BLACK DIAMOND RANCH UNIT #4 PROJECT

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

Prepared for:

CITY OF ANTIOCH
200 H STREET, SECOND FLOOR
ANTIOCH, CA 94509

Prepared by:

Michael Baker
INTERNATIONAL

2729 PROSPECT DRIVE, SUITE 220
RANCHO CORDOVA, CA 95607

OCTOBER 2016

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ENVIRONMENTAL CHECKLIST FORM

1. Project title: Black Diamond Ranch Unit #4

2. Lead agency name and address: City of Antioch
200 H Street, Second Floor
Antioch, CA 94509

3. Contact person and phone number: Forrest Ebbs, AICP, Community Development Director; (925) 779-7038

4. Project location: The 20.98-acre project site is located along Countryside Way and at the terminus of Torgensen Court in Antioch, Contra Costa County, California. The project site is located adjacent to Antioch's western boundary with Pittsburg. The project site consists of one parcel identified as Assessor's Parcel Number (APN) 089-160-010. The regional location is shown on **Figure 1** and the project location is shown on **Figure 2**.

5. Project sponsor's name and address: Discovery Builders, Inc.
4061 Port Chicago Highway, #H
Concord, CA 94520

6. General Plan designation: Low Density Residential (4 dwelling units per acre)

7. Zoning: Hillside Planned Development (HPD)

8. Project Background:

The project site is part of the Black Diamond Ranch subdivision, which is the adjacent 286-unit single-family housing development. Lots in the subdivision range from 4,000 to 6,000 square feet, with publicly maintained roads. The project site was designated as open space on the Black Diamond Ranch tentative map and was to be deeded to the City. In 2005, the applicant requested the opportunity to develop "executive/estate" housing on this parcel and in November 2005, the City Council redesignated the open space area as Owner/Developer Remainder Parcel on the assumption that such development was going to occur in the near term. An initial application was submitted in 2006 for a Preliminary Development Plan for "The Point" project. In January 2014, the City Council denied The Point project, which was proposed to have 60 one- and two-story single-family homes. The project required extensive grading to the hillside and was determined to not be consistent with the General Plan or the Zoning Code. The applicant resubmitted an application, and this new proposal is described and analyzed in this Initial Study.

9. Project Description:

The project applicant is requesting that the City approve a Vesting Tentative Subdivision Map (VTSM), Amendment of the Black Diamond Ranch Hillside Planned Development, and Master Development Plan for the development of a 10-unit single-family residential subdivision on 20.98 acres. The proposed VTSM would divide the project site into 10 residential parcels ranging in size

from 7,060 to 14,430 square feet, with an 18.77-acre remainder parcel that would be retained as open space. The proposed project is summarized in **Table 1-1** and the proposed VTSM is provided as **Figure 3**.

TABLE 1-1
PROPOSED LOTTING SUMMARY

Lot Number	Lot Size		Location within Project Site
	Square Feet	Acres	
1	12,762	0.29	Southern
2	12,198	0.28	Southern
3	9,129	0.21	Eastern
4	7,222	0.17	Eastern
5	7,060	0.16	Eastern
6	7,199	0.17	Eastern
7	9,944	0.23	Eastern
8	7,928	0.18	Northern
9	8,353	0.19	Northern
10	14,430	0.33	Northern
11 (open space)	817,621	18.77	Central

Site Access and Circulation

The project area would be accessed from James Donlon Boulevard via Somersville Road. Proposed lots 1 and 2 would front onto Torgensen Court, an existing public roadway that terminates in a cul-de-sac. Proposed lots 3 through 7 would front onto Countryside Way, an existing public roadway, near the intersection with Wind Chime Street and Sun Crest Street. Proposed lots 8 through 10 would front onto Countryside Way where the roadway turns north, becoming Barn Hollow Way.

Pedestrian and Bicycle Facilities

There are existing sidewalks and street lighting along Countryside Drive and Torgensen Court and throughout the surrounding neighborhoods. Crosswalks are provided at major intersections in the project area. There are no designated bicycle facilities in the project area.

Utilities

Water

Water service would be provided to the proposed project by the City of Antioch. The project would include extension of existing water supply facilities within the adjacent roadways onto each proposed lot.

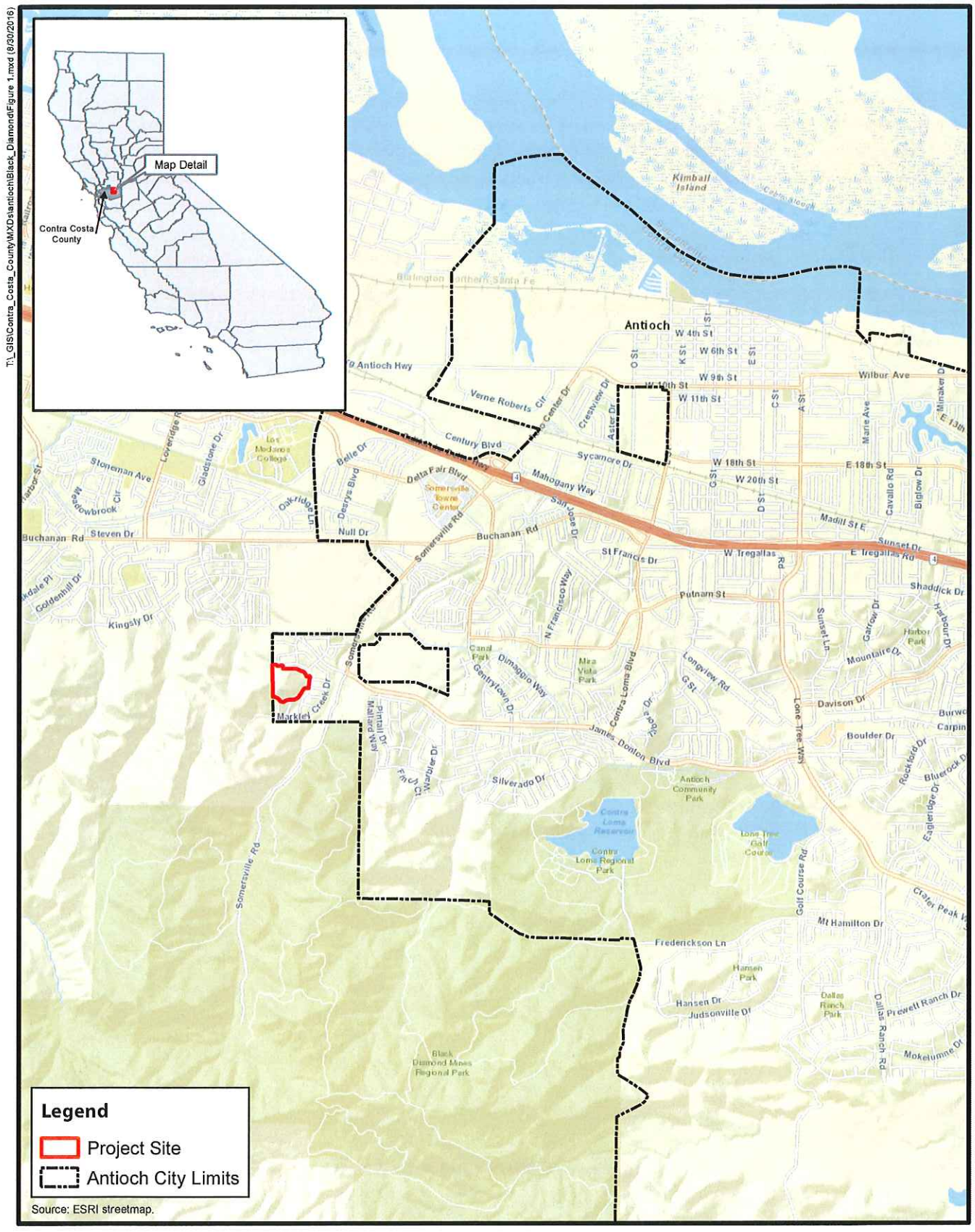

FIGURE 1
Regional Vicinity

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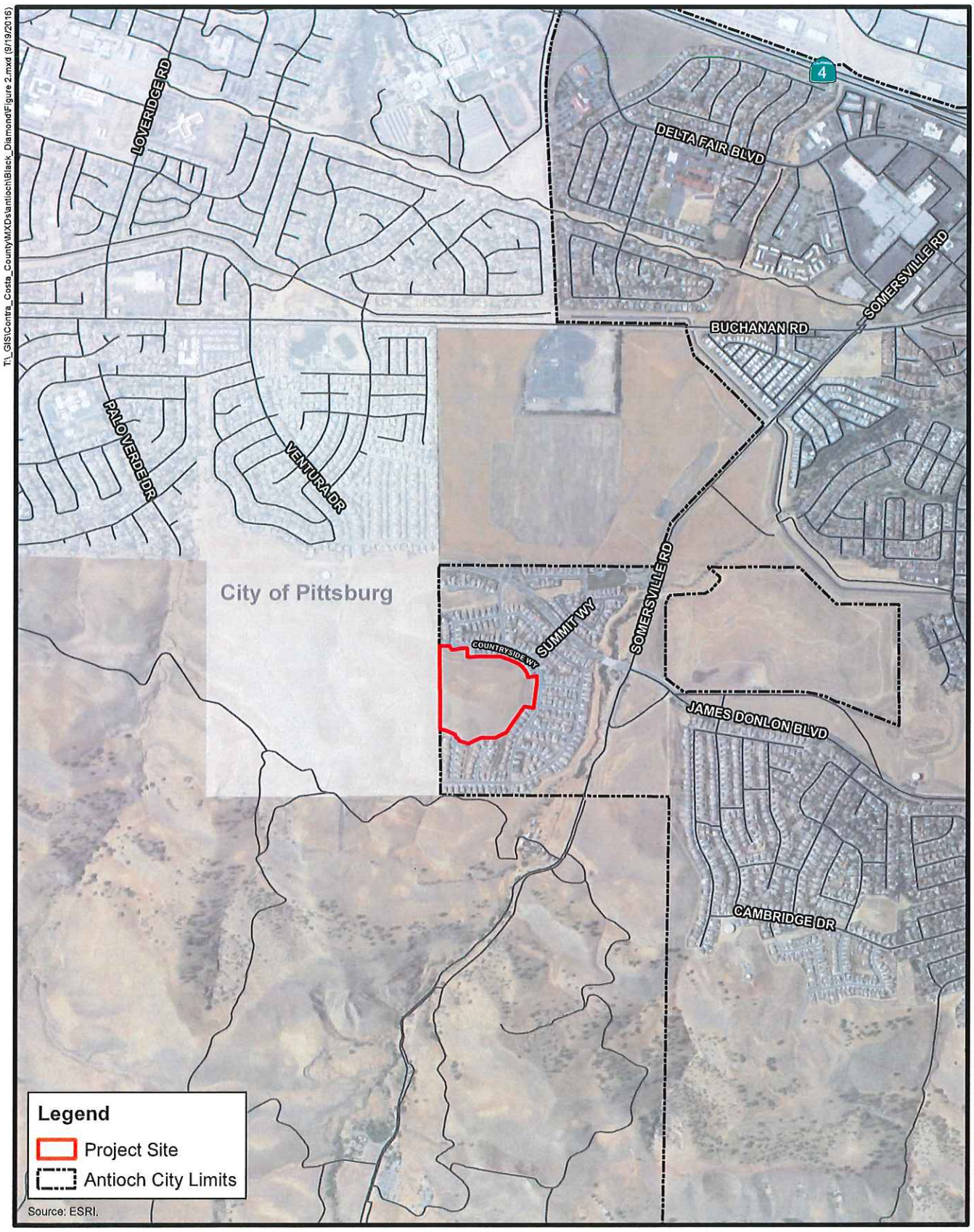

FIGURE 2
Project Location

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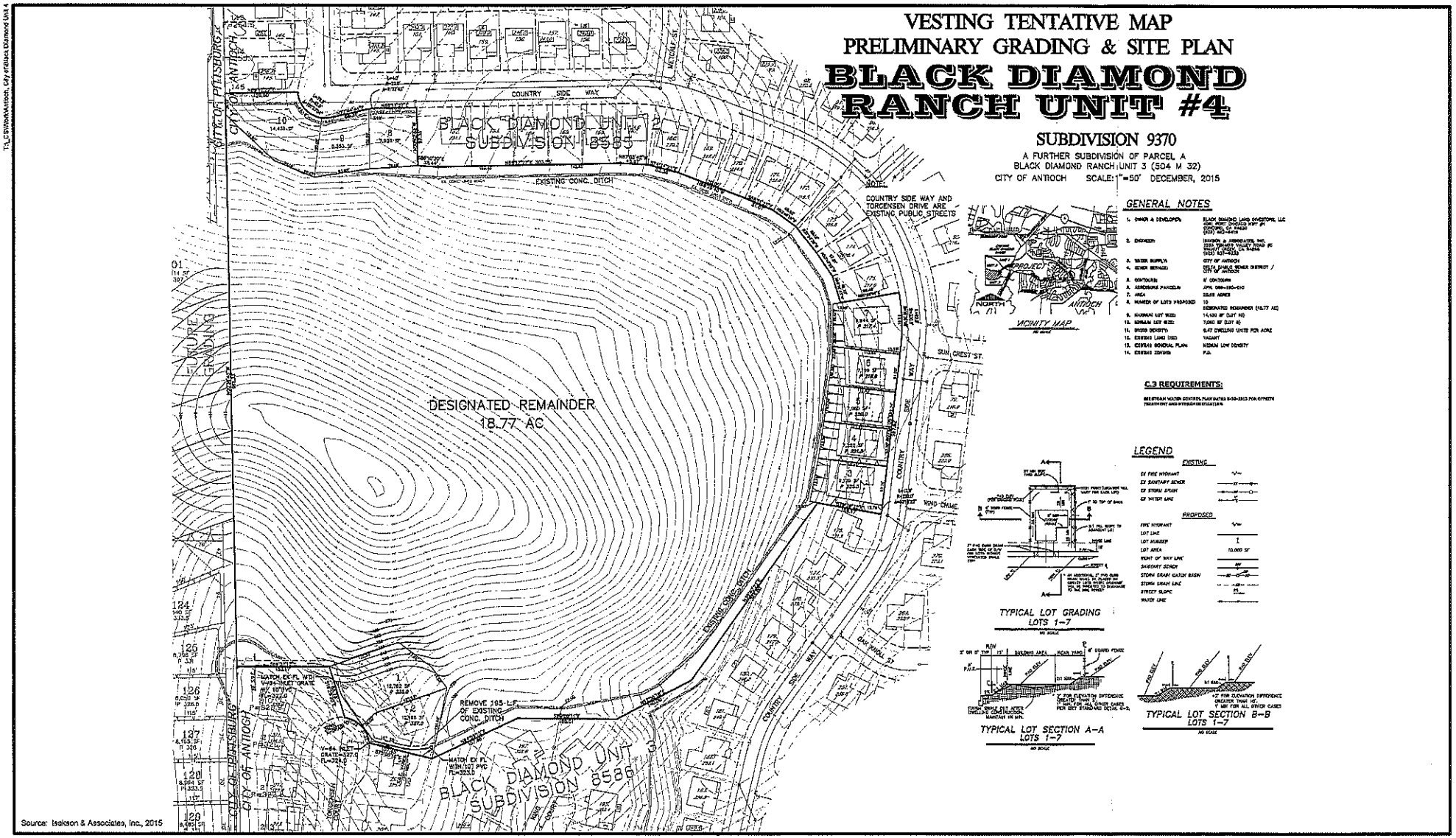

FIGURE 3
Vesting Tentative Subdivision Map

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Wastewater

Wastewater service would be provided to the project by Delta Diablo Wastewater Treatment Plant (WWTP).

Solid Waste

Solid waste collection and disposal services would be provided to the proposed project by Republic Services (Antioch 2016).

Electricity

Electricity service would be provided to the proposed project by the Pacific Gas and Electric Company (PG&E).

11. Surrounding land uses and setting:

The project site is vacant, undeveloped land covered with grasses. The site frontage has been improved with low chain-link fencing, curb, gutter, sidewalk, and street lighting. The site is surrounded to the north, east, and west by single-family residential development within the city of Antioch. Immediately west of the project site is undeveloped land planned for future residential development within the city of Pittsburg.

12. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement)

This Initial Study covers approvals by government agencies that may be needed to construct, implement, and operate the proposed project. As noted previously, the proposed project would require the City of Antioch's approval of a VTSM, Amendment of the Black Diamond Ranch Hillside Planned Development, and Master Development Plan. At this time, no other discretionary public agency approvals are known to be required for the project.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages. Potentially significant impacts that are mitigated to "Less Than Significant" with mitigation identified in this Initial Study are not shown here.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
Biological Resources	☐ Cultural Resources	☐ 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/Traffic	☐ Utilities and Service Systems	☐ Mandatory Findings of Significance

DETERMINATION (to be completed by the lead agency)

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.

☒ 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 because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ 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" impact 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 or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

JDelich FOR FORREST EBBS
Signature

9/30/2016
Date

Forrest Ebbs
Printed Name

Community Development Director
Title

EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources cited following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made and feasible mitigation is not identified, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less Than Significant With Mitigation Measures Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) The significance criteria or threshold, if any, used to evaluate each question; and

   b) The mitigation measure identified, if any, to reduce the impact to less than significant.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

DISCUSSION OF IMPACTS

a) **Less Than Significant Impact.** Per the City of Antioch General Plan, important visual resources in the community include views of Mount Diablo, ridgelines, and the San Joaquin River (Antioch 2003). Mount Diablo is visible from the hillside on the project site. The project area proposed for development is limited to the perimeter of the hillside, which does not offer views of designated scenic vistas. The majority of the project site (18.77 acres) that provides views of Mount Diablo would remain undeveloped and would not obstruct views. The project avoids development on the slopes and top of the hill, does not alter the existing ridgeline and does not substantially change the character of the hill within the Black Diamond subdivision. Therefore, the project would not result in a substantial adverse effect on a scenic vista. This impact would be less than significant.

b) **No Impact.** State Route (SR) 4, which runs north to south along the city's eastern border, is the only designated state scenic highway in Antioch (Caltrans 2011). The project site is located on the city's western border, 5 miles south of SR 4, and is not visible from the highway corridor. Further, SR 160, an Eligible State Scenic Highway–Not Officially Designated, is located approximately 8 miles east of the project site. Views of the project site are not available from either of these two freeways. Therefore, the project site is not located in the vicinity of any scenic vistas, as described by the General Plan EIR, or a state scenic highway. The project would have no impact.

c) **Less Than Significant Impact.** The project area's visual character is that of a developed residential neighborhood surrounded by undeveloped hillsides. The development in the project area is fairly recent and has a uniform look. The project site is currently vacant and covered in grasses. As shown in **Figure 2**, the lots proposed for development are pockets of undeveloped land surrounded on three sides by residential development. Although the project would change the project site's visual character from undeveloped land to residential development, the project would be consistent with surrounding uses and fill in the patchwork of residential uses in the project area. Additionally, project development would be consistent with the surrounding development, as homes would be part of the same subdivision.

According to Antioch Municipal Code Section 9-5.2607, the project is subject to Design Review by the City. The purpose of the Design Review process is to promote the city's orderly development, encourage high quality site design and planning, protect the stability of land values and investments, and ensure consistency with the Citywide Design Guidelines. The project would undergo design review and would be consistent with the existing visual character of the project area. Therefore, this impact would be less than significant.

d) **Less Than Significant Impact.** The project site frontage was previously improved with streetlights during development of the larger Black Diamond Ranch subdivision. The project would construct 10 new residences and would install lighting typical of residential uses. In addition, each project site parcel is surrounded by single-family residences with similar porch and security lighting. Because it would be consistent with existing uses in the project area, the project would not create or contribute to a substantial change in lighting or glare and would have a less than significant impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
2. AGRICULTURE RESOURCES. 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 Department 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 forestland, 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 and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forestland (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))?	☐	☐	☐	☒
d) Result in the loss of forestland or conversion of forestland to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forestland to non-forest use?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a–e) **No Impact.** The project site is located in an urbanized area and does not contain any Important Farmland or other agricultural or forestry resources. The site is zoned Hillside Planned Development, which does not allow for any agricultural or forestry uses. Neither the project site nor the surrounding properties are subject to a Williamson Act contract (Contra Costa County 2000). The proposed project would have no potential to affect agricultural or forestry resources. Therefore, the project would have no impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
3. AIR QUALITY. 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?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a) **Less Than Significant Impact.** The project site is located in the Contra Costa County portion of the San Francisco Bay Area Air Basin, which comprises a single air district, the Bay Area Air Quality Management District (BAAQMD). The BAAQMD prepares plans to attain ambient air quality standards in the air basin.

The emissions inventories contained in the BAAQMD ozone attainment plan and the 2010 Clean Air Plan are based on projected population growth and vehicle miles traveled (VMT) for the entire region. These inventories are largely based on the predicted growth identified in regional and community general plans, including associated development projects. Projects that result in an increase in population or employment growth beyond that identified in regional or community plans could result in increases in VMT and subsequently increase mobile source emissions, which would not have been accounted for in the BAAQMD's air quality plans, making the projects inconsistent with the plans.

The proposed project is consistent with the City's General Plan land use designation for the site. The proposed project would result in an incremental increase in population and employment growth that is consistent with population projections in the City's General Plan (Antioch 2003). Therefore, the project would not increase VMT beyond that anticipated in the BAAQMD ozone attainment plan and the Clean Air Plan. The proposed project would not conflict with or obstruct implementation of an applicable air quality plan and therefore would have a less than significant impact.

b) **Less Than Significant Impact With Mitigation Incorporated.** The BAAQMD developed project-level thresholds of significance to provide a conservative indication of whether a

proposed project could result in potentially significant air quality impacts. To meet the project-level threshold of significance for construction-related criteria air pollutant and precursor impacts, the proposed project must emit no more than 54 pounds per day (lbs/day) of reactive organic gases (ROG), nitrogen oxides (NOx), and/or exhaust-related fine particulate matter ($PM_{2.5}$), and no more than 82 lbs/day of exhaust-related PM_{10}. Concerning fugitive dust-related $PM_{2.5}$ and PM_{10} emissions generated during construction, the BAAQMD states that implementation of its Basic Construction Mitigation Measures is necessary to reduce such emissions to a level that is considered less than significant.

For operational-related criteria air pollutant and precursor impacts, the proposed project must emit no more than 54 lbs/day of ROG, NOx, and/or $PM_{2.5}$, and no more than 82 lbs/day of PM_{10} to be considered less than significant.

Construction Emissions

Construction-generated emissions are short term, lasting only as long as construction activities occur. The proposed project would result in the temporary generation of emissions resulting from site grading and excavations, paving, motor vehicle exhaust associated with construction equipment and worker trips (including trucks hauling fill off-site), the movement of construction equipment, and architectural coatings. Off-road construction equipment is often diesel-powered and can be a substantial source of NOx emissions, in addition to coarse particulate matter (PM_{10}) and $PM_{2.5}$ emissions. Worker commute trips and architectural coatings are dominant sources of ROG emissions. Fugitive dust, the dominant source of PM_{10} and $PM_{2.5}$ emissions, is generated when wheels or blades disturb surface materials. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. To ensure that construction would not generate substantial levels of particulate matter, mitigation measure **MM 3.1** requires implementation of BAAQMD Basic Construction Mitigation Measures (identified in **Table 3-1**), which would reduce fugitive dust emissions to a less than significant level.

TABLE 3-1
BAAQMD BASIC CONSTRUCTION MITIGATION MEASURES

BAAQMD Basic Construction Mitigation Measures
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 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. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
8. Post a publicly visible sign with the telephone number and 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 phone number shall also be visible to ensure compliance with applicable regulations.

Source: BAAQMD 2011

Operational Impacts

The project would increase potential operational air quality impacts. Increases in operational air impacts as a result of the project would consist of stationary and mobile sources associated with residential development, and would result in regional emissions of PM_{10} and $PM_{2.5}$, as well as ROG, NOx, and carbon monoxide (CO). Based on a similar project that involved the construction of 18 single-family homes on 10 acres in Pleasant Hill, Michael Baker International estimated that the project would emit less than approximately 34 lbs/day of ROG, 2 lbs/day NOx, 6.4 lbs/day of PM_{10}, 6 lbs/day of $PM_{2.5}$, and 47 lbs/day of CO (Pleasant Hill 2016). These amounts would not exceed BAAQMD thresholds for air pollutant emissions. Therefore, long-term operational air quality impacts would be less than significant. Therefore, long-term operational air quality impacts would be less than significant.

c) **Less Than Significant Impact.** Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its nature, air pollution is largely a cumulative impact. According to the BAAQMD, no single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing air quality impacts. In developing thresholds of significance for air pollutants, the BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. According to the BAAQMD, if a project exceeds the district's identified significance thresholds, the project would be cumulatively considerable. As stated under item 3(b), the proposed project would be of a small scale and would not exceed BAAQMD thresholds for air pollutant emissions during construction or operations. Therefore, the project would result in less than significant cumulative impacts.

d) **Less Than Significant Impact With Mitigation Incorporated.** Sensitive receptors are generally defined as uses that house or attract groups of children, the elderly, people with illnesses, and others who are especially sensitive to the effects of air pollutants. Schools, hospitals, residential areas, and convalescent facilities are examples of sensitive receptors.

Short-Term Construction Toxics

The project site is adjacent to residential neighborhoods to the north, south, and east. Sources of construction-related air toxics potentially affecting sensitive receptors include off-road diesel-powered equipment. Construction would result in the generation of diesel particulate matter (diesel PM) emissions from the use of off-road diesel equipment required for grading and excavation, paving, and other construction activities. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to toxic air contaminant emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer.

The use of diesel-powered construction equipment would be temporary and episodic and would occur over several locations isolated from one another. Construction activities would occur in an area of less than 2.5 acres. Construction projects contained in a site of such size are generally considered by the California Air Resources Board (CARB) to represent less than significant health risk impacts due to (1) limitations on the off-road diesel equipment able to operate and thus a reduced amount of generated diesel PM, (2) the reduced amount of dust-generating ground disturbance possible compared to larger

construction sites, and (3) the reduced duration of construction activities compared to the development of larger sites. Additionally, compliance with mitigation measure **MM 3.1** would reduce the amount of construction-generated fugitive dust. Construction activities would be subject to and would comply with California regulations limiting the idling of vehicles to no more than 5 minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable diesel PM emissions.

For these reasons and because diesel fumes disperse rapidly over relatively short distances, diesel PM generated by construction activities would not be expected to expose sensitive receptors to substantial amounts of air toxics. Project impacts would be less than significant.

Localized Carbon Monoxide

Localized CO concentrations near roadway intersections are a function of traffic volume, speed, and delay. Transport of CO is extremely limited because carbon monoxide disperses rapidly with distance from the source.

Based on BAAQMD guidance, projects meeting all of the following screening criteria would be considered to have a less than significant impact on localized carbon monoxide concentrations:

1. The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plans, and local congestion management agency plans.

2. The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

3. The project is of a small scale. 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).

The project would not increase traffic volumes at any intersection to more than 44,000 vehicles per hour. Assuming a trip generation rate of 9.6 trips per single-family detached housing unit (ITE Land Use Code 210) from the Institute of Transportation Engineer's (2012) Trip Generation Manual, 9th edition, the project would generate 96 daily trips. As such, the proposed project would not exceed the BAAQMD's significance thresholds for carbon monoxide and project impacts would be less than significant.

Toxic Air Contaminants

There are many different types of toxic air contaminants (TACs), with varying degrees of toxicity. Sources of TACs potentially affecting sensitive receptors include commercial operations, such as gasoline stations and dry cleaners. Mobile sources of air toxics include freeways and major roadways. Roadways are sources of diesel PM, which CARB has listed as a toxic air contaminant.

The project would not result in the development of any sources of TACs. In April 2005, CARB released the *Air Quality and Land Use Handbook: A Community Health Perspective*, which

offers guidance on siting sensitive land uses in proximity to sources of air toxics. According to this guidance document, CARB does not consider residential uses to be sources of air toxics. As previously described, areas of high CO concentrations, or "hot spots," are typically associated with idling vehicles. However, as demonstrated above, the project would not increase traffic volumes to the extent of creating a CO hot spot. Therefore, there would be no impacts due to TAC exposure from project operations and this impact would be less than significant.

e) **No Impact.** Residential, institutional, office, and commercial land uses are not considered major sources of odorous emissions. In addition, the proposed project is not located downwind from any significant odor sources such as landfills or sewage treatment plants that could affect people on the project site. Therefore, project operation is not anticipated to expose a substantial number of people to objectionable odors.

The BAAQMD does not have a recommended odor threshold for construction activities. Construction-generated odors are typically associated with exhaust emissions from diesel-fueled equipment and the application of architectural coatings and paving materials, which may be considered objectionable to some individuals. However, because construction-related odors would be intermittent, temporary, and would disperse rapidly with distance from the source, construction-related odors would not result in exposure of a substantial number of individuals to objectionable odors. Further, the project would be required to comply with BAAQMD Regulation 8, Rule 3, Architectural Coatings, and Rule 15, Emulsified Asphalt, which establish volatile organic compound (VOC) content limits for these construction materials. VOCs are the main sources of odors from these sources. Compliance with these regulatory requirements would further reduce odor impacts associated with these sources. The project would have no impact related to odorous emissions.

Mitigation Measures

MM 3.1 To adequately control dust, the project applicant shall ensure construction contracts contain requirements for implementing the BAAQMD's Basic Construction Mitigation Measures from Table 8-1 of the BAAQMD's (2011) CEQA Air Quality Guidelines.

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered as deemed necessary for controlling dust during varying weather conditions to conserve water while California is in a drought.

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. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of the California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified visible emissions evaluator.

8. A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Timing/Implementation: During construction

Enforcement/Monitoring: City of Antioch

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
4. BIOLOGICAL RESOURCES. 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 Wildlife or US Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.), through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) 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?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a) **Less Than Significant Impact With Mitigation Incorporated.** A Michael Baker International biologist conducted a site visit on August 15, 2016, to characterize the environmental setting on and adjacent to the project site. The evaluation involved a query of available data and literature from local, state, federal, and nongovernmental agencies, and aerial surveys to collect site-specific data regarding habitat suitability for special-status species and to identify any potentially jurisdictional waters.

Database searches were performed on the following websites:

- US Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) Service (2016)
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (2016)
- California Native Plant Society (CNPS) Inventory of Rare, Threatened, and Endangered Plants of California (2016)

Database results are included in **Appendix A.**

The project site consists of a hillside covered in ruderal grassland, surrounded by residential development on three sides. The project site appears to be maintained regularly and appeared to be recently mowed prior to the site visit.

Potentially suitable habitat is present for western burrowing owl; however, no burrows or fossorial mammals (i.e., California ground squirrels) were observed on the project site. Burrowing owls require burrows that were previously dug by fossorial mammals or man-made burrows such as pipes or culverts. Because of the absence of burrowing habitat, this species would not be present. No other special-status species are expected to occur on the project site.

There are no trees in or around the project site, with the exception of small ornamentals associated with adjacent residences. Suitable habitat is present for ground-nesting birds protected under the Migratory Bird Treaty Act (MBTA), including red-winged blackbird (*Agelaius phoeniceus*), killdeer (*Charadrius vociferous*), and western meadowlark (*Sturnella neglecta*). Construction activities could affect protected birds if present on the site, which would be a significant impact. Implementation of mitigation measure **MM 4.1** would minimize impacts on birds protected under the MBTA. With this mitigation, the project would have a less than significant impact.

b–e) **No Impact.** There are no trees located on the project site. The only trees in the vicinity are small ornamentals that are associated with the adjacent residences. Additionally, no aquatic features are located on the project site. The project site is dominated by ruderal grassland and does not support riparian communities, wetlands, a wildlife corridor, or sensitive natural communities. The project would not conflict with local ordinances. Therefore, the project would have no impact.

f) **No Impact.** The project is located in Antioch, which is not in an area covered under an approved habitat conservation plan or natural community conservation plan. Therefore, the proposed project would have no impact.

Mitigation Measures

MM 4.1 If clearing and construction activities occur during the nesting period for migratory birds (February 1–August 31), a qualified biologist shall conduct preconstruction surveys on and adjacent to the project area within 14 days prior to construction initiation. Surveys shall be repeated if project activities are suspended or delayed for more than 15 days during the nesting season.

If active nest sites are identified within 200 feet of project activities, the project applicant shall impose a Limited Operating Period (LOP) for all active nest sites prior to commencement of any project construction activities to avoid construction- or access-related disturbances to migratory bird nesting activities. An LOP constitutes a period during which project-related activities (i.e., vegetation removal, earth moving, and construction) shall not occur, and shall be imposed within 100 feet of any active nest sites until the nest is deemed inactive. Activities permitted within and the size (i.e., 100 feet) of LOPs may be adjusted through consultation with the California Department of Fish and Wildlife.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
d) Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?	☐	☐	☒	☐

DISCUSSION OF IMPACTS

a) **No Impact.** The project site is vacant, with no existing structures or remnants of structures. The site has been disturbed from past activities and construction of the adjacent roadways and residences. Thus, future development of the proposed lots would not adversely affect any historical resources. The project would have no impact.

b, d) **Less Than Significant Impact.** The project site has been heavily disturbed as a result of construction activities on the surrounding parcels, so the discovery of unanticipated archaeological and tribal resources would not be expected to occur during future development activities. Antioch General Plan Policy 10.9.2, Cultural Policies, requires new development to analyze sites for the presence of archaeological resources and either avoid or mitigate for potential impacts to such resources. As a standard condition of approval for new development projects, this policy further requires earth-disturbing activities to be halted if unanticipated cultural or archaeological resources are discovered during grading and for a qualified professional to evaluate and record the find. Compliance with the requirements of Antioch General Plan Policy 10.9.2 would protect and ensure proper management of any cultural, archaeological, or tribal resources present on the project site. The City initiated Native American consultation pursuant to Assembly Bill (AB) 52. The City sent a Project Notification and invitation to begin AB 52 consultation on September 12, 2016, to Randy Yonemura, cultural committee chair of the Ione Band of Miwok, and Michael Mirelez, cultural resource coordinator of the Torres Martinez Desert Cahuilla Indians. No requests for consultation for the project have been received as of the date of this writing (September 2016). Given the disturbed nature of the site, impacts related to substantial adverse changes in the significance of an archaeological resource or tribal cultural resources would be less than significant.

c) **Less Than Significant Impact.** As discussed previously, the project site has been heavily disturbed as a result of construction activities on the adjacent parcels and public right-of-way. Thus, the discovery of human remains on the site would not be expected to occur during future development activities. However, if human remains are discovered during

construction, compliance with existing regulations would ensure proper management of the discovery. Procedures of conduct following the discovery of human remains on nonfederal lands are mandated by Health and Safety Code Section 7050.5, by Public Resources Code Section 5097.98, and by CEQA in California Code of Regulations Section 15064.5(e). According to these provisions, should human remains be encountered, all work in the immediate vicinity of the burial must cease and any necessary steps to ensure the integrity of the immediate area must be taken. The remains are required to be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. The Contra Costa County Coroner would be immediately notified, and the coroner would then determine whether the remains are Native American. If the coroner determines the remains are Native American, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC), which would in turn notify the person identified as the most likely descendant (MLD) of any human remains. Further actions would be determined, in part, by the desires of the MLD, who has 24 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 24 hours, the owner is required, with appropriate dignity, to reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD's recommendations, the owner or the descendant may request mediation by the NAHC. Any discovery of human remains within the project site would be subject to these procedural requirements, which would reduce impacts associated with the discovery/disturbance of human remains to a less than significant level.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
6. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to 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 or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) 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?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a)

i. **Less Than Significant Impact.** The project area is located in one of the most seismically active regions in the United States and has a strong shaking hazard potential (ABAG 2015). However, the project site is not located in an Alquist-Priolo earthquake hazard zone (DOC 2016). Per the City's General Plan, there are no known active faults in Antioch. Therefore, the project site is not considered to be at risk for surface fault rupture and the project would have a less than significant impact.

ii. **Less Than Significant Impact.** Antioch (2015b) Municipal Code Section 8-4.01 adopted the California Building Code. The proposed project would be subject to the California

Building Code seismic design force standards for the Antioch area. Compliance with these standards would ensure that the structures and associated improvements are designed and constructed to withstand expected seismic activity and associated potential hazards, including strong seismic ground shaking and seismic-induced ground failure (i.e., liquefaction, lateral spreading, landslide, subsidence, and collapse), thereby minimizing risk to the public and property. Therefore, this impact would be less than significant.

iii. **Less Than Significant Impact.** See item 6(a)(ii).

iv. **Less Than Significant Impact.** According to the Association of Bay Area Governments' (2016) Hazards Susceptibility Map, liquefaction potential at the project site is considered very low. Therefore, the project would have a less than significant impact.

b) **Less Than Significant Impact.** The project site is currently not developed. Project construction would include land clearing, grading, excavating, and other soil-disturbing activities that would expose site soils to wind and water erosion. All grading activities would be required to be in compliance with Section 9-5.2408 of the Antioch Municipal Code. The City would review grading plans to ensure that grading would not impact adjacent property owners and be limited to the portion of the site required for each residence. Municipal Code Chapter 9 requires all construction activities to conform to the City's grading and erosion control requirements and other generally accepted engineering practices for erosion control. These measures may include hydroseeding, straw mulch, earth dikes and drainage swales, and slope drains, as necessary (Antioch 2015b).

All construction activities would be subject to standards in California Building Code Chapter 70, which would ensure implementation of appropriate measures during grading activities to reduce soil erosion.

Because the project would disturb more than 1 acre of land, the project applicant would be required to prepare and comply with a stormwater pollution prevention plan (SWPPP). This plan would provide a schedule for the implementation and maintenance of erosion control measures and a description of the erosion control practices, including appropriate design details and a time schedule. The SWPPP would consider the full range of erosion control best management practices (BMPs), including any additional site-specific and seasonal conditions. As further discussed in subsection 9, Hydrology and Water Quality, the State Water Resources Control Board (SWRCB) adopted a Construction General Permit (CGP) (Order No. 2009-0009DWQ) and associated amendment that include additional standards and requirements to avoid soil erosion.

Compliance with these existing regulatory requirements and implementation of project-specific erosion management would minimize the potential for soil erosion during project construction and operation. Therefore, this impact would be less than significant.

c, d) **Less Than Significant Impact.** Based on Natural Resources Conservation Service (2016) regional soils data, project site soils are classified as Altamont clay. These soils are not expansive and have a low shrink-swell potential. Therefore, risks associated with expansive soils are low. The project site has low linear extensibility, and project area soils are not susceptible to landslide, lateral spreading, subsidence, liquefaction, or collapse (NRCS 2016). Therefore, this impact would be less than significant.

e) **No Impact.** The project would be served by a public sewer system. Therefore, no septic tanks or alternative wastewater disposal systems would be associated with the project. The project would have no impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
7. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a) **Less Than Significant Impact.** Greenhouse gases (GHG) are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases includes carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and chlorofluorocarbons. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system.

Table 7-1 provides descriptions of the primary GHGs attributed to global climate change, including a description of their physical properties and primary sources.

TABLE 7-1
GREENHOUSE GASES

Greenhouse Gas	Description
Carbon dioxide (CO_2)	CO_2 is a colorless, odorless gas and is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere.[1]
Methane (CH_4)	CH_4 is a colorless, odorless gas that is not flammable under most circumstances. CH_4 is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. CH_4 is emitted from both human-related and natural sources. Methane's atmospheric lifetime is about 12 years.[2]
Nitrous oxide (N_2O)	N_2O is a clear, colorless gas with a slightly sweet odor. N_2O is produced by natural and human-related sources. Primary human-related sources are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. The atmospheric lifetime of N_2O is approximately 120 years.[3]

Sources: [1]EPA 2011a, [2]EPA 2011b, [3]EPA 2010

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps over 21 times more heat per molecule than CO_2, and N_2O absorbs 310 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weights each gas by its global warming potential. Expressing GHG emissions in CO_2e takes

the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts. No single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contributes substantially to the phenomenon of global climate change and its associated environmental impacts and as such is addressed only as a cumulative impact.

The project's GHG emissions would occur over the short construction duration and would consist primarily of emissions from equipment exhaust. There would also be long-term regional emissions associated with project-related new vehicular trips and indirect source emissions, such as electricity usage for lighting.

Construction Emissions

The BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, the BAAQMD recommends quantification and disclosure of GHG emissions that would occur during construction, in addition to making a determination on the significance of these construction-generated GHG emissions impacts in relation to meeting AB 32 GHG reduction goals (statewide reduction of GHG emissions to 1990 levels by 2020).

Based on projections run using the California Emissions Estimator Model (CalEEMod), version 2013.2.2, computer program for the aforementioned DeNova Homes project constructing 18 single-family residences on 10 acres in Pleasant Hill (Pleasant Hill 2016), construction would result in less than 467 metric tons of construction-generated CO_2e.

In addition to quantifying construction-generated GHG emissions, the BAAQMD recommends that all construction projects incorporate best management practices minimizing GHG emissions. Mitigation measure **MM 3.1**, which is required to reduce particulate emissions, would also reduce the emissions of GHGs from heavy-duty diesel-powered equipment during construction. Implementation of mitigation measure **MM 3.1** would minimize construction-related GHG emissions to the extent feasible, consistent with AB 32 GHG reduction goals, and would therefore result in a less than significant impact.

Operational Emissions

For operational GHG emissions, the applicable BAAQMD threshold of significance is whether the project would exceed 1,100 metric tons per year of CO_2e. The project would be of a small scale, constructing 10 single-family residences. Based on the Pleasant Hill project referenced above, the operational GHG emissions would not result in more than approximately 250 metric tons per year of CO_2 emissions (Pleasant Hill 2016). Therefore, the project would be below BAAQMD significance thresholds for operational GHG emissions and would result in less than significant GHG impacts.

b) **No Impact.** The project is subject to compliance with AB 32, which is designed to reduce statewide GHG emissions to 1990 levels by 2020. As identified above, the project-generated GHG emissions would not exceed BAAQMD significance thresholds, which were prepared to comply with the requirements of and achieve the goals of AB 32. Therefore, the project would not conflict with the state goals listed in AB 32, other state policies, or any other applicable plans, policies, or regulations adopted to reduce GHG emissions.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
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?	☐	☐	☐	☒
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

DISCUSSION OF IMPACTS

a–c) **Less Than Significant Impact.** Public health is potentially at risk whenever hazardous materials are used. It is necessary to differentiate between the hazard of these materials and the acceptability of the risk they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment. The risk to health and public safety is determined by the probability of exposure, in addition to the inherent toxicity of a material. Factors that can influence the

health effects when human beings are exposed to hazardous materials include the dose to which the person is exposed, the frequency of exposure, the duration of exposure, the exposure pathway (route by which a chemical enters a person's body), and the individual's unique biological susceptibility.

Both the US Environmental Protection Agency (EPA) and the US Department of Transportation (DOT) regulate the transport of hazardous waste and material, including transport via highway. The EPA administers permitting, tracking, reporting, and operations requirements established by the Resource Conservation and Recovery Act. The DOT regulates the transportation of hazardous materials through the Hazardous Materials Transportation Act. This act includes requirements for container design and labeling, as well as for driver training. The established regulations are intended to track and manage the safe interstate transportation of hazardous materials and waste. California Code of Regulations (CCR) Title 22 (Social Security, Division 4.5, Environmental Health Standards for the Management of Hazardous Waste) defines hazardous and special waste, identifies federal and state hazardous waste criteria, and regulates the storage, transportation, and disposal of waste. Title 22 was created to regulate the hazardous wastes generated by factories or similar sources, but soil excavated during construction may also be regulated. If contaminated soil meets Title 22 waste criteria and will be excavated during construction, the soil must be handled in a manner consistent with the regulations. These regulations are also found in Title 26. Additionally, state and local agencies enforce the application of these acts and coordinate safety and mitigation responses in the case that accidents involving hazardous materials occur.

The proposed project would include construction and landscaping activities that could involve limited transport, use, and disposal of hazardous materials such as gasoline fuels, asphalt, lubricants, toxic solvents, pesticides, and herbicides. The project would be required to ensure proper transportation, waste treatment, and disposal of hazardous materials during construction activities in accordance with all applicable federal, state, and local laws, as cited above. If any fuel or oil spills were to occur, they would be minor based on the quantity of such materials typically stored and/or used on a construction site. In addition, as described above, the proposed project would be required to develop and implement a SWPPP that includes best management practices to prevent or reduce the movement of sediment, nutrients, pesticides, and other pollutants from the construction site to surface water or groundwater. BMPs identified in the stormwater pollution prevention plan would prevent impacts on surface water or groundwater associated with the use and handling of hazardous materials during construction activities.

Project Operation

Project implementation would result in the development of housing, which would not be expected to involve the routine transport, use, or disposal of significant amounts of hazardous materials. Residents could use materials classified as household hazardous waste, including common items such as paints, cleaners, motor oil, pesticides, batteries, light bulbs, televisions, and computer monitors. Because it is illegal to dispose of household hazardous waste in the trash, down storm drains, or onto the ground, the proposed project could increase the amount of household hazardous waste being transported to the Household Hazardous Waste Facility, located at 2500 Pittsburg-Antioch Highway, which accepts and safely disposes of hazardous materials from Antioch residents at no charge. However, because of the nature of household hazardous materials, transport of hazardous materials to and from the project site would be in relatively small amounts and would not result in significant hazards to the public or to the environment.

For the reasons discussed above, the proposed project would not create a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous materials. Therefore, impacts would be less than significant.

d) **No Impact.** The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List) (DTSC 2016). The GBF/Pittsburg Dump Federal Superfund Site is the closest contaminated site, located 0.7 mile east of the project area. This Superfund site consists of two landfills, the 25-acre Pittsburg Landfill and the 63-acre GBF Landfill. Among the wastes known to be disposed on-site were beryllium metal, tars, industrial solvents, waste oils, acids, and medical waste (DTSC 2016). The site has been active since 1988 and has various land use restrictions for development on-site. The project would not impact the land use restrictions on the site. Therefore, the project would result in no impact related to significant hazards to the public or the environment due to hazardous materials sites.

e, f) **No Impact.** There are no public or private airports within 2 miles of the project site. The nearest airport to the project site is Buchanan Field Airport located approximately 10 miles to the north..Therefore, there would be no impact.

g) **Less Than Significant Impact.** The proposed project would not result in any changes to the roadway system and would not otherwise block access to any major roadways or facilities critical to emergency response or evacuation. Should any temporary lane closures or detours be necessary during project construction, the contractor would be required to coordinate with the City to ensure adequate access is maintained for emergency responders. Therefore, this impact would be less than significant.

h) **Less Than Significant Impact.** The project site is not designated as a Very High Fire Hazard Severity Zone (Cal Fire 2009). The site is located in an urbanized area that is served by a public fire protection district (the Contra Costa County Fire Protection District) and is not subject to significant risk of wildland fire. This impact would be less than significant.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
9. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☒	☐
e) 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?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of a failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

DISCUSSION OF IMPACTS

a, f) **Less Than Significant Impact.**

Construction

Construction activities would include grading, excavation, and vegetation removal, which would disturb and expose soils to water erosion, potentially increasing the amount of silt and debris entering downstream waterways. In addition, refueling and parking of construction equipment and other vehicles on-site could result in oil, grease, and other related pollutant leaks and spills that could enter runoff. However, the project applicant would be required to prepare and comply with a SWPPP that would include pollution prevention measures (erosion and sediment control measures and measures to control non-stormwater discharges and hazardous spills), demonstrate compliance with all applicable local and regional erosion and sediment control standards, identify responsible parties, and include a detailed construction timeline. The SWPPP must also include best management practices to reduce construction effects on receiving water quality by implementing erosion control measures and reducing or eliminating non-stormwater discharges.

Examples of typical construction BMPs include but are not limited to using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; and installing sediment control devices such as gravel bags, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutants from discharging to the drainage system or receiving waters. BMPs are recognized as effective methods to prevent or minimize the potential releases of pollutants into drainages, surface water, or groundwater. Strict compliance with the stormwater pollution prevention plan, coupled with the use of appropriate BMPs, would reduce potential water quality impacts during construction activities to less than significant.

Operation

Project operation could also contribute pollutants, such as oil, grease, and debris, to stormwater drainage flowing over the driveway and entering the city's stormwater system. The project would connect to the city's existing storm drainage and sewer facilities, and no on-site septic systems would be required to treat wastewater.

The Delta Diablo WWTPwould treat wastewater from the project site (Delta Diablo 2016). The district's treatment plant currently meets all applicable water quality standards and waste discharge requirements. Therefore, the project would have a less than significant impact associated with wastewater or stormwater discharge.

b) **Less Than Significant Impact.** Per the City's (2014) Water System Master Plan Update, domestic water service to proposed homes would be provided by the Contra Costa Water District (CCWD). Groundwater resources in the CCWD service area do not supply significant amounts of water to meet or augment untreated water demands (CCWD 2011). The existing site is 100 percent vegetated. Approximately 2.2 acres of the project area would be developed with residences, and close to 19 acres would remain vacant open space and permeable. Therefore, the majority of the project area could be used for groundwater recharge (**Figure 3**).

The project is located in an area with low groundwater usage and where groundwater is not drawn. Therefore, the proposed project would not contribute to the depletion of groundwater supplies and would not substantially interfere with groundwater recharge. The project would have a less than significant impact.

c, d) **Less Than Significant Impact.** Runoff from the project site currently drains in all directions and is not formalized. As discussed in subsection 6, Geology and Soils, the project would implement various measures to control erosion during both construction and operation. The project would formalize drainage in the project area by connecting the sites to existing storm drains. Therefore, the proposed project would not result in on- or off-site flooding.

In compliance with existing water quality regulations, the project would be required to implement construction and post-construction BMPs to minimize erosion and sedimentation. Therefore, although the proposed project would alter the existing drainage pattern of the site, it would not result in substantial erosion or siltation. This impact would be less than significant.

e) **Less Than Significant Impact.** See item 9(a, f) and item 9(c, d). Project site runoff would be collected and conveyed to the city's storm drainage system. The project would be required to comply with the development runoff requirements of the City's National Pollutant Discharge Elimination System (NPDES) permit, including the management of any increases in runoff volume and flows. The project would develop 10 homes, thus minimally increasing drainage flows entering the city's drainage system, and would not exceed the system's capacity. The project would have a less than significant impact.

g, h) **No Impact.** The project site is in Zone X, which the Federal Emergency Management Agency (FEMA) describes as an area of minimal flood hazard, usually depicted on FIRMs as above the 100-year flood level. Because the project site is located in Zone X unshaded, the potential for the site to be impacted by flooding is minimal (FEMA 2009). The proposed project would not place any structures within a 100-year flood hazard area. Therefore, the project would have no impact regarding flood flows.

i) **No Impact.** There are no levees in the project vicinity, and the project is not located within a dam inundation area (FEMA 2009). Therefore, the project would have no impact.

j) **Less Than Significant Impact.** The project site is generally greater than 250 feet above sea level. The project site is not located within a tsunami inundation or seiche inundation area (FEMA 2009). The hillside contains a ditch separating the project site from the designated remainder parcel to capture stormwater flows, as shown in **Figure 3**. As such, the project site would not be at risk for mudflow. The project would have less than significant impacts due to tsunami, seiche, or mudflow.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
10. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a) **No Impact**. The project site is currently vacant and undeveloped. The project site is surrounded by similar urban development on three sides, primarily low-density residential neighborhoods, so the project would not divide an established community. The project is consistent with the City's zoning and General Plan land use designation, would be consistent with surrounding uses in the area, and would fill in the patchwork of residential uses in the area. As such, the project would have no impact on an established community.

b) **No Impact.** The project site is currently designated as Low Density Residential in the Antioch General Plan. The proposed project would construct 10 new single-family homes with lot sizes ranging in size from 7,060 to 14,430 square feet. The project would contribute to the city's character as a residential community and support the goals and needs for increased available housing outlined in the Antioch General Plan. The project would not conflict with applicable land use plans and policies intended to avoid or mitigate an environmental effect.

c) **No Impact**. See item 4(f) in subsection 4, Biological Resources. The project is not in an area covered under an approved habitat conservation plan or natural community conservation plan. The proposed project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. Thus, the project would have no impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
11. MINERAL RESOURCES. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a, b) **No Impact.** While there has been historic mineral extraction in the southwest region of the city, there are no locally important mineral resources delineated in the Antioch General Plan within or adjacent to the project site (Antioch 2003). The project would not involve the loss of an available known mineral resource that would be of value to the region. Therefore, the project would have no impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
12. NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or a public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a, c, d) **Less Than Significant Impact.**

Short Term

Short-term noise levels related to project construction would temporarily increase noise levels in the project vicinity. Site preparation activities, which include excavation and grading, tend to generate the highest noise levels because earth-moving equipment is the noisiest construction equipment. Earth-moving equipment includes excavating machinery such as backhoes, bulldozers, draglines, front loaders, and earth-moving and compacting equipment, which includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings (Contra Costa County 2016a).

During project construction, noise levels could affect the nearest existing noise-sensitive receptors in the project vicinity. However, this impact would be temporary and would cease when construction is complete. Municipal Code Section 5-17.04 expressly prohibits

construction work on weekends and City-recognized holidays as designated by City Council resolution prior to 9:00 a.m. and after 5:00 p.m., Monday through Friday prior to 7:00 a.m. and after 6:00 p.m., and within 300 feet of occupied dwellings prior to 8:00 a.m. and after 5:00 p.m. (Antioch 2015b).

The project would be subject to the restrictions of the City's Municipal Code. Compliance with existing regulations would minimize disturbance to sensitive receptors in the project vicinity. As such, project construction noise would have a less than significant impact.

Long Term

The General Plan established a change of 5 dBA L_{dn} in an exterior environment as the CEQA criterion for substantial change in noise. Project operation would generate an incremental increase in local traffic as a result of residents entering and exiting the project site. A 3 dB increase in noise represents a doubling of noise energy. While the increase in traffic could increase the ambient noise levels at off-site locations (such as residential uses) in the project vicinity, the 10 homes would not double the traffic in the area, so the project's contribution to the noise environment in the project vicinity would be less than 3 dB. Therefore, long-term operational impacts would be less than significant.

b) **Less Than Significant Impact.** Construction activities would require the use of off-road equipment such as tractors, jackhammers, and haul trucks, which would result in a minimal amount of groundborne vibration. The use of major groundborne vibration–generating construction equipment, such as pile drivers, would not be needed for the project, thereby avoiding significant impacts from groundborne vibration. Nonetheless, during grading and construction, the project may generate limited groundborne vibration as a result of heavy equipment operations. However, this impact would be temporary and would cease when construction ends. Therefore, project impacts would be less than significant.

e) **No Impact.** The project site is not located within an airport land use plan area or within 2 miles of an airport. The project would have no impact.

f) **No Impact.** The project site is not located near a private airstrip. The project would have no impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
13. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a) **Less than Significant Impact.** As of July 2015, Antioch had an estimated population of 110,542 (US Census Bureau 2016). The project would construct 10 single-family homes on approximately 2.2 acres of land. According to estimates cited in the City's 2015–2023 Housing Element, the average household size in Antioch is 3.22 (Antioch 2015a). Assuming 3.22 persons per household, the project would add approximately 32 residents to the city. This minimal increase would not induce substantial population growth or require the extension of roads or infrastructure. The project would have a less than significant impact.

b, c) **No Impact.** The proposed project would be constructed on what is currently vacant land. The project would not involve the demolition of any housing and would not otherwise displace any housing or people. Therefore, the project would have no impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
14. PUBLIC SERVICES. 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 following public services:				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☒	☐
d) Parks?	☐	☐	☒	☐
e) Other public facilities?	☐	☐	☒	☐

DISCUSSION OF IMPACTS

a–e) **Less Than Significant Impact.**

Fire Protection

The Contra Costa County Fire Protection District (CCCFPD) covers Antioch for fire protection services. The district is an "all-hazards" organization providing fire suppression, paramedic emergency medical services (EMS), technical rescue, water rescue, and fire prevention/investigation services to more than 600,000 residents across a 304-square-mile coverage area. The CCCFPD operates 25 fire stations and responds to approximately 45,000 incidents annually (Antioch 2016). The nearest fire station is Station 83 located at 2717 Gentrytown Drive, approximately 1.5 miles northeast of the project site. The CCCFPD reviewed the project plans and approved the project. Given the fire protection district's large coverage area and the small-scale size of the project, and because the project area is currently served by the CCCFPD, the project would not require the construction of new or improvements to existing fire facilities. Therefore, the project would have a less than significant impact on fire protection.

Police Protection

Police protection services are provided by the Antioch Police Department, which is located at 300 L Street, approximately 3.5 miles northeast of the project site. The department consists of 124 sworn and 59 non-sworn employees (Antioch 2016). The General Plan identifies a performance ratio of 1.2 to 1.5 police officers per 1,000 individuals, which the City is not currently meeting. Due to City budgetary issues and the lack of police staffing to meet General Plan standards, residential projects in the city have been conditioned to participate in a community facilities district or other funding mechanism designated by the City (Antioch 2003). The project would participate in the police funding program. While the police staffing is currently below the General Plan performance ratio, the project area is currently patrolled by the Antioch Police Department. The project would not require new patrols or the construction of new facilities, the construction of which

could result in physical environmental effects. As such, the project would have a less than significant impact.

Schools

The Antioch Unified School District (AUSD) serves approximately 19,000 students across Antioch and parts of Oakley. AUSD consists of 14 elementary schools, 4 middle schools, and 6 high schools. The nearest schools to the project area are Turner Elementary School, Mission Elementary School, Park Middle School, and Sutter Elementary School (Antioch 2016). The project would incrementally increase enrollment in the school district. According to the AUSD (2014) Developer Fee Justification Document, it is estimated that 0.67 kindergarten to 12th grade students are added per housing unit in Antioch. As such, the project would add approximately 6.7 students to AUSD schools. While the project applicant would be required to pay school impact fees to help fund the construction of new public school facilities in accordance with Senate Bill 50, given the small number of students from the project, the need for school improvements or expansions is not anticipated. The payment of school impact fees would fully mitigate the project's potential impact on schools. The project would have a less than significant impact.

Parks and Recreation

See discussion in subsection 15, Recreation.

Other Public Facilities

The proposed project would result in a negligible increase in the city's overall population and would not be expected to generate a significant increase in demand for any other public services. This impact would be less than significant.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
15. RECREATION.				
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

DISCUSSION OF IMPACTS

a, b) **Less Than Significant Impact.** The city has 33 public parks, approximately 330 acres in total (Antioch 2016). The parks range in size from Deerfield Park (0.5 acre) to Prewett Family/Aquatic Park (99 acres). Park facilities in the city include barbecue pits, baseball fields, basketball courts, picnic tables, soccer fields, children play areas, dog parks, and trails and open space. Park hours are from dawn to dusk.

The project would incrementally increase the use of existing parks and recreational facilities. Due to the small-scale size of the project (approximately 32 new residents), the project would not require the construction or expansion of recreational facilities or cause significant physical deterioration of existing parks or recreational facilities. Therefore, the project would have a less than significant impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
16. TRANSPORTATION/TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

DISCUSSION OF IMPACTS

a, b) **Less Than Significant Impact.** As described previously, the proposed project would construct 10 single-family residences along Countryside Way. Based on an average household size of 3.22 persons, the project would increase the city's population by approximately 32 people. As described in subsection 3, Air Quality, the project would generate approximately 96 trips per day. This incremental increase in trips would not significantly impact the performance of the circulation system or a congestion management program. The project would have a less than significant impact.

c) **No Impact.** The project proposes 10 single-family homes and would not result in a change in air traffic patterns or increase air traffic levels. The project does not propose any structures that could interfere with aircraft operation. As described in subsection 8, Hazards and Hazardous Materials, there are no public or private airports in the project vicinity. Therefore, no impact to air traffic patterns would occur.

d) **No Impact.** The project does not propose any alterations to the public roadway system. The proposed single-family driveways would not create or increase any hazards to motorists or pedestrians on Countryside Way. Furthermore, the project would be compatible with surrounding land uses. There would be no impact.

e) **Less Than Significant Impact.** The project does not propose any changes to the existing access points from James Donlon Boulevard via Somersville Road, Torgensen Court, or Countryside Way. The proposed driveways do not feature any barriers or sharp corners and would provide adequate access for emergency responders. This impact would be less than significant.

f) **No Impact.** There are existing sidewalks and street lighting along Countryside Drive and Torgensen Court and throughout the surrounding neighborhoods. Crosswalks are also provided at major intersections. The project does not propose any uses that would interfere with policies, plans, or programs for public transit, bicycle, or pedestrian facilities. There would be no impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
17. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider that 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?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

DISCUSSION OF IMPACTS

a) **Less Than Significant Impact.** The City of Antioch maintains and owns the local sewage collection system and is responsible for the collection and conveyance of wastewater to the Delta Diablo WWTP. Delta Diablo owns and operates the regional interceptors and wastewater treatment plant. The project site is located within the Delta Diablo service area. The City of Antioch is responsible for the wastewater collection system from the project site to the designated Delta Diablo regional wastewater conveyance facility. The regional conveyance facilities transport wastewater to the WWTP located at 2500 Pittsburg-Antioch Highway. After secondary treatment, the effluent is either discharged through a deep-water outfall to New York Slough or further processed through the Recycled Water Facility (Delta Diablo 2016).

Delta Diablo provides water resource recovery services for the City of Antioch, the City of Pittsburg, and the unincorporated community of Bay Point, serving a population of nearly 200,000. Delta Diablo services 54 square miles, maintaining six pump stations and five equalization storage facilities with 4 million gallons of storage. Water resource recovery services consist of conventional treatment of wastewater, recycled water production and

distribution, pollution prevention, energy recovery, beneficial reuse of biosolids, street sweeping, and household hazardous waste collection. The WWTP currently meets all applicable water quality standards and waste discharge requirements (Delta Diablo 2016).

The project is of a small scale and would only incrementally increase the amount of wastewater treated by Delta Diablo. In addition, the proposed project is consistent with the Antioch General Plan land use designation, so increases in wastewater treatment demands were anticipated by the City in the General Plan. Therefore, the proposed project would not result in an exceedance of any wastewater treatment requirements and would have a less than significant impact on wastewater.

b) **Less Than Significant Impact.**

Water. The project would construct 10 single-family homes. According to the Contra Costa County Water District Urban Water Management Plan (2015) the District does not anticipate any supply deficits in normal years or single-dry years throughout the 25 year planning horizon. In future years, multiple-dry year conditions may result in supply shortfalls of up to approximately 30,000 AF (15 percent of demand). The District'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. In 2015, which was considered a dry year, the Contra Costa Water District had a drought pricing program for households using more than 400 gallons of water per day (CCWD 2015b). Using an estimate of 400 gallons per day (gpd), the project would increase water demand by 4,000 gpd.[1] The CCWD's share of the current capacity at the water treatment plants is 35 million gallons per day (mgd) of the 120 mgd permitted at the two facilities operated by the district. The additional project demand of 4,000 gpd is minimal compared with the facilities' operating capacity. As such, the project would have a less than significant impact on water facilities.

Wastewater. As stated above, the project would result in a negligible increase in wastewater, and no new or expanded treatment facilities would be required. Therefore, the project would have a less than significant impact related to wastewater facilities.

c) **Less Than Significant Impact.** See item 9(e) in subsection 9, Hydrology and Water Quality. The City would require the project applicant to submit a stormwater control plan and a drainage plan. The project's storm drainage system would be designed to comply with Section E.12.e(ii)(d) of the NPDES General Permit for Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (Order No. 2013-0001-DWQ). This requires the project site design to achieve an 85 percent capture rate. The project's stormwater would flow into the City's existing storm drain system.

All stormwater controls were designed in accordance with the Clean Water Program guidelines, California Stormwater Quality Association standards, and the City of Antioch Urban Water Management Plan. Because the project would connect to an existing storm drain, the project would not require new or the expansion of existing storm drainage facilities. As such, the project would have a less than significant impact on stormwater facilities.

[1] Calculation of gpd: 400 gpd x 10 units = 4,000 gpd

d) **Less Than Significant Impact.** See item 17(b).

e) **Less Than Significant Impact.** See item 17(b).

f) **Less Than Significant Impact.**

Republic Services provides solid waste collection, disposal, recycling, and yard waste services in Antioch, including the project site. Solid waste and recyclables from the city are taken to the Contra Costa Transfer and Recovery Station in Martinez. Solid waste is transferred from the Transfer and Recovery Station to the Keller Canyon Landfill in Pittsburg. The landfill site is 1,399 acres, 244 of which comprise the actual current disposal acreage. The landfill is permitted to accept 3,500 tons of waste per day and has a total estimated permitted capacity of approximately 75 million cubic yards, with approximately 12 million cubic yards (16 percent of total capacity) used to date (CalRecycle 2016).

Assuming a solid waste generation rate of 4.7 pounds per dwelling unit per day (CalRecycle 2015), the project would be expected to generate 47 pounds of solid waste per day. With the available capacity remaining at Keller Canyon Landfill, sufficient capacity would be available to accommodate the project's solid waste disposal needs. Therefore, the impact would be less than significant.

g) **Less Than Significant Impact.** During project construction, disposal of construction debris would be accomplished in compliance with City regulations. Further, the City has in place a household hazardous materials service. The Delta Household Hazardous Waste Collection Facility accepts house and garden products, automotive care products, paint, personal care products, and a variety of miscellaneous products listed on the Delta Diablo website (Delta Diablo 2016). As stated above, the project area would be serviced by Republic Services for solid waste. As such, the project would comply with all applicable solid waste regulations for both project construction and operation and would have a less than significant impact.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
18. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to 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, reduce the number or restrict the range of rare or endangered plants or animals, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
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.	☐	☒	☐	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

DISCUSSION OF IMPACTS

a) **Less Than Significant Impact With Mitigation Incorporated.** As discussed throughout this Initial Study/Mitigated Negative Declaration, the proposed project would not result in any significant impacts that cannot be mitigated to a level of less than significant. As discussed in subsection 4, Biological Resources, with mitigation incorporated, the proposed project would result in less than significant impacts to migratory birds. As discussed in subsection 5, Cultural Resources, the project site does not contain any significant historical resources that could be affected project construction.

b) **Less Than Significant Impact With Mitigation Incorporated.** A significant impact may occur if the project, in conjunction with related projects, would result in impacts that are less than significant when viewed separately but would be significant when viewed together. When considering the proposed project in combination with other past, present, and reasonably foreseeable future projects in the project vicinity, the proposed project would not have the potential to cause impacts that would be cumulatively considerable. As discussed throughout this Initial Study/Mitigated Negative Declaration, the proposed project would not result in any significant impacts after mitigation in any environmental issue areas. In all cases, the impacts associated with the project are limited to the project site or are minor, such that they would not result in a substantial contribution to any cumulative impacts.

c) **Less Than Significant Impact With Mitigation Incorporated.** The proposed project does not have the potential to significantly adversely affect humans, either directly or indirectly, once mitigation measures are implemented. Based on the findings of this Initial Study/Mitigated Negative Declaration, the project would not have a substantial impact on human beings.

REFERENCES

ABAG (Association of Bay Area Governments). 2015. Earthquake and Hazards Program. Accessed September 3. http://quake.abag.ca.gov/tsunamis/.

———. 2016. Hazards Susceptibility Map. Accessed September 7. http://gis.abag.ca.gov/website/Hazards/?hlyr=liqSusceptibility.

Antioch, City of. 2003. *City of Antioch General Plan.*

———. 2009. *Citywide Design Guidelines.*

———. 2014. *Water System Master Plan Update.*

———. 2015a. *Housing Element 2015–2023.*

———. 2015b. *Municipal Code.*

———. 2016. City website. Accessed September 2016. http://www.ci.antioch.ca.us/.

AUSD (Antioch Unified School District). 2014. *Developer Fee Justification Document for Residential, Commercial, and Industrial Development Projects.*

BAAQMD (Bay Area Air Quality Management District). 2010. *Bay Area 2010 Clean Air Plan.*

———. 2011. *CEQA Air Quality Guidelines.*

———. 2012a. Stationary Source Screening Analysis Tool.

———. 2012b. Distance Adjustment Multiplier Tool. http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.

Cal Fire (California Department of Forestry and Fire Protection). 2009. Contra Costa County Very High Fire Hazard Severity Zones in LRA Map.

CalRecycle (California Department of Resources Recycling and Recovery). 2015. California's 2015 per Capita Disposal Rate. http://www.calrecycle.ca.gov/lgcentral/goalmeasure/DisposalRate/MostRecent/default.htm.

———. 2016. Solid Waste Information System. Accessed August 2016. www.calrecycle.ca.gov/SWFacilities/.

Caltrans (California Department of Transportation). 2011. Officially Designated State Scenic Highways. Accessed September 2016. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm.

CARB (California Air Resources Board). 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.*

CCWD (Contra Costa Water District). 2015. *Urban Water Management Plan.*

———. 2015a. *Treated Water Master Plan.*

———. 2015b. State Mandated Drought Emergency. Accessed September 2016. http://www.ccwater.com/755/CCWD-Removes-Drought-Mandates

CDFW (California Department of Fish and Wildlife). 2016. California Natural Diversity Database. Accessed September 15. http://www.dfg.ca.gov/biogeodata/cnddb/.

CNPS (California Native Plant Society). 2016. Inventory of Rare, Threatened, and Endangered Plants of California.

Contra Costa County. 2000. *Contra Costa County General Plan.*

———. 2014. Underground Storage Tanks Program. Accessed September 2016. http://cchealth.org/hazmat/ust/.

———. 2016a. *Draft Environmental Impact Report, Tassajara Parks Project.*

———. 2016b. Keller Canyon Landfill – Application to Amend Land Use Permit. Accessed September 2016. http://www.cccounty.us/4984/Keller-Canyon-Landfill.

Delta Diablo. 2016. District website. Accessed September 2016. http://www.deltadiablo.org/.

DOC (California Department of Conservation). 2014. Division of Land Resource Protection, Farmland Mapping and Monitoring Program. Contra Costa County Important Farmland 2012 [map].

———. 2016. CGS Information Warehouse: Regulatory Maps.

DTSC (California Department of Toxic Substances Control). 2016. EnviroStor. http://www.envirostor.dtsc.ca.gov/public/.

EPA (US Environmental Protection Agency). 1971. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.*

———. 2010. Nitrous Oxide. http://www.epa.gov/nitrousoxide/scientific.html.

———. 2011a. Climate Change – Greenhouse Gas Emissions: Carbon Dioxide. http://www.epa.gov/climatechange/emissions/co2.html.

———. 2011b. Methane. http://www.epa.gov/methane/scientific.html.

FEMA (Federal Emergency Management Agency). 2009. Flood Map FIRM Panel 06013C0326F.

Google. 2016. Accessed September 2016. Maps.google.com.

Institute of Transportation Engineers. 2012. *Trip Generation Manual*, 9th ed.

NRCS (US Department of Agriculture, Natural Resources Conservation Service). 2016. Web Soil Survey. Accessed September 2016. http://websoilsurvey.nrcs.usda.gov/app /WebSoilSurvey.aspx.

Pleasant Hill, City of. 2016. *DeNova Homes Major Subdivision, Initial Study/Mitigated Negative Declaration.*

SWRCB (State Water Resources Control Board). 2016. GeoTracker. http://geotracker.waterboards.ca.gov/.

US Census Bureau. 2016. Agency website. Accessed September 2016. http://www.census.gov/.

USFWS (US Fish and Wildlife Service). 2016. Information for Planning and Conservation (IPaC) Service.

APPENDICES

Appendix A: Bio

CNDDB Quad Species List 52 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Amphibians	Ambystoma californiense	California tiger salamander	AAAAA01180	Threatened	Threatened	WL	-	3712187	Antioch South	Mapped and Unprocessed	Animals - Amphibians - Ambystomatidae - Ambystoma californiense
Animals - Amphibians	Rana draytonii	California red-legged frog	AAABH01022	Threatened	None	SSC	-	3712187	Antioch South	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana draytonii
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP, WL	-	3712187	Antioch South	Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3712187	Antioch South	Mapped and Unprocessed	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3712187	Antioch South	Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Falco mexicanus	prairie falcon	ABNKD06090	None	None	WL	-	3712187	Antioch South	Unprocessed	Animals - Birds - Falconidae - Falco mexicanus
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3712187	Antioch South	Mapped and Unprocessed	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3712187	Antioch South	Unprocessed	Animals - Birds - Laniidae - Lanius ludovicianus
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3712187	Antioch South	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3712187	Antioch South	Mapped and Unprocessed	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3712187	Antioch South	Mapped	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3712187	Antioch South	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Insects	Andrena blennospermatis	Blennosperma vernal pool andrenid bee	IIHYM35030	None	None	-	-	3712187	Antioch South	Mapped	Animals - Insects - Andrenidae - Andrena blennospermatis
Animals - Insects	Bombus crotchii	Crotch bumble bee	IIHYM24480	None	None	-	-	3712187	Antioch South	Mapped	Animals - Insects - Apidae - Bombus crotchii
Animals - Insects	Bombus occidentalis	western bumble bee	IIHYM24250	None	None	-	-	3712187	Antioch South	Mapped	Animals - Insects - Apidae - Bombus occidentalis
Animals - Insects	Lytta molesta	molestan blister beetle	IICOL4C030	None	None	-	-	3712187	Antioch South	Mapped	Animals - Insects - Meloidae - Lytta molesta
Animals - Mammals	Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	Endangered	Threatened	-	-	3712187	Antioch South	Mapped	Animals - Mammals - Canidae - Vulpes macrotis mutica
Animals - Mammals	Perognathus inornatus	San Joaquin Pocket Mouse	AMAFD01060	None	None	-	-	3712187	Antioch South	Mapped	Animals - Mammals - Heteromyidae - Perognathus inornatus

Animals - Mammals	Taxidea taxus	American badger	AMAJF04010	None	None	SSC	-	3712187	Antioch South	Mapped	Animals - Mammals - Mustelidae - Taxidea taxus
Animals - Mammals	Antrozous pallidus	pallid bat	AMACC10010	None	None	SSC	-	3712187	Antioch South	Mapped	Animals - Mammals - Vespertilionidae - Antrozous pallidus
Animals - Mammals	Lasiurus blossevillii	western red bat	AMACC05060	None	None	SSC	-	3712187	Antioch South	Mapped	Animals - Mammals - Vespertilionidae - Lasiurus blossevillii
Animals - Mollusks	Helminthoglypta nickliniana bridgesi	Bridges' coast range shoulderband	IMGASC2362	None	None	-	-	3712187	Antioch South	Mapped	Animals - Mollusks - Helminthoglyptidae - Helminthoglypta nickliniana bridgesi
Animals - Reptiles	Anniella pulchra pulchra	silvery legless lizard	ARACC01012	None	None	SSC	-	3712187	Antioch South	Mapped	Animals - Reptiles - Anniellidae - Anniella pulchra pulchra
Animals - Reptiles	Masticophis lateralis euryxanthus	Alameda whipsnake	ARADB21031	Threatened	Threatened	-	-	3712187	Antioch South	Mapped	Animals - Reptiles - Colubridae - Masticophis lateralis euryxanthus
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3712187	Antioch South	Mapped and Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Plants - Bryophytes	Anomobryum julaceum	slender silver moss	NBMUS80010	None	None	-	4.2	3712187	Antioch South	Mapped	Plants - Bryophytes - Bryaceae - Anomobryum julaceum
Plants - Vascular	Blepharizonia plumosa	big tarplant	PDAST1C011	None	None	-	1B.1	3712187	Antioch South	Mapped and Unprocessed	Plants - Vascular - Asteraceae - Blepharizonia plumosa
Plants - Vascular	Eriophyllum jepsonii	Jepson's woolly sunflower	PDAST3N040	None	None	-	4.3	3712187	Antioch South	Unprocessed	Plants - Vascular - Asteraceae - Eriophyllum jepsonii
Plants - Vascular	Helianthella castanea	Diablo helianthella	PDAST4M020	None	None	-	1B.2	3712187	Antioch South	Mapped	Plants - Vascular - Asteraceae - Helianthella castanea
Plants - Vascular	Hesperevax caulescens	hogwallow starfish	PDASTE5020	None	None	-	4.2	3712187	Antioch South	Unprocessed	Plants - Vascular - Asteraceae - Hesperevax caulescens
Plants - Vascular	Lasthenia conjugens	Contra Costa goldfields	PDAST5L040	Endangered	None	-	1B.1	3712187	Antioch South	Mapped	Plants - Vascular - Asteraceae - Lasthenia conjugens
Plants - Vascular	Madia radiata	showy golden madia	PDAST650E0	None	None	-	1B.1	3712187	Antioch South	Mapped	Plants - Vascular - Asteraceae - Madia radiata
Plants - Vascular	Senecio aphanactis	chaparral ragwort	PDAST8H060	None	None	-	2B.2	3712187	Antioch South	Mapped	Plants - Vascular - Asteraceae - Senecio aphanactis
Plants - Vascular	Amsinckia grandiflora	large-flowered fiddleneck	PDBOR01050	Endangered	Endangered	-	1B.1	3712187	Antioch South	Mapped	Plants - Vascular - Boraginaceae - Amsinckia grandiflora
Plants - Vascular	Cryptantha hooveri	Hoover's cryptantha	PDBOR0A190	None	None	-	1A	3712187	Antioch South	Mapped	Plants - Vascular - Boraginaceae - Cryptantha hooveri
Plants - Vascular	Viburnum ellipticum	oval-leaved viburnum	PDCPR07080	None	None	-	2B.3	3712187	Antioch South	Mapped	Plants - Vascular - Caprifoliaceae - Viburnum ellipticum

Plants - Vascular	Atriplex coronata var. coronata	crownscale	PDCHE040C3	None	None	-	4.2	3712187	Antioch South	Unprocessed	Plants - Vascular - Chenopodiaceae - Atriplex coronata var. coronata
Plants - Vascular	Atriplex depressa	brittlescale	PDCHE042L0	None	None	-	1B.2	3712187	Antioch South	Mapped	Plants - Vascular - Chenopodiaceae - Atriplex depressa
Plants - Vascular	Extriplex joaquinana	San Joaquin spearscale	PDCHE041F3	None	None	-	1B.2	3712187	Antioch South	Mapped	Plants - Vascular - Chenopodiaceae - Extriplex joaquinana
Plants - Vascular	Convolvulus simulans	small-flowered morning-glory	PDCON05060	None	None	-	4.2	3712187	Antioch South	Unprocessed	Plants - Vascular - Convolvulaceae - Convolvulus simulans
Plants - Vascular	Arctostaphylos auriculata	Mt. Diablo manzanita	PDERI04040	None	None	-	1B.3	3712187	Antioch South	Mapped	Plants - Vascular - Ericaceae - Arctostaphylos auriculata
Plants - Vascular	Arctostaphylos manzanita ssp. laevigata	Contra Costa manzanita	PDERI04273	None	None	-	1B.2	3712187	Antioch South	Unprocessed	Plants - Vascular - Ericaceae - Arctostaphylos manzanita ssp. laevigata
Plants - Vascular	California macrophylla	round-leaved filaree	PDGER01070	None	None	-	1B.2	3712187	Antioch South	Mapped and Unprocessed	Plants - Vascular - Geraniaceae - California macrophylla
Plants - Vascular	Calochortus pulchellus	Mt. Diablo fairy-lantern	PMLIL0D160	None	None	-	1B.2	3712187	Antioch South	Mapped	Plants - Vascular - Liliaceae - Calochortus pulchellus
Plants - Vascular	Fritillaria agrestis	stinkbells	PMLIL0V010	None	None	-	4.2	3712187	Antioch South	Unprocessed	Plants - Vascular - Liliaceae - Fritillaria agrestis
Plants - Vascular	Hesperolinon breweri	Brewer's western flax	PDLIN01030	None	None	-	1B.2	3712187	Antioch South	Mapped	Plants - Vascular - Linaceae - Hesperolinon breweri
Plants - Vascular	Malacothamnus hallii	Hall's bush-mallow	PDMAL0Q0F0	None	None	-	1B.2	3712187	Antioch South	Mapped	Plants - Vascular - Malvaceae - Malacothamnus hallii
Plants - Vascular	Calandrinia breweri	Brewer's calandrinia	PDPOR01020	None	None	-	4.2	3712187	Antioch South	Unprocessed	Plants - Vascular - Montiaceae - Calandrinia breweri
Plants - Vascular	Navarretia heterandra	Tehama navarretia	PDPLM0C0A0	None	None	-	4.3	3712187	Antioch South	Unprocessed	Plants - Vascular - Polemoniaceae - Navarretia heterandra
Plants - Vascular	Navarretia nigelliformis ssp. radians	shining navarretia	PDPLM0C0J2	None	None	-	1B.2	3712187	Antioch South	Mapped	Plants - Vascular - Polemoniaceae - Navarretia nigelliformis ssp. radians
Plants - Vascular	Eriogonum truncatum	Mt. Diablo buckwheat	PDPGN085Z0	None	None	-	1B.1	3712187	Antioch South	Mapped	Plants - Vascular - Polygonaceae - Eriogonum truncatum
Plants - Vascular	Galium andrewsii ssp. gatense	serpentine phlox-leaf bedstraw	PDRUB0N032	None	None	-	4.2	3712187	Antioch South	Unprocessed	Plants - Vascular - Rubiaceae - Galium andrewsii ssp. gatense

CNDDB Quad Species List 56 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Amphibians	Ambystoma californiense	California tiger salamander	AAAAA01180	Threatened	Threatened	WL	-	3812118	Honker Bay	Mapped	Animals - Amphibians - Ambystomatidae - Ambystoma californiense
Animals - Amphibians	Rana draytonii	California red-legged frog	AAABH01022	Threatened	None	SSC	-	3812118	Honker Bay	Mapped	Animals - Amphibians - Ranidae - Rana draytonii
Animals - Birds	Accipiter cooperii	Cooper's hawk	ABNKC12040	None	None	WL	-	3812118	Honker Bay	Unprocessed	Animals - Birds - Accipitridae - Accipiter cooperii
Animals - Birds	Buteo regalis	ferruginous hawk	ABNKC19120	None	None	WL	-	3812118	Honker Bay	Unprocessed	Animals - Birds - Accipitridae - Buteo regalis
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3812118	Honker Bay	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Circus cyaneus	northern harrier	ABNKC11010	None	None	SSC	-	3812118	Honker Bay	Unprocessed	Animals - Birds - Accipitridae - Circus cyaneus
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3812118	Honker Bay	Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Eremophila alpestris actia	California horned lark	ABPAT02011	None	None	WL	-	3812118	Honker Bay	Unprocessed	Animals - Birds - Alaudidae - Eremophila alpestris actia
Animals - Birds	Ardea alba	great egret	ABNGA04040	None	None	-	-	3812118	Honker Bay	Unprocessed	Animals - Birds - Ardeidae - Ardea alba
Animals - Birds	Ardea herodias	great blue heron	ABNGA04010	None	None	-	-	3812118	Honker Bay	Unprocessed	Animals - Birds - Ardeidae - Ardea herodias
Animals - Birds	Charadrius alexandrinus nivosus	western snowy plover	ABNNB03031	Threatened	None	SSC	-	3812118	Honker Bay	Unprocessed	Animals - Birds - Charadriidae - Charadrius alexandrinus nivosus
Animals - Birds	Melospiza melodia maxillaris	Suisun song sparrow	ABPBXA301K	None	None	SSC	-	3812118	Honker Bay	Mapped	Animals - Birds - Emberizidae - Melospiza melodia maxillaris
Animals - Birds	Agelaius tricolor	tricolored blackbird	ABPBXB0020	None	None	SSC	-	3812118	Honker Bay	Mapped	Animals - Birds - Icteridae - Agelaius tricolor
Animals - Birds	Lanius ludovicianus	loggerhead shrike	ABPBR01030	None	None	SSC	-	3812118	Honker Bay	Unprocessed	Animals - Birds - Laniidae - Lanius ludovicianus
Animals - Birds	Sternula antillarum browni	California least tern	ABNNM08103	Endangered	Endangered	FP	-	3812118	Honker Bay	Mapped and Unprocessed	Animals - Birds - Laridae - Sternula antillarum browni
Animals - Birds	Geothlypis trichas sinuosa	saltmarsh common yellowthroat	ABPBX1201A	None	None	SSC	-	3812118	Honker Bay	Mapped	Animals - Birds - Parulidae - Geothlypis trichas sinuosa
Animals - Birds	Phalacrocorax auritus	double-crested cormorant	ABNFD01020	None	None	WL	-	3812118	Honker Bay	Unprocessed	Animals - Birds - Phalacrocoracidae - Phalacrocorax auritus
Animals - Birds	Laterallus jamaicensis coturniculus	California black rail	ABNME03041	None	Threatened	FP	-	3812118	Honker Bay	Mapped and Unprocessed	Animals - Birds - Rallidae - Laterallus jamaicensis coturniculus

Animals - Birds	Rallus longirostris obsoletus	California clapper rail	ABNME05016	Endangered	Endangered	FP	-	3812118	Honker Bay	Mapped	Animals - Birds - Rallidae - Rallus longirostris obsoletus
Animals - Birds	Asio flammeus	short-eared owl	ABNSB13040	None	None	SSC	-	3812118	Honker Bay	Mapped and Unprocessed	Animals - Birds - Strigidae - Asio flammeus
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3812118	Honker Bay	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Crustaceans	Branchinecta conservatio	Conservancy fairy shrimp	ICBRA03010	Endangered	None	-	-	3812118	Honker Bay	Mapped	Animals - Crustaceans - Branchinectidae - Branchinecta conservatio
Animals - Crustaceans	Branchinecta lynchi	vernal pool fairy shrimp	ICBRA03030	Threatened	None	-	-	3812118	Honker Bay	Mapped	Animals - Crustaceans - Branchinectidae - Branchinecta lynchi
Animals - Crustaceans	Lepidurus packardi	vernal pool tadpole shrimp	ICBRA10010	Endangered	None	-	-	3812118	Honker Bay	Mapped	Animals - Crustaceans - Triopsidae - Lepidurus packardi
Animals - Fish	Acipenser medirostris	green sturgeon	AFCAA01030	Threatened	None	SSC	-	3812118	Honker Bay	Unprocessed	Animals - Fish - Acipenseridae - Acipenser medirostris
Animals - Fish	Acipenser transmontanus	white sturgeon	AFCAA01050	None	None	SSC	-	3812118	Honker Bay	Unprocessed	Animals - Fish - Acipenseridae - Acipenser transmontanus
Animals - Fish	Lavinia exilicauda exilicauda	Sacramento hitch	AFCJB19012	None	None	SSC	-	3812118	Honker Bay	Unprocessed	Animals - Fish - Cyprinidae - Lavinia exilicauda exilicauda
Animals - Fish	Pogonichthys macrolepidotus	Sacramento splittail	AFCJB34020	None	None	SSC	-	3812118	Honker Bay	Unprocessed	Animals - Fish - Cyprinidae - Pogonichthys macrolepidotus
Animals - Fish	Hysterocarpus traski traski	Sacramento-San Joaquin tule perch	AFCQK02012	None	None	-	-	3812118	Honker Bay	Unprocessed	Animals - Fish - Embiotocidae - Hysterocarpus traski traski
Animals - Fish	Hypomesus transpacificus	Delta smelt	AFCHB01040	Threatened	Endangered	-	-	3812118	Honker Bay	Unprocessed	Animals - Fish - Osmeridae - Hypomesus transpacificus
Animals - Fish	Spirinchus thaleichthys	longfin smelt	AFCHB03010	Candidate	Threatened	SSC	-	3812118	Honker Bay	Mapped and Unprocessed	Animals - Fish - Osmeridae - Spirinchus thaleichthys
Animals - Fish	Entosphenus tridentatus	Pacific lamprey	AFBAA02100	None	None	SSC	-	3812118	Honker Bay	Unprocessed	Animals - Fish - Petromyzontidae - Entosphenus tridentatus
Animals - Fish	Lampetra ayresii	river lamprey	AFBAA02030	None	None	SSC	-	3812118	Honker Bay	Unprocessed	Animals - Fish - Petromyzontidae - Lampetra ayresii
Animals - Fish	Oncorhynchus kisutch	coho salmon - central California coast ESU	AFCHA02034	Endangered	Endangered	-	-	3812118	Honker Bay	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus kisutch
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - central California coast DPS	AFCHA0209G	Threatened	None	-	-	3812118	Honker Bay	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	-	-	3812118	Honker Bay	Mapped and Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus

Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	AFCHA0205A	Threatened	Threatened	-	-	3812118	Honker Bay	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	-	-	3812118	Honker Bay	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Fish	Oncorhynchus tshawytscha	chinook salmon - Central Valley fall / late fall-run ESU	AFCHA0205N	None	None	SSC	-	3812118	Honker Bay	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus tshawytscha
Animals - Insects	Bombus occidentalis	western bumble bee	IIHYM24250	None	None	-	-	3812118	Honker Bay	Mapped	Animals - Insects - Apidae - Bombus occidentalis
Animals - Mammals	Perognathus inornatus	San Joaquin Pocket Mouse	AMAFD01060	None	None	-	-	3812118	Honker Bay	Mapped	Animals - Mammals - Heteromyidae - Perognathus inornatus
Animals - Mammals	Reithrodontomys raviventris	salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	FP	-	3812118	Honker Bay	Mapped and Unprocessed	Animals - Mammals - Muridae - Reithrodontomys raviventris
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3812118	Honker Bay	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Thamnophis gigas	giant gartersnake	ARADB36150	Threatened	Threatened	-	-	3812118	Honker Bay	Mapped	Animals - Reptiles - Natricidae - Thamnophis gigas
Community - Terrestrial	Coastal Brackish Marsh	Coastal Brackish Marsh	CTT52200CA	None	None	-	-	3812118	Honker Bay	Mapped	Community - Terrestrial - Coastal Brackish Marsh
Plants - Vascular	Cicuta maculata var. bolanderi	Bolander's water-hemlock	PDAPI0M051	None	None	-	2B.1	3812118	Honker Bay	Mapped	Plants - Vascular - Apiaceae - Cicuta maculata var. bolanderi
Plants - Vascular	Lilaeopsis masonii	Mason's lilaeopsis	PDAPI19030	None	Rare	-	1B.1	3812118	Honker Bay	Mapped and Unprocessed	Plants - Vascular - Apiaceae - Lilaeopsis masonii
Plants - Vascular	Blepharizonia plumosa	big tarplant	PDAST1C011	None	None	-	1B.1	3812118	Honker Bay	Mapped	Plants - Vascular - Asteraceae - Blepharizonia plumosa
Plants - Vascular	Symphyotrichum lentum	Suisun Marsh aster	PDASTE8470	None	None	-	1B.2	3812118	Honker Bay	Mapped	Plants - Vascular - Asteraceae - Symphyotrichum lentum
Plants - Vascular	Erysimum capitatum var. angustatum	Contra Costa wallflower	PDBRA16052	Endangered	Endangered	-	1B.1	3812118	Honker Bay	Mapped	Plants - Vascular - Brassicaceae - Erysimum capitatum var. angustatum
Plants - Vascular	Astragalus tener var. tener	alkali milk-vetch	PDFAB0F8R1	None	None	-	1B.2	3812118	Honker Bay	Mapped	Plants - Vascular - Fabaceae - Astragalus tener var. tener
Plants - Vascular	Lathyrus jepsonii var. jepsonii	Delta tule pea	PDFAB250D2	None	None	-	1B.2	3812118	Honker Bay	Mapped and Unprocessed	Plants - Vascular - Fabaceae - Lathyrus jepsonii var. jepsonii
Plants - Vascular	California macrophylla	round-leaved filaree	PDGER01070	None	None	-	1B.2	3812118	Honker Bay	Mapped	Plants - Vascular - Geraniaceae - California macrophylla

Plants - Vascular	Oenothera deltoides ssp. howellii	Antioch Dunes evening-primrose	PDONA0C0B4	Endangered	Endangered	-	1B.1	3812118	Honker Bay	Mapped	Plants - Vascular - Onagraceae - Oenothera deltoides ssp. howellii
Plants - Vascular	Chloropyron molle ssp. molle	soft salty bird's-beak	PDSCR0J0D2	Endangered	Rare	-	1B.2	3812118	Honker Bay	Mapped	Plants - Vascular - Orobanchaceae - Chloropyron molle ssp. molle
Plants - Vascular	Limosella australis	Delta mudwort	PDSCR10050	None	None	-	2B.1	3812118	Honker Bay	Mapped	Plants - Vascular - Scrophulariaceae - Limosella australis

CNDDB Quad Species List 65 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Amphibians	Ambystoma californiense	California tiger salamander	AAAAA01180	Threatened	Threatened	WL	-	3712188	Clayton	Mapped and Unprocessed	Animals - Amphibians - Ambystomatidae - Ambystoma californiense
Animals - Amphibians	Rana draytonii	California red-legged frog	AAABH01022	Threatened	None	SSC	-	3712188	Clayton	Mapped and Unprocessed	Animals - Amphibians - Ranidae - Rana draytonii
Animals - Birds	Aquila chrysaetos	golden eagle	ABNKC22010	None	None	FP , WL	-	3712188	Clayton	Mapped and Unprocessed	Animals - Birds - Accipitridae - Aquila chrysaetos
Animals - Birds	Buteo regalis	ferruginous hawk	ABNKC19120	None	None	WL	-	3712188	Clayton	Mapped and Unprocessed	Animals - Birds - Accipitridae - Buteo regalis
Animals - Birds	Buteo swainsoni	Swainson's hawk	ABNKC19070	None	Threatened	-	-	3712188	Clayton	Mapped	Animals - Birds - Accipitridae - Buteo swainsoni
Animals - Birds	Elanus leucurus	white-tailed kite	ABNKC06010	None	None	FP	-	3712188	Clayton	Unprocessed	Animals - Birds - Accipitridae - Elanus leucurus
Animals - Birds	Pandion haliaetus	osprey	ABNKC01010	None	None	WL	-	3712188	Clayton	Unprocessed	Animals - Birds - Accipitridae - Pandion haliaetus
Animals - Birds	Falco mexicanus	prairie falcon	ABNKD06090	None	None	WL	-	3712188	Clayton	Unprocessed	Animals - Birds - Falconidae - Falco mexicanus
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3712188	Clayton	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Crustaceans	Linderiella occidentalis	California linderiella	ICBRA06010	None	None	-	-	3712188	Clayton	Mapped	Animals - Crustaceans - Linderiellidae - Linderiella occidentalis
Animals - Fish	Oncorhynchus mykiss irideus	steelhead - central California coast DPS	AFCHA0209G	Threatened	None	-	-	3712188	Clayton	Unprocessed	Animals - Fish - Salmonidae - Oncorhynchus mykiss irideus
Animals - Insects	Bombus caliginosus	obscure bumble bee	IIHYM24380	None	None	-	-	3712188	Clayton	Mapped	Animals - Insects - Apidae - Bombus caliginosus
Animals - Insects	Bombus crotchii	Crotch bumble bee	IIHYM24480	None	None	-	-	3712188	Clayton	Mapped	Animals - Insects - Apidae - Bombus crotchii
Animals - Insects	Bombus occidentalis	western bumble bee	IIHYM24250	None	None	-	-	3712188	Clayton	Mapped	Animals - Insects - Apidae - Bombus occidentalis
Animals - Insects	Callophrys mossii bayensis	San Bruno elfin butterfly	IILEPE2202	Endangered	None	-	-	3712188	Clayton	Mapped	Animals - Insects - Lycaenidae - Callophrys mossii bayensis
Animals - Mammals	Vulpes macrotis mutica	San Joaquin kit fox	AMAJA03041	Endangered	Threatened	-	-	3712188	Clayton	Mapped	Animals - Mammals - Canidae - Vulpes macrotis mutica
Animals - Mammals	Dipodomys heermanni berkeleyensis	Berkeley kangaroo rat	AMAFD03061	None	None	-	-	3712188	Clayton	Mapped	Animals - Mammals - Heteromyidae - Dipodomys heermanni berkeleyensis
Animals - Mammals	Perognathus inornatus	San Joaquin Pocket Mouse	AMAFD01060	None	None	-	-	3712188	Clayton	Mapped and Unprocessed	Animals - Mammals - Heteromyidae - Perognathus inornatus

Animals - Mammals	Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	AMAFF08082	None	None	SSC	-	3712188	Clayton	Mapped	Animals - Mammals - Muridae - Neotoma fuscipes annectens
Animals - Mammals	Antrozous pallidus	pallid bat	AMACC10010	None	None	SSC	-	3712188	Clayton	Mapped	Animals - Mammals - Vespertilionidae - Antrozous pallidus
Animals - Mammals	Corynorhinus townsendii	Townsend's big-eared bat	AMACC08010	None	Candidate Threatened	SSC	-	3712188	Clayton	Mapped	Animals - Mammals - Vespertilionidae - Corynorhinus townsendii
Animals - Mollusks	Helminthoglypta nickliniana bridgesi	Bridges' coast range shoulderband	IMGASC2362	None	None	-	-	3712188	Clayton	Mapped	Animals - Mollusks - Helminthoglyptidae - Helminthoglypta nickliniana bridgesi
Animals - Reptiles	Masticophis lateralis euryxanthus	Alameda whipsnake	ARADB21031	Threatened	Threatened	-	-	3712188	Clayton	Mapped	Animals - Reptiles - Colubridae - Masticophis lateralis euryxanthus
Animals - Reptiles	Emys marmorata	western pond turtle	ARAAD02030	None	None	SSC	-	3712188	Clayton	Unprocessed	Animals - Reptiles - Emydidae - Emys marmorata
Animals - Reptiles	Phrynosoma blainvillii	coast horned lizard	ARACF12100	None	None	SSC	-	3712188	Clayton	Mapped	Animals - Reptiles - Phrynosomatidae - Phrynosoma blainvillii
Community - Terrestrial	Serpentine Bunchgrass	Serpentine Bunchgrass	CTT42130CA	None	None	-	-	3712188	Clayton	Mapped	Community - Terrestrial - Serpentine Bunchgrass
Plants - Bryophytes	Anomobryum julaceum	slender silver moss	NBMUS80010	None	None	-	4.2	3712188	Clayton	Mapped	Plants - Bryophytes - Bryaceae - Anomobryum julaceum
Plants - Bryophytes	Grimmia torenii	Toren's grimmia	NBMUS32330	None	None	-	1B.3	3712188	Clayton	Mapped	Plants - Bryophytes - Grimmiaceae - Grimmia torenii
Plants - Bryophytes	Triquetrella californica	coastal triquetrella	NBMUS7S010	None	None	-	1B.2	3712188	Clayton	Mapped	Plants - Bryophytes - Pottiaceae - Triquetrella californica
Plants - Vascular	Sanicula saxatilis	rock sanicle	PDAPI1Z0H0	None	Rare	-	1B.2	3712188	Clayton	Mapped and Unprocessed	Plants - Vascular - Apiaceae - Sanicula saxatilis
Plants - Vascular	Blepharizonia plumosa	big tarplant	PDAST1C011	None	None	-	1B.1	3712188	Clayton	Mapped and Unprocessed	Plants - Vascular - Asteraceae - Blepharizonia plumosa
Plants - Vascular	Eriophyllum jepsonii	Jepson's woolly sunflower	PDAST3N040	None	None	-	4.3	3712188	Clayton	Unprocessed	Plants - Vascular - Asteraceae - Eriophyllum jepsonii
Plants - Vascular	Helianthella castanea	Diablo helianthella	PDAST4M020	None	None	-	1B.2	3712188	Clayton	Mapped	Plants - Vascular - Asteraceae - Helianthella castanea
Plants - Vascular	Madia radiata	showy golden madia	PDAST650E0	None	None	-	1B.1	3712188	Clayton	Mapped	Plants - Vascular - Asteraceae - Madia radiata
Plants - Vascular	Microseris sylvatica	sylvan microseris	PDAST6E0E0	None	None	-	4.2	3712188	Clayton	Unprocessed	Plants - Vascular - Asteraceae - Microseris sylvatica
Plants - Vascular	Monolopia gracilens	woodland woollythreads	PDAST6G010	None	None	-	1B.2	3712188	Clayton	Mapped	Plants - Vascular - Asteraceae - Monolopia gracilens
Plants - Vascular	Senecio aphanactis	chaparral ragwort	PDAST8H060	None	None	-	2B.2	3712188	Clayton	Mapped	Plants - Vascular - Asteraceae - Senecio aphanactis

Plants - Vascular	Phacelia phacelioides	Mt. Diablo phacelia	PDHYD0C3Q0	None	None	-	1B.2	3712188	Clayton	Mapped and Unprocessed	Plants - Vascular - Boraginaceae - Phacelia phacelioides
Plants - Vascular	Arabis blepharophylla	coast rockcress	PDBRA06040	None	None	-	4.3	3712188	Clayton	Unprocessed	Plants - Vascular - Brassicaceae - Arabis blepharophylla
Plants - Vascular	Streptanthus albidus ssp. peramoenus	most beautiful jewelflower	PDBRA2G012	None	None	-	1B.2	3712188	Clayton	Mapped and Unprocessed	Plants - Vascular - Brassicaceae - Streptanthus albidus ssp. peramoenus
Plants - Vascular	Streptanthus hispidus	Mt. Diablo jewelflower	PDBRA2G0M0	None	None	-	1B.3	3712188	Clayton	Mapped and Unprocessed	Plants - Vascular - Brassicaceae - Streptanthus hispidus
Plants - Vascular	Tropidocarpum capparideum	caper-fruited tropidocarpum	PDBRA2R010	None	None	-	1B.1	3712188	Clayton	Mapped	Plants - Vascular - Brassicaceae - Tropidocarpum capparideum
Plants - Vascular	Campanula exigua	chaparral harebell	PDCAM020A0	None	None	-	1B.2	3712188	Clayton	Mapped	Plants - Vascular - Campanulaceae - Campanula exigua
Plants - Vascular	Viburnum ellipticum	oval-leaved viburnum	PDCPR07080	None	None	-	2B.3	3712188	Clayton	Mapped	Plants - Vascular - Caprifoliaceae - Viburnum ellipticum
Plants - Vascular	Arctostaphylos auriculata	Mt. Diablo manzanita	PDERI04040	None	None	-	1B.3	3712188	Clayton	Mapped	Plants - Vascular - Ericaceae - Arctostaphylos auriculata
Plants - Vascular	Arctostaphylos manzanita ssp. laevigata	Contra Costa manzanita	PDERI04273	None	None	-	1B.2	3712188	Clayton	Mapped	Plants - Vascular - Ericaceae - Arctostaphylos manzanita ssp. laevigata
Plants - Vascular	California macrophylla	round-leaved filaree	PDGER01070	None	None	-	1B.2	3712188	Clayton	Mapped	Plants - Vascular - Geraniaceae - California macrophylla
Plants - Vascular	Calochortus pulchellus	Mt. Diablo fairy-lantern	PMLIL0D160	None	None	-	1B.2	3712188	Clayton	Mapped	Plants - Vascular - Liliaceae - Calochortus pulchellus
Plants - Vascular	Fritillaria agrestis	stinkbells	PMLIL0V010	None	None	-	4.2	3712188	Clayton	Unprocessed	Plants - Vascular - Liliaceae - Fritillaria agrestis
Plants - Vascular	Fritillaria liliacea	fragrant fritillary	PMLIL0V0C0	None	None	-	1B.2	3712188	Clayton	Mapped	Plants - Vascular - Liliaceae - Fritillaria liliacea
Plants - Vascular	Hesperolinon breweri	Brewer's western flax	PDLIN01030	None	None	-	1B.2	3712188	Clayton	Mapped and Unprocessed	Plants - Vascular - Linaceae - Hesperolinon breweri
Plants - Vascular	Malacothamnus hallii	Hall's bush-mallow	PDMAL0Q0F0	None	None	-	1B.2	3712188	Clayton	Mapped	Plants - Vascular - Malvaceae - Malacothamnus hallii
Plants - Vascular	Calandrinia breweri	Brewer's calandrinia	PDPOR01020	None	None	-	4.2	3712188	Clayton	Unprocessed	Plants - Vascular - Montiaceae - Calandrinia breweri
Plants - Vascular	Oenothera deltoides ssp. howellii	Antioch Dunes evening-primrose	PDONA0C0B4	Endangered	Endangered	-	1B.1	3712188	Clayton	Mapped	Plants - Vascular - Onagraceae - Oenothera deltoides ssp. howellii
Plants - Vascular	Cordylanthus nidularius	Mt. Diablo bird's-beak	PDSCR0J0F0	None	Rare	-	1B.1	3712188	Clayton	Mapped	Plants - Vascular - Orobanchaceae - Cordylanthus nidularius
Plants - Vascular	Collomia diversifolia	serpentine collomia	PDPLM02020	None	None	-	4.3	3712188	Clayton	Unprocessed	Plants - Vascular - Polemoniaceae - Collomia diversifolia

Plants - Vascular	Eriastrum ertterae	Lime Ridge eriastrum	PDPLM030F0	None	None	-	1B.1	3712188	Clayton	Mapped	Plants - Vascular - Polemoniaceae - Eriastrum ertterae
Plants - Vascular	Navarretia gowenii	Lime Ridge navarretia	PDPLM0C120	None	None	-	1B.1	3712188	Clayton	Mapped	Plants - Vascular - Polemoniaceae - Navarretia gowenii
Plants - Vascular	Eriogonum truncatum	Mt. Diablo buckwheat	PDPGN085Z0	None	None	-	1B.1	3712188	Clayton	Mapped	Plants - Vascular - Polygonaceae - Eriogonum truncatum
Plants - Vascular	Eriogonum umbellatum var. bahiiforme	bay buckwheat	PDPGN086UB	None	None	-	4.2	3712188	Clayton	Unprocessed	Plants - Vascular - Polygonaceae - Eriogonum umbellatum var. bahiiforme
Plants - Vascular	Stuckenia filiformis ssp. alpina	slender-leaved pondweed	PMPOT03091	None	None	-	2B.2	3712188	Clayton	Mapped	Plants - Vascular - Potamogetonaceae - Stuckenia filiformis ssp. alpina
Plants - Vascular	Androsace elongata ssp. acuta	California androsace	PDPRI02031	None	None	-	4.2	3712188	Clayton	Unprocessed	Plants - Vascular - Primulaceae - Androsace elongata ssp. acuta
Plants - Vascular	Delphinium californicum ssp. interius	Hospital Canyon larkspur	PDRAN0B0A2	None	None	-	1B.2	3712188	Clayton	Mapped	Plants - Vascular - Ranunculaceae - Delphinium californicum ssp. interius
Plants - Vascular	Ranunculus lobbii	Lobb's aquatic buttercup	PDRAN0L1J0	None	None	-	4.2	3712188	Clayton	Unprocessed	Plants - Vascular - Ranunculaceae - Ranunculus lobbii
Plants - Vascular	Galium andrewsii ssp. gatense	serpentine phlox-leaf bedstraw	PDRUB0N032	None	None	-	4.2	3712188	Clayton	Unprocessed	Plants - Vascular - Rubiaceae - Galium andrewsii ssp. gatense

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28 matches found. *Click on scientific name for details*

Search Criteria

Found in Quad 38121A7

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Astragalus tener var. tener	alkali milk-vetch	Fabaceae	annual herb	1B.2	S2	G2T2
Atriplex cordulata var. cordulata	heartscale	Chenopodiaceae	annual herb	1B.2	S2	G3T2
Atriplex coronata var. coronata	crownscale	Chenopodiaceae	annual herb	4.2	S3	G4T3
Atriplex depressa	brittlescale	Chenopodiaceae	annual herb	1B.2	S2	G2
Blepharizonia plumosa	big tarplant	Asteraceae	annual herb	1B.1	S2	G2
California macrophylla	round-leaved filaree	Geraniaceae	annual herb	1B.2	S3?	G3?
Chloropyron molle ssp. molle	soft bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	1B.2	S1	G2T1
Cicuta maculata var. bolanderi	Bolander's water-hemlock	Apiaceae	perennial herb	2B.1	S2	G5T4
Convolvulus simulans	small-flowered morning-glory	Convolvulaceae	annual herb	4.2	S4	G4
Cryptantha hooveri	Hoover's cryptantha	Boraginaceae	annual herb	1A	SH	GH
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	2B.2	S2	GU
Eriogonum nudum var. psychicola	Antioch Dunes buckwheat	Polygonaceae	perennial herb	1B.1	S1	G5T1
Eriogonum truncatum	Mt. Diablo buckwheat	Polygonaceae	annual herb	1B.1	S2	G2
Erysimum capitatum var. angustatum	Contra Costa wallflower	Brassicaceae	perennial herb	1B.1	S1	G5T1
Eschscholzia rhombipetala	diamond-petaled California poppy	Papaveraceae	annual herb	1B.1	S1	G1
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	1B.2	S2	G2
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	1B.2	S2	G2
Isocoma arguta	Carquinez goldenbush	Asteraceae	perennial shrub	1B.1	S1	G1
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	annual herb	1B.1	S1	G1
Lathyrus jepsonii var. jepsonii	Delta tule pea	Fabaceae	perennial herb	1B.2	S2	G5T2
Lilaeopsis masonii	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	1B.1	S2	G2
Limosella australis	Delta mudwort	Scrophulariaceae		2B.1	S2	G4G5

			perennial stoloniferous herb			
Madia radiata	showy golden madia	Asteraceae	annual herb	1B.1	S2	G2
Neostapfia colusana	Colusa grass	Poaceae	annual herb	1B.1	S1	G1
Oenothera deltoides ssp. howellii	Antioch Dunes evening-primrose	Onagraceae	perennial herb	1B.1	S1	G5T1
Plagiobothrys hystriculus	bearded popcornflower	Boraginaceae	annual herb	1B.1	S2	G2
Senecio hydrophiloides	sweet marsh ragwort	Asteraceae	perennial herb	4.2	S3	G5
Symphyotrichum lentum	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	1B.2	S2	G2

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Search Criteria

Found in Quad 37121H7

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Amsinckia grandiflora	large-flowered fiddleneck	Boraginaceae	annual herb	1B.1	S1	G1
Arctostaphylos auriculata	Mt. Diablo manzanita	Ericaceae	perennial evergreen shrub	1B.3	S2	G2
Arctostaphylos manzanita ssp. laevigata	Contra Costa manzanita	Ericaceae	perennial evergreen shrub	1B.2	S2	G5T2
Atriplex cordulata var. cordulata	heartscale	Chenopodiaceae	annual herb	1B.2	S2	G3T2
Atriplex coronata var. coronata	crownscale	Chenopodiaceae	annual herb	4.2	S3	G4T3
Atriplex depressa	brittlescale	Chenopodiaceae	annual herb	1B.2	S2	G2
Blepharizonia plumosa	big tarplant	Asteraceae	annual herb	1B.1	S2	G2
Calandrinia breweri	Brewer's calandrinia	Montiaceae	annual herb	4.2	S4	G4
California macrophylla	round-leaved filaree	Geraniaceae	annual herb	1B.2	S3?	G3?
Calochortus pulchellus	Mt. Diablo fairy-lantern	Liliaceae	perennial bulbiferous herb	1B.2	S2	G2
Convolvulus simulans	small-flowered morning-glory	Convolvulaceae	annual herb	4.2	S4	G4
Cryptantha hooveri	Hoover's cryptantha	Boraginaceae	annual herb	1A	SH	GH
Eriogonum truncatum	Mt. Diablo buckwheat	Polygonaceae	annual herb	1B.1	S2	G2
Eschscholzia rhombipetala	diamond-petaled California poppy	Papaveraceae	annual herb	1B.1	S1	G1
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	1B.2	S2	G2
Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	4.2	S3	G3
Galium andrewsii ssp. gatense	phlox-leaf serpentine bedstraw	Rubiaceae	perennial herb	4.2	S3	G5T3
Helianthella castanea	Diablo helianthella	Asteraceae	perennial herb	1B.2	S2	G2
Hesperolinon breweri	Brewer's western flax	Linaceae	annual herb	1B.2	S2?	G2?
Madia radiata	showy golden madia	Asteraceae	annual herb	1B.1	S2	G2
Malacothamnus hallii	Hall's bush-mallow	Malvaceae	perennial evergreen shrub	1B.2	S2	G2
Navarretia heterandra	Tehama navarretia	Polemoniaceae	annual herb	4.3	S4	G4

Navarretia nigelliformis ssp. nigelliformis	adobe navarretia	Polemoniaceae	annual herb	4.2	S3	G4T3
Navarretia nigelliformis ssp. radians	shining navarretia	Polemoniaceae	annual herb	1B.2	S2	G4T2
Senecio aphanactis	chaparral ragwort	Asteraceae	annual herb	2B.2	S2	G3
Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	2B.3	S3?	G4G5

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Search Criteria

Found in Quad 38121A8

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Astragalus tener var. tener	alkali milk-vetch	Fabaceae	annual herb	1B.2	S2	G2T2
Atriplex cordulata var. cordulata	heartscale	Chenopodiaceae	annual herb	1B.2	S2	G3T2
Blepharizonia plumosa	big tarplant	Asteraceae	annual herb	1B.1	S2	G2
California macrophylla	round-leaved filaree	Geraniaceae	annual herb	1B.2	S3?	G3?
Chloropyron molle ssp. molle	soft bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	1B.2	S1	G2T1
Cicuta maculata var. bolanderi	Bolander's water-hemlock	Apiaceae	perennial herb	2B.1	S2	G5T4
Erysimum capitatum var. angustatum	Contra Costa wallflower	Brassicaceae	perennial herb	1B.1	S1	G5T1
Lathyrus jepsonii var. jepsonii	Delta tule pea	Fabaceae	perennial herb	1B.2	S2	G5T2
Lilaeopsis masonii	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	1B.1	S2	G2
Limosella australis	Delta mudwort	Scrophulariaceae	perennial stoloniferous herb	2B.1	S2	G4G5
Oenothera deltoides ssp. howellii	Antioch Dunes evening-primrose	Onagraceae	perennial herb	1B.1	S1	G5T1
Symphyotrichum lentum	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	1B.2	S2	G2

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Found in Quad 37121H8

Scientific Name	Common Name	Family	Lifeform	Rare Plant Rank	State Rank	Global Rank
Androsace elongata ssp. acuta	California androsace	Primulaceae	annual herb	4.2	S3S4	G5? T3T4
Anomobryum julaceum	slender silver moss	Bryaceae	moss	4.2	S2	G5?
Arabis blepharophylla	coast rockcress	Brassicaceae	perennial herb	4.3	S4	G4
Arctostaphylos auriculata	Mt. Diablo manzanita	Ericaceae	perennial evergreen shrub	1B.3	S2	G2
Arctostaphylos manzanita ssp. laevigata	Contra Costa manzanita	Ericaceae	perennial evergreen shrub	1B.2	S2	G5T2
Blepharizonia plumosa	big tarplant	Asteraceae	annual herb	1B.1	S2	G2
Calandrinia breweri	Brewer's calandrinia	Montiaceae	annual herb	4.2	S4	G4
California macrophylla	round-leaved filaree	Geraniaceae	annual herb	1B.2	S3?	G3?
Calochortus pulchellus	Mt. Diablo fairy-lantern	Liliaceae	perennial bulbiferous herb	1B.2	S2	G2
Campanula exigua	chaparral harebell	Campanulaceae	annual herb	1B.2	S2	G2
Collomia diversifolia	serpentine collomia	Polemoniaceae	annual herb	4.3	S4	G4
Cordylanthus nidularius	Mt. Diablo bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	1B.1	S1	G1
Delphinium californicum ssp. interius	Hospital Canyon larkspur	Ranunculaceae	perennial herb	1B.2	S3	G3T3
Eriastrum ertterae	Lime Ridge eriastrum	Polemoniaceae	annual herb	1B.1	S1	G1
Eriogonum truncatum	Mt. Diablo buckwheat	Polygonaceae	annual herb	1B.1	S2	G2
Eriophyllum jepsonii	Jepson's woolly sunflower	Asteraceae	perennial herb	4.3	S3	G3
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	1B.2	S2	G2
Grimmia torenii	Toren's grimmia	Grimmiaceae	moss	1B.3	S2	G2
Helianthella castanea	Diablo helianthella	Asteraceae	perennial herb	1B.2	S2	G2
Hesperolinon breweri	Brewer's western flax	Linaceae	annual herb	1B.2	S2?	G2?
Malacothamnus hallii	Hall's bush-mallow	Malvaceae	perennial evergreen shrub	1B.2	S2	G2
Monolopia gracilens	woodland woolythreads	Asteraceae	annual herb	1B.2	S3	G3
Navarretia gowenii	Lime Ridge navarretia	Polemoniaceae	annual herb	1B.1	S1	G1

Oenothera deltoides ssp. howellii	Antioch Dunes evening-primrose	Onagraceae	perennial herb	1B.1	S1	G5T1
Phacelia phacelioides	Mt. Diablo phacelia	Boraginaceae	annual herb	1B.2	S2	G2
Ranunculus lobbii	Lobb's aquatic buttercup	Ranunculaceae	annual herb	4.2	S3	G4
Sanicula saxatilis	rock sanicle	Apiaceae	perennial herb	1B.2	S2	G2
Senecio aphanactis	chaparral ragwort	Asteraceae	annual herb	2B.2	S2	G3
Streptanthus albidus ssp. peramoenus	most beautiful jewelflower	Brassicaceae	annual herb	1B.2	S2	G2T2
Streptanthus hispidus	Mt. Diablo jewelflower	Brassicaceae	annual herb	1B.3	S2	G2
Stuckenia filiformis ssp. alpina	slender-leaved pondweed	Potamogetonaceae	perennial rhizomatous herb	2B.2	S3	G5T5
Triquetrella californica	coastal triquetrella	Pottiaceae	moss	1B.2	S2	G2
Tropidocarpum capparideum	caper-fruited tropidocarpum	Brassicaceae	annual herb	1B.1	S1	G1
Viburnum ellipticum	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	2B.3	S3?	G4G5

Suggested Citation

CNPS, Rare Plant Program. 2016. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org [accessed 15 September 2016].

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U.S. Fish & Wildlife Service

Antioch

IPaC Trust Resources Report

Generated September 15, 2016 08:30 AM MDT, IPaC v3.0.9

This report is for informational purposes only and should not be used for planning or analyzing project level impacts. For project reviews that require U.S. Fish & Wildlife Service review or concurrence, please return to the IPaC website and request an official species list from the Regulatory Documents page.

IPaC - Information for Planning and Conservation (https://ecos.fws.gov/ipac/): A project planning tool to help streamline the U.S. Fish & Wildlife Service environmental review process.

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U.S. Fish & Wildlife Service

IPaC Trust Resources Report

NAME

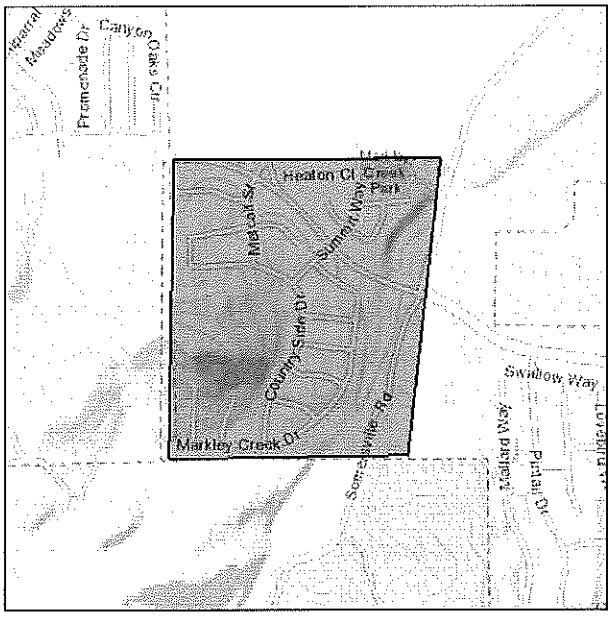
Antioch

LOCATION

Contra Costa County, California

IPAC LINK

https://ecos.fws.gov/ipac/project/LERRT-YI5LF-DVBOC-CW2TK-KIDIHQ



U.S. Fish & Wildlife Service Contact Information

Trust resources in this location are managed by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Endangered Species

Proposed, candidate, threatened, and endangered species are managed by the Endangered Species Program of the U.S. Fish & Wildlife Service.

This USFWS trust resource report is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list from the Regulatory Documents section.

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 either from the Regulatory Documents section in IPaC or from the local field office directly.

The list of species below are those that may occur or could potentially be affected by activities in this location:

Amphibians

California Red-legged Frog Rana draytonii — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=D02D

California Tiger Salamander Ambystoma californiense — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=D01T

Birds

California Clapper Rail Rallus longirostris obsoletus — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B04A

California Least Tern Sterna antillarum browni — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B03X

Crustaceans

Conservancy Fairy Shrimp Branchinecta conservatio — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=K03D

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=K03G

Vernal Pool Tadpole Shrimp Lepidurus packardi — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=K048

Fishes

Delta Smelt Hypomesus transpacificus — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E070

Steelhead Oncorhynchus (=Salmo) mykiss — Threatened

CRITICAL HABITAT
No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=E08D

Flowering Plants

Antioch Dunes Evening-primrose Oenothera deltoides ssp. howellii — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q1ZN

Contra Costa Goldfields Lasthenia conjugens — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q122

Large-flowered Fiddleneck Amsinckia grandiflora — Endangered

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=Q1SU

Insects

San Bruno Elfin Butterfly Callophrys mossii bayensis — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=I00Q

Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=I01L

Mammals

San Joaquin Kit Fox Vulpes macrotis mutica — Endangered

CRITICAL HABITAT
No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=A006

Reptiles

Alameda Whipsnake (=striped Racer) Masticophis lateralis euryxanthus — Threatened

CRITICAL HABITAT
There is **final** critical habitat designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=C04A

Giant Garter Snake Thamnophis gigas — Threatened

CRITICAL HABITAT
No critical habitat has been designated for this species.

http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=C057

Critical Habitats

There are no critical habitats in this location

Migratory Birds

Birds are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any activity that results in the take of migratory birds or eagles is prohibited unless authorized by the U.S. Fish & Wildlife Service.[1] There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

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1. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern
  http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds
  http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data
  http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The following species of migratory birds could potentially be affected by activities in this location:

Allen's Hummingbird Selasphorus sasin — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0LI

Bald Eagle Haliaeetus leucocephalus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B008

Bell's Sparrow Amphispiza belli — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HE

Black Oystercatcher Haematopus bachmani — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0KJ

Black Rail Laterallus jamaicensis — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B09A

Burrowing Owl Athene cunicularia — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0NC

Costa's Hummingbird Calypte costae — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JE

Fox Sparrow Passerella iliaca — Bird of conservation concern
Season: Wintering

Lawrence's Goldfinch Carduelis lawrencei — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0J8

Least Bittern Ixobrychus exilis
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B092

Lesser Yellowlegs Tringa flavipes — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MD

Lewis's Woodpecker Melanerpes lewis — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HQ

Loggerhead Shrike Lanius ludovicianus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FY

Long-billed Curlew Numenius americanus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06S

Marbled Godwit Limosa fedoa — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JL

Mountain Plover Charadrius montanus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B078

Nuttall's Woodpecker Picoides nuttallii — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HT

Oak Titmouse Baeolophus inornatus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MJ

Peregrine Falcon Falco peregrinus — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0FU

Rufous-crowned Sparrow Aimophila ruficeps — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0MX

Short-billed Dowitcher Limnodromus griseus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JK

Short-eared Owl Asio flammeus — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0HD

Snowy Plover Charadrius alexandrinus — Bird of conservation concern
Season: Breeding

Swainson's Hawk Buteo swainsoni — Bird of conservation concern
Season: Breeding
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B070

Tricolored Blackbird Agelaius tricolor — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B06P

Western Grebe aechmophorus occidentalis — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0EA

Yellow Rail Coturnicops noveboracensis — Bird of conservation concern
Season: Wintering
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0JG

Yellow-billed Magpie Pica nuttalli — Bird of conservation concern
Season: Year-round
http://ecos.fws.gov/tess_public/profile/speciesProfile.action?spcode=B0N8

Wildlife refuges and fish hatcheries

There are no refuges or fish hatcheries in this location

Wetlands in the National Wetlands Inventory

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.

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.

Wetland data is unavailable at this time.