 39
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/12/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 05/01/2019
Date Made Active in Reports: 06/21/2019
Number of Days to Update: 51

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 04/29/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 12/10/2019
Number of Days to Update: 69

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/14/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/04/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

CLAYTON COMMUNITY CHURCH
1027 PINE HOLLOW COURT
CLAYTON, CA 94517

TARGET PROPERTY COORDINATES

Latitude (North):	37.940052 - 37° 56’ 24.19’’
Longitude (West):	121.938105 - 121° 56’ 17.18’’
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	593311.1
UTM Y (Meters):	4199490.0
Elevation:	449 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5640430 CLAYTON, CA
Version Date:	2012

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

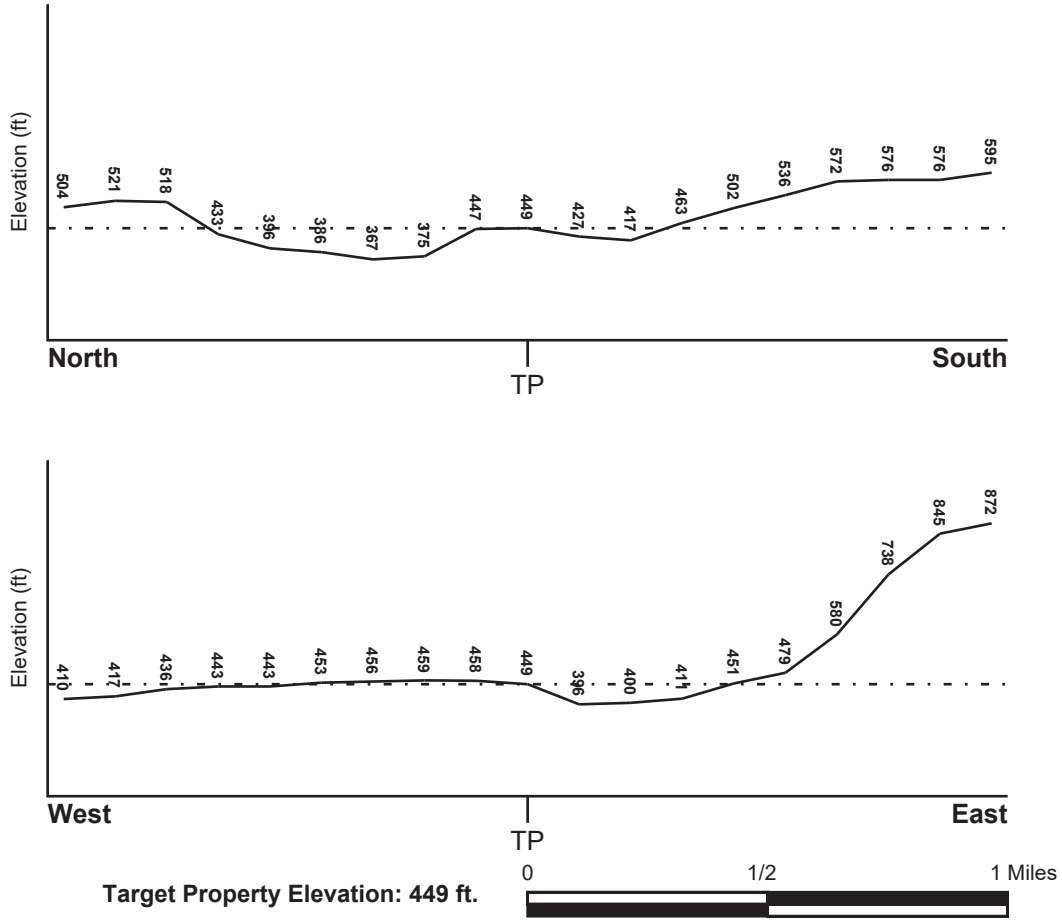
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06013C0304F	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06013C0308F	FEMA FIRM Flood data
06013C0312F	FEMA FIRM Flood data
06013C0316F	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
CLAYTON	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Mesozoic
System:	Cretaceous
Series:	Upper Cretaceous
Code:	uK *(decoded above as Era, System & Series)*

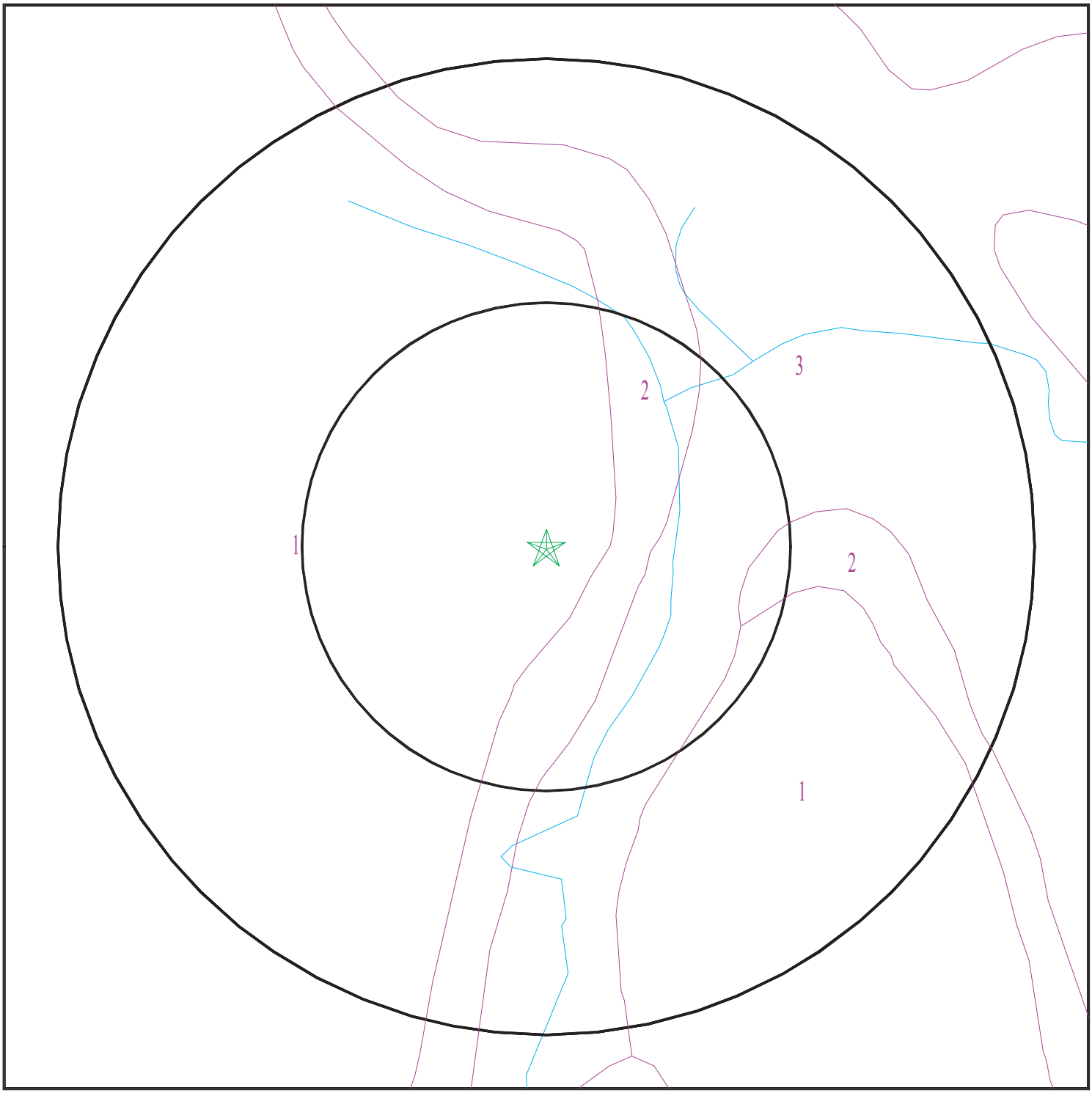
GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

*Figure not OCR compatible

SSURGO SOIL MAP - 6093006.2s



SITE NAME:	Clayton Community Church	CLIENT:	GeoCon Environmental Cons.
ADDRESS:	1027 Pine Hollow Court Clayton CA 94517	CONTACT:	Suzanne Nase
LAT/LONG:	37.940052 / 121.938105	INQUIRY #:	6093006.2s
		DATE:	June 15, 2020 6:54 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: PERKINS

Soil Surface Texture: gravelly loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 7.8 Min: 6.1
2	18 inches	59 inches	gravelly clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 7.8 Min: 6.1

Soil Map ID: 2

Soil Component Name: Perkins

Soil Surface Texture: gravelly loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	18 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Clayey Gravel	Max: 4 Min: 1.4	Max: 7.8 Min: 6.1
2	18 inches	59 inches	gravelly clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Clayey Gravel	Max: 4 Min: 1.4	Max: 7.8 Min: 6.1

Soil Map ID: 3

Soil Component Name: ZAMORA

Soil Surface Texture: silty clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	16 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 6.1
2	16 inches	72 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 6.1

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CA0706053	1/8 - 1/4 Mile ENE

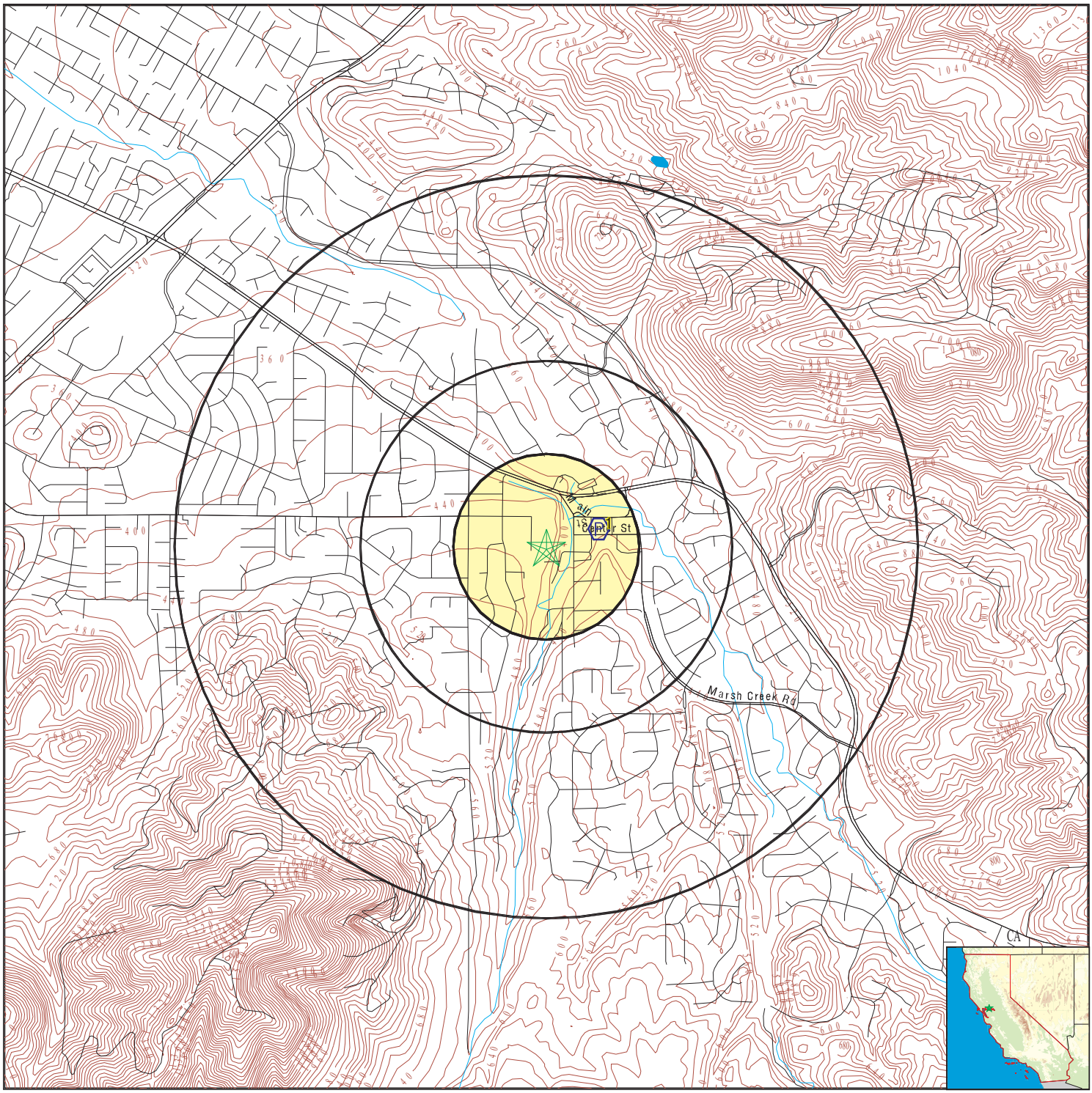
Note: PWS System location is not always the same as well location.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 6093006.2s



0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

N

*Figure not OCR compatible

SITE NAME: Clayton Community Church ADDRESS: 1027 Pine Hollow Court Clayton CA 94517 LAT/LONG: 37.940052 / 121.938105	CLIENT: GeoCon Environmental Cons. CONTACT: Suzanne Nase INQUIRY #: 6093006.2s DATE: June 15, 2020 6:54 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
ENE
1/8 - 1/4 Mile
Lower

FRDS PWS **CA0706053**

PWS ID:	CA0706053	PWS type:	System Owner/Responsible Party
PWS name:	VERNON PETERSON	PWS address:	Not Reported
PWS city:	CLAYTON	PWS state:	CA
PWS zip:	94517	PWS ID:	CA0706053
Activity status:	Active	Date system activated:	7706
Date system deactivated:	Not Reported	Retail population:	00000025
System name:	BROKEN WHEEL	System address:	VERNON PETERSON
System address:	HWY 4 & HILL AVE	System city:	OAKLEY
System state:	CA	System zip:	94561
Population served:	Under 101 Persons	Treatment:	Untreated
Latitude:	375627	Longitude:	1215604

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
94517	6	0

Federal EPA Radon Zone for CONTRA COSTA County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 94517

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.500 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX E

Clayton Community Church
1027 Pine Hollow Court
Clayton, CA 94517

Inquiry Number: 6093006.4
June 15, 2020

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

06/15/20

Site Name:

Clayton Community Church
1027 Pine Hollow Court
Clayton, CA 94517
EDR Inquiry # 6093006.4

Client Name:

GeoCon Environmental Cons.
6671 Brisa Street
Livermore, CA 94550
Contact: Suzanne Nase

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by GeoCon Environmental Cons. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# E9205-04-01
Project: Clayton Community Church

Coordinates:

Latitude: 37.940052 37° 56' 24" North
Longitude: -121.938105 -121° 56' 17" West
UTM Zone: Zone 10 North
UTM X Meters: 593308.70
UTM Y Meters: 4199695.36
Elevation: 449.53' above sea level

Maps Provided:

2012
1994
1980
1973
1968
1953
1943
1912
1898
1896

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

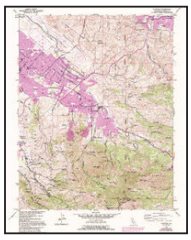
2012 Source Sheets



Clayton

7.5-minute, 24000

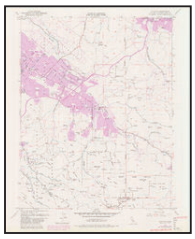
1994 Source Sheets



Clayton

7.5-minute, 24000
Aerial Photo Revised 1979

1980 Source Sheets



Clayton

7.5-minute, 24000
Aerial Photo Revised 1979

1973 Source Sheets



Clayton

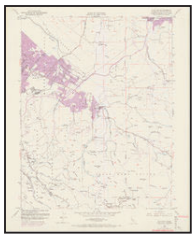
7.5-minute, 24000
Aerial Photo Revised 1973

*Figure not OCR compatible

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1968 Source Sheets



Clayton

7.5-minute, 24000
Aerial Photo Revised 1968

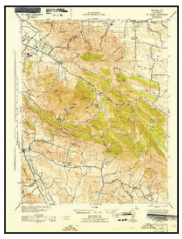
1953 Source Sheets



Clayton

7.5-minute, 24000
Aerial Photo Revised 1949

1943 Source Sheets



Mt. Diablo

15-minute, 62500
Aerial Photo Revised 1937

*Figure not OCR compatible

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1898 Source Sheets



Mt. Diablo

15-minute, 62500

1896 Source Sheets



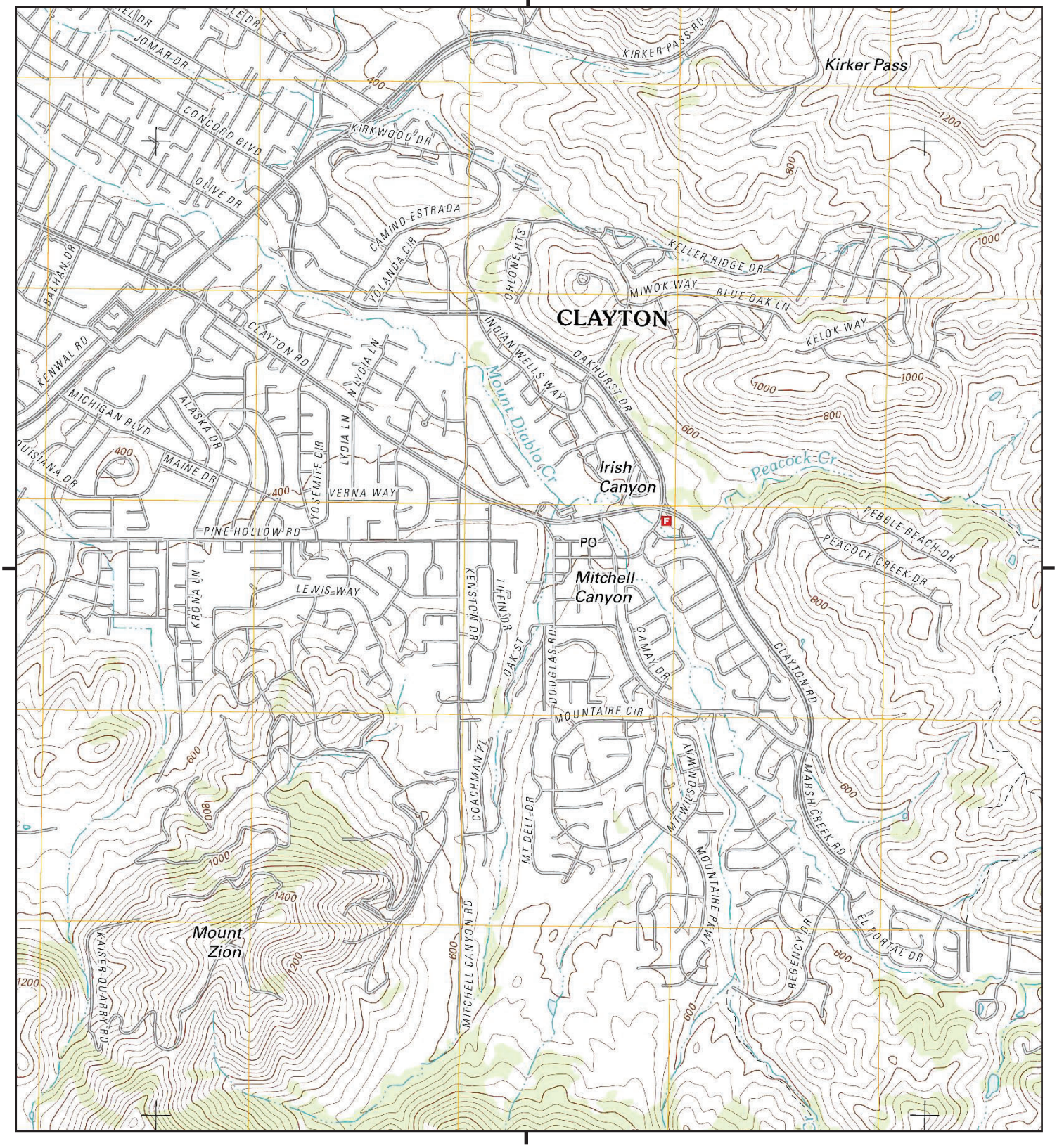
Mt. Diablo

15-minute, 62500

*Figure not OCR compatible

Historical Topo Map

2012



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W E
SW S SE

TP, Clayton, 2012, 7.5-minute

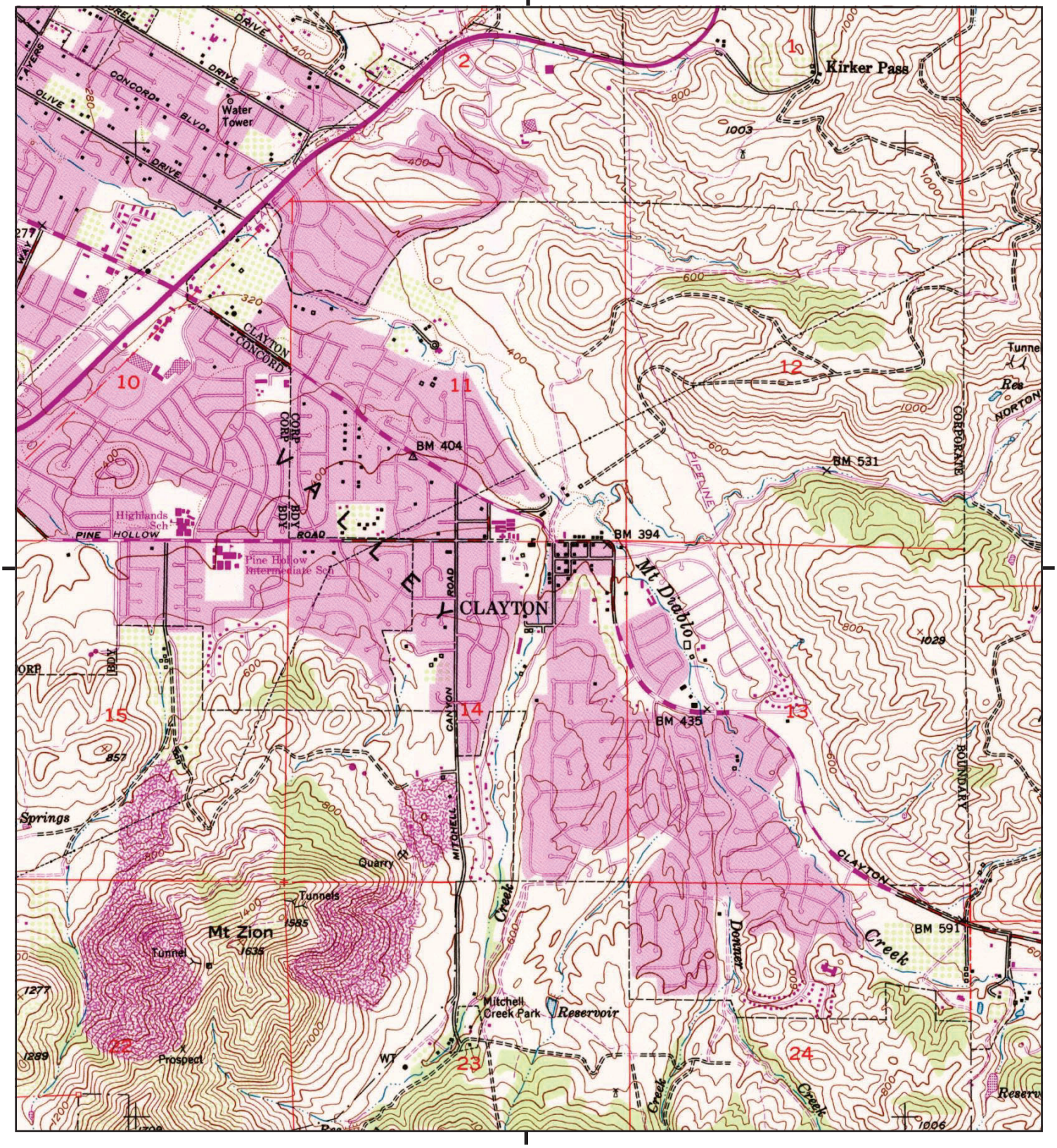
SITE NAME: Clayton Community Church
ADDRESS: 1027 Pine Hollow Court
Clayton, CA 94517
CLIENT: GeoCon Environmental Cons.

N

*Figure not OCR compatible

Historical Topo Map

1994



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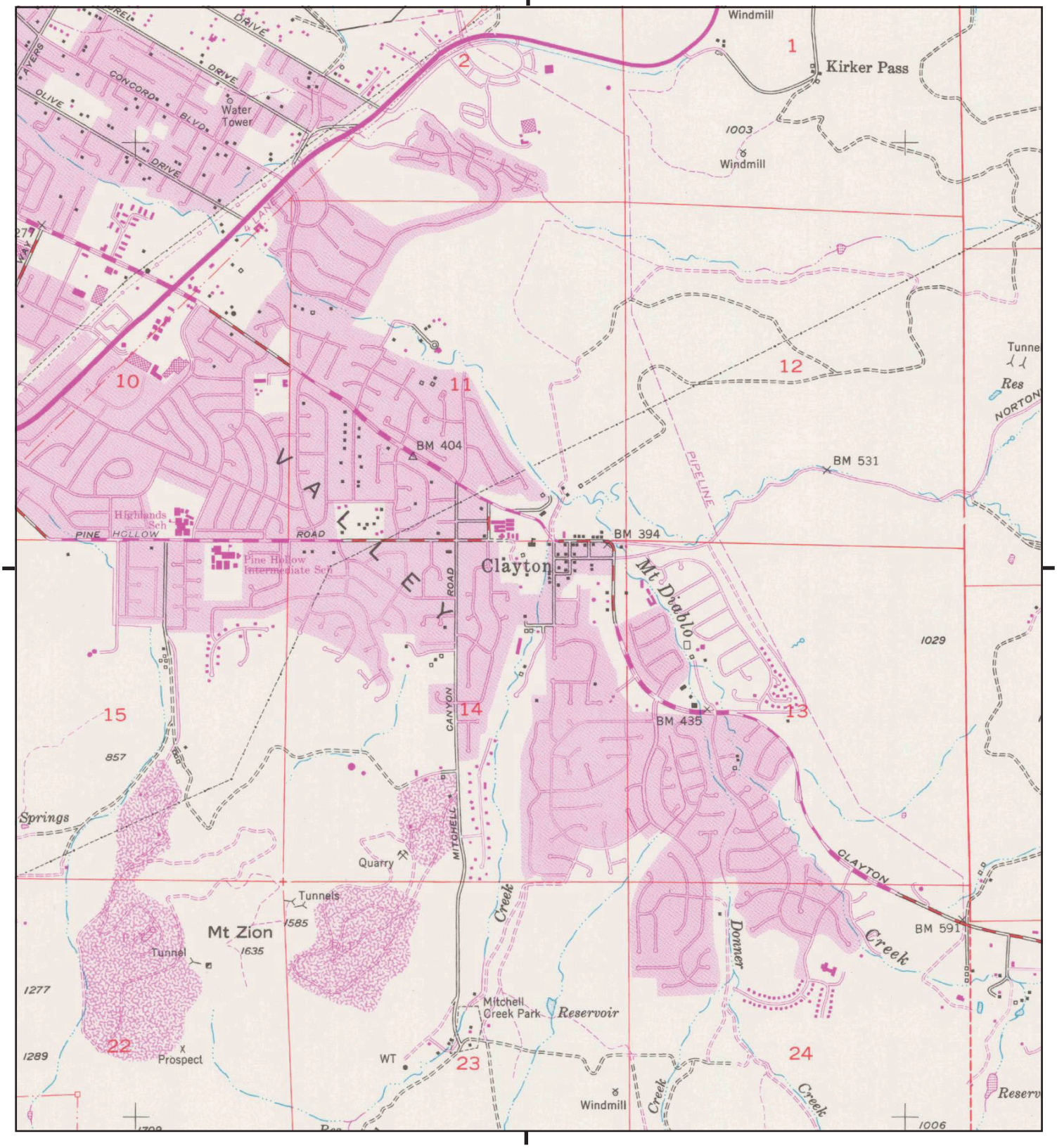
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SW S SE

TP, Clayton, 1994, 7.5-minute

SITE NAME: Clayton Community Church
ADDRESS: 1027 Pine Hollow Court
Clayton, CA 94517
CLIENT: GeoCon Environmental Cons.

N

*Figure not OCR compatible



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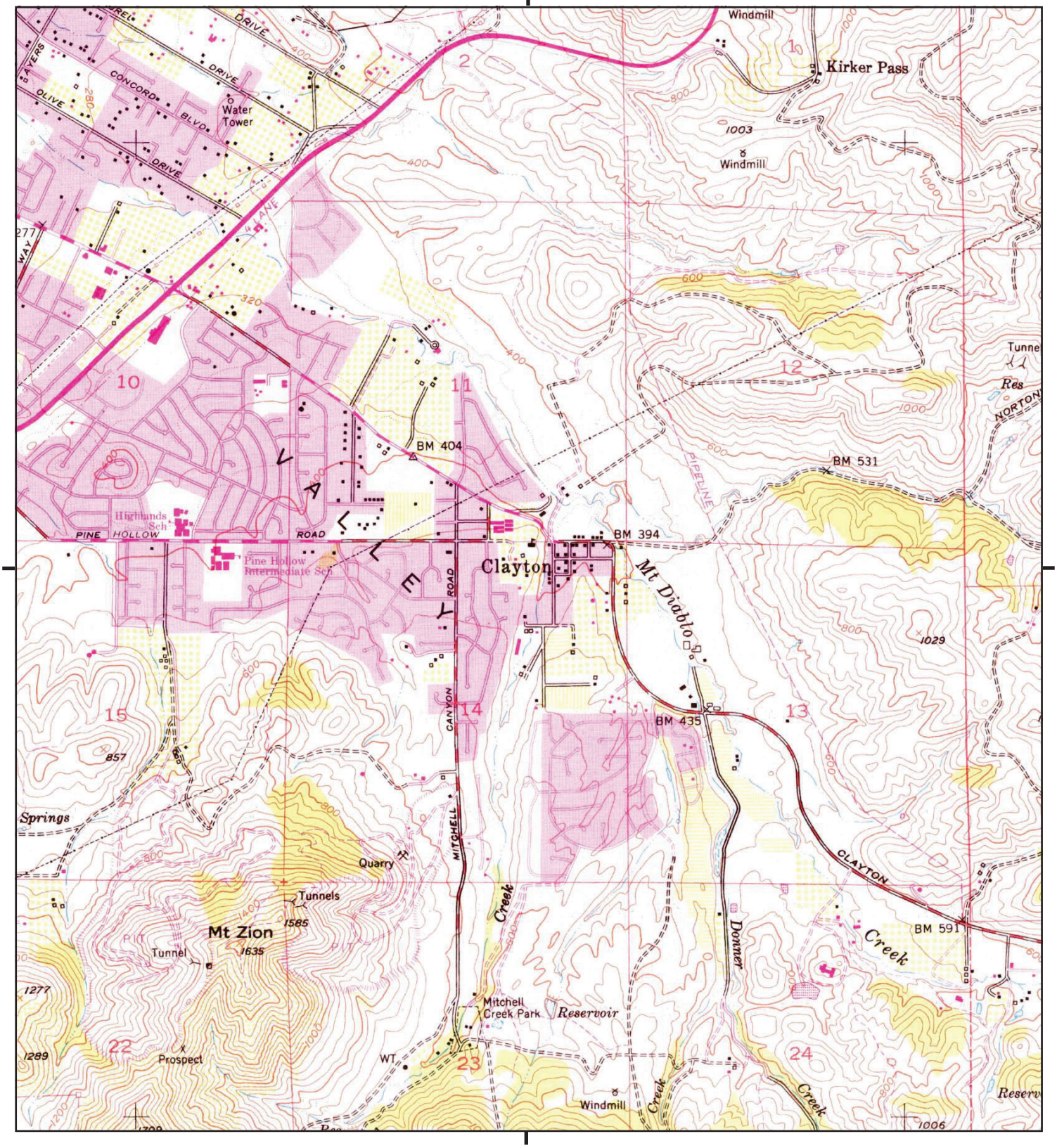
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SW S SE

TP, Clayton, 1980, 7.5-minute

SITE NAME: Clayton Community Church
ADDRESS: 1027 Pine Hollow Court
Clayton, CA 94517
CLIENT: GeoCon Environmental Cons.

N

*Figure not OCR compatible



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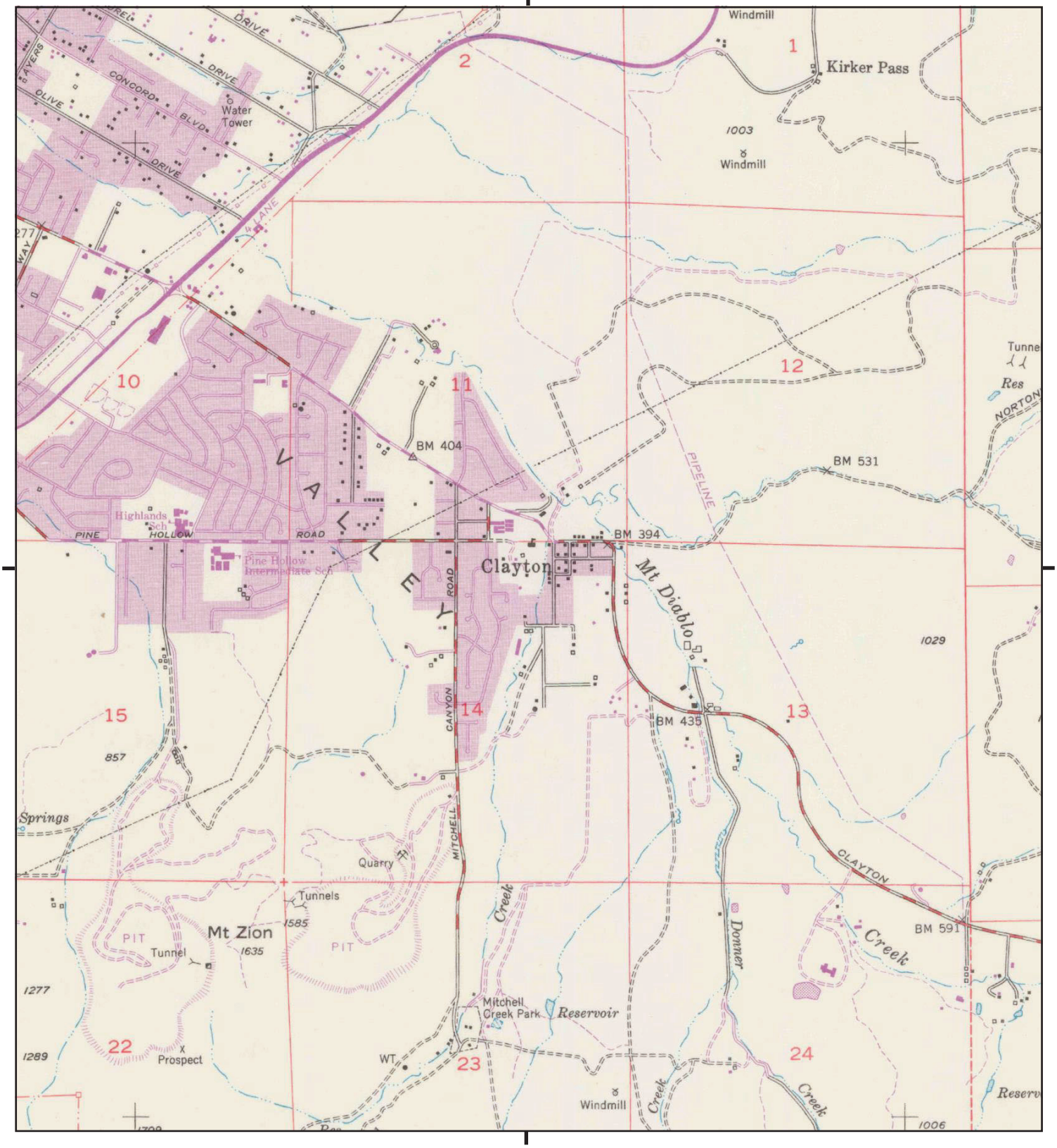
NW N NE
W E
SW S SE

TP, Clayton, 1973, 7.5-minute

SITE NAME: Clayton Community Church
ADDRESS: 1027 Pine Hollow Court
Clayton, CA 94517
CLIENT: GeoCon Environmental Cons.

N

*Figure not OCR compatible



This report includes information from the following map sheet(s).

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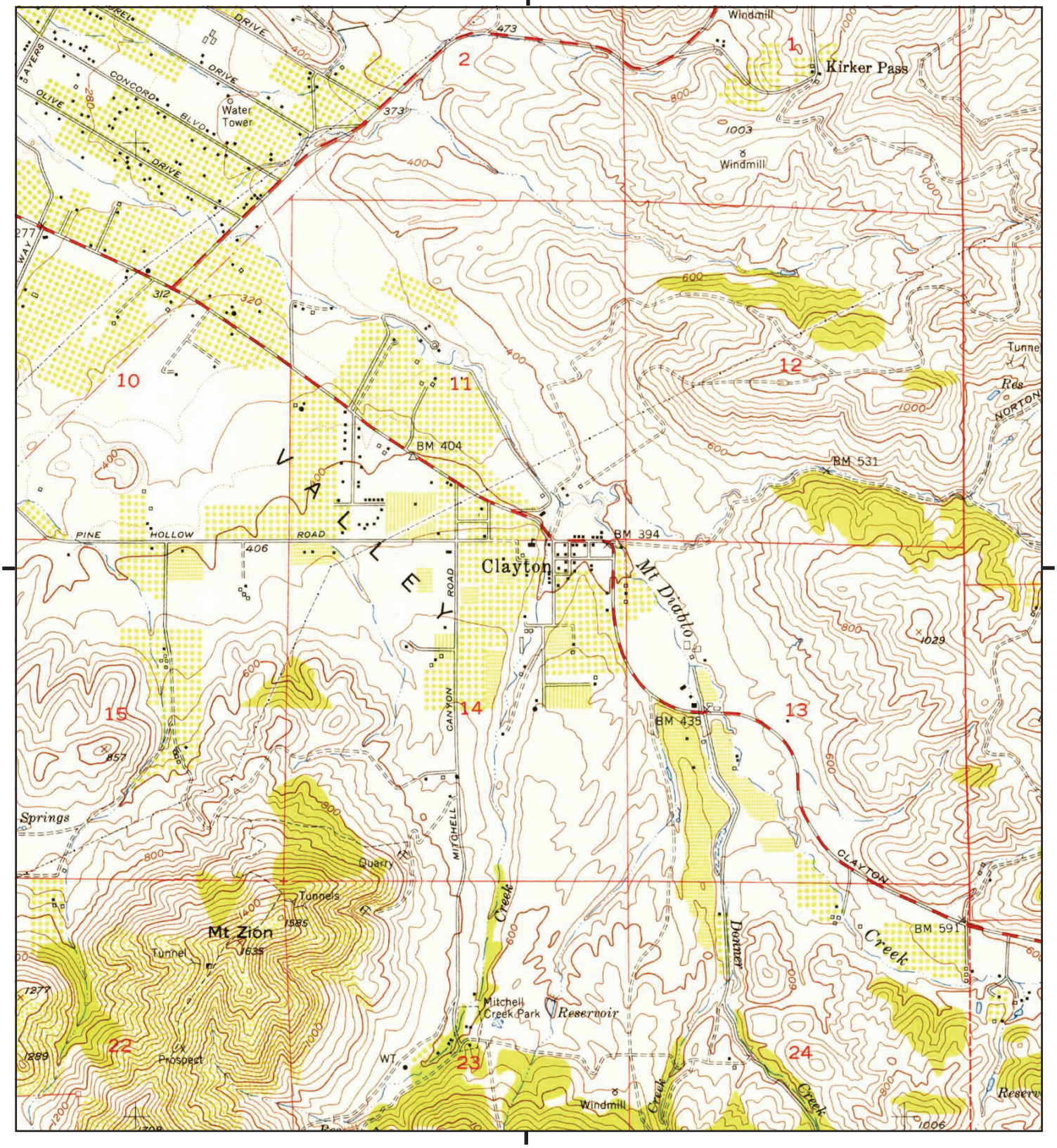
NW N NE
W E
SW S SE

TP, Clayton, 1968, 7.5-minute

SITE NAME: Clayton Community Church
ADDRESS: 1027 Pine Hollow Court
Clayton, CA 94517
CLIENT: GeoCon Environmental Cons.

N

*Figure not OCR compatible



This report includes information from the following map sheet(s).

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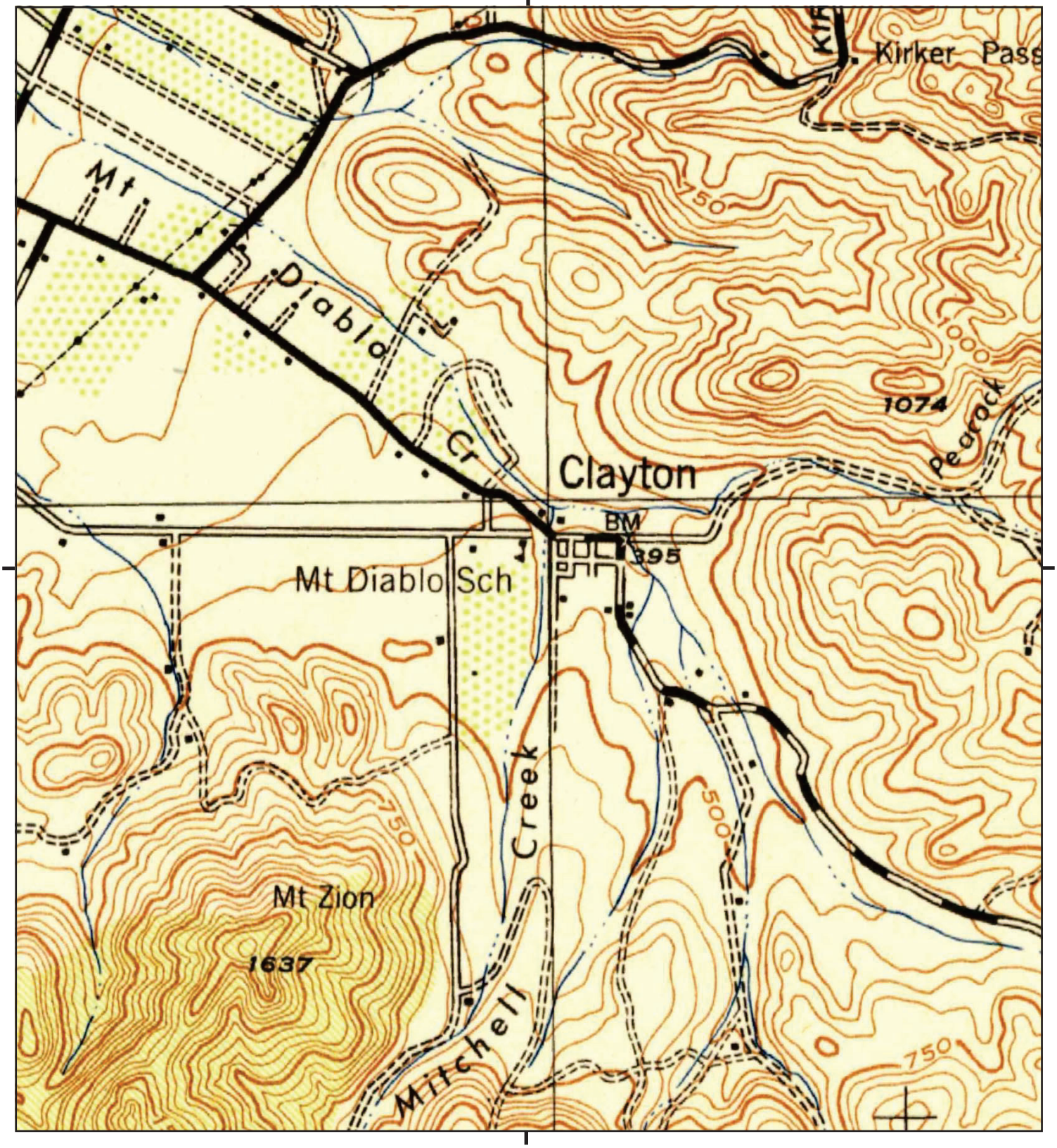
NW N NE
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SW S SE

TP, Clayton, 1953, 7.5-minute

SITE NAME: Clayton Community Church
ADDRESS: 1027 Pine Hollow Court
Clayton, CA 94517
CLIENT: GeoCon Environmental Cons.

N

*Figure not OCR compatible



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

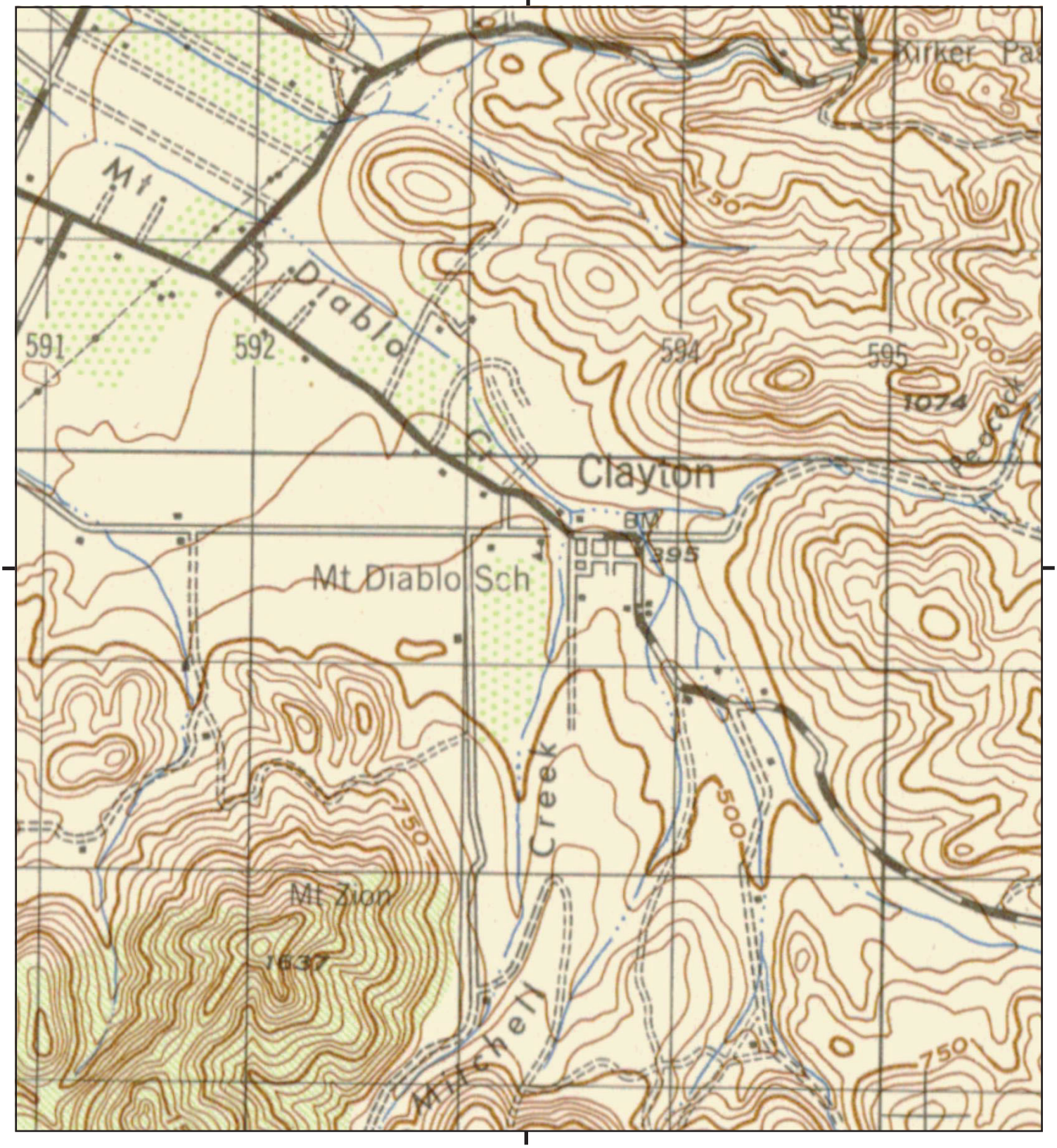
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SW S SE

TP, Mt. Diablo, 1943, 15-minute

SITE NAME: Clayton Community Church
ADDRESS: 1027 Pine Hollow Court
Clayton, CA 94517
CLIENT: GeoCon Environmental Cons.

N

*Figure not OCR compatible



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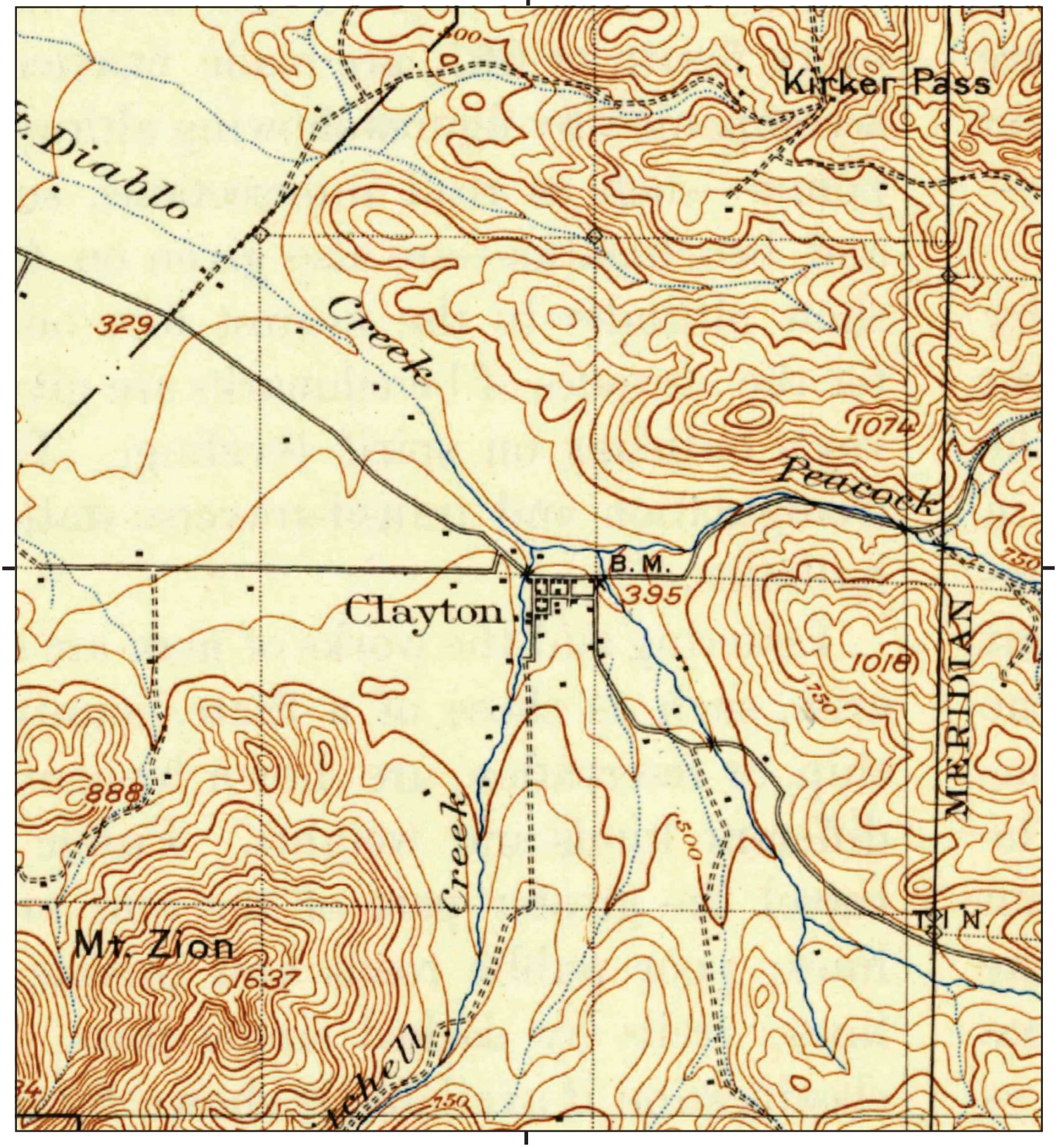
NW N NE
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TP, MT. DIABLO, 1912, 15-minute

SITE NAME: Clayton Community Church
ADDRESS: 1027 Pine Hollow Court
Clayton, CA 94517
CLIENT: GeoCon Environmental Cons.

N

*Figure not OCR compatible



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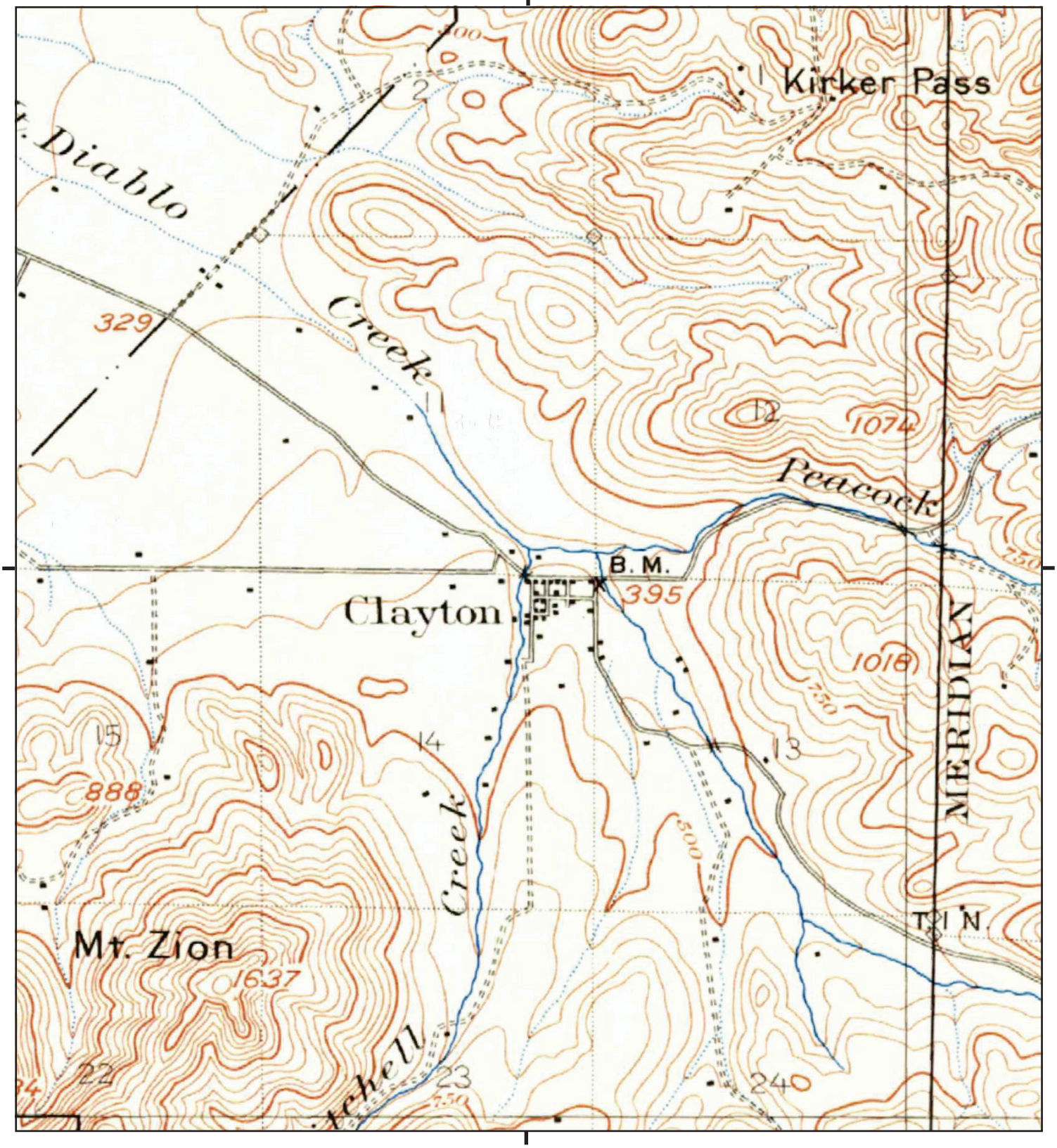
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SW S SE

TP, Mt. Diablo, 1898, 15-minute

SITE NAME: Clayton Community Church
ADDRESS: 1027 Pine Hollow Court
Clayton, CA 94517
CLIENT: GeoCon Environmental Cons.

N

*Figure not OCR compatible



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Mt. Diablo, 1896, 15-minute

SITE NAME: Clayton Community Church
ADDRESS: 1027 Pine Hollow Court
Clayton, CA 94517
CLIENT: GeoCon Environmental Cons.

N

*Figure not OCR compatible

APPENDIX F

TECHNICAL MEMORANDUM

Date:	October 22, 2025
To:	Jeff Schroeder, SVP Land, Planning & Operations
From:	Vamsee Modugula, and Anjali Satheeshkumar, TJKM
Subject:	**Vehicle Mile Traveled (VMT) Analysis for 1027 Pine Hollow Court in Clayton, California.**

TJKM conducted a Vehicle Miles Traveled (VMT) assessment for the proposed residential housing development located at 1027 Pine Hollow Court in the City of Clayton, Contra Costa County, California. The project proposes to construct 17 single-family residential units on a 4.5-acre parcel, replacing an existing 1,280-square-foot single-family home. **Figure 1** shows the project location.

This analysis evaluates potential transportation impacts under the California Environmental Quality Act (CEQA) consistent with Senate Bill (SB) 743 and the Contra Costa Transportation Authority (CCTA) Growth Management Program (GMP) Implementation Guide (Revised February 17, 2021). The analysis uses the Alameda–Contra Costa Activity-Based Model (AlaCC) to estimate Vehicle Miles Traveled attributable to the project and determine whether it would result in significant transportation impacts under CEQA.

VEHICLE MILES TRAVELED

Compliance with Senate Bill (SB) 743 will include replacement of LOS with VMT for purposes of assessing traffic impacts under the California Environmental Quality Act (CEQA) described in new Section 15064.3 of the CEQA Guidelines that will be applied statewide that began on July 1, 2020. Lead agencies will have the discretion to choose the most appropriate methodology to evaluate a project's vehicles miles traveled, including whether to express the change in absolute terms, per capita, per household or any other measure. VMT refers to the amount and distance of automobile travel "attributable to a project".

The following sections outline the methodology, significance thresholds, and potential mitigation measures for addressing VMT impacts, ensuring compliance with both state and local guidelines.

PROJECT SCREENING

Per the 2021 GMP Implementation Guide, a residential project may be screened out of detailed VMT analysis if it meets one of the following criteria:

- Considered a small project - Generates less than 110 daily vehicle trips (typically <20 residential units).
- Located in Transit Priority Area (TPAs)
- Located in a low-VMT generating TAZ

Although the Pine Hollow project includes 17 units, the project-generated daily trips are expected to exceed the 110-trip threshold given the suburban location and low transit accessibility. The site is not located within a TPA, and based on AlaCC model outputs, it lies in a medium-to-high VMT zone typical of suburban Contra Costa County. Therefore, the project does not meet any of the CCTA screening exemptions, and a full VMT impact analysis is required.

Figure 1: Project Location

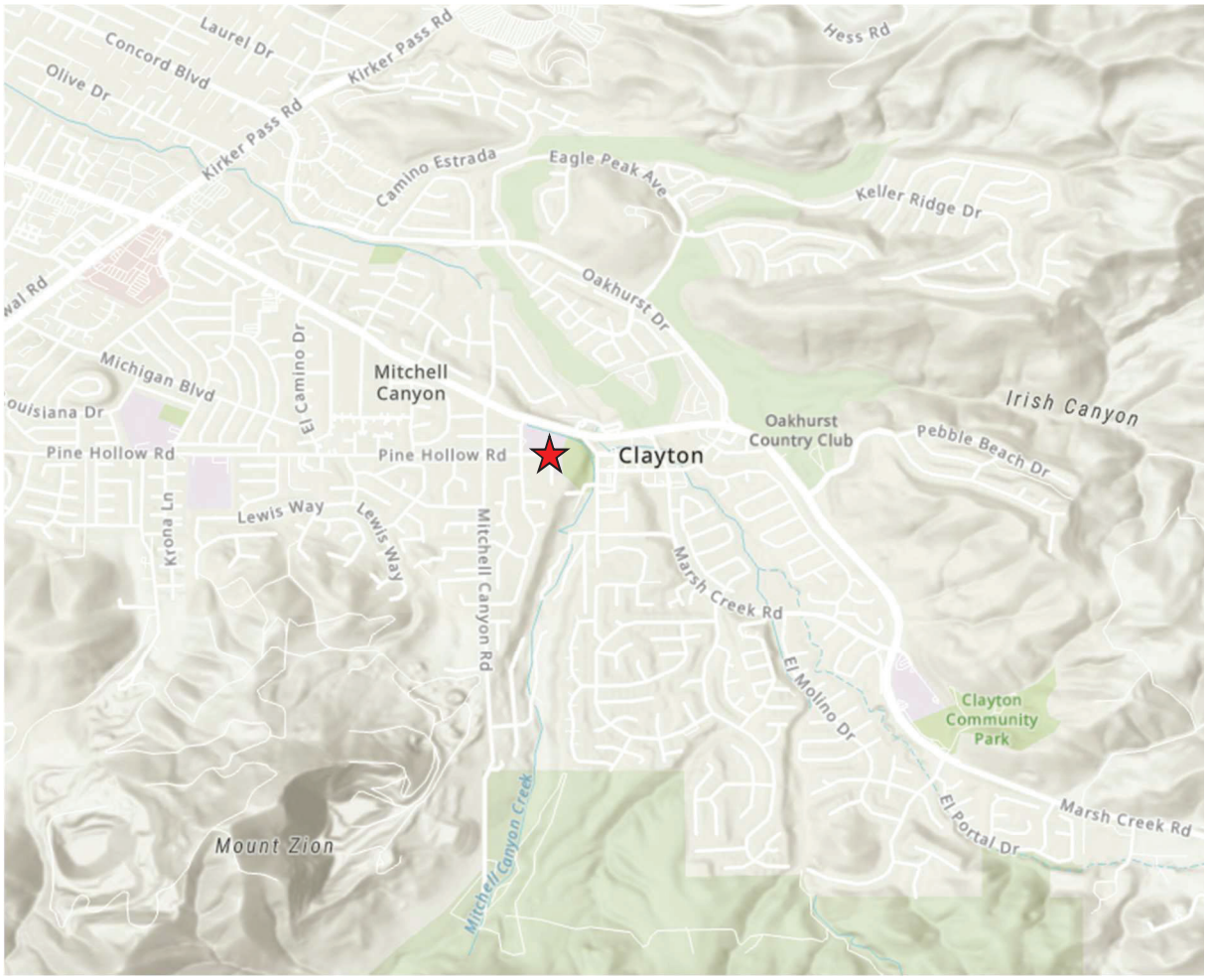


*Figure not OCR compatible

SIGNIFICANT IMPACT CRITERIA

The 2021 CCTA GMP Implementation Guide establishes thresholds of significance for VMT based on OPR's Technical Advisory. Per the GMP Implementation Guide, a Residential project's impact is deemed significant if:

"Home-based VMT per capita, it is higher than 85% of the home-based VMT per resident in the subject municipality or unincorporated CCTA subregion (for areas outside of municipalities) or 85% of the existing County-wide average home-based VMT per resident, whichever is less stringent."

Cumulative Requirement

If a project cannot reduce its VMT to less than significant after feasible mitigation, a cumulative VMT analysis must be prepared prior to any findings of overriding consideration.

METHODOLOGY

Residential VMT estimates were developed using the Alameda Contra Costa County (AlaCC) Travel Demand Model. The model is an activity-based model and simulates individual and household travel decisions including trip generation, destination choice, mode choice, and time-of-day, based on daily activity patterns.

The Travel Analysis Zone (TAZ) for this project in the model is #3912. The first step in preparation for this analysis was to update the traffic analysis zones (TAZs) in the model. 17 households were added into the TAZ for the base year to check if the project creates significant VMT impacts. No other project-specific network modifications were required for the model run. Model runs were conducted for the base year (2020) scenarios with updated model inputs. The outputs from this updated model run were used to calculate the project generated VMT.

Table 1 shows the land use changes for the Base Year plus project run.

Table 1: Land Use Changes for Plus Project Scenarios

TAZ/Zone	Households	Population (Residents)	Single Family Dwelling Units
3912	+17	+48	+17

The AlaCC model and post processing VMT scripts were run with the project coded in, and the VMT results are summarized in **Table 2.**

Based on the AlaCC Baseline (2020) model outputs, the current City of Clayton average Residential VMT per capita is **28.04 miles**. Applying the 85 percent threshold, the significance criterion for this project is **23.83 miles** under Base Year conditions (applicable to Existing plus Project Conditions)**.**

VMT IMPACT FINDINGS

Table 2 shows the Residential VMT per Capita associated with the proposed development, derived from the AlaCC model outputs for TAZ #3912, which includes the proposed development. Under Existing plus Project conditions, the VMT per Capita is lower than the significance threshold of 23.83 miles per resident. As such, the proposed project would **not result in a potentially significant VMT impact** under Existing plus Project Conditions.

Table 2: VMT per Capita (Base Year Conditions)

TAZ / Zone	City Residential VMT/Capita	Impact Threshold	TAZ Residential VMT per Capita under Existing Conditions	TAZ VMT per Capita under Existing Plus Project Conditions
3912	28.04	**23.83**	19.27	20.40

Source: AlaCC Model Outputs

CONCLUSION

The 17-unit single-family project at 1027 Pine Hollow Court was evaluated using the Alameda Contra Costa Activity-Based Model. The Residential VMT threshold is 23.83 miles per resident, based on 85% of the City average (28.04). The project TAZ (3912) reports 19.27 miles under Existing conditions and 20.40 miles under Existing Plus Project condition. Both values are below the threshold. Thus, the VMT impact is **less than significant**, and no mitigation is required.