CEQA ENVIRONMENTAL CHECKLIST FORM

1.	**Project Title:**	Learning Lane Boat Storage Project County File #CDLP22-02069
2.	**Lead Agency Name and Address:**	Contra Costa County Department of Conservation and Development 30 Muir Rd. Martinez, CA 94553
3.	**Contact Person and Phone Number:**	Adrian Veliz, Senior Planner; (925) 655-2879
4.	**Project Location:**	21 Learning Lane Brentwood, CA 94513 Assessor's Parcel Number: 015-170-031
5.	**Project Sponsors' Names and Address:**	Ben Fox 21 Learning Lane Brentwood, CA 94513
6.	**General Plan Designation:**	The subject property is located within the Agricultural Lands (AL) General Plan Land Use designation.
7.	**Zoning:**	The subject property is located within an A-2 General Agricultural (A-2) District

8. Description of Project: The applicant is requesting approval of a land use permit for the purpose of constructing a boat storage facility on the subject property. The proposed development is planned within a northerly ±2.5-acre portion of a larger 5-acre parcel. The project includes seven enclosed buildings providing a total of 80 secured 14' x 35' parking stalls. If approved, the applicant anticipates developing the project in two phases. The first phase includes a 9,800 square-foot building (Building 1) and two 4,800 square-foot buildings (Buildings 2 and 3) having a combined 40 parking stalls. Building 1 has a proposed footprint of 34.4' x 280 feet, with the longer side oriented in an east-west direction. The smaller buildings each have a proposed footprint of 34.4' x 140' and are also oriented in an east-west direction, parallel with Building 1.

The project proposes vehicular access via a 50' wide driveway along Bixler Road, centered approximately 121 feet south of the northwestern property line. From the driveway, a paved area approximately 60 feet in width extends east across the entire width of the property, terminating at a "hammerhead" type emergency vehicle turnaround located along the eastern property boundary. Building one is located immediately north of this paved area, while Building 2 and Building 3 would be located immediately south. The paved area consists of two separate interior drive aisles, each 28.1 feet in width, with one serving Building 1, and the other serving Buildings 2 & 3, separated by a 5-foot-wide concrete valley gutter.

Phase two of the project would be located immediately south of phase 1 and is identical to phase 1 in terms of proposed parking stalls (40), combined building square footage (19,200). The configuration of the buildings and interior drive aisles are substantially similar to phase 1. The distinguishing characteristic for phase 2 is that the additional parking spaces would be divided amongst four buildings (Buildings 4 through 7), each having an identical footprint to Buildings 2

& 3. Buildings 4 & 5 are immediately south of Buildings 2 & 3, with no separation between the long sides of the rectangular buildings. A 10-foot paved walkway is proposed in the area between the Building 3/5 and Building 2/4. Phase 2 does not require a separate driveway, as the phase 1 access driveway along Bixler Road would also provide vehicular access to phase 2. The driveway aisle width, drainage valley width, and emergency vehicle turnaround are otherwise identical to that proposed with phase 1 within a paved area 60' in width separating northerly phase 2 buildings (Buildings 4 & 5) from the southerly phase 2 buildings (Buildings 6 &7).

The project includes an exception request from collect and convey requirements specified in Chapter 914-2 of the County Subdivision Ordinance for the Land Use Permit approval. The exception request would allow the existing drainage pattern to remain, where collection and conveyance, without diversion and within an adequate storm drainage system, to an adequate natural watercourse having a definable bed and banks or to an existing adequate public storm drainage system which conveys the storm water to an adequate natural watercourse is required.

9. **Surrounding Land Uses and Setting:** The project site site project site is a 5-acre agricultural-zoned parcel in the unincorporated Brentwood area and is bounded by Bixler Road to the west, and Learning Lane to the south. The overall topography of the subject property is flat, with elevations ranging from 12 to 16 feet above sea level. The project site predominantly consists of non-native ruderal vegetation and southerly areas previously developed with residential improvements. Vehicular access to the site exists via Learning Lane.

   The surrounding areas consists of lands zoned General Agricultural (A-2) and Agricultural Preserve (A-4) to the north, east and west of the project site, which are presently used for farming, grazing, and/or single-family residential purposes. Old River Elementary school is located immediately south of the project site, and urbanized development within the Discovery Bay area exists further south beyond the school site. The communities of Byron and Discovery Bay are located south and north of the subject property respectively.

10. **Other public agencies whose approval is required (e.g., permits, financing, approval, or participation agreement:**

    Contra Costa County Public Works Department, Contra Costa County Department of Health Services, East Contra Costa Fire Protection District, Pacific Gas & Electric.

11. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?**

    Notice of the proposed project was sent to Native American tribes, as applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1. Letters were sent to the Confederated Villages of Lisjan and Wilton Rancheria on March 25, 2025 Neither tribal group provided comments to the Notices sent in relation to this project, nor was any consultation requested.

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.

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

Environmental Determination

On the basis of this initial evaluation:

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

☒ 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.



06/12/2025

Adrian Veliz
Senior Planner
Contra Costa County
Department of Conservation & Development

Date

ENVIRONMENTAL CHECKLIST

1. ***AESTHETICS –*** *Except as provided in Public Resources Code Section 21099,* **would the project:**				
Environmental Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

SUMMARY*:*

a) Would the project have a substantial adverse effect on a scenic vista? ***(Less Than Significant Impact)***

Figure 9-1 of the Open Space Element of the County General Plan identifies major scenic ridges and scenic waterways in the County. According to this map, the project site is not located adjacent to scenic resources in the county. Thus, a less than significant impact on a scenic vista is expected.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway? ***(Less Than Significant Impact)***

The Scenic Routes Map (Figure 5-4) of the County General Plan's Transportation and Circulation Element identifies scenic routes in the County, including both State Scenic Highways and County designated Scenic Routes. There are no County-designated Scenic Routes, or State Scenic Highways in the project vicinity. The nearest scenic route is the Byron Highway, a County-designated scenic route, located approximately 1 mile west of the site. The subject property may be marginally visible when viewed from the Byron Highway, however, at that distance, the project would not be prominently visible amongst other structural development in the immediate project vicinity. There are no rock outcroppings or historic buildings existing on the subject property that would be impacted by the development. Based on the above, the project has minimal potential to result in substantial impacts to scenic resources, and less than significant aesthetic impacts would expectedly result from the project.

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

The visual changes from the project improvements would be visible from nearby public rights-of-way and from surrounding properties. This could have an impact on the visual character of the site; however, the proposed land use is considered compatible with agricultural land uses. Thus, the change from pastoral, rural-residential land use to another compatible use would not expectedly degrade the scenic quality. This determination is based on the fact that the project involves a use that is permitted within agricultural zoning districts and would be considered compatible with nearby agricultural land uses. Additionally, the project proposes 17-foot-tall storage buildings that are well below the maximum building height (35 feet) and are substantially similar in size and appearance to agricultural buildings that are prevalent in agricultural east County. Therefore, the nature of the project and its compatibility with surrounding development ensures that the project would have less than significant impacts degrading the existing visual character of the project site and surrounding area.

d) *Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (**Less Than Significant Impact with Mitigation)***

The lighting and glare analysis in this section addresses the two issues of nighttime illumination and reflected light (glare). Nighttime illumination impacts are evaluated in terms of the project's net change in ambient lighting conditions and proximity to light sensitive land uses. Reflected light impacts are analyzed to determine if project related glare would create a visual nuisance or hazard.

The project involves the construction of seven storage buildings providing secure indoor storage spaces which will be offered for rent to boat owners over approximately 2.5-acres of the subject property. The buildings would be relatively low profile and would not utilize polished metal, glass, or other highly reflective materials. Additionally, due to the flat topography of the site the property is not prominently visible when viewed from a distance, thus limiting any potential glare impacts related to the building. Further, the facility is not proximate to the Byron Airport, nor is it below the flight path of runways serving this nearby public airfield. As such potential impacts related to glare are expected to occur at less than significant levels, if at all.

The project proponent has submitted a lighting plan which depicts the location of all light fixtures proposed within the facility and includes an analysis of the areas of the project site which would be illuminated by the proposed lighting plan. Since the proposed light fixtures would be predominantly located within the interior driveway aisles between the buildings, much of the light is contained within the facility itself. Exterior lights along Bixler Road and on the eastern side of the facility are not shielded by the buildings but would not result in significant illumination beyond the property boundaries resulting in substantial light pollution. Therefore, the project would have less than significant impacts resulting from the project lighting.

Sources of Information

- Contra Costa County General Plan, 2005-2020. *Open Space Element*.
- Contra Costa County General Plan, 2005-2020. *Transportation and Circulation Element.*
- Boat Storage Facility Project Plans - Received May 7, 2024.

2. ***AGRICULTURAL AND FOREST RESOURCES** – Would the project:*				
Environmental Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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 non-agricultural use?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land 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 non-agricultural use?	☐	☐	☐	☒

***SUMMARY**:*

a) Would the project 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 non-agricultural use? ***(Less Than Significant Impact)***

As shown on the California Department of Conservation's *Contra Costa County Important Farmland 2020 Map*, the project site consists of land classified as "Prime Farmland". The project would convert a 2.5-acre portion of the 5-acre subject property to non-agricultural use. However, the project site is not within the Contra Costa County Agricultural Core (AC), as designated by the Contra Costa County 2005-2020 General Plan, nor is it within an Agricultural Preserve Zoning District which typically applies to lands within the AC designation. The Land Use Element of the 2005-2020 Contra Costa County General Plan states that the purpose of the agricultural core is to preserve and protect farmlands in the County that are the most capable of, and generally used for, production of food, fiber, and plant materials by requiring higher minimum parcel sizes (40 acres) in order to maintain economically viable, commercial agricultural units. Since the subject property

is only 5 acres in area, it has substantially less potential for utilization as an economically viable commercial agricultural units, relative to larger parcels within the AC designation. Since the project site is already considered an uneconomically small agricultural unit for inclusion in the agricultural core designation, the conversion of a 2.5 acre portion of prime farmland on the subject property will expectedly have a negligible impact on the overall productivity of prime farmland in Contra Costa County. Additionally, the proposed land use is conditionally permitted within the A-2 zoning district and Agricultural Lands General Plan Land Use designation in which the property is located. Thus, although the project is not agricultural in nature, it is considered compatible with agricultural land uses that exist in the project vicinity. In cumulative consideration of the fact that the project is outside of the Contra Costa County Agricultural Core and that it would only affect a 2.5-acre portion of land that is appropriately zoned for the proposed land use the project would have less than significant impacts resulting from the conversion of Prime Farmland.

b) *Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?* ***(Less Than Significant Impact)***

The project site is within an A-2 General Agricultural Zoning District. Boat/RV storage is a conditionally permitted land use on A-2 zoned lands that are within 1 mile by public road of a public boat launch facility. The subject property is 0.9 miles southwest from public boat launch facilities at the Orwood Resort. The property is not included in a Williamson Act contract, and there is no reason to believe the project would conflict with any existing agricultural uses in the vicinity. Therefore, a less than significant impact is expected from a conflict with existing agricultural uses.

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

The project site is not considered forest land as defined by California Public Resources Code Section 12220(g), timberland as defined by California Public Resources Code Section 4526, or zoned Timberland Production as defined by Government Code section 51104(g). Furthermore, the project site is within the A-3 zoning district / -SG combining district, and the proposed use is a permitted use within the existing zoning. Thus, the project would not conflict with existing zoning for, or cause rezoning of forest land or timberland.

California Public Resources Code Section 12220, under the Forest Legacy Program Act, defines "forest land" as land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

Public Resources Code 4526, under the Forest Practice Act, defines "timberland" as land, other than land owned by the federal government and land designated by the State Board of Forestry and Fire Protection as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species are determined by the board on a district basis after consultation with the district committees and others.

California Government Code 51104, under the Timberland Productivity Act, defines "timberland" as privately owned land, or land acquired for state forest purposes, which is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre. "Timberland production zone" or "TPZ" means an area which has been zoned pursuant to Section 51112 or 51113 of the Government Code and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in Public Resources Code 4526 or 12220. With respect to the general plans of cities and counties, "timberland preserve zone" means "timberland production zone." As stated in the Contra Costa County General Plan, no land is used for timber harvesting in the County. Therefore, the project will have no impact in this respect.

d) *Would the project involve or result in the loss of forest land or conversion of forest land to non-forest use?* ***(No Impact)***

The project site is not considered forest land, as discussed in "c" above, therefore, no impact.

e) *Would the project involve other changes in the existing environment, which due to their location or nature, could result in conversion of farmland, to non-agricultural use?* ***(No Impact)***

Considering that the project involves a land use which is considered compatible with policies and ordinances regulating development within agricultural lands, the project would not expectedly result in changes in the existing environment that encourage the conversion of farmland to non-agricultural use. The project does not involve the extension of new utilities or roadways in the vicinity which might encourage urban development on agricultural lands. Consequently, the project would have a less than significant impact in this regard.

Sources of Information

- Contra Costa County Code, Title 8, Zoning Ordinance.
- Contra Costa County General Plan 2005-2020. *Land Use Element*.
- California Department of Conservation. *Contra Costa County Important Farmland Map 2020.*
- Contra Costa County Department of Conservation and Development. Accessed October 23, 2023. *2016 Agricultural Preserves Map*. http://www.co.contra-costa.ca.us/DocumentCenter/View/882/Map-of-Properties-Under-Contract?bidId=

3. *AIR QUALITY – Would the project:*				
Environmental Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

***SUMMARY**:*

a) *Would the project conflict with or obstruct implementation of the applicable air quality plan?* ***(Less Than Significant Impact)***

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

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

The most recent federal ozone plan is the 2001 Ozone Attainment Plan, which was adopted on October 24, 2001 and approved by the California Air Resources Board (CARB) on November 1, 2001. The plan was submitted to the USEPA on November 30, 2001 for review and approval. The most recent State ozone plan is the 2017 Clean Air Plan, adopted on April 19, 2017. The 2017 Clean Air Plan was developed as a multi-pollutant plan that provides an integrated control strategy

to reduce ozone, PM, toxic air contaminants (TACs), and greenhouse gases (GHGs). Although a plan for achieving the State PM_{10} standard is not required, the BAAQMD has prioritized measures to reduce PM in developing the control strategy for the 2017 Clean Air Plan. The control strategy serves as the backbone of the BAAQMD's current PM control program.

The aforementioned air quality plans contain mobile source controls, stationary source controls, and transportation control measure to be implemented in the region to attain State and federal AAQS within the SFBAAB. Adopted BAAQMD rules and regulations, well as the thresholds of significance, have been developed with the intent to ensure continued attainment of AAQS, or to work towards attainment of AAQS for which the area is currently designated nonattainment, consistent with applicable air quality plans. For development projects, BAAQMD establishes significance thresholds for emissions of the ozone precursors reactive organic gases (ROG) and oxides of nitrogen (NO_x), as well as exhaust PM_{10}, and $PM_{2.5}$, expressed in pounds per day (lbs/day) and tons per year (tons/yr) noted in the table below:

Table 1: BAAQMD Thresholds of Significance		
Pollutant	**Construction Thresholds Daily Average**	**Operation Thresholds**
ROG	54 lbs/day	54 lbs/day and 10 tons/yr
NO_x	54 lbs/day	54 lbs/day and 10 tons/yr
PM_{10}	82 lbs/day exhaust	82 lbs/day and 10 tons/yr
$PM_{2.5}$	54 lbs/day exhaust	54 lbs/day and 10 tons/yr
Source: BAAQMD, CEQA Guidelines, April 2022		

Construction Criteria Pollutant Emissions

The BAAQMD provides guidance on reviewing proposed project for air quality and climate impacts to assist developers and local jurisdictions comply with the California Environmental Quality Act. For screening purposes, the most similar land use is "Warehouse", other than logistics or distribution centers. According to BAAQMD screening criteria, a warehouse less than 452,000 s.f. in area would not result in significant construction-related air impacts. Considering that the screening threshold exceeds the total land area of the project site, the project is comfortably below the screening criteria for this land use. The operation of a warehouse project under 1.2 million square feet is assumed to result in less than significant air quality impacts. The proposed project involves up to seven boat storage buildings having a combined area of 28,800 square feet over the northern half of a ±5.3 acre agricultural parcel. The project represents a fraction of the applicable construction/operational screening criteria, and thus qualifies for screening out of the requirement to model emissions and is assumed to have a less than significant air impact resulting in substantial construction and/or operational related criteria pollutant emissions.

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

The thresholds of significance presented in Table 1 represent the levels at which a project would result in a cumulatively considerable contribution to the SFBAAB's existing air quality

conditions. If a project exceeds the significance thresholds presented in Table 1, the proposed project's emissions would be cumulatively considerable, resulting in significant adverse cumulative air quality impacts to the regions existing air quality conditions.

Because the proposed project would result in both construction-related and operational emissions below the applicable thresholds of significance, construction and operations of the project would not be expected to result in a cumulatively considerable contribution to the region's existing air quality conditions.

As stated previously, the applicable regional air quality plans include the 2001 Ozone Attainment Plan and the 2017 Clean Air Plan. According to BAAQMD, if a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation if needed, the project may be considered consistent with the air quality plans. As discussed above, the proposed project would result in construction and operational emissions below the applicable thresholds of significance and do not warrant mitigation. Therefore, the proposed project would not conflict with or obstruct implementation of the applicable air quality plans, violate any air quality standards or contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in any criteria air pollutant, and impacts would be considered less than significant.

c) *Would the project expose sensitive receptors to substantial pollutant concentrations?* ***(Less Than Significant Impact)***

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by existing health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Sensitive receptors are typically defined as facilities where sensitive receptor groups (i.e. children, the elderly, acutely ill, and the chronically ill) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics. Sensitive receptors in the project vicinity include a handful of rural single-family residences to the east and north, and Old River elementary school to the south.

The project does not involve any activities or processes on site resulting in emissions that could potentially expose sensitive receptors to substantial pollutant concentrations. The proposed project would allow the applicant to rent out secured parking stalls, in which local recreationists may store their boats. The storage of the boats would result in negligible air quality impacts. The primary source of emissions resulting from the project would be attributable to those emitted from vehicles driven to the site to pick up or return their boats. Considering the small scale of the proposed facility and the 100-500 buffers between the project and the nearest surrounding residences, the vehicle emissions expected to result from the project would not expose nearby sensitive receptors to substantial pollutant concentrations.

Short term, construction related activities could result in the generation of TACs, specifically diesel particulate matter (DPM) from on-road haul trucks and off-road equipment exhaust emissions. Because construction equipment on-site would not operate for long periods of time and would be used at varying locations within the site, associated emissions of DPM would not occur at the same location for extended periods of time. Due to the temporary nature of construction, the relatively short duration of potential exposure to associated emissions, and the sparsely populated character of the project vicinity, the potential for any one sensitive receptor in the area to be exposed to concentrations of pollutants for a substantially extended period of time would be low.

Based on the above, the proposed project would not expose sensitive receptors to substantial concentrations of localized CO or TACs associated with construction or operations of the project. Therefore, the proposed project would result in a less than significant impact related to the exposure of sensitive receptors to substantial pollutant concentrations.

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

The proposed project would not produce any major sources of odor and is not located in an area with existing issues (e.g. landfills, treatment plants). Therefore, the operation of the project would have a less than significant impact in terms of odors.

During construction and grading, diesel powered vehicles and equipment used on the site could create localized odors. However, given the remote location of the project and that these odors would be temporary; the impact would be considered less than significant.

Sources of Information

- Bay Area Air Quality Management District. 2017. *Bay Area 2017 Clean Air Plan.*
- Bay Area Air Quality Management District. 2022. *Air Quality Guidelines.*

4. *BIOLOGICAL RESOURCES – Would the project:*				
Environmental Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
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 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?	☐	☐	☐	☒

***SUMMARY**:*

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

The project site consists of a ±5.33 -acre parcel located at 21 Learning Lane within an agricultural area in eastern Contra Costa County. The project proponent has submitted a *Biological Resources Analysis and Wetland Determination (Jan 20, 2025)*, prepared by Marcus H. Bole & Associates, an environmental consulting firm, which outlines the results of onsite surveys conducted during January, 2025 for the purpose of evaluating the presence of special status plant/wildlife species and/or their specific habitats. The consulting biologist/botanist assessed the physical and biological characteristics of the project site and surrounding 500-foot buffer, for comparison to special status plant and wildlife species habitat requirements in an effort to determine whether the site is suitable to support these species.

The property is within the geographic range of the burrowing owl, as depicted on current range maps, and onsite elevations are within the range occupied by the species. Onsite vegetation is composed of olive trees with an understory of non-native grasses and forbs. Additional ornamental tree/shrub species exist as landscaping adjacent to an existing modular home on site. The California Department of Fish & Wildlife Natural Diversity Database (CNDDB) has identified habitat with potential to support nesting raptors within five miles of the project, as well as several California Native Plant Society (CNPS) rare plants.

The information gathered during onsite surveys found that nearby trees are not currently occupied by nesting raptors, migratory birds, or roosting bats. Numerous bird species were observed

overflying the site, and occasionally attempting to forage within the non-native grassland habitats. Species observed include the house sparrow *(Passer domesticus)*, American crow *(Corvus brachyrhynchos)*, Western meadowlark *(Sturnella neglecta*), and western scrub jay (*Aphelocoma californica)*. No burrowing owls were detected during the surveys performed by the consulting biologist. Concurrent with the observations for the burrowing owls, a comprehensive stick nest survey was conducted for all trees within 5,000 feet of the project site. Although the CNDDB database lists numerous recorded raptor nest sites within five miles of the site, no suitable raptor nesting habitat (trees with stick nests) was found within or near the project site. The onsite olive trees are newly planted and do not support suitable nesting habitat. Olive orchards with understories of ruderal non-native grassland environments generally provide marginal breeding cover and foraging habitat for wildlife species. A limited variety of bird species were observed during recent surveys. No mammals, invertebrates, reptiles or amphibians were observed during recent surveys.

Special Status Species

A species habitat survey was conducted in January, 2025, by Marcus H. Bole, M.S., and Charlene J. Bole, M.S. The species habitat survey was conducted by walking all areas of the subject property and surrounding 500-foot buffer, and evaluating potential habitat for special-status species based on vegetation composition and structure, presence of predatory species, microclimate, and other available resources. A total of 17 special status species of wildlife were identified by the consulting biologist as having potential to occur in this area, including California linderialla (*Linderiella occidentalis*), Conservancy fairy shrimp (*Branchinecta conservation*), Valley Elderberry longhorn beetle (*Desmocerus californicus dimorphus*), Vernal pool fairy shrimp (*Branchinecta lynchi*), Vernal pool tadpole shrimp (*Lepidurus packardi*), Monarch Butterfly (*Danaus plexippus*), California tiger salamander (*Ambystoma californiense*), Western spadefoot (*Spea hammondii*), Giant garter snake (*Tamnophis gigas*), Alameda whipsnake (*Masticophis lateralis euryxanthus*), California red legged frog (*Rana drayronii*), San Joaquin kit fox (*Vulpes macrotis mutica*), Burrowing owl, (*Athene cunicularia*), California condor (*Gymnogyps californianus*), Swainson's hawk (*Buteo swainsoni*), Song sparrow Modesto population (*Melospiza melodia*), and California black rail (*Laterallus jamacicensis coturniculus*). The consulting biologist concluded that the project site does not support habitat for any of the aforementioned special status species. Therefore, the project is expected to have less than significant impacts on special status species of wildlife.

A general botanical survey and habitat evaluation for rare plant botanical species was conducted at the same time. The general botanical survey and habitat evaluation was conducted by walking all areas of the project site while taking inventory of general botanical species and searching for special-status plant species and their habitats. Botanical surveys were conducted outside of the normal blooming cycle for all sensitive plant species. However, in the opinion of the consulting biologists, the site would not support the micro-habitat requirements of special status plant species due to the lack of mashes, swamps, riparian forests, vernal pools, alkali playa or chenopod scrub habitats on the project site. Seven special status species plants were identified as having potential to occur within or near the project site, including San Joaquin Spearscale (*Extriplex joaquinana*), Wooly rose-mallow (*Hibiscus lasiocarpos var. occidentalis*), Large-flowered fiddleneck

(*Amsinckia grandiflora*), Delta tule pea (*Lathyrus jepsonii var. jepsonii*), Manson's lilaepsis (*Lilaepsis masonii*), Delta mudwort (*Limosella australis*), Suisun Marsh Aster (*Symphotrichum lentum*). The consulting botanist concluded that the project site does not consist of suitable habitat for any of these special status plant species. Therefore, the project is expected to have less than significant impact on special status plant species.

As discussed above, the project would expectedly have less than significant impact on any special status species of plant or wildlife. Nevertheless, because the site evaluation was performed outside of the blooming season, the potential occurrence of special status plant species cannot be ruled out absent site surveys conducted during the blooming season. Similarly, the presence of raptors and/or migratory bird species cannot be ruled out without conducting onsite surveys during nesting season. Therefore, the implementation of the below mitigation measures would ensure that the project does not result in a significant impact on plant or wildlife species occurring on or near the project site.

Potential Impact BIO-1: *Development activities occurring during the nesting period for birds (approximately February 1 – August 31), including site grading, soil excavation, and/or tree removal and vegetation pruning/removal poses potential risk to nesting passerine and raptor bird species.*

***Mitigation Measure BIO-1*:** *No more than seven (7) days prior to ground disturbing activities occurring during the nesting period for birds (approximately February 1 – August 31), a nesting bird survey shall be performed by a CDFW qualified biologist to ensure that the project avoids impacting any active nests. If active bird nests are detected, a suitable nest buffer should be installed (typically 100 feet for passerines, and up to 500 feet for raptors, depending on species). Preconstruction surveys are not necessary prior to project activities occurring outside of nesting bird season.*

Potential Impact BIO-2: *Development activities occurring during the blooming period special status plants species, including site grading, soil excavation, and/or tree removal and vegetation pruning/removal poses potential risk to nesting passerine and raptor bird species.*

Mitigation Measure BIO-2: *Prior to issuance of a grading permit, plant surveys shall be conducted to confirm the absence of special status plant species on the project stie. The plant surveys shall be conducted during the March through June blooming period in which the species are most identifiable. These surveys shall be conducted in compliance with all survey guidelines published by the California Department of Fish and Wildlife (CDFW, 2018), U.S. Fish and Wildlife Service (USFWS, 2011), and California Native Plant Society (CNPS. 2001). If the survey finds any listed special-status plant species on the project site, the applicant shall consult with the USFWS and/or CDFW, as appropriate, to develop an approved mitigation plan to ensure that potential impacts to the identified species are less than significant. The applicant shall fully implement the mitigation plan prior to initiation of any project construction activity.*

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? ***(No Impact)***

There are no creeks, streams or waterways on or near the subject property. Thus, the project has no potential to result in negative impacts on a riparian area. Based on the consulting biologist's determination that the project site lacks sufficient habitat value to support any special status plant

or animal species, the project would not result in any adverse impact on any other sensitive natural community.

c) *Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? (**No Impact)***

The project will have no impact on state or federally protected wetlands. The Biological Resources Analysis performed for the project included a determination of Waters of the U.S. within the project site via surveys conducted in January 2025. The surveys involved an examination of botanical resources, soils, hydrological features, and determination of wetland characteristics based on the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0)(USACE 2008a), *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b), and the Sacramento District's Minimum Standards for Acceptance of Preliminary Wetlands Delineations (USACE 2016b). U.S. Army Corps of Engineers (USACE) regulations (33 CFR 328) were used to determine the presence of Waters of the United States other than wetlands. The most recent National Wetland Plant List (USACE 2020) was used to determine the wetland indicator status of plants observed in the project site. *The Jepsen eFlora* (Jepson Flora Project 2024) was used for plant nomenclature, except where it conflicted with the nomenclature in the National Wetland Plant List, which was given priority on the data sheets. On January 18, 2023, the Environmental Protection Agency (EPA) and the Department of the Army published the "*Revised Definition of 'Waters of the United States,'" (*2023 Rule). On September 8, 2023, the agencies published the "*Revised Definition of 'Waters of the United States'; Conforming"* which amended the 2023 Rule to conform to the 2023 Supreme Court Decision in Sackett v. EPA.

The consulting biologists employed the Routine On-Site Determination methodology for this study, which involves a three-parameter approach (vegetation, soils and hydrology) to identify and delineate the boundaries of jurisdictional wetlands. To be considered a wetland, all three positive wetland parameters must be present, including (1) a dominance of wetland vegetation, (2) a presence of hydric soils, and (3) hydrologic conditions that result in periods of inundation or saturation on the surface from flooding or ponding. The consulting biologist found none of the three parameters present on the project site. Thus, considering the lack of wetlands on or near the project site, the project will not result in adverse impacts to wetlands. Further description of these parameters is provided below:

1. **Vegetation**: Wetland vegetation includes those plants that possess physiological traits that allow them to grow and persist in soils subject to inundation and anaerobic soil conditions. Plant species are classified according to their probability of being associated with wetlands. Obligate (OBL) wetland species almost always occur in wetlands (more than 99 percent of the time), facultative wetland (FACW) plant species occur in wetlands most of the time (67 to 99 percent of the time), and facultative (FAC) plant species have about an equal chance (33 to 66 percent) of occurring in wetlands as in uplands. For this study vegetation was considered to meet the vegetation criterial if more than 50% of the

vegetative cover was FAC or wetter. No wetland plant species were observed within the project site during onsite evaluations. Additionally, there were no signs of seasonal wetlands, vernal pools or vernal swales. Onsite trees consist of newly planted olive trees. The understory of non-native grasses and forbes included upland varieties of wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), Italian thistle (*Cardus pycnocephalus*), yellow-star thistle (*Centuarea solstitialis*), Bermuda grass (*Cynodon dactylon*), field bindweed (Convolvulus arvensis), common storksbill (*Erodium cicutarium*), cutleaf geranium (*Geranium dissectum*), and dove foot geranium (*Geranium molle*).

2. **Hydric Soils**: Hydric soils are saturated, flooded, or ponded in the upper stratum long enough during the growing season to develop anaerobic conditions and favor the growth of wetland plants. Hydric soils include gleied soils (soils with gray colors), or usually display indicators such as low chroma values, redoximorphic features, iron, or manganese concretions, or a combination of these indicators. Samples of soils on the project site taken at random data points indicate that the soils on site are not classified as "hydric", with no redoximorphic features.

3. **Hydrology**: Wetlands by definition are seasonally inundated or saturated at or near the surface. In order for an area to have wetland hydrology, it has to be inundated or saturated for 5% of the growing season (approximately 12 days). Indicators include visual soil saturation, flooding, watermarks, drainage patterns, encrusted sediment and plant deposits, cryptogrammic lichens and algal mats. No evidence of wetland hydrology was present within the project site. No ponding was observed on the project site.

d) Would the project 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 wildlife nursery sites? ***(No Impact)***

The project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species, due to the lack of navigable waterways or suitable habitat on site for any special status plant or wildlife species known to occur in the vicinity. There are no wildlife nursery's or migratory corridors on or near the project site. Therefore, the project would result in no adverse impact in this respect.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? ***(No Impact)***

The project does not conflict with any local policies or ordinances protecting biological resources. Neither the project site, nor surrounding vicinity are classified as ecologically significant areas in the Contra Costa County General Plan. Since there are no code-protected trees existing on the subject property, the project has no potential to conflict with the County's tree protection ordinance. Therefore, the project will not result in any adverse impacts in this respect.

f) *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?* ***(No Impact)***

The application materials were forwarded to East Contra Costa County Habitat Conservation Plan / Natural Community Conservation Plan (HCP/NCCP) staff with a request for comment. In a response dated January 2, 2023, HCP/NCCP staff advised that there are no applicable HCP requirements for this project due to its location outside of the Urban Limit Line. Thus, the project will have no potential for conflict with the provisions of the HCP/NCCP and the project will have no impact in this respect.

Sources of Information

- *Biological Resource Analysis and Wetland Determination of the Ben Fox Boat Storage Project*, January 20, 2025, Marcus H. Bole & Associates
- East Contra Costa County Habitat Conservancy comments, dated January 2, 2023

5. *CULTURAL RESOURCES – Would the project:*				
Environmental Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

SUMMARY*:*

a) *Would the project cause a substantial adverse change in the significance of a historical resource pursuant to California Environmental Quality Act Guidelines Section 15064.5?* ***(Less Than Significant Impact With Mitigations)***

Historical resources are defined in the California Environmental Quality Act Guidelines Section 15064.5 as resources that fit any of the following definitions:

- Is listed in the California Register of Historic Places and has been determined to be eligible for listing by the State Historic Resources Commission;
- Is included in a local register of historic resources, and identified as significant in a historical resource survey that has been or will be included in the State Historic Resources Inventory; or
- Has been determined to be historically or culturally significant by a lead agency.

The project site primarily consists of fallow cropland, and is generally undeveloped with the exception of an existing single-family residence located near the subject property's southern boundary. The existing residence is of no historical significance, and would not be displaced by the proposed project. No resources on the site were found to be eligible for listing under any criteria for the California Register of Historical Resources (CRHR), the National Register of Historic Places (NRHP), or local listing. Thus, the project would not impact any known historical or culturally significant resources.

The archaeological sensitivity map of the County's General Plan (Figure 9-2), identifies the project area as "Area of Medium Sensitivity", which may contain significant archeological resources. While unlikely since the project site has been fully disturbed by previous agricultural activities, subsurface construction activities always have the potential to damage or destroy previously undiscovered historic and prehistoric resources. Historic resources can include wood, stone, foundations, and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, and other refuse. If during project construction, subsurface construction activities damaged previously undiscovered historic and prehistoric resources, there could be a potentially significant impact. The following mitigation measure would reduce the potentially significant impact to a less than significant level.

Potential Impact CUL-1 – CUL-4: Construction activities requiring excavation or earth movement could uncover previously unrecorded significant cultural resources and/or human remains. The following mitigation measures will ensure that, in the event cultural resources are discovered, the proper actions are taken to reduce the adverse environmental impacts to cultural resources to a less than significant level.

Mitigation Measure CUL-1*: *Should archaeological materials be uncovered during grading, trenching, or other on-site excavation(s), all earthwork within 30 yards of the materials shall be stopped until a professional archeologist who is certified by the Society for California Archaeology (SCA) and/or the Society of Professional Archaeology (SOPA) and any Native American tribe(s) that have requested consultation and/or demonstrated interest in the project site has had an opportunity to evaluate the significance of the find, and, if deemed necessary, suggest appropriate mitigation(s).

Mitigation Measure CUL-2*: *If any significant cultural materials such as artifacts, human burials, or the like are encountered during construction operations, such operations shall cease within 100 feet of the find, the Community Development Division (CDD) shall be notified within 24 hours, and a qualified archaeologist contacted and retained for further recommendations. Significant cultural materials include, but are not limited to, aboriginal human remains, chipped stone, groundstone, shell and bone artifacts, concentrations of fire cracked rock, ash, charcoal, and historic features such as privies or walls and other structural remains.

Mitigation Measure CUL-3*: *Should human remains be uncovered during grading, trenching, or other on-site excavation(s), earthwork within 30 yards of these materials shall be stopped until the County coroner has had an opportunity to evaluate the significance of the human remains and determine the proper treatment and disposition of the remains. Pursuant to California Health and Safety Code Section 7050.5, if the coroner determines the remains may be those of a Native American, the coroner is responsible for contacting the Native American

Heritage Commission (NAHC) by telephone within 24 hours. Pursuant to California Public Resources Code Section 5097.98, the NAHC will then determine a Most Likely Descendant (MLD) tribe and contact them. The MLD tribe has 48 hours from the time they are given access to the site to make recommendations to the land owner for treatment and disposition of the ancestor's remains. The land owner shall follow the requirements of Public Resources Code Section 5097.98 for the remains.

Mitigation Measure CUL-4: ***Appropriate mitigation of any discovered cultural resources may include monitoring of further construction and/or systematic excavation of the resources. Any artifacts or samples collected as part of the initial discovery, monitoring, or mitigation phases shall be properly conserved, catalogued, evaluated, and curated, and a report shall be prepared documenting the methods, results, and recommendations. The report shall be submitted to the Northwest Information Center and appropriate Contra Costa County agencies.***

Implementation of these mitigations would ensure a less than significant adverse environmental impact on historical resources.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to California Environmental Quality Act Guidelines Section 15064.5? ***(Less Than Significant Impact With Mitigation)***

As stated previously, the project site does not appear to host any historical resources. However, subsurface construction activities always have the potential to damage or destroy previously undiscovered historic and prehistoric resources. In keeping with the CEQA guidelines, if archaeological remains are uncovered, work at the place of discovery should be halted immediately until a qualified archaeologist can evaluate the finds. If during project construction, subsurface construction activities damaged previously undiscovered historic and prehistoric resources, there could be a potentially significant impact. Mitigation Measure ***CUL-1*** would reduce the potentially significant impact to a less than significant level.

Potential Impact CUL-1: *Surface construction activities could potentially damage or destroy previously undiscovered archeological resource.*

Mitigation Measure CUL-1: *Implementation of mitigation measure* ***CUL-1*** *would reduce the impact on previously undiscovered archeological resources to a less than significant level.*

c) Would the project disturb any human remains, including those interred outside of formal cemeteries? ***(Less Than Significant Impact With Mitigation)***

There is a possibility that human remains could be present and accidental discovery could occur. If during project construction, subsurface construction activities damaged previously undiscovered human remains, there could be a potentially significant impact. Mitigation Measure *Cultural Resources 1* would reduce the potentially significant impact to a less than significant level.

Potential Impact CUL-2 & CUL-3: *Surface construction activities could potentially damage or destroy previously undiscovered human remains.*

Mitigation Measure CUL-2 & CUL-3: *Implementation of the above-described mitigations measures* ***CUL-2*** *and* ***CUL-3*** *would reduce the impact on previously undiscovered human remains to a less than significant level.*

Sources of Information

- Contra Costa County General Plan 2005-2020. *Open Space Element*.

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

SUMMARY*:*

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

Environmental effects related to energy include a project's energy requirements and its energy use efficiencies by amount and fuel type during construction and operation; the effects of the project on local and regional energy supplies; the effects of the project on peak and base period demands for electricity and other forms of energy; the degree to which the project complies with existing energy standards; the effects of the project on energy resources; and the project's projected transportation energy use requirements and its overall use of efficient transportation alternatives, if applicable. The following factors demonstrate a project's significance in relation to these effects: (1) Why certain measures were incorporated in the project and why other measures were dismissed; (2) The potential of siting, orientation, and design to minimize energy consumption, including transportation energy, increase water conservation and reduce solid-waste; (3) The potential for reducing peak energy demand; (4) Alternate fuels (particularly renewable ones) or energy systems; and (5) Energy conservation which could result from recycling efforts.

The boat storage facility would typically be manned by a single employee and does not include an office, customer lounge area, cleaning facilities, or other amenities on site that would draw electricity in substantial quantities. The indoor parking spaces would include electrical receptacles which can be used to connect boat batteries to trickle chargers while in storage. Otherwise, the energy consumption associated with the proposed facility would primarily involve fuels consumed

by automobiles for the purpose of towing the boats to and from the site. The project is a relatively small-scale facility, offering only 80 total parking stalls for long term boat storage. Since the project offers storage for leisure vessels that are not used on a daily basis, the facility would not produce a substantial quantity of daily traffic to and from the site, thus limiting the potential daily energy consumed from transporting the vessels. With the passage of SB 100 (the 100 Percent Clean Energy Bill of 2018), the State of California has committed to achieving carbon neutrality by the year 2045. In order to plan for carbon neutrality, buildings constructed today will need to be able to transition from fossil fuels to carbon free energy by reducing or eliminating natural gas use, increasing the use of carbon free electricity, and ensuring enough capacity to support rapid growth in EV charging. As previously mentioned, the sole activities proposed with this project is for the storage of boats. The nature of the proposed land use is one that does not demand the consistent use of electrical energy. The use of trickle chargers within individual storage stalls would draw low voltage currents at low amperage for battery maintenance purposes, but such use would not be considered excessive or wasteful. The project is consistent with the implementation of SB 100 as it does not include any proposed natural gas connections and will be subject to all current building code requirements for building energy efficiency. Considering the small scale of the project, the minor energy consumption associated with the use of trickle chargers on site, and the sporadic use of vessels to be stored at the facility, there is no expectation that the operation of the facility – including the transportation of vessels to and from the facility - would result in significant environmental impacts relating to wasteful or inefficient energy consumption.

The construction phase of the project would be temporary in nature and would occur in two (phases). Phase 1 activities would entail approximately half of the proposed facility, and would include site grading, paving, and the construction of three storage buildings, access driveways, and security fencing. Phase 2 would essentially involve constructing a mirror image of Phase 1 located immediately south of the initial phase. The project's compliance with California Air Resources Board (CARB) tier requirements for construction equipment emissions and fuel efficiency would ensure that the construction phase of the project does not result in significant impacts related to energy use during construction. Considering the small scale of the proposed facility and the phased building construction, the minor construction activities associated with both phases of the project would result in less than significant energy impacts.

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

The Contra Costa County Climate Action Plan (CAP) includes a number of Green House Gas (GHG) emission reduction strategies. The strategies include measures such as implementing standards for green buildings and energy-efficient buildings, reducing parking requirements, and reducing waste disposal. If approved, the project will be subject to all building code requirements in effect at the time when building permit applications are submitted for the facility, including those pertaining to energy efficient building materials and/or techniques. The project would not conflict with the policies outlined in the CAP. Additionally, as the polices in the CAP recommendations for macro-level planning and not requirements applicable at the individual project level, the project has minimal potential for conflict with the CAP. Thus, the project would not be considered to have a significant impact in this respect.

Sources of Information

- Contra Costa County, 2015. *Municipal Climate Action Plan*.

7. *GEOLOGY AND SOILS – Would the project:*				
Environmental Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☒	☐
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 direct or indirect 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?	☐	☐	☒	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

***SUMMARY**:*

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? ***(Less Than Significant Impact)***

The project site is not located within an Alquist-Priolo Fault Zone, as mapped by the California Department of Conservation. The known active faults closest to the project site include the Marsh Creek fault, located approximately 12.5 miles southwest of the site, and the Concord Fault, located approximately 20 miles to the west. Given the lack of active faults near the site and the 12+ mile distance to the nearest known active fault, the potential for surface rupture on site is relatively low. Additionally, since the proposed project does not propose any buildings intended for human occupancy, the project would have less than significant impacts involving earthquake fault rupture.

ii) Strong seismic ground shaking? ***(Less Than Significant Impact)***

The project site was the subject of a geotechnical analysis dated May 4, 2019, by California Engineering Co. in connection with the development of a single-family residence on the project site. Based on field, laboratory and office studies, the consulting engineers concluded that competent soil material is present on site to allow for suitable foundation designs which take into account known seismic hazards. As mentioned above, the proposed project does not propose any buildings intended for human occupancy, thus, the risk of injury or death resulting from strong seismic ground shaking is already relatively low. With appropriate foundation design ensures that less than significant impacts would result from strong seismic ground shaking on the project site.

iii) Seismic-related ground failure, including liquefaction? ***(Less Than Significant Impact)***

With regard to liquefaction potential, the Safety Element of the General Plan divides Contra Costa County into three categories: “generally high”, “generally moderate to low”, and “generally low”. According to the Safety Element of the 2005-2020 Contra Costa County General Plan (Figure 10-5, Page 10-15), the site and immediate vicinity are within the “generally moderate to low” category. This map is used as a screening criterion by Contra Costa County during the processing of land development applications. The County requires rigorous evaluation of liquefaction potential in areas of “high potential”, and less comprehensive investigations are demanded in the “moderate to low” category. Since no portions of the site fall within the “generally high” category, detailed quantitative analysis of liquefaction potential is not required at this time. However, empirical evaluation of liquefaction potential is routinely required in the “generally moderate to low” category.

The subject property consists of “Parcel A” as identified on a Vesting Tentative Map approved by the Contra Costa County Zoning Administrator under County file #MS05-0008. During the time in which the County was processing subdivision #MS05-0008, development of the Old River Elementary School was underway on an adjacent parcel located immediately south of “Parcel A”. A geotechnical investigation for the Knightsen Elementary School District property (located immediately south of the project site) performed by Consolidated Engineering Laboratories (CEL) was considered in the environmental review for the subdivision which resulted in the creation of the subject property (“Parcel A”) and three additional parcels. The CEL study included a comprehensive investigation of the adjacent property, including eight (8) cone penetration

test borings and eleven (11) hollow stem auger boring on the 16.3-acre site. The data gathered confirmed up to 13 feet of fine-grained basin deposits (maximum) overlying dune sands. The dune sands extended to approximately 30 to 35 feet below the surface. Underlying the dune sands are clayey fine-grained alluvial deposits of inferred Pleistocene age. Based on the results of the laboratory test data and engineering analysis , CEL concluded that isolated lenses of relatively loose sandy silt, ranging from approximately 5-10 feet thick are present in the subsurface. Typically, this material was present between 5 and 15 feet below ground level. The loose sandy silt, where present, is considered to have a high liquefaction potential by CEL.

According to CEL, lateral spreading is not anticipated to be a hazard due to the discontinuous nature of the potentially liquefiable soil, flat terrain (<1 percent slope), and lack of a nearby "open face". The consultant acknowledged that there is a canal at the south perimeter of the school site, but it is not deemed to be deep enough to present a lateral spreading concern. In the event of liquefaction, sand lenses may cause localized, small-scale "sand boils", and there maybe localized ground settlement that could range up to 2 inches.

As part of the environmental review for the Mitigated Negative Declaration prepared for MS05-0008, the County peer review geologist evaluated the CEL report to provide a professional opinion on the document as it pertained to potential environmental impacts arising from development on the study area. In the experience of the peer review geologist, only 1 acre of ever 1,000 acres in the "generally moderate to low" category have the unique set of conditions required for liquefaction of sands to be a hazard, and geotechnical measures are available to avoid/control risk of damage. Thus, based on the in-depth analysis of the adjacent site, the properties designation as "generally moderate to low" liquefaction potential, and the unlikelihood of such hazards to exist on land within this category, less than significant impacts should be expected in this regard.

iv) Landslides? ***(No Impact)***

The project site is located within a topographically flat area of eastern Contra Costa County, and there are no hillsides or mountains in the vicinity. It is not mapped within a seismic Landslide Hazard Area. Therefore, the project will have no impacts related to landslides.

b) Would the project result in substantial soil erosion or the loss of topsoil? ***(Less Than Significant Impact)***

The project site is essentially flat, with a slight (<1%) west to east downslope. The project would not substantially alter the existing topography. Presently, stormwater runoff from the project site drains in an easterly direction over adjacent rural residential parcels. The proposed grading plan is designed to divert stormwaters from the ±2.5-acre project site into a bio-retention area located along the northern property boundary. The proposed bioretention area allows for onsite treatment of stormwaters originating on or traversing the project. It is expected that stormwater can be adequately managed on site such that overland discharge from the project site would occur at a rate substantially similar to existing conditions. Since the project does not involve any mass

grading of the property or surrounding areas, the project would not expectedly result in substantial soil erosion or the loss of topsoil, or in a substantial alteration of existing drainage patterns. Therefore, less than significant impact from soil erosion or top soil loss is expected.

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

The most recent map of Quaternary deposits is mapping by the U.S. Geological Survey. According to this map, the site is underlain by basin deposits (Qhb) of Holocene age. Dune sands (Qds) of early Holocene and Pleistocene age are inferred to underlie the site at depth, and are exposed in low sand hills in the vicinity of the site. Other Quaternary deposits mapped in the vicinity include natural level deposits (Qhl) and peaty mud deposits (Qhpm), both of Holocene age.

Based on the CEL investigation of the adjacent school site (discussed above in section a.3), it was concluded that a) the collapse potential of soils is "low", and b) loading of soils by placing fill or substantial foundation loads could cause consolidation of soft or loose soil layers within 12 feet of the ground surface. However, given that lateral spreading is not anticipated to be a significant hazard, and the discontinuous nature of potentially liquefiable soil in the area, the project would expectedly have less than significant impacts relating to a geologic unit that is unstable, or couple potentially become unstable.

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

Soils on the site can be considered to be "moderately" expansive and "moderately" corrosive to uncoated steel. Expansive soils shrink and swell as a result of moisture changes that can cause heaving and cracking of slabs-on-grade, pavements and structures founded on shallow foundations. It should be recognized that expansive soils are an engineering issue, and not a land use or feasibility issue. Building damage due to volume changes associated with expansive soils can be reduced by placing slabs on select granular fill; by use of rigid mat or post-tensioned slabs. Additionally, the project does not propose the construction of any buildings intended for human occupancy, substantially limiting the project's potential to pose any risk to human life. Therefore, with an appropriately engineered foundation, the project would have less than significant impacts relating to expansive soils creating a substantial direct or indirect risk to life or property.

e) *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?* ***(Less Than Significant Impact)***

According to the Soil Survey of Contra Costa County, the Conejo soil series is characterized by "moderately slow" permeability, and on the adjacent Knightsen Elementary School District property, CEL encountered the water table at a depth of 6 feet below the ground surface. This

combination of conditions places a severe constraint on the use of septic systems. Nevertheless, However, since the project does not proposed any buildings having restrooms or other plumbed connections, these soil conditions would have a negligible effect on the project from a feasibility standpoint. Therefore, less than significant impact.

f) *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?* ***(Less Than Significant Impact)***

Similar to archaeological resources, there is a possibility that previously undiscovered buried fossils and other paleontological resources could be present and accidental discovery could occur. If during project construction, subsurface construction activities damaged previously undiscovered historic and prehistoric resources, there could be a potentially significant impact. Mitigation Measure **CUL-1** would reduce the potentially significant impact to a less than significant level. No unique geologic features exist on the site. Thus, a less than significant impact would be expected with the included mitigations.

Sources of Information

- California Department of Conservation. *EQ Zapp: California Earthquake Hazards Zone Application.*
- Contra Costa County General Plan, 2005-2020. *Safety Element.*
- *United States Department of Agriculture, Natural Resources Conservation Service. Web Soil Survey*. http://websoilsurvey.nrcs.usda.gov
- Geologic Peer Review for C.C. County Minor Subdivision #MS05-0008, Darwin Myers Associates (April 2, 2009)

8. *GREENHOUSE GAS EMISSIONS – Would the project:*				
Environmental Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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?	☐	☐	☒	☐

SUMMARY*:*

a-b) Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential and agricultural sectors. Implementation of the project would cumulatively contribute to increases of GHG emissions. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O) associated with area sources, mobile sources or

vehicles, utilities (electricity), water usage, wastewater generation, and the generation of solid waste. The primary source of GHG emissions for the project would be mobile source emissions. The common unit of measurement for GHG is expressed in terms of annual metric tons of CO2 equivalents ($MTCO_2e/yr$).

The proposed project is located within the jurisdictional boundaries of the Bay Area Air Quality Management District (BAAQMD). The most recent BAAQMD Air Quality Guidelines were released in April, 2022. The updated GHG thresholds address recent climate change legislation, including SB 32, and provide qualitative thresholds related to Buildings and Transportation. Construction GHG emissions are a one-time release and are, therefore, not typically expected to generate a significant contribution to global climate change.

Potential impacts related to operational GHG emissions resulting from implementation of the proposed project are considered in comparison with BAAQMD's adopted thresholds of significance. The 2022 BAAQMD CEQA Guidelines state that projects that demonstrate consistency with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines section15183.5(b) can be determined to result in less than significant contribution of GHG emissions. The 2015 Contra Costa County Climate Action Plan (CAP) has been adopted at the local level in compliance with State CEQA Guidelines section 15183.5(b). The GHG reduction strategies incorporated therein include measures designed to increase energy efficiency, promote alternative modes of transportation, reduce vehicle miles traveled, and reduce reliance on fossil fuel energy sources. Since the project does not utilize natural gas as an energy source, and considering the low demand for energy associated with the storage of boats or RV's on site, the project has little potential to result in elevated GHG emissions as a result of wasteful or inefficient use of energy resource. The primary source of GHG emissions expected to result from the project would be from automotive sources as patrons visit the site to retrieve or return their stored vehicle. A project traffic assessment prepared by Rick Engineering estimates that the project would generate an estimated 57 daily vehicular trips, with only 10 of those trips occurring during AM or PM peak traffic hours. Thus, based on the fact that the project would generate fewer than 110 daily automotive trips, the project would not expectedly generate significant air quality impacts, as determined by Contra Costa County's Transportation Analysis guidelines. In cumulative consideration of the above, the project would not result in significant GHG emission impacts with adherence to all applicable building code regulations, including those pertaining to building energy efficiency. Therefore, the project would have less than significant GHG impacts.

Sources of Information

- Bay Area Air Quality Management District *2022 CEQA Guidelines*
- *Brentwood Boat Storage Trip Generation and VMT screening Assessment* – Rick Engineering, January 15, 2025.
- Contra Costa County Transportation Analysis Guidelines - Contra Costa County Transportation Analysis Guidelines

9. HAZARDS AND HAZARDOUS MATERIALS – *Would the project:*				
Environmental Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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 create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

***SUMMARY**:*

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

If the project is approved, construction activities associated with the boat storage facility would include the routine use of fuels, lubricants, paints, and other construction materials during the construction period. The use and handling of hazardous materials during construction would occur in accordance with applicable federal, state, and local laws, including California Occupational Health and Safety Administration (Cal/OSHA) requirements. With compliance with existing regulations, the project would have a less than significant impact from construction.

The operation of the project does not involve the routine transport, use, or disposal of hazardous materials to any significant degree. Accordingly, less than significant impacts from hazardous materials would result from the operation of the project.

b) *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?* ***(Less Than Significant Impact)***

Since the project does not involve the transport, use, or disposal of hazardous materials, the release of hazardous materials into the environment is not reasonably expected to occur. Therefore, the project will have less than significant impact in this respect.

c) *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?* ***(No Impact)***

The Old River Elementary school is located immediately south of the project site on an adjacent parcel. This is the only school within a quarter mile of the project. Since the project would only allow for the storage of recreational vessels (boats and a limited number of RV's), the facility's operation would not result in emissions, hazardous or otherwise, in any significant quantity. The lack of any project element involving a process or activity on site that could result in such emissions ensures that the project would have no impact in this respect.

d) *Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?* ***(Less Than Significant Impact)***

A review of regulatory databases maintained by County, State, and federal agencies found no documentation of hazardous materials violations or discharge on the subject property. The site is not listed on the State of California Hazardous Waste and Substance Sites (Cortese) List. California Government Code section 65962.5 requires the California Environmental Protection Agency to develop at least annually an updated Cortese List. The Cortese List is a planning document with hazardous material contaminated site information, used by the State, local agencies and developers to comply with the California Environmental Quality Act. Thus, the project is not expected to result in significant hazard to the public or the environment.

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

The project site is not located with the Byron Airport Influence Area and is located approximately 3.5 miles north of Byron Airport. Therefore, there would not be any expected safety hazard or excessive noise impacts related to a public airport or public use airport.

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

The project site is bounded by Bixler Road to the west and Learning Lane to the south. The addition of the Boat storage facility would not increase area population and does not involve construction activity within a public right-of-way or highway. Thus, the project has little to no

potential to affect emergency evacuation plans, or other emergency response plans. Therefore, less than significant impacts are anticipated in this regard.

With respect to proposed onsite improvements, the Contra Costa Fire Protection District has reviewed the project plans and provided routine comments specifying current fire code sections that are applicable to the project. Furthermore, prior to the issuance of building permits the Fire Protection District would review the construction drawings for the project to verify compliance with provisions of the fire code that are in effect at the time of building permit application submittal. The project's compliance with all applicable provisions of the California Building Code and California Fire Code will ensure that the project does result in improvements that physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, the project will have less than significant impacts in this regard.

g) *Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?* ***(Less Than Significant Impact)***

The Boat storage facility does not include any habitable structures and would expectedly be operated by an individual owner/operator residing in an existing residence in a southerly portion of the subject property. The project site and surrounding area is designated as "non-wildland, non urban", and therefore, is not within an area subject to an elevated risk of wildfire. The project site is not within the service area of a public water supply, but numerous nearby properties, including the school immediately south of the project site are within the Discovery Bay Community Services District service area for public water supply. Considering that the school property and most residences in the immediate project vicinity have access to urban water supplies for fire suppression purposes, and the relatively lower risk of wildfire occurring in the "non urban non wildlands" designation, the project would expectedly result in less than significant risk of exposing people or structures to hazards associated with wildland fires.

Sources of Information

- California Department of Forestry and Fire Protection (CalFire). 2009. *Very High Fire Hazard Severity Zones in LRA Map.*
- Contra Costa County, 2000. *Contra Costa County Airport Land Use Compatibility Plan.*
- Contra Costa County General Plan, 2005-2020. *Transportation and Circulation Element.*

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

***SUMMARY**:*

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

The proposed project would comply with applicable water quality and discharge requirements. Contra Costa County, the Contra Costa County Flood Control and Water Conservation District, and 16 incorporated cities in the county have formed the Contra Costa Clean Water Program. In October 2009, the Regional Water Quality Control Board for the San Francisco Bay Region (RWQCB) adopted the National Pollutant Discharge Elimination System (NPDES) Municipal Regional Permit for the Program, which regulates discharges from municipal storm drains. Provision C.3 of the Municipal Regional Permit places requirements on site design to minimize creation of impervious surfaces and control stormwater runoff. The County has the authority to enforce compliance with its Municipal Regional Permit through the County's adopted C.3 requirements. The C.3 requirements stipulate that projects creating and/or redeveloping at least

10,000 square feet of impervious surface shall treat stormwater runoff with permanent stormwater management facilities, along with measures to control runoff rates and volumes.

The proposed project would exceed 10,000 square feet of new impervious surface area. Therefore, the project has submitted a preliminary Stormwater Control Plan (SWCP) with this planning permit application, as required by County drainage ordinances. The project drainage plan allows for onsite detention and infiltration of stormwaters on the subject property in a manner that substantially maintains the established drainage pattern for the property. The project requires an exception to the collect and convey standards specified by County ordinance, which can only be approved with the appropriate findings. Based on the applicant's exception request and proposal, the necessary finding can be made to support the request. Furthermore, the preliminary stormwater control plan has been reviewed by the County's Public Works division and shows that all stormwaters will be managed adequately on site. Thus, with implementation of the practicable stormwater controls, the project would be compliant with applicable water quality standards or waste discharge requirements, resulting in a less than significant impact.

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

Since the project includes on site detention designed to allow stormwater to infiltrate the soils beneath the subject property, and the project does not generally require water for the on-site storage of boats and small numbers of RV's, the project would not substantially decrease groundwater supplies nor interfere with groundwater recharge. To the extent that water is needed for site operation, the project would draw on well water as a potable water source, which is subject to permitting requirements administered by the County Environmental Health Division to verify water flow/quality is adequate for the proposed use. The project's compliance with applicable permit requirements for the use of well water, along with the implementation of the proposed grading/drainage plan, ensures less than significant project related impacts in this respect.

c) *Would the project substantially alter the existing drainage pattern of the area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*

i) *Result in substantial erosion or siltation on- or off-site?* ***(Less Than Significant Impact)***

The proposed project would not substantially alter the drainage pattern of the site or area or result in substantial erosion or siltation. The grading necessary for the project would substantially maintain the existing drainage patterns on site. Accordingly, the proposed project would not result in substantial erosion or siltation relative to present conditions.

ii) *Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*

The project site is not located within a Federal Emergency Management Agency (FEMA) Special Flood Hazard Zone. As described previously, the proposed project would not substantially alter the existing drainage pattern of the site or area. Thus, there would not be a significant risk due to an increase in the project-related volume of runoff that would result in onsite or off-site flooding.

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? ***(No Impact)***

The project is located outside of the urban limit line. Consequently, the use of a public stormwater drainage system is unavailable to the project as such improvements are generally prohibited outside of the urban limit line. Consequently, the project requires an exception to County Drainage Ordinance in order to authorize the proposed grading/drainage plan which would detain and treat stormwaters on site. The County Public Works Department has reviewed the application submittal and determined that the proposed onsite surface drainage regimen would be appropriate for the area. Accordingly, the proposed project would not exceed the capacity of any existing stormwater system. Therefore, no impact to existing or planned stormwater drainage systems would result from the project.

iv) Impede or redirect flood flows? ***(No Impact)***

The improvements on the site are not expected to create any barrier that would impede or redirect flood flows, should flooding occur. Therefore, no impact.

d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation? ***(Less Than Significant Impact)***

According to County GIS mapping, no portion of the subject property is located in a Special Flood Hazard Zone. The California Geological Survey (2009) has projected and mapped the tsunami hazard posed by a tidal wave that passes through the Golden Gate and into San Francisco Bay, San Pablo Bay and Carquinez Strait. The project site is not included in the inundation area on any of the State's published tsunami hazard maps. Therefore, the project would not result in significant impacts as a result of flood hazards, tsunami's or seiche waves.

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

As stated above, the proposed project would comply with applicable water quality and discharge requirements. Provision C.3 of the Municipal Regional Permit places requirements on site design to minimize creation of impervious surfaces and control stormwater runoff. Thus, the project would not conflict with or obstruct implementation of a water quality control plan.

The Sustainable Groundwater Management Act (SGMA), effective January 1, 2015, established a framework of priorities and requirements to facilitate sustainable groundwater management throughout the State. The intent of SGMA is for groundwater to be managed by local public agencies and newly-formed Groundwater Sustainability Agencies (GSAs) to ensure a groundwater basin is operated within its sustainable yield through the development and implementation of a Groundwater Sustainability Plans (GSP). The project is located near the San Joaquin Valley – East Contra Costa basin management area, which is Medium Priority groundwater basin based on the Groundwater Basin Prioritization by the State Department of Water Resources (DWR). Given that the project reliance on groundwater would be or impact water percolation, a less than significant impact to the basin is expected.

Sources of Information

- California Department of Water Resources. *https://water.ca.gov/Programs/Groundwater-Management*
- Federal Emergency Management Agency (FEMA). *National Flood Insurance Rate Map (FIRM). https://www.fema.gov/national-flood-insurance-program-flood-hazard-mapping.*

11. *LAND USE AND PLANNING – Would the project:*				
Environmental Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

SUMMARY:

a) Would the project physically divide an established community? ***(No Impact)***

Development of the proposed project would not physically divide an established community. The proposed project would occur on an agricultural parcel within a rural agricultural area. The community of Discovery Bay is approximately 0.25-miles south of the project and would not be physically divided by the proposed facility. Therefore the project would have no impact in this respect.

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

General Plan

The proposed project would conform to the applicable General Plan land use designation. The site's current land use designation is AL, Agricultural Lands. Boat/RV storage facilities are

considered compatible land uses which may be permitted on agricultural lands upon issuance of a land use permit.

The Contra Costa General Plan includes Policy #3-54, which is relevant to the project area, reading *"All public and private management and development activites within the Primary Zone of the Delta shall be consistent with the Goals, policies, and provisions of the "Land Use and Resource Management Plan" for the Primary Zone of the Delta as adopted and as may be amended by the Delta Protection Commission*."

The current Land Use and Resource Management Plan for the Primary Zone of the Delta was adopted by the DPC on February 25, 2010. The Plan includes relevant goals and policies for various topics including land use, agriculture, natural resources, recreation & access, water, levees, and utilities/ infrastructure. The policies relevant to the proposed minor subdivision are those pertaining to land use and agriculture.

Most land use policies are specific to non-agricultural oriented development, development near levees, developments requiring general plan amendments, or projects involving substantial residential development, and thus are not relevant to the proposed boat storage facility. The most relevant land use policies for the Primary Zone of the Delta include Land Use Policy P-1 and P-2 which collectively recognize a need to "protect the unique character and qualities of the Primary Zone by preserving the cultural heritage, strong agricultural/economic base, unique recreational resources, and biological diversity of the Primary Zone." These policies promote agricultural land uses as the primary use of lands located in the Primary Zone, while allowing for recreational and natural resources land uses in appropriate locations and where conflicts with agricultural lands uses can be minimized. The project is consistent with these policies given its location outside of the County-designated agricultural core, and its close proximity to public boat launch facilities that are characteristic of the recreational land uses in this area of the County. The project does not involve a subdivision of lands below minimum parcel sizes, nor does it involve a use considered incompatible with agricultural activities on adjoining lands. Therefore, the project does not conflict with policies for the Primary Zone of the Delta.

Zoning

Boat storage facilities are conditionally permitted in the A-2 agricultural zoning district in which the subject property is located. The proposed structures are consistent with development standards for the A-2 district in terms of setback, rear yard, side yards, and building height. Thus, the project is consistent with the zoning regulations applicable to the subject property.Based on the foregoing, the project is substantially consistent and compatible with applicable general plan and zoning policies and has less than significant potential to conflict with these provisions in a manner resulting in significant environmental impacts.

Sources of Information

- Contra Costa County Code, Title 8, Zoning Ordinance.
- Contra Costa County General Plan 2005-2020. *Land Use Element*.

12. *MINERAL RESOURCES – Would the project:*				
Environmental Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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?	☐	☐	☐	☒

***SUMMARY**:*

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

Known mineral resource areas in the County are shown on Figure 8-4 (Mineral Resource Areas) of the General Plan Conservation Element. No known mineral resources have been identified in the project vicinity, and therefore the proposed project would not result in the loss of availability of any known mineral resource.

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

The project site is not within an area of known mineral importance according to the Conservation Element of the General Plan, and therefore, the project would not impact any mineral resource recovery site.

Sources of Information

- Contra Costa County General Plan 2005-2020. *Conservation Element.*

13. *NOISE – Would the project result in:*				
Environmental Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐

b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

***SUMMARY**:*

*a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**(Less Than Significant Impact)***

Activities at the project site are not expected to expose persons to, or generate, noise levels in excess of the Community Noise Exposure Levels shown on Figure 11-6 of the General Plan Noise Element. Figure 11-6 shows that levels of 75 dB or less are normally acceptable and noise levels between 70 dB to 80 dB are conditionally acceptable in agricultural areas. Types and levels of noise generated from the uses associated with the future solar facility would be similar – if not quieter - to noise levels from the existing agricultural uses in the area.

Operation of construction equipment could result in temporary noise impacts in the immediate vicinity. However, no sensitive uses are located near the project sites. Furthermore, use of heavy equipment would be temporary and cease once construction is complete. Thus, project noise impacts to the existing surrounding land uses would be less than significant.

*b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels? **(Less Than Significant Impact)***

Operation of construction equipment could result in perceptible levels of ground-borne vibration in the immediate vicinity. However, no sensitive uses are located near the project sites. Furthermore, use of heavy equipment would be temporary and cease once construction is complete. Therefore, this impact would be less than significant.

c) *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? **(Less Than Significant Impact)***

The project does not include a residential component, and the operation of the facility would largely managed by a single employee. The project is approximately 7.5 miles north of the Byron Airport. Considering the distance from the airport and the fact that the property does not lie below runway flight paths for approaching/departing flights, the airport is not expected to expose people residing or working on the proposed facility to excessive noise. According to County GIS mapping layers, northerly portions of the subject property are generally not experiencing ambient noise

levels above 60dB. Thus, the project would have less than significant impacts exposing people residing or working in the project area to excessive noise levels related to the airport..

Sources of Information

- Contra Costa County General Plan, 2005-2020, Noise *Element.*
- Contra Costa County, 2000. *Contra Costa County Airport Land Use Compatibility Plan.*

14. *POPULATION AND HOUSING – Would the project:*				
Environmental Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Induce substantial unplanned 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 people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

SUMMARY*:*

a) Would the project induce substantial unplanned 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)? ***(Less Than Significant Impact)***

The proposed project would result in the development of a boat storage facility and commercial solar energy generation facility in agricultural east County. The facility would not require a large number of employees and would typically be operated by a single employee. Given the small workforce demanded by the project and the lack of a residential component, the project would not result in a significant population increase.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? ***(No Impact)***

The project site is currently an agricultural property, and does not include any dwelling units. Thus, the proposed project would not displace any existing housing and does not affect housing inventory in the County.

15. *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 public services:*				
Environmental Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Fire Protection?	☐	☐	☒	☐
b) Police Protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☒	☐
d) Parks?	☐	☐	☒	☐
e) Other public facilities?	☐	☐	☒	☐

SUMMARY*:*

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) *Fire Protection?****(Less Than Significant Impact)***

Fire protection and emergency medical response services for the project vicinity are provided by the Contra Costa Fire Protection District (CCFPD). The project was forwarded to the fire district with a request for comment, and staff did not receive a response indicating that the land use would negatively affect the provision of fire protection services in the area. The project is required to comply with the applicable provisions of the California Fire Code, the California Building Code, and applicable Contra Costa County Ordinances that pertain to emergency access, fire suppression systems, and fire detection/warning systems. Prior to the issuance of building permits, the construction drawings would be reviewed and approved by the CCFPD. As a result, potential impacts of the proposed project relating to fire protection would be less than significant.

b) *Police Protection? **(Less Than Significant Impact)***

Police protection services in the project vicinity are provided by the Contra Costa County Sheriff's Office, which provides patrol service to the Byron area. The project would not expectedly affect the provision of police services to the area due to the lack of a substantial residential component. Therefore, the project would have less than significant impact on police services.

c) *Schools? **(Less Than Significant Impact)***

The project is not expected to have a substantial impact on population, thus, there would be a less than significant impact on the local school system.

d) *Parks?* ***(Less Than Significant Impact)***

As stated above, the project is not expected to induce population growth in the area; thus a less than significant impact on the provision of parks is expected.

e) Other public facilities? ***(Less Than Significant Impact)***

Impacts to other public facilities, such as hospitals and libraries are usually caused by substantial increases in population. Implementation of the proposed project is not anticipated to induce population growth. The project is not anticipated to create substantial additional service demands besides those which have been preliminarily reviewed by various agencies of Contra Costa County, or result in adverse physical impacts associated with the delivery of fire, police, schools, parks, or other public services. Therefore, the impact to hospitals, libraries or other public facilities would be less than significant.

16. *RECREATION*				
Environmental Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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?	☐	☐	☒	☐

SUMMARY*:*

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

As previously stated, the project is not expected to induce population growth in the area. Thus, the project would not expectedly result in an increase in the use of existing neighborhood or regional parks. The Boat storage facility, located near existing public boat launch facilities, would provide a convenient location for storage of recreational vessels. However, the use of such boat launch facilities is typically associated with a per-use fee, which would generate revenue for the maintenance and operation of such facilities. Thus, the project is not expected to result in substantial physical deterioration of recreational facilities.

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

As stated above, the project is not expected to induce population growth in the area. The project does not require the expansion of existing recreational facilities and does not propose the

construction of new recreational facilities. Therefore, the project would have less than significant impacts in this respect.

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

***SUMMARY**:*

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

Policy 4-c of the Growth Management Element of the General Plan requires a traffic impact analysis of any project that is estimated to generate 100 or more AM or PM peak-hour trips. The applicant has provided a Trip Generation Analysis memo prepared by Rick Engineering evaluating traffic impacts associated with the proposed project. Trip generation estimates are based on the Institute of Transportation Engineers (ITE) taken from the 11th Edition of the ITE Trip Generation Manual. There are no ITE rates available for a Boat storage facility and based on a review of the most similar rates in the ITE Trip Generation Manual. It was determined that using the "Mini-Warehous-Self-Storage" trip generation rates (ITE Land Use Code 151) would provide the most accurate forecast of the project's potential trip generation. According to the Trip Generation Analysis, the project would expectedly result in up to 10 combined (AM/PM) peak hour trips. Since the project would yield less than 100 peak-hour AM or PM trips, the proposed project would have less than significant traffic impacts and therefore, would not conflict with the circulation system in the Byron area.

b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3(b)? ***(Less Than Significant Impact)***

The project would result in additional daily vehicle trips but would only marginally increase peak hour trips. Since trips for this type of land use typically occur during off-peak hours and weekends, this would not expectedly coincide in the project area. According to trip generation analysis provided by the project proponent, an estimated 57 daily vehicle trips would result from the project. Given the minor scale of the project and the relatively small number of daily trips resulting

therefrom, the Boat/RV storage facility would not be a substantial contributor to peak hour traffic conditions in the project area.

The project has been evaluated with the California Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (December, 2018). Pursuant to OPR's published screening thresholds for land use projects, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less than significant transportation impact – absent substantial evidence indicating that a project would generate a potentially significant level of VMT or inconsistency with a Sustainable Communities Strategy or General Plan. There is no substantial evidence that the project would generate a potentially significant level of VMT. The project is consistent with the Contra Costa County General Plan. Therefore, based on the estimated 57 average daily trips, the project would have less than significant traffic impacts and is consistent with VMT analysis required under CEQA guidelines section 15064.3(b).

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

The project site is located on private property fronting Bixler Road and accessed from Learning Lane. The project driveway proposed along Bixler Road would be constructed to meet the County's design guidelines ingress and egress and, thus, would not be considered hazardous. Therefore, the project would result in a less than significant impact due to design features or incompatible uses.

d) *Would the project result in inadequate emergency access?* ***(Less Than Significant Impact)***

Construction activities would occur on the project site but would not restrict access for emergency vehicles traveling to or nearby the project site. During operation of the project, emergency access to the site would be provided by on site roadways. Therefore, operation of the proposed project would not result in inadequate emergency access, and a less than significant impacts would occur.

Sources of Information

- Contra Costa County Transportation Analysis Guidelines
- California Office of Planning and Research *Technical Advisory on Evaluating Transportation Impacts in CEQA* – December 2018

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

***SUMMARY**:*

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: ***(Less Than Significant Impact With Mitigations)***

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? ***(Less Than Significant Impact With Mitigations)***

As discussed in Sections 5.a through 5.c above, no historical resources have been identified on the project site. Further, according to the County's Archaeological Sensitivities map, Figure 9-2, of the County General Plan, the subject site is located in a "Moderately Sensitive Area," which may contain significant archeological resources. While unlikely since the site is fully disturbed, subsurface construction activities always have the potential to damage or destroy previously undiscovered historic and prehistoric resources.

Pertaining to the significance of tribal cultural resources, there are no onsite historical resources, pursuant to Public Resources Code section 5020.1(k) that are included in a local register of historic resources.

Nevertheless, the expected construction and grading could cause ground disturbance which may impact heretofore undocumented cultural resources. Implementation of Mitigation Measure *CUL-1* would reduce the impact on cultural resources during project related work to a level that would be considered less than significant.

Potential Impact: *Construction and grading could cause ground disturbance which may impact heretofore undocumented tribal cultural resources.*

Mitigation Measure: *Implementation of mitigations measure CUL-1 would reduce the impact on previously undiscovered tribal cultural resources to a less than significant level.*

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? ***(Less Than Significant Impact With Mitigations)***

As discussed in Sections 5.a through 5.c above, no historical resources have been identified on the project site. Further, according to the County's Archaeological Sensitivities map, Figure 9-2, of the County General Plan, the subject site is in a "Moderately Sensitive Area," which may contain significant archeological resources. While unlikely since the site is fully disturbed, subsurface construction activities always have the potential to damage or destroy previously undiscovered historic and prehistoric resources.

Nevertheless, the expected construction and grading could cause ground disturbance which may impact heretofore undocumented cultural resources. Implementation of Mitigation Measure *Cultural Resources 1* would reduce the impact on cultural resources during project related work to a less than significant level.

Potential Impact: *The project could cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. The expected construction and grading could cause ground disturbance which may impact heretofore undocumented cultural resources.*

Mitigation Measure: *Implementation of mitigations measure CUL-1 would reduce the impact on previously undiscovered tribal cultural resources to a less than significant level.*

19. *UTILITIES AND SERVICE SYSTEMS – Would the project:*

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☒	☐

c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

***SUMMARY**:*

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

The project is not proposing to construct any new or expanded water, wastewater treatment, stormwater drainage, or telecommunications facilities. The electricity generated by the facilities would be provided to the PG&E grid from existing onsite infrastructure. Thus, the project would not result in any environmental effects from construction of these facilities. A less than significant impact would occur.

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

The project would not induce any growth because the project would not increase capacity over what is provided by the existing electrical grid. Rather, this project is meant to improve existing, aging non-renewable energy infrastructure. Because operation of the project would not induce substantial population growth, project operation would not increase demand for water supplies.

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

The project is not located within the service area of a wastewater treatment provided. The project would be required to treat any wastewater produced by the project on site via septic system or other private wastewater disposal system. Thus, the operation of the proposed project would not exceed wastewater treatment demand beyond the provider's existing commitments, and no impacts would occur.

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

Construction waste would be hauled to one of the recycling centers and/or transfer stations located in the area. The recycling center and/or transfer station would sort through the material and pull out recyclable materials. Future construction of the proposed project would incrementally add to the construction waste headed to a landfill; however, the impact of the project-related incremental increase would be considered to be less than significant. Furthermore, construction on the project site would be subject to the CalGreen Construction and Demolition Debris Recovery Program administered by the CDD at the time of application for a building permit. The Debris Recovery Program would reduce the construction debris headed to the landfill by diverting materials that could be recycled to appropriate recycling facilities.

Operation of the project would generate municipal solid waste. Since the primary function of the proposed facility is storage, and does not involve residential or commercial retail activities, the solid waste generated by the project would be considered incidental and is not expected to be generated in substantial amounts. Commercial solid waste disposal service, including recycling and composting bins required by state law, is available from local service providers. Therefore, operations would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, less than significant operational impacts would occur.

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

Operation of the project would not expectedly be a significant contributor to municipal solid waste. Additionally, the use of local service providers to subject to monitoring/reporting by federal, state and local regulations ensures that operations would not conflict with any federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, less than significant operational impacts would occur.

20. *WILDFIRE –* *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones,* ***would the project:***

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby, expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

***SUMMARY**:*

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

a-d) As discussed in section 9.g above, the project site is no located in a fire hazard area designated by the California Department of Forestry and Fire Protection. The Department of Forestry and Fire Protection's Very High Fire Hazard Severity Zone Map characterizes this area as a Non-Urban, Non Wildland. There are no lands on or near the project site having the "High" or "Very High" designation. Therefore, the project would have no impact relating to wildfire.

Sources of Information

- California Department of Forestry and Fire Protection (CalFire). 2009. *Very High Fire Hazard Severity Zones*

21. *MANDATORY FINDINGS OF SIGNIFICANCE*				
Environmental Issues	**Potentially Significant Impact**	**Less Than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
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, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

***SUMMARY**:*

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

As discussed in individual sections of this Initial Study, the project to establish a Boat storage facility may impact the quality of the environment (Air Quality, Biological Resources, Geology, Cultural Resources, and Tribal Cultural Resources) but the impact would be reduced to a less than significant level with the adoption of the recommended Mitigation Measures that are specified in the respective sections of this Initial Study. The project is not expected to threaten any wildlife population, impact endangered plants or animals, or affect state cultural resources with the already identified Mitigation Measures.

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.)

The proposed project would not create substantial cumulative impacts. The project site is located adjacent to existing high-power electrical lines and would be tied into the grid from existing infrastructure on the subject property and adjoining public right-of-way. The recreational vessel storage element of the project would provide a convenient storage location for owners of such vehicles. Additionally, the proposed project would be consistent with the existing surrounding agricultural development. Since most potential environmental impacts in this report are associated with the construction phase of the project, and considering the temporary nature of the construction phase, the project would not expectedly result in cumulatively considerable environmental impacts. Therefore, less than significant impacts are expected in this regard.

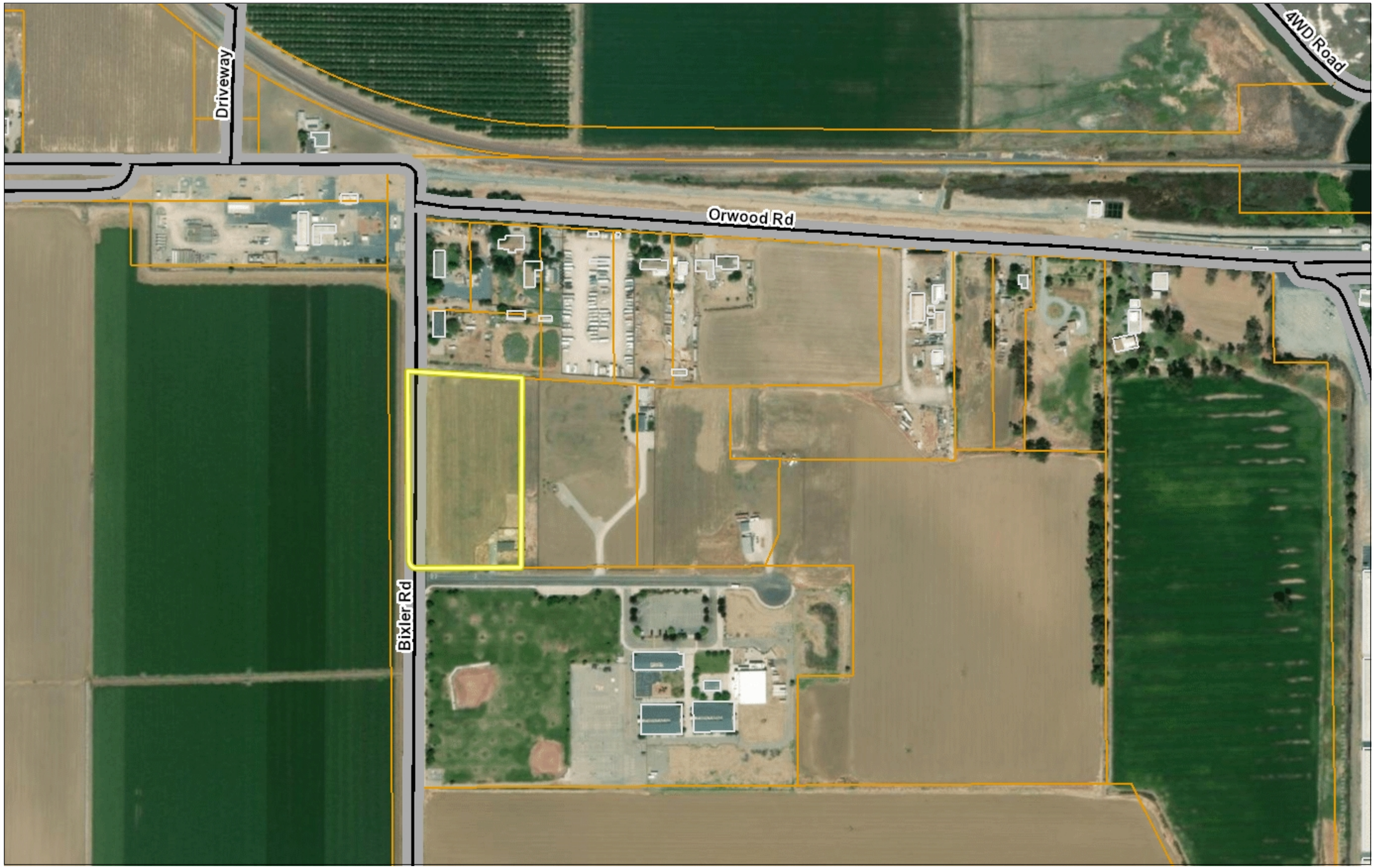
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

This Initial Study has disclosed impacts that would be less than significant with the implementation of Mitigation Measures. All identified Mitigation Measures would be included in the conditions of approval for the proposed project, and the applicant would be responsible for implementation of the measures. As a result, there would not be any environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

ATTACHMENTS

1. **Vicinity Map**
2. **Site Development Plans**
3. **Biological Resources Assessment**
4. **MMRP**

Aerial Photo



0.1 0 0.07 0.1 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Legend

- City Limits
- Streets
- Building Footprints
- Assessment Parcels
- World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery
- Citations

1: 4,514

Notes

CDLP22-02069

PRELIMINARY SITE DEVELOPMENT PLAN
21 LEARNING LANE

BRENTWOOD
COUNTY OF CONTRA COSTA
STATE OF CALIFORNIA

RECEIVED on 05/07/2024 CDLP22-02069
By Contra Costa County
Department of Conservation and Development

04/29/2024

ABBREVIATIONS

AB	– AGGREGATE BASE
AC	– ASPHALT CONCRETE
BC	– BEGINNING OF CURVE
BGL	– BOTTOM OF GRAVEL LAYER
BR	– BIO–RETENTION AREA
BRW	– BOTTOM OF RETAINING WALL
BUAD	– BUBBLE–UP AREA DRAIN
BVCE	– BEGIN VERTICAL CURVE ELEVATION
BVCS	– BEGIN VERTICAL CURVE STATION
C&G	– CURB & GUTTER
CB	– CATCH BASIN
CC	– CURB CUT
CCCo	– CONTRA COSTA COUNTY
CL	– CENTER LINE, CLASS
CO	– CLEANOUT
CONC	– CONCRETE
COB	– CITY OF BRENTWOOD
CR	– CURB RETURN
DET	– DETAIL
DI	– DRAIN INLET
DWY	– DRIVEWAY
DWG	– DRAWING
EC	– END OF CURVE
EG	– EXISTING GROUND ELEVATION
ELEV	– ELEVATION
EP	– EDGE OF PAVEMENT
ESMT	– EASEMENT
EVCE	– END VERTICAL CURVE ELEVATION
EVCS	– END VERTICAL CURVE STATION
EXIST/EX	– EXISTING
F	– FIRE
FC	– FACE OF CURB
FDC	– FIRE DEPARTMENT CONNECTION
FF	– FINISH FLOOR ELEVATION
FG	– FINISH GRADE ELEVATION
FH	– FIRE HYDRANT
FL	– FLOWLINE
FS	– FIRE SERVICE
G	– GRATE ELEVATION
GB	– GRADE BREAK
H	– HIGH
HORIZ	– HORIZONTAL
HP	– HIGH POINT
INV	– INVERT
JT	– JOINT TRENCH
LF	– LINEAR FEET
LT	– LEFT
MAX	– MAXIMUM
MH	– MANHOLE
MIN	– MINIMUM
MISC	– MISCELLANEOUS
MON	– MONUMENT
N	– NORTH
NTS	– NOT TO SCALE
OC	– ON CENTER
PAE	– PRIVATE ACCESS EASEMENT
PCC	– PORTLAND CEMENT CONCRETE
PI	– POINT OF INTERSECTION
PL	– PROPERTY LINE
PRC	– POINT OF REVERSE CURVE
PSE	– PUBLIC SERVICE EASEMENT
PSDE	– PRIVATE STORM DRAIN EASEMENT
PSSE	– PRIVATE SANITARY SEWER EASEMENT
PUE	– PUBLIC UTILITY EASEMENT
PVAW	– PRIVATE VEHICLE ACCESSWAY
PVC	– POLYVINYL CHLORIDE
PVI	– POINT OF VERTICAL INTERSECTION
PVMT	– PAVEMENT
PWLE	– PRIVATE WATER LINE EASEMENT
RCP	– REINFORCED CONCRETE PIPE
RT	– RIGHT
R/W	– RIGHT OF WAY
S	– SLOPE, SOUTH
SD	– STORM DRAIN
SDWK	– SIDEWALK
SF	– SQUARE FEET
SO	– SIDE OPENING
SS	– SANITARY SEWER
SSCO	– SANITARY SEWER CLEANOUT
SSE	– SANITARY SEWER EASEMENT
SSMH	– SANITARY SEWER MANHOLE
SSRI	– SANITARY SEWER RODDING INLET
STA	– STATION
STD	– STANDARD
SXD	– SIDEWALK CROSS DRAIN
TB	– TOP OF BANK
TC	– TOP OF CURB
TEMP	– TEMPORARY
TGL	– TOP OF GRAVEL LAYER
TRW	– TOP OF RETAINING WALL
TSL	– TOP OF SOIL LAYER
TYP	– TYPICAL
VC	– VERTICAL CURVE
VERT	– VERTICAL
VG	– VALLEY GUTTER
WM	– WATER METER
WS	– WATER SERVICE

OWNER/DEVELOPER

BEN FOX
21 LEARNING LANE
BRENTWOOD, CA 94513
(510) 754-3343

CIVIL ENGINEER

APEX CIVIL ENGINEERING & LAND SURVEYING
817 ARNOLD DRIVE, SUITE 50
MARTINEZ, CA 94553
(925) 476-8499

BENCHMARK

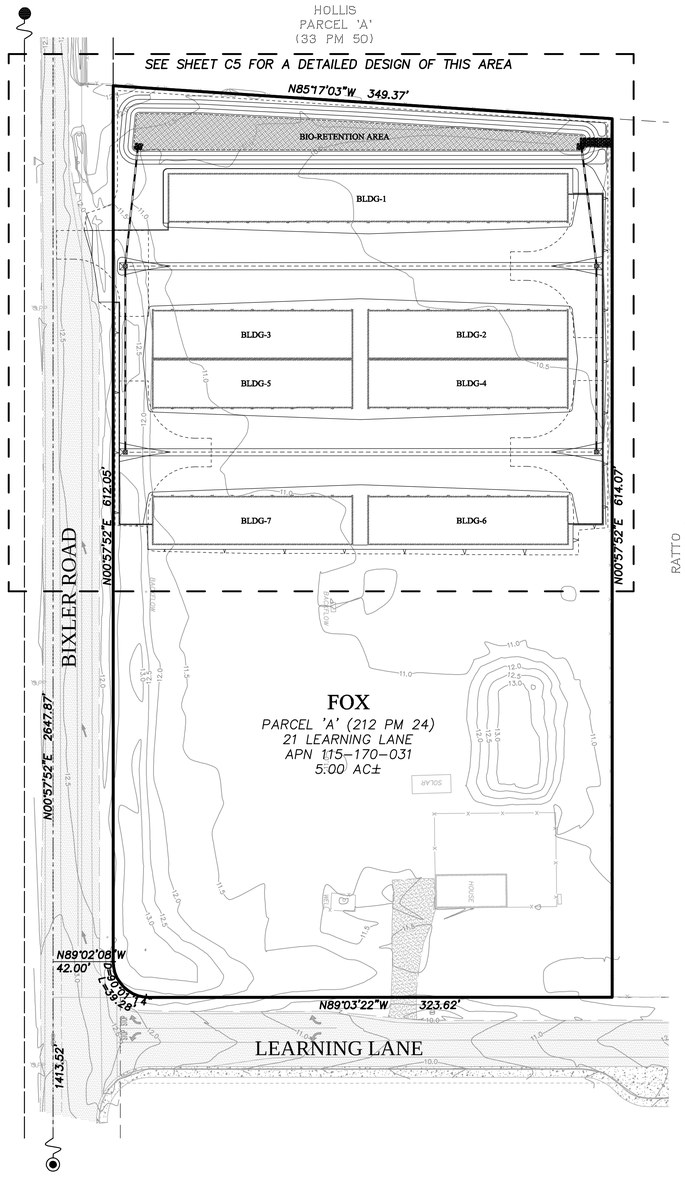
CCCO BM #3267 SET TAG IN TOP OF MANHOLE ON BIXLER ROAD JUST SOUTH OF LEARNING LANE EL=18.13 (NGVD 29)

BASIS OF BEARINGS

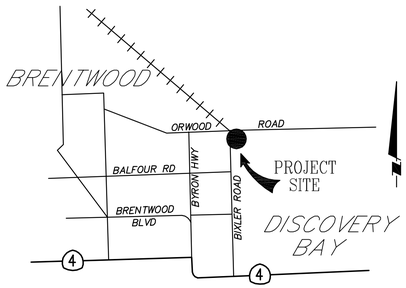
BEARINGS ARE BASED ON THE CENTERLINE OF BIXLER ROAD AS SHOWN ON THE PARCEL MAP (212 PM 24) TAKEN AS NORTH 00°57'52" EAST

811 DIAL TOLL FREE 811 AT LEAST TWO DAYS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

NOTE:
THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES DURING CONSTRUCTION.



GRAPHIC SCALE
50 25 0 50
(IN FEET)
1 inch = 50 feet



VICINITY MAP
NOT TO SCALE

LEGEND

EXISTING	PROPOSED	ITEM
		PAVEMENT
		CONCRETE
		CURB & GUTTER
8" SS	8" SS	SANITARY SEWER MAIN
		SANITARY SEWER MANHOLE
8" SD	8" SD	STORM DRAIN LINE
		STORM DRAIN MH
		INLET OR CATCH BASIN
		FIRE HYDRANT
6" W	6" W	WATER LINE & VALVE
		WATER METER
		AIR RELEASE VALVE
		SIGN
		STREET LIGHT
		UTILITY POLE
		STREET MONUMENTS
71	75	CONTOURS
		DIRECTION OF DRAINAGE FLOW

SHEET INDEX

SHEET No.	DESCRIPTION
C1	TITLE SHEET
C2	GENERAL NOTES & DETAILS
C3	SECTIONS
C4	TOPOGRAPHIC SURVEY
C5	PRELIMINARY GRADING, DRAINAGE & UTILITY PLAN
C6	PRELIMINARY C.3 STORMWATER CONTROL PLAN

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APEX
CIVIL ENGINEERING & LAND SURVEYING

REGISTERED PROFESSIONAL ENGINEER JOHN V. LIZCANO EXP. 9/30/25 CIVIL STATE OF CALIFORNIA

NO.	REVISIONS	BY	APP	DATE

PRELIMINARY SITE DEVELOPMENT PLAN
TITLE SHEET
21 LEARNING LANE
BRENTWOOD, CA

SHEET
C1

DATE
04-29-2024

PROJECT #: 23086

GENERAL NOTES

1. THESE PLANS SHOW EXISTING FEATURES INCLUDING BUT NOT LIMITED TO TREES, UTILITIES, AND STRUCTURES THAT MAY BE AFFECTED BY THE CONSTRUCTION OR PLACEMENT OF THE PROPOSED ENGINEERED IMPROVEMENTS. THE CONTRACTOR WILL IMMEDIATELY NOTIFY THE ENGINEER IF THERE ARE ANY EXISTING FEATURES, WHETHER SHOWN OR NOT SHOWN ON THESE PLANS, THAT COULD IN ANY WAY BE IN POTENTIAL CONFLICT WITH THE DESIGN OF THE PLANS. ALL WORK WITHIN THE VICINITY OF A POTENTIAL CONFLICT SHALL CEASE UNTIL AN ADEQUATE AND APPROPRIATE SOLUTION IS DETERMINED BY THE ENGINEER AND APPROVED BY THE PUBLIC WORKS DEPARTMENT.

2. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT APEX CIVIL ENGINEERING & LAND SURVEYING, FOR SUCH FURTHER EXPLANATIONS AS NECESSARY.

3. ALL STREET IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF TITLE 9 OF THE CURRENT COUNTY ORDINANCE CODE, COUNTY STANDARD SPECIFICATIONS AND STANDARD PLANS. ALL PEDESTRIAN IMPROVEMENTS SHALL CONFORM WITH THE REQUIREMENTS OF TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS AND THE AMERICANS WITH DISABILITIES ACT. THE IMPROVEMENTS ARE SUBJECT TO THE INSPECTION AND APPROVAL OF THE PUBLIC WORKS DEPARTMENT. CONTACT THE PUBLIC WORKS DESIGN/CONSTRUCTION DIVISION AT 313-2320, AT LEAST 48 HOURS PRIOR TO THE START OF ANY WORK, TO ARRANGE FOR INSPECTION. ANY WORK PERFORMED WITHOUT PROVIDING THIS ADVANCED NOTICE WILL BE REJECTED AND THE DEVELOPER/CONTRACTOR MAY BE REQUIRED TO REMOVE THE IMPROVEMENTS AND MAY BE SUBJECT TO PAYMENT OF FINES AS DETERMINED BY THE PUBLIC WORKS DIRECTOR.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING THE QUALITY OF MATERIAL ENTERING THE WORK AND THE WORK PERFORMED, AND SHALL PERFORM TESTING TO ENSURE CONTROL. PRIOR TO START OF WORK THE CONTRACTOR SHALL SUBMIT A QUALITY CONTROL PLAN THAT MUST DESCRIBE THE METHODS AND FREQUENCY OF TESTING, IMPLEMENTATION OF CORRECTIVE ACTIONS AS NECESSARY, AND REPORTING OF TEST RESULTS, SPECIFIC TO EACH MATERIAL TO BE USED.

5. ALL REVISIONS TO THIS PLAN MUST BE REVIEWED BY THE PUBLIC WORKS DEPARTMENT PRIOR TO CONSTRUCTION AND SHALL BE ACCURATELY SHOWN ON REVISED PLANS, STAMPED AND DISTRIBUTED BY THE ENGINEERING SERVICES DIVISION, PRIOR TO ACCEPTANCE OF THE WORK AS COMPLETE.

6. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT AT 811 OR (800) 227-2600 TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION. THE USA AUTHORIZATION NUMBER SHALL BE KEPT AT THE JOB SITE.

7. ALL NEW UTILITY DISTRIBUTION SERVICES SHALL BE PLACED UNDERGROUND.

8. PRIOR TO PLACING CURB, SIDEWALK, ASPHALT CONCRETE, SUBBASE OR BASE MATERIAL, ALL UNDERGROUND UTILITIES WITHIN THE RIGHT OF WAY SHALL BE INSTALLED, BACKFILL COMPLETED AND THE PUBLIC WORKS DEPARTMENT'S CONSTRUCTION DIVISION NOTIFIED, BY EACH OF THE UTILITY COMPANIES HAVING FACILITIES WITHIN THE WORK AREA, THAT THE UTILITY INSTALLATION HAS SATISFACTORILY PASSED ACCEPTANCE TESTS.

9. NO TREES SHALL BE REMOVED UNLESS THEY ARE SHOWN AND NOTED TO BE REMOVED ON THE IMPROVEMENT PLANS. IF ANY TREES ARE TO BE REMOVED, THE IMPROVEMENT PLANS MUST BE REVIEWED AND ACKNOWLEDGED BY THE COMMUNITY DEVELOPMENT DEPARTMENT. ALL TREES CONFLICTING WITH GRADING, UTILITIES, OR OTHER IMPROVEMENTS, OR OVERHANGING THE SIDEWALK OR PAVEMENT SO AS TO FORM A NUISANCE OR HAZARD, SHALL BE TRIMMED, PROPERLY TREATED AND SEALED. A TREE PERMIT MAY BE NECESSARY AND CAN BE OBTAINED FROM THE DEPARTMENT OF CONSERVATION AND DEVELOPMENT.

10. WATER TESTING IS REQUIRED FOR ALL CURB GRADES LESS THAN ONE PERCENT.

11. ALL ASPHALT CONCRETE PAVING OF PUBLIC ROADS IS SUBJECT TO TESTS REQUIRED BY AMENDED SECTION 39-HOT MIX ASPHALT OF THE CONTRA COSTA COUNTY STANDARD SPECIFICATIONS DATED OCTOBER 16, 2014. BASED ON THESE TESTS, ADDITIONAL PAVEMENT TREATMENT MAY BE NECESSARY.

12. EXISTING CURB AND SIDEWALK WITHIN THE PROJECT LIMITS THAT ARE DAMAGED OR DISPLACED, EVEN THOUGH NOT PROPOSED TO BE REMOVED, SHALL BE REPAIRED OR REPLACED, EVEN IF DAMAGE OR DISPLACEMENT OCCURRED PRIOR TO ANY WORK PERFORMED BY THE CONTRACTOR.

13. IF PAVING AND STORM DRAIN IMPROVEMENTS ARE NOT COMPLETED BY OCTOBER 1ST, TEMPORARY SILT AND DRAINAGE CONTROL FACILITIES SHALL BE INSTALLED TO CONTROL AND CONTAIN EROSION-CAUSED SILT DEPOSITS AND TO PROVIDE FOR THE SAFE DISCHARGE OF STORM WATERS INTO EXISTING STORM WATER FACILITIES. DESIGN OF THESE FACILITIES MUST BE APPROVED BY THE BUILDING INSPECTION DEPARTMENT.

14. THE CONTRACTOR SHALL COMPLY WITH ALL RULES, REGULATIONS AND PROCEDURES OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) FOR MUNICIPAL CONSTRUCTION AND INDUSTRIAL ACTIVITIES AS PROMULGATED BY THE CALIFORNIA STATE WATER RESOURCE CONTROL BOARD OR ANY OF ITS REGIONAL WATER QUALITY CONTROL BOARDS.

15. THE CONTRACTOR IS RESPONSIBLE FOR PRESERVATION AND/OR PERPETUATION OF ALL EXISTING MONUMENTS (THAT CONTROL SUBDIVISIONS, TRACTS, STREETS OR HIGHWAYS, OR PROVIDE SURVEY CONTROL) WHICH WILL BE DISTURBED OR REMOVED DUE TO CONTRACTOR'S WORK. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 10 WORKING DAYS NOTICE, TO PROJECT ENGINEER/SURVEYOR, PRIOR TO DISTURBANCE OR REMOVAL OF EXISTING MONUMENTS. PROJECT ENGINEER/SURVEYOR SHALL COORDINATE WITH THE CONTRACTOR TO RESET MONUMENTS OR PROVIDE PERMANENT WITNESS MONUMENTS AND FILE THE REQUIRED DOCUMENTATION WITH THE COUNTY SURVEYOR, PER BUSINESS AND PROFESSIONS CODE SECTION 8771.

16. ANY MATERIAL IMPORTED FOR THE CONSTRUCTION OF EMBANKMENTS OR AS BACKFILL FOR STRUCTURES, CULVERTS AND OTHER FACILITIES SHALL MEET THE FOLLOWING REQUIREMENTS:

PH*	>5.5 (7.3**)
WATER SOLUBLE SULFATE***	<0.2%
RESISTIVITY (R)*	>3000 OHM/CM**

* PER CALIFORNIA TEST 532 & 643.
** FOR BACKFILL AROUND METAL PIPE/CONDUIT.
*** REPORTED AS SO4.

17. THE CONTRACTOR IS REQUIRED TO OBTAIN AN ENCROACHMENT PERMIT FOR ALL WORK WITHIN EXISTING COUNTY ROAD RIGHTS OF WAY. APPLICATIONS FOR ENCROACHMENT PERMIT, SUBMITTED MORE THAN 120 DAYS PAST THE PUBLIC WORKS "REVIEWED" DATE STAMP, MAY REQUIRE UP TO FOUR WEEKS TO PROCESS. FOR FURTHER PERMIT INFORMATION, CONTACT THE APPLICATION AND PERMIT CENTER AT (925) 674-7744.

18. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE COUNTY AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.

19. IF DEPOSITS OF PREHISTORIC OR HISTORICAL ARCHAEOLOGICAL MATERIALS ARE ENCOUNTERED DURING GROUND DISTURBANCE ACTIVITIES, ALL WORK WITHIN 50 FEET OF THE DISCOVERY SHOULD BE REDIRECTED AND A QUALIFIED ARCHAEOLOGIST CONTACTED TO EVALUATE THE FINDS AND MAKE RECOMMENDATIONS. IT IS RECOMMENDED THAT SUCH DEPOSITS BE AVOIDED BY FURTHER GROUND DISTURBANCE ACTIVITIES. IF SUCH DEPOSITS CANNOT BE AVOIDED, THEY SHOULD BE EVALUATED FOR THEIR SIGNIFICANCE IN ACCORDANCE WITH THE CALIFORNIA REGISTER OF HISTORICAL RESOURCES.

20. IF THE DEPOSITS ARE NOT ELIGIBLE, AVOIDANCE IS NOT NECESSARY. IF THE DEPOSITS ARE ELIGIBLE, THEY WILL NEED TO BE AVOIDED BY IMPACTS OR SUCH IMPACTS MUST BE MITIGATED. UPON COMPLETION OF THE ARCHAEOLOGICAL ASSESSMENT, A REPORT SHOULD BE PREPARED DOCUMENTING THE METHODS, RESULTS, AND RECOMMENDATIONS. THE REPORT SHOULD BE SUBMITTED TO THE NORTHWEST INFORMATION CENTER AND APPROPRIATE CONTRA COSTA COUNTY AGENCIES.
PREHISTORIC MATERIALS CAN INCLUDE FLAKES-STONE TOOLS (E.G., PROJECTILE POINTS, KNIVES, CHOPPERS) OR OBSIDIAN, CHERT, OR QUARTZITE TOOL-MAKING DEBRIS; CULTURALLY DARKENED SOIL (I.E., MIDDEN SOIL OFTEN CONTAINING HEAT-AFFECTED ROCK, ASH AND CHARCOAL, SHELLFISH REMAINS, AND CULTURAL MATERIALS); AND STONE MILLING EQUIPMENT (E.G., MORTARS, PESTLES, HANDSTONES). HISTORICAL MATERIALS CAN INCLUDE WOOD, STONE, CONCRETE, OR ADOBE FOOTINGS, WALLS OR OTHER STRUCTURAL REMAINS; DEBRIS-FILLED WELLS OR PRIVIES; AND DEPOSITS OF WOOD, GLASS, CERAMICS, AND OTHER REFUSE.

21. IF HUMAN REMAINS ARE ENCOUNTERED, WORK WITHIN 50 FEET OF THE DISCOVERY SHOULD BE REDIRECTED AND THE COUNTY CORONER NOTIFIED IMMEDIATELY. AT THE SAME TIME, AN ARCHAEOLOGIST SHOULD BE CONTACTED TO ASSESS THE SITUATION. IF THE HUMAN REMAINS ARE OF NATIVE AMERICAN ORIGIN, THE CORONER MUST NOTIFY THE NATIVE AMERICAN HERITAGE COMMISSION WITHIN 24 HOURS OF THIS IDENTIFICATION. THE NATIVE AMERICAN HERITAGE COMMISSION WILL IDENTIFY A MOST LIKELY DESCENDANT (MLD) TO INSPECT THE SITE AND PROVIDE RECOMMENDATIONS FOR THE PROPER TREATMENT OF THE REMAINS AND ASSOCIATED GRAVE GOODS.

    UPON COMPLETION OF THE ASSESSMENT, THE ARCHAEOLOGIST SHOULD PREPARE A REPORT DOCUMENTING THE METHODS AND RESULTS, AND PROVIDE RECOMMENDATIONS FOR THE TREATMENT OF THE HUMAN REMAINS AND ANY ASSOCIATED CULTURAL MATERIALS, AS APPROPRIATE AND IN COORDINATION WITH THE RECOMMENDATIONS OF THE MLD. THE REPORT SHOULD BE SUBMITTED TO THE NORTHWEST INFORMATION CENTER AND APPROPRIATE CONTRA COSTA AGENCIES.

22. THE APPLICANT SHALL COMPLY WITH THE FOLLOWING RESTRICTIONS AND REQUIREMENTS, WHICH SHALL BE STATED ON THE FACE OF ALL CONSTRUCTION DRAWINGS:
    A. ALL CONSTRUCTIONS ACTIVITIES SHALL BE LIMITED TO THE HOURS OF 8:00 A.M. TO 5:00 P.M., MONDAY THROUGH FRIDAY, AND ARE PROHIBITED ON STATE AND FEDERAL HOLIDAYS ON THE CALENDAR DATES THAT THESE HOLIDAYS ARE OBSERVED BY THE STATE OR FEDERAL GOVERNMENT AS LISTED BELOW:
        NEW YEAR'S DAY (STATE AND FEDERAL)
        BIRTHDAY OF MARTIN LUTHER KING, JR. (STATE AND FEDERAL)
        WASHINGTON'S BIRTHDAY (FEDERAL)
        LINCOLN'S BIRTHDAY (STATE)
        PRESIDENT'S DAY (STATE AND FEDERAL)
        CESAR CHAVEZ DAY (STATE)
        MEMORIAL DAY (STATE AND FEDERAL)
        INDEPENDENCE DAY (STATE AND FEDERAL)
        LABOR DAY (STATE AND FEDERAL)
        COLUMBUS DAY (STATE AND FEDERAL)
        VETERANS DAY (STATE AND FEDERAL)
        THANKSGIVING DAY (STATE AND FEDERAL)
        DAY AFTER THANKSGIVING (STATE)
        CHRISTMAS DAY (STATE AND FEDERAL)

        FOR DETAILS ON THE ACTUAL DAY THE STATE AND FEDERAL HOLIDAYS OCCUR, PLEASE VISIT THE FOLLOWING WEBSITES:

        FEDERAL: HTTP://WWW.OPM.GOV/OPERATING_STATUS_SCHEDULES/FEDHOL

        CALIFORNIA: HTTP://WWW.FTB.CA.GOV/ABOUTFTB/HOLIDAYS.SHTML

    B. THE SITE SHALL BE MAINTAINED IN AN ORDERLY FASHION. FOLLOWING THE CESSATION CONSTRUCTION ACTIVITY, ALL CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE SITE.

    C. THE PROJECT SPONSOR SHALL REQUIRE THEIR CONTRACTORS AND SUBCONTRACTORS TO FIT ALL INTERNAL COMBUSTION ENGINES WITH MUFFLERS WHICH ARE IN GOOD CONDITION AND SHALL LOCATED STATIONARY NOISE-GENERATING EQUIPMENT SUCH AS AIR COMPRESSORS AND CONCRETE PUMPS AS FAR AWAY FROM SENSITIVE RECEPTORS AS POSSIBLE.

    D. THIS APPLICANT SHALL MAKE A GOOD-FAITH EFFORT TO AVOID INTERFERENCE WITH EXISTING NEIGHBORHOOD TRAFFIC FLOWS.

    E. TRANSPORTING OF HEAVY EQUIPMENT AND TRUCKS SHALL BE LIMITED TO THE HOURS OF 8:00 A.M. TO 4:00 P.M., MONDAY THROUGH FRIDAY, AND IS PROHIBITED ON STATE AND FEDERAL HOLIDAYS.

    F. UNNECESSARY IDLING OF INTERNAL COMBUSTION ENGINES IS PROHIBITED.

23. PAVEMENT STRUCTURAL SECTION: THE THICKNESS OF SUB-BASE, BASE AND SURFACING WILL BE DETERMINED BY THE COUNTY PUBLIC WORKS DEPARTMENT BASED ON THE TRAFFIC INDEX AND SOILS TESTS FOR "R" VALUE.

24. RETAINING WALLS: RETAINING WALLS WITHIN PUBLIC ROAD RIGHTS OF WAY WILL BE INSPECTED BY THE PUBLIC WORKS DEPARTMENT.
    A. A BUILDING PERMIT WILL BE REQUIRED FOR RETAINING WALLS, OUTSIDE THE PUBLIC ROAD RIGHTS OF WAY, THAT ARE 4 FEET OR HIGHER, OR THAT ARE 3 FEET OR HIGHER WITH SURCHARGE. PRIOR TO ACCEPTANCE OF THE IMPROVEMENTS AS COMPLETE, VERIFICATION THAT THE BUILDING INSPECTION DEPARTMENT HAS SIGNED OFF ON THE PERMIT SHALL BE PROVIDED TO THE CONSTRUCTION INSPECTOR.
    B. RETAINING WALLS UNDER 4 FEET HIGH (3 FEET HIGH WITH SURCHARGE) SHOWN ON THE IMPROVEMENT PLANS TO BE OUTSIDE THE PUBLIC ROAD RIGHT OF WAY, WILL BE INSPECTED BY BERLOGAR STEVENS & ASSOCIATES. A LETTER STATING THAT ALL WALLS WERE CONSTRUCTED IN ACCORDANCE WITH THE STRUCTURAL AND/OR GEOTECHNICAL ENGINEERS' RECOMMENDATIONS MUST BE SUBMITTED TO THE PUBLIC WORKS DEPARTMENT, PRIOR TO ACCEPTANCE OF IMPROVEMENTS AS COMPLETE.

25. THE FOLLOWING BAY AREA AIR QUALITY MANAGEMENT DISTRICT, BASIC CONSTRUCTION MITIGATION MEASURES SHALL BE IMPLEMENTED DURING PROJECT CONSTRUCTION AND SHALL BE INCLUDED ON ALL CONSTRUCTION PLANS.
    A. ALL EXPOSED SURFACES (E.G., PARKING AREAS, STAGING AREAS, SOIL PILES, GRADED AREAS, AND UNPAVED ACCESS ROADS) SHALL BE WATERED TWO TIMES PER DAY.
    B. ALL HAUL TRUCKS TRANSPORTING SOIL, SAND, OR OTHER LOOSE MATERIAL OFF-SITE SHALL BE COVERED.

25. (CONT.)
    C. 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.
    D. ALL VEHICLE SPEEDS ON UNPAVED ROADS SHALL BE LIMITED TO 15 MPH.
    E. 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.
    F. 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 TOXIC CONTROL MEASURE TITLE 13, SECTION 2485 OF CALIFORNIA CODE OF REGULATIONS [CCR]). CLEAR SIGNAGE SHALL BE PROVIDED FOR CONSTRUCTION WORKERS AT ALL ACCESS POINTS.
    G. 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.
    H. 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.

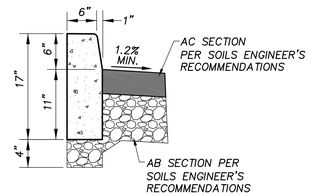
26. PRIOR TO THE START OF CONSTRUCTION-RELATED ACTIVITIES, THE APPLICANT SHALL PREPARE A TRAFFIC CONTROL PLAN (TCP), INCLUDING A HAUL ROUTE, FOR THE REVIEW AND APPROVAL OF THE PUBLIC WORKS DEPARTMENT.

27. THE APPLICANT SHALL SUBMIT A SURVEY OF THE PAVEMENT CONDITION OF ROADWAYS TO BE USED AS PART OF THE HAUL ROUTE PRIOR TO THE COMMENCEMENT OF ANY WORK ON-SITE, FOR PUBLIC WORKS DEPARTMENT APPROVAL. AFTER COMPLETION OF GRADING ACTIVITIES, THE APPLICANT SHALL SUBMIT A SECOND SURVEY OF THE PAVEMENT CONDITION OF ROADWAYS USED AS PART OF THE HAUL ROUTE, WHICH SHALL BE USED TO IDENTIFY REMEDIAL WORK TO BE COMPLETED BY THE APPLICANT. THE SURVEYS SHALL EACH INCLUDE A VIDEO OF THE ROADWAYS. THE APPLICANT SHALL BE RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH PERFORMANCE OF THE REMEDIAL WORK. THE APPLICANT SHALL COMPLETE ANY REMEDIAL WORK PRIOR TO INITIATION OF USE; OR, PROVIDE A BONDED AGREEMENT ASSURING COMPLETION OF THE REMEDIAL WORK, THE AMOUNT OF WHICH SHALL BE DEEMED SUFFICIENT BY THE PUBLIC WORKS DEPARTMENT.

28. PAVEMENT WIDENING: WHEN WIDENING THE PAVEMENT ON AN EXISTING ROAD, THE EXISTING PAVEMENT SHALL BE CUT TO A NEAT LINE AND REMOVED TO AN EXISTING ADEQUATE STRUCTURAL SECTION. AN EXPLORATORY TRENCH, OR POTHOLING, MAY BE REQUIRED TO DETERMINE THE LIMITS OF PAVEMENT REMOVAL.

29. REPRODUCIBLE 610MM X 920MM (24" X 36") MYLAR "AS BUILT" RECORD DRAWINGS ARE REQUIRED FOR ENGINEERED STRUCTURES WITHIN PUBLIC RIGHTS OF WAY OR EASEMENTS. STRUCTURES INCLUDE: BRIDGES, RETAINING WALLS, TIE BACKS, SUBDRAINS, ETC.

30. PAVEMENT STRUCTURAL SECTION: THE THICKNESS OF SUB-BASE, BASE AND SURFACING WILL BE DETERMINED BY THE COUNTY PUBLIC WORKS DEPARTMENT BASED ON THE TRAFFIC INDEX AND SOILS TESTS FOR "R" VALUE.



VERTICAL CURB DETAIL
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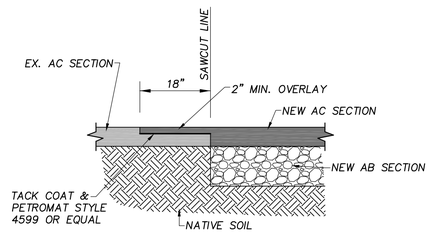
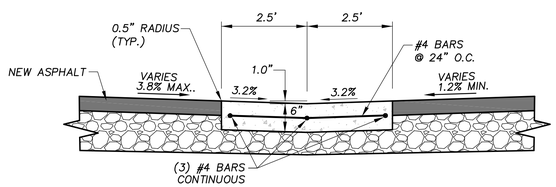


TRANSITION NEW ASPHALT TO EX. PAVEMENT
NOT TO SCALE



5' CONCRETE VALLEY GUTTER
NOT TO SCALE

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REGISTERED PROFESSIONAL ENGINEER JOHN J. LOZICA EXP. 9/30/25 CIVIL STATE OF CALIFORNIA

04/29/2024

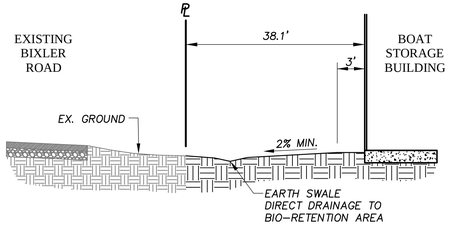
NO.	REVISIONS	BY	APP	DATE

PRELIMINARY SITE DEVELOPMENT PLAN
GENERAL NOTES AND DETAILS
21 LEARNING LANE
BRENTWOOD, CA

SHEET
C2

DATE
04-29-2024

PROJECT #: 23086



SECTION A-A
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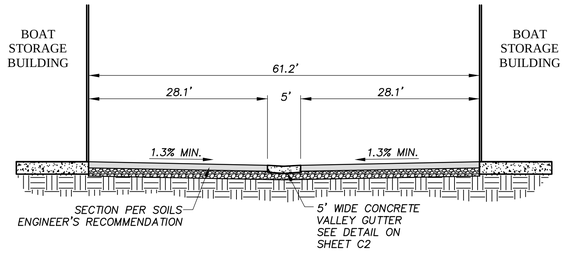

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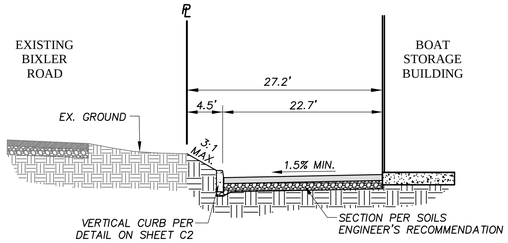

SECTION B-B
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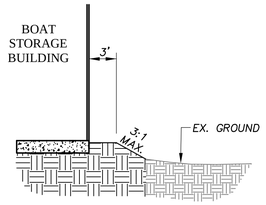

SECTION E-E
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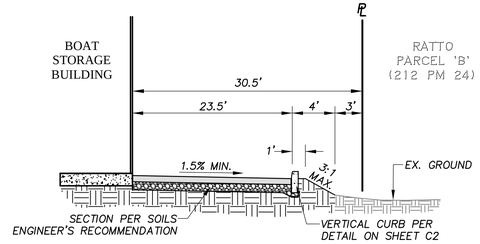

SECTION F-F
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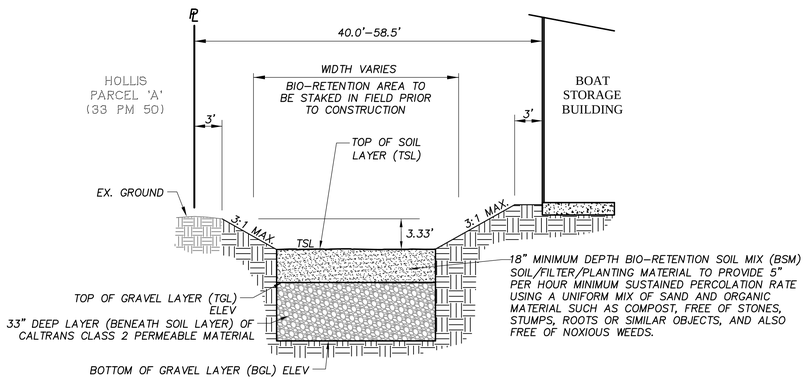

SECTION C-C
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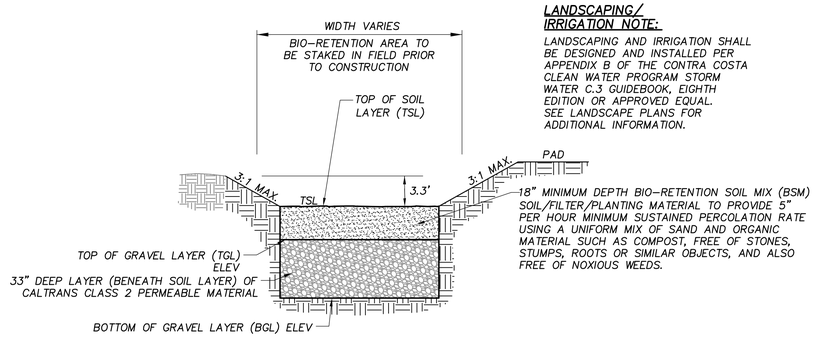

LANDSCAPING/ IRRIGATION NOTE:

LANDSCAPING AND IRRIGATION SHALL BE DESIGNED AND INSTALLED PER APPENDIX B OF THE CONTRA COSTA CLEAN WATER PROGRAM STORM WATER C.3 GUIDEBOOK, EIGHTH EDITION OR APPROVED EQUAL. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.

TYPICAL BIO-RETENTION AREA DETAIL
NOT TO SCALE

04/29/2024

REGISTERED PROFESSIONAL ENGINEER JOHN S. LYZGA EXP. 6/30/25 CIVIL STATE OF CALIFORNIA

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APEX
CIVIL ENGINEERING & LAND SURVEYING

NO.	REVISIONS	BY	APP	DATE

PRELIMINARY SITE DEVELOPMENT PLAN
SECTIONS
21 LEARNING LANE
BRENTWOOD, CA

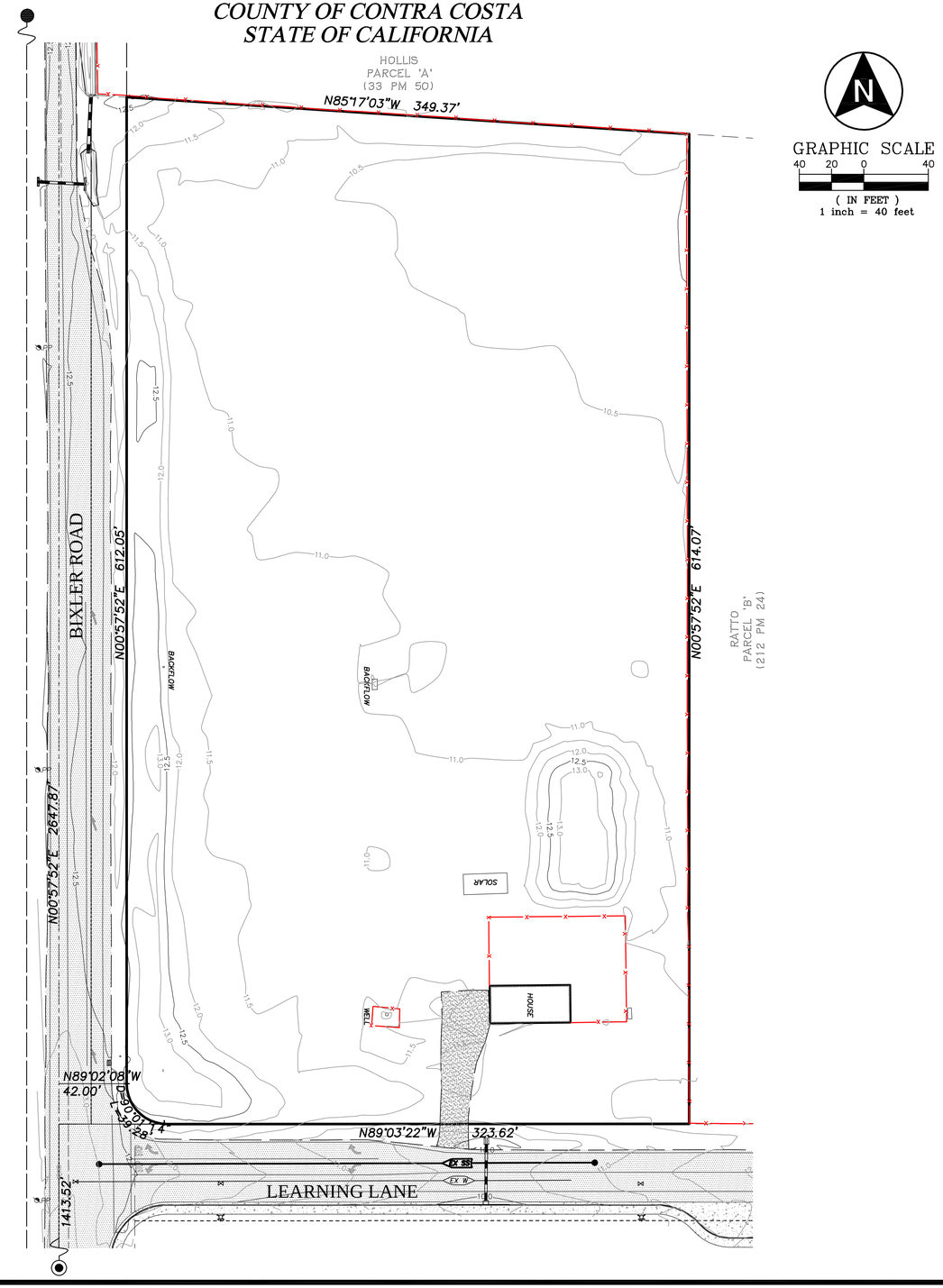
SHEET
C3

DATE
04-29-2024

PROJECT #: 23086

TOPOGRAPHIC SURVEY
21 LEARNING LANE

BRENTWOOD
COUNTY OF CONTRA COSTA
STATE OF CALIFORNIA



OWNER/DEVELOPER

BEN FOX
21 LEARNING LANE
BRENTWOOD, CA 94513
(510) 754-3343

BENCHMARK

CCCO BM #3267 SET TAG IN TOP OF MANHOLE ON BIXLER ROAD JUST SOUTH OF LEARNING LANE EL=18.13 (NGVD 29)

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CENTERLINE OF BIXLER ROAD AS SHOWN ON THE PARCEL MAP (212 PM 24) TAKEN AS NORTH 00°57'52" EAST

04/29/2024

REGISTERED PROFESSIONAL ENGINEER
JON J. VIZCAY
EXP. 9/30/25
NO. 78203
CIVIL
STATE OF CALIFORNIA

APEX
CIVIL ENGINEERING & LAND SURVEYING
817 Arnold Drive, Ste. 50
Martinez, CA 94553
Ph: (925) 476-8499
www.apexce.net

NO.	REVISIONS	BY	APP	DATE

PRELIMINARY SITE DEVELOPMENT PLAN
TOPOGRAPHIC SURVEY & DEMOLITION PLAN
21 LEARNING LANE
BRENTWOOD, CA

SHEET
C4

DATE
04-29-2024

PROJECT #: 23086

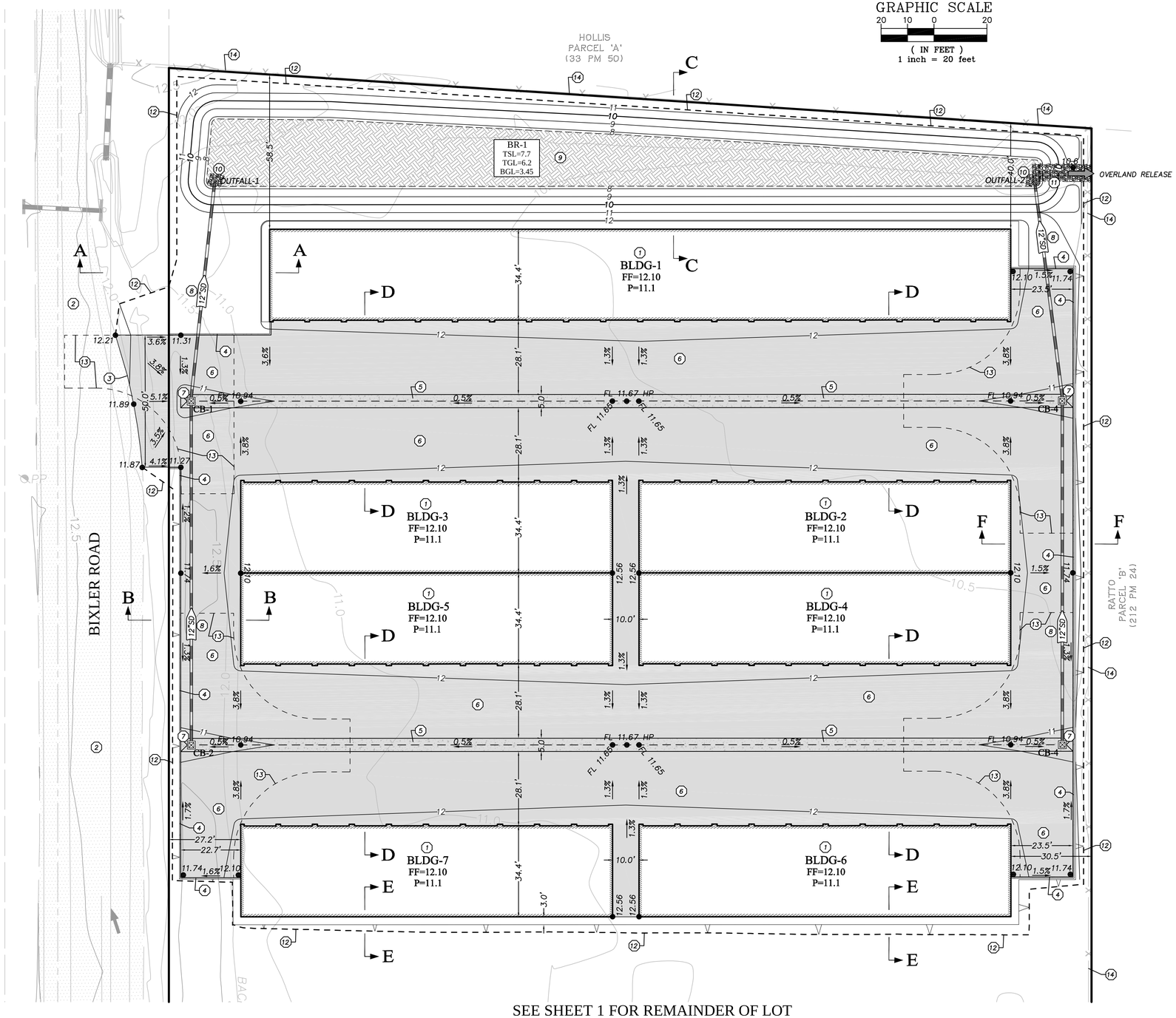
PRELIMINARY GRADING DRAINGE & UTILITY PLAN
21 LEARNING LANE

BRENTWOOD
COUNTY OF CONTRA COSTA
STATE OF CALIFORNIA

04/29/2024

SECTIONS NOTE:
REFER TO SHEETS C2 & C3
FOR ALL SECTIONS & DETAILS

GRAPHIC SCALE
20 10 0 20
(IN FEET)
1 inch = 20 feet



SEE SHEET 1 FOR REMAINDER OF LOT

SD STRUCTURE SUMMARY

STRUCTURE #	TC/RIM ELEVATION	FLOW LINE ELEVATION
OUTFALL-1	N/A	12"FL 7.70 IN
CB-1	G 10.85	12"FL 7.95 THRU
CB-2	G 10.85	12"FL 8.34 OUT
OUTFALL-2	N/A	12"FL 7.70 IN
CB-3	G 10.85	12"FL 7.95 THRU
CB-4	G 10.85	12"FL 8.34 OUT

KEY LEGEND

1. BOAT STORAGE BUILDING. SEE ARCHITECTURAL PLANS
2. EX. PAVEMENT TO REMAIN
3. MATCH EX. PAVEMENT PER DETAIL ON SHEET C2
4. 6" VERTICAL CURB PER DETAIL ON SHEET C2
5. 5' CONCRETE VALLEY GUTTER PER DETAIL ON SHEET C2
6. ASPHALT PAVEMENT. SECTION PER SOILS ENGINEER'S RECOMMENDATIONS
7. 24" x 24" STORM DRAIN INLET (CHRISTY U23 OR EQUAL)
8. 12" ADS N-12 WT PIPE @ S=0.3% MIN.
9. BIO-RETENTION AREA. SEE SECTION H-H ON SHEET C3
10. COBBLESTONES AT PIPE OUTFALLS (TYP)
11. ROCK SLOPE PROTECTION AT BASIN OVERFLOW
12. DAYLIGHT LINE (TYP)
13. APPROVED FIRE TURN-AROUND (TYP)
14. EXISING FENCE TO REMAIN

NOTES

1. CONTRACTOR TO POTHOLE ALL EXISTING UTILITIES AND VERIFY LOCATION AND DEPTH PRIOR TO CONSTRUCTION TO ENSURE NO CONFLICTS EXIST.
2. FINISHED FLOOR ELEVATION TO FINISHED GRADE ELEVATION AT THE EXTERIOR OF THE BUILDING FOOTPRINT SHALL BE A MINIMUM OF 8", OTHERWISE WATER PROOFING IS REQUIRED.
3. SEE ARCHITECTURAL PLANS FOR FINAL LOCATION, DESIGN ELEVATIONS AND SLOPES OF ALL BUILDING FEATURES WITHIN THE LIMITS OF THE BUILDING FOUNDATION.
4. ALL DOWNSPOUTS SHALL BE DISCHARGED TO HARDSCAPE SURFACES AT THE DRIVE AISLES.
5. ALL CATCH BASINS SHALL BE FITTED WITH TRASH CAPTURE DEVICES.
6. ROCK SLOPE PROTECTION SHALL BE 30" THICK CALTRANS "LIGHT" CLASS ROCK (NON-GROUTED) AND SHALL BE PLACED USING METHOD B PLACEMENT ON A NON-WOVEN RSP FABRIC OR EQUAL. FABRIC SHALL COMPLY WITH CALTRANS STANDARD SPECIFICATION 72-2.
7. ALL DRIVE AISLES SHALL BE CAPABLE OF SUPPORTING THE IMPOSED LOAD OF FIRE APPARATUS WEIGHING AT LEAST 74,000 POUNDS IN ACCORDANCE WITH CALTRANS DESIGN STANDARD HS-20-44.

REGISTERED PROFESSIONAL ENGINEER
JOHN J. VIZCAY
EXP. 9/30/25
NO. 78203
CIVIL
STATE OF CALIFORNIA

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NO.	REVISIONS	BY	APP	DATE

PRELIMINARY SITE DEVELOPMENT PLAN
PRELIMINARY GRADING, DRAINGE & UTILITY PLAN
21 LEARNING LANE
BRENTWOOD, CA

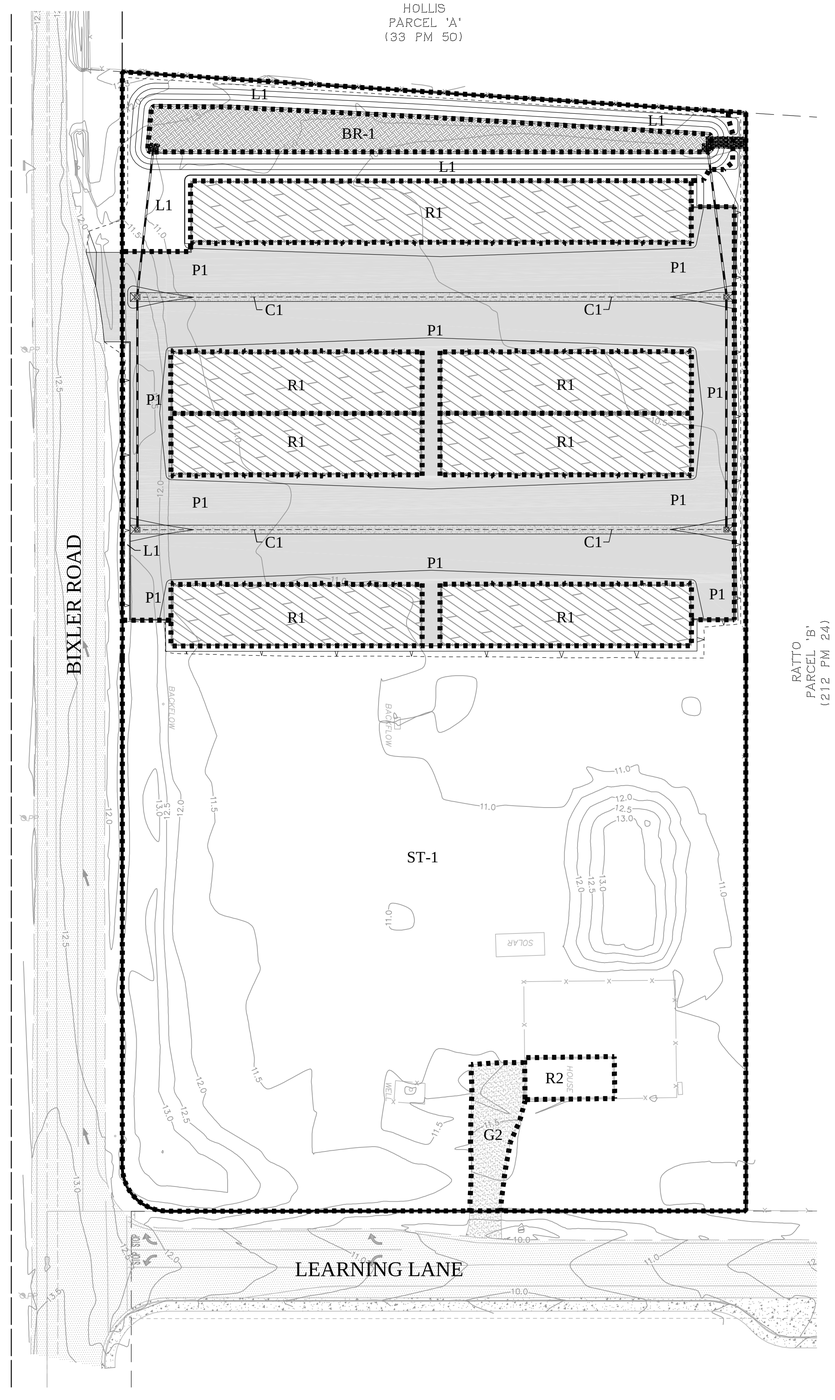
SHEET
C5

DATE
04-29-2024

PROJECT #: 23086

PRELIMINARY C.3 STORM WATER CONTROL PLAN
21 LEARNING LANE

BRENTWOOD
COUNTY OF CONTRA COSTA
STATE OF CALIFORNIA



GRAPHIC SCALE
40 20 0 40
(IN FEET)
1 inch = 40 feet

ABBREVIATIONS

C	– CONCRETE
L	– LANDSCAPE AREA
OL	– OFFSITE LANDSCAPE AREA
OP	– OFFSITE ASPHALT/PAVEMENT
P	– ASPHALT/PAVEMENT
PL	– FLOW–THROUGH PLANTER
R	– ROOFTOP
SAO	– SUBSTITUTE ASPHALT OVERLAY AREA
SIA	– SUBSTITUTE IMPERVIOUS AREA
SR	– SELF–RETAINING LANDSCAPE AREA
ST	– SELF–TREATING LANDSCAPE AREA
UT	– UNTREATED AREA

C.3 COMPLIANCE

REFER TO STORM WATER CONTROL PLAN REPORT FOR ADDITIONAL INFORMATION

C.3 STORM WATER CONTROL LEGEND

DRAINAGE MANAGEMENT AREAS (DMA):

LANDSCAPE AREA	L
NEW IMPERVIOUS AREA (PAVEMENT/CONCRETE)	P / C
UNTREATED AREA (CANNOT BE TREATED)	UT
NEW IMPERVIOUS AREA (ROOFTOP)	R
BIO-RETENTION AREA	BR-1
BMP TRIBUTARY BOUNDARY:	

PROJECT DATA FORM

PROJECT NAME/NUMBER	"21 LEARNING LANE"
PROJECT LOCATION	21 LEARNING LANE BRENTWOOD, CA
NAME OF DEVELOPER	BEN FOX
PROJECT TYPE AND DESCRIPTION	7 BOAT STORAGE BUILDINGS
PROJECT WATERSHED	EAST COUNTY DELTA
TOTAL PROJECT SITE AREA (ACRES)	5.00 ACRES (217,957 SF)
TOTAL AREA OF LAND DISTURBED (ACRES)	2.48 ACRES (107,866 SF)
TOTAL NEW IMPERVIOUS SURFACE AREA (SQ. FT.)	85,495 SF
TOTAL REPLACED IMPERVIOUS SURFACE AREA	0 SF
TOTAL PRE-PROJECT IMPERVIOUS SURFACE AREA	3,144 SF
TOTAL POST-PROJECT IMPERVIOUS SURFACE AREA	88,639 SF
RUNOFF REDUCTION MEASURES SELECTED	☒ 1. DISPERSE RUNOFF TO VEGETATED AREA ☐ 2. PERVIOUS PAVEMENT (PAVERS) ☐ 3. CISTERNS OR RAIN BARRELS ☒ 4. BIO-RETENTION FACILITY OR FLOW-THROUGH PLANTER
50% RULE	YES
PROJECT DENSITY	N/A
APPLICABLE SPECIAL PROJECT CATEGORIES	N/A
PERCENT LID AND NON LID TREATMENT	100% LID
HMP COMPLIANCE	YES

BIO-RETENTION AREA SUMMARY

IMP AREA NAME	DMA NAME	DMA AREA (SF)	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	IMP SIZING FACTOR	RAIN ADJUSTMENT FACTOR	MINIMUM AREA (SF)	REQUIRED IMP AREA (SF)	PROPOSED IMP AREA (SF)
BR-1	R1	38,708	1.0	38,708	0.05	1.273	2,464	5,895	5,925
	C1/P2	46,787	1.0	46,787	0.05	1.273	2,978		
	L1	10,162	0.7	7,113	0.05	1.273	453		

SELF-TREATING AREAS: (ST-1) = 113,231 SF

AREAS DRAINING TO SELF-TREATING AREAS CALCULATIONS

DMA NAME	AREA (SQ FT)	SURFACE TYPE	RUNOFF FACTOR	PRODUCT (AREA x RUNOFF FACTOR) [A]	RECEIVING SELF-TREATING DMA	RECEIVING SELF-TREATING DMA (SQ FT)	RATIO [A]/[B]
R2	1,175	ROOF	1.0	1,175	ST-1	113,231	0.01
G2	1,969	GRAVEL	1.0	1,969	ST-1	113,231	0.02

04/29/2024

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APEX
CIVIL ENGINEERING & LAND SURVEYING

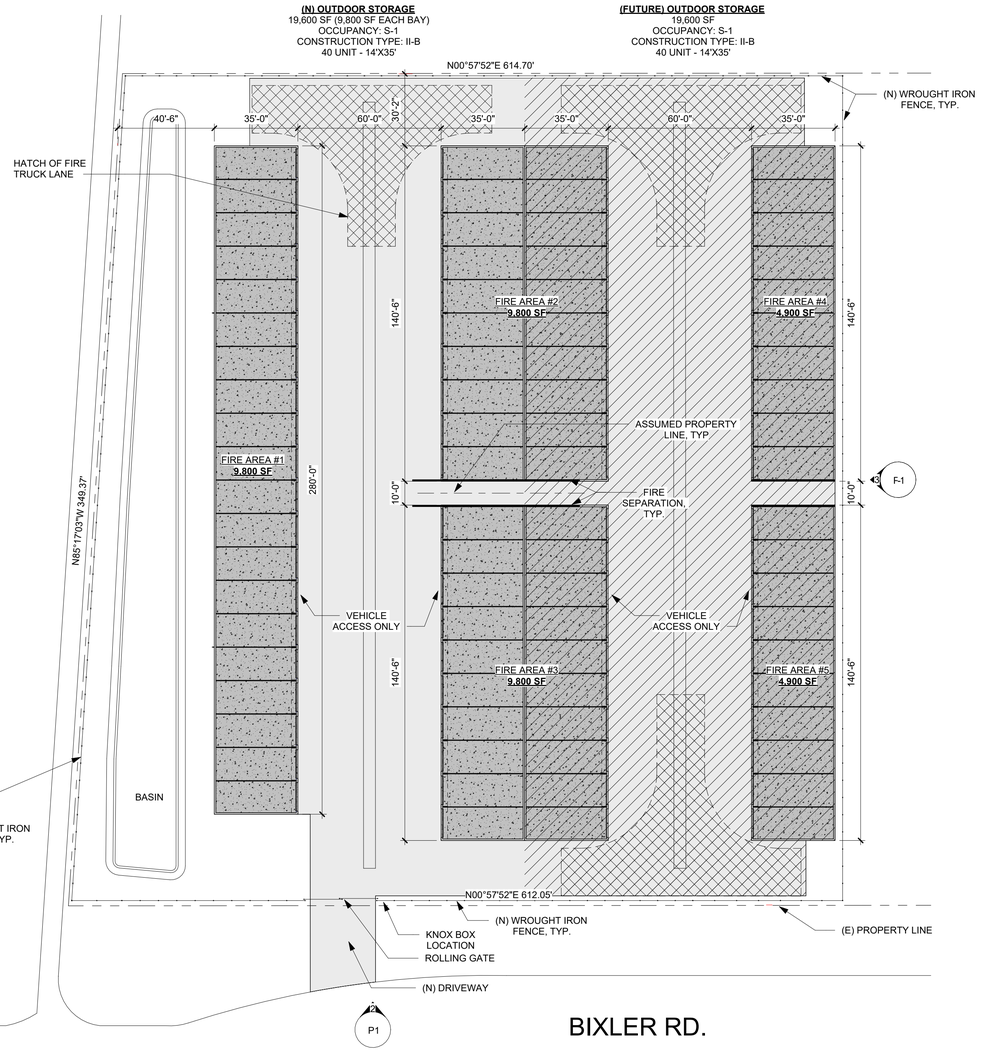
NO.	REVISIONS	BY	APP	DATE

PRELIMINARY SITE DEVELOPMENT PLAN
PRELIMINARY C.3 STORMWATER CONTROL PLAN
21 LEARNING LANE
BRENTWOOD, CA

SHEET
C6

DATE
04-29-2024

PROJECT #: 23086

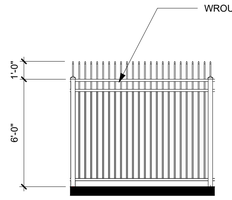


1 SITE PLAN

SCALE: 1" = 30'-0"

LEGEND

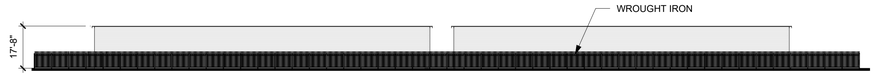
- AC PAVEMENT
- PROPERTY LINE



4 WROUGHT IRON FENCE, TYP.

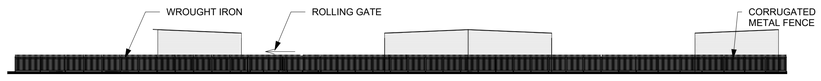
SCALE: 1/4" = 1'-0"





3 SIDE ELEVATION, TYP.

SCALE: 1" = 30'-0"



2 FRONT ELEVATION, TYP.

SCALE: 1" = 30'-0"

PROJECT INFORMATION:

- APN 115-170-031 & 032
- PRESENT USE: VACANT AND RESIDENTIAL
- PROPOSED USE: COMMERCIAL
- ZONING: P-1-X
- AREA: 5.00 AC (217,800 SF)
- PHASE 1 PROPOSED GROSS FLOOR AREA: 19,600 SF (9,800 SF EACH BAY)
- PHASE 2 PROPOSED GROSS FLOOR AREA: 19,600 SF (9,800 SF EACH BAY)

CODE ANALYSIS:

- FIRE SPRINKLERS REQUIRED IN GROUP S-1 WHEN FIRE AREA EXCEEDS 12,000 SQ. (CFC 903.2.9)
- ALLOWABLE AREA FOR A TYPE II-B NON-SPRINKLERED BUILDING = 17,500 SQ (CBC TABLE 506.2)
- FIRE-RESISTANCE RATING REQUIREMENT FOR EXTERIOR WALLS BASED ON FIRE SEPATATION DISTANCE = 0 (CBC TABLE 705.5)

0' 15' 30' 60' 120'

Preliminary Design For:

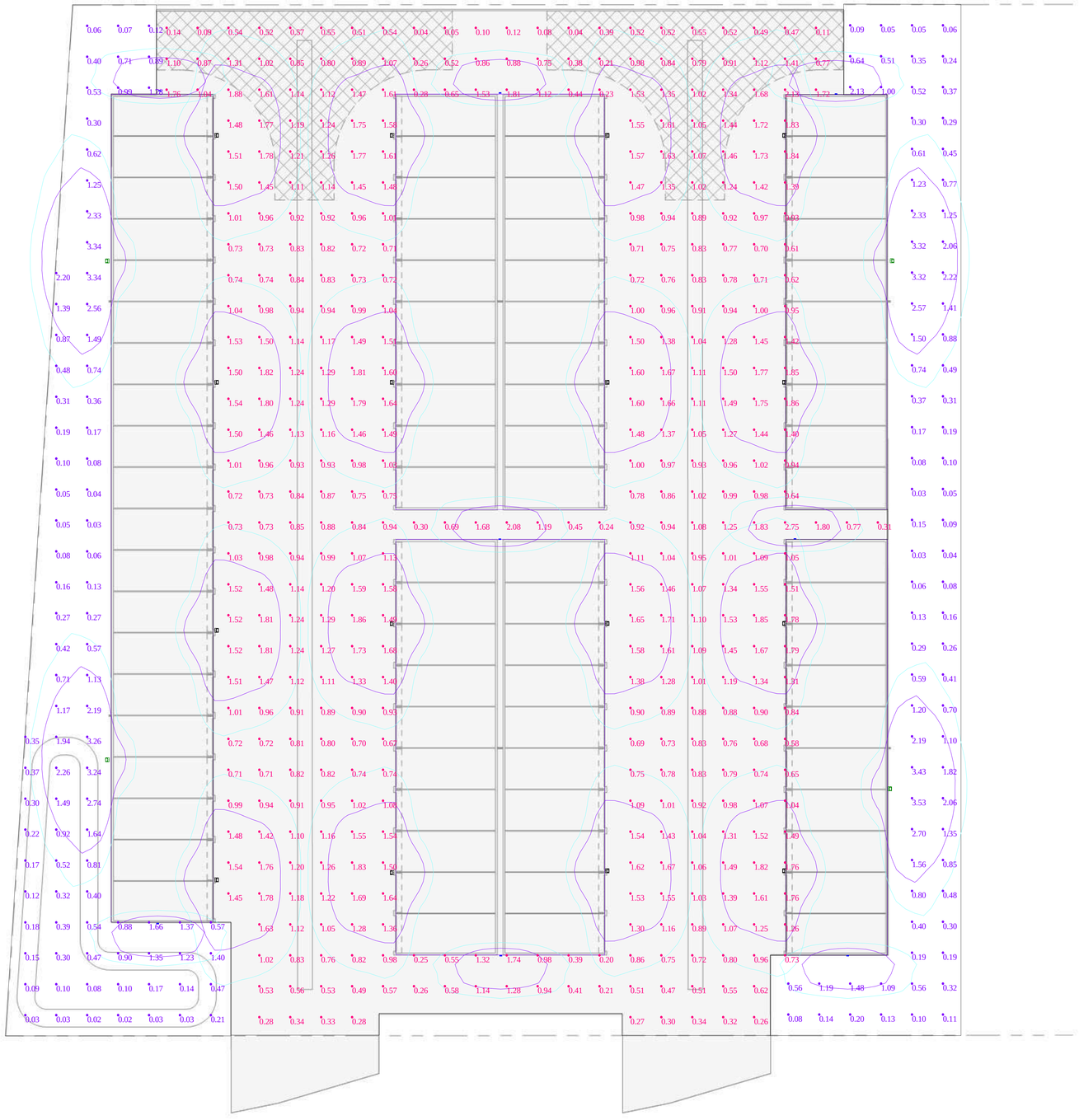
East Bay Boat Storage

21 Learning Ln.
Brentwood, CA 94513

JR / NS 24018 04/29/24

Comstock Johnson ARCHITECTS INC.

COMSTOCK JOHNSON ARCHITECTS, INC. 10520 ARMSTRONG AVENUE, MATHER, CA 95655
916.362.6303(P) 916.362.5841(F)



Luminaire Schedule

Symbol	Qty	Label	[MANUFAC]	Description	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	16	E1	COOPER LIGHTING SOLUTIONS - LUMARK (FORMERLY EATON)	PRV-P-PA1A-730-U-T3	0.850	4046	30.7	491.2
	4	E2	COOPER LIGHTING SOLUTIONS - LUMARK (FORMERLY EATON)	PRV-P-PA1A-740-U-T2R	0.850	4505	30.7	122.8
	8	E3	Performance iN Lighting	M20 M 15 T2 (finish) 80 40 UNV (options)	0.850	1385	15	120

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Drive Lane_Drive Lane	Illuminance	Fc	1.08	2.75	0.04	27.00	68.75
East Boundary_Planar	Illuminance	Fc	0.83	3.53	0.03	27.67	117.67
West Boundary_Planar	Illuminance	Fc	0.77	3.34	0.02	38.50	167.00

Reflectance %
80/50/20

All values shown are maintained horizontal Footcandles at grade level.
The lighting calculations provided in this report approximate the light levels expected within the space as defined and are based on the information provided to Cal Lighting
Please verify the data to assure the accuracy of the report. Cal Lighting is not responsible for light output of lamps and ballasts, or design variables

Filename: 9292 AND East Bay Boat Storage R03.AGI

CAL LIGHTING

#	Date	Comments

Revisions

Application Designer : TEB
Salesperson: AND
Date:4/4/2024
Scale: As shown on plans

9292 AND
East Bay Boat Storage
R03

CAL-A2.1

Marcus H. Bole & Associates
An Environmental Consulting Firm

January 20, 2025

Boat Storage Project
Attn: Ben Fox
21 Learning Lane
Brentwood, CA 94513

BIOLOGICAL RESOURCE ANALYSIS AND WETLAND DETERMINATION FOR THE BEN FOX BOAT STORAGE PROJECT, APN 015-170-031-7, 21 LEARNING LANE, BRENTWOOD, CA 94513, CONTRA COSTA COUNTY, CALIFORNIA. MHBA FILE: 0108-2025-3978.

This letter format report outlines the results of onsite surveys conducted during January 2025 on property located at 21 Learning Lane, Brentwood, California. The surveyed property consists of one parcel of agricultural land (olive orchard): APN 015-170-031-7 @ 5.33-acres. The property is located within Township 1 North, Range 3 East, Section 14, Woodward Island USGS Quadrangle (See Enclosure A Figure 1). Center of the Environmental Study Limits (ESL) is approximately 37.937404° North, -121.622368° West (NAD 83). Surveys were conducted to evaluate the presence of special status plants/wildlife species and their specific habitats subject to the jurisdiction of the California Department of Fish & Wildlife (CDFW) and United States Fish & Wildlife Service (USFWS). Evaluations were also conducted to evaluate the presence of wetland habitats subject to the jurisdiction of the United States Army Corps of Engineers (USACE), and the State of California. Surveys were conducted by Marcus H. Bole, M.S. Senior Wildlife Biologist/Wetland Scientist, and Charlene J. Bole, M.S. Senior Botanist/Environmental Scientist, Marcus H. Bole & Associates' (MHBA), Wheatland, California.[1] The results of the habitat assessment and surveys are presented below.

During assessments physical and biological characteristics of the approximately 5.33-acre ESL and surrounding 500 foot buffer, were compared to special status plant and wildlife species habitat requirements in an effort to determine whether the site is suitable to support these species. The property is within the geographic range of the burrowing owl (*Athene cunicularia*), as depicted on current range maps, and onsite elevations are within the range occupied by the species (Haug et al. 1993). Onsite vegetation is composed of olive trees with an understory of non-native grasses and forbs. The ESL also supports a modular home with ornamental tree/shrub plant species. The California Department of Fish & Wildlife Natural Diversity Database (CNDDB) has identified potential habitat within five miles of the ESL to support nesting raptors as well as several California Native Plant Society (CNPS) rare plants (Table 1, page 3).

The information gathered during onsite surveys found that nearby trees are not currently occupied by nesting raptors, migratory birds, or roosting bats. Numerous bird species were

[1] Marcus H. Bole & Associates is a Service approved Biological Consulting firm with over thirty years of experience in conducting biological and wetland surveys in the Contra Costa County area. Qualifications in Enclosure D.

observed overflying the ESL, and occasionally attempting to forage within the non-native grassland habitats. Species observed include the house sparrow, *Passer domesticus*, American crow, *Corvus brachyrhynchos*, Western meadowlark, *Sturnella neglecta*, and western scrub jay, *Aphelocoma californica*.

SPECIES ASSESSMENT RESULTS:

No burrowing owls were detected within the ESL. Concurrent with the observations for the burrowing owls, a comprehensive stick nest survey was conducted within all trees within 5000 feet of the ESL. Although the CNDDB database lists numerous recorded raptor nest sites within five miles of the ESL, no suitable raptor nesting habitat (trees with stick nests) was found within or near the ESL. The onsite olive trees are newly planted and do not support suitable nesting habitat.

Wildlife Communities:

Olive orchards with understories of ruderal non-native grassland environments generally provide marginal breeding, cover, and foraging habitat for wildlife species. A limited variety of bird species were observed during the recent surveys. No mammals, invertebrates, reptiles or amphibians were observed during the recent surveys.

Special Status Species:

The following discussion describes the plant and animal species that have been afforded special recognition by federal, state, or local resource agencies or organizations. Listed and special-status species are of relatively limited distribution and may require specialized habitat conditions. Listed and special-status species are defined as one of the following:

- Listed or proposed for listing under state or federal Endangered Species Acts.
- Protected under other regulations (e.g., *Migratory Bird Treaty Act*).
- Receive consideration during environmental review under the California Environmental Quality Act (CEQA).

Special-status species were considered for this analysis based on field survey results, a review of the *Federal Endangered and Threatened Species* lists (Information for Planning and Consultation – IPaC, 2025), *California Natural Diversity Database* (CNDDB, 2025), and California Native Plant Society (CNPS) literature. Based on the results of the species lists, appropriate biological and botanical surveys were conducted. A species habitat survey was conducted during January 2025 by Marcus H. Bole, M.S., and Charlene J. Bole, M.S. The species habitat survey was conducted by walking all areas of the subject property (and surrounding 500 foot buffer) and evaluating potential habitat for special-status species based on vegetation composition and structure, presence of predatory species, microclimate and other available resources. A general botanical survey and habitat evaluation for rare plant botanical species was conducted at the same time. The general botanical survey and habitat evaluation for rare plant botanical species was conducted by walking all areas of the ESL while taking inventory of general botanical species and searching for special-status plant species and their habitats. Botanical surveys were

conducted outside the normal blooming cycle for all sensitive plant species. It is therefore recommended that follow up surveys be conducted during the May – June time period. Although outside the normal blooming cycle for plants of concern, the disturbed nature (graded, planted, orchard management) of the ESL indicated that the site would not support the normal micro-habitat habitat requirements of special status plant species (there are no onsite marshes, swamps, riparian forests, vernal pools, alkali playa or chenopod scrub habitats).

A determination of Waters of the U.S., was also conducted during January 2025 and was conducted under the guidelines of the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (2008). Onsite surveys did not reveal the presence of state/federal regulatory wetlands.

Sensitive Habitats:

Sensitive habitats include those that are of special concern to resource agencies and those that are protected under CEQA, Section 1600 of the California Fish and Game Code, or Section 404 of the Clean Water Act. The ESL was systematically surveyed to ensure total search coverage, with special attention given to identifying those portions of the ESL with the potential for supporting special-status species and sensitive habitats. No special status plant or wildlife species or their sensitive habitats were found within or near the ESL (see Table 1 below).

Table 1. Listed and Proposed Species potentially occurring within or near the ESL

Common Name *(Scientific Name)*	**Status** Fed/State/ CNPS	**General Habitat Description**	**Species Present or Absent/ Habitat Present or Absent**	**Rationale**
INVERTEBRATES				
California linderiella *(Linderiella occidentalis)*	_/S2S3/_	Vernal pools, swales, and ephemeral freshwater habitat.	A/HA	There are no vernal pools or other suitable seasonal wetlands within or near the ESL. **No Effect.**
Conservancy fairy shrimp *(Branchinecta conservatio)*	FE/_/_	Moderately turbid, deep, cool-water vernal pool.	A/HA	There are no vernal pools or other suitable seasonal wetlands within or near the ESL. **No Effect.**
Valley elderberry longhorn beetle *(Desmocerus californicus dimorphus)*	FT/_/_	Blue elderberry shrubs usually associated with riparian areas.	A/HA	There are no vernal pools or other suitable seasonal wetlands within or near the ESL. **No Effect.**

Common Name *(Scientific Name)*	**Status** Fed/State/ CNPS	**General Habitat Description**	**Species Present or Absent/ Habitat Present or Absent**	**Rationale**
Vernal pool fairy shrimp *(Branchinecta lynchi)*	FT/_/_	Moderately turbid, deep, cool-water vernal pool.	A/HA	There are no vernal pools or other suitable seasonal wetlands within or near the ESL. **No Effect.**
Vernal pool tadpole shrimp *(Lepidurus packardi)*	FE/_/_	Vernal pools, swales, and ephemeral freshwater habitat.	A/HA	There are no vernal pools or other suitable seasonal wetlands within or near the ESL. **No Effect.**
Monarch butterfly *(Danaus plexippus)*	PT/_/_	Roosts located in wind-protected tree groves with nectar and water sources nearby.	A/HA	There is no habitat to support this species within the ESL. **No Effect**.
REPTILES AND AMPHIBIANS				
California tiger salamander *(Ambystoma californiense)*	FT/ST/S3	Need underground refuges, especially ground squirrel burrows & vernal pools or other seasonal water sources for breeding.	A/HA	There are no vernal pools or other suitable seasonal wetlands within or near the ESL. **No Effect.**
Western spadefoot *(Spea hammondii)*	PT/_/SSC	Vernal pools are essential for breeding and egg-laying.	A/HA	There are no vernal pools or other suitable seasonal wetlands within or near the ESL. **No Effect.**
Giant garter snake *(Thamnophis gigas)*	FT/ST/_	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals & irrigation ditches	A/HA	There is no habitat to support this species within the ESL. **No Effect.**

Common Name *(Scientific Name)*	**Status** Fed/State/ CNPS	**General Habitat Description**	**Species Present or Absent/ Habitat Present or Absent**	**Rationale**
Alameda whipsnake *(Masticophis lateralis euryxanthus)*	FT/ST/S2_	Mostly south-facing slopes and ravines, with rock outcrops, deep crevices or abundant rodent burrows.	A/HA	There is no habitat to support this species within the ESL. **No Effect.**
California red-legged frog *(Rana draytonii)*	FT/_/SCC	Lowland & foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian habitat.	A/HA	There is no habitat to support this species within the ESL. **No Effect.**
MAMMALS				
San Joaquin kit fox *(Vulpes macrotis mutica*)	FE/ST/S3	Need loose-textured sandy soils for burrowing and suitable prey base.	A/HA	The ESL does not support habitat for this species. Onsite surveys did not reveal the presence of this species. **No Effect.**
BIRDS				
Burrowing owl, *(Athene cunicularia)*	_/CE/SSC	Open, dry annual or perennial grasslands, deserts & scrublands characterized by low-growing vegetation.	A/HA	The ESL does not support habitat for this species (no burrows). Onsite surveys did not reveal the presence of this species. **No Effect.**
California condor *(Gymnogyps californianus)*	FE/SE/S2	Requires vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude.		The ESL does not support habitat for this species. Onsite surveys did not reveal the presence of this species. **No Effect.**
Swainson's hawk *(Buteo swainsoni)*	_/ST/S4	Breeds in grasslands with scattered trees, riparian areas and agricultural fields.	A/HA	No Nesting habitat identified onsite. Nearest nesting habitat approximately one mile east within eucalyptus grove along canal. None observed during surveys. **No Effect.**
Song sparrow (Modesto population) *(Melospiza melodia)*	_/S3?/SSC	Habitat described as riparian and marsh.	A/HA	The ESL does not support habitat for this species (no riparian or march habitat). Onsite surveys did not reveal the presence of this species. **No Effect.** .

Common Name *(Scientific Name)*	**Status** Fed/State/ CNPS	**General Habitat Description**	**Species Present or Absent/ Habitat Present or Absent**	**Rationale**
California black rail *(Laterallus jamacicensis coturniculus)*	_/FT/S2	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays.	A/HA	No suitable habitat present within or near the ESL. None observed during surveys. **No Effect.**
PLANTS				
San Joaquin Spearscale *(Extriplex joaquinana)*	_/_/1B.2	Alkali playa, valley and foothill grassland, vernal pools and chenopod scrub habitat.	A/HA	No suitable habitat present within or near the ESL. None observed during surveys. **No Effect.**
Woolly rose-mallow *(Hibiscus lasiocarpos var. occidentalis)*	_/_/1B.2	Marshes and swamps (freshwater).	A/HA	No suitable habitat present within or near the ESL. None observed during surveys. **No Effect.**
Large-flowered fiddleneck *(Amsinckia grandiflora)*	FE/SE/1B.1	Cismontane woodland, valley and foothill grassland.	A/HA	Disturbed nature of olive orchard provides no suitable habitat for this species. None observed during surveys. **No Effect.**
Delta tule pea *(Lathyrus jepsonii var. jepsonii)*	_/_/1B.2	Marshes and swamps (freshwater and brackish).	A/HA	No suitable habitat present within or near the ESL. None observed during surveys **No Effect.**
Manson's lilaepsis *(Lilaeopsis masonii)*	_/Rare/1B.1	Freshwater and brackish marshes, riparian scrub.	A/HA	No suitable habitat present within or near the ESL. None observed during surveys. **No Effect.**
Delta mudwort *(Limosella australis)*	_/_/2B.1	Riparian scrub, marshes and swamps.	A/HA	No suitable habitat present within or near the ESL. None observed during surveys. **No Effect.**
Suisun Marsh Aster *(Symphyotrichum lentum)*	_/_/1B.2	Marshes and swamps (freshwater and brackish).	A/HA	No suitable habitat present within or near the ESL. None observed during surveys. **No Effect.**

CODE DESIGNATIONS	
FE = Federally-listed Endangered	**A** = Species Absent
FT = Federally-listed Threatened	**P** = Species Present
PT = Federally Proposed Threatened	**HA** = Habitat Absent
FC = Federal Candidate Species	**HP** = Habitat Present
SC = State Candidate Species	**CH** = Critical Habitat
BCC = Federal Bird of Conservation Concern	**MH** = Marginal Habitat
MBTA = Protected by the federal Migratory Bird Treaty Act	**CNPS 1B** = Rare or Endangered in California or elsewhere
SE = State-listed Endangered	**CNPS 2** = Rare or Endangered in California, more common elsewhere
ST = State-listed Threatened	
SR = State-listed Rare	**CNPS 3** = More information is needed
SSC = State Species of Special Concern	**CNPS 4** = Plants with limited distribution
S1 = State Critically Imperiled	**0.1** =Seriously Threatened
S2 = State Imperiled	**0.2** = Fairly Threatened
S3 = State Vulnerable	**0.3** = Not very Threatened
S4 = State Apparently Secure	
SSC = CDFW Species of Special Concern	
FP =CDFW Fully Protected Species	
SNC = CDFW Sensitive Natural Community	

Determination of Waters of the United States

MHBA conducted a determination of Waters of the U.S. within the ESL. Surveys were conducted during January 2025 by Senior Wetland Scientist Marcus H. Bole. The surveys involved an examination of botanical resources, soils, hydrological features, and determination of wetland characteristics based on the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (USACE 2008a), *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b), and the Sacramento District's Minimum Standards for Acceptance of Preliminary Wetlands Delineations (USACE 2016b). U.S. Army Corps of Engineers (USACE) regulations (33 CFR 328) were used to determine the presence of Waters of the United States other than wetlands. The most recent National Wetland Plant List (USACE 2020) was used to determine the wetland indicator status of plants observed in the Study Area. *The Jepson eFlora* (Jepson Flora Project 2024) was used for plant nomenclature, except where it conflicted with the nomenclature in the National Wetland Plant List, which was given priority on the data sheets. On January 18, 2023, the Environmental Protection Agency (EPA) and the Department of the Army ("the agencies") published the "*Revised Definition of 'Waters of the United States*,'" 88 FR 3004 (January 18, 2023) ("2023 Rule"). On September 8, 2023, the agencies published the "*Revised Definition of 'Waters of the United States'; Conforming*", which amended the 2023 Rule to conform to the 2023 Supreme Court decision in Sackett v. EPA, 598 U.S., 143 S. Ct. 1322 (2023) ("Sackett").

Marcus H. Bole has employed the Routine On-Site Determination methodology for this study (as supplemented by the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (2008). The Routine On-Site Determination method uses a three-parameter approach (vegetation, soils and hydrology) to identify and delineate the

boundaries of jurisdictional wetlands. To be considered a wetland, all three positive wetland parameters must be present. These parameters include (1) a dominance of wetland vegetation, (2) a presence of hydric soils, and (3) hydrologic conditions that result in periods of inundation or saturation on the surface from flooding or ponding. Further description of these parameters is provided below:

1) Vegetation. Wetland vegetation includes those plants that possess physiological traits that allow them to grow and persist in soils subject to inundation and anaerobic soil conditions. Plant species are classified according to their probability of being associated with wetlands. Obligate (OBL) wetland plant species almost always occur in wetlands (more than 99 percent of the time), facultative wetland (FACW) plant species occur in wetlands most of the time (67 to 99 percent), and facultative (FAC) plant species have about an equal chance (33 to 66 percent) of occurring in wetlands as in uplands. For this study, vegetation was considered to meet the vegetation criteria if more than 50% of the vegetative cover was FAC or wetter. No wetland plant species were observed within the ESL during our onsite evaluations. There was no sign of seasonal wetlands, vernal pools or vernal swales within the ESL. Onsite trees consist of newly planted olive trees. The understory of non-native grasses and forbes included upland varieties of wild oat, *Avena fatua*, ripgut brome, *Bromus diandrus*, Italian thistle, *Cardus pycnocephalus*, yellow-star thistle, *Centaurea solstitialis,* Bermuda grass, *Cynodon dactylon*, field bindweed, *Convolvulus arvensis*, common storksbill, *Erodium cicutarium,* cutleaf geranium, *Geranium dissectum*, and dove foot geranium, *Geranium molle*.

2) Hydric Soils. Hydric soils are saturated, flooded, or ponded in the upper stratum long enough during the growing season to develop anaerobic conditions and favor the growth of wetland plants. Hydric soils include gleyed soils (soils with gray colors), or usually display indicators such as low chroma values, redoximorphic features, iron, or manganese concretions, or a combination of these indicators. Low chroma values are generally defined as having a value of 2 or less using the Munsell Soil Notations (Munsell, 1994). For this study a soil was considered to meet the hydric soil criteria for color if it had a chroma value of one or a chroma of two with redoximorphic features, or if the soil exhibited iron or manganese concretions. The Natural Resource Conservation Service (NRCS) has identified onsite soils as Capay clay, wet, 0 percent slopes. These are moderately well-drained soils. These soils are not classified as "hydric". Soil samples were taken at random data points. Soil matrix was 10YR 3/2 to 10YR 4/2 with no redoximorphic features.

3) Hydrology. Wetlands by definition are seasonally inundated or saturated at or near the surface. In order for an area to have wetland hydrology, it has to be inundated or saturated for 5% of the growing season (approximately 12 days) (USDA, 1967). Indicators include visual soil saturation, flooding, watermarks, drainage patterns, encrusted sediment and plant deposits, cryptogrammic lichens, and algal mats. No evidence of wetland hydrology was present within the ESL. No ponding was observed within the ESL.

Wetland Determination Results

Using the methodologies described in the *1987 Wetland Delineation Manual* as supplemented by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (2008), Marcus H. Bole & Associates found no federal jurisdictional wetland habitats

within the boundaries of the ESL. Additionally, no State of California jurisdictional wetland habitats were found on or near the ESL.

FINDINGS AND EVALUATION OF POTENTIAL PROJECT IMPACTS

Special-status plant and wildlife species were considered for this analysis based on field survey results, a review of Federal Special Status Species databases, the California Natural Diversity Database (CNDDB), and CNPS literature.

Project implementation will not result in impacts to sensitive wildlife habitats, riparian/wetland habitats, wildlife corridors, local policies or ordinances protecting biological resources or adopted habitat conservation plans.

- Project implementation will not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. **Less-than-Significant.**

- Project implementation will not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. **No Impact**.

- Project implementation will not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. **No Impact.**

- Project implementation will 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 wildlife nursery sites. **No Impact.**

- Project implementation will not conflict with any local policies or ordinances protecting biological resources, such as tree preservation policies or ordinances. **No Impact.**

- Project implementation will 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. **No Impact.**

RECOMMENDATIONS

The following recommendations are not Mitigation Measures. Onsite surveys did not reveal biological or wetland issues that will require mitigation for project impacts. The following recommendations should be considered to ensure compliance with proper survey protocols

1) Although no habitat was found onsite to support special status plant species, surveys were conducted outside the normal blooming cycle of all plants of concern (normal blooming cycle is

May – June). It is recommended that follow up surveys be conducted during the normal blooming cycle to confirm current findings of **Less-than-Significant.**

2) Although no ground-nesting or tree-nesting raptors and/or migratory bird species were revealed during onsite surveys, these surveys were conducted outside the normal nesting season (April – September) of all birds of concern. It is recommended that follow up surveys be conducted during the normal nesting season to confirm findings of **Less-than-Significant.**

This concludes our biological resources analysis for property located at 21 Learning Lane, Brentwood, California. If you have any questions concerning our findings or recommendations please feel free to contact me directly at: Marcus H. Bole & Associates, Attn: Marcus Bole, 104 Brock Drive, Wheatland, CA 95692, phone 530-633-0117, email: mbole@aol.com.

Respectfully Submitted:

Charlene J. Bole, M.S, Botanist
Marcus H. Bole & Associates

Marcus H. Bole, M. S, Wildlife Biologist
Marcus H. Bole & Associates

LIST OF ATTACHMENTS

Enclosure A: Maps and Photos

Enclosure B: CNDDB & IPaC

Enclosure C: Soil Data

Enclosure D: Resumes

REFERENCES

California Department of Fish & Wildlife. 2012. *Staff Report on Burrowing Owl Mitigation.* Burrowing Owl Consortium (CBOC). 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines.

California Department of Fish and Wildlife (CDFG). 2025. *California Natural Diversity Database*. California Department of Fish and Game Wildlife & Habitat Data Analysis Branch. Rare Find. Visited December 2024, updated January 2025.

California Department of Fish and Wildlife (CDFG). 2010. *Swainson's Hawk Survey Protocols, Impact Avoidance, Minimization Measures for Renewable Energy Projects, State of California Energy Commission and Department of Fish & Game, June 2, 2010.*

Haug, E.A., Millsap, B.A., and Martell, M.S. 1993. Burrowing owl (*Athene cunicularia*). The Birds of North America Online. A. Poole, ed. Ithaca, NY: Cornell Laboratory of Ornithology. Available at http://bna.birds.cornell.edu/bna/species/061.

United States Fish & Wildlife Service. *List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project*. Sacramento Fish & Wildlife Project Code: 2025-0039248. Ben Fox Boat Storage Project, January 8, 2025. (See Enclosure B).

U.S. Army Corps of Engineers (USACE). 2008. *Regional supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region.* J.S. Wakeley, R.W. Lichvar, and C.V. Noble, ed. ERDC/EL TR-06-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center, Environmental Laboratory.

ENCLOSURE A: SITE MAPS & PHOTOS

CONTRA COSTA COUNTY APN 015-170-031-7

Vicinity Map: 21 LEARNING LANE, BRENTWOOD CA 94513

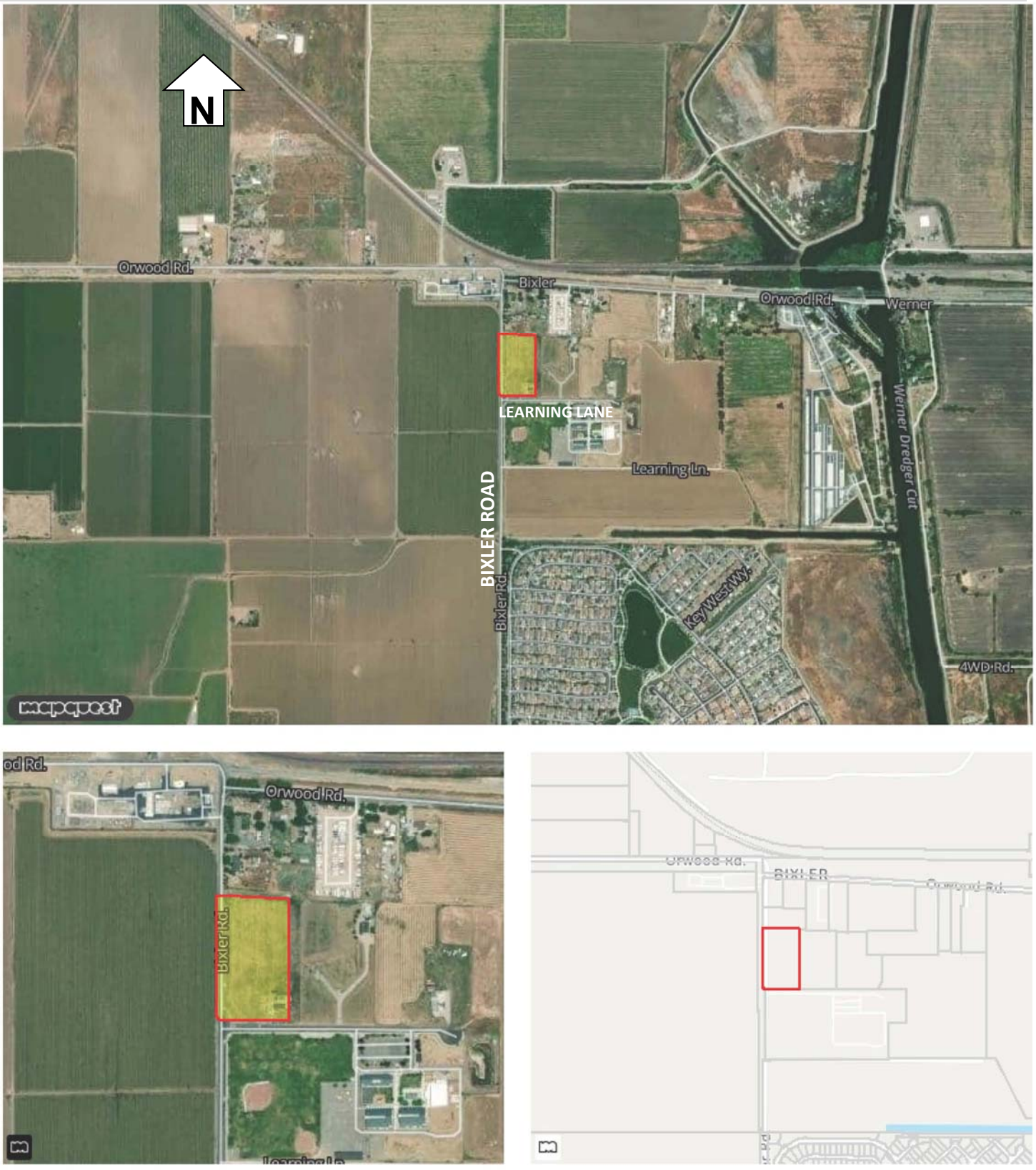


Figure 1: Vicinity Map: 21 Learning Lane, Brentwood, CA 94513. Site is a 5.33-acre parcel of agricultural land (olive orchard), located approximately 37.937404N, -121.622368W. Section 14, Township 1 North, Range 3 East, Woodward Island 7.5" USGS Quadrangle.



INQUIRY #: 7867470.1

YEAR: 2016

= 500'

N

EDR



INQUIRY #: 7867470.1

YEAR: 2012

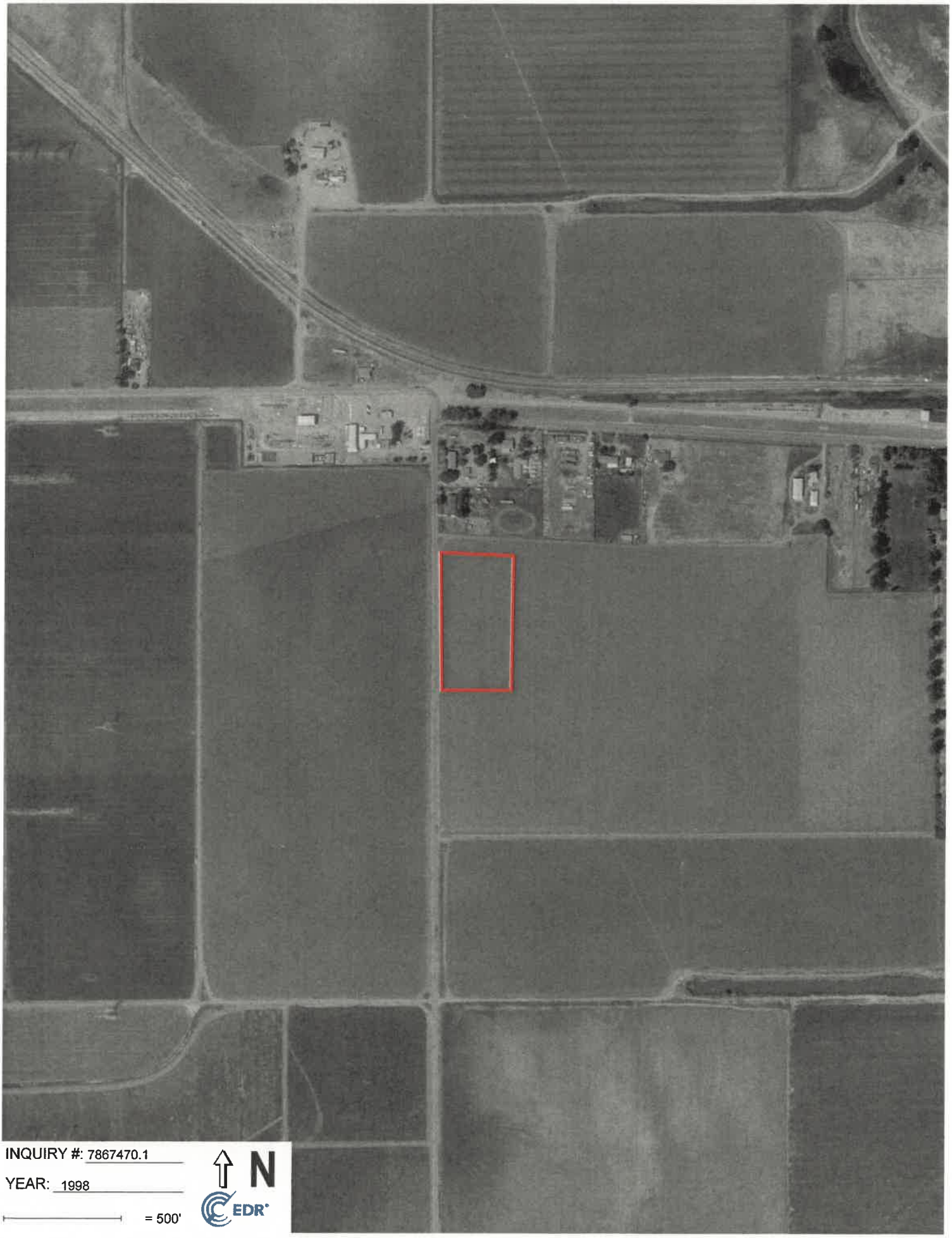
= 500'

N

EDR


INQUIRY #: 7867470.1
YEAR: 2009
= 500'
N
EDR


INQUIRY #: 7867470.1
YEAR: 2006
= 500'
N
EDR



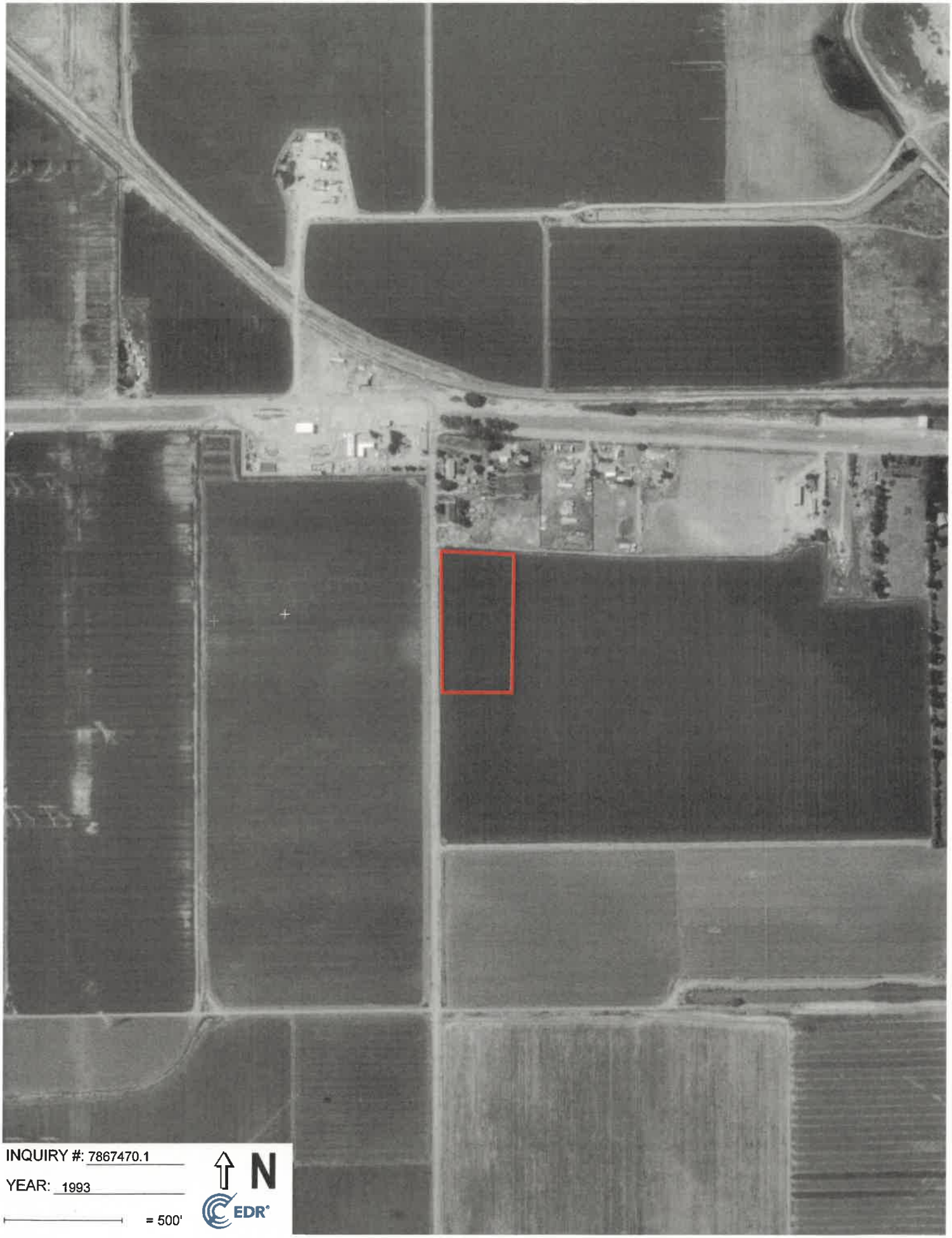
INQUIRY #: 7867470.1

YEAR: 1998

= 500'

N

EDR



INQUIRY #: 7867470.1

YEAR: 1993

= 500'

N

EDR



INQUIRY #: 7867470.1

YEAR: 1984

= 500'

N

EDR



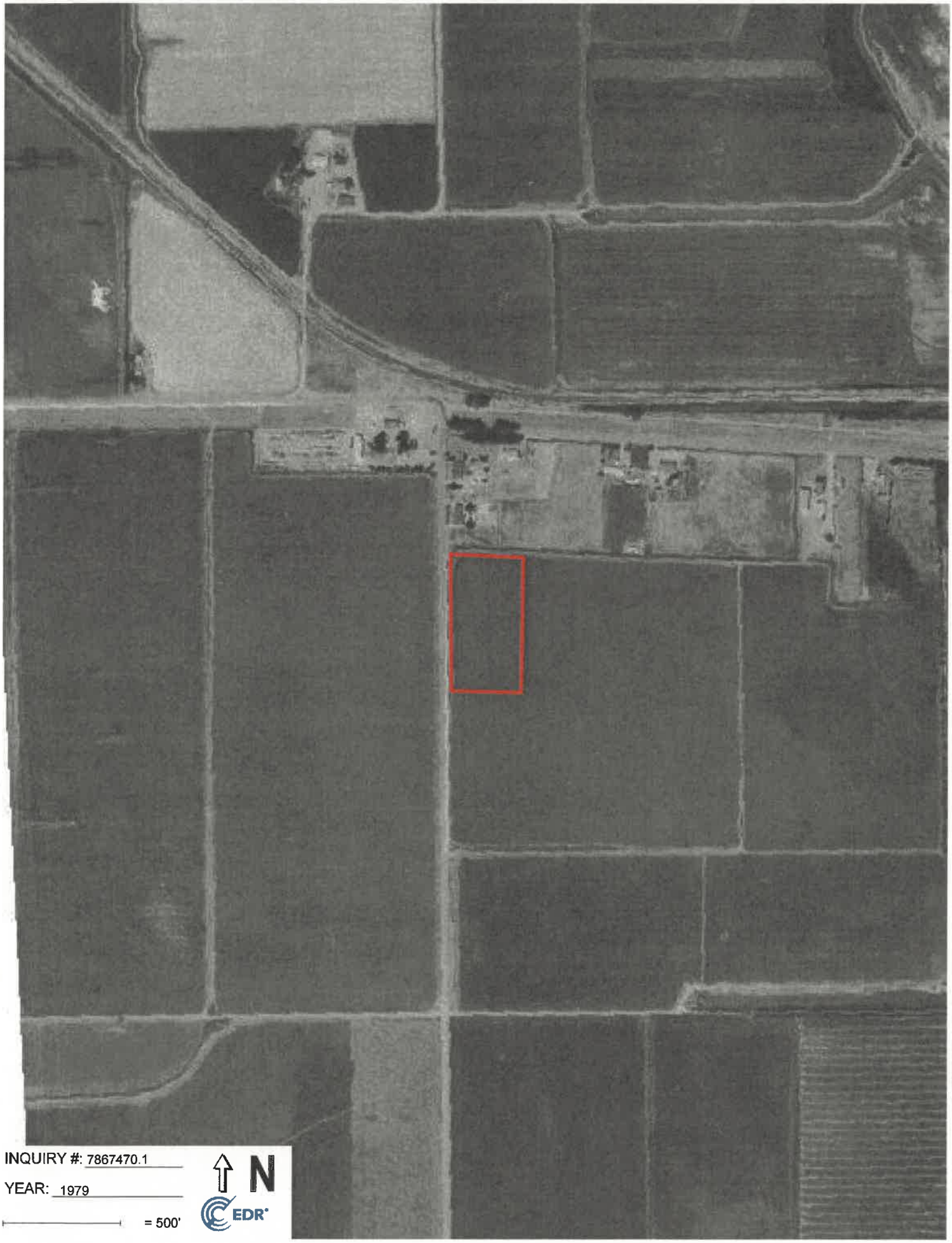
INQUIRY #: 7867470.1

YEAR: 1982

= 500'

N

EDR



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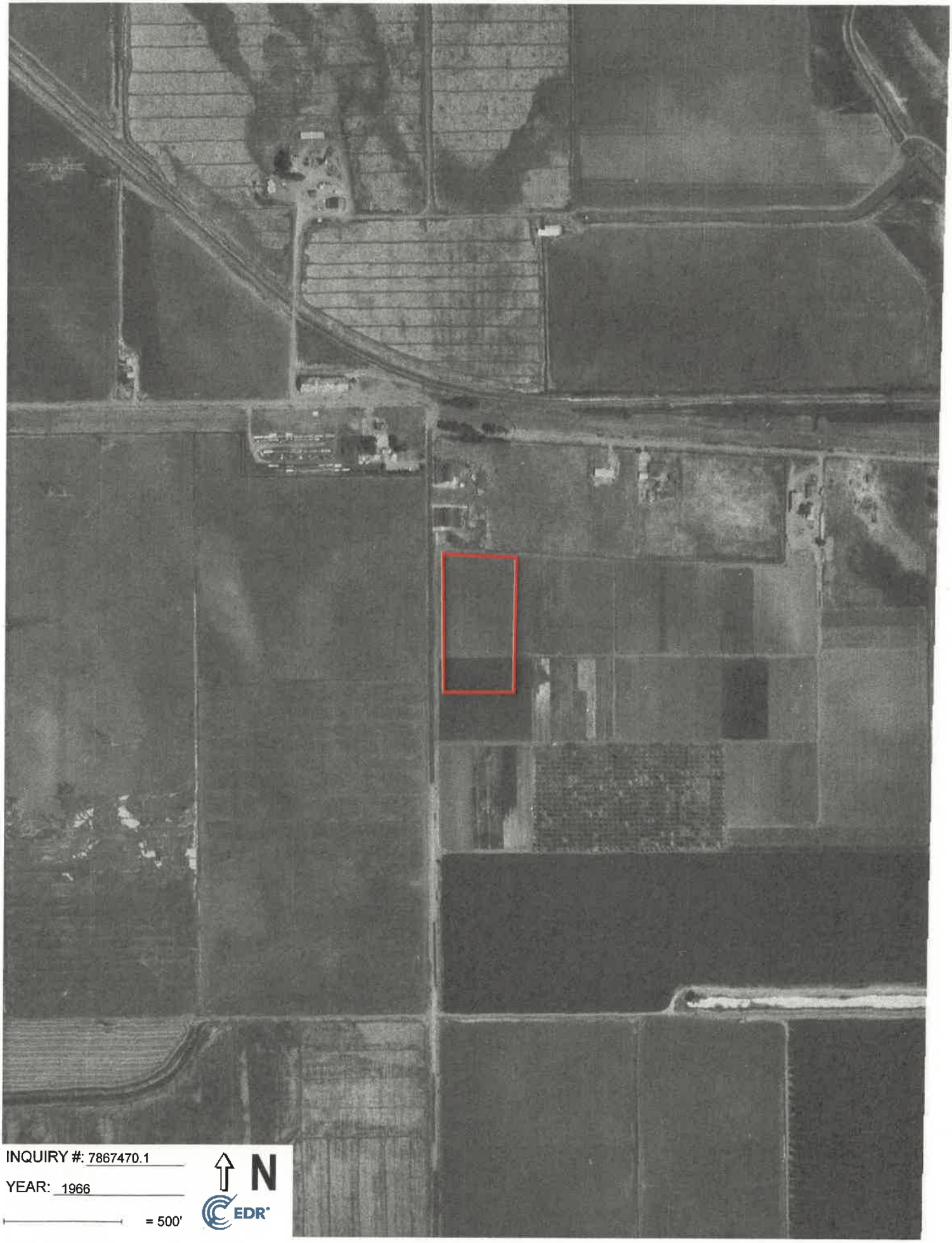
YEAR: 1979

= 500'

N

EDR



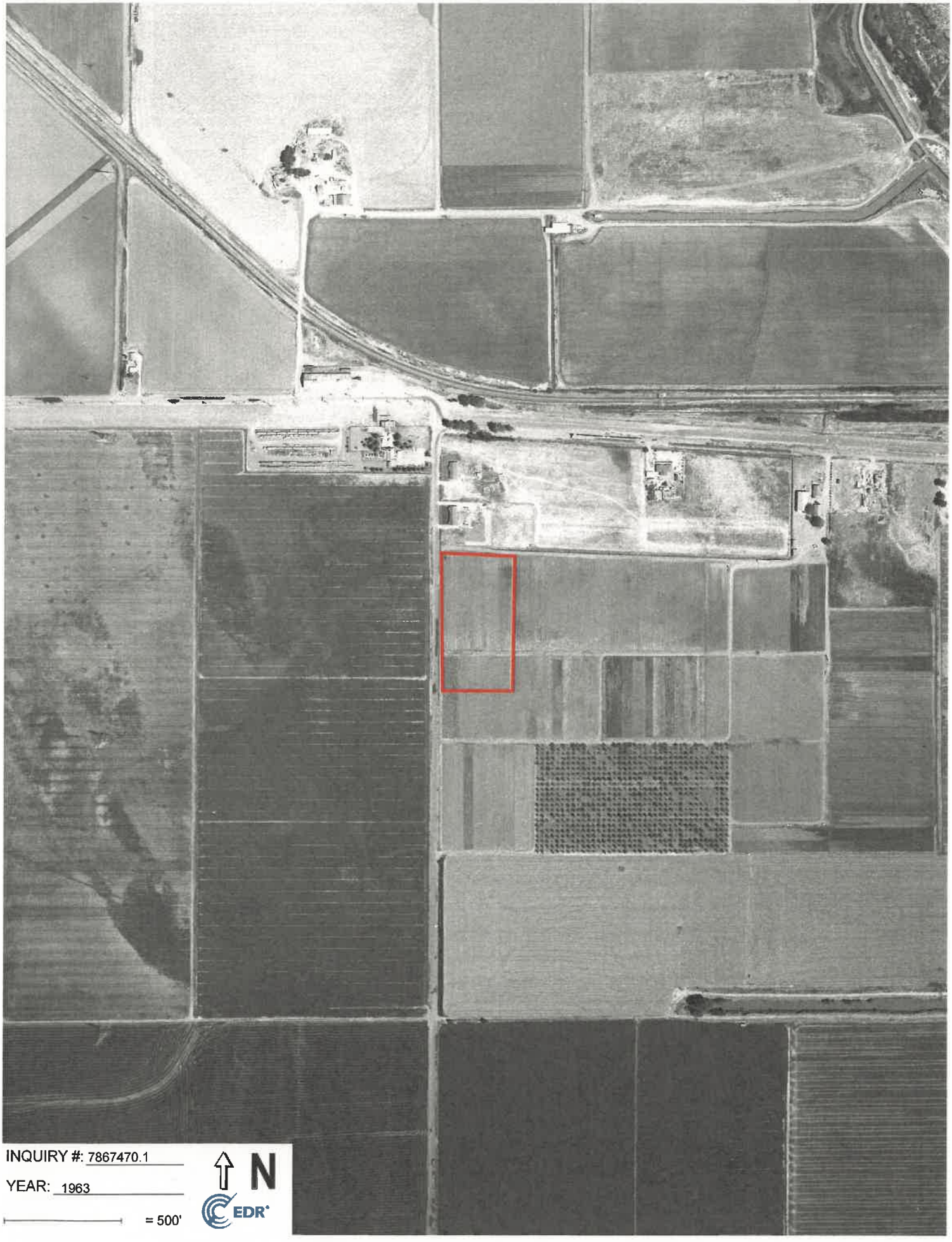
INQUIRY #: 7867470.1

YEAR: 1966

= 500'

N

EDR



INQUIRY #: 7867470.1

YEAR: 1963

= 500'

N

EDR





MARCUS H. BOLE & ASSOCIATES
104 Brock Drive, Wheatland, CA 95692
(530) 633-0117, email: mbole@aol.com

SITE: Ben Fox Boat Storage Project
ITEM: Site Photos - Typical
DATE: 1/13/2025 PLATE: 1





MARCUS H. BOLE & ASSOCIATES
104 Brock Drive, Wheatland, CA 95692
(530) 633-0117, email: mbole@aol.com

SITE: Ben Fox Boat Storage Project
ITEM: Site Photos - Typical
DATE: 1/13/2025 PLATE: 2

ENCLOSURE B: CNDDB & IPaC Databases

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: 01/08/2025 23:16:54 UTC
Project Code: 2025-0039248
Project Name: Ben Fox Boat Storage Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Note: IPaC has provided all available attachments because this project is in multiple field office jurisdictions.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

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

This project's location is within the jurisdiction of multiple offices. However, only one species list document will be provided for all offices. The species and critical habitats in this document reflect the aggregation of those that fall in each of the affiliated office's jurisdiction. Other offices affiliated with the project:

San Francisco Bay-Delta Fish And Wildlife
650 Capitol Mall
Suite 8-300
Sacramento, CA 95814
(916) 930-5603

PROJECT SUMMARY

Project Code: 2025-0039248
Project Name: Ben Fox Boat Storage Project
Project Type: Commercial Development
Project Description: Contra Costa County APN 015-170-031, 5.33-acres
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.93607385,-121.62282610362985,14z



Counties: Contra Costa County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 16 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
San Joaquin Kit Fox *Vulpes macrotis mutica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered

BIRDS

NAME	STATUS
California Condor *Gymnogyps californianus* Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered

REPTILES

NAME	STATUS
Alameda Whipsnake (=striped Racer) *Masticophis lateralis euryxanthus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5524	Threatened
Giant Garter Snake *Thamnophis gigas* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

AMPHIBIANS

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened
Western Spadefoot *Spea hammondii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5425	Proposed Threatened

FISHES

NAME	STATUS
Longfin Smelt *Spirinchus thaleichthys* Population: San Francisco Bay-Delta DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9011	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850	Threatened

CRUSTACEANS

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Longhorn Fairy Shrimp *Branchinecta longiantenna* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4294	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

FLOWERING PLANTS

NAME	STATUS
Large-flowered Fiddleneck *Amsinckia grandiflora* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5558	Endangered

CRITICAL HABITATS

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Delta Smelt *Hypomesus transpacificus*	Final

For information on why this critical habitat appears for your project, even though Delta Smelt is not on the list of potentially affected species at this location, contact the local field office.
https://ecos.fws.gov/ecp/species/321#crithab

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For

assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

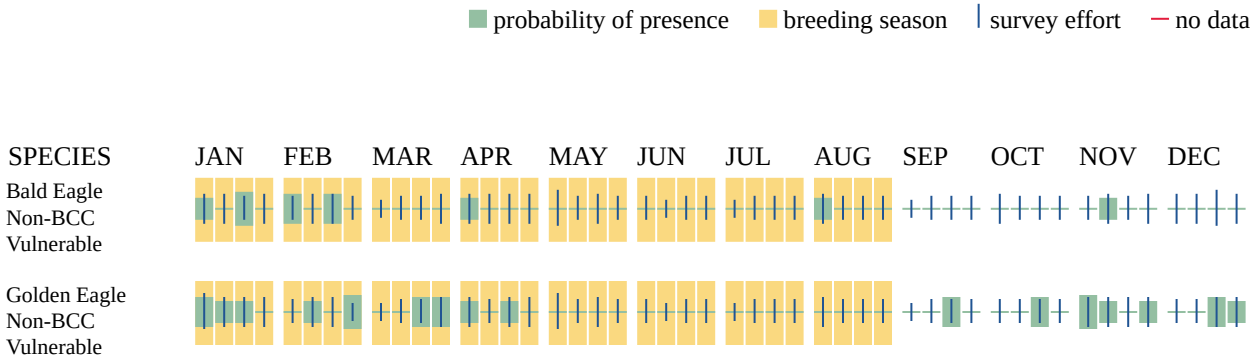
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Allen's Hummingbird *Selasphorus sasin* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow *Passerculus sandwichensis beldingi* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Black Swift *Cypseloides niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10
Black Tern *Chlidonias niger surinamenisis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093	Breeds May 15 to Aug 20
Bullock's Oriole *Icterus bullockii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9458	Breeds Mar 21 to Jul 25
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10955	Breeds Mar 1 to Jul 31
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10575	Breeds Jun 1 to Aug 31
Common Yellowthroat *Geothlypis trichas sinuosa* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

NAME	BREEDING SEASON
Lawrence's Goldfinch *Spinus lawrencei* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Northern Harrier *Circus hudsonius* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15
Nuttall's Woodpecker *Dryobates nuttallii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse *Baeolophus inornatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Red Knot *Calidris canutus roselaari* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8880	Breeds elsewhere
Santa Barbara Song Sparrow *Melospiza melodia graminea* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5513	Breeds Mar 1 to Sep 5
Short-billed Dowitcher *Limnodromus griseus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Tricolored Blackbird *Agelaius tricolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10

NAME	BREEDING SEASON
Western Grebe *aechmophorus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Western Gull *Larus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/11969	Breeds Apr 21 to Aug 25
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10669	Breeds elsewhere
Wrentit *Chamaea fasciata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10668	Breeds Mar 15 to Aug 10
Yellow-billed Magpie *Pica nuttalli* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

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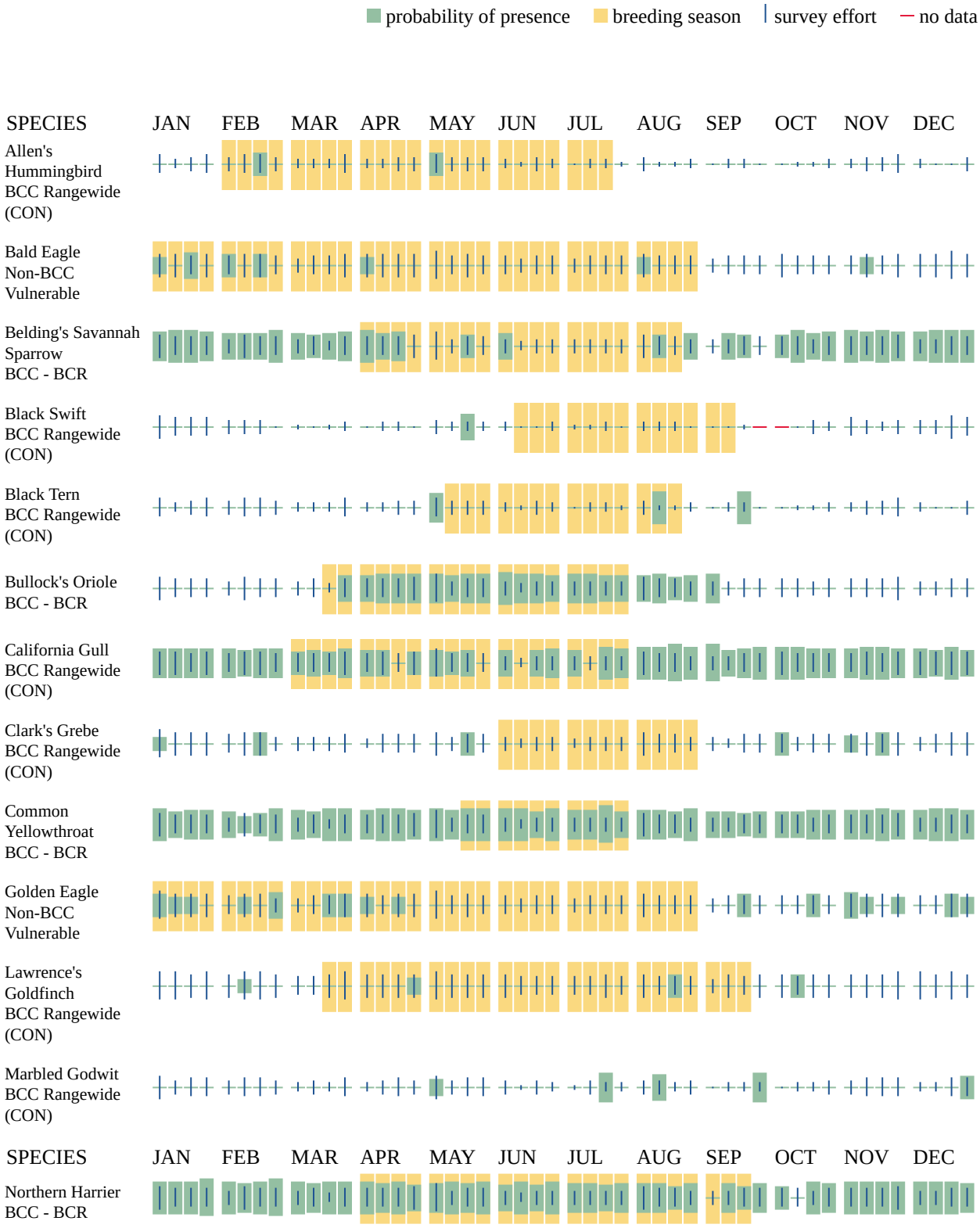
Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.


probability of presence
breeding season
survey effort
no data
SPECIES
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Allen's Hummingbird BCC Rangewide (CON)
Bald Eagle Non-BCC Vulnerable
Belding's Savannah Sparrow BCC - BCR
Black Swift BCC Rangewide (CON)
Black Tern BCC Rangewide (CON)
Bullock's Oriole BCC - BCR
California Gull BCC Rangewide (CON)
Clark's Grebe BCC Rangewide (CON)
Common Yellowthroat BCC - BCR
Golden Eagle Non-BCC Vulnerable
Lawrence's Goldfinch BCC Rangewide (CON)
Marbled Godwit BCC Rangewide (CON)
SPECIES
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Northern Harrier BCC - BCR



Additional information can be found using the following links:

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- Nationwide avoidance and minimization measures for birds

- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- PEM1Bh
- PEM1S

FRESHWATER POND

- PUBFx

RIVERINE

- R4SBCx
- R1UBTx

IPAC USER CONTACT INFORMATION

Agency: Bole & Associates
Name: Marcus Bole
Address: 104 Brock Drive
City: Wheatland
State: CA
Zip: 95692
Email mbole@aol.com
Phone: 5306330117

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Woodward Island (3712185) OR Brentwood (3712186))
 AND (Federal Listing Status IS (Endangered OR Threatened OR Proposed Endangered OR Proposed Threatened OR Candidate OR All CNDDB element occurrences) OR State Listing Status IS (Endangered OR Threatened OR Rare OR Candidate Endangered OR Candidate Threatened))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Alkali Meadow *Alkali Meadow*	CTT45310CA	None	None	G3	S2.1	
alkali milk-vetch *Astragalus tener var. tener*	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Alkali Seep *Alkali Seep*	CTT45320CA	None	None	G3	S2.1	
Antioch andrenid bee *Perdita scitula antiochensis*	IIHYM01031	None	None	G1T1	S2	
Antioch Dunes evening-primrose *Oenothera deltoides ssp. howellii*	PDONA0C0B4	Endangered	Endangered	G5T1	S1	1B.1
big tarplant *Blepharizonia plumosa*	PDAST1C011	None	None	G1G2	S1S2	1B.1
Bolander's water-hemlock *Cicuta maculata var. bolanderi*	PDAPI0M051	None	None	G5T4T5	S2?	2B.1
Brewer's western flax *Hesperolinon breweri*	PDLIN01030	None	None	G2	S2	1B.2
burrowing owl *Athene cunicularia*	ABNSB10010	None	Candidate Endangered	G4	S2	SSC
California black rail *Laterallus jamaicensis coturniculus*	ABNME03041	None	Threatened	G3T1	S2	FP
California linderiella *Linderiella occidentalis*	ICBRA06010	None	None	G2G3	S2S3	
California tiger salamander - central California DPS *Ambystoma californiense pop. 1*	AAAAA01181	Threatened	Threatened	G2G3T3	S3	WL
caper-fruited tropidocarpum *Tropidocarpum capparideum*	PDBRA2R010	None	None	G1	S1	1B.1
Cismontane Alkali Marsh *Cismontane Alkali Marsh*	CTT52310CA	None	None	G1	S1.1	
Coastal and Valley Freshwater Marsh *Coastal and Valley Freshwater Marsh*	CTT52410CA	None	None	G3	S2.1	
curved-foot hygrotus diving beetle *Hygrotus curvipes*	IICOL38030	None	None	G2	S2	
Delta button-celery *Eryngium racemosum*	PDAPI0Z0S0	None	Endangered	G1	S1	1B.1
Delta mudwort *Limosella australis*	PDSCR10030	None	None	G5	S2	2B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Delta smelt *Hypomesus transpacificus*	AFCHB01040	Threatened	Endangered	G1	S1	
Delta tule pea *Lathyrus jepsonii var. jepsonii*	PDFAB250D2	None	None	G5T2	S2	1B.2
great blue heron *Ardea herodias*	ABNGA04010	None	None	G5	S4	
green sturgeon - southern DPS *Acipenser medirostris pop. 1*	AFCAA01031	Threatened	None	G2T1	S1	SSC
loggerhead shrike *Lanius ludovicianus*	ABPBR01030	None	None	G4	S4	SSC
longfin smelt - San Francisco Bay-Delta DPS *Spirinchus thaleichthys pop. 2*	AFCHB03040	Endangered	Threatened	G5TNRQ	S1	
marsh skullcap *Scutellaria galericulata*	PDLAM1U0J0	None	None	G5	S2	2B.2
Mason's lilaeopsis *Lilaeopsis masonii*	PDAPI19030	None	Rare	G2	S2	1B.1
midvalley fairy shrimp *Branchinecta mesovallensis*	ICBRA03150	None	None	G2	S2S3	
molestan blister beetle *Lytta molesta*	IICOL4C030	None	None	G2	S2	
Northern California legless lizard *Anniella pulchra*	ARACC01020	None	None	G3	S2S3	SSC
northwestern pond turtle *Actinemys marmorata*	ARAAD02031	Proposed Threatened	None	G2	SNR	SSC
San Joaquin kit fox *Vulpes macrotis mutica*	AMAJA03041	Endangered	Threatened	G4T2	S3	
San Joaquin pocket mouse *Perognathus inornatus*	AMAFD01060	None	None	G2G3	S2S3	
San Joaquin spearscale *Extriplex joaquinana*	PDCHE041F3	None	None	G2	S2	1B.2
song sparrow ("Modesto" population) *Melospiza melodia pop. 1*	ABPBXA3013	None	None	G5T3?Q	S3?	SSC
steelhead - Central Valley DPS *Oncorhynchus mykiss irideus pop. 11*	AFCHA0209K	Threatened	None	G5T2Q	S2	SSC
stinkbells *Fritillaria agrestis*	PMLIL0V010	None	None	G3	S3	4.2
Suisun Marsh aster *Symphyotrichum lentum*	PDASTE8470	None	None	G2	S2	1B.2
Swainson's hawk *Buteo swainsoni*	ABNKC19070	None	Threatened	G5	S4	
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	Threatened	G1G2	S2	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
vernal pool fairy shrimp *Branchinecta lynchi*	ICBRA03030	Threatened	None	G3	S3	
western bumble bee *Bombus occidentalis*	IIHYM24252	None	Candidate Endangered	G3	S1	
western ridged mussel *Gonidea angulata*	IMBIV19010	None	None	G3	S2	
white-tailed kite *Elanus leucurus*	ABNKC06010	None	None	G5	S3S4	FP
woolly rose-mallow *Hibiscus lasiocarpos var. occidentalis*	PDMAL0H0R3	None	None	G5T3	S3	1B.2

Record Count: 44

ENCLOSURE C: SOIL DATA

United States Department of Agriculture

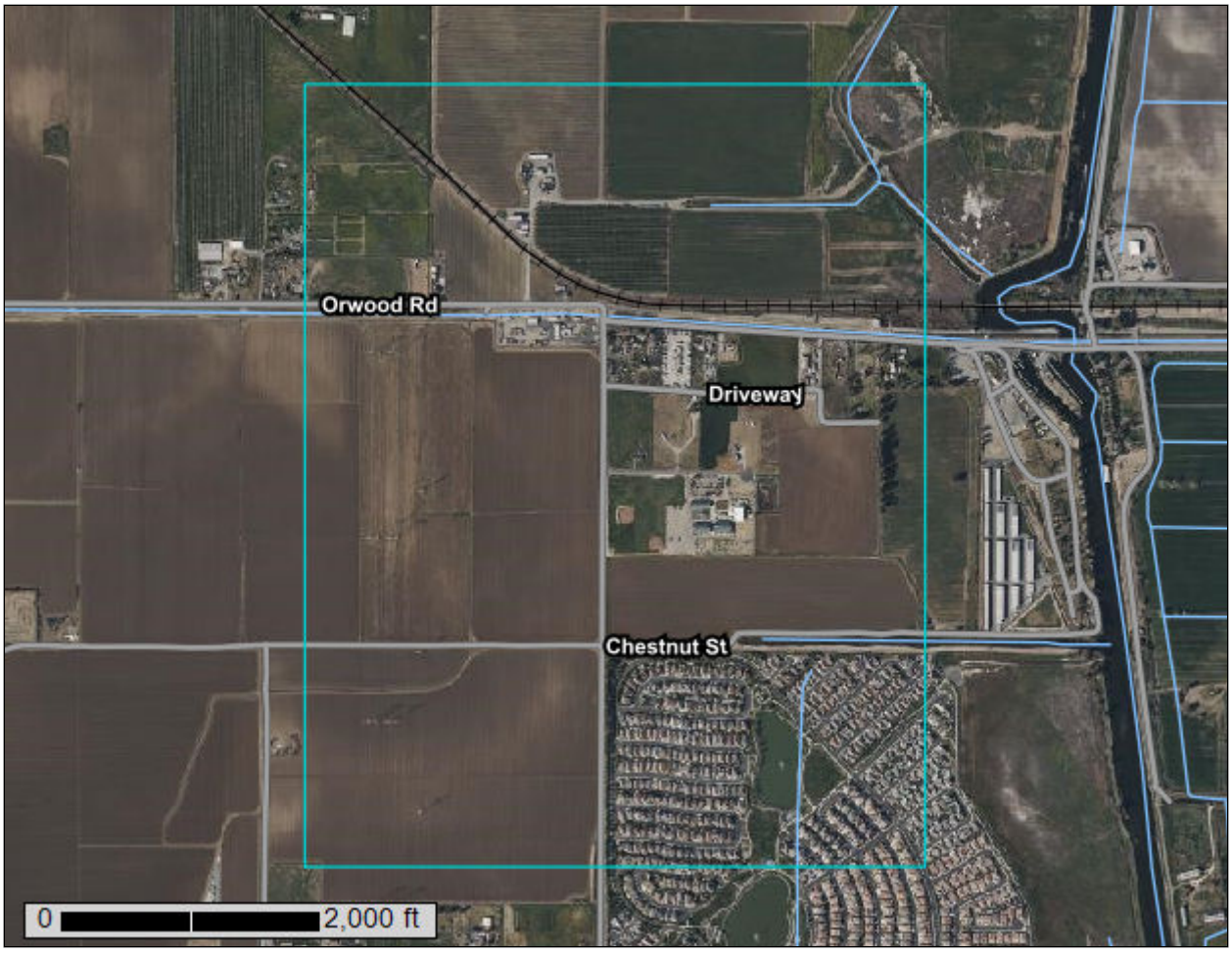
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Contra Costa County, California

BEN FOX BOAT STORAGE



January 12, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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CbA—Capay clay, wet, 0 percent slopes, MLRA 17.....14
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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:11,300 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Contra Costa County, California
Survey Area Data: Version 21, Sep 9, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 9, 2022—Mar 11, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Bc	Brentwood clay loam, wet	0.2	0.0%
CbA	Capay clay, wet, 0 percent slopes, MLRA 17	429.1	64.2%
DaC	Delhi sand, 2 to 9 percent slopes	17.6	2.6%
Mb	Marcuse clay, moderately saline, sodic, partially drained 0 to 2 percent slopes	90.9	13.6%
RcA	Rincon clay loam, wet, 0 to 2 percent slopes	130.0	19.5%
Totals for Area of Interest		**667.9**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Contra Costa County, California

Bc—Brentwood clay loam, wet

Map Unit Setting

National map unit symbol: h986
Elevation: 40 to 200 feet
Mean annual precipitation: 12 to 15 inches
Mean annual air temperature: 61 degrees F
Frost-free period: 250 to 300 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Brentwood and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Brentwood

Setting

Landform: Valley floors
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sedimentary rock

Typical profile

H1 - 0 to 18 inches: clay loam
H2 - 18 to 50 inches: clay loam
H3 - 50 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.4 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C
Ecological site: R017XY901CA - Clayey Basin Group
Hydric soil rating: No

Minor Components

Sycamore

Percent of map unit: 10 percent

Landform: Flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Unnamed

Percent of map unit: 5 percent
Landform: Depressions
Hydric soil rating: Yes

CbA—Capay clay, wet, 0 percent slopes, MLRA 17

Map Unit Setting

National map unit symbol: 2xc8v
Elevation: 10 to 110 feet
Mean annual precipitation: 11 to 15 inches
Mean annual air temperature: 61 to 63 degrees F
Frost-free period: 319 to 330 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Capay and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Capay

Setting

Landform: Basin floors
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey alluvium derived from igneous, metamorphic and sedimentary rock

Typical profile

Ap - 0 to 11 inches: clay
A - 11 to 20 inches: clay
Bss1 - 20 to 30 inches: clay
Bss2 - 30 to 39 inches: clay
Bk1 - 39 to 51 inches: clay
Bk2 - 51 to 60 inches: clay

Properties and qualities

Slope: 0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 40 to 72 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 1 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.2 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 3.0
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C
Ecological site: R017XY901CA - Clayey Basin Group
Hydric soil rating: No

Minor Components

Stomar

Percent of map unit: 4 percent
Landform: Alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

El solyo

Percent of map unit: 4 percent
Landform: Alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Vernalis

Percent of map unit: 3 percent
Landform: Alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, lack perched water table

Percent of map unit: 2 percent
Landform: Alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Unnamed, saline-sodic

Percent of map unit: 2 percent
Landform: Basin floors
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

DaC—Delhi sand, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: h98s
Elevation: 10 to 150 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 59 degrees F
Frost-free period: 260 to 300 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Delhi and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Delhi

Setting

Landform: Flood plains, terraces, alluvial fans
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits derived from igneous and sedimentary rock

Typical profile

H1 - 0 to 5 inches: sand
H2 - 5 to 60 inches: sand

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: R017XY904CA - Subirrigated Deep Alluvial Fans
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 12 percent
Hydric soil rating: No

Laugenour

Percent of map unit: 3 percent
Hydric soil rating: No

Mb—Marcuse clay, moderately saline, sodic, partially drained 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2xld2
Elevation: 0 to 20 feet
Mean annual precipitation: 13 to 16 inches
Mean annual air temperature: 61 to 62 degrees F
Frost-free period: 321 to 331 days
Farmland classification: Not prime farmland

Map Unit Composition

Marcuse and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Marcuse

Setting

Landform: Basin floors
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sedimentary rock

Typical profile

A1 - 0 to 7 inches: clay
A2 - 7 to 9 inches: silty clay
Bw - 9 to 14 inches: clay
Bk1 - 14 to 24 inches: clay
Bk2 - 24 to 37 inches: clay
Bkg - 37 to 60 inches: clay

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.01 in/hr)

Depth to water table: About 42 to 48 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Gypsum, maximum content: 5 percent
Maximum salinity: Strongly saline (16.0 mmhos/cm)
Sodium adsorption ratio, maximum: 25.0
Available water supply, 0 to 60 inches: Very low (about 1.1 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: R017XY901CA - Clayey Basin Group
Hydric soil rating: Yes

Minor Components

Marcuse, strongly alkaline

Percent of map unit: 10 percent
Landform: Basin floors
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Sacramento

Percent of map unit: 5 percent
Landform: Basin floors
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

RcA—Rincon clay loam, wet, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: h9bq
Elevation: 50 to 500 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 59 degrees F
Frost-free period: 260 to 300 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Rincon and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rincon

Setting

Landform: Benches
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from sedimentary rock

Typical profile

H1 - 0 to 12 inches: clay loam
H2 - 12 to 29 inches: clay
H3 - 29 to 60 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 42 to 55 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C
Ecological site: R017XY905CA - Dry Alluvial Fans and Terraces
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 3 percent
Landform: Depressions
Hydric soil rating: Yes

Brentwood

Percent of map unit: 3 percent
Hydric soil rating: No

Capay

Percent of map unit: 3 percent
Hydric soil rating: No

Unnamed

Percent of map unit: 3 percent
Landform: Depressions
Hydric soil rating: Yes

San ysidro

Percent of map unit: 3 percent
Hydric soil rating: No

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ENCLOSURE D: RESUMES OF SURVEYORS

Marcus H. Bole & Associates

An Environmental Consulting Firm

MARCUS H. BOLE, M.S., Senior Wildlife Biologist

EXPERTISE:

Natural Resource Management
Biological Monitoring for Construction Projects
Protocol-level Special Status Plant & Wildlife Surveys
Wetland Delineation, Mitigation, and Permitting
Phase I & II Environmental Site Assessments
CEQA/NEPA Document Preparation and Coordination

EDUCATION:

Masters Degree in Environmental Science
North Dakota State University, Fargo, 1976
Baccalaureate in Biology & Geography
California State University, Sacramento, 1970
Registered Environmental Property Assessor (REPA #647913)
Certified (OSMB) Disabled Veteran Business Enterprise (DVBE)
California Department of General Services (#0000847)
Service Disabled Veteran Owned Small Business (VA)

PROFESSIONAL HISTORY:

Marcus H. Bole & Associates, Senior Environmental Scientist, 1993 - Present
U. S. Federal Government Manager of Environmental Science and Project Management,
Natural Resource Management, Evaluation and Compliance, 1990 – 1993
United States Air Force, Environmental Scientist, U.S. & Overseas, 1970-1990
California State Division of Forestry, Biological Field Technician, 1966 - 1970

TRAINING AND REGISTRATIONS:

Air Force Institute of Technology -1991
Professional Education, Wright-Patterson Air Force Base, Ohio
Natural Resource Management, Biological Assessment
Air Force Center of Environmental Excellence-1992
Professional Education - Brooks City-Base, Texas
Natural Resource Management- National Environmental Policy
National Registry of Environmental Professionals 1993 - Present
Registered Environmental Property Assessor (REPA)
Yearly Continuing Education Credits - Biological/Environmental Science
Association of Environmental Professionals - 2000-2021
Professional Education Program - Biological Sciences
Bat Survey Techniques, Impact Assessment, and Mitigation - Leila Harris, UCD

Richard Chinn Environmental Training Institute - 2000-2021
Yearly re-certifications - Wetland Identification, Mapping and Reporting
Sierra Nevada Field Campus - 2000-2021
Continuing Education - Workshops in Natural Resource Evaluation
San Diego Natural History Museum - Department of Herpetology, 1998-2021
Training under Bradford D. Hollingsworth, Ph.D., Curator
Reptile and Amphibian Identification and Evaluation
Dr. Murray E. Fowler Veterinary Hospital - Sacramento Zoo, 1998-2021
Familiarization and identification training - Giant Garter Snake
Museum of Wildlife and Fish Biology - University of California, Davis
Continuing education in conservation biology, 1998-2021

REPRESENTATIVE EXPERIENCE - Natural Resource Evaluation and Reporting:

Mr. Bole has over forty years of experience in environmental project management. He has supervised work forces of professional engineers, scientists and technicians responsible for pollution monitoring, permitting, abatement, environmental impact analysis, natural resource evaluation and restoration programs and preserve habitat management. As a biologist, Mr. Bole has conducted numerous Biological Assessments in accordance with United States Fish & Wildlife Service (USFWS), California Department of Fish & Wildlife (CDFW), United States Army Corps of Engineers (USACE) and the California Department of Transportation (Caltrans) guidance, protocols and regulations. He has conducted wetland delineations in accordance with the United States Army Corps of Engineers regulations throughout California. As Senior Environmental Scientist, Lt. Colonel Bole, Chief, Environmental Affairs, was directly responsible training and employing a staff of 200 biologists, botanists and environment scientists conducting hundreds of Biological Assessments at five major military installations in California (1990 -1993). As lead environmental scientist for the Department of Veterans Affairs, National Cemetery Administration, he has been directly responsible for conducting environmental assessments, preserve monitoring and habitat restoration for the expansion over 160 National Cemeteries in the United States. The California Superior Court system (Yuba & Plumas Counties) has qualified Marcus Bole as an expert witness in wildlife and fisheries biology. Mr. Bole is an approved biologist for the Yolo Habitat Conservancy, East Contra Costa Habitat Conservancy and the South Sacramento Habitat Conservation Plan. Following is a list of representative experience for selected species:

- Vernal pool species habitat and preserve management
- California Red-legged Frog & Foothill Yellow-legged Frog
- Swainson's hawk & White-Tailed Kite
- Tri-Colored Blackbird & Bank Swallow
- Western Burrowing Owl, bat species
- Western Yellow-billed Cuckoo, Least Bell's Vireo
- Western Pond Turtle, Giant Garter Snake
- Valley Elderberry Longhorn Beetle
- San Joaquin kit fox
- Fresno kangaroo rat
- Blunt-nosed Leopard Lizard, California Tiger Salamander
- Federal and State Listed Plant Species

Marcus H. Bole & Associates
An Environmental Consulting Firm

CHARLENE J. BOLE, Senior Botanist

EXPERTISE:

Environmental Project Management
Natural Resource Management
Environmental Site Assessments (Phase I & II)
Threatened and Endangered Species Surveys and Reporting
Senior Botanist
Wetland Delineation, Mapping, Mitigation and Permitting

EDUCATION:

Master Degree in Environmental Science
North Dakota State University, Fargo, 1979
Baccalaureate in Geography and Botany
California State University, Sacramento, 1974
Graduate Course work in Environmental Sciences, Botany & Wildlife Biology
Registered Environmental Property Assessor (REPA# 229436)
State of California Standard Teaching Credential, Environmental Science
California Community College Credential, Environmental Science

PROFESSIONAL HISTORY:

Marcus H. Bole & Associates (MHB&A), Senior Environmental Scientist, 1991 - Present
Consultant, Veterans Administration, National Cemetery Administration, 2005-Present
Consultant, Regulatory Permitting, US Army, Department of Defense, Belgium, 1988 - 1991
Consultant, Senior Project Manager, Environmental Development Center, Belgium, 1988 - 1991
Consultant, Senior Environmental Scientist, National Cemetery Administration, 2005 – Present

TRAINING AND REGISTRATIONS:

National Registry of Environmental Professionals 1993 - Present
Registered Environmental Property Assessor (REPA)
Yearly Continuing Education Credits - Biological/Environmental Science
Association of Environmental Professionals - 2000-2021
Professional Education Program - Biological Sciences
Bat Survey Techniques, Impact Assessment, and Mitigation - Leila Harris, UCD
Richard Chinn Environmental Training Institute - 2000-2021
Yearly re-certifications - Wetland Identification, Mapping and Reporting
Sierra Nevada Field Campus - 2000-2021
Continuing Education - Workshops in Natural Resource Evaluation
Special status botanical speciesl of California.

Mitigation Monitoring and Reporting Program
County File #CDLP22-02069

21 Learning Lane
Brentwood, CA 94513

June 12, 2025

SECTION 4: BIOLOGICAL RESOURCES

Potentially Significant Impacts:

Potential Impact BIO-1: *Development activities occurring during the nesting period for birds (approximately February 1 – August 31), including site grading, soil excavation, and/or tree removal and vegetation pruning/removal poses potential risk to nesting passerine and raptor bird species.*

Potential Impact BIO-2**:** *Development activities occurring during the blooming period special status plants species, including site grading, soil excavation, and/or tree removal and vegetation pruning/removal poses potential risk to nesting passerine and raptor bird species.*

Mitigation Measures(s):

Mitigation Measure BIO-1**:** *No more than seven (7) days prior to ground disturbing activities occurring during the nesting period for birds (approximately February 1 – August 31), a nesting bird survey shall be performed by a CDFW qualified biologist to ensure that the project avoids impacting any active nests. If active bird nests are detected, a suitable nest buffer should be installed (typically 100 feet for passerines, and up to 500 feet for raptors, depending on species). Preconstruction surveys are not necessary prior to project activities occurring outside of nesting bird season.*

Mitigation Measure BIO-2: *Prior to issuance of a grading permit, plant surveys shall be conducted to confirm the absence of special status plant species on the project stie. The plant surveys shall be conducted during the March through June blooming period in which the species are most identifiable. These surveys shall be conducted in compliance with all survey guidelines published by the California Department of Fish and Wildlife (CDFW, 2018), U.S. Fish and Wildlife Service (USFWS, 2011), and California Native Plant Society (CNPS. 2001). If the survey finds any listed special-status plant species on the project site, the applicant shall consult with the USFWS and/or CDFW, as appropriate, to develop an approved mitigation plan to ensure that potential impacts to the identified species are less than significant. The applicant shall fully implement the mitigation plan prior to initiation of any project construction activity.*

Implementing Action:	COA
Timing of Verification:	Prior to CDD stamp approval of grading permit, and prior to any ground disturbance.
Party Responsible for Verification:	CDD staff, Consulting Biologist.
Compliance Verification:	CDD Review of Biologist's report

SECTION 5: CULTURAL RESOURCES

Potentially Significant Impacts:

Potential Impact CUL-1: *Subsurface construction activities could potentially damage or destroy previously undiscovered historic and prehistoric resources.*

Potential Impact CUL-1: *Surface construction activities could potentially damage or destroy previously undiscovered archeological resource.*

Potential Impact CUL-1 – CUL-4: Construction activities requiring excavation or earth movement could uncover previously unrecorded significant cultural resources and/or human remains. The following mitigation measures will ensure that, in the event cultural resources are discovered, the proper actions are taken to reduce the adverse environmental impacts to cultural resources to a less than significant level.

Mitigation Measure(s):

Mitigation Measure CUL-1*: *Should archaeological materials be uncovered during grading, trenching, or other on-site excavation(s), all earthwork within 30 yards of the materials shall be stopped until a professional archeologist who is certified by the Society for California Archaeology (SCA) and/or the Society of Professional Archaeology (SOPA) and any Native American tribe(s) that have requested consultation and/or demonstrated interest in the project site has had an opportunity to evaluate the significance of the find, and, if deemed necessary, suggest appropriate mitigation(s).

Mitigation Measure CUL-2*: *If any significant cultural materials such as artifacts, human burials, or the like are encountered during construction operations, such operations shall cease within 100 feet of the find, the Community Development Division (CDD) shall be notified within 24 hours, and a qualified archaeologist contacted and retained for further recommendations. Significant cultural materials include, but are not limited to, aboriginal human remains, chipped stone, groundstone, shell and bone artifacts, concentrations of fire cracked rock, ash, charcoal, and historic features such as privies or walls and other structural remains.

Mitigation Measure CUL-3: ***Should human remains be uncovered during grading, trenching, or other on-site excavation(s), earthwork within 30 yards of these materials shall be stopped until the County coroner has had an opportunity to evaluate the significance of the human remains and determine the proper treatment and disposition of the remains. Pursuant to California Health and Safety Code Section 7050.5, if the coroner determines the remains may be those of a Native American, the coroner is responsible for contacting the Native American Heritage Commission (NAHC) by telephone within 24 hours. Pursuant to California Public Resources Code Section 5097.98, the NAHC will then determine a Most Likely Descendant (MLD) tribe and contact them. The MLD tribe has 48 hours from the time they are given access to the site to make recommendations to the land owner for treatment and disposition of the ancestor's remains. The land owner shall follow the requirements of Public Resources Code Section 5097.98 for the remains.***

Mitigation Measure CUL-4: ***Appropriate mitigation of any discovered cultural resources may include monitoring of further construction and/or systematic excavation of the resources. Any artifacts or samples collected as part of the initial discovery, monitoring, or mitigation phases shall be properly conserved, catalogued, evaluated, and curated, and a report shall be prepared documenting the methods, results, and recommendations. The report shall be submitted to the Northwest Information Center and appropriate Contra Costa County agencies.***

Implementing Action:	COA
Timing of Verification:	Prior to CDD stamp approval of plans for the issuance of building/grading permits.
Party Responsible for Verification:	CDD staff
Compliance Verification:	Review of construction plans verifying that measures **CUL-1-CUL4** are included on plan notes printed thereon.

SECTION 18: TRIBAL CULTURAL RESOURCES

Potentially Significant Impacts:

Potential Impact: *Construction and grading could cause ground disturbance which may impact heretofore undocumented tribal cultural resources.*

Potential Impact: *The project could cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and*

supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. The expected construction and grading could cause ground disturbance which may impact heretofore undocumented cultural resources.
Mitigation Measure: *Implementation of mitigations measures **CUL-1-CUL4** would reduce the impact on previously undiscovered tribal cultural resources to a less than significant level.*

Implementing Action:	COA
Timing of Verification:	Prior to CDD stamp approval of plans for the issuance of building/grading permits.
Party Responsible for Verification:	CDD staff
Compliance Verification:	Review of construction plans verifying that **CUL-1 - CUL4** measures are included on plan notes printed thereon.