C&S Waste Solutions Transfer Station

Initial Study/Mitigated Negative Declaration

Prepared for:

City of Fort Bragg
416 N. Franklin Street
Fort Bragg, CA 95437

Prepared by:
Marie Jones Consulting
Fort Bragg, CA
&
HELIX Environmental Planning, Inc.
Folsom, CA

September 2022

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ACRONYMS AND ABBREVIATIONS

APN – parcel number
BERD – Built Environment Resources Directory
BLM – Bureau of Land Management
BMP – Best Management Practices for Stormwater
CBC – California Building Code
CDC – California Department of Conservation
CEQA – California Environmental Quality Act
City – City of Fort Bragg
County – Mendocino County
CRHR – California Registry of Historic Places
EIR - Environmental Impact Report
EPA – Environmental Protection Agency
FAR – Floor Area Ratio
FBUSD – Fort Bragg Unified School District
Ft - foot
GLO – General Land Office
IL – Light Industrial Zoning District
ILUDC – Inland Land Use and Development Code
IS – Initial Study
LEA – Local Enforcement Agency
NAHC – Native American Heritage Commission
NRCS – Natural Resources Conservation Service
NWIC - Northwest Information Center
OSHA – Operational Safety and Health Agency
PG&E – Pacific Gas and Electric
RWS – Redwood Waste Solutions
Sf – Square foot
SWPPP – Storm Water Pollution Prevention Plan
SWRCB – State Water Resources Control Board
TCR – Tribal Cultural Resources

1.0 INITIAL STUDY

1.1 INITIAL STUDY INFORMATION SHEET

1.	Project title:	Fort Bragg Transfer Station (Transfer Station)
2.	Lead agency name and address:	City of Fort Bragg 416 N. Franklin Street Fort Bragg, CA 95437
3.	Contact person and phone number:	Heather Gurewitz, AICP Associate Planner 707-961-2827 x118
4.	Project location:	1280 North Main Street, Fort Bragg, CA 95437
5.	General Plan designation:	Light Industrial (I)
6.	Zoning:	Inland Light Industrial (IL)
7.	Coastal Zone:	No
8.	Affected Parcel(s):	069-231-21

1.2 Introduction

This Initial Study addresses the proposed Fort Bragg Transfer Station (proposed project) and analyzes whether it may cause significant effects on the environment. The proposed project is subject to the requirements of the California Environmental Quality Act (CEQA). The Lead Agency is the City of Fort Bragg. The purpose of this Initial Study (IS) is to provide a basis for determining whether to prepare an Environmental Impact Report (EIR) or a Negative Declaration. This IS satisfies the requirements of CEQA (Public Resources Code, Div. 13, Sec. 21000-21177) and the State CEQA Guidelines (California Code of Regulations, Title 14, Sec 15000-15387).

CEQA encourages lead agencies and applicants to modify their projects to avoid significant adverse impacts (CEQA Section 20180(c) (2) and State CEQA Guidelines Section 15070(b) (2)). Section 15063(d) of the State CEQA Guidelines states that an IS shall contain the following information in brief form:

- A description of the project including the project location
- Identification of the environmental setting
- Identification of environmental effects by use of a checklist, matrix, or other method, provided that
- entries on a checklist or other form are briefly explained to provide evidence to support the entries
- Discussion of means to mitigate significant effects identified, if any
- Examination of whether the project would be consistent with existing zoning, plans, and other
- applicable land use controls
- The name of the person or persons who prepared and/or participated in the Initial Study

1.3 Project Background

For many years Waste Management Collection and Recycling operated the Fort Bragg Disposal Transfer Station (Facility) at 219 Pudding Creek Road. In 2021 the County of Mendocino (County) and City of Fort Bragg (City) offered a joint competitive bidding opportunity for the waste management franchise for both the County and the City. The franchise and transfer station would serve only the Mendocino Coast community. Three proposals were received

and the City and County selected C&S Waste (C&S) as the qualified low-cost bidder. C&S initially sought to purchase the 219 Pudding Creek Road location to continue providing waste management services from that location, however C&S and Waste Management were unable to reach agreement on the property. C&S provides waste management services to a variety of small cities throughout Lake, Lassen, Mendocino, and Sonoma Counties, including the cities of Ukiah and Willits.

Initially the proposed project included the transfer station, a recycling buy back center and a truck maintenance building. However, through the project review process Caltrans indicated that it would require improvements to Highway 1 (north bound turn lane and bicycle lane) due to the traffic generated by the buyback center. Based on these requirements C&S determined that the project was not financially feasible and decided to eliminate the recycling buy back center and the truck maintenance facility from the project. Consequently, the proposed project would include only the following:

1. The direct transfer of waste from waste collection trucks to transport trucks. The system utilizes a fleet of eject-body route trucks which uses a ramp to elevate the route truck to the same level as a walking floor transfer trailer. A walking floor transfer trailer (Wilkens trailer) is equipped with a conveyor-like floor which moves material from the back of the trailer to the front. Loaded route trucks are backed up the ramp and positioned back-to-back with the Wilkens trailers, then the route trucks slowly "eject" or release the solid waste into the Wilkens trailer. As the solid waste is "ejected" into the Wilkens trailer, the trailer utilizes the walking floor to move material released from the route trucks to the front of the trailer. It takes approximately 10 to 20 minutes for one route truck to transfer a load of material into the Wilkens trailer. There will be two to three Wilken's trailers parked on site, and typically two trailers will leave the site each day. Three trailer loads will leave the site during very busy times (such as the holidays).
2. Ten truck parking spaces and 13 employee parking spaces.
3. Associated stormwater management features, site fencing and signage.

The following project specific technical reports quantified analysis and or surveys were used in preparation of this Initial Study and are incorporated by reference:

- Air Quality, Greenhouse Gases, and Energy Assessment, prepared by HELIX (2022)
- Noise Impact Assessment, prepared by HELIX (2022)
- Stormwater Control Plan, prepared by Lawrence Associates (August 2022)
- Phase I Environmental Site Assessment, prepared by LACO Associates Inc. (September 2021)
- Update to Conditions Reported in Phase I Environmental Site Assessment, prepared by Waste Connections Inc (May 2022)
- Archaeological Survey Report, prepared by Alta Archaeological Consulting (August 2021)
- Geotechnical Exploration, prepared by LACO Associates Inc. (March 2022)
- Biological Resolution Evaluation
- Staff Report to the Planning Commission, prepared by Marie Jones Consulting (May 2021)

1.4 Project Location

The project site is located at 1280 North Main Street in the City of Fort Bragg (City), in western Mendocino County, California. The project site is 6.98 acres and is bordered to the west/northwest by North Main Street (State Highway 1). The project is located within the Inland Zone of the City of Fort Bragg. The project site consists of Assessor's Parcel Number (APN) 069-231-21, and the current parcel is vacant with existing developed areas and vegetation. The site is located within Section 8, Township 9 North, Range 8 East (Mount Diablo Base and Meridian, United States Geological Survey 7.5-minute "Clarksville Quadrangle"). Refer to **Figure 1** for the vicinity map and **Figure 2** for the site plan. Note: All figures are located in **Appendix A**.

1.5 Project Setting and Surrounding Land Uses

The project site is currently a vacant lot with existing developed areas and vegetation. The existing site includes an informal gravel/earth parking area (13,000 square feet (sf)) which is primarily used for coastal access, an underdeveloped area that provides habitat to a variety of plant communities, a paved area that has been used in the past for materials storage (64,000-sf), and an access paved road (10,000-sf). Industrial uses, including Fort Bragg Cycle Supplies and Anderson Logging: Log Storage and Trucking, are located north/ northeast of the project site and industrial uses, including a mini-storage facility, are located south of the project site. Residential homes are located west of the project site but are across State Highway 1. Additionally, residential homes are also located south/ southeast of the project site, but other industrial land uses lie between the project site and such uses. The Pacific Ocean is located across highway 1, and approximately 0.2 mile west of the project site. The project site is located outside the Coastal Zone.

Neighboring land uses are summarized in **Table 1**.

Table 1: Neighboring Land Uses

Direction	Land Use
North	Industrial uses; State Highway 1
East	Industrial uses; vegetation/ open space; residential homes
South	Industrial uses; residential homes
West	Residential homes; State Highway 1; State Park; Ocean; Vacant; Commercial uses

1.6 Project Description

The proposed project is the development of a direct transfer station with a direct transfer operation and a parking lot. Once constructed, the project would be operated by C&W Waste Solutions (C&W), through a subsidiary Redwood Waste Solutions, Inc. (RWS). This Transfer Station will be owned and operated by C&W Waste Solution and will serve the Mendocino Coast Community. The front (north-west portion) of the project site would remain undeveloped. The rear (south-eastern) portion of the project site would include the direct transfer operation including truck vehicle parking and employee parking. The entire site would be restricted to employees of the operation and would not be open to the public. A more detailed description of individual components is described below.

I. Infrastructure

Front Portion (Front). The front portion of the project site would remain undeveloped and continue to serve as an informal parking area for surfers and others accessing MacKerricher State Park. Minimal improvements would include an improved encroachment to Highway 1, address sign, security and habitat protective fencing, and stormwater management features.

Middle Portion *(Middle).* The middle of the site will not be improved or developed. It will be retained in its natural state to provide habitat for a variety of native plant communities. This area would be restricted to native plant community restoration activities. No public or employee access would be permitted.

Back Portion (Rear). The back portion of the project site would include the development of the direct transfer operation and associated vehicle parking on a pre-existing already developed asphalt, concrete and gravel pad. The area would be restricted to employees of the operation. The existing paved developed area in the rear of the project site would not be resurfaced. It would be striped for parking spaces. The rear of the site would include a

7,200-sf (90 ft by 80 ft) ramp and loading platform comprised of interlocking blocks with compacted gravel fill for a truck-to-truck transfer. The ramp and loading platform would be approximately 4-ft high to allow for a smooth transition from loading platform to transfer trailers and would be able to accommodate up to four (4) collection trucks, if needed. It would also include 10 parking spaces for trucks, 13 parking spaces for employees, and one (1) ADA compliant parking stall. A new 18-ft-tall mounted downcast light pole would be added; there is an existing downcast light pole.

II. Landscape and Stormwater Management

The project site would include a total 3,432 SF of bio-swale/infiltration basin in the back portion of the site. The bioswale would be designed in accordance with the City's standard for urban runoff pollution control. All runoff from impervious surfaces would be directed to the proposed bioretention features where it would infiltrate on site. No stormwater discharge is anticipated from the project. Stormwater during construction would be managed by Best Management Practices (BMPs).

III. Access, Circulation, and Parking

The project site would upgrade an existing encroachment, which currently provides a 13-ft wide commercial driveway entrance perpendicular to State Highway 1, per California Department of Transportation (Caltrans) requirements, which include installing an asphalt apron. Installation of any frontage improvements in Caltrans' Right of Way would require an encroachment permit. The transfer station would be accessed from an existing, single lane driveway that extends southeast of the main entrance driveway and parallels the eastern boundary line. The existing driveway would remain a 13-ft one way driveway.

Parking would be located on the back of the site, and would include 10 parking spaces for trucks, 13 parking spaces for employees, and one (1) ADA compliant parking stall. All parking spaces would be constructed to meet all applicable City of Fort Bragg standards and requirements including quantity, dimension, wheel stops, turning radius, etc. When not in use, vehicles would be parked at the project site, including ten+ (10) brand new, high-efficiency collection trucks, and up to four (4) transfer trailers.

IV. Operation and Employees

The operations associated with the direct transfer operations in the back portion of the project site would include the collection of trucks operated by RWS running established routes to pick up materials from the surrounding areas. Materials commonly transported would consist of recycling and solid waste streams received from curbside collection per a separate franchise agreement between RWS and the City of Fort Bragg. After collecting materials, the collection trucks would return to the project site to transfer collected materials from the back of the collection trucks directly into staged transfer trailers. The truck-to-truck transfer would occur via a proposed ramp and loading platform that would be located in the back portion of the project site. All material transfers would remain fully contained within an enclosed transfer trailer and would be moved on a truck-to-truck basis only. No materials would be stored on the ground at any time. Full transfer trailers would transport collected materials off-site daily to end-processing locations located elsewhere. The timeline of vehicle movement and Transfer Station utilization is as follows:

- Waste Collection Trucks: From 5:00 to 5:30 a.m. the waste collection trucks depart the facility for collection route. Typical route is 1.5 to 2 hours. Starting at approximately 7:00 a.m. the waste collection trucks arrive and unload into haul trailer. Unload time is approximately 30 minutes. Then waste collection truck continues with collection route. The waste collection route repeats itself for an approximately 7 to 14 loads total per day. This can be up to 7 trucks doing 1 to 2 trips per day or can also be 4 trucks making 2-4 trips per day. Typical the last load arrives at approximately 3:00 p.m. with seasonal fluctuations for heavy tonnage days (holidays).

- Transfer Trucks may already be staged (parked) at the facility awaiting being filled in the morning. Starting at approximately 7:00 a.m. – waste collection truck(s) arrive and begin unloading. Loading continues throughout the day until the transfer is filled and then departs at around 3:00. Typically, two transfer trucks depart per day. During busy visitor periods three to four transfer trucks would leave the site per day.

The project site would employee up to 13 individuals at full build out including 10 employees to operate the collection trucks and 3 employees to operate the transfer trailers.

V. Signage and Security

A small address sign labeled "Redwood Waste Solutions" would be located along the frontage of the site.
The project would include installation of a 6-ft livestock fence along the frontage of the project site. The fencing would be consistent with traffic safety and visibility standards. A gate would be located along the driveway to the back portion of the project site, to prevent unauthorized entrance.

VI. Utilities

The project site contains an existing Pacific Gas & Electric (PG&E) connection and an existing well. The applicant would be allowed to use the existing well in compliance with Fort Bragg Municipal Code Section 14.04.127 (Wells for Nondomestic Use), as well as Section 14.04.125 (wells for Domestic Use), if applicable. Additionally, the existing electrical connection would be upgraded as needed to accommodate the proposed project. No natural gas is anticipated for the proposed project, and telecommunications service would be obtained, if needed, prior to construction. A portable bathroom will be provided for employees.

VII. Other Permits

The project must comply with the State Minimum Standards for solid waste facilities including obtaining a registration level permit from the Local Enforcement Agency (LEA) which is the Mendocino County Environmental Health Department with concurrence from the California Department of Resources Recycling and Recovery (CalRecycle). A Registration Permit requires monthly inspections by the LEA. The facility would be limited to receiving no more than 99 tons of refuse per day.

1.7 Zoning and Land Use Designation

The project site is currently zoned Inland Light Industrial (IL) under the City of Fort Bragg Inland Land Use and Development Code (ILUDC 2020). The IL zoning district applies to areas of the City that are appropriate for a variety of commercial, manufacturing, wholesale and distribution, and industrial uses that do not generate significant customer traffic or high levels of noise, dust, odors, or other potential off-site nuisance characteristics. The IL zoning district implements and is consistent with the IL land use designation of the General Plan. The project would require a Use Permit approval to construct a direct transfer operation on a vacant site.

General Plan. The project site has a land use designation of Light Industrial (I) under the City of Fort Bragg Inland General Plan (Inland General Plan, 2012). This designation is intended for a variety of commercial, manufacturing, wholesale and distribution, and industrial uses which do not generate a significant amount of on-site customer traffic or high levels of noise, dust, odors, or other potential off-site nuisance characteristics.

Land Use & Development Code. Freight terminals are permitted by right and vehicle storage requires a Use Permit approval in the Light Industrial zoning district (18.24.030 of the ILUDC). The proposed project would be consistent with these permissible land uses within the Light Industrial General Plan land use designation.

Figure 1: Vicinity Map- Fort Bragg, CA

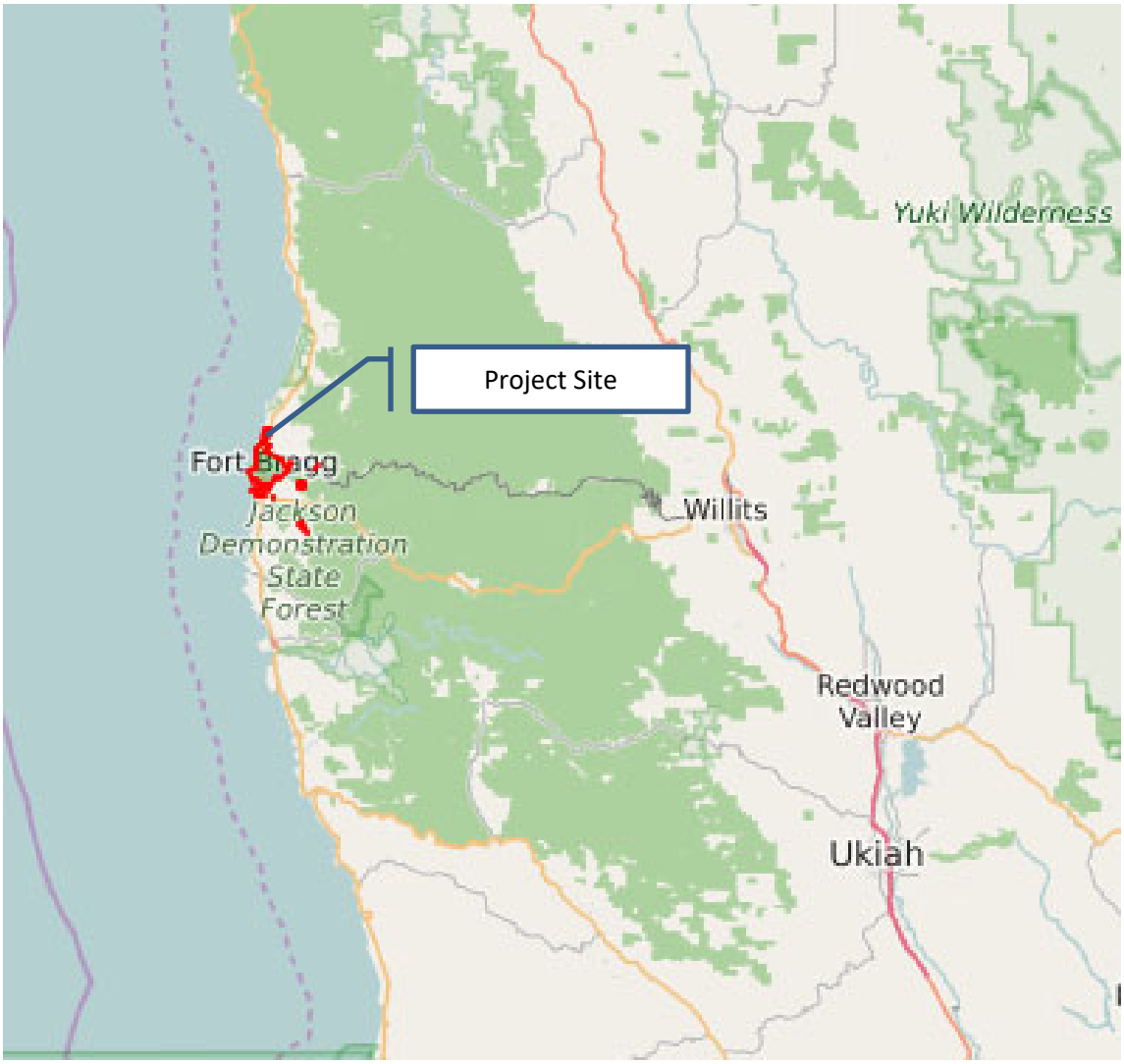
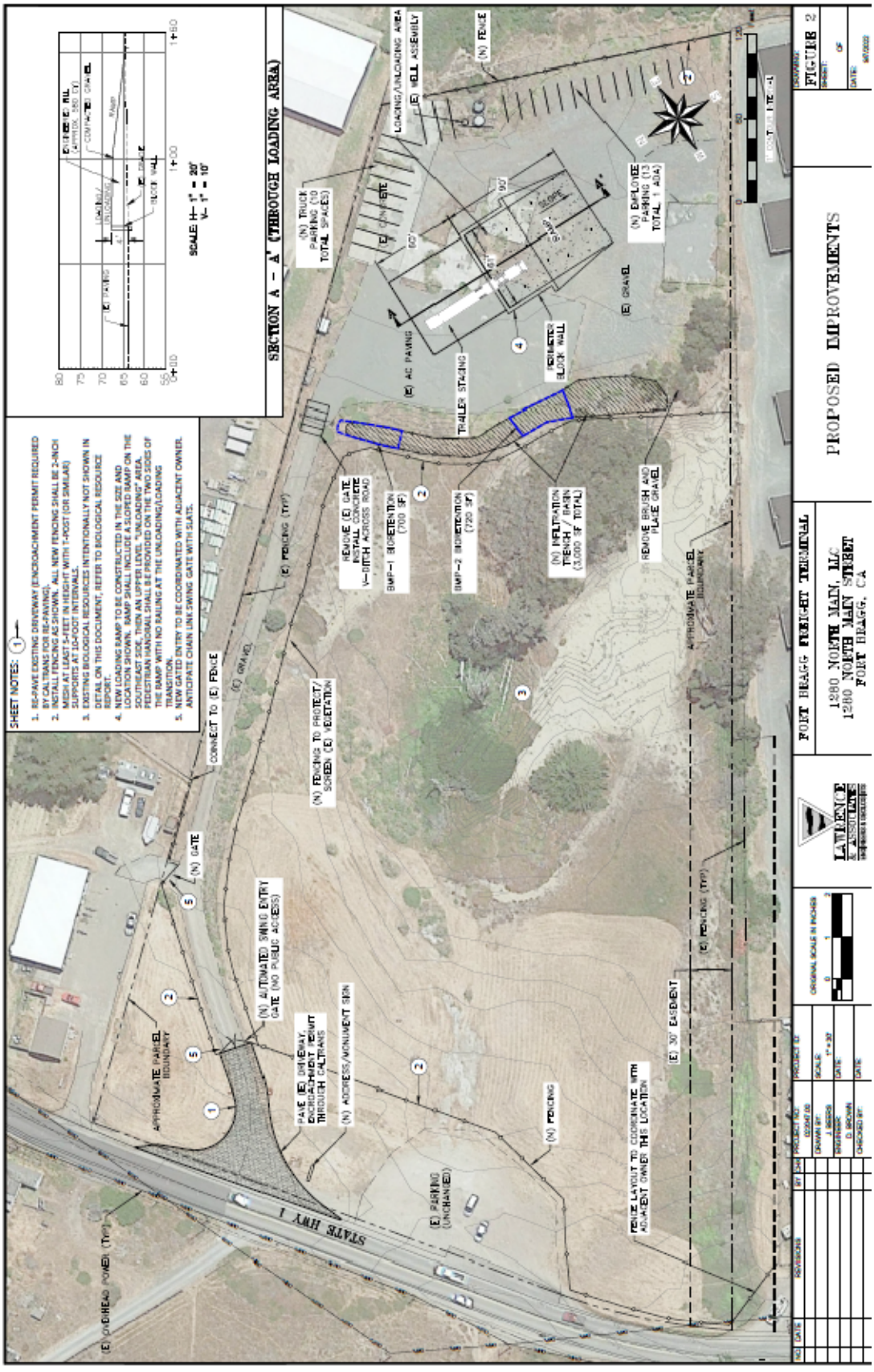

Yuki Wilderness
Project Site
Fort Bragg
Jackson
Demonstration
State
Forest
Willits
Redwood
Valley
Ukiah

Figure 2: Project Plan



1.8 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" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

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

1.9 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 I) 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.

Signature

Date

Printed Name

For

2.0 ENVIRONMENTAL INITIAL STUDY CHECKLIST

The lead agency has defined the column headings in the environmental checklist as follows:

A. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

B. "Less Than Significant with Mitigation Incorporated" applies where the inclusion of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." All mitigation measures are described, including a brief explanation of how the measures reduce the effect to a less than significant level. Mitigation measures from earlier analyses may be cross-referenced.

C. "Less Than Significant Impact" applies where the project does not create an impact that exceeds a stated significance threshold.

D. "No Impact" applies where a project does not create an impact in that category. "No Impact" answers do not require an explanation if they are adequately supported by the information sources cited by the lead agency which show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project specific screening analysis).

The explanation of each issue identifies the significance criteria or threshold used to evaluate each question; and the mitigation measure identified, if any, to reduce the impact to less than significance. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [CEQA Guidelines Section 15063(c)(3)(D)]. Where appropriate, the discussion identifies the following:

a) Earlier Analyses Used. Identifies where earlier analyses are available for review.

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

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

VIII. AESTHETICS

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:					
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c)	Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Setting

The project site is located at 1280 North Main Street in the City of Fort Bragg (City), in western Mendocino County, California. The project site is 6.98 acres and is bordered to the west/northwest by State Highway 1. The project site is currently a vacant lot with existing developed areas and vegetation. The existing site includes an informal gravel/earth parking area (13,000 square feet (sf)) along Main Street which is primarily used for unauthorized (although with possible proscriptive rights) coastal access by the public, an underdeveloped area that provides habitat to a variety of plant communities, a largely paved area that has been used in the past for a concrete batch plant and materials storage (64,000-sf), and an access road (10,000-sf). An existing entrance driveway is located in the northwestern boundary line, off of State Highway 1.

Industrial uses, including Fort Bragg Cycle Supplies, are located north/northeast of the project site and industrial uses, including a mini-storage facility, are located south of the project site. Residential homes are located west of the project site but are intervened by State Highway 1. Additionally, residential homes are also located south/southeast of the project site but there are intervening industrial uses. The Pacific Ocean is located approximately 0.2 mile west of the project site.

Discussion

a) Have a substantial adverse effect on a scenic vista?

Less than significant impact. A scenic vista can be defined as a viewpoint that is visually or aesthetically pleasing, which often provides expansive views of a highly valued landscape for the benefit of the public. The project is located on a 6.98 parcel and is zoned Inland Light Industrial (IL), with a Light Industrial (I) land use designation. The site has been previously disturbed with gravel parking areas, paved areas, and an access road. The proposed site is located on the east side of State Highway 1 (North Main Street), approximately 0.2 mile east of the Pacific Ocean. The project would not obstruct a view of the Pacific Ocean, as the project site is located east of State Highway 1. The project

would be surrounded by similar industrial uses to the north and south and the proposed project would be consistent with the existing industrial developments in the vicinity of the project site. The proposed improvements would be hidden behind an existing vegetated berm and would not be visible from the public right of way. As the project would not obstruct views of the Pacific Ocean and would be consistent with the existing surrounding uses, impacts relating to scenic vistas would be less than significant and no mitigation would be required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No impact. The project is regulated by the City's Inland General Plan and ILUDC. The City's Inland General Plan includes the following Policy:

> *Policy CD-1.3: Scenic Views and Resource Areas: Ensure that development does not adversely impact scenic views and resources as seen from public rights-of-way.*

The proposed project would comply with this policy. It would be located on the east side of Highway 1 between two existing industrial uses. The proposed project provides a scenic view to a natural area that has been impacted by informal parking and use. The proposed project location at the back of the property behind the scenic dunes and vegetation would preserve the scenic view from the highway. Transfer activities will take place on the back of the site and will not be visible from the public right of way.

Per Caltrans Scenic Highway System Lists, State Highway 1 is an eligible state scenic highway, although it has not been designated as scenic (Caltrans 2019). As the project is not located within a state scenic highway, it would have no impact on scenic resources and no mitigation is required.

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

Less than significant impact. The project is proposing the construction and operation of a waste transfer station located north of downtown Fort Bragg at 1280 North Main Street. The station would include a direct transfer operation and parking area. The current project site is vacant and partially developed with various vegetative communities located throughout the site. The existing site includes an informal gravel/earth parking area (13,000 square feet (sf)), an underdeveloped area that provides habitat to a variety of plant communities, a largely paved area that has been used in the past for a concrete batch plant and materials storage (64,000-sf), and an access road (10,000-sf). The proposed project would be developed only on existing developed areas that are not visible from a public right of way. The proposed project would not degrade the existing visual character of the site.

Additionally, the project site is located on the eastern side of State Highway 1 and is bordered to the north, northeast, and south by similar industrial use developments. The Pacific Ocean, located 0.2 mile west, is not visible from the project site. Open space and a few residential homes are located west of the project site, but the site is intervened by State Highway 1 (North Main Street). The project would be consistent with similar land use developments located on the eastern side of State Highway 1 and would not degrade the quality of public views from the site. The project would be designed and conditioned for consistency with ILUDC.

While the proposed project would inevitably result in a change of visual character on the vacant site, the proposed land uses are consistent with the surrounding industrial use developments within the vicinity of the project site. Therefore, a less than significant impact to visual character and public views would occur and no mitigation is required.

d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Less than significant impact. The project site is bordered by existing industrial use developments to the north and the south. The project site contains an existing Pacific Gas & Electric (PG&E) connection and an existing light pole in the back portion of the project site. The project is proposing an additional 18-ft tall light pole, also in the back portion of the project site. Any new exterior lighting utilized under the proposed project would be motion-censored, downcast, and shielded in compliance with regulations set by the International Dark-Sky Association and the performance standards of ILUDC 18.30.070 Outdoor Lighting. As a result, the potential for new sources of significant light or glare at the Site, which would adversely affect day or nighttime views in the area, would be reduced. A less than significant impact would occur.

IX. AGRICULTURE AND FORESTRY RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to 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 or conversion of forest land to non- forest use?	☐	☐	☐	☒

Setting

The Inland industrial zones of Fort Bragg do not contain any forest lands or timberland production zones. While agriculture is allowed in all zoned areas of the City of Fort Bragg, none of the industrial lands are designated as "Prime Farmland" and non are currently under agricultural uses. There are no sites in the City of Fort Bragg that are covered under the Williamson Act.

The California Important Farmlands Map prepared for Mendocino County by the California Department of Conservation classifies the project site as Grazing Land and Urban/Built-Up Land (California Department of Conservation [CDC] 2022a). Urban and built-up land is land occupied by structures or infrastructure to accommodate a building density of at least one unit to one and one-half acres, or approximately six structures to 10-acres; grazing land is land on which vegetation is suited to the grazing of livestock; and other land is land not included in any other mapping category – typically vacant and nonagricultural lands (CDC 2022a).

Discussion

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?

No impact. The proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, conflict with existing zoning for agricultural use, or a Williamson Act contract. As noted above, the Site is designated as “Grazing Land” and “Urban and Built-Up Land” under the FMMP of the CDC (CDC 2022a). No impact would occur.

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?

No impact. The Site is neither designated nor zoned as forest land or timberland and there is no forest land in the vicinity of the Site. No impact would occur.

e) 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. There are no components of the project that would involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland, to non-agricultural use or conversion of forest land to non-forest use. This project is considered to be disturbed and existing vegetative communities would be avoided. Because no important agricultural resources or activities exist on the project site, impacts would be less than significant, and no mitigation would be necessary.

X. AIR QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) 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?	☐	☒	☐	☐

a) Conflict with or obstruct implementation of the applicable air quality plan?

No impact. The proposed project would consist of the relocation of an existing transfer station to a new location, which is 1.0 mile north on highway 1. The new project will have significant less impacts on air quality as the site would only be used for truck to trailer transfer and would not include the 250+ daily vehicle trips for the recycling buy back center which will not be moved and is not a part of this operation.

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?

Less Than Significant. The County of Mendocino is in non-attainment for PM-10**;** however, this project would result in a net daily increase in 20 miles of cumulative driving to and from the new transfer station over conditions from the previous waste hauler (this includes ten trucks making the trip two times per day). Additionally, as an interim measure, while the new operator does not have a transfer station in operation, all seven RWS waste collection trucks drive across highway 20 to Ukiah and back each day, rather than just three transfer trucks. The transfer trucks would produce less pollutants than the seven waste collection trucks. The current situation results in more PM-10 being released into the air than from operations once the proposed project is completed.

The PM-10 resulting from the construction of the 4-foot ramp is negligible and will consist of local trucks bringing 580 cubic yards of gravel to the site, or approximately 24 truckloads. This would not be a less than significant source of PM-10.

c) Expose sensitive receptors to substantial pollutant concentrations?

No impact. As noted above the proposed project would not have result in substantial pollution, and there would be no impact on sensitive receptors.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant with Mitigation Incorporated.

The proposed project has the potential to result in odors that could affect nearby residential, industrial and commercial businesses. To reduce this potential impact to a less than significant impact, the project should incorporate the following mitigation measures:

> **Mitigation Measure AQ-1:** No solid waste odors shall be detectable beyond the facility's boundaries. In the event that odors are detectable beyond the immediate vicinity of the transfer trailers and re-load area, the operator shall take immediate action to prevent the further spread of the odor either by hauling the transfer trailer to an appropriate disposal site, sealing the transfer trailer, applying deodorizer, or utilizing other prevention or abatement measures.
>
> **Mitigation Measure AQ-2:** No recyclables or solid waste will remain on-site in the pickup trucks or transfer trailers longer than 24 hours. The purpose of this mitigation measure is to reduce odors and associated vector issues (crows, rats, etc.).
>
> **Mitigation Measure AQ-3:** Solid waste and compostable materials shall never be stored on the ground or in an unclosed container. All such materials shall always be contained on site in a fully closed container for 24 hours or less.
>
> **Mitigation Measure AQ-4:** At the close of each operating day, all transfer trailers containing solid waste shall have the on-board tarp closed and covering the roof of the trailer and the rear doors shall be securely closed.

With these mitigation measures the effect on odors will be less than significant.

XI. BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife 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, regulations, or by the California Department of Fish and Wildlife or US 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?	☐	☒	☐	☐

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

A Biological Resources Assessment (BRA) was prepared Clifton Environmental on June 12, 2022, and is included as Appendix C.

Setting

A Biological Resources Assessment included a review of past botanical survey reports, database scoping results, mapped soils, aerial imagery, and floristic field surveys. Special-status species in this BRA are those listed (or candidate or proposed) under the federal or state endangered species acts, under the California Native Plant Protection Act, as a California species of special concern or fully protected by the California Department of Fish and Wildlife (CDFW), or that are on List 1, 2, or 3 of the *Inventory of Rare and Endangered Plants of California* (CNPS 2021). Special status natural communities in this review are waters, wetlands, riparian communities, and any natural community ranked S1, S2, or S3 on the *California Natural Community List* (CDFW 2021). Prior to field surveys, the *Draft Floristic Survey for the Rossi Property* (Nelson 2007), the *Botanical Scoping Survey* (NCRM 2022), and the *Wetland and Waters Delineation Memorandum* (LACO 2021) were reviewed, providing baseline information on past reported resources.

A list from the U.S. Fish and Wildlife Service (USFWS), Critical Habitat Portal, was obtained on February 17, 2022 (USFWS 2022). The list identified federal-listed, candidate, or proposed species that potentially occur in or could be affected by the Project. The California Natural Diversity Database (CNDDB) and CNPS online searches were queried for the Fort Bragg 7.5' USGS quad and the five surrounding quads to determine known occurrences of special-status species on or near the BSAA (CNDDB 2022 & CNPS 2022). Data received from USFWS, CNDDB, and CNPS records were used to compile a table of regional species and habitats of concern.

A list of soils within the Biological Resources Assessment Area BRAA and their characteristics was generated using the Natural Resource Conservation Service Web Soil Survey (NRCS 2022). Wetland data points (DP) were collected utilizing the Regional Supplement to the Corps of Engineers *Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*, Version 2.0 (USACE 2010), the National Wetland Plant List (USACE 2020), and Munsell soil chart.

This BRAA and all figures were prepared by Clifton Environmental, LLC (CE), Principal Botanist, Estelle Clifton with assistance on wildlife mitigations from consulting Wildlife Biologist Pam Town and the Mitigation and Monitoring Plan (MMP) from CE Botany Technician Paula Gaska. Floristic surveys were performed by Estelle Clifton and consulting Botanist Kerry Heise.

Field surveys consisted of walking the entire BRAA to determine if any special-status species, their habitats, or special status communities were present. During surveys, notes on natural communities were recorded, including the habitat potential for wildlife. Field surveys were conducted on April 6, April 13, and June 2, 2022, by CE, Principal Botanist, Estelle Clifton and on June 4, 2022, by consulting Botanist Kerry Heise. Survey methodologies were based on the *Protocols for Surveying and Evaluation Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018). Plant species located during the surveys were identified to the lowest taxonomic level necessary to determine presence or absence of special status plants. The *Jepson Flora Project* (Jepson 2022) was consulted to determine the taxonomic nomenclature of observed plants. *A Manual of California Vegetation* (CNPS-a 2022) was used to classify and describe the representative plant communities present. The *California Natural Community List* (CDFW 2021) was consulted for additional information on current ranking of described communities and their associations.

Coordination and communications occurred with LACO Associates Senior Planner Rebecca Dalske, Landscape Architect Nicholas Thayer of Forbes Land Design, RWS Director of Community and Government Affairs Kristyn Byrne, CDFW Environmental Scientist Lee Margadant, California State Parks Senior Specialist Environmental Scientist Terra Fuller, and City of Fort Bragg Associate Planner Heather Gurewitz, in preparation of this BRAR.

Previous Studies

A previous floristic survey of this property, conducted April to July of 2007, was completed for the City of Fort Bragg by Playalina Nelson (Nelson 2007). The survey describes dune mat, a sensitive plant community, with varying levels of disturbance, in areas that corresponds to the general locations of coastal strand communities identified in the 2022 surveys (Figure 3). The Nelson report identified a portion of the dune and adjoining grassland, just south of the driveway entrance, as dominated by a stand of Pacific wild rye (*Elymus pacificus*), noting that the grass is considered to have limited distribution, concluding, “generally, coastal grasslands or dune habitats that support a dominance of native species are considered regionally significant.” In 2007, Nelson identified three special status plants: 65-72 individual dune wallflower (*Erysimum menziesii*), 500-550 individual dark-eyed gilia (*Gilia millefoliata*), and 1,400-1,450 individual round-headed Chinese houses (*Colinsia corymbose*). Nelson also identified one dune mat habitat with limited disturbance and no invasive plant populations which supported most of the dune wallflower on the property, along with dark-eyed gilia and round-headed Chinese houses. This portion of the dune community is close to the back border between the vernal marsh and beach pine forest communities (Figure 3). Nelson also identified zones of Brewer’s rush (*Juncus breweri*) and slough sedge (*Carex obnupta*) sensitive plant communities that loosely correspond to the vernal marsh in Figure 3. Nelson indicated that these areas are dominated by hydrophytic vegetation and need further study to determine if they meet the criteria of an isolated wetland. Invasive plants identified in the Nelson report include Himalayan blackberry (*Rubus armeniacus*), periwinkle (*Vinca major*), sea fig (*Carpobrotus chilensis*), pampas grass (*Cortaderia selloana*), blue gum (*Eucalyptus globulus*), and English ivy (*Hedera helix*). Nelson noted in her conclusion, “there is low conservation value in protecting a portion of the property that would be isolated and surrounded by development,”and “off-site mitigation measures may be more beneficial in terms of protecting a larger habitat area that is less fragmented.”

NCRM’s Botanical Scoping Survey memo consisted of one site visit conducted November 18, 2021. The memo noted the presence of suitable habitats for listed species that were not identifiable during NCRM’s November site assessment. Interestingly, Menzies’ wallflower was found in bloom November 2021. NCRM identified the dominance of Pacific wild rye within a portion of the Coastal Strand community, just south of the driveway entrance, and recommended that impacts to this population be mitigated.

The *Wetland and Waters Delineation* Memorandum (LACO 2021) found no areas that meet the criteria to be considered federal jurisdictional waters or State Water Resource Control Board (SWRCB) waters of the State. The following sections include discussions of the biological resources and habitats observed on-site and an evaluation of the Project’s potential impact on the specific resources.

Wetland Evaluation Findings

Additional reconnaissance in April found surface water and a North Coast Riparian Scrub, abutting the BRAA to the east, mapped as a Palustrine seasonal deciduous scrub habitat by the National Wetland Inventory (USFWS 2022), as shown in Appendix C. Additional wetland data points were collected June 2, 2022 in the those habitats, within the BRAA, most probable to be classified as wetland and containing a dominance of hydrophytic vegetation indicators. On the BRAA's eastern boundary, a Coastal Strand berm rises up, creating a hydrologic barrier to the North Coast Riparian Scrub located off the BRAA. The parcels south of the BRAA channels water into a man-made ditch/swale along the back property line of the BRAA, through numerous drop inlets within the development. Wetland data points were collected within the vernal swale along the back property line (DP1), the coastal brackish marsh (DP2), and North Coast Riparian Scrub (DP3) habitats (Figure 3). Wetland hydrology and soils were not identified within the BRAA at the three wetland DPs.

At DP1 the relief and vegetation indicate wetland potential, thus DP1 was placed at the lowest end of the BRAA's swale feature. Upon investigation, the swale relief was found discontinuous, and no evidence of flow patterns or water-stained leaves were observed within the swale. The swale terminates at SH1 with no outlet and no continuation of herbaceous hydrophytes. Wetland soil indicators were observed but they did not meet the criteria in the WMVC region supplement (USACE 2010) as the chroma was too high.

At DP2 the landform is bowl shaped on a low gradient creating an isolated stand of slough sedge (*Carex obnupta*), a wetland obligate (OBL) species (wetland ratings are defined in Appendix C of the Biological Resources Assessment, Table 3), mapped as brackish marsh. No visible evidence of hydrology was observed. Soils at DP2 nearly keyout as wetland, but as noted at DP1, the chroma was found to be too high. Adjacent to the sedge is an extensive area partially dominated by Brewer's rush (*Juncus breweri*), a facultative wet species, mapped as vernal marsh. The Brewer's rush extends out from the brackish marsh in all directions rising over subtle topographic lifts in the sandy substrate. Most of the vernal marsh is also dominated by upland grasses ripgut brome (*Bromus diandrus*)-not included in the wetland inventory, sweet vernal grass (*Anthoxanthum odoratum*)-FACU, and velvet grass (*Holcus lanatus*)-FAC (USACE 2020). It is unclear why and how the brackish marsh at DP2 may have been established. One hypothesis is that the community was established prior to hydraulic alteration at the site, and it persists because of the drainage relief in this location creates a slight bowl, and the density of the occurrence may protect the brackish marsh from evaporation.

DP3 was taken in a large depression, at the center of the BRAA, mapped as North Coast Riparian Scrub. On either side of the landform depression, slopes rise and sink forming an approximately 5-feet to 10- feet deep depression, below the adjacent land. Barren rocky substrate gave the appearance of hydrologic patterns (noted in the April version of this report) but was since determined to be a legacy dump of fill material comprised of concrete fragments and gravel. Wetland soils were not found and no evidence of hydrology was observed at DP3.

Natural Community and Special Status Plant Species Findings

The BRAA contains previously developed, ruderal areas, natural communities and areas dominated by non-native species and cultivars. Table 1 below estimates the acres of each natural community that would be affected by the Project based on preliminary engineering. The acres delineated as "Permanent Impact," in Table 1, include areas that would be rocked and paved and the bioretention swale that would be landscaped with Brewer's rush rhizomes. A 5-foot buffer around the entire development footprint including the areas for fencing was created representing "Temporary Impact" areas, shown in Table 2, to allowing for potential disturbances exceeding the engineered design.

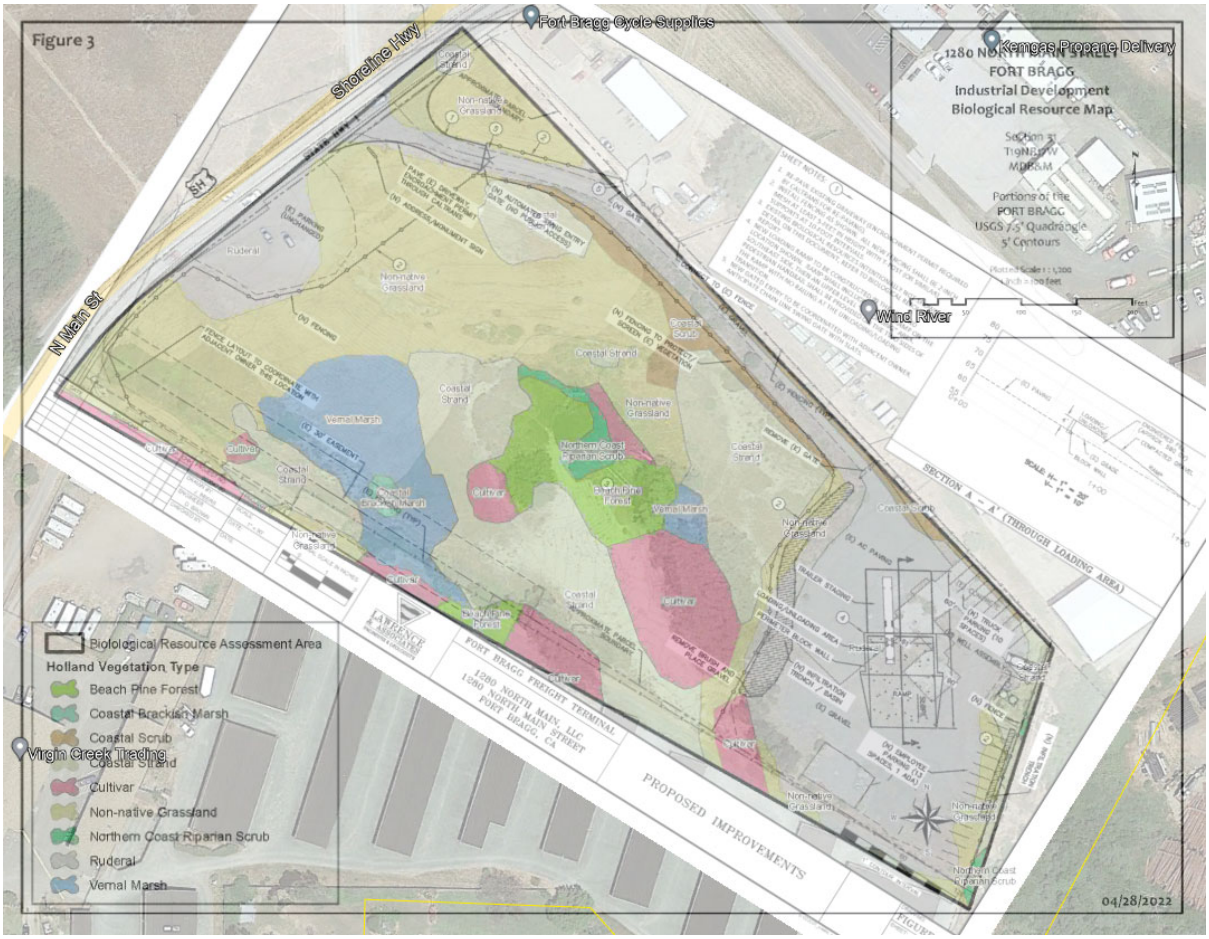
Table 2: Temporary Impact Areas (Square Feet)

Natural Community (Holland Type; CDFW rarity rank) 1	Acreage	SF	Temporary Impact (SF)	Permanent Impact (SF)
Beach Pine Forest (S3, G5)	0.3	13,068	-	-
Coastal Brackish Marsh (G3, G4)	0.02	871	-	-
Coastal Scrub (S5, G5)	0.22	9,583	2,005	-
Coastal Strand (S3, G3)	1.46	63,598		-
Northern Coast Riparian (S3, G3)	0.06	2,614	-	-
Vernal Marsh (S2?, G3)	0.54	23,522	-	-
Other				
Cultivar	0.57	24,829	211	-
Non-native Grassland	2.04	88,862	4,378	1,071
Ruderal	1.91	83,200	605	0
Total	7.12	310,147	11,209	1,071

[1] A Manual of California Vegetation (CNPS-a 2022) was referenced to correlate each community type in the community table (Holland 1986) to CDFW's Natural Communities List (CDFW 2021).

The image below includes an overlay of the developed areas and the botanical map and illustrates the small area of permanent impacts by the bioswale.

Figure 3 – Project Plan view and Botanical Survey Overlay



Natural Communities of Concern

Coastal Strand – *Polygonum paronychia*, *Camissonia cheiranthifolia*, *Lupinus littoralis*, *Carpobrotus chilensis:*
The Coastal Strand natural community is a maritime hummock (upland stabilized dune) located approximately 0.25 mile west of the Pacific Ocean, separated from the ocean by SH1, thence coastal prairie and dune habitat further west. Three special status species: Menzies' wallflower (*Erysimum menziesii*), round-headed Chinese-houses (*Collinsia corymbose*), and dark-eyed gilia (*Gilia millefoliata*) were found within the Coastal Strand community. Within the BRAA, much of the Coastal Stand community is impacted by sea fig (*Carpobrotus chilensis*). This community was found to most closely correlate to dune mat - *Abronia latifolia* Herbaceous Alliance, ranked S3, G3 (CNPS 2022-a). The proposed Project would have no permanently impacts on the Coastal Strand community.

Vernal Marsh – *Juncus breweri*:
The Vernal Marsh natural community is dominated by Brewer's rush (*Juncus breweri*) and in portions of the mapped natural community non-native grasses. This community was found to most closely correlate to the salt rush swales - *Juncus lescurii* Herbaceous Alliance, ranked S2?, G3 (CNPS 2022-a). A ranking status with a "?" denotes an inexact or uncertain rank determined (CNPS-b). The Vernal Marsh community is considered a special status natural community. The largest Vernal Marsh community within the BRAA is located between two mapped Coastal Strand community areas containing special status plant species. No Vernal Marsh would be impacted by the proposed Project. Mitigation is not necessary.

Beach Pine Forest – *Pinus Muricata* & *Pinus contorta*:
The Beach Pine Forest natural community is located in two small, isolated patches. The *Pinus contorta* (shore pine) stand is located along the back property line and the *Pinus muricata* (bishop pine) stand within the center of the property near the North Coast Riparian Scrub or Fen habitat. Because of the small mapping units of these two forested patches, the Beach Pine Forest communities are not considered special status in this BRAR. Temporary and minor impacts of 0.01 acre to the Beach Pine Forest may result from Project fence replacement along the back property line. The new fence is proposed to be installed in the same place and to be a 6-foot chain link fence with barbed wire and privacy slats. **No mitigations are proposed for temporary impacts within this community**.

Coastal Brackish Marsh – *Carex obnupta*:
Within the BRAA, a small depression within the larger Vernal Marsh natural community is dominated by *Carex obnupta* (slough sedge), constituting the Coastal Brackish Marsh natural community. This community was found to correlate to slough sedge swards – *Carex obnupta* Herbaceous Alliance, ranked S3, G4 (CNPS 2022). No project impacts are proposed to this special status natural community. This community does not appear to be hydrologically connected to the small drainage swale that may have been constructed on the back property line and receives drainage from drop inlet culverts discharging into the swale from the adjacent parcel.

North Coast Riparian Scrub – *Lonicera involucrata*, *Morella californica*, Salix spp*., Rubus ursinus*:
The North Coast Riparian Scrub natural community is a Fen habitat located adjacent to the Beach Pine Forest at the center of the BRAA. It consists of a small but deep (approximately 5-foot to 10-foot) depression with no evidence of hydrology or visible connection to water features. During the April 2022 survey of the BRAA, gravel and concrete debris-fill, dumped in and near the west-end of the community was mistaken for signs of hydrology within this community. This community was found to correlate to the *Morella californica* Shrubland Alliance, ranked S3, G4 (CNPS 2022-a). **No impacts are proposed to this special status natural community.**

Other Communities

Coastal Scrub – *Baccharis pilularis*:
The Coastal Scrub natural community is not ranked special status. Much of this natural community is located along the previously disturbed, existing road margin. The community is dominated by coyote

brush (*Baccharis pilularis*) with a significant amount of pampas grass (*Cortaderia jubata*). There would be2,005 sf of temporary impacts associated with installation of the habitat protective fencing.

Cultivar – *Chaenomeles speciosa*, *Rosa* sp.*, Hesperocyparis macrocarpa*, *Eycalyptus globulus*, *Vinca major*:
Portions of the BRAA contain non-native and invasive species including some that may have been planted on the site. At the south side of the parcel perennial cultivars include flowering quince, a rose hedge, periwinkle (Cal-IPC Rating – Moderate), and Monterey cypress tree (Cal-IPC Rating – Limited). Within the center of the parcel cultivars include eucalyptus stand (Cal-IPC Rating – Limited), periwinkle, and English ivy (Cal-IPC Rating – High). Several limited patches of water iris (Cal-IPC Rating – Limited) are located in the western portion of the swale along the back property line, found alongside a red escallonia bush and native species California blackberry, willow herb and a few patches of coast twinberry. Approximately 211 square feet of cultivar will be temporarily impacted by the installation of the habitat protective fencing, this will have no impact and no mitigation is required.

Non-native Grassland – *Bromus diandrus*, *Holcus lanatus*, *Cortaderia jubata*:
The Non-native grassland community is dominated by non-native herbaceous species ripgut brome (Cal-IPC Rating – Moderate), velvet grass (Cal-IPC Rating – Moderate), rattlesnake grass (Cal-IPC Rating – Limited), coastal heron bill (Cal-IPC Rating – Limited), sweet vernal grass (Cal-IPC Rating – Moderate), and sheep sorrel (Cal-IPC Rating – Moderate). In addition, native herbs found in varying abundance within this community include Pacific wild rye, dune blue grass, dune bent grass, and seashore lupin. The grassland largely borders SH1 to the west and abuts portions of the Coastal Strand habitats. Approximately 4,378 square feet of this community would be temporarily impacted, and 1.071 square feet would be permanently impacted by the construction of the bioswale for this Project.

Special Status Plant Species

During BRA scoping, 53 special status plant species were identified and reviewed to determine if suitable habitat is present within the BRAA (see Table 2 in Appendix C of the Biological Resources Assessment). Of these 53 special status plant species, 20 were found to potentially have suitable habitat within the BRAA and 3 special status plant species previously identified within the BRAA (Nelson 2007) were found to be present on the site during spring 2022 surveys.

Blasdale's agrostis (*Agrostis blasdalei*), and swamp harebell (*Campanula californica*) occurrences are mapped within the BRAA (CNDDB 2022), but the meta-data descriptions of these occurrences indicate they are mapped incorrectly. Blasdale's agrostis and swamp harebell were not identified within the BRAA.

Three special status plant species were located within the BRAA:

- Menzies' wallflower *(Erysium menziesii*), ranked: Federally Endangered (FE), State Endangered, & CNPS List 1B.2;
- Round-headed Chinese-houses *(Collinsia corymbose*), ranked: CNPS List 1B.2; and
- Dark-eyed gilia *(Gilia millefoliata*), ranked: CNPS List 1B.2.

Since Nelson's 2007 floristic survey was completed, habitat disturbance through expansion of sea-fig populations, human foot traffic and camping, off-road vehicles, and unknown use appear to have greatly decreased the populations of Menzies' wallflower, round-headed Chinese-houses, and dark-eyed gilia.

Menzie's wallflower (*Erysium menziesii*)
Within the BRAA, one population with 30 individuals of Menzie's wallflower was observed, in the Coastal Strand community. Impacts to Menzies' wallflower could occur, in the form of trampling, during proposed perimeter fence replacement or proposed restoration/mitigation work.

Round-headed Chinese-houses (*Collinsia corymbose*)

Within the BRAA, five populations with approximately 590 round-headed Chinese-houses were observed in the Coastal Strand community, shown in Figure 7 as Occurrences 3 to 7. Impacts to roundheaded Chinese-houses could occur, in the form of trampling, during proposed Project grading, perimeter fence replacement, and proposed restoration/mitigation work. Mitigations are proposed to reduce impacts to round-headed Chinese-houses.

Dark-eyed gilia (*Gilia millefoliata*)
Within the BRAA, five populations with approximately 790 individual Dark-eyed gilia were identified in the Coastal Strand community. No dark-eyed gilia were identified within the Project's impact area.

Special Status Animal Species

Previous scoping and surveys for special status animal species within the BRAA are unknown. During BRA scoping, 27 special status animal species were identified and reviewed to determine if suitable habitat is present within or directly adjacent to the BRAA. Of the 27 species, 3 special status animal species were found to potentially have suitable habitat within the BRAA. These include:

- western snowy plover (*Charadrius nivosus nivosus*), ranked: Federally Threatened and State Species of Special Concern (SSC);
- western pond turtle (*Emys marmorata*), ranked: SSC, Bureau of Land Management and U.S. Forest Service (S); and
- northern red-legged frog (*Rana aurora*), ranked: SSC.

Western Snowy Plover (*Charadrius nivosus nivosus*)
The Federally Threatened western snowy plover is a small sea bird known to nest on the State Park's beach approximately 0.25 miles or 1,300 feet from the BRAA. The plover breeds primarily above the high tide line, on coastal beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. The BRAA's Coastal Strand community, while not breeding habitat, may provide suitable wintering habitat. The proposed Project would permanently impact approximately 0.09 acres and temporarily impact approximately 0.03 acre of Coastal Strand community. Coastal strand in the northwest corner of the BRAA would be impacted by new native plant landscape screening and bioretention areas (see Figure 4). Restoration of Coastal Strand community within the BRAA that is not proposed for development would mitigate for proposed Project impacts to potential wintering habitat.

Western Pond Turtle (*Emys marmorata*)
The western pond turtle may utilize the North Coast Riparian natural community located near the Project on the parcel directly east of the BRAA. Although not observed during this BRA, presence on the neighboring parcel is assumed. Generally, female western pond turtles have been known to migrate, up
to 100 meters (325-feet) overland, from their aquatic habitat to nest and deposit eggs in a suitable upland location. Inadvertent take of the species during construction or Project operations could occur if a western pond turtle were to enter the BRAA. The Project's proposed chain link perimeter fence would provide a sufficient barrier to this species from entering the site during Project operations. Mitigations are proposed below to reduce potential construction-related impacts to western pond turtle to less than significant.

Northern Red-Legged Frog (*Rana aurora)*
The northern red-legged frog may utilize the North Coast Riparian natural community located near the Project on the parcel directly east of the BRAA. Although not observed during this BRA, presence is assumed. While northern red-legged frogs are known to be highly mobile, they require dense, highly aquatic vegetation, preferring extensive, dense vegetation for cover from predators. The northern red legged frog can travel up to one mile in upland habitat during wet weather to moist forests and riparian habitats. Inadvertent take of the species during construction or Project operations could occur if the northern red-legged frog were to enter the BRAA. The habitat in the BRAA, adjoining the off-site Marsh habitat, is not considered suitable breeding or likely migratory habitat, but given the

lack of recent activity in the BRAA there is a slight potential for migratory, dispersing frogs to travel into the upper site, potentially to access the limited vernal habitats within the BRAA. Mitigations are proposed to reduce potential Project-related impacts to Northern red-legged frogs to less than significant.

Of note, insect species, obscure bumble bee (*Bombus caliginosus*) is included in the CNDDB database and was identified as having potential habitat within the BRAA's Non-native Grassland community. A bumble bee that resembles the obscure bumble bee was observed with the BRAA but was not positively identified as the obscure bumble bee. Although the listing status of this species does not require impact mitigations, Project-related impacts to nectar plants within the Non-native Grassland community would be reduced through implementation of the Project's landscape screening design and maintenance plans.

Discussion

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less than significant with mitigation. The proposed Project would directly impact special status natural communities Coastal Strand. The Project also has the potential to indirectly impact special status animal species western snowy plover (*Charadrius nivosus nivosus*), western pond turtle (*Emys marmorata*), and northern red-legged frog (*Rana aurora*). With implementation of mitigation measures, the Project is not likely to adversely affect federally listed animal species snowy plover or federally listed plant species round-headed Chinese-houses and Menzies' wallflower, thus formal consultation with USFWS is not required.

Project impacts to Coastal Strand and Vernal Marsh natural communities, and special status species Menzie's wallflower, Round-headed Chinese Houses, and dark-eyed gilia would be reduced to a less than significant level with implementation of Mitigation Measure BIO-1. Mitigation Measure BIO-1 details installation of boundary fencing between the project development and the remaining undeveloped area, and establishment of bioretention/stormwater swale.

Project impacts to the western snowy plover would be reduced during project operations to a less than significant level with Mitigation Measure BIO-2. Project impacts to the western pond turtle would be reduced to a less than significant level with Mitigation Measure BIO-3, and the red-legged frog would be reduced to a less than significant level with Mitigation Measure BIO-4.

With implementation of Mitigation Measures BIO-1 through -4, impacts to species located on the project site would be mitigated to a less than significant level.

> **Mitigation Measure BIO-1: Reduce and Minimal Impacts to plant communities and special status species.** This mitigation measure is designed to minimize and mitigate potential temporary impacts to special status natural communities and special status plant species and during proposed Project grading, perimeter fence installation, and proposed restoration/mitigation work, the following are proposed:
>
> - Best Management Practices (BMPs) shall be implemented during construction in accordance with the Project's Stormwater Pollution Prevention Plan (SWPPP).
> - In order to limit potential construction-related impacts in areas adjacent to special status species and natural communities, prior to any construction work, a qualified botanist shall meet with the construction crew site manager(s) and shall oversee the installation of site habitat protective fencing and to inform the manager(s) of the avoidance and minimization constraints at the site.
> - The **Habitat Protection fencing** shall be installed prior to any other in the BRAA. Protective signage shall be installed that says "Do Not enter – Protected Area. The permanent habitat protective fence (T-stake with 5 feet high coated livestock wire) shall be installed along the border

with the paved zones, the driveway, the parking area and the property frontage (east of the informal parking area) to protect special status habitats and species at the site.

- To avoid any inadvertent trampling of special status plant species, during or prior to restoration work, a qualified **botanist shall place lath stakes with flags** around the special status plant species occurrences to identify and protect these special status plant populations. Prior to restoration work, a qualified **botanist shall train the restoration crew supervisor** on how to identify and avoid Menzies' wallflowers, dark-eyed gilia, and roundheaded Chinese-houses.
- Invasive pampas grass (*Cortaderia jubata*) and blue gum trees (*Eucalyptus globulus*) adjoining the Coastal Strand community shall be mechanically removed to protect Coastal Strand habitat and its species from further encroachment.

Mitigation Measure BIO-2: Avoid and reduce impacts to western snowy plover. To mitigate for potential predator-related impacts to western snowy plover during Project operations:

- All waste shall be fully contained within an enclosed transfer trailer, moved on a truck-to-truck basis only.
- Full transfer trailers shall then transport collected materials off-site within 24 hours;
- No materials shall be stored on the ground at any time;
- The operation's staff shall make every best effort to deter crows and ravens from the site, such that, any collected material that may unintentionally fall outside of the vehicles will be promptly cleaned up and replaced within the vehicle to which it is being transferred;
- A permanent habitat protective fence (T-stake with 5 feet high coated livestock wire) shall be installed along the border with the paved zones, the driveway, the parking area and the property frontage (east of the informal parking area) to protect special status habitats and species at the site. This fencing and the regular human activity during business operations will deter coyotes, raccoons and people from trespassing.

Mitigation Measure BIO-3: Avoid and reduce impacts to western pond turtles. To mitigate for potential presence and impacts to western pond turtles, prior to construction:

- A qualified biologist shall train the construction and restoration supervisors in identifying and avoiding harm to the western pond turtle.

Mitigation Measure BIO-4: Avoid and reduce impacts to northern red-legged frog. To assess presence and address potential impacts to northern red-legged frog within the BRAA the following mitigation are proposed:

- Prior to beginning construction, a qualified biologist shall train the construction and restoration supervisors in identifying and avoiding harm to northern red-legged frogs;
- Grading work shall be limited to the dry period generally from July 1 to October 30. Work beyond October 30 may continue if approved by the Director of Public Works; and
- After October 30, anytime there is a rain event of 0.10-inch or greater, construction work shall halt and a qualified biologist, approved by CDFW, shall survey the project site for northern red-legged frogs at least two days after the qualifying rain event, before construction activities can resume.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or 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?

Less than significant with mitigation. As mentioned in a), the Project would not permanently impact any special status natural communities. With implementation of Mitigation Measure BIO-1, temporary impacts to special status natural communities would be reduced to a less than significant level.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No impact. The project site is surrounded by industrial and commercial uses, residential homes, State Highway 1, and minimal vegetation and open space. The project is located on the eastern side of State Highway 1, and industrial uses are located to the north, south, and east of the project site. The project site does not provide any wildlife movement corridors or wildlife nursery sites. Therefore, there would be no impacts to wildlife corridors or the use of native wildlife nursery sites as a result of the proposed project.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No impact. As conditioned through the Use Permit and as mitigated in this MND the project does not conflict with any local policies or ordinances protecting biological resources. The City does not have a tree ordinance and the project does not propose the removal of any trees.

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?

No impact. No Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan applicable to the site. Therefore, no impacts to an existing adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan would occur.

XII. CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource 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 dedicated cemeteries?	☐	☒	☐	☐

The discussion below is based on an Archaeological Survey Report prepared by Alta Archaeological Consulting (August 2021) and is included in the Project files.

Setting

Alta Archaeological Consulting (ALTA) was retained to conduct a cultural resources inventory as part of the permitting process for industrial development on the site. An archaeological field survey was completed by ALTA on August 9, 2021 for the purpose of identifying cultural resources within the project site. For the purposes of this investigation, the entire parcel was surveyed, totaling approximately 7-acres. No new cultural or historical resources were identified within the project site. A previously known resource was relocated within the project parcel. The cultural resources survey report documents the adequacy of identification efforts, presents the results of investigations within the project site boundaries, and makes recommendations for management of resources present on the property. This cultural resource inventory report addresses the responsibilities of the California Environmental Quality Act (CEQA), as codified in Public Resources Code sections 5097, and its implementing guidelines 21082 and 21083.2.

Background

The project site is situated within the Coast Range geologic province (Jennings et al. 1977). The northern Coast Ranges are a geologic province comprised of numerous rugged north-south trending ridges and valleys that run parallel to a series of faults and folds. Formation of these ranges is generally attributed to events associated with subduction of the Pacific Plate beneath the western border of North America. The bedrock that underlies the region is a complex assemblage of highly deformed, fractured, and weathered sedimentary, igneous, and metamorphic rocks. The bedrock geology of the Project Area consists of Jurassic-Cretaceous age Franciscan Formation rock (Jennings et al. 1977; Schoenherr 1995:7). Rocks of this formation, the oldest in the area, are often weakly metamorphosed, and consist of greywacke shale interspersed with discontinuous bodies of ultramafic rock such as greenstone, schist, and serpentine. The repeated folding and faulting are reflected in the complex structure of Franciscan rocks and area topography (Schoenherr 1995:265).

A Mediterranean climate prevails within the project site with an average of 60-70 inches of rainfall annually. Winters are cool and wet, while summers are hot and dry. Annual temperatures range from about 30 to 95 degrees Fahrenheit. Soft wood trees such as redwood (Sequoia sempervirens) and hardwood species such as tan oak (Notholithocarpus denisflorus) and Pacific madrone (Arbutus menziesii) are common along the mountain slopes to the east. The project area is located in the Coastal Prairie biotic community of Mendocino County. The project area is underlain by dune sand with no substantial soil development. Heavy winds prevent the larger varieties of trees and as a result these lands do not naturally support large faunal communities (Schoenherr 1995:282). Cypress trees (Hesperocyparis macrocarpa) have been planted on nearby parcels to form windbreaks.

The project is located in the Fort Bragg in western Mendocino County, with elevations varying from approximately 45 to 65 feet above mean sea level. The project site is situated north of Pudding creek, across California State Route 1 from MacKerricher State Park. The nearest fresh water source is Virgin Creek, north of the Project Area. The project area is in an undeveloped lot populated with native and nonnative annual and perennial grasses.

Prehistory

Over half a century of archaeological investigations in the North Coast Ranges has revealed a record of hunter-gatherer occupation spanning over 10,000 years. The cultural chronology of the project site is best described as part of the overall cultural chronology for the central North Coast Ranges. In his 1974 doctoral dissertation David A. Fredrickson proposed five chronological periods and related cultural patterns. The Paleo-Indian Period (10,000 to 6000 BC) is represented as a hunting adaptation characterized by large fluted projectile points. The Lower Archaic

Period (6000 to 2000 BC) is distinguished by an emphasis on plant exploitation as evidenced by high frequencies of milling tools. The Middle Archaic (3000-1000 BC) is characterized by the introduction of mortar and pestle technology and the assumed exploitation of acorns. The Upper Archaic Period (1000 BC to AD 100) is represented growing social complexity marked by status differentiation, complex trade networks, and the development of "group oriented religious activities" (Fredrickson 1974:48). The Emergent Period (AD 500 to Historic times) is marked by the use/introduction of bow and arrow technology, expansion of exchange relations, and the establishment of clearly defined territorial systems.

A number of cultural chronologies have been developed for this region (cf. Basgall 1982; Fredrickson and White 1988; Hildebrandt and Hayes 1984; Jones and Hayes 1993; Layton 1990; Meighan 1955; White and King 1993; White et al. 2002). White et al. (2002) provides the most synthetic summary of relevant research themes and the current state of knowledge concerning prehistoric hunter-gatherer studies in the North Coast Ranges. Archaeologists and linguists believe that Yukian peoples were the original inhabitants of the Mendocino coast and were displaced by Pomo speakers. Yukian assemblages are affiliated with the Gunther Pattern of northwestern California and generally lack obsidian. When obsidian is present, it is most often derived from northeastern California sources such as the Medicine Lake Highlands and Grasshopper Flat. Pomoan assemblages are affiliated with the Augustine Pattern and show influences from Central California including strong access to obsidian from the Clear Lake basin. Layton's (1990) work at sites on Albion Head, Night Bird's retreat, and Three Chop village represent one of the most synthetic attempts devoted to detecting the expansion of Pomoan populations across the North Coast Ranges.

Significant archaeological research conducted within MacKerricher State Park during the late 1980s included excavation of 11 prehistoric Native American shell mound sites within the park, outlined a three-phase cultural chronology for the area, identified several research problems that form the basis of much subsequent work and was a major step toward understanding local archaeology on the Mendocino Coast (White 1989: Figure 1).

Ethnography

The project area is generally considered to be within the ancestral territory of the Coast Yuki (Barrett 1908, Kroeber 1925), though the land is near a territorial border between the Coast Yuki and the Northern Pomo to the south (White 1989:14). Stewart (1943) assigned this area as part of North Pomo territory extending north to the South Fork Ten Mile River. The Coast Yuki, who inhabited this region prior to European-American intrusion, are one of three linguistically related groups that spoke the Yuki Language: Coast Yuki, Yuki and Huchnom. The Yuki language has been grouped with Wappo in the Yukian language family (Miller 1978:249). The following ethnographic summary is not intended as a thorough description of Coast Yuki culture, but instead is meant to provide a background to the present cultural resource investigation with specific references to the project area. In this section, the past tense is sometimes used when referring to native peoples, as this is an historical study. This convention is not intended to suggest that Yuki people only existed in the past. To the contrary, the Yuki people have a strong cultural and social identity today.

The Coast Yuki occupied a portion of what is now the northern Mendocino Coast, in the area from Cleone to north of Rockport, along the coast and for several miles inland (Barrett 1908:360). The Coast Yuki lived in small groups and moved seasonally, harvesting at beach camps during the summer, and moving inland for the winter (Miller 1978:254). Each Coast Yuki Group had a headman and controlled a strip of land from the coast inland to the eastern boundary of Coast Yuki territory. In spite of territorial divisions, many groups would come together to gather a particularly plentiful resource, such as mussels at Westport. The Coast Yuki primarily subsisted off of shellfish, seals, salmon, acorns and root plants. Some deer and elk were also consumed. Trade networks were maintained with the Cahto and Northern Pomo to obtain obsidian, tobacco, and clamshell disk beads, trading ocean products in return (Miller 1978:255).

History

Early Exploration

Mendocino County derives its name from Cape Mendocino, which lies northward of its northern boundary. Cape Mendocino was given its name by the 16th century Spanish navigator, Juan Rodriquez Cabrillo. Cabrillo discovered the cape in 1542 while on a voyage of discovery along the Pacific Coast and named it in honor of Don Antonio de Mendoza, the first Viceroy of New Spain (Mexico), and the patron of the voyageur. Although Spanish explorers traveled by sea along the Mendocino coast beginning as early as the 1500s, regular contact with local tribes did not occur until after about 1812, when Russian fur-trapping parties established the trading outpost at Fort Ross in Sonoma County. The 1822 shipwreck of a Russian vessel along the back Mendocino coast near Point Arena likely resulted in the first contact between local native groups and Euro- American colonists. In 1833, John Work of the Hudson Bay Company led a party across the Noyo River in search of pelts. Work's journal provides the first recorded interaction between local Native peoples and Euro-American settlers on the Mendocino Coast (Palmer 1880).

Spanish and Mexican Periods

Neither Spanish nor Mexicans had significant influence in Mendocino County beyond establishing two Mexican land grants in central Mendocino County. These grants, Rancho Sanel in Hopland (1844) and Rancho Yokaya (1845), included the majority of the Ukiah Valley (Beck and Haase 1974:26-27). In an effort to gain control of the coast, the Mexican government issued two large land grants that encompassed the entire coast from Big River south to the Gualala River. Rafael Garcia petitioned in 1844 for lands from Elk to the Gualala River and inland two leagues. William Richardson claimed lands to the north of the Garcia River as far as Big River. In 1845, the Mexican- American war broke out as a result of US annexation of Texas. At the conclusion of the war in 1848, Mexico ceded its northern territories to the United States, from Texas to California. Neither grant was subsequently recognized by the U.S. government during trials after the passage of the Land Act of 1851 (Sullenberger 1980).

Anglo Settlement and Native American Reservations

Permanent non-indigenous settlement along the Mendocino Coast did not take place until the mid- 1840s. Problems quickly developed between setters and local Native Americans involving a struggle over territory and competition over food between livestock and people. Campaigns of genocide led by local settlers decimated the population of Coast Yuki peoples, decreasing the population from 750 in 1850 to 50 in 1864 (Miller 1978:250). In 1855, two Indian reservations were established in Mendocino County for the purpose of "collecting, removing and subsisting" local tribes (Winn 1986).

The Mendocino Reservation was established on the coast near Fort Bragg, north of the mouth of the Noyo River. Indians were rounded up and brought to the reservation, where they were mandated to stay, inadequately rationed and often physically abused (Winn 1986:22-24). In 1857 Lt. Horatio Gibson established the military encampment of Fort Bragg to manage the Mendocino Reservation (Palmer 1880:423-428). By the summer 1857, the reservation included a population of 3,450 Indians from many different tribal groups, 350 acres of planted land, and 24 houses for Indians (Winn 1986:17). An additional 1,500 Indians were absent by permission subject to good behavior enforced by the U.S. Army military. Native Americans were rounded up, mandated to stay on the reservation, inadequately rationed, and physically abused (Winn 1986:22-24). Thomas J. Henley, Superintendent of Indian Affairs in California in the mid 1850's, was accused of stealing reservation funds and fraud (Winn 1986:21-22). Henley was removed from office in June 1859, but never charged for his alleged crimes. The Mendocino Reservation was deemed a failure and closed in 1867 (Winn 1986). After the closing of the Mendocino Reservation in 1867, Coast Yuki people were moved to the Round Valley Reservation (Miller 1978:249). By 1970, it was believed that no speakers of the Coast Yuki language remained (Kroeber and Heizer 1970:3).

MacKerricher State Park

Duncan MacKerricher (1836-1926) and his wife Jessie McArthur (1837-1923) emigrated from Canada and settled land south of the Ten Mile River in 1864, during the tenure of the Mendocino Indian Reservation (Gudde 2004:222). The MacKerrichers purchased 1000 acres, which they called Rancho de la Laguna, not to be confused with ranchos established under the Mexican land grant system. The MacKerrichers employed Native people on the Mendocino Reservation, raising cattle, hogs, and draft horses. The homestead was deeded to the state in 1949, to become MacKerricher State Park. In this year, the Ten Mile Railroad formerly operated by the Union Lumber Company was replaced as a road for the park (State Parks 2017).

Regulatory Context

CEQA applies to certain projects requiring approval by State and/or local agencies. Property owners, planners, developers, as well as State and local agencies, are responsible for complying with CEQA's requirements regarding the identification and treatment of historical resources. Applicable California regulations are found in California Public Resources Code (PRC) Sections 5020 through 5029.5 and Section 21177, and in the CEQA Guidelines (CCR Sections 15000 through 15387). CEQA equates a substantial adverse change in the significance of a historical resource with a significant effect on the environment (PRC Section 21084.1). A substantial adverse change includes demolition, destruction, relocation, or alteration that would impair the historical significance of a resource (PRC Section 5020.1). PRC Section 21084.1 stipulates that any resource listed in, or eligible for listing in, the California Register of Historical Resource (CRHR) is presumed to be historically or culturally significant. If a resource is determined ineligible for listing on the CRHR, the resource is released from management responsibilities and a project can proceed without further cultural resource considerations.

Under CEQA, cultural resources that will be affected by an undertaking must be evaluated to determine their eligibility for listing in the CRHR (PRC Section 5024.1(c)). For a cultural resource to be deemed eligible for listing, it must meet at least one of the following criteria:

1. is associated with events that have made a significant contribution to the broad patterns of California History and cultural heritage; or
2. is associated with the lives of persons important to our past; or
3. embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possess high artistic value; or
4. has yielded or is likely to yield, information important to prehistory or history.

CEQA Guidelines Section 15064.5 also applies to unique archaeological resources as defined in PRC 21084.1. Section 21083.2 defines "unique archaeological resources" as "any archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and show that there is a demonstrable public interest in that information.
- Has a special and particular quality, such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person."

The eligibility of archaeological sites is usually evaluated under Criterion 4 –its potential to yield information important to prehistory or history. Whether or not a site is considered important is determined by the capacity of the site to address pertinent local and regional research themes. The process for considering cultural resources on CEQA projects is essentially linear, although in practice it may overlap or be compressed. Evaluating prehistoric properties involves four basic tasks: (1) development of an archaeological research design (2) field excavations, (3) laboratory analysis, and (4) report preparation and eligibility determination.

Sources Consulted

Records Search

On June 17, 2021, Alex DeGeorgey, Principal Archaeologist with ALTA, conducted a records search (File Number 20-2618) at the Northwest Information Center (NWIC). The NWIC, an affiliate of the State of California Office of Historic Preservation is the official state repository of archaeological and historical records and reports for an 18-county area that includes Mendocino County. The records search included a review of all study reports on file within a one-half mile radius of the project site. Sources consulted include archaeological site and survey base maps, survey reports, site records, and historic General Land Office (GLO) maps. Included in the review were:

- California Inventory of Historical Resources (CA Dept. of Parks and Recreation 1976)
- California Historical Landmarks for Mendocino County (CA-OHP 1990)
- California Points of Historical Interest (CA-OHP 1992)
- Built Environment Resources Directory (BERD) (CA-OHP January 2020), including the National Register of Historic Places, California Historical Landmarks, and California Points of Historical Interest

Review of historic registers and inventories indicate that no historical landmarks or points of interest are present in the Project Area. According to the Built Environment Resources Directory, one historic property is located within the 0.5-mile visual area of the Project Area, 32500 Airport Rd., which has been evaluated as not eligible for listing on the National Register.

Review of archaeological site and survey maps revealed that four cultural resource studies have been previously performed within a one-quarter mile radius of the current project site (Table 2). Approximately 50% of the 0.25-mile records search radius has been previously surveyed. One study (S-33296) has been conducted within the project site, which had re-identified the previously recorded site within the parcel, P-23-003691 (Van Bueren 2006a).

Four pre-historic cultural resources are documented within quarter-half mile radius of the project site (Table 3) (P-23-000415, P-23-000416, P-23-002933 and P-23-003690). There is one cultural resource documented within the project site (P-23-003691).

Table 3: Summary of Previous Cultural Resource Studies within the Search Radius

Report No.	Authors	Year	Description
S-033296	Thad M. Van Bueren	2006	An Archeological Survey of Seven Acre Proposed Subdivision for the City of Fort Bragg, California.
S-001235	Roger H. Werner	1978	An Archaeological Survey of State Highway 1 from Pudding Creek North to Cleone Beach Road, Mendocino County, California.
S-001800	M. Holman, R. Melander, S. Van Dyke, and W. Woolfenden	1969	Archeological Survey Report of Selected Beaches and Parks from District 2.
S-008997	Jay M. Flaherty	1987	An Archeological Survey of 25.8 acres near Fort Bragg, Mendocino County, California (MS #59-86) (letter report).
S-010588	Jay M. Flaherty	1988	An Archeological Survey of AP # 69-231-10, 12 Fort Bragg, Mendocino County, California (letter report).

Table 4: Summary of Documented Cultural Resources within Search Radius

Primary No.	Trinomial	Age	Description
P-23-003691	CA-MEN-003123	Prehistoric	Consists of small shell midden with fire-affected rock, mammal bone, and a ground stone fragment located on a sand due.
P-23-000415	CA-MEN-000412	Prehistoric	MacKerricher #10
P-23-000416	CA-MEN-000413	Prehistoric	[None provided]
P-23-002933	CA-MEN-000542	Prehistoric	Gifford's Site #2
P-23-003690	CA-MEN-003122	Prehistoric	Bxman-1

P-23-0003691 (CA-MEN-003123) is a pre-historic resource located on a sand dune that consists of a small shell midden with fire-affected rock, mammal bone, and a ground stone fragments (Van Bueren 2006b). The remaining sites in the search radius exhibit similar characteristics representing coastal resource exploitation and processing.

Historic Map Review

Review of historic maps of the area was completed to better understand the timing of development within the project site and recognize historic features. The following historic maps were reviewed as part of this investigation.

- Bureau of Land Management (BLM)
    - 1866 Survey plat of T19N R17W. General Land Office Records, Bureau of Land Management, Washington, D.C. 1:31,680 scale.
    - 1877 Survey plat of T19N R17W. General Land Office Records, Bureau of Land Management, Washington, D.C. 1:31,680 scale.

- Metsker, C.
    - 1954 Township 19 N., Range 17 and 18 W., Cleone, Glenblair, Inglenook. Metsker Maps

- United States Geological Survey (USGS)
    - 1920 Fort Bragg Topographic Map, 1:62,500 scale.
    - 1943 Fort Bragg Topographic Map, 1:62,500 scale.
    - 1960 Fort Bragg Topographic Map, 1:24,000 scale.

The project site first appears on the 1866 GLO survey map, which depicts the area as part of the Mendocino Indian Reservation (BLM 1866). The land remained un-surveyed until 1877, after the Mendocino Indian Reservation had been dissolved and the land officially opened to settlement. By 1920 the parcels are shown as further subdivided, with structures present along North Main St. The Ten Mile Railroad is also shown running west of the Project Area, along what is now MacKerricher State Park Road (USGS 1920). By this timeframe, the area had been subdivided and development had begun. The parcel containing the Project Area is listed as being held by L.J. Miettunen, J. Knudsen, and R&D Josephson (Metsker 1954).

Ethnographic Literature Review

Available ethnographic literature was reviewed to identify cultural resources in the project vicinity. The following sources were consulted.

- Barrett, Samuel A.
    - 1908 The Ethnogeography of the Pomo and Neighboring Indians. University of California Publications in American Archaeology and Ethnology 6(1):1-332.
- Kroeber, Alfred L.

  - 1925 Handbook of the Indians of California. Bureau of American Ethnology Bulletin 78. Government Printing Office, Washington, D.C.
- McLendon, Sally and Robert L. Oswalt
  - 1978 Pomo: Introduction. In Handbook of the Indians of North America, Volume 8 California. Smithsonian Institution, Washington, D.C.
- Miller, Virginia
  - 1978 Yuki, Huchnom, and Coast Yuki. In Handbook of the Indians of North America, Volume 8 California. Smithsonian Institution, Washington.

Prior to Euro-American occupation, the project area was used by the Coast Yuki, though the project site is near a disputed border of the Coast Yuki and Northern Pomo (Barrett 1908; Miller 1978). No ethnographically recorded Coast Yuki camps are known within a five-mile radius of the project site. The nearest ethnographically described resource to the project area is the Northern Pomo camp site of gaiyeti'l, located at the cliffs about 0.75 mile north of Pudding Creek. This site was neighbored by another campsite, kabētsitū, 300 feet to the south (Barrett 1908:134).

Native American Outreach

Assembly Bill 52, which went into effect in July 2015, established a proactive consultation process with all California Native American tribes identified by the Native American Heritage Commission (NAHC) with cultural ties to an area. This process is implemented on projects that file a notice of preparation for an EIR or notice of intent to adopt a negative or mitigated negative declaration. Under AB52, the Lead Agency is required to consult with tribes at tribal request. The bill further created a new class of resources under CEQA known as Tribal Cultural Resources (TCRs).

ALTA archaeologist Heather Warner contacted the NAHC on June 17, 2021 to request a review of the Sacred Lands file for information on Native American cultural resources in the study area and to request a list of Native American contacts in this area. In the NAHC response dated July 7, 2021, Sarah Fonseca (Cultural Resources Analyst) indicated that a search of the Sacred Lands File returned a negative result. The NAHC forwarded a list of suggested tribal entities to contact for their input or concerns regarding the project.

On June 22, 2021, an outreach letter was sent to the Chairperson of each tribal group associated with the Study Area. The City has engaged in informal consultation with the Sherwood Valley Band of Pomo with regard to this project and the tribe has requested that a Native American monitor be present during all excavation activities.

Field Methods

ALTA staff archaeologist Brianna Boyd conducted a field survey of the Project Area on August 9, 2021. Project design drawing, project maps and aerial imagery were used to correctly identify the Project site. Ground surface visibility was fair, about 70% throughout the survey area and poor about 20% in certain sections due to dense low and high-lying grasses, downed eucalyptus vegetation, blackberry and other brushes. An area that had been used as a previous concrete pad took up 20% of the parcel and provided clear ground visibility.

The previously identified resource, **P-23-003961 (CA-MEN-3123),** was relocated during the field survey. The resource appears to be in similar condition as the original 2006 site record, with perhaps a greater level of disturbance since the original recordation. The parcel has been subject to considerable surface disturbances from visitors to the area using part of the parcel as a parking lot for nearby beach access and modern trash from homeless encampments. The entirety of the project parcel was surveyed, totaling 7-acres of land. The project site was surveyed using intensive survey coverage with transects no greater than 10-meter intervals. Twenty-two shovel pits were placed at of depth of 10 – 20 cm to expose underlying mineral soils. Soils compositions consisted of yellowish-brown fine grain sand to brown sandy loam. The previously delineated boundaries of **P-23-003961** are still accurate given no artifactual or other cultural deposit was identified by the shovel pits outside the known boundaries of the site. No new discrete deposit of cultural resources was identified during survey.

Discussion

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?

Less than significant with mitigation. This cultural resource inventory was conducted to address the responsibilities of CEQA, as codified in Public Resource Code sections 5097, and its implementing guidelines 21082 and 21083.2. No new cultural resources were identified within the project site as a result of the records search, literature review, Native American communication, or archaeological field survey. No evidence of the previously recorded prehistoric site (P-23- 003691) was identified outside of the known boundaries of the site; indeed, the soil exposures and shovel pits did not result in the identification of a substantial subsurface deposit. However, the surface manifestation of the site is evident, but constrained to the existing delineated boundaries.

As initially proposed the project would have impacted the boundaries of the proposed project site. However, the project was redesigned and neither the site nor its 100-foot buffer would be disturbed by any site construction or long-term activities. As designated, the footprint of the proposed project will not directly affect the known boundaries of the site.

Mitigation Measure CUL-1, CUL-2, and CUL-3 are provided in order to avoid an adverse effect or significant impact to this potential historical resource. With the implementation of these mitigation measures the project, as presently designed, would result in a less than significant impact to tribal cultural resources.

> **Mitigation Measure CUL-1: Avoidance of Cultural Resources** Project proponents shall ensure that cultural resources are not adversely affected by ground disturbing activities within the sensitive area and buffer (100-feet).
>
> **Mitigation Measure CUL-2: Unanticipated Discovery of Cultural Resources.** If previously unidentified cultural resources are encountered during project implementation, all construction within 100 feet of the find shall be temporarily halted until the find is examined by a qualified professional archaeologist. Project personnel should not collect cultural resources. Prehistoric resources include, but are not limited to, chert or obsidian flakes, projectile points, mortars, pestles, and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic resources include stone or abode foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies.
>
> **Mitigation Measure CUL-3: Implementation and Monitoring of Mitigation Measures.** Prior to construction, the applicant shall hire a qualified tribal monitor to assist in implementation of mitigation measures. The monitor will be notified when construction begins and will inspect the construction area as necessary during work to ensure that the site is protected and to monitor for any new site discoveries. The monitor will notify the City of Fort Bragg and the State Historic Preservation Officer within 48 hours of any ESA violation or unanticipated discovery to determine how it will be addressed. After construction, the monitor shall supervise removal of the temporary fencing.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less than significant with mitigation. No human remains are known to exist within the project area nor were there any indications of human remains found during the field survey. However, there is always the possibility that subsurface construction activities associated with the proposed project, such as trenching and grading, could potentially damage or destroy previously undiscovered human remains. This is a potentially significant impact.

However, if human remains are discovered, implementation of Mitigation Measure CUL-4 would reduce this potential impact to a less than significant level.

> **Mitigation Measure CUL-4: Encountering Native American Remains.** Although unlikely, if human remains are encountered, all construction must be temporarily halted within 100 feet of the discovered remains, and the County Coroner and a qualified archaeologist must be notified immediately so that an evaluation can be performed. If the remains are deemed to be Native American and prehistoric, the Native American Heritage Commission must be contacted by the coroner so that a "Most Likely Descendant" can be designated and further recommendations regarding treatment of the remains is provided.

XIII. ENERGY

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

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

No impact. The proposed project would consist of the construction of an earth and gravel ramp. Energy use of site would be limited to two light poles. No Natural gas will be utilized on site. The project will utilize the same amount of gasoline and diesel fuel as was used for the previous Waste Management operation, and considerably less than is used currently without the benefit of a transfer station, as the total miles traveled by collection trucks will follow significantly post-project.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No impact. The proposed project will not conflict with any local or state plan for renewable energy or energy efficiency. No known plan is proposed for the project site.

XIV. GEOLOGY AND SOILS

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
	ii. Strong seismic ground shaking?	☐	☐	☒	☐
	iii. Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
	iv. Landslides?	☐	☐	☒	☐
b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial 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 waste water?	☐	☐	☐	☒
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

A Geotechnical Exploration Technical Memorandum was prepared by LACO Associates Inc on March 4, 2022, and is included as Appendix D. The findings of the report are summarized below.

Setting

The City of Fort Bragg is located in the Coastal Range geomorphic province of California in an area of relatively steep and mountainous topography. The City itself is built on uplifted marine terrace deposits. Soils in the City of Fort Bragg are variations of sand dune, sandy loams, and the like. There are no mines nor identified mineral resources within the City of Fort Bragg limits (CDC 2022d).

Regionally, the University of California Museum of Paleontology (UCMP) database lists 513 fossil localities within Mendocino County (UCMP 2020). Of the known fossil localities, 63 are from the Cretaceous period and 2 are from

the Jurassic Period. A review of the Mendocino County fossil record indicates that 10 early Cretaceous fossils have been discovered within the County and no late Jurassic fossils have been discovered (UCMP 2020).

Seismically, the City is located between two major fault systems, the Mayacamas Fault is 20 miles east of the City and runs north-south roughly along Highway 101. The San Andreas Fault network runs approximately 5 miles offshore from the City. According to the Department of Conservation's Earthquake Hazards Zone Application (CDC EQ Zapp), the City of Fort Bragg does not contain any Alquist Priolo fault traces or zones (CDC 2022b). The Department of Conservation's "Earthquake Shaking Potential for California" shows the relative intensity of ground shaking anticipated from future earthquakes. The City of Fort Bragg is shown as moderate level of intensity for 1.0 second earthquake shaking (CDC 2022c).

The City also has some areas that have potential for landslides. There are areas along the Noyo River and Pudding Creek that may present a higher risk for landslide due to steep slopes. However, the project site is not within a landslide zone according to the CDC EQ Zapp (CDC 2022b).

Soils on the project site are mapped according to the Soil Resources Report (NRCS 2021):

- Cabrillo-Heeser complex, 0 to 5 percent slopes: 5.6% of parcel
- Dune land: 62.3% of parcel
- Sirdrak loamy sand, 0 to 15 percent slopes: 32.1% of parcel

These soil classes are identified as having moderately low to moderate drainage. Drainage is unknown for Dune Land.

At the local level, the Inland General Plan policies and programs also address geology and soils, as outlined in Table 4 below.

Table 5: Inland General Plan Policies and Programs- Geology and Soils

Safety Goal SF-1 Policy SF-1.1 Minimize Hazards: New development shall: (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard; and (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs
Program SF-1.1.1 Continue to comply with the provisions of the State Alquist-Priolo Act.
Program SF-1.1.2 Require professional inspection of foundations and excavations, earthwork, and other geotechnical aspects of site development during construction on those sites specified in soils, geologic, and geotechnical studies as being prone to moderate or high levels of seismic hazard.
Program SF-1.1.3 Monitor and review existing critical, high priority buildings to ensure structural compliance with seismic safety standards.
Program SF-1.1.7 Continue to comply with State law regarding reinforcement of unreinforced masonry structures.

Policy SF-1.2 Geotechnical report required: Applications for development located in or near an area subject to geologic hazards, including but not limited to areas of geologic hazard shown on Map SF-1, shall be required to submit a geologic/soils/geotechnical study that identifies all potential geologic hazards affecting the proposed project site, all necessary mitigation measures, and demonstrates that the project site is suitable for the proposed development and that the development will be safe from geologic hazard. Such study shall be conducted by a licensed Certified Engineering Geologist (CEG) or Geotechnical Engineer (GE). Refer to Map SF-1: Geologic Hazards. Refer to the General Plan Glossary for definitions of these terms.
Policy SF-1.4 Identify Potential Hazards: Identify potential hazards relating to geologic and soils conditions during review of development applications.
Policy SF-1.4 Program SF-1.4.1 Evaluate slopes over 15 percent, unstable land, and areas susceptible to liquefaction, settlement, and/or soil expansion for safety hazards prior to issuance of any discretionary approvals and require appropriate measures to reduce any identified hazards.
Program SF-1.4.2 Require that development in areas with identified slope stability constraints as shown on Map SF-1 or other areas where City staff determines there is potential slope stability issues be supervised and certified by a geologist, geotechnical engineer, or engineering geologist.
Program SF-1.4.3 Require repair, stabilization, or avoidance of active or potentially active landslides, areas of soil creep, or areas with possible debris flow as a condition of project approval.

The ILUDC Chapter 18.62 provides standards for grading, erosion, and sediment control. A proposed project that creates ground disturbance would have to be in compliance with any applicable section of this chapter including §18.62.030 Erosion and Sediment Control, §18.62.070 Revegetation and Slope Surface Stabilization, §18.62.090 Setbacks for Cut and Fill Slopes, and any other section that regulates erosion.

a) **Discussion** 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? Refer to Division of Mines and Geology Special Publication 42?

Less than significant impact. According to the CDC Earthquake Hazards Zone Application (EQ Zapp) Map, there are no known active faults crossing the property, and the project site is not located within an Earthquake Fault Zone (CDC 2022b). Therefore, ground rupture is unlikely at the subject property, and impacts would be less than significant.

   ii. Strong seismic ground shaking?

Less than significant impact. According to the Geotechnical Exploration, the project site is in a seismically active region where large earthquakes may be expected to occur during the economic lifespan (50 years) of the structures due to the seismic activity of the northern section of the San Andreas fault. The nearest potentially active fault is the north coast section of the San Andreas fault zone, which is located approximately 7 miles west of the project site in the Pacific Ocean. The next nearest fault is the Mayacamas Fault Zone, located approximately 22 miles east of the Site.

However, the project site is not located within an Alquist Priolo fault trace or zone (CDC 2022b). The proposed project would be constructed in accordance with standards imposed by the City of Fort Bragg through the ILUDC Chapter 18.62, standards for grading, erosion, and sediment control, and in compliance with the 2019 California Building Code (CBC) requirements (City of Fort Bragg Inland Land Use and Development Code 2021). Potential impacts would be reduced to levels considered acceptable in the City of Fort Bragg. As a result, the project would not expose people or structures to substantial adverse effects of seismic events. This would be a less than significant impact and no mitigation would be required.

iii. Seismic-related ground failure, including liquefaction?

Less than significant impact with mitigation. The project site is a relatively flat with elevations ranging from 45 feet to 60 feet. Additionally, the project site is not located within an Earthquake Fault Zone, as mentioned in i.), and is not located within a liquefaction zone (CDC 2022b). According to the soils mapping for the site, the Cabrillo-Heeser complex and the Sirdrak loamy sand soils onsite have a depth to the water table greater than 80 inches (NRCS 2022). No information on depth to the water table for Dune land was provided, however no development is proposed in the dune land areas. The Geotechnical Exploration concludes that based on the classification and density of the soils observed at the project site, the loose, poorly graded sands have liquefaction susceptibility. However, the proposed project will be located entirely within the frame of the paved and graveled area on the back of the site that has been used by heavy industrial uses in the past. With implementation of Mitigation Measure GEO-1, impacts relating to seismic-related ground failure would be less than significant.

> **Mitigation Measure GEO-1: Compliance with the Geotechnical Exploration Recommendations.** The project applicant shall implement all recommendations outlined in the Geotechnical Exploration, prepared by LACO Associates Inc., and attached as Appendix C. The recommendations shall avoid impacts to settlement and/or collapse when subjected to structural loading. The recommendations shall be implemented before construction commences and throughout project construction.

iv. Landslides?

Less than significant impact. The existing project site is a partially developed site with various plant communities. The project site has relatively flat topography with elevations ranging from 45 feet to 60 feet. According to the NRCS Web Soil Survey, the existing on-site soil ranges from 0 to 15 percent slopes. Additionally, as mentioned in i.), the project site is not located near a fault and is not located within an Earthquake Fault Zone. The topography and location of the project reduces the potential of site slope instability and surface rupture to almost negligible. Therefore, landslides are unlikely at the subject property and impacts would be less than significant.

b) Result in substantial soil erosion or the loss of topsoil?

Less than significant impact. Cabrillo-Heeser complex soils have a high runoff potential, Sirdrak loamy sand soils have a low runoff potential, and Dune Land did not identify the runoff potential (NRCS 2022). Soils with a high runoff potential would indicate a higher potential for water erosion. Ground disturbing activities during construction of the project would further increase the potential for soil erosion. The 2019 CBC and the City's standards for grading, erosion, and sediment control (ILUDC Chapter 18.62), contain requirements to minimize or avoid potential effects from erosion hazards. As a condition of approval, prior to the issuance of a grading or building permit, the City would require the applicant to prepare a detailed grading plan and an erosion control plan by a qualified and licensed engineer. The soils report would identify soil hazards, including potential impacts from erosion. The City would be required to review and approve the erosion control plan based on the California Department of Conservation's "Erosion and Control Handbook." The erosion control plan would identify protective measures to be implemented during excavation, temporary stockpiling, disposal, and revegetation activities. Additionally, a Draft SWPPP was prepared by SWT Engineering, Inc. in February 2022 and included erosion and sediment control BMPs for project construction. Sedimentation/desilting basin would be installed as a sediment control BMP in the northwestern portion of the site, along with additional sediment controls including fiber rolls, street sweeping, and stabilized

construction roadways. Erosion control BMPs would be required such as diverting stormwater into the stormwater basin using earth dikes and drainage swales, preserving existing vegetation, and applying erosion control blankets, erosion control seeding, non-vegetated stabilization, and wind erosion control. A final Construction and Industrial SWPPP would be prepared as required by Mitigation Measure HYD-1 and HYD-2.

Implementation of BMPs, as well as compliance with the City's regulations and the California Building Code requirements, would reduce potential impacts related to soil erosion to less than significant and no mitigation would be required.

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?

Less than significant impact with mitigation. Liquefaction is the sudden loss of soil shear strength and sudden increase in porewater pressure caused by shear strains, which could result from an earthquake. Research has shown that saturated, loose to medium-dense sands with a silt content less than about 25 percent located within the top 40-feet are most susceptible to liquefaction and surface rupture or lateral spreading. Slope instability can occur as a result of seismic ground motions and/or in combination with weak soils and saturated conditions.

The project site elevation observed no historical or ongoing slope stability concerns. However, due to the loose, poorly graded sands, the project has the potential for liquefaction and would be mitigated to a less than significant level with Mitigation Measure GEO-1. Therefore, the project would have less than significant impact with mitigation regarding unstable geological units or soils.

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?

Less than significant impact. As mentioned in the Geotechnical Exploration, expansive soils tend to undergo volume changes (shrink or swell) with changes in moisture content. They generally consist of cohesive fine-grained clay soils and represent a significant structural hazard to structures founded on them. Based on soil classification and laboratory testing outlined in the Geotechnical Exploration, soils on the project site have a low potential to shrink (or swell) during seasonal moisture variations. Therefore, the potential for soil expansion to detrimentally affect the proposed development at the project site is low. Additionally, the proposed project would be designed to meet seismic safety requirements specified in the California Building Code, including standards to minimize impacts from expansive soils. Therefore, impacts related to the potential hazards of construction on expansive soils would be less than significant, and no mitigation would be required.

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?

No impact. The proposed project would include a portable restroom in the back portion of the project site. No wastewater collection infrastructure or treatment system is present within the vicinity of the project site. Therefore, no impact would occur.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than significant impact with mitigation. No previous surveys conducted in the project area have identified the project site as sensitive for paleontological resources or other geologically sensitive resources, nor have testing or ground disturbing activities performed to date uncovered any paleontological resources or geologically sensitive resources. While the likelihood of encountering paleontological resources and other geologically sensitive resources is considered low, project-related ground disturbing activities could affect the integrity of a previously unknown paleontological or other geologically sensitive resource, resulting in a substantial change in the significance of the resource. Therefore, the proposed project could result in potentially significant impacts to paleontological resources.

Implementation of Mitigation Measure GEO-1 would reduce potentially significant impacts to a level of less than significant.

> **Mitigation Measure GEO-2: Avoid and Minimize Impacts to Paleontological Resources.** In the event paleontological or other geologically sensitive resources (such as fossils or fossil formations) are identified during any phase of project construction, all excavations within 100 feet of the find shall be temporarily halted until the find is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the appropriate representative at the City of Fort Bragg who shall coordinate with the paleontologist as to any necessary investigation of the find. If the find is determined to be significant under CEQA, the City shall implement those measures which may include avoidance, preservation in place, or other appropriate measures, as outlined in Public Resources Code Section 21083.2.

XV. GREENHOUSE GAS EMISSIONS

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

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

No impact. The proposed project would reduce the amount of Green House gasses released into the atmosphere by reducing the number of trucks taking solid waste and recyclables from the Mendocino Coast to the City of Ukiah from seven to ten trucks per day to two to three trucks per day. The proposed project construction would have a less than significant impact on greenhouse gas emissions.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No impact. As the project will reduce overall GHG emissions for the transportation of solid waste and recyclables from the Mendocino Coast to the landfill, it will not conflict with any plan, policy or regulation adopted to reduce GHG emissions.

XVI. HAZARDS AND HAZARDOUS MATERIALS

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e)	For a project located within an airport land use plan 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?	☐	☐	☒	☐

An Update to Conditions Reported in Phase I Environmental Site Assessment (Phase I ESA) was prepared by Waste Connections, Inc. on May 16, 2022. The original Phase I Environmental Site Assessment was prepared by LACO Associates on September 21, 2021. The Update to Conditions Reported in Phase I ESA may be found in the project files and the Phase I Environmental Site Assessment may also be found in the project files. The results of the assessment are summarized below.

Setting

The project site is currently a partially developed, vacant lot located at 1280 North Main Street, in the City of Fort Bragg. The schools located nearest to the project site are Montessori Del Mar Community School and Three Rivers Charter School, who are not affiliated with the Fort Bragg Unified School District (FBUSD). Both schools are located approximately 0.4 mile north of the project site.

The following databases were reviewed for the project site and surrounding area to identify potential hazardous contamination sites: the State Water Resources Control Board (SWRCB) Geotracker database (SWRCB 2022); and

the US EPA's Superfund National Priorities List (EPA 2022). Based on the results of the databases reviewed, the project site is not listed as a hazardous waste site. However, as provided by the SWRCB Geotracker database, there are four sites located within the vicinity of the project site, as listed below in Table 6.

Table 6: Geotracker Listed Hazardous Materials Sites within Close Proximity to Project Site

ID	Name & Case No.	Case Type	Location	Distance and Direction to Project Site	Cleanup Status
1	Eastman Transporting (T0604500292)	Lust Cleanup Site	1251 North Main Street, Fort Bragg	0.2 mile west of the project site	Case Closed-2/18/2010
2	Fort Bragg Gun Club (2309001)	Voluntary Agreement	Highway 1, Fort Bragg	0.2 mile north of the project site	Certified-6/12/1998
3	Roussin, Sharon (T0604500226)	Lust Cleanup Site	22800 Highway 1, Fort Bragg	0.3 mile north of the project site	Case Closed-2/16/1995
4	Baxman Gravel Company (T0604593402)	Cleanup Program Site	1221 North Main Street, Fort Bragg	0.3 mile south of the project site	Case Closed-1/14/202

Federal and state laws include provisions for the safe handling of hazardous substances. The federal Occupational Safety and Health Administration (OSHA) administers requirements to ensure worker safety. Construction activity must also be in compliance with the California OSHA regulations (Occupational Safety and Health Act of 1970).

At the local level, the following policies and programs from the Inland General Plan address hazards and hazardous waste:

Table 7: Inland General Plan Policies and Programs- Hazards and Hazardous Waste

Safety Goal SF-4 Policy SF-4.1 Minimize Fire Risk in New Development: Review all development proposals for fire risk and require mitigation measures to reduce the probability of fire.
Safety Goal SF-4 Policy SF-4.1 Program SF-4.1.1: Continue to consult the Fort Bragg Fire Protection Authority in the review of development proposals to identify the projected demand for fire protection services and implement measures to maintain adequate fire protection services. Mitigation measures may include levying fire protection impact fees for capital facilities, if warranted.
Safety Goal SF-7 Policy SF-7.1 Protection from Hazardous Waste and Materials: Provide measures to protect the public health from the hazards associated with the transportation, storage, and disposal of hazardous wastes (TSD Facilities).
Safety Goal SF-7 Policy SF-7.1 Program SF-7.1.1 Continue to ensure that use, transportation, and disposal of hazardous materials are in accordance with the local, State, and Federal safety standards.
Safety Goal SF-7 Policy SF-7.1 Program SF-7.1.2 Continue to support and participate in Mendocino County's Hazardous Materials Business Plan which requires all businesses using hazardous materials to list the types, quantities, and locations of hazardous materials with the County's Department of Environmental Health.
Safety Goal SF-7 Policy SF-7.1 Program SF-7.1.3 Require, as a condition of City approvals of non-residential projects, that the Fire Protection Authority be notified of all hazardous substances that are transported, stored, treated, or could be released accidentally into the environment.

Safety Goal SF-7 Policy SF-7.1 Program SF-7.1.4 Require that applications for discretionary development projects that will generate hazardous waste or utilize hazardous materials include detailed information on hazardous waste reduction, recycling, transportation, and storage, and prepare a plan for emergency response to a release or threatened release of a hazardous material.

Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than significant impact. The project proposes the construction and operation of a waste transfer station that would be anticipated to require the routine transport, use, or disposal of hazardous materials common to construction and operations of waste transfer stations. During construction, common hazardous materials such as gasoline, diesel fuel, hydraulic fluids, oils, lubricants, and cleaning solvents would be anticipated to be utilized on-site. However, the types and quantities of hazardous materials to be used are not expected to pose a significant risk to the public and/or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Operation of the proposed project may require the use of hazardous materials such as automobile fluids in employee cars and operation trucks. Additionally, there is some risk that household waste that is transferred on site from truck to truck may contain some quantity of hazardous wastes. The applicant does not propose to operate any hazardous waste drop off facilities or handling on this site.

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?

Less than significant impact with mitigation. The purpose of the Phase I ESA is to evaluate whether the property is impacted by "recognized environmental conditions" (RECs), "historical recognized environmental conditions" (HRECs), "controlled recognized environmental conditions" (CRECs), or a "business environmental risk" (BER). These terms are not intended to include *de minimis* conditions that generally do not present a threat to human health and/or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government agencies.

The decision to classify a condition as a REC, HREC, CREC, or BER was based upon the conclusion that known or suspected hazardous substance or petroleum product releases had occurred at a location, and a reasonable inference could be made that the hazardous substance or petroleum product had impacted soil and/or groundwater quality. REC, HREC, CREC, and BER classifications attributable to hydraulically upgradient off-site sources are based upon hydrologic, geologic, and chemical/material specific factors that when combined lead to the opinion that off-site RECs may negatively impact on-site soil and groundwater conditions. The Phase I ESA found that a water well was installed in the 1990s to support a concrete batch plant, which has since been dismantled. Records from the Mendocino County Department of Environmental Health (MCDEH) indicated that the water well is unpermitted and therefore may present a business environmental risk (BER) for the user. In order to avoid impacts to soil and or groundwater quality through the release of a hazardous substance, Mitigation Measure HAZ-1 would be implemented, as recommended by the Phase I ESA.

Fuji Civil Engineering (FCE) visited the project site on January 24, 2022 and observed people to be camping with a car and one or two tents. On February 24, 2022, the car was not present. As a result, from the camp site, there may be *de minimis* conditions including refuse, surficial leaks or spills of lubricants, fuels or other liquids. The potential conditions would be limited to a relatively small area within the taller trees. Implementation of Mitigation Measure

HAZ-2 would avoid impacts to the soil due to the camp site, as well as avoid future impacts related to camping in the rest of the project site

With implementation of Mitigation Measure HAZ-1 and Mitigation Measure HAZ-2, impacts would be less than significant.

> **Mitigation Measure HAZ-1:** If the applicant proposes to use the existing well as a water source, the applicant shall obtain appropriate permits from the City of Fort Bragg prior to use of the well. The applicant shall be allowed to use the existing well in compliance with Fort Bragg Municipal Code Section 14.04.127 (Wells for Nondomestic Use), as well as Section 14.04.125 (Wells for Domestic Use), if applicable.
>
> **Mitigation Measure HAZ-2: Clean-up Camp Site.** Prior to construction, the applicant shall take actions necessary to evict campers from the site, and to remove all refuse and any impacted soils.

c) 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 project site is located 0.4 mile south of Montessori Del Mar Community School and Three Rivers Charter School. The project would not emit hazardous emissions or handle hazardous materials within 0.25 mile of an existing school, as no schools are within this distance. Therefore, no impact would occur.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less than significant impact. As mentioned above, three (3) closed site and one (1) active site are located within 0.2-0.3 mile of the project site. However, the project site is not included on the lists of hazardous materials sites compiled and available on SWRCB Geotracker database (SWRCB 2022) or the US EPA's Superfund National Priorities List (EPA 2022). Therefore, impacts regarding hazardous materials sites compiled pursuant to Government Code Section 65962.5 would be less than significant and no mitigation would be necessary.

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?

Less than significant impact. The project site is located approximately 2 miles south of the private Fort Bragg Airport. However, the construction and operation of a waste transfer station would not result in a safety hazard or excessive noise for people residing or working in the area. Therefore, a less than significant impact would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than significant impact. Within the City of Fort Bragg, the generally recognized "safe elevation level" with regard to tsunami events is approximately 60 feet above mean sea level. The project site is located just east of State Highway 1 and has elevations ranging from 45-60 feet above mean sea level. Therefore, impact or inundation from a tsunami event has a relatively low risk for the site. The City's Tsunami Contingency Plan provides guidelines to alert and evacuate the public from tsunami risk areas within the City, this site is not considered a location that is at risk in the event of a tsunami by the City. To ensure the project would not impair the evacuation of the project site in the event of tsunami or coastal flooding, the project would adhere to the procedures outlined in the City of Fort Bragg Tsunami Contingency Plan (City of Fort Bragg 2006). With adherence to the City of Fort Bragg Tsunami Contingency Plan, impacts relating to emergency evacuation plan would be less than significant.

Per the Tsunami Contingency Plan, evacuation direction for properties located North of Pudding Creek Bridge include the following:

- Pudding Creek Road – eastbound east of John Hyman Road
- Airport Road – eastbound east of Burrows Ranch Road

The proposed project is not in a location that would interfere with either evacuation route.

g) 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 project site is located in a Local responsibility Area (LRA) according to the Fire Hazard Severity Zone Map (CAL FIRE 2022). The City of Fort Bragg Fire Department provides fire protection services and is located at 141 North Main Street, approximately 2 miles south of the project site. The proposed waste transfer center would not result in a substantial change in site conditions that would expose people or structures to increased wildfire risks. The project would avoid impacts to existing vegetative communities on site and would construct on previously developed areas on the project site. The vegetation located just east of the project site would not be impacted as all proposed development is located a minimum of 10 feet from the project boundary line. Therefore, the proposed project would not expose people or structures to a significant risk of loss due to wildland fires, and impacts would be less than significant.

XVII. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
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 the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
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 resources of polluted runoff?	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☒	☐

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☒	☐

A "Stormwater Control Plan and No Discharge Technical Report" was prepared by Lawrence Associates in August 2022 and is included as Appendix E. The results of the report are summarized below.

Setting

The regional setting is characterized by industrial and residential uses. The project site has a gentle slope with elevations ranging from 45-60 feet above mean sea level. Precipitation is the only apparent source of surface water as there are no wetlands or natural drainages located on the project site. The project site is located in Zone "X" – area of minimal flood hazard – as shown on Federal Emergency Management Agency's (FEMA) National Flood Hazard Layer FIRMette map number 06045C1016G, effective July 18, 2017 (FEMA 2012). The existing runoff on the project site flows from the northern lot corner to the eastern lot corner, and outflows to State Highway 1 roadside ditches. The project site is located 0.2 mile east of the Pacific Ocean, Virgin Creek is located north of the project site, and Pudding Creek and Noyo River lie south of the project site.

The City of Fort Bragg is located in California's north coast region, within Mendocino County, California. The City of Fort Bragg lies within the Coastal Franciscan Ecological Subsection of California (Miles and Goudey, 1997). This subsection is a steep, mountainous area of the northern California Coast Ranges, near the coast, south from Humboldt Bay to the Russian River. There is substantial oceanic influence on climate, including summer fog. The subsection is particularly mountainous, with rounded ridges, steep and moderately steep sides, and narrow canyons. The mean annual precipitation in this subsection is about 43 inches, with mostly rain at lower elevations. Runoff is rapid and many of the smaller streams are dry by the end of summer. Natural lakes are absent from the Coastal Franciscan Ecological Subsection (Miles and Goudey, 1997).

The National Pollutant Discharge Elimination System (NPDES) permit program of the U.S. Environmental Protection Agency (EPA) addresses water pollution by regulating point sources that discharge pollutants to waters of the United States. Created in 1972 by the Clean Water Act, the NPDES permit program grants authority to state governments to perform many permitting, administrative, and enforcement aspects of the program. Within California, the NPDES permit program is administered by the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (North Coast Regional Water Quality Control Board). Construction projects that would disturb more than one acre of land, such as the proposed project, would be subject to the requirements of General Construction Activity Stormwater Permit (Construction General Permit Order 2009-0009-DWQ, also known as the CGP), which requires operators of such construction sites to implement stormwater controls and develop a Stormwater Pollution Prevention Plan (SWPPP) identifying specific BMPs to be implemented to minimize the amount of sediment and other pollutants associated with construction sites from being discharged in stormwater runoff. Discharges of stormwater and non-stormwater from the Municipal Separate Storm Sewer System (MS4) within the jurisdictional boundary of the City of Fort Bragg are subject to Water Quality Order No. 2013-0001-DWQ, NPDES General Permit No. CAS00004, Waste Discharge Requirements for Storm Water Discharges from MS4s (Phase II MS4 Permit). The Phase II MS4 Permit authorizes the City to discharge stormwater runoff and certain non-stormwater discharges from its MS4 to waters of the United States and provides a framework and requirements for the implementation of the City MS4 Program.

The City's Inland General Plan Open Space Element contains the following relevant policies:

Table 8: Inland General Plan Policies and Programs- Hydrology and Water Quality

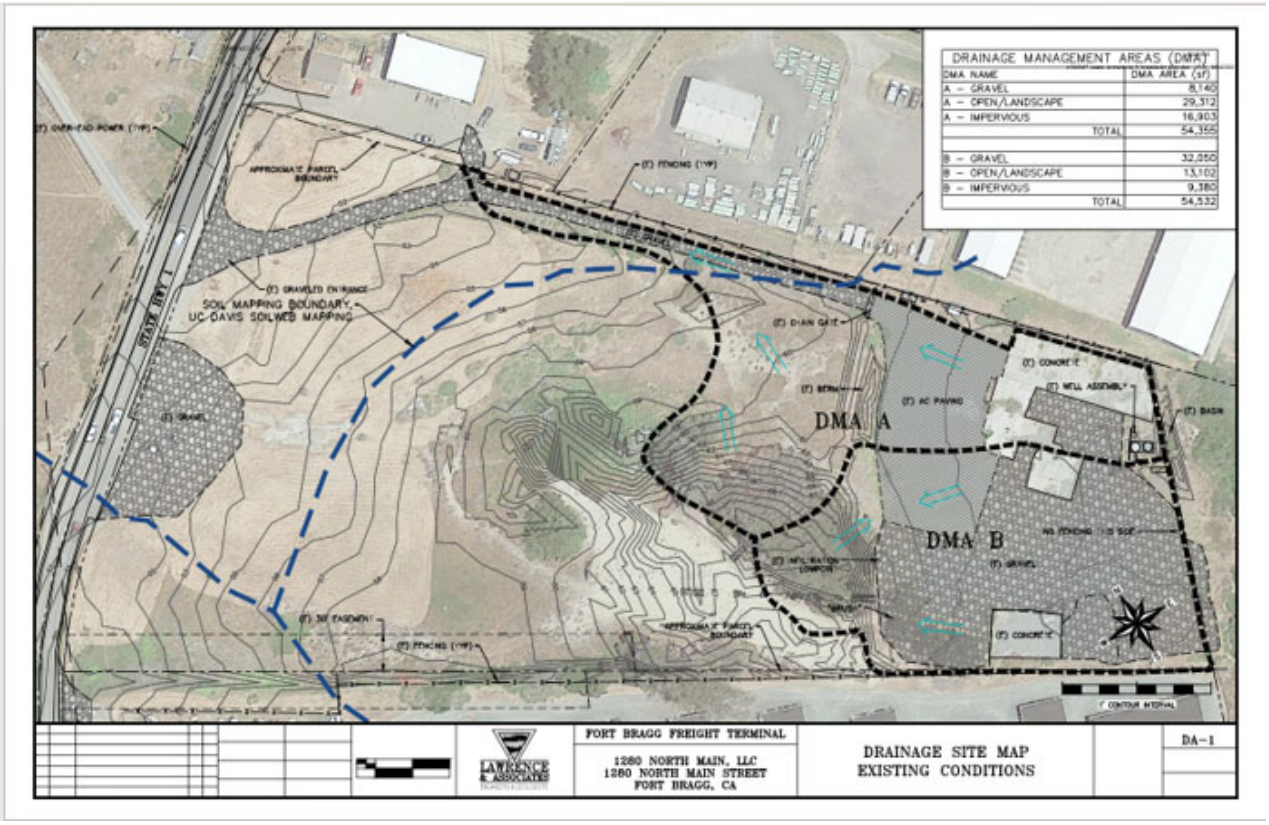
Open Space Goal OS-6 Policy OS-6.3 Minimize Increases in Stormwater Runoff: Development shall be designed and managed to minimize post project increases in stormwater runoff volume and peak runoff rate, to the extent feasible.
Open Space Goal OS-6 Policy OS-6.3 Program OS-6.3.1: Develop and implement Low Impact Development requirements in the Inland Land Use and Development Code. Remove regulatory barriers to Low Impact Development from the Inland LUDC where feasible.
Open Space Goal OS-6 Policy OS-6.4 Maintain and Restore Biological Productivity and Water Quality: Development shall maintain and, where feasible, restore the biological productivity and the quality of streams and wetlands to maintain optimum populations of aquatic organisms and for the protection of human health.
Open Space Goal OS-6 Policy OS-6.5 Municipal Activities to Protect and Restore Water Quality: The City shall promote both the protection and restoration of water quality. Water quality degradation can result from a variety of factors, including but not limited to the introduction of pollutants, increases in runoff volume and rate, generation of non-stormwater runoff, and alteration of physical, chemical, or biological features of the landscape.
Open Space Goal OS-6 Policy OS-6.5 Program OS-6.5.2 BMPS for Municipal Maintenance Activities. The City shall ensure that municipal maintenance activities and other public projects integrate appropriate BMPs to protect water quality.
Safety Goal SF-2 Policy SF-2.1 Flood Hazards: Ensure adequate standards for development in the 100-year floodplain.
Safety Goal SF-2 Policy SF-2.1 Program SF-2.1.1 Maintain and update as necessary the zoning and building code standards and restrictions for development in identified floodplains and areas subject to inundation by a 100-year flood. Use the Federal Emergency Management Agency's Flood Insurance Rate Map (FIRM) in the review of development proposals
Safety Goal SF-2 Policy SF-2.1 Program SF-2.1.2: Ensure all development in flood prone areas meet Federal, State, and local requirements.
Safety Goal SF-2 Policy SF-2.2 Storm Drainage: Continue to maintain effective flood drainage systems and regulate construction to minimize flood hazards.
Safety Goal SF-2 Policy SF-2.2 Program SF-2.2.1: Continue to update the City's Storm Drain Master Plan.
Safety Goal SF-2 Policy SF-2.3 Require development to pay for the costs of drainage facilities needed to drain project-generated runoff.
Safety Goal SF-2 Policy SF-2.3 Program SF-2.3.1 Update and utilize the City's Drainage Development Impact Fees to ensure that development pays for its proportional share of drainage facilities.
Safety Goal SF-2 Policy SF-2.4 Require, where necessary, the construction of siltation/detention basins to be incorporated into the design of development projects.
Safety Goal SF-2 Policy SF-2.5 Require, as determined by City staff, analysis of the cumulative effects of development upon runoff, discharge into natural watercourses, and increased volumes and velocities in watercourses and their impacts on downstream properties. Include clear and comprehensive mitigation measures as part of project approvals to ensure that new development does not cause downstream flooding of other properties.

Safety Goal SF-2 Policy SF-2.6 Analyze the impacts of and potential flooding issues resulting from Climate Change and rising sea levels on proposed projects located within the 100-year Sea-Level Rise Inundation Area (see Map SF-4).

CURRENT (PRE-PROJECT) SITE TOPOGRAPHY AND DRAINAGE CONDITIONS

The overall property generally slopes from southeast to northwest with a mounded area centrally located on the site. The back of the site (referred to as 'ramp area'), consists of the former industrial land use, with two drainage management areas (DMA's) as shown in the figure below. The northern DMA (DMA-A) includes roughly half of the ramp area and slopes to the northwest across concrete and paved surfaces to the existing gate at the graveled access road. Runoff from this area continues from this point to the northwest within the access road and ultimately sheet flows as shown on the figure. The south half of the ramp area, shown as DMA-B, slopes similarly from east to west, however it does not discharge offsite and infiltrates at a localized depression.

Figure 4: Drainage Management Areas (DMA) for Proposed Transfer Station



PLANNED IMPROVEMENTS AND DEVELOPED DRAINAGE CONDITIONS

The planned facility operational areas are limited to the ramp area (eastern portion) of the site and the ingress/egress road. The facility plans to retain nearly all existing surfaces including the gravel access road, gravel and concrete areas in the eastern portion of the facility, and nearly all of the vegetation within the western and central portions of the facility.

Proposed improvements in the eastern portion of the facility will be as follows:

1. New Ramp. The ramp will be an approximate 60-foot wide by 90-foot length combination ramp and landing that will serve for loading and unloading for the direct transfer operation.

The ramp will consist of a perimeter gravity block wall system and compacted gravel fill. It is anticipated that the ramp may be paved in the future. Drainage calculations assume a paved surface condition for this feature.

2. Concrete V-ditch. Existing sheet flow as shown on the figures, conveys surface runoff from the northern portion of the 'ramp' area along the existing gravel road. For stormwater management purposes, a concrete v-ditch is proposed near the existing gate location to intercept surface water from DMA-A into a bio-retention area and thereon into an infiltration area.
3. Bio-retention and Infiltration areas. Bio-retention areas have been sized based on the Mendocino Low Impact Design Standards Manual v 2.2. The sequence of received runoff (flow) will include surface sheet flow runoff to bioretention areas, with overflow to infiltration areas.

STORMWATER CONTROL PLAN – LID COMPONENT

The Mendocino Low Impact Design Standards Manual version 2.2 ("LID Manual") was used as a reference for this project. Drainage management areas (DMA's) were delineated for both existing and developed conditions and further summarized by surface. Table 1 of the LID Manual indicated Applicable Post-Construction Standards based on project type. As indicated above, while the current ramp design is gravel (pervious), there is the likelihood this will be paved in the near future based on facility needs for wet weather operation. For this reason, this document assumes the ramp is paved. The overall ramp surface area is roughly 5,400 SF, which meets the definition for a Regulated Project, including requirement for a Stormwater Control Plan (SCP), which was prepared for the project.

The stormwater control plan concluded that the project qualifies for a Notice of Non-Applicability and "No Discharge" from the project. That State of California General Industrial Stormwater Permit (GISWP) in Section XX.C establishes the following requirements for Dischargers claiming "No Discharge" through the Notice of Non-Applicability (NONA):

> Entities who are claiming "No Discharge" through the NONA shall meet the following eligibility requirements:
>
> a. The facility is engineered and constructed to have contained the maximum historic precipitation event (or series of events) using the precipitation data collected from the National Oceanic and Atmospheric Agency's website (or other nearby precipitation data available from other government agencies) so that there will be no discharge of industrial storm water to waters of the United States; or,
> b. The facility is located in basins or other physical locations that are not hydrologically connected to waters of the United States.

Discussion

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than significant impact with mitigation. Proposed grading during construction could increase the potential of erosion and increase the amount of sediment carried by storm-water runoff, on and off the project site. Therefore, prior to issuance of grading or building permits, the applicant would submit a Construction Storm-Water Prevention and Pollution Plan (SWPPP) with best management practices (BMPs), as included as Mitigation Measure HYD-1. All construction and post-construction activities would be implemented according to the SWPPP and monitored by the City's Public Works Department and North Coast Regional Water Quality Board (NCRWQCB). The project would comply with all applicable federal, state, and local regulations and policies, including NCRWQCB water quality standards. A Draft SWPPP was prepared by SWT Engineering, Inc. in February 2022 and included erosion and sediment control BMPs for

project construction. Sedimentation/desilting basin would be installed as a sediment control BMP in the northwestern portion of the site, along with additional sediment controls including fiber rolls, street sweeping, and stabilized construction roadways. Erosion control BMPs would be required such as diverting stormwater into the stormwater basin using earth dikes and drainage swales, preserving existing vegetation, and applying erosion control blankets, erosion control seeding, non-vegetated stabilization, and wind erosion control.

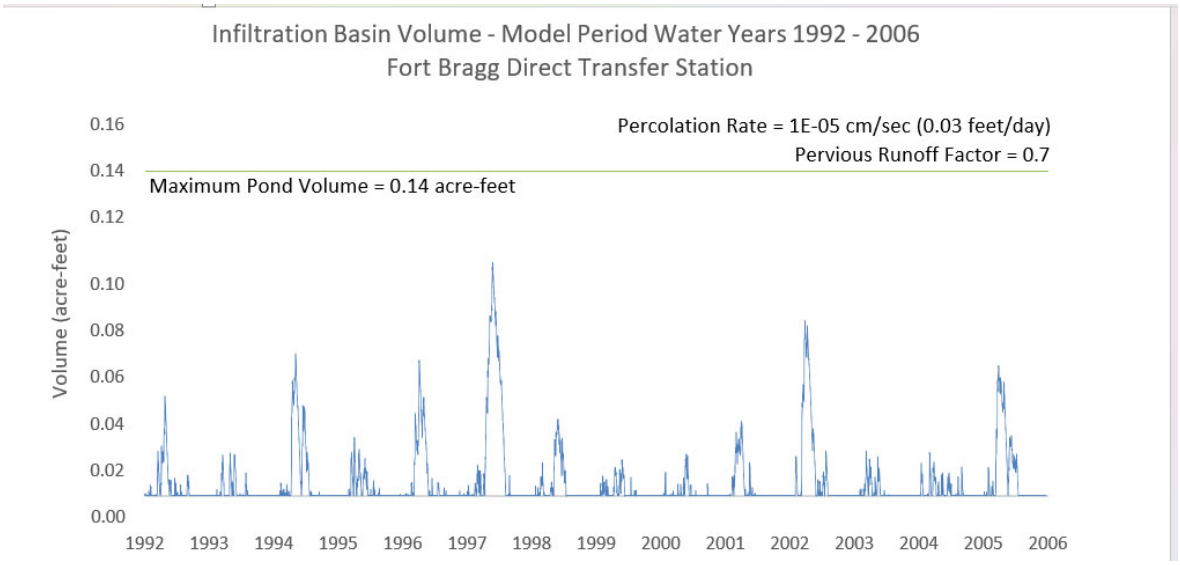
In addition, the National Pollution Discharge Elimination Systems (NPDES) Phase II Small Municipal Separate Storm Sewer System (MS4) permit requires that all projects that create and/or replace 5,000 square feet or more of impervious surface be considered Regulated Projects. The project is proposing an increase in impervious surface of about 8,486 sf.

Table 9: Transfer Station: New Impervious Areas

	Square Feet
Highway 1 Driveway Apron	4,014
Transfer Ramp	4,159
Concrete Ditch	313
Total	8,486

Regulated Projects are required to implement measures for site design, source control, runoff reduction, storm water treatment and baseline hydro-modification management as defined in the SWRCB Order 2013-0001-DWQ. A Stormwater Control Plan was prepared by Lawrence & Associates, which used predictive modeling to show that the 3,000 square foot infiltration area is adequate for the above-average precipitation event period. The figure below shows a graph of infiltration area volume during the modeling period, for the model run using the most conservative assumptions - lower permeability (1 × 10-5 cm/sec) and higher runoff coefficient (0.7) for pervious areas. This illustrates that the infiltration area would have sufficient capacity to contain runoff from a period of higher historical precipitation without overtopping.

Figure 5: Infiltration Basin Volume - Fort Bragg Transfer Station



Additionally, in accordance with ILUDC 18.64.020, Urban Runoff Water Quality and Discharge Management, verification of consistency of the project with the NPDES Permitting requirements is required to the satisfaction of the Public Works Director. Accordingly, an Industrial SWPPP would also be required with BMPs, as included as Mitigation Measure HYD-2. Therefore, with inherent design and compliance with all regulations and policies as well as with implementation of Mitigation Measure HYD-1 and HYD-2, impacts would be less than significant with mitigation.

Mitigation Measure HYD-1: Prepare and implement a Construction SWPPP. All proposed development associated with this project shall be compliant with the Fort Bragg Municipal Code (FBMC) Section 18.62 (Grading, Erosion and Sediment Control Standards), Section18.64 [Urban Runoff Pollution Control] and Section 12.14 (Drainage Facility improvements). Prior to issuance of building permit, the:

- Applicant shall execute an agreement with the City for the long-term maintenance of the post-construction BMPs identified in the plans, which shall remain functional in perpetuity.
- Obtain approval from the Public Works Department if any construction is conducted between October and April (the rainy season).
- Remove all construction debris/soil.

Mitigation Measure HYD-2: Prepare and implement an Industrial SWPPP. All proposed development associated with this project shall be compliant with the Fort Bragg Municipal Code (FBMC) Section 18.62 (Grading, Erosion and Sediment Control Standards), Section18.64 [Urban Runoff Pollution Control] and Section 12.14 (Drainage Facility improvements). Prior to issuance of building permit, an Industrial SWPPP shall be submitted with the conditions listed below.

- This project is subject to the Industrial General Permit (IGP), and an industrial SWPPP will be required. Submittal of draft IGP-SWPPP is required per Municipal Code Section 18.64 [Urban Runoff Pollution Control]. The SWPPP shall clearly identify industrial activities with the potential to pollute and the BMP's proposed to protect watershed.
- Applicant shall at all times practice good housekeeping to eliminate pollutants in discharges and stormwater flows.
- No hazardous materials shall be stored on site.
- In the event of a release of a hazardous material the responsible person or owner shall immediately notify emergency response officials of the occurrence via emergency dispatch services (911).
- In the event of a release of non-hazardous materials, the responsible person or owner shall notify the Public Works Department in person or by phone or email no later than 5:00 p.m. of the next business day.

b) 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. Water for the proposed site would currently be supplied by an onsite well, however is it not currently permitted and not currently in use. The applicant is seeking to obtain permits for the existing well to establish the landscaping, for dust suppression and fire-fighting water. The applicant would be allowed to use the existing well in compliance with Fort Bragg Municipal Code Section 14.04.127 (Wells for Nondomestic Use), as well as Section 14.04.125 (wells for Domestic Use), if applicable.

All runoff from impervious surfaces would be directed to the proposed bioretention features. As stormwater is retained on site, groundwater recharge would occur through natural precipitation events. As such, the project would have a less than significant impact on groundwater supplies and groundwater recharge.

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

    i. Result in substantial erosion or siltation on- or off-site?

Less than significant impact. Project construction would require grading and excavation that would disturb soils and increase the potential for erosion. A City of Fort Bragg grading permit would be obtained prior to any ground disturbance per Fort Bragg Municipal Code Section 18.60 (Grading Permit Requirements and Procedures). All grading would be performed in compliance with Fort Bragg Municipal Code Chapter 18.62 (Grading, Erosion, and Sediment Control Standards). The project is proposing there would be in increase in impervious surface of about 8,486 sf. The construction would include a new driveway apron at Highway 1, eventual paving of the transfer station ramp and a small concrete ditch. The project would preserve 99.65% of existing vegetative communities on site. Only one non-native grassland area (totaling 1,071 SF or 0.35% of the vegetative site) would be replaced with a vegetative bioswale.

Erosion and sediment control BMPs, as outlined in the Draft SWPPP would be implemented during project construction to prevent erosion. Therefore, impacts are anticipated to be less than significant.

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

Less than significant impact. The project would include an increase of impervious surface of about 8,486 sf. According to ILUDC Section 18.60, Grading Permit Requirements and Procedures, grading in excess of 5,000 cubic yards would be performed in compliance with an approved grading plan prepared by a California registered civil engineer and would be designated “engineered grading.” In granting a grading permit for a discretionary grading project, the Director of Public Works may impose any condition determined to be necessary to protect public health, safety and welfare, to prevent the creation of hazards to property, improve the quality of stormwater runoff by incorporating Low Impact Development design strategies, and to ensure proper completion of grading. As mentioned in the Stormwater Control Plan, stormwater has been modeled for the site and full infiltration of all stormwater is expected. The project would also include bioretention areas for on-site runoff. Best management practices (BMPs) for the bioretention and stormwater infiltration areas would be inspected and maintained as described in Section 18.60 of the ILUDC. With inherent project design and implementation of vegetative swales, bioretention areas, and a flood control pond, impacts related to flooding would be less than significant.

    iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional resources of polluted runoff?

Less than significant impact. The Stormwater Control Plan concluded that no discharge will occur from the site. Source control pollution measures include signage to prohibit dumping at the bioswale, weekly parking area sweeping, and no onsite materials storage. BMPs would be implemented to ensure upkeep

of the vegetated swale. Therefore, impacts relating to runoff exceeding capacity and polluted runoff would be less than significant.

iv. Impede or redirect flood flows?

Less than significant impact. The Stormwater Control Plan calculated pre-development and post-development peak outflow (Q) and determined that no stormwater would leave the site. Therefore, impacts to flood flows would be less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less than significant impact. Similar to other areas along the California coastline, the project site could be subject to large storm waves. The California Emergency Management Agency, the California Geologic Survey, and the University of Southern California partnered to create the California Official Tsunami Inundation Maps and the project site is not within the inundation zone, according to the Fort Bragg quadrant (State of California 2021). The City of Fort Bragg is in the generally recognized "safe elevation level" with regard to a tsunami event and is approximately 60 feet above mean sea level. However, the project is located in a relatively low-lying area as compared to most of the city, with elevations ranging from 45-60 feet. With this relatively low elevation, impact or inundation from a severe storm surge or tsunami event must be considered a relatively low risk for the site. Therefore, impacts related to release of pollutants due to project inundation would be less than significant.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than significant impact. The proposed project would include the development of a direct transfer station with a direct transfer operation. The project would utilize existing disturbed areas, while avoiding existing vegetative communities located within the project site. During construction, the proposed project would adhere to, and implement, permitting requirements, building/grading standards, and site-specific BMPs. Therefore, the proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. A less than significant impact would occur as a result of the construction and completion of the proposed project. Therefore, no mitigation would be required.

XVIII. LAND USE AND PLANNING

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

a) Physically divide an established community?

No Impact. The proposed project is located in an industrial zoning district at the northern edge of the City of Fort Bragg. While there is a small pocket of residential housing to the southeast of the proposed project site as well as three units of residential housing to the northwest of the site, these residential areas are not connected as a community. There are no streets connecting the two small residential areas and they are located in different jurisdictions (the City of Fort Bragg and Mendocino County). The proposed project will not physically divide an established community and there would be no impact.

b) Cause significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant with Mitigation. The proposed project must comply with Section 18.42.150(C), which includes the following requirement related to environmental effects:

> 7. Operating standards. Dust, fumes, odor, smoke, or vibration, above ambient levels, shall not be detectable on adjoining parcels.

The direct transfer operation has the potential to generate dust, fumes, odor and vibrations above ambient levels on adjoining parcels. In order to ensure compliance with this requirement the project Use Permit includes a number of special conditions, which are incorporated into Mitigation LUP-1 below:

Mitigation LUP-1: Operating Standards.

- The operation and facility shall be conducted and maintained to prevent the creation of any nuisance conditions. Measures to control nuisances shall be implemented as needed, or at the direction of the Community Development Director, and may include, but are not limited to regular maintenance and cleaning of the transfer area, vector control devices, and other measures necessary to control vectors.
- No solid waste will remain on-site in the transfer trailers longer than 24 hours to reduce odor transmission and vector issues.
- No solid waste odors shall be detectable beyond the facility's boundaries. In the event that odors are detectable beyond the immediate vicinity of the transfer trailers and re-load area, the operator shall take immediate action to prevent the further spread of the odor either by hauling the transfer trailer to an appropriate disposal site, sealing the transfer trailer, applying deodorizer, or utilizing other prevention or abatement measures.
- At the close of each operating day, all transfer trailers containing solid waste shall have the on-board tarp closed and covering the roof of the trailer and the rear doors shall be securely closed.
- To minimize noise transmission, the operator shall utilize the best available OSHA-compliant technology for all backup alarms for both route trucks and transfer trailers. The use of heavy equipment (other than trucks) shall be limited to the hours of 8:00 a.m. to 5:00 p.m. so that it occurs when ambient noise from the highway and other nearby industrial areas is also high.
- Trucks shall be parked facing exit roads in the evenings, so that they can be driven from the site in the morning without requiring backing and the consequent backing beeping.
- The operator shall utilize portable litter fences around the direct transfer area to prevent and capture all windblown litter.
- The operator shall take measures to minimize the creation, emission, or accumulation of excessive dust and particulates. The operator shall minimize the unnecessary handling of wastes during transfer to prevent the creation of excessive dust. Measures to control dust should be implemented as needed or at the direction of the Community Development Director and may

include but are not limited to reduced transferring during periods of high winds, daily sweeping and cleaning, and misting systems.

Per ILUDC Stormwater Management requirements (Section 18.62 & 18.64), the project must comply with the following special condition, which is replicated here as a mitigation measure LUP- 2

> **Mitigation Measure LUP-2:** All transfer trailer tarps shall be closed during any rain events to prevent the generation of any stormwater leachate.

The Inland General Plan includes the following policies related to wildlife corridors.

> *Policy OS-1.4 Maintain Open Space: Require site planning and construction to maintain adequate open space to permit effective wildlife corridors for animal movement between open spaces.*

The proposed project site does not act as a wildlife corridor per the biological study completed for the site. Additionally, the project plan proposes to maintain most of the site as open space in an undeveloped state and further to protect that open space from environmental impacts of inform use by campers and hikers, through the installation of habitat protective fencing.

> *Policy OS-2.2 Prohibit Invasive Species: Condition development projects requiring discretionary approval to prohibit the planting of any species of broom, pampas grass, gorse, or other species of invasive non-native plants deemed undesirable by the City.*

The project site includes a variety of invasive plants. Pampas grass and scotch broom both produce prolific seed banks and have been sighted on the property, so removal will require a long-term maintenance effort. The Use permit for the Project includes the following Special Condition:

> ***Mitigation Measure* LUP-3:** The applicant shall engage in a long term weed abatement program that includes hand and mechanical pulling of pampas grass on an annual basis prior to the blooming period and the removal of pulled plants from the property. Herbicide use is prohibited due to the sensitive and rare plants located on the site.

With the proposed Use Permit Special Conditions and the other mitigation measures required in this MND the proposed project would have a less than significant impact.

XIX. MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒

Setting

The California Division of Mines and Geology has not identified any significant mineral resources in the City of Fort Bragg (City) or City's Sphere of Influence (CDC 2022d). Historically, various parties have taken small amounts of aggregate from area streams, but this is no longer the case (City of Fort Bragg 2002).

The most predominant of the minerals found in Mendocino County are aggregate resource minerals, primarily sand and gravel, found along many rivers and streams. Aggregate hard rock quarry mines are also found throughout the County. Three sources of aggregate materials are present in Mendocino County: quarries, instream gravel, and terrace gravel deposits. The viability of different sources for any use depends on the property of the rock itself and the processing required to prepare the rock. According to the Mendocino County General Plan Environmental Impact Report (2008), there are no mineral resources within the Proposed Project area. The closest mineral resource is located north of the City of Fort Bragg and is labeled as sand and gravel (Mendocino County 2009).

Discussion

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?

No Impact. The proposed project site does not contain mineral resources that are of value locally, to the region, or to residents of the City, County, or state. The proposed project site is not identified as a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, the proposed project would not interfere with materials extraction or otherwise cause a short-term or long-term decrease in the availability of mineral resources. No impact would occur.

XX. NOISE

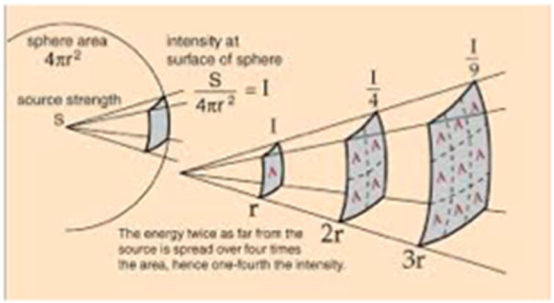
	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive ground borne 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?	☐	☐	☐	☒

Background

Noise Measurements. Acousticians define sound as a sensation in the ear created by pressure variations or vibrations in the air. What qualifies as noise, or unwanted sound, tends to be subjective. That is, sound that one person perceives as music may be noise to someone else. Sound is composed of many frequencies, some of which may affect one person more than another. Because engineers measure sound in decibels (dB) on a logarithmic scale, when two sources of sound, each measuring 70 dB(A), are added together, the resulting sound level is not 140 dB(A) but 73 dB(A). The (A) refers to a weighting scale that approximates the manner in which humans hear higher frequencies better than lower frequencies.

Noise Attenuation. The area of a surface around a point sound source increases with the square of the distance from the source. This means that the same sound energy from the source is distributed over a larger area and the energy intensity reduces with the square of the distance from the source (Inverse Square Law). For every doubling of distance, the sound level reduces by 6 decibels (dB), (e.g., moving from 10 to 20 meters away from a sound source). But the next 6dB reduction means moving from 20 to 40 meters, then from 40 to 80 meters for a further 6dB reduction.

Distance		Level c/w 10 metres
From source	c/w 10 m	
5	½	+6
10	1	0
20	2	-6
30	3	-10
40	4	-12
50	5	-14
60	6	-16
70	7	
80	8	-18
90	9	
100	10	-20



Existing Conditions: Noise Survey

A site visit/noise survey was on conducted on June 27, 2022, which included two short-term (10 to 15 minute) ambient noise measurements. Measurement M1 was conducted on the northwest side of the project site approximately 30 feet from SR-1. Measurement M2 was conducted inside the southeast portion the project site, approximately at the proposed location of the truck-to-truck transfer ramp. Traffic counts on SR-1 were conducted during measurement M1. The measured noise levels are shown on Table 1, *Noise Measurement Results*.

Table 1
NOISE MEASUREMENT RESULTS

M1	
Date	June 27, 2022
Time	10:12 a.m. – 10:27 a.m.
Location	Northwest side of the project site, approximately 30 feet from SR-1
Noise Level	66 dBA L_{EQ}
Notes	Noise primarily from vehicular traffic on SR-1. Traffic Count: 117 cars, 1 medium truck.
M2	
Date	June 27, 2022
Time	10:36 a.m. – 10:46 a.m.
Location	Northwest side of the project site, approximate 40 feet from East Natoma Street.
Noise Level	40 dBA L_{EQ}
Notes	No noise generating activity occurring at the industrial uses to the north during the measurement.

General Plan Noise Element

The City's Inland General Plan Noise Element includes Table N-3 which indicates that current noise contours along highway 1 between Pudding Creek and Elm Street (the closest road segment for which

there is data) indicates that the transfer Station, which is located more than 590 feet from the centerline of highway 1 will experience less than 60ldn of noise from the highway.

TABLE N-3
2022 TRAFFIC NOISE (L_{dn}) CONTOUR DISTANCES

Roadway	Noise Level 50 ft. from Centerline (L_{dn})	Contour Distances (in feet from Centerline) 70 L_{dn}	65 L_{dn}	60 L_{dn}
Hwy. One (Ocean View Drive to Hwy. 20)	73	80	175	380
Hwy. One (Cypress St. to Ocean View Dr.)	74	100	205	450
Hwy. One (Chestnut St. to Cypress St.)	71	55	125	270
Hwy. One (Oak St. to Chestnut St.)	70	50	115	245
Hwy. One (Redwood Ave. to Oak St.)	70	50	105	225
Hwy. One (Laurel St. to Redwood Ave.)	69	45	90	205
Hwy. One (Pine St. to Laurel St.)	69	45	90	200
Hwy. One (Elm St. to Pine St.)	69	45	95	195
Hwy. One (Pudding Creek Rd. to Elm St.)	69	45	95	195
Franklin St. (South of Chestnut St.)	61	---	---	55
Franklin St. (Oak St. to Chestnut St.)	62	---	---	60
Franklin St. (Redwood Ave. to Oak St.)	60	---	---	55
Franklin St. (Laurel St. to Redwood Ave.)	60	---	---	50
Franklin St. (Pine St. to Laurel St.)	61	---	---	55
Hwy. 20 (at Hwy. One)	63	---	40	85
Ocean View Drive (East of Hwy. One)	61	---	---	55
Ocean View Drive (West of Hwy. One)	61	---	---	55
Chestnut St.(East of Hwy. One)	60	---	---	50
Chestnut St.(East of Franklin St.)	61	---	---	60
Oak St. (East of Hwy. One)	61	---	---	60
Oak St. (East of Franklin St.)	60	---	---	50
Redwood Ave. (West of Hwy. One)	64	---	45	100
Laurel St. (West of Hwy. One)	61	---	---	55
Elm St. (West of Hwy. One)	64	---	45	95

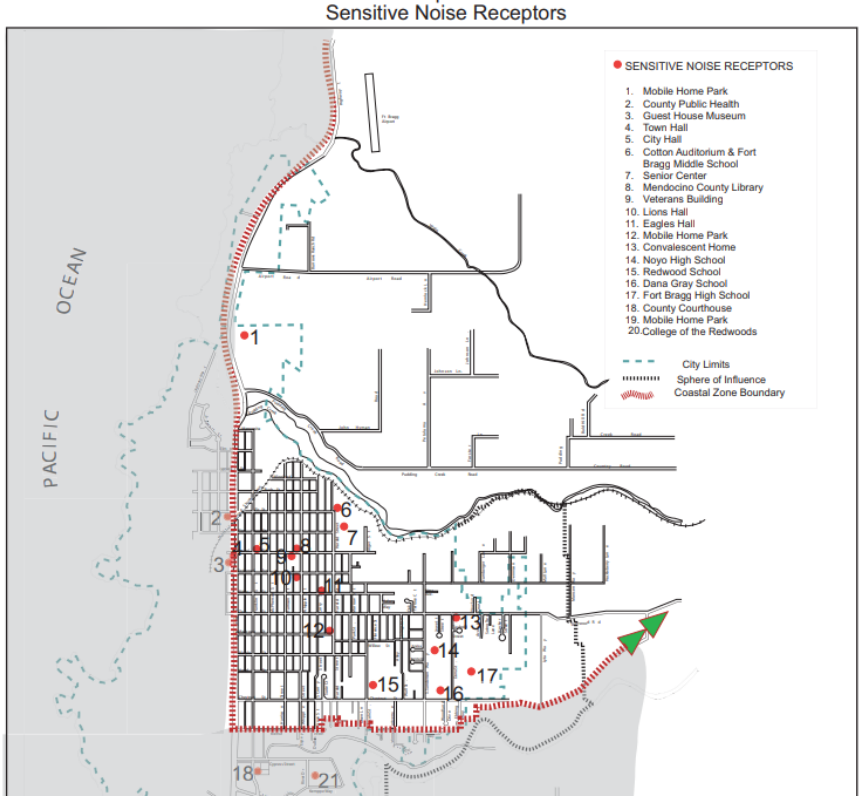
Source: Illingworth & Rodkin, Inc., February, 2002

The Inland General Plan also sets the following standard for noise exposure in residential areas:

1. The standard for maximum outdoor noise level permitted in residential areas is an Ldn of 60 dB. This standard is applied where outdoor use is a major consideration, such as backyards in single-family housing developments and recreation areas in multi-family developments. This standard should not be applied to outdoor areas such as small decks and balconies typically associated with multi-family residential developments, which can have a higher exposure of 65 dB Ldn.

Per Map N-1 of the Inland General Plan, there are no sensitive noise receptors within 1 mile of the proposed Transfer Station site.

Map N-1
Sensitive Noise Receptors



The General Plan includes the following policies and programs that are relevant to this project:

Policy N-1.2 Reduce Noise Impacts: Avoid or reduce noise impacts first through site planning and project design. Barriers and structural changes may be used as mitigation techniques only when planning and design prove insufficient.

- Program N-1.2.2: Consider requiring an acoustical study and mitigation measures for projects that would cause a "substantial increase" in noise as defined by the following criteria or would generate unusual noise which could cause significant adverse community response:
    - a) cause the Ldn in existing residential areas to increase by 3 dB or more;
    - b) cause the Ldn in existing residential areas to increase by 2 dB or more if the Ldn would exceed 70 dB; or
    - c) cause the Ldn resulting exclusively from project-generated traffic to exceed an Ldn of 60 dB at any existing residence.
- Program N-1.2.3: Consider requiring an acoustical study and mitigation measures for proposed projects that City staff finds may generate unusual noise that would cause significant adverse community response, such as, but not limited to, night-time, single-event noise or recurring impulse noise.

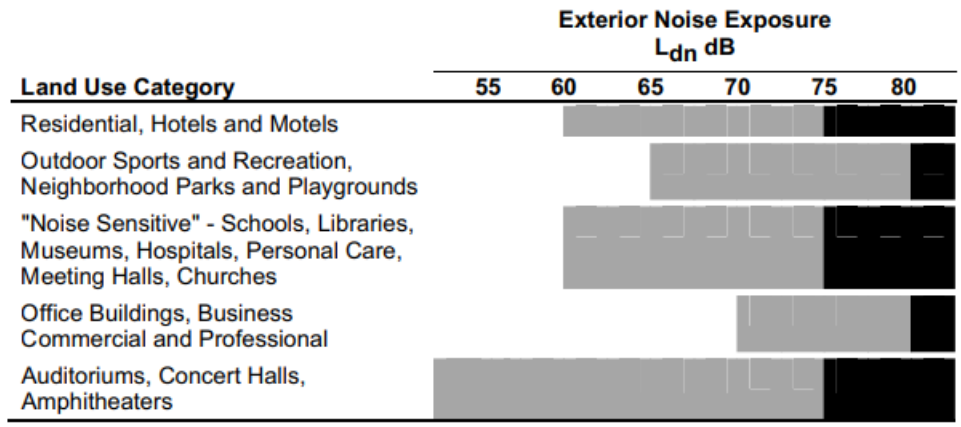
Policy N-1.6 Mitigate Noise Impacts: Mitigate noise impacts to the maximum feasible extent.

- Program N-1.6.1: Require acoustical studies and noise reduction measures, when warranted, for new developments and roadway improvements which affect noise sensitive uses such as residences, schools, hospitals, libraries, and convalescent homes.

- Program N-1.6.2: Require acoustical studies and noise reduction measures for any project that would potentially generate non-transportation noise levels in a residential area such that noise levels would exceed the planning standards set forth in Program N-1.2.2 and/or Table N-5.
- Program N-1.6.5: Recommend acoustical studies and noise reduction measures for all projects that would be exposed to noise levels in excess of those deemed normally acceptable, as defined in Table N-4.

The standards listed in Table N-4 shall be used to evaluate the compatibility between land uses and future noise in Fort Bragg.

TABLE N-4
NOISE AND LAND USE COMPATIBILITY STANDARDS



Normally Acceptable
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal, conventional construction, without any special insulation requirements.

Conditionally Acceptable
Specified land use may be permitted only after a detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.

Unacceptable
New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.

Source: Illingworth & Rodkin, Inc., March, 2002

City Noise Regulations

The City regulates noise via the City's Municipal Code 9.44.020 SPECIAL RESTRICTIONS - RESIDENTIAL AREAS, which notes the following restrictions:

A. Between the hours of 10:00 p.m. of one (1) day and 7:00 a.m. of the following day, it is unlawful for any person within a residential zone, or within a radius of 500 feet therefrom, to create cause to be created or maintain sources of noise which cause annoyance or discomfort to a reasonable person of normal sensitiveness in the neighborhood.

The sources include, but are not limited to, the following:

1. Excessively loud noises caused by the use or operation of radios, musical instruments and drums, phonographs, television sets, or other machines or devices for the production, reproduction or amplification of sound;

2. Operation of equipment or performance of any outside construction or repair work on buildings, structures, or projects or operation of construction-type devices;
3. Excessively loud sounds, cries, or behavioral noise caused by the keeping or maintenance of animals or fowl;
4. Excessively loud noise caused by the operation of any machinery, chain saw, equipment, device, pump, fan compressor, air conditioning apparatus, or similar mechanical device;
5. Operation of chimes, bells, or other devices for the purpose of advertising or inviting the patronage of any person or persons to any business enterprise; and
6. Repairing, rebuilding, or testing of motor vehicles or operating of any motor-driven vehicle off public streets or highways.

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.

Less than significant impact with Mitigation.

Truck Movement Noise. The proposed project would include the operation of short haul trucks and waste collection trucks including sounds from start up, backing up, turning, and driving to and from the site on an occasional basis. These uses generate the following level of noise:

- A semi-truck produces between 80-100 dB at 4 feet. The semi-truck is used to transfer the solid waste from Fort Bragg to the waste processing facility in Ukiah.
- The back-up beep of a truck produces an intermittent noise at between 87 to 112 dB at 4 feet.

Solid Waste Transfer Noise. Additionally, noise from the truck-to-truck transfer operation was modeled assuming unloading the collection truck (e.g., truck stationary with engine orating at high power) would require two minutes, and a small front-end loader would be operated for five minutes. Noise levels from the solid waste collection truck during the transfer operation would be approximately equivalent to a cement mixer truck unloading. Based on data from the RCNM, a concrete mixer truck produces approximately 78.8 dBA measured at a distance of 50 feet (USDOT 2008).

Analysis- Off-Site Traffic Noise
Modeling of the exterior noise environment was accomplished using Candara and the TNM. Future traffic noise levels presented in this analysis are based on traffic volumes for the existing and existing plus project scenarios. The modeling does accounts for intervening terrain, but does not account for intervening structures (e.g., sound walls, buildings).

The calculated off-site traffic noise levels are shown in Table below, *Off-Site Traffic Noise Levels*. In typical outdoor environments, a 3 dBA increase in ambient noise level is considered just perceptible and a 5 dBA increase is considered distinctly perceptible. The City's General Plan requires mitigation for an increase in off-site noise of more than 3dB. Because areas along the analyzed road segments already exceed the residential land use noise compatibility standard listed in the City Inland General Plan, this analysis uses a threshold of a 1.5 CNEL increase to determine significance of the impact.

Table
OFF-SITE TRAFFIC NOISE LEVELS

Roadway Segment	Existing 2021 (CNEL)	Existing + Project (CNEL)	Change in CNEL
State Route 1	68.0	68.1	0.1

Source: TNM version 2.5

As shown in the Table, the maximum change in CNEL as a result of project-generated traffic would be 0.1 CNEL, a change in ambient noise level that is lower than the threshold and is not discernable. Therefore, impacts related to the project generating a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of General Plan standards from project-generated traffic would be less than significant.

As initially proposed the truck parking area would be located between 300 and 371 feet of the residences located in the County to the south of the project site. The applicant has agreed to relocate the parking to the north side of the parcel as doing so would mean that truck parking, backing and starting activity would be located more than 475 feet from a residential use. While heavy trucks are not specifically referenced in the Municipal Code, they can be inferred from the list that has been provided as "other similar sources of noise."

An inverse square law calculator was used to determine the level of sound at the nearby residential homes for truck operation on site (see: https://www.wkcgroup.com/tools-room/inverse-square-law-sound-calculator/) and given the distances of the homes from the parking location total noise from truck operation at the residences would range between 55.8 dBA and 53.1 dBA, which is below the level of a normal person talking to a person from 4 feet away. Additionally, this complies with the General Plan standard of 60db, noted above for residential areas. Regular truck driving will not have a significant impact.

Truck Back-up Noise. Truck back-up noise will range from 74.1 to 75 dBA, at the property line, which is the typical level of a vacuum cleaner. However, Mitigation Measure LUP-1 will reduce this impact to a level that is less than significant.

Mitigation NOI-2 is recommended during construction.

> **Mitigation Measure NOI-2: Construction Hours/Scheduling.** The City shall specify on all grading, and construction permits that construction activities for all phases of construction, including servicing of construction equipment shall only be permitted during the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday and between 9:00 a.m. to 5:00 p.m. on Saturdays. Construction shall be prohibited on Sundays and on all holidays.

Transfer Station Operational Noise. The transfer of trash into semi-trucks will be brief in time but will happen between 7 and 14 times per day, between 9:00am and 3:00pm, six days per week. As previously noted, the transfer of material from the collection truck into the transfer trailer will produce noise of 78.8dB at 50 feet. The inverse square law sound attenuation calculator was utilized to determine the level of noise at the nearby residences. As follows:

Residence 1 – located 455 feet from transfer station = 59.6 dB
Residence 2 – located 505 feet from transfer station = 58.7 dB
Residence 3 – located 434 feet from transfer station = 60 dB

Residence 4 – located 656 feet from transfer station = 56.4 dB
Residence 5 – located 661 feet from transfer station =56.4 dB

This noise level is at or below the General Plan threshold of 60dB (table N-4 of the Noise Ordinance) for requiring special conditions or mitigation measures. However, the calculator above does not account for intervening buildings, and all of these residences except for residence 2 and residence 5 have large intervening storage buildings which will block a considerable amount of the noise. Based on the noise standard in the General plan (60dB), the transfer Station operation will have a less than significant effect on nearby residences.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant. An on-site source of vibration during project construction would be a vibratory roller. A vibratory roller would primarily be used to achieve soil compaction as part of the transfer ramp construction, and for aggregate and asphalt compaction as part of project driveway construction. Vibratory rollers could be used within approximately 150 feet of the single-family residences to the northwest. A large vibratory roller creates approximately 0.21 in/sec PPV at a distance of 25 feet. At a distance of 150 feet, a vibratory roller would create a PPV of 0.029 in/sec, [1] below the Caltrans standard of 0.2 in/sec for potential damage to structure with normal construction (not historical structure). Once operational, the project would not be a substantial source of groundborne vibrations. Therefore, the project would not generate excessive ground-borne vibration levels and the 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?

No Impact. There nearest airport is located 2 miles away; there is no airport located within two miles of the proposed project site.

XXI. POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐

[1] Equipment PPV = Reference PPV * (25/D)^{n}(in/sec), where Reference PPV is PPV at 25 feet, D is distance from equipment to the receptor in feet, and n= 1.1 (the value related to the attenuation rate through the ground); formula from Caltrans 2020. VdB = 20 * Log(PPV/4/10^{-6}).

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Setting

Based on the U.S. Census Bureau Quick Facts, Fort Bragg city, a census-designated place had a population of approximately 7,291 persons as of July 1, 2019, a decrease of approximately 0.2 percent since April 1, 2018. There were an estimated 2,775 households between 2014 and 2018, with 2.56 persons per household. Approximately 8 percent of the persons living in Mendocino County reside in the City of Fort Bragg, based on estimates provided by the U.S. Census Bureau.

Discussion

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less than significant impact. The project would not induce a substantial unplanned population growth in the areas as the project includes the development of a direct transfer station. The project site would employee up to 13 individuals at full build out including 10 employees to operate the collection trucks and 3 employees to operate the transfer trailers. It is anticipated that employees associated with the proposed project would reside locally and already be employed by the current waste hauling company. However, if future employees move to the City of Fort Bragg for work, it would be within the projected increase in population from planned grown as projected in the City of Fort Bragg Housing Element. Therefore, the project would result in a less than significant impact regarding unplanned population growth.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed project would not displace any residents or housing, as the Site contains a vacant former batch plant asphalt pad and access road. No residential units are currently located on-site; therefore, no impact would occur.

XXII. PUBLIC SERVICES

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

Setting

The project site is located in the City of Fort Bragg, in western Mendocino County, California. The project is in an area currently served by urban levels of all utilities and services. Public services provided by the City of Fort Bragg in the project area include fire, police, school, library, and park services.

The City of Fort Bragg Fire Department provides fire protection services. The City of Fort Bragg Fire Department is located at 141 North Main Street, Fort Bragg, CA 95437, approximately 2 miles south of the project site. The project is also served by the City of Fort Bragg Police Department. The police department is located at 250 Cypress Street, Fort Bragg, CA 95437, approximately 3 miles south of the project site.

The project site is located within the City of Fort Bragg Unified School District and is within the attendance area for the Redwood Elementary School, Fort Bragg Middle School, and Fort Bragg High School. However, there are several other schools that are within the attendance area including Montessori Del Mar Community School, Three Rivers Charter School, and Mendocino College Krenov School. There are two public parks in the inland zone in the City of Fort Bragg including Otis Johnson Park and Bainbridge Park. Additionally, the City owns the CV Starr Center and the City Hall Gym. Coastal parks within the Coastal Zone include the Fort Bragg Coastal Trail, which stretches 5.5 miles between Glass Beach and Noyo Harbor on 104 acres of land.

The project would be serviced with a PG&E connection and the project site is within the service boundaries of the City Municipal Improvement District (MID) No. 1.

Discussion

a) Fire protection?

Less than significant impact. The project site is located within a Local Responsibility Area (LRA) (CAL FIRE 2022) and is served by the City of Fort Bragg Fire Department, located approximately 2 miles south of the project site. As detailed on the City's website, the Fort Bragg Fire Department is a volunteer fire department with 36 firefighters and four (4) auxiliary members. Currently, there are four (4) paid positions in the department: a full-time Fire Chief, an Office Manager, a Maintenance Engineer, and a Fire Prevention Officer. As the project would include development of a waste transfer station with a maximum of 13 employees, a significant population increase is not anticipated as a result of the project and the project would be located within the service boundaries of the Fort Bragg Fire Department. The project itself does not include any structures and therefore will not result in calls for service. Therefore, a less than significant impact would occur.

b) Police protection?

Less than significant impact. The project site and the surrounding area are currently and would continue to be served by the Fort Bragg Police Department (Fort Bragg PD). The Fort Bragg PD is located at 250 Cypress Street, in Fort Bragg, California, approximately 3 miles south of the Site. As the project would include the development of a waste transfer station with a maximum of 13 on-site employees, a significant population increase is not anticipated as a result of the project and the project would be located within the service boundaries of the Fort Bragg PD. Therefore, a less than significant impact would occur.

c) Schools?

Less than significant impact. The project site is located within the Fort Bragg Unified School District (FBUSD). Montessori Del Mar Community School and Three Rivers Charter School, who are not affiliated with the FBUSD, are both located approximately 0.4 mile north of the project site. Mendocino College, who is also not affiliated with the FBUSD, is located approximately 2 miles southeast of the project site. Fort Bragg Middle School, which is affiliated with the FBUSD, is located approximately 2 mile southeast of the project site.

The proposed project does not involve the development of any residential units; however, some employees may relocate to the City of Fort Bragg (City) area to work at the proposed waste transfer station. However, as discussed under Section XIV, Population and Housing, above, while some employees may relocate to the City to work at the proposed station, some employees may commute from their current residences within the City of Fort Bragg surrounding communities. As a result, the proposed project would not be anticipated to result in substantial population growth or a significant increase in the student population. Therefore, it is anticipated that any new students as a result of the proposed project could be adequately accommodated by the existing schools within the FBUSD, and a less than significant impact would occur.

d) Parks?

Less than significant impact. As detailed in Section XXIII, Recreation, below, there are two public parks within the Inland Zone, and there are multiple Coastal Trails and Coastal Parks within the Coastal Zone. The closest park is MacKerricher State Park, which is located approximately 500 feet west of the project

site. However, no residential units are proposed nor is a significant population increase anticipated as a result of the project. As a result, the use of the existing park and recreational facilities would not substantially increase and there would not be a need for a new or physically altered park facility.

Additionally, surfers currently use a dirt area on the west side of the site parcel as an informal and unsanctioned parking lot. The applicant will retain this informal parking lot (without improvements) to allow continued surfer access to MacKerricher State Park at this point.

In total the City has 172 acres of parks and open space which is well above the threshold of 3 acres of park space per 1,000 residents. The City has seven thousand residents and has 24.4 acres of parks for every 1,000 residents. Therefore, a less than significant impact would occur.

e) Other public facilities?

Less than significant impact. There are no elements of the proposed project that would impact other public facilities, such as regional hospitals. The project involves the development of a waste transfer station that would serve the residents and business of the Mendocino County coast and of the City of Fort Bragg. Therefore, a less than significant impact would occur.

XXIII. RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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?	☐	☐	☐	☒

Setting

The City of Fort Bragg has two public parks in the inland zone: Otis Johnson Park, a 6-acre riparian park with hiking trails and Bainbridge Park, a 2-acre park in the City with an 11,000 square foot playground, basketball court, and tennis court. Additionally, the City owns the CV Starr Center, an aquatic facility with a leisure pool and competition lap pool and fitness rooms (operated by the Mendocino Parks and Recreation District) and the City Hall Gym, a historic gym located behind city hall. In the City's Coastal Zone, the 5.5-mile Coastal Trail stretches from Glass Beach to the Noyo Harbor on 104 acres of land. The City's coastal parks also include Noyo Beach and Pomo Bluffs Park on the back bluffs overlooking Noyo Harbor. In total the City has 172 acres of parks and open space which is well above the threshold which is

3 acres of neighborhood and community park space per 1,000 residents. The City has seven thousand residents and has 24.4 acres of parks for every 1,000 residents. The existing parcel has been subject to considerable surface disturbances from visitors to the area using part of the parcel as a parking lot for nearby beach access and modern trash from homeless encampments.

Discussion

a), b) **No impact.** MacKerricher State Park Road is located approximately 500 feet west of the project site, on the opposite side of State Highway 1. As the project site is located on the eastern side of State Highway 1 and the recreational areas located on the western side of State Highway 1, the recreational areas in the vicinity of the project site would not be impacted from project construction and operation. No residential units would be constructed, nor is the population expected to substantially increase, as a result of the proposed project. While some employees may relocate to the Fort Bragg area to work at the proposed waste haul transfer station, some employees may commute from their current residences within the City or surrounding communities. The proposed project would estimate a maximum of 13 workers employed on the project site. As a result, a substantial population increase is not anticipated, and use of the existing park and recreational facilities would not be expected to substantially increase as a result of the project. Therefore, there would not be a need for a new or physically altered park or recreational facility. Therefore, no impact would occur.

XXIV. TRANSPORTATION

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☒	☐	☐
b)	Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (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?	☐	☐	☒	☐

Setting

Some of the applicable goals, policies, and programs in the Circulation element of the Inland General Plan might include:

Table 10: Inland General Plan Policies and Programs- Transportation

Circulation Goal C-1 Policy C-1.3 Complete Streets: New development, that includes new streets or street segments, shall build multi-modal "complete streets" that are designed for the safety and comfort of cyclists and pedestrians, including children, the elderly, and people with disabilities, consistent with US Department of Transportation complete streets guidelines
Circulation Goal C-1 Policy C-1.3 Program C1.3.2 Through the Capital Improvement Plan and related impact fees, the City shall ensure that adequate funds are provided to maintain the existing circulation network, and where feasible upgrade it to "complete street" design.
Circulation Goal C-2 Policy C-2.2 Coordinate Land Use and Transportation: Ensure that the amount and phasing of development can be adequately served by transportation facilities.
Circulation Goal C-2 Policy C-2.3 Do not permit new development that would result in the exceedance of roadway and intersection Levels of Service standards unless one of the following conditions is met: a) Revisions are incorporated in the proposed development project which prevent the Level of Service from deteriorating below the adopted Level of Service standards; or b) Funding of pro rata share of the cost of circulation improvements and/or the construction of roadway improvements needed to maintain the established Level of Service is included as a condition or development standard of project approval.
Circulation Goal C-3 Policy C-3.3 High Trip Generating Uses: Traffic studies shall be required for all major development proposals that require a conditional approval, including but not limited to, drive-through facilities, fast food outlets, convenience markets, major tourist accommodations, shopping centers, commercial development, residential subdivisions, and other generators of high traffic volumes that would affect a Level of Service. Traffic studies shall identify, at a minimum: a) The amount of traffic to be added to the street system by the proposed development; b) Other known and foreseeable projects and their effects on the street system; c) The direct, indirect, and cumulative adverse impacts of project traffic on street system operations, safety, and public access to the coast; d) Mitigation measures necessary to provide for project traffic while maintaining City Level of Service standards; e) The responsibility of the developer to provide improvements; and f) The timing of all improvements.
Circulation Goal C-3 Policy C-3.4 Program C-3.4.1 Review site plans for new development to facilitate the continuation of streets to improve local circulation. Where streets are not feasible, priority shall be given to providing pedestrian and bicycle trails that establish bicycle and pedestrian connections to streets wherever possible.
Circulation Goal C-3 Policy C-3.5 Right-of-Way Acquisition: Require right-of-way dedications for new development to meet the City's roadway width standards

Study Area

The project site is located at 1280 N Main Street (State Highway 1) in the City of Fort Bragg.
The study area includes the intersection of SR 1/Pudding Creek Road and the project access point. Operation of the study intersection was evaluated under Existing and Existing plus Project Conditions. Operating conditions at the intersection of SR 1/Pudding Creek Road were assessed for the afternoon peak period on a weekday and the morning peak period on a Saturday.

State Route (SR) 1/Pudding Creek Road is a "T" intersection with the westbound Pudding Creek Road approach stop-controlled. The intersection has a left-turn lane on the southbound SR 1 approach and the stop-controlled minor street approach has a flared right-turn area with storage space to accommodate one vehicle, allowing drivers to queue upside-by-side to make left and right turns.

It is noted that the project driveway was not considered as a study intersection. The *California Vehicle Code* defines an intersection as "the area embraced within the prolongation of the lateral curb lines, or, if none, then the lateral boundary lines of the roadways, of two highways which join one another at approximately right angles or the area within which vehicles traveling upon different highways joining at any other angle may come in conflict." This definition specifies that intersections are created where two "highways," or public streets, intersect. As driveways are not public streets, where they connect with a public road is not an intersection, so it would be unreasonable to evaluate it as such. The driveway connection was, however, evaluated for operational issues such as adequacy of sight distance and need for turn lanes.

Trip Generation

The trip generation was determined by reviewing existing operations, and extrapolating to operations with the transfer truck, which would include:

Table 11: Trip Generation Summary

Land Use	Daily		Weekday PM Peak Hour			Weekend AM Peak Hour		
	Wkdy	Wknd	Trips	In	Out	Trips	In	Out
2-Axle Vehicle	20	20	10	10	0	10	10	0
3-Axle Vehicle	14-28	14-28	0	0	0	7	0	7
4-Axle or more Axle Vehicle	4	4	4	0	3	0	0	0
Total	52	52	14	10	3	17	10	7

Note: Wkday=Weekday;
Wknd=Weekend

Project-generated trips were assumed to be distributed primarily to the City of Fort Bragg so 90 percent were assumed to be to/from the south on SR 1 and the remaining 10 percent to/from the north.

Traffic Operation

A review of the current Fort Bragg General Plan Circulation Element indicates that intersections on SR 1 in northern Fort Bragg were expected to operate at LOS A or B under future volumes, even upon developing the Mill Site. Since this indicates that there is substantial capacity remaining prior to operation falling to an unacceptable LOS D, an operational analysis was not prepared for these intersections on SR 1. Based on the project's trip generation of 13 weekday p.m. peak hour trips, it is reasonable to conclude that the project would not have an adverse effect on traffic operation at these previously evaluated intersections.

Existing and Existing plus Project Conditions

The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the weekday a.m. and p.m. peak periods. Count data were collected in March 2022 specifically for this study. To reflect summertime conditions, the collected counts were compared to counts collected in July 2015, and adjustment factors of 1.18 and 1.84 were applied to weekday afternoon and weekend midday counts, respectively. It is noted that while the counts from 2015 may appear to be outdated, the counts were determined to be acceptable as there have been no significant developments in the study area, so volumes have remained relatively constant aside from the effects associated with the COVID pandemic. Peak hour factors (PHFs) were calculated based on the counts obtained and used in the LOS calculations unless the calculated PHF was less than 0.85 in which case this was used as a floor to avoid overly conservative results.

Under Existing Conditions, the intersection of SR 1/Pudding Creek Road operates acceptably at LOS A overall with LOS C or D operation on the stop-controlled westbound Pudding Creek Road approach. Upon addition of project trips, the intersection would continue to operate at the same Levels of Service. It is noted that while operating the waste transfer station at the proposed site would eliminate the turning movements to/from Pudding Creek Road associated with the existing facility, because the existing site can be redeveloped and potentially generate a similar volume of traffic, no deductions were made to existing volumes to reflect the change in travel patterns for project traffic. The results are summarized in Table 10 below, which is a very conservative analysis, because the original TIS included a buy-back recycling center which has been eliminated from the project.

Table 12: Existing and existing plus Project Peak Hour Intersection Levels of Service

Study Approach	Existing Conditions				Existing plus Project			
Approach	WD PM Peak		WE AM Peak		WD PM Peak		WE PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. SR 1/ Pudding Creek Rd	2.0	A	2.0	A	2.0	A	2.0	A
WB (Pudding Creek Rd) approach	*23.5*	*C*	*27.4*	*D*	*25.0*	*C*	*29.4*	*D*

Note: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*

Project Impact on Vehicle Miles Traveled (VMT)

A significance threshold equal to the subregion average total VMT per service population for the "Fort Bragg Adjacent" region was developed. Based on the Mendocino Council of Governments (MCOG) SB 743 VMT Screening Tool by Fehr & Peers, the subregional average VMT per service population is 22.0. The project site is located in the traffic analysis zone (TAZ) 474, which has an average of 19.0 VMT per service population. Since the project VMT is approximately 14 percent below the subregional average, it is reasonable to conclude that the project would have a less-than-significant impact on VMT. The additional vehicle miles traveled to move the transfer station from its current location at Pudding Creek transfer station facility to the proposed location is calculated in the table below and illustrates that the new Transfer Station would result in 48 miles additional VMT per day over the operations at the Waste Management Transfer Station.

Table 13 Vehicle Miles Traveled – additional miles traveled from previous transfer station location, Fort Bragg Transfer Station

	Additional Miles Traveled from Previous Transfer Station		
	Vehicle Trips	Additional Miles/vehicle	Total Miles Traveled
Employee Vehicles	20	1	20
Collection Trucks	14-28	1	14-28
Transfer Trucks	4	1	4
Total			48-62

Additionally, as the existing Waste Management facility has already closed, current vehicle miles traveled are higher now, because the lack of a transfer station results in 7 collection vehicles driving 1 to 2 times to and from Ukiah every day rather than 2 to 3 semi-trailers going just once. The table below illustrates the final milage if the transfer station becomes operational (left) and current VMT without a transfer station. As noted, the completion of the project would result in a reduction of VMT.

Table 14: Vehicle Miles Traveled - Redwood Solution Operations with and without Transfer Station

	Additional Miles Traveled from Previous Transfer Station			Additional Miles Without Operational Transfer Station		
	Vehicle Trips	Additional Miles/vehicle	Total Miles Traveled	Vehicle Trips	Additional Miles	Total Miles Traveled
Employee Vehicles	20	1	20	20	1	20
Collection Trucks	14-28	1	14-28	14-28	61	856-1,708
Transfer Trucks	4	61	244	0	0	0
Total			268-278			882-1,728

It should be noted that the Technical Advisory and CEQA Guidelines Section 15064.3 state “vehicle miles traveled refers to the amount and distance of automobile travel attributable to a project.” The Technical Advisory further explains that “the term ‘automobile’ refers to on-road passenger vehicles, specifically cars and light duty trucks.” Based on this guidance, none of the project’s heavy trucks are subject to VMT analysis, and the project would have **no impact on Vehicle Miles Traveled.**

Vehicle Access

The project site would be accessed via a proposed driveway on SR 1. Along the project frontage, SR 1 has a posted speed limit of 45 miles per hour (mph) and a 12-foot travel lane in each direction. Based on count data collected on March 25, 2022, the segment of SR 1 along the project frontage has an average daily traffic (ADT) volume of about 6,600 vehicles; peak summertime volumes are about 8,000 based on data posted on Caltrans’ website. Based on the brief speed survey taken on April 16, 2022, southbound traffic on SR 1 had an 85th-percentile speed of 37 mph while the northbound traffic had an 85th-

percentile speed of 41 mph along the project frontage. As the speed survey results indicate that the average speeds for both directions on SR 1 are lower than the posted speed limit of 45 mph, the posted speed limit was used for the access analysis for a conservative approach.

Sight Distance

Sight distance along SR 1 at the project driveway was evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distance for minor street approaches that are either a private road or a driveway is based on stopping sight distance, with the approach travel speed used as the basis for determining the recommended sight distance. Consideration was also given to the stopping sight distance needed for a following driver to stop if there is a vehicle waiting to turn into a side street or driveway.

For the posted speed limit of 45 mph, the minimum stopping sight distance needed is 360 feet. Based on a review of field conditions, sight lines to and from the project driveway location on SR 1 extend nearly 380 feet to the east and 400 feet to the west, which is more than adequate for the posted speed limit. Additionally, adequate stopping sight distances are available for following drivers to notice and react to a preceding motorist slowing to turn right or left into the driveway.

Collisions

The collision history for SR 1 in the vicinity of the project driveway, between Airport Road and Jane Lane, was reviewed to determine any trends or patterns that may indicate a safety issue. Collision rates were calculated based on records available from the California Highway Patrol (CHP) as published in their Statewide Integrated Traffic Records System (SWITRS) reports. For the most current five-year period for which data is available of October 1, 2016, through September 30, 2021, there were two collisions reported on the study segment, which translates to a calculated collision rate of 0.25 collisions per million vehicles miles (c/mvm). This calculated collision rate was compared to the average collision rate for similar facilities statewide, as indicated in *2018 Collision Data on California State Highways*, California Department of Transportation (Caltrans). The statewide average collision rate for a two-lane roadway in an urban environment with the posted speed limit less than or equal to 45 mph is 1.20 c/mvm, which is higher than calculated for the study segment indicating that the study segment is performing acceptably with regards to safety.

It is noted that one of the incidents during the study period occurred along the project frontage; however, as this collision was a single-vehicle collision and did not involve turns into or out of any of the project driveway, it appears that there have not been safety issues at the project driveway location.

Left-turn Lane Warrant

The need for a left-turn lane on SR 1 at the project driveway was evaluated based on criteria contained in the Guidelines for Reconstruction of Intersections, Caltrans, August 1985. The values provided in Table V-1 on Page 55 were used to develop a regression formula that best fits the criteria published by Caltrans. Using the Existing plus Project peak hour volumes, it was determined that a left-turn pocket is not warranted on SR 1 at the project driveway during the critical peak hour evaluated.

Queuing

Using the Vistro application, queueing for inbound and outbound trips at the project driveway was evaluated for any potential delay upon the addition of the project-generated trips. Under Existing plus Project volumes, the 95th percentile queue for the project driveway was determined to be no more than one vehicle during both peak hours. Similarly, no queuing is expected on the northbound and southbound approaches of SR 1 during either peak hour. Therefore, it is reasonable to conclude that project traffic would not impede through traffic on SR 1.

Parking

The project was analyzed to determine whether the proposed parking supply would be sufficient to meet the City requirements, as proposed the project includes 10 truck parking spaces and 13 employee parking spaces (including on ADA space). As noted below this meets the requirements of the ILUDC.

City parking supply requirements are based on the City of Fort Bragg's Municipal Code, Chapter 18.36.040 and as noted below:

Use type	Square feet	Requirement	Required Parking Space
Vehicle Storage	4,400	1 space/3,000 SF	2
Freight Terminal	7,200	1 space/1,000 SF & 1 space for each commercial vehicle	7
Total			**9**

The parking for the vehicle storage and transfer station was also calculated based on the numbers of employees and trucks, which indicates a need for 20 parking spaces as noted below:

Table 15: Parking Analysis

Land Use	Units	Rate	Parking Space
Required Parking			
Employee	10 employees	1 space/ employee	10
Collection/ Transfer Truck	10 trucks (7 collection & 3 transfer trucks)	1 space/ truck	10
Required Parking Total			20
Proposed Parking Supply			
Employee Parking			13
Collection/ Transfer Truck			10

Discussion

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than significant impact with mitigation. Based on operations requirements, the project would result in an average of 41 weekday daily trips including 13 trips during the p.m. peak hour identified for analysis and 41 weekend daily trips with 17 trips during morning peak hour. The number of project-generated trips were assumed to be distributed primarily to the City of Fort Bragg so 90 percent were assumed to be

to/from the south on SR 1 and the remaining 10 percent to/from the north. Under Existing Conditions, the intersection of SR 1/Pudding Creek Road operates acceptably at LOS A overall with LOS C or D operation on the stop-controlled westbound Pudding Creek Road approach. Upon addition of project trips, the intersection would continue to operate at the same Levels of Service. Using the peak hour volumes evaluated, a left turn pocket is not warranted on SR 1 at the project driveway during critical peak hours. Based on the project's trip generation weekday p.m. peak hour trips, it is reasonable to conclude that the project would not have an adverse effect on traffic operation and impacts would be less than significant.

The proposed parking supply includes an adequate number of parking spaces for the number of employees and trucks. The proposed truck parking is considered adequate as not all the trucks would be parked on-site at any one time. No bicycle, pedestrian, or transit facilities are located or warranted on the project site. The project will have a less than significant impact on site circulation.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less than significant impact. SB 743, passed in 2013, required OPR to develop new CEQA Guidelines that address traffic metrics under CEQA. As stated in the legislation (and Section 21099[b][2] of CEQA), upon adoption of the new CEQA guidelines, "automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the CEQA guidelines, if any." The Office of Administrative Law approved the updated CEQA Guidelines on December 28, 2018, and the changes are reflected in new CEQA Guidelines (Section 15064.3). CEQA Guidelines Section 15064.3 was added December 28, 2018, to address the determination of significance for transportation impacts. Pursuant to the new CEQA Guidelines, VMT replaced congestion as the metric for determining transportation impacts.

The Vehicle Miles Traveled (VMT) associated with a project is the primary basis for determining traffic impacts under CEQA. Like many other jurisdictions in California, the City of Fort Bragg has not yet adopted policies or thresholds of significance regarding VMT. Therefore, the project was analyzed based on the guidance provided in the Technical Advisory on Evaluating Transportation Impacts in CEQA (2018) by the state's Office of Planning and Research (OPR), as well as the Senate Bill 743 Vehicle Miles Traveled Regional Baseline Study, Fehr & Peers, 2020. While the Technical Advisory addresses residential, commercial, and office use types, it does not address industrial types of land uses, indicating that lead agencies may develop their own thresholds for other land use types, and allow assessment on a case-by-case basis. Accordingly, a significance threshold was developed for the proposed project based on guidance contained in the Technical Advisory, Regional Baseline Study, adopted thresholds for industrial projects being applied in other jurisdictions, and an understanding of the proposed project's operating characteristics.

Consistent with the approaches used by Sacramento County and San Jose, a significance threshold equal to the subregion average total VMT per service population for the "Fort Bragg Adjacent" region was applied. Based on the Mendocino Council of Governments (MCOG) SB 743 VMT Screening Tool by Fehr & Peers, the subregional average VMT per service population is 22.0. The project site is located in the traffic analysis zone (TAZ) 474, which has an average of 19.0 VMT per service population. Since the project VMT is significantly below (3.8 VMT) the subregional average, the project would have a less than significant impact on VMT, and no mitigation would be required.

c) 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 with mitigation. The project site would be accessed via a proposed driveway on SR 1. Along the project frontage, SR 1 has a posted speed limit of 45 miles per hour (mph) and a 12-foot travel lane in each direction. A speed survey indicated that the average speeds of both directions on SR 1 were lower than the posted speed of 45 mph. The collision history for SR 1 in the vicinity of the project driveway, between Airport Road and Jane Lane, was reviewed to determine any trends or patterns that may indicate a safety issue. For the most current five-year period for which data is available of October 1, 2016, through September 30, 2021, there were two collisions reported on the study segment, which translates to a calculated collision rate of 0.25 collisions per million vehicles miles (c/mvm). The statewide average collision rate for a two-lane roadway in an urban environment with the posted speed limit less than or equal to 45 mph is 1.20 c/mvm, which is higher than calculated for the study segment indicating that the study segment is performing acceptably with regards to safety. Therefore, speed and crash history do not indicate any safety concerns at the proposed project driveway.

Queueing for inbound and outbound trips at the project driveway was evaluated for any potential delay upon the addition of the project-generated trips. Under Existing plus Project volumes, the 95th percentile queue for the project driveway was determined to be no more than one vehicle during both peak hours. Similarly, no queuing is expected on the northbound and southbound approaches of SR 1 during either peak hour. Therefore, it is reasonable to conclude that impacts related project traffic would be less than significant on through traffic on SR 1.

Sight distance along SR 1 at the project driveway was evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. For the posted speed limit of 45 mph, the minimum stopping sight distance needed is 360 feet. Based on a review of field conditions, sight lines to and from the project driveway location on SR 1 extend nearly 380 feet to the east and 400 feet to the west, which is more than adequate for the posted speed limit. Additionally, adequate stopping sight distances are available for following drivers to notice and react to a preceding motorist slowing to turn right or left into the driveway. While adequate sight lines are available along the project frontage, implementation of Mitigation Measure TRA-1 would ensure sight lines are not blocked.

Implementation of Mitigation Measure TRA-1 would reduce all potential impacts regarding limited visibility and traffic safety to a less than significant level.

> **Mitigation Measure TRA-1: Visibility to Sight Lines.** The applicant shall ensure that all vegetation within and near the area encompassed by the sight lines be regularly mowed, clipped and maintained throughout project construction and operation. The applicant shall ensure the sight lines are not blocked from overgrown vegetation.

d) Result in inadequate emergency access?

Less than significant impact. The project site would be accessed from an existing, single lane driveway along Highway 1 that extends southeast of the main entrance driveway and parallels the eastern boundary line. The existing driveway width would be retained as a 13-ft driveway. The project is designed to allow for adequate emergency access. Therefore, impacts would be less than significant, and no mitigation would be required.

XXV. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a 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:				
i. 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), or	☐	☒	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Setting

CEQA, as amended by Assembly Bill 52 (AB 52), requires that the City of Fort Bragg provide notice to any California Native American tribes that have requested notice of projects subject to CEQA review and consult with tribes that responded to the notice within 30 days of receipt with a request for consultation.

- Sherwood Valley Rancheria
- Coyote Valley Band of Pomo Indians
- Manchester Band of Pomo Indians
- Cahto Tribe
- Guidibille Indian Rancheria
- Pinoleville Pomo Nation
- Hopland Band of Pomo Indians
- Potter Valley Tribe

The purpose of consultation is to identify Tribal Cultural Resources (TCRs) that may be significantly impacted by the proposed project, and to allow the City to avoid or mitigate significant impacts prior to project approval and implementation. Section 21074(a) of the PRC defines TCRs for the purpose of CEQA

as:

(1) Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or

(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or,

(2) 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Because the first two criteria also meet the definition of a Historical Resource under CEQA, a TCR may also require additional consideration as a Historical Resource. TCRs may or may not exhibit archaeological, cultural, or physical indicators and can only be identified by a culturally affiliated tribe, which has been determined under State law to be the subject matter expert for TCRs.

CEQA requires that the City initiate consultation with tribes at the commencement of the CEQA process to identify TCRs. Furthermore, because a significant effect on a TCR is considered a significant impact on the environment under CEQA, consultation is required to develop appropriate avoidance, impact minimization, and mitigation measures. Therefore, in accordance with the requirements summarized above, the City carried out, or attempted to carry out, tribal consultation for the project.

On January 27, 2022, the City of Fort Bragg sent project notification letters to the eight California Native American tribes named above. The letter provided each tribe with a brief description of the project and its location, the contact information for the City's authorized representative, and a notification that the tribe has 30 days to request consultation. On June 13, 2022, the Sherwood Valley Rancheria responded to the notification letter requesting tribal cultural monitoring on site when project work begins. No other tribes responded.

Discussion

a) 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:

   i. 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. On June 17, 2021, Alex DeGeorgey, Principal Archaeologist with ALTA, conducted a records search (File Number 20-2618) at the Northwest Information Center (NWIC). There was one cultural resource documented within the project site (P-23-003691). P-23-0003961 (CA-MEN-

003123) is a pre-historic resource located on a sand dune that consists of a small shell midden with fire-affected rock, mammal bone, and a ground stone fragments (Van Bueren 2006b).

ALTA staff archaeologist Brianna Boyd conducted a field survey of the Project Area on August 9, 2021. The previously identified resource, P-23-003691 (CA-MEN-3123), was relocated during the field survey. The resource appears to be in similar condition as the original 2006 site record, with perhaps a greater level of disturbance since the original recordation. The parcel has been subject to considerable surface disturbances from visitors to the area using part of the parcel as a parking lot for nearby beach access and modern trash from homeless encampments. The entirety of the project parcel was surveyed, totaling 7-acres of land. The previously delineated boundaries of P-23-003691 are still accurate given no artifactual or other cultural deposit was identified by the shovel pits outside the known boundaries of the site. No new discrete deposit of cultural resources was identified during survey.

ALTA archaeologist Heather Warner contacted the NAHC on June 17, 2021 to request a review of the Sacred Lands file for information on Native American cultural resources in the study area and to request a list of Native American contacts in this area. In the NAHC response dated July 7, 2021, Sarah Fonseca (Cultural Resources Analyst) indicated that a search of the Sacred Lands File returned a negative result. The NAHC forwarded a list of suggested tribal entities to contact for their input or concerns regarding the project.

On June 22, 2021, an outreach letter was sent to the Chairperson of each tribal group associated with the Study Area. On June 13, 2022, the Sherwood Valley Rancheria tribe responded to the notification letter and requested on site tribal cultural monitoring when project work begins. Out of abundance of precaution as well as to comply with the requested monitoring on site from Sherwood Valley Rancheria, Mitigation Measure TCR-01 would be implemented to reduce impacts to potential discoveries of Tribal Cultural Resources on site to a less than significant level. With the receipt of June 13, 2022, the City of Fort Bragg verbally closed AB 52 Consultation with Sherwood Valley Rancheria.

From the conclusions from the records search, Sacred Lands File search, and the confirmations from the individual tribal members, impacts to tribal cultural resources would be less than significant with Mitigation Measure CUL-3.

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less than significant impact. No cultural resources were identified on the project site through the records search or via subterranean testing. Impacts to unanticipated tribal cultural resources, if encountered during construction, would be potentially significant. Based on the results in the confidential Archaeological Survey Report as well as the monitoring request from the Sherwood Valley Rancheria on June 13, 2022, the City concludes that there would be a less than significant impact on TCR's with the incorporation of Mitigation Measure CUL-3 regarding unanticipated discoveries.

XXVI. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
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?	☐	☐	☒	☐

Setting

The project site contains an existing Pacific Gas & Electric (PG&E) connection and an existing unpermitted well. The unpermitted well would be permitted and/or abandoned for the proposed project, as required by the Mendocino County Division of Environmental Health (MCDEH). The applicant would be allowed to use the existing well in compliance with Fort Bragg Municipal Code Section 14.04.127 (Wells for Nondomestic Use), as well as Section 14.04.125 (Wells for Domestic Use), if applicable. Additionally, the existing electrical connection would be upgraded as needed to accommodate the proposed project. No natural gas is anticipated for the proposed project, and telecommunications service would be obtained, if needed, prior to construction.

Background

The Public Facilities Element of the Inland General Plan has goals, policies and programs to manage the impacts of growth on the City's infrastructure. These can be found in Page 3-3 through 3-6 of the Public Facilities Element of the City's General Plan. Included in these policies are:

Table 16: Inland General Plan Policies and Programs- Utilities and Service Systems

Public Facilities Goal PF-1 Ensure that new development is served by adequate public services and infrastructure.
Public Facilities Goal PF-1 Policy PF-1.1 Ensure Adequate Services and Infrastructure for New Development: Review new development proposals to ensure that the development can be served with adequate potable water; wastewater collection, treatment, and disposal; storm drainage; fire and emergency medical response; police protection; transportation; schools; and solid waste collection and disposal.
Public Facilities Goal PF-1 Policy PF-1.2 All new development proposals shall be reviewed and conditioned to ensure that adequate public services and infrastructure can be provided to the development without substantially reducing the services provided to existing residents and businesses.
Public Facilities Goal PF-1 Policy PF-1.2 Program PF-1.2.1: New development shall be responsible for any improvements or extensions of infrastructure or the service capacity necessary to serve the development.

Discussion

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

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?

Less than significant impact. Discussion of the project's impact on water, wastewater treatment or storm water drainage, electric power, natural gas, and telecommunications facilities follows:

Water Supply

The proposed project would be required to comply with all necessary local, state, and federal permits and would therefore be subject to avoidance and minimization measures, as well as standard BMPs described in those permits and would not have a significant effect on the environment.

Wastewater (Sanitary Sewer)

The project would include a portable restroom in the back portion of the project site. No permanent wastewater system is located within the project vicinity.

Stormwater

The project would include installation of a total of 3,432 sf of bioretention and stormwater infiltration swale. The bioretention area would be designed in accordance with the City's standard for urban runoff pollution control. The project has been analyzed for potential stormwater runoff and has qualified as a

No Discharge project, as all runoff from impervious surfaces would be directed to the proposed bioretention feature, which is adequate to retain and infiltrate storms. Stormwater during construction would be managed by Best Management Practices (BMPs), which would be inspected and maintained as described in the County of Mendocino Low Impact Development Standards Manual.

Electricity, Gas, and Telephone

The existing electrical connection located on the project site would be upgraded as needed to facilitate the proposed project. No natural gas is anticipated for the proposed project, and telecommunications service would be obtained, if needed, prior to construction.

Based on the details above, the project would have a less than significant impact on water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, and no mitigation is needed for questions a), b), and c).

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?

Less than significant impact. The proposed project is the development of a direct transfer station with a direct transfer operation and associated vehicle storage.

The operations associated with the direct transfer operations in the back portion of the project site would include the collection of trucks operated by RWS running established routes to pick up materials from the surrounding areas. Materials commonly transported would consist of recycling and solid waste streams received from curbside collection per a separate franchise agreement between RWS and the City of Fort Bragg and Mendocino County. After collecting materials, the collection trucks would return to the project site to transfer collected materials from the back of the collection trucks directly into staged transfer trailers. All material transfers (waste and recyclables) would remain fully contained within an enclosed transfer trailer and would be moved on a truck-to-truck basis only. No materials would be stored on the ground at any time.

The proposed project would comply with all federal, state, and local statutes and regulations related to solid waste including compliance with the 1989 California Integrated Waste Management Act (AB 939) requiring specific waste diversion goals for local agencies.

As the project would collect solid waste within capacity of State and local standards, and within the capacity of the on-site infrastructure, and would comply with all federal, state, and local statutes and regulations related to solid waste. Therefore, impacts would be less than significant.

XXVII. WILDFIRE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
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?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐

Setting

The project site is located in a Local Responsibility Area, and it is not in a Very High Fire Hazard Severity Zone. However, the project site is bordered to the southeast by a State Responsibility Area (CAL FIRE 2021).

The City is also part of the Fort Bragg Fire Protection Authority. Goal SF-4 - Reduce fire hazards of the Inland General Plan Element 7- Safety has specific policies and programs to reduce fire hazards:

Table 17: Inland General Plan Policies and Programs- Wildfire

Safety Goal SF-4 Policy SF-4.1 Minimize Fire Risk in New Development: Review all development proposals for fire risk and require mitigation measures to reduce the probability of fire.
Safety Goal SF-4 Policy SF-4.1 Program SF-4.1.1: Continue to consult the Fort Bragg Fire Protection Authority in the review of development proposals to identify the projected demand for fire protection services and implement measures to maintain adequate fire protection services. Mitigation measures may include levying fire protection impact fees for capital facilities, if warranted.
Safety Goal SF-4 Policy SF-4.2 Maintain a High Level of Fire Protection: Work with the Fire Protection Authority to ensure a continued high level of fire protection.

Safety Goal SF-4 Policy SF-4.2 Program SF-4.2.1: Increase water main sizes or loop existing water mains where necessary to provide adequate flows for fire protection. The standard for water flow for fire protection purposes in commercial uses should be a minimum of 1,000 gallons per minute for 2 hours with 20 pounds per square inch residual pressure.
Safety Goal SF-4 Policy SF-4.2 Program SF-4.2.3 Work with the Fort Bragg Fire Protection Authority to establish a regular schedule for periodic inspections of commercial and industrial premises by the Fire Prevention Officer.

Discussion

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less than significant impact. Within the City of Fort Bragg, the generally recognized "safe elevation level" with regard to tsunami events is approximately 60 feet above mean sea level. The project site is located just east of State Highway 1 and has elevations ranging from 45-60 feet above mean sea level. Therefore, impact or inundation from a severe storm surge or tsunami event must be considered a risk for the site, albeit a relatively low risk. The City's Tsunami Contingency Plan provides guidelines to alert and evacuate the public from tsunami risk areas within the City. The project is not located in an area that would not impair the evacuation of the City in the event of tsunami or coastal flooding. Per the Tsunami Contingency Plan, evacuation directions for properties located North of Pudding Creek Bridge include the following:

- Pudding Creek Road – eastbound east of John Hyman Road
- Airport Road – eastbound east of Burrows Ranch Road

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?

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?

Less than significant impact. The project site is relatively flat with elevations ranging from 45 feet to 60 feet and would not expose any structures or persons to risks related to slopes either during or after the occurrence of a wildfire. According to the NRCS Web Soil Survey, the existing on-site soil ranges from 0 to 15 percent slopes, minimizing the potential for landslides. The project would include bioretention areas for on-site runoff. The Stormwater Control Plan concluded the proposed overflow and flood control pond would be sized to limit discharge to pre-development flows. With the existing site conditions and the proposed drainage areas, impacts related to wildfire risk and post-fire instability is less than significant.

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?

Less than significant impact. The project site contains an existing Pacific Gas & Electric (PG&E) connection and an existing unpermitted well. The unpermitted well would be permitted and/or abandoned for the proposed project, as required by the Mendocino County Division of Environmental Health (MCDEH). The applicant would be allowed to use the existing well in compliance with Municipal Code Section 14.04.127 (Wells for Nondomestic Use), as well as Section 14.04.125 (Wells for Domestic

Use), if applicable. A new well would be installed, if needed. Additionally, the existing electrical connection would be upgraded as needed to accommodate the proposed project. No natural gas is anticipated for the proposed project, and telecommunications service would be obtained, if needed, prior to construction. The project applicant is proposing a portable restroom in the eastern portion of the project site, as no wastewater collection infrastructure is present within the site. As no installation or maintenance of associated infrastructure is required, impacts would be less than significant.

XXVIII. MANDATORY FINDINGS OF SIGNIFICANCE

	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 significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

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

Less than significant impact. As mitigated, the proposed project will not have a substantial impact on habitat or fish species, wildlife species or a plant or animal community. The project has the potential to result in improved habitat for the rare Menzies Wallflower, which is found on site in a small, dispersed population. This beneficial effect will occur from fencing this area off to trespass by vehicles, campers and the curious.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?

Less than significant impact. The proposed small-scale project will have a less than significant impact on daily traffic (20 vehicles total), vehicle miles traveled, traffic safety and Level of Service and thus will not result in a cumulatively considerable impact. Likewise, all other potential impacts have been analyzed in the MND and either reduced to a level of less than significant with mitigation or were or will have no impact or a less than significant impact.

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

Less than significant impact. The project does not have any substantial adverse effects **o**n human beings either directly or indirectly. As noted in the traffic analysis the project will not result in traffic safety concerns due to the relatively low number of vehicle movements in and out of the facility. Likewise, the project is designed to ensure that all waste and recyclables will be transferred directly from one truck to the other without spillage or leakage. The project will likewise not have an impact on green house gasses or PM-10. Potential noise from the project will be fully mitigated through operational requirements. As previously analyzed the project will not have an impact on recreational opportunities.

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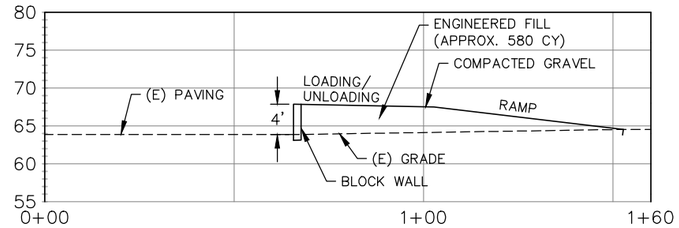
4.0 PREPARERS

Marie Jones, Principal, Marie Jones Consulting

HELIX Environmental Planning, Inc.
Robert Edgerton, AICP CEP, Project Manager
Julia Pano, Environmental Planner

SHEET NOTES: (1)

1. RE-PAVE EXISTING DRIVEWAY (ENCROACHMENT PERMIT REQUIRED BY CALTRANS FOR RE-PAVING).
2. INSTALL FENCING AS SHOWN. ALL NEW FENCING SHALL BE 2-INCH MESH AT LEAST 5-FEET IN HEIGHT WITH T-POST (OR SIMILAR) SUPPORTS AT 10-FOOT INTERVALS.
3. EXISTING BIOLOGICAL RESOURCES INTENTIONALLY NOT SHOWN IN DETAIL ON THIS DOCUMENT, REFER TO BIOLOGICAL RESOURCE REPORT.
4. NEW LOADING RAMP TO BE CONSTRUCTED IN THE SIZE AND LOCATION SHOWN. RAMP SHALL INCLUDE A SLOPED RAMP ON THE SOUTHEAST SIDE, THEN AN UPPER LEVEL "UNLOADING" AREA. PEDESTRIAN HANDRAIL SHALL BE PROVIDED ON THE TWO SIDES OF THE RAMP WITH NO RAILING AT THE UNLOADING/LOADING TRANSITION.
5. NEW GATED ENTRY TO BE COORDINATED WITH ADJACENT OWNER. ANTICIPATE CHAIN LINK SWING GATE WITH SLATS.



SCALE: H– 1" = 20'
V– 1" = 10'

SECTION A – A' (THROUGH LOADING AREA)

(E) OVERHEAD POWER (TYP)
STATE HWY 1
APPROXIMATE PARCEL BOUNDARY
(N) GATE
CONNECT TO (E) FENCE
(E) GRAVEL
(N) AUTOMATED SWING ENTRY GATE (NO PUBLIC ACCESS)
(E) FENCING (TYP)
PAVE (E) DRIVEWAY, ENCROACHMENT PERMIT THROUGH CALTRANS
(N) FENCING TO PROTECT/ SCREEN (E) VEGETATION
(N) ADDRESS/MONUMENT SIGN
REMOVE (E) GATE, INSTALL CONCRETE V–DITCH ACROSS ROAD
BMP–1 BIORETENTION (700 SF)
(N) TRUCK PARKING (10 TOTAL SPACES)
(E) CONCRETE
LOADING/UNLOADING AREA
(E) AC PAVING
60'
(E) WELL ASSEMBLY
(E) PARKING (UNCHANGED)
BMP–2 BIORETENTION (720 SF)
TRAILER STAGING
(N) FENCE
61'
90'
(N) FENCING
PERIMETER BLOCK WALL
RAMP
SLOPE
(N) INFILTRATION TRENCH / BASIN (3,000 SF TOTAL)
(E) GRAVEL
FENCE LAYOUT TO COORDINATE WITH ADJACENT OWNER THIS LOCATION
REMOVE BRUSH AND PLACE GRAVEL
(N) EMPLOYEE PARKING (13 TOTAL, 1 ADA)
(E) 30' EASEMENT
(E) FENCING (TYP)
APPROXIMATE PARCEL BOUNDARY
N
E
W
S
0
60
120
Feet
1' CONTOUR INTERVAL

NO.	DATE	REVISIONS	BY	CHK

PROJECT NO: 022047.00	PROJECT ID:	ORIGINAL SCALE IN INCHES 0 1 2	
DRAWN BY: J. BEERS	SCALE: 1" = 30'		
ENGINEER: D. BROWN	DATE:		
CHECKED BY:	DATE:		

LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

FORT BRAGG FREIGHT TERMINAL

1280 NORTH MAIN, LLC
1280 NORTH MAIN STREET
FORT BRAGG, CA

PROPOSED IMPROVEMENTS

DRAWING: FIGURE 2
SHEET: OF
DATE: 9/7/2022

p:\022047_waste_connections_ft_bragg\imp_cond.dwg J.R.B. 9/7/2022

C&S Waste Solutions Transfer Station

MITIGATION AND MONITORING REPORTING PROGRAM

MMRP Statements:

1. **MMRP runs with the Land.** The adopted Transfer Station MND and MMRP shall run with the real property and successive owners, heirs, and assigns of this real property are bound to comply with all of the requirements of the adopted program;
2. **MMRP Disclosure.** Prior to any lease, sale, transfer, or conveyance of any portion of N Highway 1, the applicant shall provide a copy of the adopted program to the prospective lessee, buyer, transferee, or one to whom the conveyance is made;
3. **Applicant Responsibilities.** C&S Waste Solutions is responsible for ensuring the attached MMRP is implemented and that annual reports are submitted to the Community Development Department of the City of Fort Bragg describing compliance and work towards compliance with all mitigation measures.
4. **Professional Expertise. The following** professional expertise is required for completion or evaluation of any part of the program:
5. **Payments.** No additional costs are required of the applicant.
6. **Civil Remedies and Criminal Penalties.** The following civil remedies and criminal penalties are permitted by Title18.04.050 of CEQA for noncompliance with this adopted mitigation monitoring and reporting program.

18.04.120 Civil and administrative remedies.

In addition to the penalties set forth in subsection 18.04.100, the city may carry out or seek other remedies as permitted by law, including, but not limited to the following:

A. Injunctive relief;

B. A stop order subject to the following:

1. Whenever the environmental coordinator finds that there is noncompliance with an adopted program and that this noncompliance presents a serious and immediate threat to the public health, safety and welfare, the environmental coordinator shall issue a stop work order which shall prohibit further work on the project that is the subject of the adopted program.

2. In the event the environmental coordinator issues a stop work order, notice of this order shall be served on the applicant and/or project supervisor and/or contractor and posted on site. The notice shall contain the following:

   a. The findings justifying the stop work order;

   b. The time and date when the stop work order commence;

   c. The time, date, and place at which the applicant may appear to respond to the findings in the notice, which shall not be later than twenty-four (24) hours following the time and date when the stop work order commences.

3. Authority to recommence work on the project that is the subject of an adopted program after issuance of a stop work order may be granted by the environmental coordinator upon the establishment of such terms, conditions and requirements as are reasonably necessary to protect the public health, safety, and welfare and as are consistent with the terms, conditions, and requirements of the adopted program. (Ord. 97-03 § 2 (part): prior code § 8-1.6015(L))

Mitigation Monitoring and Reporting Program

	Mitigation Monitoring			Reporting	
Mitigation Measure	**Schedule**	**Responsibility**	**Procedure**	**Comments**	**Date/Initial**
AESTHETICS					
AQ-1: No solid waste odors shall be detectable beyond the facility's boundaries. In the event that odors are detectable beyond the immediate vicinity of the transfer trailers and re-load area, the operator shall take immediate action to prevent the further spread of the odor either by hauling the transfer trailer to an appropriate disposal site, sealing the transfer trailer, applying deodorizer, or utilizing other prevention or abatement measures.	During all Operations	City of Fort Bragg Planning & Building Department. C&S Waste Solution Operator.	Initiate code enforcement if odors are detectable or if complaints are received from the public. Implement mitigations.		
AQ-2: No recyclables or solid waste will remain on-site in the pickup trucks or transfer trailers longer than 24 hours. The purpose of this mitigation measure is to reduce odors and associated vector issues (crows, rats, etc.).	During all Operations	City of Fort Bragg Planning & Building Department. C&S Waste Solution Operator.	Initiate code enforcement if odors are detectable or if complaints are received from the public. Do not allow solid waste to remain on site more than 24 hours		
AQ-3: Solid waste and compostable materials shall never be stored on the ground or in an unclosed container. All such materials shall always be contained on site in a fully closed container for 24 hours or less.	During all Operations	City of Fort Bragg Planning & Building Department. C&S Waste Solution Operator.	Initiate code enforcement if odors are detectable or if complaints are received from the public.		
AQ-4: At the close of each operating day, all transfer trailers containing solid waste shall have the on-board tarp closed and covering the roof of the trailer and the rear doors shall be securely closed.	During all Operations	C&S Waste Solution Operator.	Close tarps at the end of each day.		

	Mitigation Monitoring			Reporting	
Mitigation Measure	**Schedule**	**Responsibility**	**Procedure**	**Comments**	**Date/Initial**
BIOLOGY					
BIO-1: Reduce and Minimal Impacts to plant communities and special status species. This mitigation measure is designed to minimize and mitigate potential temporary impacts to special status natural communities and special status plant species and during proposed Project grading, perimeter fence installation, and proposed restoration/mitigation work, the following are proposed:		City of Fort Bragg Planning & Building Department.	Make regular visits to the project site to ensure that all Biology Related Mitigations are implemented.		
• Best Management Practices (BMPs) shall be implemented during construction in accordance with the Project's Stormwater Pollution Prevention Plan (SWPPP).	Construction	Operator Contractor	Implement Mitigation		
• In order to limit potential construction-related impacts in areas adjacent to special status species and natural communities, prior to any construction work, a qualified botanist shall meet with the construction crew site manager(s) and shall oversee the installation of site habitat protective fencing and to inform the manager(s) of the avoidance and minimization constraints at the site.	Construction	Qualified Biologist	Implement Mitigation		
• The Habitat Protection fencing shall be installed prior to operation.	Prior to Construction Construction	Qualified Biologist Operator Contractor	Implement Mitigation Implement Mitigation		
• Protective signage shall be installed that says: "Do Not enter – Protected Area. The permanent habitat protective fence (T-stake with 5 feet high coated livestock wire) shall be installed along the border with the paved zones, the driveway, the parking area and the property frontage (east of the informal parking area) to protect special status habitats and species at the site.	Prior to Construction	Qualified Biologist	Implement Mitigation		
• To avoid any inadvertent trampling of special status plant species, during or prior to restoration work, a qualified botanist shall place lath stakes with flags around the special status plant species occurrences to identify and protect these special status plant					

populations. Prior to restoration work, a qualified botanist shall train the restoration crew supervisor on how to identify and avoid Menzies' wallflowers, dark-eyed gilia, and roundheaded Chinese-houses. • Invasive pampas grass (Cortaderia jubata) and blue gum trees (Eucalyptus globulus) adjoining the Coastal Strand community shall be mechanically removed to protect Coastal Strand habitat and its species from further encroachment.	Prior to Certificate of Occupancy and annually thereafter.	Operator Contractor	Implement Mitigation		
BIO-2: Avoid and reduce impacts to western snowy plover. To mitigate for potential predator-related impacts to western snowy plover during Project operations: • All waste shall be fully contained within an enclosed transfer trailer, moved on a truck-to-truck basis only. • Full transfer trailers shall then transport collected materials off-site within 24 hours; • No materials shall be stored on the ground at any time; • The operation's staff shall make every best effort to deter crows and ravens from the site, such that, any collected material that may unintentionally fall outside of the vehicles will be promptly cleaned up and replaced within the vehicle to which it is being transferred; • A permanent habitat protective fence (T-stake with 5 feet high coated livestock wire) shall be installed along the border with the paved zones, the driveway, the parking area and the property frontage (east of the informal parking area) to protect special status habitats and species at the site. This fencing and the regular human activity during business operations will deter coyotes, raccoons and people from trespassing.	During all Operations Construction	City of Fort Bragg Planning & Building Department. Operator Contractor	Make regular visits to the project site to ensure that all Biology Related Mitigations are implemented. Implement Mitigation Install Fence		
BIO-3: Avoid and reduce impacts to western pond turtles. To mitigate for potential presence and impacts to western pond turtles, prior to construction:		City of Fort Bragg Planning & Building Department.			

• A qualified biologist shall train the construction and restoration supervisors in identifying and avoiding harm to the western pond turtle.	Construction	Qualified Biologist	Implement Mitigation		
BIO-4: Avoid and reduce impacts to northern red-legged frog. To assess presence and address potential impacts to northern red-legged frog within the BRAA the following mitigation are proposed:		City of Fort Bragg Planning & Building Department.	Insure Biology Mitigation is implemented.		
• Prior to beginning construction, a qualified biologist shall train the construction and restoration supervisors in identifying and avoiding harm to northern red-legged frogs; • Grading work shall be limited to the dry period generally from July 1 to October 30. Work beyond October 30 may continue if approved by the Director of Public Works; and • After October 30, anytime there is a rain event of 0.10-inch or greater, construction work shall halt and a qualified biologist, approved by CDFW, shall survey the project site for northern red-legged frogs at least two days after the qualifying rain event, before construction activities can resume.	Construction	Qualified Biologist Public Works approval Approval of CDFW	Implement Mitigation		

CULTURAL RESOURCES					
CUL-1: Avoidance of Cultural Resources Project proponents shall ensure that cultural resources are not adversely affected by ground disturbing activities within the sensitive area and buffer (100-feet).	During Construction	City of Fort Bragg Planning & Building Department.	Verify compliance with Mitigation Measure CUL-1.		
CUL-2: Unanticipated Discovery of Cultural Resources. If previously unidentified cultural resources are encountered during project implementation, all construction within 100 feet of the find shall be temporarily halted until the find is examined by a qualified professional archaeologist. Project personnel should not collect cultural resources. Prehistoric resources include, but are not limited to, chert or obsidian flakes, projectile points, mortars, pestles, and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic resources include stone or abode foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies.	During Construction	City of Fort Bragg Planning & Building Department.	Halt construction if unidentified resources are found. Implement Mitigation Measure CUL-2.		
CUL-3: Prior to construction, the applicant shall hire a qualified tribal monitor to assist in implementation of mitigation measures. The monitor will be notified when construction begins and will inspect the construction area as necessary during work to ensure that the site is protected and to monitor for any new site discoveries. The monitor will notify the City of Fort Bragg and the State Historic Preservation Officer within 48 hours of any ESA violation or unanticipated discovery to determine how it will be addressed. After construction, the monitor shall supervise removal of the temporary fencing.	Prior to Construction	City of Fort Bragg Planning & Building Department. Cultural Resource Monitor	Check with Sherwood Valley Band of Pomo to determine is a monitor has been hired. Implement Mitigation Measure CUL-3		
CUL-4: Encountering Native American Remains. Although unlikely, if human remains are encountered, all construction must be temporarily halted within 100 feet of the discovered remains, and the County	During Construction	City of Fort Bragg Planning & Building Department.	Implement CUL-4 if required.		

Coroner and a qualified archaeologist must be notified immediately so that an evaluation can be performed. If the remains are deemed to be Native American and prehistoric, the Native American Heritage Commission must be contacted by the coroner so that a "Most Likely Descendant" can be designated and further recommendations regarding treatment of the remains is provided.					
GEOLOGY & SOILS					
	Mitigation Monitoring			**Reporting**	
Mitigation Measure	**Schedule**	**Responsibility**	**Procedure**	**Comments**	**Date/Initial**
GEO-1: Compliance with the Geotechnical Exploration Recommendations. The project applicant shall implement all recommendations outlined in the Geotechnical Exploration, prepared by LACO Associates Inc., and attached as Appendix C. The recommendations shall avoid impacts to settlement and/or collapse when subjected to structural loading. The recommendations shall be implemented before construction commences and throughout project construction.	Construction	City of Fort Bragg Planning & Building Department and Public Works Department	Review grading permit for compliance with the Geotechnical Report. Conduct site visits to verify that all measures identified in the geotechnical report are implemented.		
GEO-2: Avoid and Minimize Impacts to Paleontological Resources. In the event paleontological or other geologically sensitive resources (such as fossils or fossil formations) are identified during any phase of project construction, all excavations within 100 feet of the find shall be temporarily halted until the find is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The paleontologist shall notify the appropriate representative at the City of Fort Bragg who shall coordinate with the paleontologist as to any necessary investigation of the find. If the find is determined to be significant under CEQA, the City shall implement those measures which may include avoidance, preservation in place, or other appropriate measures, as outlined in Public Resources Code Section 21083.2.	Construction	City of Fort Bragg Planning & Building Department.	Implement mitigation measure if a discovery is made.		

	Mitigation Monitoring			Reporting	
Mitigation Measure	**Schedule**	**Responsibility**	**Procedure**	**Comments**	**Date/Initial**
HAZARDS AND HAZARDOUS MATERIALS					
HAZ-1. If the applicant proposes to use the existing well as a water source, the applicant shall obtain appropriate permits from the City of Fort Bragg prior to use of the well. The applicant shall be allowed to use the existing well in compliance with Fort Bragg Municipal Code Section 14.04.127 (Wells for Nondomestic Use), as well as Section 14.04.125 (Wells for Domestic Use), if applicable.	Construction	City of Fort Bragg Planning & Building Department.	Review permit for compliance with City requirements.		
HAZ-2: Clean-up Camp Site. Prior to construction, the applicant shall take actions necessary to evict campers from the site, and to remove all refuse and any impacted soils.	Prior to Construction	City of Fort Bragg Planning & Building Department.	Site visit to ensure camp site has been cleaned up.		
HYDROLOGY & WATER QUALITY					
HYD-1: Prepare and implement a Construction SWPPP. All proposed development associated with this project shall be compliant with the Fort Bragg Municipal Code (FBMC) Section 18.62 (Grading, Erosion and Sediment Control Standards), Section18.64 [Urban Runoff Pollution Control] and Section 12.14 (Drainage Facility improvements). Prior to issuance of building permit, the: • Applicant shall execute an agreement with the City for the long-term maintenance of the post-construction BMPs identified in the plans, which shall remain functional in perpetuity. • Obtain approval from the Public Works Department if any construction is conducted between October and April (the rainy season). • Remove all construction debris/soil.	Prior to Construction	City of Fort Bragg Department of Public Works.	Site visit to ensure HYD-1. Is implemented.		

HYD-2: Prepare and implement an Industrial SWPPP. All proposed development associated with this project shall be compliant with the Fort Bragg Municipal Code (FBMC) Section 18.62 (Grading, Erosion and Sediment Control Standards), Section18.64 [Urban Runoff Pollution Control] and Section 12.14 (Drainage Facility improvements). Prior to issuance of building permit, an Industrial SWPPP shall be submitted with the conditions listed below. • This project is subject to the Industrial General Permit (IGP), and an industrial SWPPP will be required. Submittal of draft IGP-SWPPP is required per Municipal Code Section 18.64 [Urban Runoff Pollution Control]. The SWPPP shall clearly identify industrial activities with the potential to pollute and the BMP's proposed to protect watershed.	Prior to construction	City of Fort Bragg Public Works Department.	Implement HYD-2.		
• Applicant shall at all times practice good housekeeping to eliminate pollutants in discharges and stormwater flows. • No hazardous materials shall be stored on site. • In the event of a release of a hazardous material the responsible person or owner shall immediately notify emergency response officials of the occurrence via emergency dispatch services (911). • In the event of a release of non-hazardous materials, the responsible person or owner shall notify the Public Works Department in person or by phone or email no later than 5:00 p.m. of the next business day.	Construction & operations	City of Fort Bragg Public Works Department.	Implement HYD-2. Engage in Code enforcement if any violations occur or are reported.		

LAND USE AND PLANNING					
	Mitigation Monitoring			Reporting	
Mitigation Measure	**Schedule**	**Responsibility**	**Procedure**	**Comments**	**Date/Initial**
LUP-1: Operating Standards. ▪ The operation and facility shall be conducted and maintained to prevent the creation of any nuisance conditions. Measures to control nuisances shall be implemented as needed, or at the direction of the Community Development Director, and may include, but are not limited to regular maintenance and cleaning of the transfer area, vector control devices, and other measures necessary to control vectors. ▪ No solid waste will remain on-site in the transfer trailers longer than 24 hours to reduce odor transmission and vector issues. ▪ No solid waste odors shall be detectable beyond the facility's boundaries. In the event that odors are detectable beyond the immediate vicinity of the transfer trailers and re-load area, the operator shall take immediate action to prevent the further spread of the odor either by hauling the transfer trailer to an appropriate disposal site, sealing the transfer trailer, applying deodorizer, or utilizing other prevention or abatement measures. ▪ At the close of each operating day, all transfer trailers containing solid waste shall have the on-board tarp closed and covering the roof of the trailer and the rear doors shall be securely closed. ▪ To minimize noise transmission, the operator shall utilize the best available OSHA-compliant technology for all backup alarms for both route trucks and transfer trailers. The use of heavy equipment (other than trucks) shall be	Operations	City of Fort Bragg Planning & Building Department.	Engage in Code enforcement as needed.		

limited to the hours of 8:00 a.m. to 5:00 p.m. so that it occurs when ambient noise from the highway and other nearby industrial areas is also high. ▪ Trucks shall be parked facing exit roads in the evenings, so that they can be driven from the site in the morning without requiring backing and the consequent backing beeping. ▪ The operator shall utilize portable litter fences around the direct transfer area to prevent and capture all windblown litter. ▪ The operator shall take measures to minimize the creation, emission, or accumulation of excessive dust and particulates. The operator shall minimize the unnecessary handling of wastes during transfer to prevent the creation of excessive dust. Measures to control dust should be implemented as needed or at the direction of the Community Development Director and may include but are not limited to reduced transferring during periods of high winds, daily sweeping and cleaning, and misting systems.					
LUP-2: All transfer trailer tarps shall be closed during any rain events to prevent the generation of any stormwater leachate.	Operations	City of Fort Bragg Planning & Building Dept.	Engage in code enforcement as needed.		
LUP-3: The applicant shall engage in a long term weed abatement program that includes hand and mechanical pulling of pampas grass on an annual basis prior to the blooming period and the removal of pulled plants from the property. Herbicide use is prohibited due to the sensitive and rare plants located on the site.		City of Fort Bragg Planning & Building Department.	Make regular visits to the project site to ensure Mitigation is implemented. Engage in code enforcement as needed.		

	Mitigation Monitoring			Reporting	
Mitigation Measure	**Schedule**	**Responsibility**	**Procedure**	**Comments**	**Date/Initial**
NOISE					
NOI-1: Construction Hours/Scheduling. The City shall specify on all grading, and construction permits that construction activities for all phases of construction, including servicing of construction equipment shall only be permitted during the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday and between 9:00 a.m. to 5:00 p.m. on Saturdays. Construction shall be prohibited on Sundays and on all holidays.	Construction	City of Fort Bragg Planning & Building Department.	Make regular visits to the project site to ensure that all Noise related Mitigations are implemented.		
TRANSPORTATION					
TRA-1: Visibility to Sight Lines. The applicant shall ensure that all vegetation within and near the area encompassed by the sight lines be regularly mowed, clipped and maintained throughout project construction and operation. The applicant shall ensure the sight lines are not blocked from overgrown vegetation.		City of Fort Bragg Planning & Building Department.	Make regular visits to the project site to ensure that this transportation mitigation is implemented.		

BIOLOGICAL RESOURCE ASSESSMENT
for the proposed
WASTE TRANSFER OPERATION AND BUY-BACK CENTER
at
1280 N MAIN ST, FORT BRAGG, CALIFORNIA

28 April 2022

Prepared for:

Redwood Waste Solutions
3515 Taylor Drive
Ukiah, CA, 95482

Prepared by:

CLIFTON
Evironmental

Table of Contents

1.0 PROJECT DESCRIPTION

This Biological Resource Assessment Report (BRAR) covers an approximate 7- acre Biological Resource Assessment Area (BRAA) property located at 1280 N. Main Steet, Fort Bragg, California and identified by Assessor's Parcel Number APN 069-231-21. The BRAA is located on the north side of Fort Bragg, along State Highway 1, within portions of Section 31, Township 19 North, Range 17 West, Mount Diablo Base and Meridian.

The "Project" is a proposed direct transfer operation and beverage container buy-back center for the City of Fort Bragg. The majority of the proposed Project is previously developed area, but portions of the undeveloped site are proposed to be developed, primarily to accommodate the required buy-back center. Collectively, the proposed development footprint of the transfer operation and the buy-back center constitute the Project Area (PA) studied for this BRAR.

Clifton Environmental, LLC was contracted by Redwood Waste Solutions to conduct further biological review of the BRAA to identify impacts the Project may have on special status biological resources within the BRAA.

2.0 SURVEY METHODOLOGY

This Biological Resource Assessment (BRA) included a review of past botanical survey reports, database scoping results (see Appendix A), mapped soils (see Appendix B), and aerial imagery and floristic field surveys. Special-status species in this BRA are those listed (or candidate or proposed) under the federal or state endangered species acts, under the California Native Plant Protection Act, as a California species of special concern or fully protected by the Department of Fish and Wildlife (CDFW), or that are on List 1 or 2 of the California Native Plant Society's Inventory of Rare and Endangered Plants of California (CNPS 2021). Special status natural communities in this review are waters, wetlands, riparian communities, and any natural community ranked S1, S2, S3 on the *California Natural Community List* (CDFW 2021).

Prior to field surveys, the *Draft Floristic Survey for the Rossi Property* (Nelson 2007), the *Botanical Scoping Survey* (NCRM 2022), and the *Wetland and Waters Delineation* Memorandum (LACO 2021) were reviewed, providing baseline information on past reported resources.

A list from the U.S. Fish and Wildlife Service (USFWS), Critical Habitat Portal, was obtained on 17 February 2022 (USFWS 2022). The list identified federal-listed, candidate, or proposed species that potentially occur in or could be affected by the Project. The California Natural Diversity Database (CNDDB) and CNPS online searches were queried for the Fort Bragg 7.5' USGS quad and the five surrounding quads to determine known occurrences of special-status species on or near the BSA (CNDDB 2022 & CNPS 2022). Data received from USFWS, CNDDB, and CNPS records were used to compile a table of regional species and habitats of concern (Appendix A).

A list of soils within the BRAA and their characteristics was generated using the Natural Resource Conservation Service Web Soil Survey (NRCS 2022).

This BRAR and all figures were prepared by Clifton Environmental, LLC (CE), Principal Botanist, Estelle Clifton with assistance on the Mitigation and Monitoring Plan from CE Botanist Technician Paula Gaska.

Figure 1

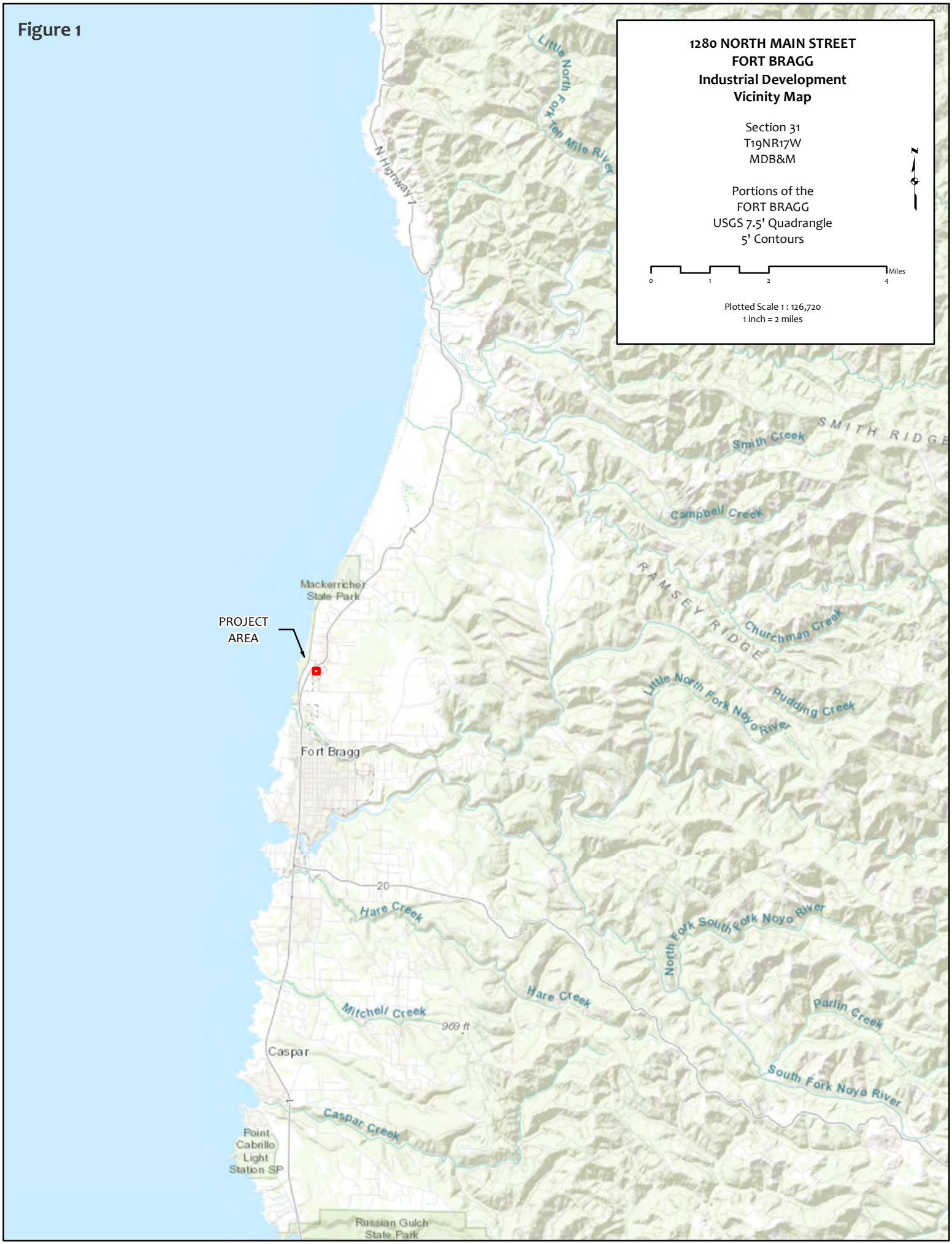

1280 NORTH MAIN STREET
FORT BRAGG
Industrial Development
Vicinity Map
Section 31
T19NR17W
MDB&M
Portions of the
FORT BRAGG
USGS 7.5' Quadrangle
5' Contours
N
0
1
2
4
Miles
Plotted Scale 1 : 126,720
1 inch = 2 miles
Little North Fork Ten Mile River
N. Highway 1
Smith Creek
SMITH RIDGE
Campbell Creek
RAMSEY RIDGE
Churchman Creek
Little North Fork Noyo River
Pudding Creek
Mackerricher State Park
PROJECT AREA
Fort Bragg
20
Hare Creek
North Fork South Fork Noyo River
Hare Creek
Parlin Creek
Mitchel Creek
969 ft
Caspar
South Fork Noyo River
Caspar Creek
Point Cabrillo Light Station SP
Russian Gulch State Park

Figure 2


1280 NORTH MAIN STREET
FORT BRAGG
Industrial Development
Aerial Image Map
Section 31
T19NR17W
MDB&M
Portions of the
FORT BRAGG
USGS 7.5' Quadrangle
5' Contours
N
Biologic Resoiurce Assessment Area
Plotted Scale 1 : 1,200
1 inch = 100 feet
0 25 50 100 150 200 Feet
NAIP 2020
04/26/2022

Field surveys consisted of walking the entire BRAA to determine if any special-status species, their habitats, or special status communities were present. Plant species and natural communities were identified and recorded (Appendix C). Wildlife species observed, their signs, and potential habitats were recorded.

Field surveys were conducted on April 6 and April 13, 2022, by CE, Principal Botanist, Estelle Clifton. Survey methodologies were based on the *Protocols for Surveying and Evaluation Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018). Plant species located during the surveys were identified to the lowest taxonomic level necessary to determine presence or absence of special status plants (Appendix C). *The Jepson Manual, Higher Plants of California* (Baldwin 2012) was consulted to determine the taxonomic nomenclature. *A Manual of California Vegetation* (Sawyer 2009) was used to classify and describe the representative plant communities present. The *California Natural Community List* (CDFW 2021) was consulted for additional information on current ranking of described communities and their associations.

Coordination occurred with LACO Associates Senior Planner Rebecca Dalske, Landscape Architect Nicolas Thayer of Forbes Land Design, Redwood Waste Solutions Director of Community and Government Affairs Kristyn Byrne, CDFW Environmental Scientist Lee Margadant, and California State Parks Senior Specialist Environmental Scientist Terra Fuller, in preparation of this BRAR.

3.0 RESULTS & DISCUSSION

The BRAA is located approximately 0.25 miles east of the Pacific Ocean within the City of Fort Bragg, California. The BRAA is zoned Industrial, as are the parcels adjoining the BRAA to the north, south, and east. The BRAA is bordered by State Highway 1 (SH1) to the west. Traveling further west, across SH1, is a row of Industrial and Rural Residentially zoned parcels, then the “old haul road,” then the ocean front bluff and beach owned by California State Parks.

The *Special Status Species and Natural Communities Scoping List*, included in Appendix A, indicats the presence or absence of suitable habitats for each special-status species and natural communities identified during project scoping. This table also includes numerous watch list species that are not considered special status.

Within the BRAA, the following soils units are mapped in the Mendocino County, Western Part soil survey (NCRS 2022); 138 – Dune land, 204 – Sirdrak loamy sand, and 117- Cabrillo Heeser complex. Detailed descriptions of these soil units and their mapped location, within the BRAA, are located in Appendix B.

The *Wetland and Waters Delineation* Memorandum (LACO 2021) included sample points in habitats where hydrophytic vegetation indicators are located. No areas within the BRAA were identified in the 2021 LACO Memorandum that meet the criteria to be considered federal jurisdictional waters or State Water Resource Control Board (SWRCB) waters of the State. Additional reconnaissance found North Coast Riparian Scrub, on the neighbor’s parcel to the east. On the BRAA’s eastern boundary, a Coastal Strand berm creates a hydrologic barrier to the eastern marsh. Along the northern boundary of the BRAA, no indicators of hydrology were observed. The ownership to the south channels water into a

man-made ditch along the southern property line of the BRAA, through numerous drop inlets within their development.

The BRAA contains previously developed, ruderal areas, natural communities and areas dominated by non-native species and cultivars. Table 1 below estimates the acres of each natural community that will be affected by the Project based on preliminary engineering. Photographs of communities in the BRAA are in Appendix D. The acres delineated as permanently impacted, in Table 1, include areas that will be paved and areas that will be landscaped with regionally appropriate native species as part of the Project's landscaping plan.

TABLE 1 – Acres of Communities and Project Impacts

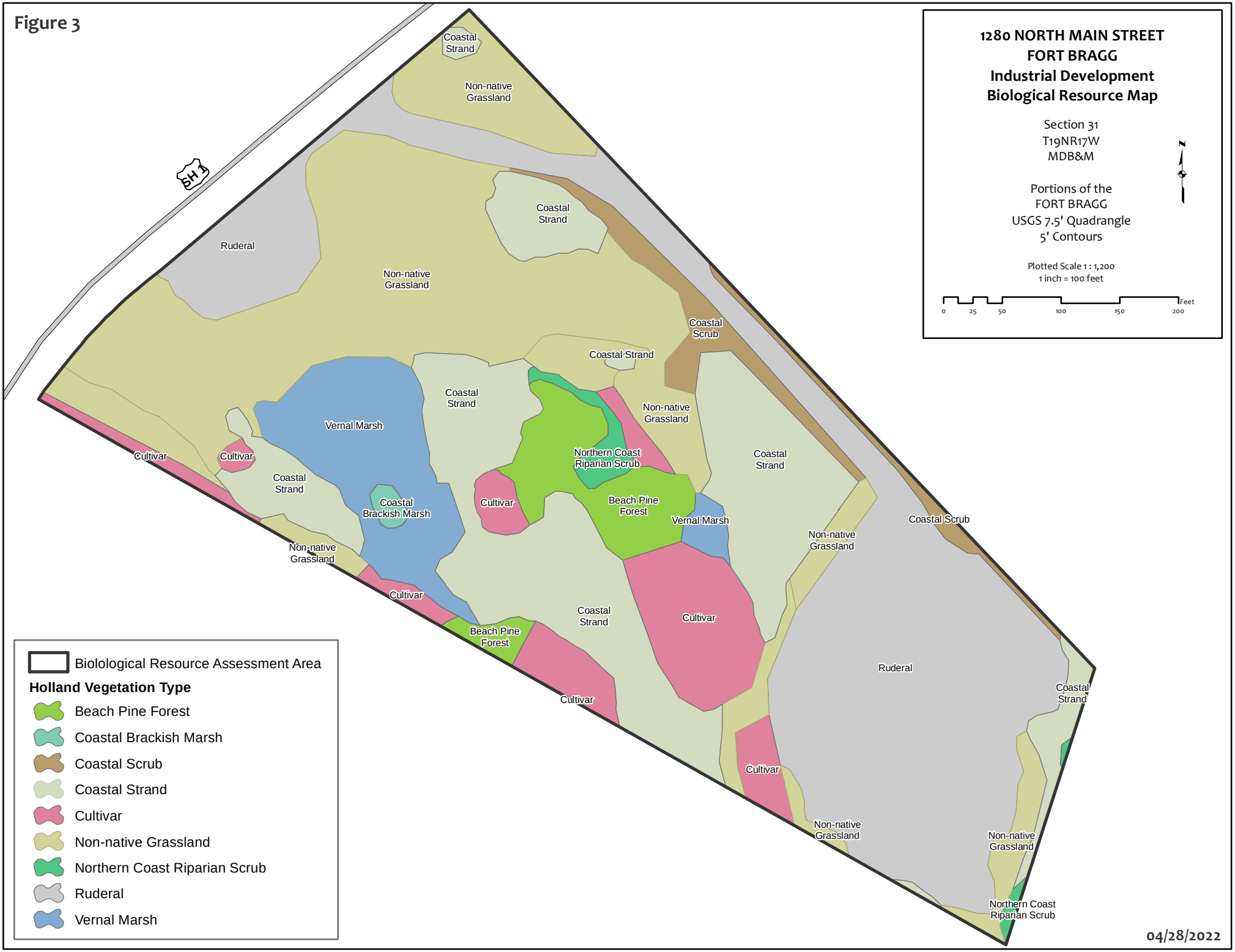
Natural Community (Holland Type; CDFW rarity rank)	**Acreage**	**Temporary Impact (ac)**	**Permanent Impact (ac)**
Beach Pine Forest (**S3**, G5)	0.30	0.01	--
Coastal Brackish Marsh (**G3**, G4)	0.02	--	--
Coastal Scrub (S5, G5)	0.22	0.03	0.11
Coastal Strand (**S3**, **G3**)	1.45	0.03	0.09
Northern Coast Riparian (**S3**, **G3**)	0.07	--	--
Vernal Marsh (S4?, G4)	0.48	0.02	0.06
Other			
Cultivar	0.57	0.05	0.06
Non-native Grassland	2.09	0.08	1.06
Ruderal	1.92	0.02	1.68
Total	**7.12**	**0.24**	**3.06**

Natural Communities of Concern

Coastal Strand – *Polygonum paronychia*, *Camissonia cheiranthifolia*, *Lupinus* ssp., *Carpobrotus chilensis:* The Coastal Strand natural community is a maritime hummock (upland stabilized dune) located approximately 0.25 miles west of the Pacific Ocean, separated from the ocean by SH1 and coastal prairie habitat further west. Three special status species: dune wall flower (*Erysium menziesii*), round-headed Chinese-houses (*Collinsia corymbose*), and dark-eyed gilia (*Gilia millefoliata*) were found within the Coastal Strand community. Within the BRAA, much of the Coastal Stand community is impacted by *Carpobrotus chilensis* (sea fig).

The proposed project will impact approximately 0.09 acres of Coastal Strand community. The portions of the Coastal Strand community proposed for development are of low quality, due to invasive species pressure. The Mitigation and Monitoring Plan (MMP), in Appendix D, details the mitigations designed to offset the Project's permanent impacts to Coastal Strand community and the special status plant species (dark-eyed gilia) present within this community's impact area.

Figure 3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SH 1
Coastal Strand
Non-native Grassland
Ruderal
Coastal Scrub
Vernal Marsh
Cultivar
Coastal Brackish Marsh
Northern Coast Riparian Scrub
Beach Pine Forest
Biolological Resource Assessment Area
Holland Vegetation Type
Beach Pine Forest
Coastal Brackish Marsh
Coastal Scrub
Coastal Strand
Cultivar
Non-native Grassland
Northern Coast Riparian Scrub
Ruderal
Vernal Marsh
04/28/2022

Figure 4

1280 NORTH MAIN STREET
FORT BRAGG
Industrial Development
Biological Resource Impact Map

Section 31
T19NR17W
MDB&M

Portions of the
FORT BRAGG
USGS 7.5' Quadrangle
5' Contours

Plotted Scale 1 : 1,200
1 inch = 100 feet

0 25 50 100 150 200 Feet

Biolological Resource Assessment Area
Project Area

Impact

Permanent
Temporary

Holland Vegetation Type

Beach Pine Forest
Coastal Brackish Marsh
Coastal Scrub
Coastal Strand
Cultivar
Non-native Grassland
Northern Coast Riparian Scrub
Ruderal
Vernal Marsh

Project Development Codes:
P = Paved
L = Landscaping
S = Stormwater Swale

04/28/2022

Vernal Marsh – *Juncus* spp.:
The Vernal Marsh natural community is dominated by *Juncus* ssp. (rush) and in portions of the community non-native grasses. This community will be reduced by the proposed Project to accommodate the recycling buy-back center. Although this community is not ranked as a special status natural community, it is located between two mapped Coastal Strand community areas containing special status plant species. The *Wetland and Waters Delineation* Memorandum (LACO 2021) found no features, within the BRAA, that meet the criteria to be considered federal jurisdictional waters or SWRCB waters of the State.

Beach Pine Forest – *Pinus Muricata* & *Pinus contorta*:
The Beach Pine Forest natural community is located in two small, isolated patches. The *Pinus contorta* (shore pine) stand is located along the southern property line and the *Pinus muricata* (bishop pine) stand within the center of the property near the North Coast Riparian Scrub or Fen habitat. Because of the small mapping units of these two forested patches, the Beach Pine Forest communities are not considered special status in this BRAR. Temporary and minor impacts to the Beach Pine Forest may result from Project fence replacement along the southern property line.

Coastal Brackish Marsh – *Carex obnupta*:
Within the BRAA, a small depression within the larger Vernal Marsh natural community is dominated by *Carex obnupta* (slough sedge), constituting the Coastal Brackish Marsh natural community. No project impacts are proposed to this special status natural community. This community does not appear to be hydrologically connected to the small drainage ditch that forms on the southern property line as a result of drop inlet culverts discharging onto the parcel from the adjacent parcel.

North Coast Riparian Scrub – *Lonicera involucrata*, *Morella californica*, Salix spp*., Rubus ursinus*:
The North Coast Riparian Scrub natural community is a Fen habitat located adjacent to the Beach Pine Forest at the center of the BRAA. It consists of a small depression with evidence of hydrology, but that does not connect to other waters. No impacts are proposed to this special status natural community.

Other Communities

Coastal Scrub – *Baccharis pilularis*:
The Coastal Scrub natural community is not ranked special status. Much of this natural community is located along the previously disturbed, existing road margin. The community is dominated by coyote brush (*Baccharis pilularis*) with significant pampas grass (*Cortaderia jubata*). Impacts to this community will primarily accommodate Project landscaping and stormwater swales development. The landscaping plan proposes installation of regionally appropriate native species.

Cultivar – *Chaenomeles japonica*, *Rosa* sp*., Hesperocyparis macrocarpa*, *Eycalyptus globulus*, *Vinca major*:
Portions of the BRAA contain non-native and invasive species that may have been planted on the site. At the south side of the parcel these perennial cultivars include flowering quince, rose hedge, periwinkle (Cal-IPC Rating – Moderate), and Monterey cypress tree (Cal-IPC Rating – Limited). Within the center of the parcel cultivars include eucalyptus stand (Cal-IPC Rating – Limited), periwinkle, and English ivy (Cal-IPC Rating – High).

Non-native Grassland – *Bromus diandrus*, *Holcus lanatus*, *Cortaderia jubata*:
The Non-native grassland community is not a natural community. It largely borders SH1 to the west and abuts portions of the Coastal Strand habitats. Portions of this community will be impacted by the Project. Project related impacts to insect nectar plants within this community will be reduced to less than significant, through implementation of the Project's landscaping design and maintenance plans.

Special Status Plant Species

During BRA scoping, 53 special status plant species were identified and reviewed to determine if suitable habitat is present within the BRAA (see Appendix A). Of these 53 special status plant species, listed in Table 1, 20 were found to potentially have suitable habitat within the BRAA and 3 were again (Nelson 2007) found to be present on the site during spring 2022 surveys. Because Redwood Waste Solutions and the City of Fort Bragg's agreed upon timeline for completion of this BRAR precludes late spring and early summer surveys, special care was taken during floristic surveys to identify potentially present special status plant species *Abronia umbellata* var. *breviflora*, *Agrostis blasdalei*, *Carex saliniformis*, *Castilleja litoralis*, *Chorizanthe howellii*, *Cuscuta pacifica* var. *papillate*, *Erigeron supplex*, *Horkelia marinensis*, *Oenothera wolfii*. Although not flowering, the leaf of the *Abronia latifolia*, within the BRAA, was found to be fleshy, concurring with past observations that this herb is not the listed *Abronia*.

Special status plant species located within the BRAA include:

- *Erysium menziesii* (Menzies' wallflower), ranked: Federally Endangered (FE), State Endangered, & CNPS List 1B.2;
- *Collinsia corymbose* (round-headed Chinese-houses), ranked: CNPS List 1B.2; and
- *Gilia millefoliata* (dark-eyed gilia), ranked: CNPS List 1B.2.

Approximately 80 dark-eyed gilia were identified within the Project's impact area (landscaping and stormwater swale areas), covering approximately 0.02 acres of area within the impacted coastal strand community (0.09 acres). The Mitigation and Monitoring Plan (MMP), in Appendix E, is designed to offset Project impacts to special status plant species dark-eyed gilia (approximately 80 plants on 0.02 acres) located within the impacted special status coastal strand natural community (0.09 acres).

Special Status Animal Species

During BRA scoping 27 special status animal species were identified and reviewed to determine if suitable habitat is present within or directly adjacent to the BRAA. Of these 4 animal species, listed in Table 1, were found to potentially have suitable habitat within the BRAA.

Special status animal species with potentially suitable habitat on or adjacent to the BRAA include:

- western snowy plover (*Charadrius nivosus nivosus*), ranked: Federally Threatened and State Species of Special Concern (SSC);
- Behren's silverspot butterfly (*Speyeria zerene*), ranked: FE;
- western pond turtle (*Emys marmorata*), ranked: SSC, Bureau of Land Management and U.S. Forest Service (S); and
- northern red-legged frog (*Rana aurora*), ranked: SSC.

The Federally Threatened western snowy plover is a small sea bird known to nest on the State Park's beach approximately 0.25 miles or 1,300 feet from the BRAA. The project has the potential to attract additional animal species, such as ravens, crows, coyotes, and raccoons, that could impact nesting western snowy plover. The Project's Operation Plan (LACO 2022) mitigates this potential impact to a less than significant level, as all waste is proposed to be fully contained within an enclosed transfer trailer, moved on a truck-to-truck basis only.

Federally Endangered Behren's silverspot butterfly relies on larval host species early blue violet (*Viola* adunca) for reproduction. This violet was not found within the BRAA. Adult, nectar plants for the Behren's silverspot butterfly are present within the BRAA. These include thistle (*Circium* spp.), gumplant (*Grindelia stricta*), and yarrow (*Achillea millefolium*). Adult nectar species identified within the BRAA are expected to be reduced as a result of the Project. Through implementation of the Project's landscaping design and maintenance plans, impacts to Behren's silverspot butterfly nectar food will be reduced to less than significant.

The northern red-legged frog and western pond turtle may be located in the North Coast Riparian natural community located near the Project on the parcel directly east of the BRAA. A substantial dune berm separated the Project from this habitat. No Project impacts to these species were identified.

4.0 CONCLUSION

The proposed Project will directly impact special status natural community Coastal Strand and special status plant species dark-eyed gilia (*Gilia millefoliata*). The Project also has the potential to indirectly impact special status animal species western snowy plover (*Charadrius nivosus nivosus*) and Behren's silverspot butterfly (*Speyeria zerene*).

Project impacts to Coastal Strand natural community and dark-eyed gilia will be reduced to less than significant through implementation of the Mitigation and Monitoring Plan included in Appendix E of this report. The MMP details removal and monitoring plans for the approximate 0.27 acres of invasive sea fig (*Carpobrotus chilensis*) primarily located within the BRAA's Coastal Strand community. Removing sea fig for the un-impacted BRAA will protect and enhance dark-eyed gilia populations within the BRAA's remaining Coastal Strand community and will also benefiting special status species Menzies' wallflower (Erysium *menziesii*) and round-headed Chinese-houses (*Collinsia corymbose*), also located with the BRAA's Coastal Strand community.

Impacts to western snowy plover will be reduced to less than significant through implementation of the Project's Operational Plan. The Project's Operational Plan specifies that, "All material transfers would remain fully contained within an enclosed transfer trailer, and would be moved on a truck-to-truck basis only. No material would be stored on ground at any time" (LACO 2022).

Impacts to Behren's silverspot butterfly (BSB) nectar food will be reduced to less than significant, through planting suitable nectar species as part of the Project's landscaping design and maintenance plans. Herbaceous nectar plants suitable for incorporated into the landscaped screening areas include *Grindelia stricta*, *Erigeron glaucus*, *Solidago* spp., *Aster chilensis*, *Armeria maritima*, and *Achillea millefolium*. While the exact number of nectar species impacted has not been quantified, it is believed to be minor. Planting and maintaining some BSB nectar plants will offset the minor Project impacts.

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APPENDIX A: Special Status Species Scoping List

TABLE 2 - Special Status Species Scoping List

Scientific Name	Common Name	Federal Status[1]	State Status[2]	Other Status[3]	General Habitat Description	Habitat Present / Absent	Rationale
Amphibians							
*Ascaphus truei****	Pacific tailed frog	--	--	CDFW:SSC IUCN:LC	Inhabit permanent, cool temperature streams with rocky streambed in conifer-dominated habitats	No	Suitable habitat is not present on or adjacent to the site.
*Rana aurora****	northern red-legged frog	--	--	CDFW:SSC IUCN:LC USFS:S	Inhabits quiet pools of streams, marshes, and occasionally ponds (CDFW 2008)	Yes	East of the property is a large, freshwater marsh.
*Rana boylii****	foothill yellow-legged frog; northcoast population	--	--	BLM:S CDFW:SSC IUCN:NT USFS:S	Occurs in woodland and forest areas near streams and rivers, especially near riffles where there are exposed rocks. Requires permanent streams in which to reside. Its elevation range extends from sea level to 6,000 ft on the west slope of the Sierra (Zeiner et al. 1988).	No	Suitable habitat is not present on or adjacent to the site.
*Rana draytonii***	California red-legged frog	FT	--	CDFW:SSC IUCN:VU	Found in/near quiet permanent water of streams, marshes, or ponds; damp woods/ meadows.	No	The site is north of the species range (Herps 2022)
*Rhyacotriton variegatus****	southern torrent salamander	--	--	CDFW:SSC IUCN:LC USFS:S	Ideal habitat consists of small, cold, perennial streams wit hwater filetering through moss-covered gravel. Surface flow is not critical as long as there is subsurface flow, as species can live deep in the gravel.	No	Suitable habitat is not present on or adjacent to the site.
Taricha rivularis	red-bellied newt	--	--	CDFW:SSC IUCN:LC	Found in or near streams in valley-foothill hardwood and hardwood-conifer habitats.	No	Suitable habitat is not present on or adjacent to the site.
Arachnids							
*Calileptoneta wapiti****	Mendocino leptonetid spider	--	--		Endemic to Mendocino County. A midget cave spider.	No	Range believed to be more interior than project.

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Scientific Name	Common Name	Federal Status[1]	State Status[2]	Other Status[3]	General Habitat Description	Habitat Present / Absent	Rationale
Birds							
*Accipiter gentilis****	northern goshawk	--	--	BLM:S CDF:S CDFW:SSC IUCN:LC USFS:S	Uses dense, mature conifer and deciduous forests, interspersed with meadows, openings, and riparian areas.	No	Suitable habitat is not present on or adjacent to the site.
*Ardea herodias****	great blue heron	--	--	CDF:S IUCN:LC	Inhabits shallow estuaries, fresh and saline emergent wetlands near forested habitats	Yes	East of the property is freshwater marsh.
Brachyramphus marmoratus	marbled murrelet	FT	SE	CDF:S IUCN:EN NABCI:RWL	Uses mature coastal redwood and Douglas fir forests for nesting, and nearby coastal waters for foraging.	No	Suitable habitat is not present on or adjacent to the site.
Charadrius nivosus nivosus	western snowy plover	FT	--	CDFW:SSC NABCI:RWL USFWS:BCC	The Pacific Coast WSP breed between March and September, primarily above the high tide line, on coastal beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. Less common nesting habitats include bluff-backed beaches, dredged material disposal sites, salt pond levees, dry salt ponds, and river bars. In winter, Pacific Coast WSPs are found on many of the beaches used for nesting as well as on beaches where they do not nest. these habitats all share the same general characteristics of typically being flat, open areas with sandy or saline substrates, with usually sparse or absent vegetation or driftwood (Stenzel et al. 1981, p. 18; USFWS 2007).	Yes	Pacific Coast WSP are known to nest on the beach across Highway 1, approximately 0.25 miles from the site. The BRAA's Coastal Strand community, while not breeding habitat, may provide suitable wintering habitat. Predation during breeding is a leading cause of mortality. Human waste can attract known predators such as gulls, crows, and ravens (USFWS 2012).
*Coccyzus americanus occidentalis***	Yellow-billed cuckoo	FT	SE	BLM:S NABCI:RWL USFS:S USFWS:BCC	Uncommon to rare summer resident of valley foothill and desert riparian habitats in scattered locations in CA. Their breeding range was from Canada to Mexico. Presently, their northern range has been reduced to the Sacramento Valley.	No	Suitable habitat is not present on or adjacent to the site.

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Scientific Name	Common Name	Federal Status[1]	State Status[2]	Other Status[3]	General Habitat Description	Habitat Present / Absent	Rationale
*Fratercula cirrhata****	tufted puffin	--	--	CDFW:WL IUCN:LC	Inhabits ocean waters from Siberia and Alaska, south to the middle of California, around San Francisco. Nests on steep coastal rocky islands, burrowing into soil (All About Birds 2022).	Unknown	Suitable islands may be present in coastal waters near the site.
*Hydrobates homochroa****	ashy storm-petrel	--	--	BLM:S CDFW:SSC IUCN:EN NABCI:RWL USFWS:BCC	Breeds on offshore islands from central California to norhtern Baja (Audubon 2022).	Unknown	Suitable islands may be present in coastal waters near the site. The project is near the northern most extent of species range.
*Pandion haliaetus****	osprey	--	--	CDF:S CDFW:WL IUCN:LC	Associated strictly with large, fish-bearing waters, including rivers, lakes, bays, estuaries and surf zones, primarily in ponderosa pine through mixed conifer habitats.	No	Suitable habitat is not present on or adjacent to the site.
*Phoebastria (Diomedea) albatrus***	short-tailed albatross	FE	--	CDFW:SSC IUCN:VU NABCI:RWL	During non-breeding season they range across the north Pacific. Not commonly found in Calfiornia. Species nearly extripated due to trade in feathers at the turn of the centry.	No	Suitable habitat is not present on or adjacent to the site.
*Progne subis****	purple martin	--	--	CDFW:SSC IUCN:LC	Rare summer resident in N.CA. Valley foothill, montane hardwood, hardwood-conifer, and riparian habitats. Breeding habitat is old-growth, multi-layered open forests and woodlands with snags.	No	Suitable habitat is not present on or adjacent to the site.
*Strix occidentalis caurina***	northern spotted owl	FT	ST	CDF:S IUCN:NT NABCI:YWL	Mature multi-layered mixed conifer, redwood and Douglas fir forests	No	Suitable habitat is not present on or adjacent to the site.
Fish							
*Entosphenus tridentatus****	Pacific lamprey	--	--	AFS:VU BLM:S CDFW:SSC USFS:S	Spawn in cold, clear, freshwater streams (Moyle 2002)	No	Suitable habitat is not present on or adjacent to the site.

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Scientific Name	Common Name	Federal Status[1]	State Status[2]	Other Status[3]	General Habitat Description	Habitat Present / Absent	Rationale
Eucyclogobius newberryi	tidewater goby	FE	--	AFS:EN IUCN:VU	Native to lagoons of streams, marshes, and creeks along the coast of California.	No	Suitable habitat is not present on or adjacent to the site.
Oncorhynchus kisutch pop. 4***	coho salmon - central California coast ESU	FE	SE	AFS:EN	Perennial streams. Generally spawn in smaller streams than Chinook salmon.	No	Suitable habitat is not present on or adjacent to the site.
Oncorhynchus mykiss irideus pop. 16***	steelhead - northern California DPS	FT	--	AFS:TH	Occur in small perennial streams and tributaries with cool, well oxygenated water.	No	Suitable habitat is not present on or adjacent to the site.
Insects							
*Bombus caliginosus****	obscure bumble bee	--	--	IUCN:VU	Range includes the west coast of the United States. Common plants visitsed by workers include ceanothus, thistles, peas, lupins, rhododendrons, *Rubus*, willows, and clovers.	Yes	Suitable habitat is not present on or adjacent to the site.
*Bombus occidentalis****	western bumble bee	--	--	USFS:S	Tend to prefer flower-rich meadows of forests and subalpine zones. Primarily nesting in underground cavities and in open west-southwest slopes bordered by trees.	No	Suitable habitat is not present on or adjacent to the site.
*Coelus globosus****	globose dune beetle	--	--	UCN:VU	Dwells in sand hummocks, sometimes back dunes along immediate cost. Range was originally central California into Mexico. In the norhtern protion of range, dwells no more than 30 meters inland (NatureServe 2022).	Yes	Suitable habitat is not present on or adjacent to the site.
*Danaus plexippus***	monarch butterfly	FC	--	USFS:S	California overwintering population maps include the California coast range from Mendocino County south to Baja. Larvae consume milkweed.	No	Suitable habitat is not present on or adjacent to the site.
Plebejus anna lotis / Lycaeides argyrognomon lotis	lotis blue butterfly	FE	--		Possibly extinct. Last sighted in Mendocino County in 1983. Larvae presumed to feed on Lotus formosissimus (USFW 2009).	No	Suitable habitat is not present on or adjacent to the site.

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Scientific Name	Common Name	Federal Status[1]	State Status[2]	Other Status[3]	General Habitat Description	Habitat Present / Absent	Rationale
Speyeria zerene behrensii	Behren's silverspot butterfly	FE	--		Larvae are believed to eat *Viola adunca*, a small, native, perennial herb that blooms April to August in coastal grasslands. Observations of nectar feeding are few, but based on observations of this and closely related silverspot subspecies, plants in the sunflower family (Asteraceae) dominate as nectar sources, including thistles (Cirsium spp); gumplant (Grindelia stricta); goldenrods (Solidago spp.); tansy ragwort (Senecio jacobaea), California aster (Aster chilensis), pearly everlasting Anaphalis margaritacea), seaside daisy (Erigeron glaucus), and yarrow (Achillea millefolium). Reported nectar species from other plant families include yellow sand verbena (Abronia latifolia), seapink (Armeria maritima), and western pennyroyal (Monardella undulata) (USFW 2016).	Yes	Suitable habitat is not present on or adjacent to the site.
Mammals							
*Arborimus pomo****	Sonoma tree vole	--	--	CDFW:SSC IUCN:NT	Rare to uncommon throughout its range, but difficult to locate nests. Specializes on needles of Douglas fir and grand fir.	No	Suitable habitat is not present on or adjacent to the site.
*Corynorhinus townsendii****	Townsend's big-eared bat	--	--	BLM:S CDFW:SSC IUCN:LC USFS:S WBWG:H	Usually found in caves, mines, and tunnels, but can eb found in large tree hollows.	No	Suitable habitat is not present on or adjacent to the site.
*Erethizon dorsatum****	North American porcupine	--	--	IUCN:LC	Ranging from Alaska to N Mexico, they are commonly found in coniferous forested areas, but can be found in harsher areas.	No	Suitable habitat is not present on or adjacent to the site.

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Scientific Name	Common Name	Federal Status[1]	State Status[2]	Other Status[3]	General Habitat Description	Habitat Present / Absent	Rationale
*Lasiurus cinereus****	hoary bat	--	--	IUCN:LC WBWG:M	Suitable habitat includes all woodlands and forest with medium to large trees and dense foliage. Winters along the coast and in southern California.	No	Suitable habitat is not present on or adjacent to the site.
*Martes caurina***	Pacific marten	FT	--	IUCN:LC USFS:S	Optimal habitas are various mixed evergreen forests in the north coast regions andSierra Nevada, Klamath, and Cascades Mts.	No	Suitable habitat is not present on or adjacent to the site.
Gastropod							
*Noyo intersessa****	Ten Mile shoulderband	--	--	--	Occurs in dune mat habitat.	Yes	Suitable habitat is not present on or adjacent to the site.
Reptiles							
*Chelonia mydas***	green sea turtle	FT	--	IUCN:EN	The dps East Pacific Green Sea Turtle's range includes Mendocino County. Females crwl out at night and lay their eggs on suitable beaches.	Unknown	Ocean front habitat adjacent to the proejct was not accessed.
*Dermochelys coriacea***	leatherback sea turtle	FE	--		Covering a wide geographic range, female Leatherbacks prefer soft sand beaches with a shallower approach from the sea and typically incldue dartk forested areas adjacent to the beach. Western pacific turtles nest July through September.	Unknown	Ocean front habitat adjacent to the proejct was not accessed.
*Emys marmorata****	western pond turtle	--	--	BLM:S CDFW:SSC IUCN:VU USFS:S	Uncommon to common in suitable aquatic habitat throughout California. Associated with permanent or nearly permanent water in a wide variety of habitat types. Require basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud or sand banks.	Yes	East of the property is a large, freshwater wetland.
Vascular Plants							
Abronia umbellata var. *breviflora*	pink sand-verbena	--	--	1B.1	Perennial herb found in coastal dunes from 0 through 10 meters. Blooms from June to October.	Low	Suitable habitat is present on the site.

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Scientific Name	Common Name	Federal Status[1]	State Status[2]	Other Status[3]	General Habitat Description	Habitat Present / Absent	Rationale
Agrostis blasdalei	Blasdale's bent grass	--	--	1B.2	Perennial rhizomatous herb found in coastal bluff scrub, coastal dunes, and coastal prairie from 0 through 150 meters. Blooms from May to July.	Yes	Suitable habitat is present on the site.
*Angelica lucida**	sea-watch	--	--	4.2	Perennial herb found in coastal bluff scrub, coastal dunes, coastal scrub, carshes and swamps from 0 through 150 meters. Blooms from April to September.	No	Suitable habitat is not present on or adjacent to the site.
Arctostaphylos nummularia ssp. *mendocinoensis*	pygmy manzanita	--	--	1B.2	Perennial evergreen shrub found in closed-cone coniferous forest from 90 through 200 meters. Blooms in January.	No	Suitable habitat is not present on or adjacent to the site.
*Arenaria paludicola***	marsh sandwort	FE	SE	1B.1	Perennial herb found in marshes and swamps from 3 through 170 meters. Blooms from May to August.	No	Suitable habitat is not present on or adjacent to the site.
Astragalus agnicidus	Humboldt County milk-vetch	--	SE	1B.1	Perennial herb found in broadleafed upland forest and North Coast coniferous forest from 120 through 800 meters. Blooms from April to September.	No	Suitable habitat is not present on or adjacent to the site.
Blennosperma nanum var. *robustum*	Point Reyes blennosperma	--	SR	1B.2	Annual herb found in coastal prairie and coastal scrub from 10 through 145 meters. Blooms from February to April.	Low	Suitable habitat is present on the site.
*Calamagrostis bolanderi**	Bolander's reed grass	--	--	4.2	Bogs and fens, Broadleafed upland forest, Closed-cone coniferous forest, Coastal scrub, marshes and swamps, Meadows and seeps, North Coast coniferous forest	No	Suitable habitat is not present on or adjacent to the site.
Calamagrostis crassiglumis	Thurber's reed grass	--	--	2B.1	Perennial rhizomatous herb found in coastal scrub, marshes and swamps from 10 through 60 meters. Blooms from May to August.	No	Suitable habitat is not present on or adjacent to the site.
Calystegia purpurata ssp. *saxicola*	coastal bluff morning-glory	--	--	1B.2	Perennial herb found in coastal bluff scrub, coastal dunes, coastal scrub, and North Coast coniferous forest from 0 through 105 meters. Blooms from (March) April to September.	Low	Suitable habitat is present on the site.

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Scientific Name	Common Name	Federal Status[1]	State Status[2]	Other Status[3]	General Habitat Description	Habitat Present / Absent	Rationale
Campanula californica	swamp harebell	--	--	1B.2	Perennial rhizomatous herb found in bogs and fens, Closed-cone coniferous forest, coastal prairie, marshes and swamps, meadows and seeps, and North Coast coniferous forest from 1 through 405 meters. Blooms from June to October.	No	Suitable habitat is not present on or adjacent to the site.
Carex californica	California sedge	--	--	2B.2	Perennial rhizomatous herb found in bogs and fens, Closed-cone coniferous forest, coastal prairie, marshes and swamps, meadows and seeps from 90 through 335 meters. Blooms from May to August.	No	Suitable habitat is not present on or adjacent to the site.
Carex lenticularis var. *limnophila*	lagoon sedge	--	--	2B.2	Perennial herb found in bogs and fens, marshes and swamps,and North Coast coniferous forest from 0 through 6 meters. Blooms from June to August.	No	Suitable habitat is not present on or adjacent to the site.
Carex livida	livid sedge	--	--	2A	Perennial rhizomatous herb found in Bogs and fens at 0 meters. Blooms in June.	No	Suitable habitat is not present on or adjacent to the site.
Carex lyngbyei	Lyngbye's sedge	--	--	2B.2	Perennial rhizomatous herb found in marshes and swamps from 0 through 10 meters. Blooms from April to August.	No	Suitable habitat is not present on or adjacent to the site.
Carex saliniformis	deceiving sedge	--	--	1B.2	Perennial rhizomatous herb found in coastal prairie, coastal scrub, marshes and swamps, Meadows and seeps from 3 through 230 meters. Blooms in June (July).	Low	Suitable habitat is present on the site.
Carex viridula ssp. *viridula*	green yellow sedge	--	--	2B.3	Perennial herb found in bogs and fens, marshes and swamps, and North Coast coniferous forest from 0 through 1600 meters. Blooms in (June) July to September (November).	No	Suitable habitat is not present on or adjacent to the site.

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Scientific Name	Common Name	Federal Status[1]	State Status[2]	Other Status[3]	General Habitat Description	Habitat Present / Absent	Rationale
Castilleja ambigua var. *ambigua**	johnny-nip	--	--	4.2	Annual hemiparasitic herb found in coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, and vernal pools from 0 through 435 meters. Blooms from March to August.	No	Suitable habitat is not present on or adjacent to the site.
Castilleja ambigua var. *humboldtiensis*	Humboldt Bay owl's-clover	--	--	1B.2	Annual hemiparasitic herb found in marshes and swamps from 0 through 3 meters. Blooms from April to August.	No	Suitable habitat is not present on or adjacent to the site.
*Castilleja latifolia**	Monterey Coast paintbrush	--	--	4.3	Perennial hemiparasitic herb found in Cismontane woodland, closed-cone coniferous forest, coastal dunes, and coastal scrub from 0 through 185 meters. Blooms from February to September.	Low	Suitable habitat is present on the site.
Castilleja litoralis	Oregon coast paintbrush	--	--	2B.2	Perennial hemiparasitic herb found in coastal bluff scrub, coastal dunes, and coastal scrub from 15 through 100 meters. Blooms in June.	Low	Suitable habitat is present on the site.
Castilleja mendocinensis	Mendocino Coast paintbrush	--	--	1B.2	Perennial hemiparasitic herb found in closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie, and coastal scrub from 0 through 160 meters. Blooms from April to August.	Low	Suitable habitat is present on the site.
Ceanothus gloriosus var. *exaltatus**	glory brush	--	--	4.3	Perennial evergreen shrub found in chaparral from 30 through 610 meters. Blooms from March to June (August).	No	Suitable habitat is not present on or adjacent to the site.
Ceanothus gloriosus var. *gloriosus**	Point Reyes ceanothus	--	--	4.3	Perennial evergreen shrub found in closed-cone coniferous forest, coastal bluff scrub, coastal dunes, and coastal scrub from 5 through 520 meters. Blooms from March to May.	Low	Suitable habitat is present on the site.
Chorizanthe howellii	Howell's spineflower	--	ST	1B.2	Annual herb found in coastal dunes, coastal prairie, and coastal scrub from 0 through 45 meters. Blooms May to July.	Yes	Suitable habitat is present on the site.

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Scientific Name	Common Name	Federal Status[1]	State Status[2]	Other Status[3]	General Habitat Description	Habitat Present / Absent	Rationale
*Chrysosplenium glechomifolium**	Pacific golden saxifrage	--	--	4.3	Perennial herb found in North Coast coniferous forest, and Riparian forest from 10 through 220 meters. Blooms from February to June.	No	Suitable habitat is not present on or adjacent to the site.
Clarkia amoena ssp. *whitneyi*	Whitney's farewell-to-spring	--	--	1B.1	Annual herb found in coastal bluff scrub, and coastal scrub from 10 through 100 meters. Blooms from June to August.	No	Suitable habitat is not present on or adjacent to the site.
Collinsia corymbosa	round-headed Chinese-houses	--	--	1B.2	Annual Herb found in coastal dunes at 20 meters. Blooms from April to June.	Yes	Suitable habitat is present on the site.
Coptis laciniata	Oregon goldthread	--	--	4.2	Perennial rhizomatous herb found in meadows and seeps, and North Coast coniferous forest from 0 through 1000 meters. Blooms from (February) March to May (September to November).	No	Suitable habitat is not present on or adjacent to the site.
Cornus canadensis	bunchberry	--	--	2B.2	Perennial rhizomatous herb found in bogs and fens, meadows and seeps, and North Coast coniferous forest from 60 through 1920 meters. Blooms from May to July.	No	Suitable habitat is not present on or adjacent to the site.
Cuscuta pacifica var. *papillata*	Mendocino dodder	--	--	1B.2	Annual parasitic vine found in coastal dunes from 0 through 50 meters. Blooms in (June) July to October.	Yes	Suitable habitat is present on the site.
*Darlingtonia californica**	California pitcherplant	--	--	4.2	Perennial rhizomatous carnivorous herb found in bogs and fens, meadows and seeps from 0 through 2585 meters. Blooms from April to August.	No	Suitable habitat is not present on or adjacent to the site.
Erigeron supplex	supple daisy	--	--	1B.2	Perennial herb found in coastal bluff scrub and coastal prairie from 10 through 50 meters. Blooms from May to July.	Low	Suitable habitat is present on the site.
Erysimum concinnum	bluff wallflower	--	--	1B.2	Annual/Perennial herb found in coastal bluff scrub, coastal dunes, and coastal prairie from 0 through 185 meters. Blooms from February to July.	Yes	Suitable habitat is present on the site.

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Scientific Name	Common Name	Federal Status[1]	State Status[2]	Other Status[3]	General Habitat Description	Habitat Present / Absent	Rationale
Erysimum menziesii	Menzies' wallflower	FE	SE	1B.2	Perennial herb found in coastal dunes from 0 through 35 meters. Blooms from March to September.	Yes	Suitable habitat is present on the site.
Gilia capitata ssp. *pacifica*	Pacific gilia	--	--	1B.2	Annual herb found in chaparral, coastal bluff scrub, coastal prairie, valley and foothill grassland from 5 through 1665 meters. Blooms from April to August.	Low	Suitable habitat is present on the site.
Gilia millefoliata	dark-eyed gilia	--	--	1B.2	Annual herb found in coastal dunes from 2 though 30 meters. Blooms from April to July.	Yes	Suitable habitat is present on the site.
Glehnia littoralis ssp. *leiocarpa**	American glehnia	--	--	4.3	Perennial herb found in coastal dunes from 0 through 20 meters. Blooms from May to August.	No	Suitable habitat is not present on or adjacent to the site.
Hemizonia congesta ssp. *congesta*	congested-headed hayfield tarplant	--	--	1B.2	Annual herb found in valley and foothill grassland from 20 through 560 meters. Blooms in April to November.	No	Suitable habitat is not present on or adjacent to the site.
Hemizonia congesta ssp. *tracyi**	Tracy's tarplant	--	--	4.3	Annual herb found in coastal prairie, lower montane coniferous forest, and North Coast coniferous forest from 120 through 1200 meters. Blooms from (March) May to October.	No	Suitable habitat is not present on or adjacent to the site.
Hesperevax sparsiflora var. *brevifolia*	short-leaved evax	--	--	1B.2	Annual herb found in coastal bluff scrub, coastal dunes, and coastal prairie at 215 meters. Blooms from March to June.	Yes	Suitable habitat is present on the site.
Horkelia marinensis	Point Reyes horkelia	--	--	1B.2	Perennial herb found in coastal dunes, coastal prairie, and coastal scrub from 5 through 755 meters. Blooms from May to September.	Yes	Suitable habitat is present on the site.

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*Hosackia gracilis**	harlequin lotus	--	--	4.2	Perennial rhizomatous herb found in broadleafed upland forest, Cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, meadows and seeps, North Coast coniferous forest, valley and foothill grassland from 0 through 700 meters. Blooms from March to July.	Yes	Suitable habitat is present on the site.
*Iris longipetala**	coast iris	--	--	4.2	Perennial rhizomatous herb found in coastal prairie, lower montane coniferous forest, meadows and seeps from 0 through 600 meters. Blooms from March - May (June).	No	Suitable habitat is not present on or adjacent to the site.
Juncus supiniformis	hair-leaved rush	--	--	2B.2	Perennial rhizomatous herb found in bogs and fens, marshes and swamps from 20 through 100 meters. Blooms from April to May (June to July).	No	Suitable habitat is not present on or adjacent to the site.
*Lasthenia burkei***	Burke's Goldfields	FE	SE	1B.1	Annual herb found in vernal pools, meadows and seeps, and wetlands from 15 through 580 meters. Blooms from April to May.	No	Suitable habitat is not present on or adjacent to the site.
Lasthenia californica ssp. *bakeri*	Baker's goldfields	--	--	1B.2	Perennial herb found in closed-cone coniferous forest, coastal scrub, marshes and swamps, meadows and seeps from 60 through 520 meters. Blooms from April to October.	No	Suitable habitat is not present on or adjacent to the site.
Lasthenia californica ssp. macrantha	perennial goldfields	--	--	1B.2	Perennial herb found in coastal bluff scrub, coastal dunes, and coastal scrub from 5 through 520 meters. Blooms from January to November.	Low	Suitable habitat is present on the site.
*Lasthenia conjugens***	Contra Costs Goldfields	FE	--	1B.1	Annual herb found in valley and foothill grassland, vernal pools, alkaline playas, and cismontane woodland from 1 through 450 meters. Blooms from March to June.	No	Suitable habitat is not present on or adjacent to the site.

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Lathyrus palustris	marsh pea	--	--	2B.2	Perennial herb found in bogs and fens, coastal prairie, coastal scrub, lower montane coniferous forest, marshes and swamps, and North Coast coniferous forest from 1 through 1000 meters. Bloomd from March to August.	No	Suitable habitat is not present on or adjacent to the site.
*Leptosiphon latisectus**	broad-lobed leptosiphon	--	--	4.3	Annual herb found in broadleafed upland forest, and cismontane woodland from 170 through 1500 meters. Blooms from April to June.	No	Suitable habitat is not present on or adjacent to the site.
Lilium maritimum	coast lily	--	--	1B.1	Perennial bulbiferous herb found in broadleafed upland forest, closed-cone coniferous forest, coastal prairie, coastal scrub, marshes and swamps, and North Coast coniferous forest from 5 through 475 meters. Blooms from May to August.	No	Suitable habitat is not present on or adjacent to the site.
*Lilium rubescens**	redwood lily	--	--	4.2	Perennial bulbiferous herb found in broadleafed upland forest, chaparral, lower montane coniferous forest, North Coast coniferous forest, and upper montane coniferous forest from 30 through 1910 meters. Blooms from April to August (September).	No	Suitable habitat is not present on or adjacent to the site.
*Listera cordata**	heart-leaved twayblade	--	--	4.2	Perennial herb found in bogs and fens, lower montane coniferous forest, and North Coast coniferous forest from 5 through 1370 meters. Blooms from February to July.	No	Suitable habitat is not present on or adjacent to the site.
Lycopodium clavatum	running-pine	--	--	4.1	Perennial rhizomatous herb found in lower montane coniferous forest, marshes and swamps, and North Coast coniferous forest from 45 through 1225 meters. Blooms from June to August (September).	No	Suitable habitat is not present on or adjacent to the site.

Appendix A – Special Status Species Scoping List

Scientific Name	Common Name	Federal Status[1]	State Status[2]	Other Status[3]	General Habitat Description	Habitat Present / Absent	Rationale
Microseris borealis	northern microseris	--	--	2B.1	Perennial herb found in bogs and fens, lower montane coniferous forest, and meadows and seeps from 1000 through 2000 meters. Blooms from June to September.	No	Suitable habitat is not present on or adjacent to the site.
Mitellastra caulescens	leafy-stemmed mitrewort	--	--	4.2	Perennial rhizomatous herb found in broadleafed upland forest, lower montane coniferous forest, meadows and seeps, and North Coast coniferous forest from 5 through 1700 meters. Blooms from (March) April to October.	No	Suitable habitat is not present on or adjacent to the site.
Oenothera wolfii	Wolf's evening-primrose	--	--	1B.1	Perennial herb found in coastal bluff scrub, coastal dunes, coastal prairie, and lower montane coniferous forest from 3 through 800 meters. Blooms from May to October.	Yes	Suitable habitat is present on the site.
Packera bolanderi var. bolanderi	seacoast ragwort	--	--	2B.1	Perennial rhizomatous herb found in coastal scrub and North Coast coniferous forest from 30 through 650 meters. Blooms from (January to April) May to July (August).	No	Suitable habitat is not present on or adjacent to the site.
Phacelia insularis var. *continentis*	North Coast phacelia	--	--	1B.2	Annual herb found in coastal bluff scrub and coastal dunes from 10 through 170 meters. Blooms from March to May.	Low	Suitable habitat is present on the site.
Piperia candida	white-flowered rein orchid	--	--	1B.2	Perennial herb found in broadleafed upland forest, Lower montane coniferous forest, and North Coast coniferous forest from 30 through 1310 meters. Blooms from (March) May to September.	No	Suitable habitat is not present on or adjacent to the site.
*Pityopus californicus**	California pinefoot	--	--	4.2	Perennial achlorophyllous herb found in broadleafed upland forest, lower montane coniferous forest, North Coast coniferous forest, and upper montane coniferous forest from 15 through 2225 meters. Blooms from (March to April) May to August.	No	Suitable habitat is not present on or adjacent to the site.

Scientific Name	Common Name	Federal Status[1]	State Status[2]	Other Status[3]	General Habitat Description	Habitat Present / Absent	Rationale
*Pleuropogon refractus**	nodding semaphore grass	--	--	4.2	Perennial rhizomatous herb found in lower montane coniferous forest, meadows and seeps, North Coast coniferous forest, and riparian forest from 0 through 1600 meters. Blooms from (March) April to August.	No	Suitable habitat is not present on or adjacent to the site.
Puccinellia pumila	dwarf alkali grass	--	--	2B.2	Perennial herb found in marshes and swamps from 1 through 10 meters. Blooms in July.	No	Suitable habitat is not present on or adjacent to the site.
Rhynchospora alba	white beaked-rush	--	--	2B.2	Perennial rhizomatous herb found in bogs and fens, marshes and swamps, meadows and seeps from 60 through 2040 meters. Blooms from June to August.	No	Suitable habitat is not present on or adjacent to the site.
*Rhynchospora globularis**	round-headed beaked-rush	--	--	2B.1	Perennial rhizomatous herb found in marshes and swamps from 45 through 60 meters. Blooms from July to August.	No	Suitable habitat is not present on or adjacent to the site.
Sanguisorba officinalis	great burnet	--	--	2B.2	Perennial rhizomatous herb found in bogs and fens, marshes and swamps, meadows and seeps, North Coast coniferous forest, and riparian forest from 60 through 1400 meters. Blooms from July to October.	No	Suitable habitat is not present on or adjacent to the site.
Sidalcea malachroides	maple-leaved checkerbloom	--	--	4.2	Perennial herb found in broadleafed upland forest, coastal prairie, coastal scrub, North Coast coniferous forest, and riparian woodland from 0 through 730 meters. Blooms from (March) April to August.	No	Suitable habitat is not present on or adjacent to the site.
Sidalcea malviflora ssp. *purpurea*	purple-stemmed checkerbloom	--	--	1B.2	Perennial rhizomatous herb found in broadleafed upland forest, and coastal prairie from 15 through 85 meters. Blooms from May to June.	No	Suitable habitat is not present on or adjacent to the site.
Tiarella trifoliata var. *trifoliata**	trifoliate laceflower	--	--	3.2	Perennial rhizomatous herb found in lower montane coniferous forest and North Coast coniferous forest from 170 throgh 1500 meters. Blooms from (May) June to August.	No	Suitable habitat is not present on or adjacent to the site.

Appendix A – Special Status Species Scoping List

Scientific Name	Common Name	Federal Status[1]	State Status[2]	Other Status[3]	General Habitat Description	Habitat Present / Absent	Rationale
*Trifolium amoenum***	two-fork clover	FE	--	1B.1	Annual herb found in coastal bluff scrub, valley and foothill grassland from 5 through 415 meters. Blooms from April to June.	No	Suitable habitat is not present on or adjacent to the site.
Trifolium trichocalyx	Monterey clover	FE	SE	1B.1	Annual herb found in closed-cone coniferous forest from 30 through 305 meters. Blooms from April to June.	No	Suitable habitat is not present on or adjacent to the site.
*Veratrum fimbriatum**	fringed false-hellebore	--	--	4.3	Perennial herb found in bogs and fens, coastal scrub, meadows and seeps, and North Coast coniferous forest from 3 through 300 meters. Blooms from July to September.	No	Suitable habitat is not present on or adjacent to the site.
Viola palustris	alpine marsh violet	--	--	2B.2	Perennial rhizomatous herb found in bogs and fens, and coastal scrub from 0 through 150 meters. Blooms from March to August.	No	Suitable habitat is not present on or adjacent to the site.
Nonvascular							
Ramalina thrausta	angel's hair lichen	--	--	2B.1	Fruiticose epiphytic lichen found in North Coast coniferous forest from 75 through 430 meters.	No	Suitable habitat is not present on or adjacent to the site.
Triquetrella californica	coastal triquetrella	--	--	1B.2	Moss found in coastal bluff scrub and coastal scrub from 10 through 100 meters.	No	Suitable habitat is not present on or adjacent to the site.
Usnea longissima	Methuselah's beard lichen	--	--	4.2	Fruiticose epiphytic lichen found in broadleafed upland forest and North Coast coniferous forest from 50 thrugh 1460 meters.	No	Suitable habitat is not present on or adjacent to the site.
Trees							
Hesperocyparis pygmaea	pygmy cypress	--	--	1B.2	Perennial evergreen tree found in closed-cone coniferous forest from 30 through 600 meters.	No	Suitable habitat is not present on or adjacent to the site.
Pinus contorta ssp. *bolanderi*	Bolander's beach pine	--	--	1B.2	Perennial evergreen tree found in closed-cone coniferous forest from 75 through 250 meters.	No	Pygmy habitat absent.

Appendix A – Special Status Species Scoping List

DEFINITIONS OF RANK

CA Rare Plant Rank	Description
1A	Plants presumed extinct in California and rare/extinct elsewhere
1B.1	Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California
1B.2	Plants rare, threatened, or endangered in California and elsewhere; fairly threatened in California
1B.3	Plants rare, threatened, or endangered in California and elsewhere; not very threatened in California
2A	Plants presumed extirpated in California, but more common elsewhere
2B.1	Plants rare, threatened, or endangered in California, but more common elsewhere; seriously threatened in California
2B.2	Plants rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California
2B.3	Plants rare, threatened, or endangered in California, but more common elsewhere; not very threatened in California
3.1	Plants about which we need more information; seriously threatened in California
3.2	Plants about which we need more information; fairly threatened in California
3.3	Plants about which we need more information; not very threatened in California
4.1	Plants of limited distribution; seriously threatened in California
4.2	Plants of limited distribution; fairly threatened in California
4.3	Plants of limited distribution; not very threatened in California

California Department of Fish and Wildlife (CDFW)

Status	Description
FP	Fully Protected: This classification was the State of California's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds and mammals. Most of the species on these lists have subsequently been listed under the state and/or federal endangered species acts.
SSC	Species of Special Concern: It is the goal and responsibility of the Department of Fish and Wildlife to maintain viable populations of all native species. To this end, the Department has designated certain vertebrate species as "Species of Special Concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as "Species of Special Concern" is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long-term viability.
WL	Watch List: The Department of Fish and Wildlife maintains a list consisting of taxa that were previously designated as "Species of Special Concern" but no longer merit that status, or which do not yet meet SSC criteria, but for which there is concern and a need for additional information to clarify status.

CDF - California Department of Forestry

S Sensitive

Federal Status

Listing Status	Description
Endangered	The classification provided to an animal or plant in danger of extinction within the foreseeable future throughout all or a significant portion of its range.
Threatened	The classification provided to an animal or plant which is likely to become an Endangered species within the foreseeable future throughout all or a significant portion of its range.
Proposed Endangered	The classification provided to an animal or plant that is proposed for federal listing as Endangered in the Federal Register under Section 4 of the Endangered Species Act.
Proposed Threatened	The classification provided to an animal or plant that is proposed for federal listing as Threatened in the Federal Register under Section 4 of the Endangered Species Act.
Candidate	The classification provided to an animal or plant that has been studied by the United States Fish and Wildlife Service, and the Service has concluded that it should be proposed for addition to the Federal Endangered and Threatened species list.
None	The plant or animal has no federal status.
Delisted	The plant or animal was previously listed as Endangered or Threatened, but is no longer listed on the Federal Endangered and Threatened species list.

State Status

Listing Status	Description

Endangered	The classification provided to a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.
Threatened	The classification provided to a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts.
Rare	The classification provided to a native plant species, subspecies, or variety when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens. This designation stems from the Native Plant Protection Act of 1977.
None	The plant or animal has no state status.
Delisted	The plant or animal was previously listed as Endangered, Threatened or Rare but is no longer listed by the State of California.
Candidate Endangered	The classification provided to a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed as being under review by the Department of Fish and Wildlife for addition to the list of endangered species, or a species for which the commission has published a notice of proposed regulation to add the species to the list of endangered species.
Candidate Threatened	The classification provided to a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Fish and Game Commission has formally noticed as being under review by the Department of Fish and Wildlife for addition to the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to the list of threatened species.

IUCN - International Union for Conservation of Nature's Red list

Categories	
EX	Extinct
EW	Extint in Wild
CR	Critically Endangered
EN	Endangered
VU	Vulnerable
NT	Near Threatened
LC	Least Concern
DD	Data Deficient
NE	Not Evaluated

NABCI - North American Bird Conservation Initiative

Categories	
RWL	Red watch list
YWL	Yellow watch list

Mendocino County, Western Part, California

138—Dune land

Map Unit Composition

Dune land: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dune Land

Setting

Landform: Beaches
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian sands derived from sandstone

Minor Components

Sirdrak

Percent of map unit: 5 percent
Hydric soil rating: No

Tropaquepts

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

Data Source Information

Soil Survey Area: Mendocino County, Western Part, California
Survey Area Data: Version 16, Sep 6, 2021

Mendocino County, Western Part, California

117—Cabrillo-Heeser complex, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: hmkm
Elevation: 20 to 240 feet
Mean annual precipitation: 35 to 45 inches
Mean annual air temperature: 48 to 57 degrees F
Frost-free period: 250 to 330 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Cabrillo and similar soils: 50 percent
Heeser and similar soils: 30 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cabrillo

Setting

Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Fluviomarine deposits derived from sandstone

Typical profile

H1 - 0 to 26 inches: sandy loam
H2 - 26 to 35 inches: sandy clay loam
H3 - 35 to 50 inches: sandy clay loam
H4 - 50 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 30 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B

Ecological site: R004BY060CA - Sandy Loam Terrace (Perennial Grass)
Hydric soil rating: No

Description of Heeser

Setting

Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian deposits derived from sandstone

Typical profile

H1 - 0 to 34 inches: sandy loam
H2 - 34 to 65 inches: sandy loam

Properties and qualities

Slope: 0 to 5 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 (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: R004BY060CA - Sandy Loam Terrace (Perennial Grass)
Hydric soil rating: No

Minor Components

Crispin

Percent of map unit: 5 percent
Hydric soil rating: No

Biaggi

Percent of map unit: 5 percent
Hydric soil rating: No

Sirdrak

Percent of map unit: 4 percent
Hydric soil rating: No

Unnamed, gentler or steeper slopes

Percent of map unit: 3 percent

Hydric soil rating: No

Tropaquepts

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

Data Source Information

Soil Survey Area: Mendocino County, Western Part, California
Survey Area Data: Version 16, Sep 6, 2021

Mendocino County, Western Part, California

204—Sirdrak loamy sand, 0 to 15 percent slopes

Map Unit Setting

National map unit symbol: hmp8
Elevation: 20 to 800 feet
Mean annual precipitation: 20 to 40 inches
Mean annual air temperature: 52 to 55 degrees F
Frost-free period: 300 to 365 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Sirdrak and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sirdrak

Setting

Landform: Dunes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian sands derived from sandstone

Typical profile

A - 0 to 11 inches: loamy sand
C - 11 to 65 inches: loamy sand

Properties and qualities

Slope: 2 to 15 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 (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: F004BM101CA - Protected ravine footslopes
Hydric soil rating: No

Minor Components

Mackerricher

Percent of map unit: 5 percent
Landform: Dunes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Tropaquepts

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Heeser

Percent of map unit: 5 percent
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Cabrillo

Percent of map unit: 5 percent
Landform: Marine terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Data Source Information

Soil Survey Area: Mendocino County, Western Part, California
Survey Area Data: Version 16, Sep 6, 2021

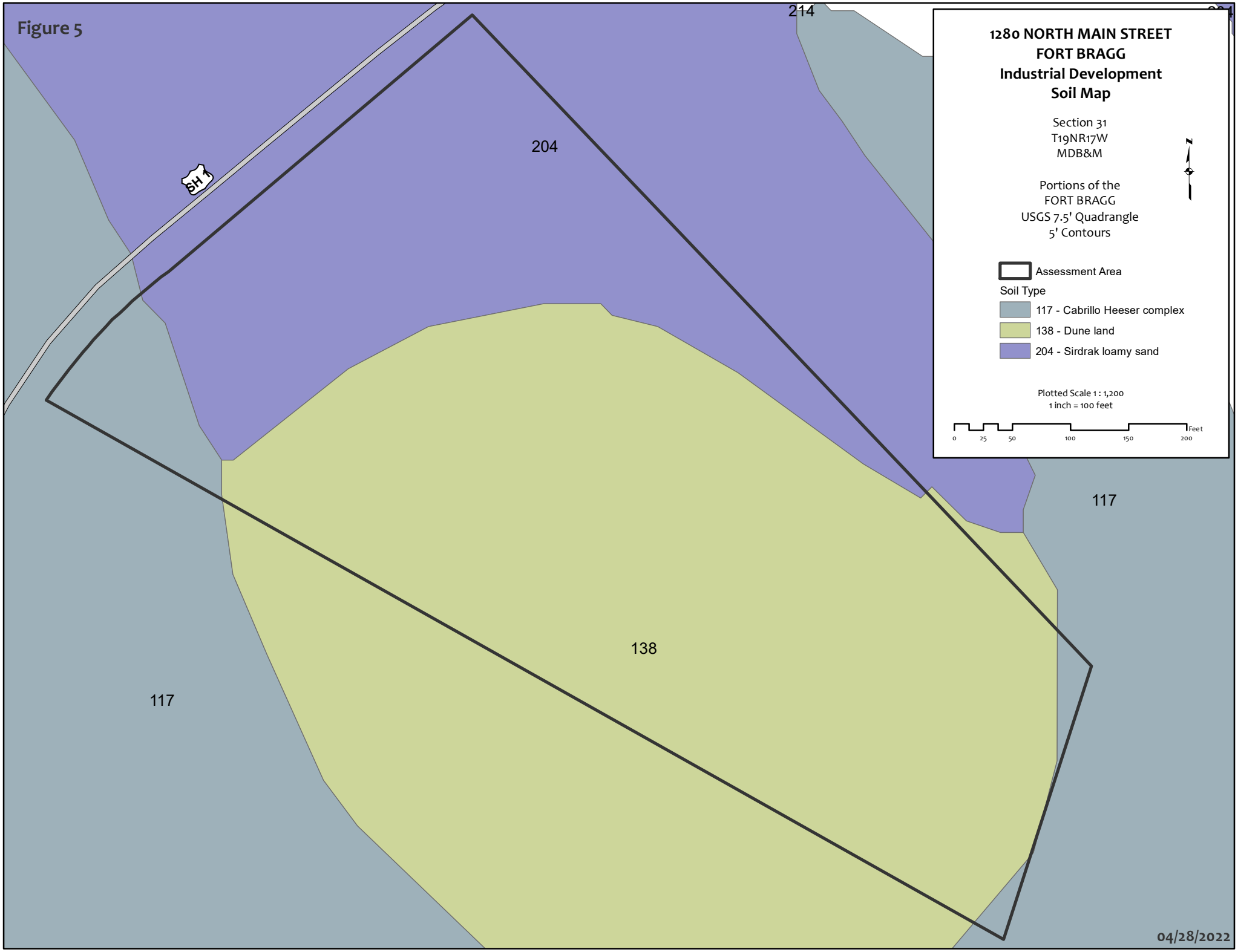
Figure 5
214
204
SH 1
117
138
117
1280 NORTH MAIN STREET
FORT BRAGG
Industrial Development
Soil Map
Section 31
T19NR17W
MDB&M
Portions of the
FORT BRAGG
USGS 7.5' Quadrangle
5' Contours
N
Assessment Area
Soil Type
117 - Cabrillo Heeser complex
138 - Dune land
204 - Sirdrak loamy sand
Plotted Scale 1 : 1,200
1 inch = 100 feet
0
25
50
100
150
200
Feet
04/28/2022

APPENDIX C – Species Observed

TABLE 3 – Plant Species Observed

Scientific Name	Common Name	Family	Native	Community Type
R = ruderal, road margin C= cultivar S = Scrub D = dune/coastal strand E = Eucalyptus P = pine RS = riparian scrub G = grassland V = vernal marsh				
OVERSTORY				
Eucalyptus globulus	eucalyptus	*Myrtaceae*	n	E
Pinus contorta	beach pine	*Pinaceae*	y	P
Pinus muricata	Bishop pine	*Pinaceae*	y	P, G, S
SHRUB LAYER				
Baccharis pilularis	coyote brush	*Asteraceae*	y	R
Gaultheria shallon	salal	*Ericaceae*	y	RS
Lonicera involucrata	twinberry	*Caprifoliaceae*	y	RS
Lupinus arboreus	yellow bush lupine	*Fabaceae*	y	D
Morella californica	wax myrtle	*Myricaceae*	y	P
Rosa spp.	rose	*Rosacea*	n	C
Rubus parviflorus	thimbleberry	*Rosacea*	y	RS
Salix spp.	willow	*Slicaceae*	y	RS
Vaccinium ovatum	evergreen huckleberry	*Ericaceae*	y	P
HERB LAYER				
Abronia latifolia	sand verbena	*Nyctaginaceae*	y	D
Achillea millefolium	common yarrow	*Asteraceae*	y	RS
Aira caryophyllea	silver hairgrass	*Poaceae*	n	G
Aira elegans	elegant hairgrass	*Poaceae*	n	G
Amsinckia spectabilis	seaside fiddleneck	*Boraginaceae*	y	D, G
Anagallis arvensis	scarlet pimpernel	*Primulaceae*	n	R
Anthoxanthum odoratum	sweet vernal grass	*Poaceae*	n	N, P
Artemisia pycnocephala	beach sagewort	*Asteraceae*	y	D
Athyrium filix-femina	lady fern	*Woodsiaceae*	y	P
Avena fatua	wild oat	*Poaceae*	n	R
Bellis perennis	English daisy	*Asteraceae*	n	C
Brassica rapa	common mustard	*Brassicaceae*	n	D
Briza maxima	rattlesnake grass	*Poaceae*	n	E, P
Briza minor	little rattlesnake grass	*Poaceae*	n	G
Bromus diandrus	ripgut brome	*Poaceae*	n	G, D, R, V
Bromus hordeaceus	soft chess	*Poaceae*	n	G
Calystegia soldanella	beach morning glory	*Convolvulaceae*	y	D
Camissonia cheiranthifolia	beach evening primrose	*Onagraceae*	y	D
Carpobrotus chilensis	sea fig	*Aizoaceae*	n	E, P, R, D

Appendix C – Species Observed

Scientific Name	Common Name	Family	Native	Community Type
Cerastium arvense	field chickweed	*Caryophyllaceae*	y	G
Claytonia perfoliata	miner's lettuce	*Montiaceae*	y	G
Collinsia corymbosa	roundhead Chinese house	*Plantaginaceae*	y	D
Cortaderia jubata	pampas grass	*Poaceae*	n	R
Dactylis glomerata	orchard grass	*Poaceae*	n	G
Daucus pusillus	American wild carrot	*Apiaceae*	y	R
Elymus pacificus	Pacific wild rye	*Poaceae*	y	G
Equisetum arvense	common horsetail	*Equisetaceae*	y	G
Erigeron glaucus	seaside daisy	*Asteraceae*	y	N
Erysimum menziesii	Menzie's wallflower	*Brassicaceae*	y	D
Fragaria vesca	wood strawberry	*Rosaceae*	y	S
Galium aparine	common bedstraw	*Rubiaceae*	y	P
Geranium dissectum	cut-leaved geranium	*Geraniaceae*	n	R
Geranium molle	dovefoot geranium	*Geraniaceae*	n	G, R, D
Gilia millefoliata	dark-eyed gilia	*Polemoniaceae*	y	D
Grindelia stricta	gum plant	*Asteraceae*	y	D
Hedera helix	English ivy	*Araliaceae*	n	P, E
Holcus lanatus	velvet grass	*Poaceae*	n	G, D
Hypochaeris radicata	hairy cat's ear	*Asteraceae*	n	D, R
Iris douglasiana	Douglas iris	*Iridaceae*	y	P
Iris pseudacorus	water iris	*Iridaceae*	n	G
Juncus bufonius	common toad rush	*Juncaceae*	y	G, D
Juncus effusus	common rush	*Juncaceae*	y	V
Logfia gallica	narrowleaf cottonrose	*Asteraceae*	n	R
Lupinus spp.	lupine	*Fabaceae*	y	E, D
Luzula comosa	common wood rush	*Juncaceae*	y	G, V
Medicago polymorpha	bur clover	*Fabaceae*	n	R
Melilotus albus	white sweetclover	*Fabaceae*	n	R
Plantago coronopus	cut leaf plantain	*Plantaginaceae*	n	R, G, D, S
Plantago lanceolata	English plantain	*Plantaginaceae*	n	R, G, D, S
Poa annua	annual bluegrass	*Poaceae*	n	G, R
Polygonum paronychia	beach knotweed	*Polygonaceae*	y	D
Prunella vulgaris var. lanceolata	mountain selfheal	*Lamiaceae*	y	P
Pteridium aquilinum var. pubescens	western bracken fern	*Dennstaedtiaceae*	y	P
Rhododendron columbianum	western labrador tea	*Ericaceae*	y	RS
Rubus armeniacus	Himalayan blackberry	*Rosaceae*	n	G
Rubus ursinus	California blackberry	*Rosaceae*	y	P

Appendix C – Species Observed

Scientific Name	Common Name	Family	Native	Community Type
Rumex acetosella	sheep sorrel	*Polygonaceae*	n	P, R
Senecio minimus	coastal burnweed	*Asteraceae*	n	N
Sisyrynchium bellum	western blue eyed grass	*Iridacea*	y	G
Spergula arvensis	corn spurry	*Caryophyllaceae*	n	D
Stachys ajugoides	hedge nettle	*Lamiaceae*	y	P
Struthiopteris spicant	deer fern	*Blechnaceae*	y	RS
Trifolium dubium	little hop clover	*Fabaceae*	n	R
Trifolium wormskioldii	cow clover	*Fabaceae*	y	
Trifolium tomentosum	woolly clover	*Fabaceae*	n	R
Vinca major	periwinkle	*Apocynaceae*	n	C, G

TABLE 4 – Animal Species Observed

Common Name	Family
bumblebee	*Apidae*
hummingbird	*Trochilidae*
ladybug	*Coccinellidae*
garden snail	*Helicidae*

APPENDIX D: Photos

Looking northwest at **Coastal Strand**, **Coast Scrub**, and **Non-Native Grassland**

Looking west along the southern property line

Non-Native Grassland

Looking east at **North Coast Riparian Scrub**, **Beach Pine Forest**, **Cultivar**, and **Coastal Strand**

Looking west at **Vernal Marsh** and **Coastal Strand**

HABITAT MITIGATION AND MONITORING PLAN

for the proposed direct transfer operation and buy-back center located at:

1280 N. Main St., Fort Bragg, CA

April 28, 2022

Prepared for:
Redwood Waste Solutions
3515 Taylor Drive
Ukiah, CA, 95482

Prepared by:
Clifton Environmental ,LLC
PO Box 932
Redwood Valley, CA 95470

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FIGURES

1.0 INTRODUCTION

As legally required by state and federal statutes, this Mitigation and Monitoring Plan has been prepared for Redwood Waste Solutions (RWS) to satisfy mitigation requirements to address significant impacts to special status natural community coastal strand and special status plant species dark-eyed gilia (*Gilia millefoliata*), as a result of the proposed direct transfer operation and buyback center "Development." This document will help guide the enhancement of coastal strand community, within un-developed portions of the site, to mitigate the Development's impacts on the special status community and plant resources identified in the Biological Resource Assessment (BRA), as well as guide the monitoring of the restoration work.

2.0 PROJECT SUMMARY

The proposed mitigation "Project" will occur at the Development site, located at 1280 N. Main Street, Fort Bragg, California. The accompanying Biological Resource Assessment Report (BRAR) identifies impacts that the Development will have on special status biological resources within the BRA Area (BRAA). Of the 1.45 acres of identified special status coastal strand natural community, 0.09 acres, including several small populations of special status plant species, dark-eyed gilia, will be permanently impacted by the Development. To mitigate these impacts restoration to the un-developed coastal strand natural community is proposed.

2.1 Restoration Design

The coastal strand community will be restored through the eradication of multiple populations of invasive sea fig (*Carpobrotus chilensis*) that has colonized significant portions of this natural community. By removing the competing invasive species, coastal strand natural community within the BRAA will be enhanced, creating an opportunity for adjacent native plant populations to repopulate those portions of the habitat colonized by sea fig. Special status plant species in the restoration area include roundhead Chinese houses (*Collinsia corymbosa*), Menzie's wallflower (*Erysimum menziesii*), and dark-eyed gilia (*Gilia millefoliata*).

2.2 Responsible Parties

Redwood Waste Solutions (RWS) is responsible for accomplishing the mitigation and monitoring work.

2.3 Rationale for Expecting Implementation Success

Manual removal of sea fig is an effective non-chemical treatment and can be executed without impacting desirable plant species in the vicinity. While sea fig is a vigorously colonizing invasive species, the size of the sea fig population within the Project can be removed within five years of careful monitoring (DiTomaso 2013). Mitigation for the permanent impacts to the coastal strand natural community and dark-eyed gilia will occur on the same property in the same community type, thus protecting adjacent special status plant populations from sea fig colonization.

3.0 MITIGATION GOALS

The goal of the mitigation plan is to enhance the special status coastal strand natural community on the property by eradicating sea fig, which is primarily isolated to the coastal strand community. Of the existing sea fig populations on the property, a portion will be removed within the Project's development

footprint where regionally sourced native landscaping is proposed. The precise acreage of sea fig throughout the property has not been carefully quantified but is approximately 0.27 acre, based on site observations and a review of aerial imagery (Figure 1). The permanent loss of 0.09 acre of coastal strand, due to the Development, will be mitigated at a replacement ratio of 3:1 of habitat area (California Coastal Commission 2013). This habitat enhancement goal safeguards successful mitigation of the permanent impact to coastal strand and dark-eyed gilia created by the development project.

3.1 Success Criteria

Performance standards for this project will be measurable by systematic monitoring methods. At the end of 5 years, within the restoration area, absolute vegetative cover of sea fig will be 0%, thus reducing the Development's level of impacts to less than significant.

4.0 MITIGATION SITE BASELINE INFORMATION

The accompanying BRAR includes a detailed description of the site's existing physical attributes, including the permanently impacted coastal strand community and a delineation of other vegetation types throughout the entire site. Prior to removal work, a map shall be prepared by a qualified botanist or landscape architect that includes geolocation points with estimated population size for each population of sea fig, for follow-up monitoring.

5.0 IMPLEMENTATION

5.1 Native Species Protections and Exclusions

Avoidance measures will be implemented to minimize impacts to desirable biological resources through restoration work. Prior to restoration and Development work, temporary lathe stakes connected by flagging will be installed, by a qualified botanist, along the border of the construction zones and special status species populations adjacent to the restoration areas, with a 5-foot buffer tolerance. Construction work will not go beyond the border established. Project work will minimize foot traffic within the avoidance areas.

5.2 Invasive Plant Species

The invasive sea fig is listed by the California Invasive Plant Council (Cal-IPC) with a *Moderate* impacts rating. Species with *Moderate* ratings have substantial and apparent impacts, but generally not have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment (Cal-IPC, n.d.). Like iceplant (*Carpobrotus edulis*), sea fig is of particular concern due to its competitive advantages to crowd out native species where they colonize (Albert 2000). Accumulated litter or duff, generated by sea fig, can encourage colonization of the coastal strand community by exotic annuals species (State Parks 2012).

5.3 Invasive Plant Removal Strategies

The field crew doing the treatment will be led by a trained supervisor. The supervisor will meet with a qualified botanist or landscape architect to properly identify the target invasive plant species and established natural community protection areas throughout the Project. Entire removal of sea fig is necessary to prevent any regrowth or reproduction. Whole sea figs will be removed manually with hand

tools, such as a grub hoe, shovel, or rake, digging out or hand-pulling plants. Where special status plants are known to be present, the field crew will hand-pull sea fig and minimize disturbance to the coastal strand natural community, to protect special status plant species. In addition to plant removal, enough sea fig duff will also be removed to discourage establishment of exotic annual species.

The crew will check for new growth once after the initial treatment and remove any recolonizing sea fig plants.

5.4 Equipment Sanitation

Tools and equipment must be cleaned and inspected for soil and debris before Project commencement. Equipment can become contaminated with invasive seed stock and should be cleaned with a mobile pressure washer in an upland staging area. The field crew must prevent unwanted seed stock or propagules from entering unaffected areas, and where removal has occurred.

5.5 Waste Material Removal

Invasive species waste material will be removed from the site in garbage bags or tarps to prevent the spread of any viable plant material and seeds. Waste material will be burned, composted in a fully permitted compost facility, or disposed of in a landfill.

6.0 IMPLEMENTATION SCHEDULE

The project is proposed to commence this year, 2022.

Table 1: Implementation Timeline

Task	Schedule
Create a map of existing sea fig populations	July 2022
Train field crew supervisor	August or September 2022
Eradicate all sea fig	September 2022 – January 2023
Check for resprouts of sea fig	February 2023
Maintenance eradication of residual sea fig (if needed)	September 2023 – January 2024
Maintenance eradication of residual sea fig (if needed)	September 2027 – January 2028
End of monitoring period	July 2027

7.0 MONITORING

7.1 Vegetation Monitoring Methods

Monitoring of the restoration area will be performed by a qualified botanist or landscape architect. The monitor will visually assess the site for any occurrences of sea fig, using the baseline map as a reference. The assessment will document successful eradication of sea fig and any successful reestablishment of native plant species. A map that includes location points with estimated population size for each population of sea fig will be prepared. Presence of sea fig during monitoring will be noted and reported to the applicant for removal, using the implementation guidelines in this MMP.

7.2 Monitoring Schedule

Vegetation monitoring in the restoration area will commence post implementation and will occur for the duration of the five-year monitoring period. Monitoring will occur during Year 1 and 2 and will commence again in Year 5. The two-year break will allow any remaining sea fig to reveal itself again.

Table 2: Monitoring Timeline

Task	Schedule
Vegetation Monitoring	March - July 2023
Monitoring Report	July 2023
Vegetation Monitoring	March - July 2024
Monitoring Report	July 2024
Vegetation Monitoring	March - July 2027
Monitoring Report	July 2027

8.0 MAINTENANCE DURING MONITORING PERIOD

8.1 Processes

Natural ecosystems are dynamic and subject to change over time, particularly in modern fragmented natural spaces. Ecological processes may partially or completely disrupt habitats. Natural processes include drought and flooding, fog, fire, wind, and disturbance by burrowing animals. Management may be needed to prevent resprouting of highly invasive sea fig.

8.2 Inspection Tasks and Frequency

Longer term maintenance after the end of the initial implementation period will generally be performed on an annual basis in the spring or at the time of mitigation monitoring. Field notes will document if conditions are normal or abnormal, and the annual monitoring report will recommend remedial actions to address any re-population of sea fig or other issues as deemed necessary. The annual monitoring will note if there are any new or reestablished populations of the sea fig, including the geolocation and square footage.

8.3 Maintenance Schedule

Maintenance, in accordance with the monitoring timeline, will be conducted annually in the spring, between March and June from 2023 to 2027, unless another time of year is more appropriate to avoid disturbance of sensitive plant species. If timing of maintenance needs to be modified for certain items, the rationale for the decision will be documented in annual reports.

8.4 Remedial Tasks

An adaptive management strategy for maintaining the restoration area will include extending the time horizon beyond five years for 100% eradication and monitoring of invasive sea fig.

9.0 MONITORING REPORTS

Annual reports will be submitted to the City of Fort Bragg Community Development Department, in accordance with the monitoring timeline. Reports will note if there are any new or reestablished populations of sea fig, including the geolocation and square footage. Photographs of the restoration

area will be included, as necessary, to document site conditions. The first annual report shall be delivered by July 31 of 2023, with subsequent semi-annual reports following the above Monitoring Timeline.

10.0 CONTINGENCY MEASURES

If final criteria are not met, a report shall be prepared analyzing the cause of failure and, if necessary, proposing remedial action for approval. Potential remedial actions include but are not limited to modifying management strategies or extending the monitoring period.

RWS will be responsible for funding any adaptive management or additional measures which it determines are necessary and which the City of Fort Bragg concurs. RWS will provide the City with a financial assurance memorandum of understanding as a standalone document.

11.0 COMPLETION OF MITIGATION MEASURES

When performance criteria have been met, the applicant will notify the City of Fort Bragg. Documentation will be provided within the accompanying annual report. Upon notification of completion, the City may concur based on written documentation or, at their discretion, may request a site visit to observe the completed project.

12.0 BIBLIOGRAPHY

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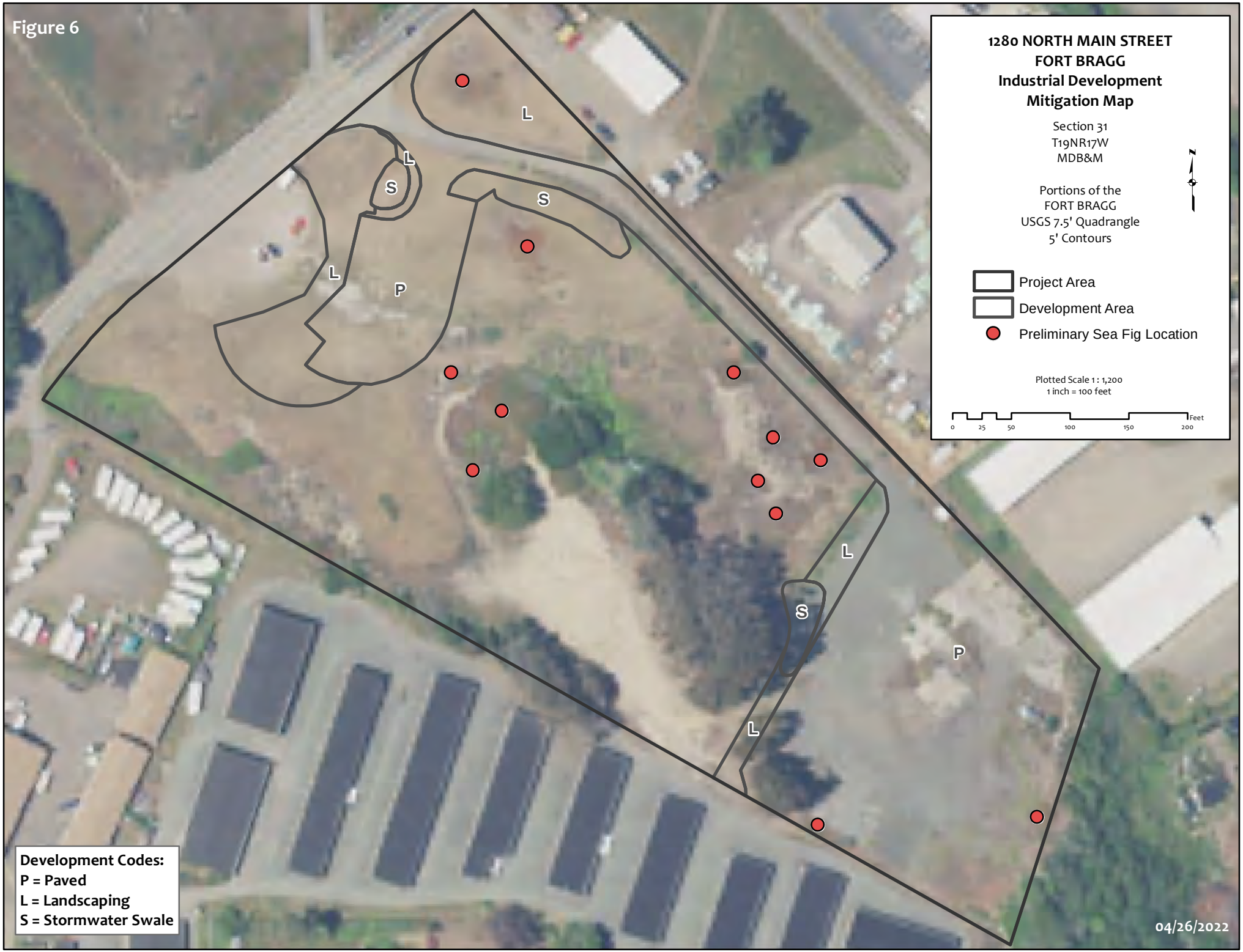
Figure 6


1280 NORTH MAIN STREET
FORT BRAGG
Industrial Development
Mitigation Map
Section 31
T19NR17W
MDB&M
Portions of the
FORT BRAGG
USGS 7.5' Quadrangle
5' Contours
Project Area
Development Area
Preliminary Sea Fig Location
Plotted Scale 1 : 1,200
1 inch = 100 feet
0 25 50 100 150 200 Feet
L
S
P
Development Codes:
P = Paved
L = Landscaping
S = Stormwater Swale
04/26/2022

LACO

TECHNICAL MEMORANDUM

Geotechnical Exploration
Proposed Development
1280 North Main Street, Fort Bragg, California

Date:	March 4, 2022
Project No.:	9016.05
Prepared For:	1280 N Main, LCC
Prepared By:	Kelsey McLaughlin Associate Geologist
Reviewed By:	Edward H. Crump, P.E. Senior Civil Engineer P.E. C 055444, EXP 12/31/22
Attachments:	Figures:

Figure 1: Vicinity Map
Figure 2: Site Plan
Figure 3: Perimeter Subdrain
Figure 4: Slab-on-Grade Subdrain

Appendix 1:	Preliminary Project Plans
Appendix 2:	Test Pit Logs
Appendix 3:	Laboratory Test Results

1.0 INTRODUCTION

This memorandum presents the results of a geotechnical exploration performed by LACO Associates (LACO) for a proposed new development at 1280 North Main Street, Fort Bragg, California (Assessor's Parcel Number 069-231-21; Site). Coastal zoning maps indicate that the Site is located outside of the Coastal Zone (County of Mendocino, 2016). A vicinity map of the Site location is provided as Figure 1. A Site Plan with exploration locations performed during this evaluation is provided as Figure 2.

1.1 Project Understanding

Based on preliminary project plans prepared by LACO dated December 16, 2021 (Appendix 1), it is our understanding that the proposed project will consist of a customer service office and buy back center, truck scale, loading platform, restroom, and mechanic shop. We anticipate that the structures will be of light-weight metal-framed construction with concrete slab-on-grade floors and steel-reinforced concrete spread footings; and that the project will include asphalt-paved parking and driveway areas. Site grading will be minor and limited to cuts and fills of approximately 3 vertical feet as needed to create level building pads, improve site soils, and provide adequate drainage. Proposed bioretention areas are anticipated throughout the Site (Appendix 1).

1.2 Scope of Services

In accordance with the Engineering Services Agreement Amendment No. 3, dated February 9, 2022, our scope of services was limited to the following:

- Review publicly available geologic reports and topographic maps as well as information in LACO's database.
- Direct the advancement of up to eight test pits to a maximum depth of 10 feet by LACO-provided excavator and operator; log soils encountered in general accordance with ASTM 2488 (Visual Manual Procedures) and collect soil samples for laboratory testing.
- Perform laboratory tests to assess soil classification, resistance (R) value, particle size gradation, and expansion potential, as appropriate. Soil and/or rock testing requirements will be determined by a Professional Geologist, Certified Engineering Geologist, and/or Professional Engineer following fieldwork and after examining soil and rock samples in the lab.
- Perform engineering analyses to develop conclusions and recommendations regarding suitable foundation type, estimates of foundation settlement, design criteria for the recommended foundation type, lateral earth pressures, drainage, and construction considerations that may include the following as applicable:
    - Suitability of on-site material for fill;
    - Asphalt paving recommendations;
    - Fill placement and restrictions;
    - Qualitative liquefaction potential based on mapped zones; and,
    - Construction consideration based on the preceding.
- Assess bearing capacity consistent with current California Building Code or engineering recommendations.
- Evaluation of the potential for geohazards that may include the following: earthquake ground motion, fault rupture hazard, liquefaction, and slope stability.
- Provide seismic coefficients as per Structural Engineers Association of California (SEAOC) and OSHPD Seismic Design Maps.
- Record the results of our exploration and analysis in a technical memorandum.

2.0 EXPLORATION

Our exploration consisted of reviewing published geotechnical reports and maps related to the surface topography and geology of the Site vicinity and performing a subsurface exploration. Documents reviewed are presented in the references section (Section 10.0) of this memorandum. Our subsurface exploration was performed on February 10, 2022, and was limited to excavating eight test pits (TP1 through TP8) to maximum depths ranging from 3.5 to10 feet below ground surface (bgs), at the approximate

locations shown in Figure 2. Test pits were excavated by a LACO-provided excavator and operator, under the direction and observation of a LACO geologist. Our geologist logged the test pits and obtained disturbed soil samples for visual classification and laboratory testing. Soils were logged in general accordance with the American Society for Testing and Materials (ASTM) Test Procedure D2488 Visual-Manual Procedures. Test pit logs are presented in Appendix 2.

2.1 Laboratory Testing

Select soil samples collected during the field exploration were submitted to LACO's materials laboratory and were subjected to the following tests:

- Atterberg Limits (ASTM D4318)
- Percent Finer than #200 sieve (ASTM D1140)
- Resistance (R) Value Test (California Test 301

Laboratory test results are included as Appendix 3 and are summarized in Table 1.

Table 1. Summary of Laboratory Test Results

Test Pit	Depth (feet bgs)	Unified Soil Classification System Soil Type1	ASTM D1140	ASTM D4318		CA Test 301
			Fines Content Percent	Plasticity Index Percent	Liquid Limit Percent	Resistance Value
TP1	1 to 2	SP	-	-		56
	2 to 3	SP	1.9	Non-plastic		-
TP5	1 to 2	GP-GC	10.7	Non-plastic		64

LACO will archive the soil samples collected for this project for 60 days following the issuance of this Memorandum. Unless directed otherwise by the Client, the samples will be discarded after the 60-day archive period.

3.0 SITE CONDITIONS

3.1 Surface Conditions

The Site is located in the coastal area within the city limits of Fort Bragg. Highway 1, also identified as North Main Street, adjoins the western boundary of the Site. The western portion of the Site is used as parking by the public to access beaches along the Pacific Ocean. The Site is vacant and the central portion is partially vegetated and partially covered in sand dunes. The immediate surrounding area appears to have a low-density development, with residential properties to the west, and commercial and industrial properties to the north, east, and south. Topography is generally flat lying, with the exception of some berms and sand dunes. The Site is located approximately 0.3 miles east of the Pacific Ocean, and 0.2 miles south of Virgin Creek, a tributary to the Pacific Ocean. No drain inlets were observed; however, stormwater is anticipated to drain via sheet flow to the west towards the Pacific Ocean. Precipitation is anticipated to infiltrate the ground surface in unpaved locations.

3.2 Geologic Setting

The Site is located in the California Coast Ranges Geomorphic Province. This province is seismically active and geologically complex due to historic and ongoing tectonic deformation that is characterized by northwest-trending faults and topographic and geologic features. The California Coast Ranges Province extends west to the Pacific Ocean, east to the Great Valley, north to Oregon, and south to the Transverse Ranges. The complex structure of the Coast Ranges Geomorphic Province began with a period of plate convergence during late Jurassic which involved eastward thrusting of oceanic crust beneath the coastal crust and was characterized by the accretion of material to the continent and the formation of east-dipping thrust and reverse faults. Beginning in the mid-Cenozoic and continuing to the present, the plate boundary was dominated by right-lateral, strike-slip deformation which was superimposed on the existing structures. This is characterized by the northwest-trending nearly vertical faults of the San Andreas system.

The oldest bedrock units in the Coast Ranges Geomorphic Province are those of the Jurassic-Cretaceous Franciscan Complex and the Great Valley Sequence. Younger bedrock units consist of the Tertiary-aged Sonoma Volcanic Group, the Plio-Pleistocene-age Clear Lake Volcanics, and Sedimentary rock formations such as the Petaluma, Wilson Grove, and Huichica. Quaternary-aged alluvium generally covers the bedrock in the valleys and low-lying areas.

Published geologic mapping indicates the Site is underlain by Quaternary-aged marine terrace deposits that are described as generally consisting of well-sorted quartz sand with minor gravel and having coarser textures near major drainages (Kilbourne, 1983).

3.3 Subsurface Conditions

Our test pits indicate the Site is blanketed by undocumented fill underlain by heterogeneous alluvial deposits that extended to the maximum depths explored of 10 feet bgs. Undocumented fill was encountered up the upper 12 inches of test pit TP1 on the western portion of the site and between 1.5 to 3 feet bgs in the eastern portion of the Site (TP5 through TP8). The fill consists of poorly to well graded gravel or sand. In the area of test pits TP2 and TP3, loose poorly graded sands were encountered to a depth of 2 feet bgs. Underlying the fill and loose poorly graded sands, layers of medium dense to dense poorly graded sand, medium dense clayey sand and medium stiff sandy lean clay were encountered to the total depths explored. Groundwater was encountered in test pits TP2 and TP3 at depths of 5.5 feet and 7 feet bgs, respectively.

4.0 GEOLOGIC HAZARDS

4.1 Slope Instability

Our site evaluation observed no historical or ongoing slope stability concerns at the project site. The project site is relatively flat and new construction is not anticipated to steepen slopes on or around the Site. Provided the project is constructed according to the recommendations of this report, we consider the potential impact to the proposed development from slope instability is low.

4.2 Seismicity

The Site is in a seismically active region where large earthquakes may be expected to occur during the economic lifespan (50 years) of the structures due to the seismic activity of the northern section of the San

Andreas fault. The nearest potentially active fault is the north coast section of the San Andreas fault zone, which is located approximately 7 miles west of the Site in the Pacific Ocean. The north coast section of the San Andreas fault zone is an approximately 150 miles long right-lateral strike-slip fault with an average strike and dip of North 36° West and 90°, respectively (Bryant and Lundberg, 2002). The next nearest fault is the Maacama Fault Zone, located approximately 22 miles east of the Site. The Maacama Fault is a 100-mile-long right-lateral strike-slip fault with an average strike and dip of North 24° West and 90°, respectively (Hart and Bryant, 2001).

The Site is not mapped in a special studies zone per the Alquist-Priolo Earthquake Fault Zoning Act and thus the likelihood of surface rupture from a potentially active fault is low (CDC, 2016a). Using an estimated Vs_{30} of 468 meters per second (based on existing mapped velocities; CDC, 2016b), the 2008 Ground Motion Interpolator indicates that within 50 years, the Site has a 2 percent probability of experiencing peak ground accelerations up to 0.723 times the acceleration of gravity (Branum, et al., 2016).

4.3 Lurching

Seismic slope failure, or lurching, is a phenomenon that occurs during earthquakes when slopes or man-made embankments yield and displace in the unsupported direction. Provided foundations are installed following the recommendations presented within this memorandum, we consider the potential for impact to the proposed development from lurching is low.

4.4 Liquefaction

Liquefaction is a phenomenon that results in a loss of shear strength and potential soil volume reduction in loose, saturated sandy/silty soils below the groundwater table as a result of earthquake shaking. It is dependent on many factors, including the intensity and duration of ground shaking, the soil age, density, particle size distribution, and position of the groundwater table. Geologic hazards maps related to liquefaction susceptibility are not available for the Site or vicinity; however, based on the classification and density of the soils observed at the Site, the loose poorly graded sands in the upper 2 feet located in the areas of test pits TP2 and TP3 have liquefaction susceptibility. Provided these near surface deposits are improved by site grading according to the recommendations of this report, we consider the potential for liquefaction to negatively impact the proposed development to be low. Evaluation of the liquefaction potential beyond the maximum depths explored is beyond the scope of this report.

4.5 Flooding

The Site is not mapped within the 100-year FEMA flood zone (FEMA, 2017) or the tsunami inundation zone (State of California, 2021). Therefore, the potential for impact to the Site from flooding or tsunami is low.

4.6 Soil Swelling or Shrinkage Potential

Expansive soils tend to undergo volume changes (shrink or swell) with changes in moisture content. They generally consist of cohesive fine-grained clay soils and represent a significant structural hazard to structures founded on them. Based on soil classification and our laboratory testing, Site soils have a low potential to shrink (or swell) during seasonal moisture variations. Therefore, we consider the potential for soil expansion to detrimentally affect the proposed development at the Site to be low.

5.0 CONCLUSIONS

The results of our exploration program indicate the project is feasible from a geotechnical standpoint. The primary concern at the Site is the presence of undocumented fill and the loose poorly graded sands that were present within the upper approximately 2 feet in the area of test pits TP2 and TP3. Undocumented fill is prone to settlement and/or collapse when subjected to structural loading. To minimize these potentially detrimental effects, undocumented fill beneath planned structural elements should be removed and replaced with select engineered fill following recommendations presented in Section 6.1 of this memorandum. Structures can be supported on standard steel-reinforced concrete spread footings bearing entirely on select engineered fill. If designed and constructed per the recommendations of this memorandum, we estimate total settlement under the loads anticipated will be less than ½ inch and differential settlement will be less than ¼ inch over distances of 20 feet.

6.0 RECOMMENDATIONS

6.1 Site Preparation and Grading

Areas to be graded should be stripped of vegetation and topsoil containing organic material. Bushes and designated trees should be removed and their roots grubbed. These materials are not suitable for reuse as select fill. Prior to placement and compaction of engineered fill, undocumented fill and loose soils should be removed to their full depth. We anticipate that excavation of fill may extend up to one foot below existing grade on the western half of the Site (TP1 and TP4); and up to 3 feet below existing grade on the eastern portion of the site (TP5 through TP8). Loose soils are anticipated to extend to 2 feet below existing grade in the area of TP2 and TP3.

Select fill pads intended for foundation support should extend 5 feet beyond the building footprint and extend 30 inches below lowest adjacent grades. Excavation depths should be adjusted such that foundations bearing on fill bear on a minimum of 12 inches of properly placed and compacted engineered fill.

In areas of planned exterior concrete slabs and walkways, select fill should extend a minimum of 3 feet beyond the slab perimeter and extend a minimum of 12 inches subgrade. Prior to placing fill, the exposed soil subgrade should be observed by an appropriately qualified professional, then scarified to a depth of 6 inches, moisture conditioned to near optimum moisture content, and compacted to at least 90 percent relative compaction.[1] Material proposed for use as select fill should be free of organic or other deleterious material and rocks with a maximum dimension greater than 3 inches, and should meet the following criteria:

Fraction Finer than No. 200 Sieve:	Between 5 percent and 60 percent
Plasticity Index:	15 percent or less
Liquid Limit:	35 percent or less

[1] Relative compaction refers to the ratio of the in-place dry density of the soil to the maximum dry density as described in the latest edition of the ASTM D1557 compaction test procedure. Optimum moisture content is the water content as a percentage of the dry weight of the soil corresponding to the maximum dry density.

Our exploration indicates that on-site soils are in general suitable for use as select fill. However, our laboratory testing indicates that portions of the onsite material have low fines content and should be blended onsite with existing suitable material. Following excavation operations, and prior to placement, material proposed fill should be observed tested and approved by an appropriately qualified professional. Fill should be placed in lifts no greater than 6 inches in loose thickness, moisture conditioned to 2 percent wet of optimum moisture content, and compacted to at least 90 percent relative compaction. In areas to receive vehicular loads, the upper 6 inches of soil subgrade should be compacted to at least 95 percent relative compaction and be firm and unyielding when subjected to proof-rolling during construction.

6.2 Foundations

6.2.1 Spread Footings

Structures can be adequately supported on standard spread footings bearing on select engineered fill. Footings for the new structures should be at least 12 inches deep (below finish subgrade elevations) and 18 inches (continuous) or 24 inches (isolated) wide. Footings adjacent to existing utility trenches or other footings should be deepened enough to bear below a 1:1 (horizontal: vertical) plane extending upwards from the bottom edge of utility trench or footing excavation. Additional embedment may be needed to satisfy code and/or structural requirements. On ungraded sloping terrain, footings should be stepped as necessary to produce level tops and bottoms.

The bottoms of all footing excavations should be thoroughly cleaned of loose soils prior to placing reinforcing steel and concrete. This will remove the soils that were disturbed during footing excavations, or restore their adequate bearing capacity, and reduce post-construction settlements. An appropriately qualified professional in the field should observe the footing excavations prior to the placement of reinforcing steel and concrete forms to check that they are founded in suitable bearing materials, have been properly cleaned of loose soil, and the proper moisture condition has been achieved.

6.2.1.1 *Bearing Pressures*

Footings bearing on select engineered fill can be designed using a maximum allowable bearing capacity of 2,000 psf. These values can be increased by one-third when considering wind and/or seismic loads.

6.2.1.2 *Lateral Pressures*

The portion of spread footings extending into select engineered fill may impose a passive equivalent fluid pressure and a friction factor of 150 pcf and 0.25, respectively, to resist sliding. Passive pressure should be neglected within the upper 12 inches unless the soils are confined by concrete slabs or pavements.

6.2.2 Slabs-on-Grade

Interior concrete slab-on-grade floors should be supported on a minimum of 30 inches of select fill that extends a minimum of 5 feet beyond the edge of the slab. The fill pad thickness may be refined in the field, dependent on conditions encountered. Exterior slabs and/or concrete flatwork can be supported entirely on a minimum of 12 inches of select fill that extends a minimum of 3 feet beyond the edge of the slab.

Prior to slab construction, the subgrade should be scarified to a depth of 6 inches, compacted following the recommendations presented in the Site Preparation and Grading section (Section 6.1) of this Memorandum, and maintained in a wet-of-optimum moisture content condition. To provide a capillary moisture break between the slab and the supporting soil/rock, we recommend a 4-inch-thick layer of

crushed rock be placed on the prepared subgrade. The crushed rock should be placed as soon as possible after slab subgrade preparation to reduce the potential for drying and cracking of the moisture-conditioned subgrade material.

Where the risk of moisture vapor movement through the slab may be detrimental to the intended use of the slab, the capillary break material should be covered by an impermeable membrane consisting of 15-mil Stego® Wrap sheeting, or equivalent, installed in accordance with the manufacturer's recommendations.

Special precautions should be taken during the placement and curing of all concrete slabs. Excessive slump (high water-cement ratio) of the concrete and/or improper curing procedures used during either hot-or cold-weather conditions could lead to excessive shrinkage, cracking, or curling of the slabs. High water-cement ratio and/or improper curing also greatly increase the water vapor permeability of concrete. We recommend concrete placement and curing operations be performed in accordance with the American Concrete Institute (ACI) manual.

6.3 Asphalt Pavement

The following asphalt pavement section is provided for the proposed parking lot and driveway. The upper 6 inches of soil subgrade in pavement areas should be compacted to 95 percent relative compaction and be firm and unyielding when subjected to proof-rolling as observed by an appropriately qualified professional. To estimate a minimum pavement section thickness, an R-value of 56 was selected based on laboratory tests (Table 1). Minimum pavement section thicknesses are presented in Table 2 below.

Table 2. Minimum Recommended Pavement Section Thicknesses with Corresponding Traffic Index

Traffic Index (TI)	HMA Thickness (Inches)	Class 2 Aggregate Base Thickness (Inches)
5	2.5	6.0
6	3.0	6.0
7	3.5	7.0
8	4.5	7.5

HMA-Hot Mix Asphalt

Hot mix asphalt (HMA) and Class 2 aggregate base materials should meet the requirements specified in the latest edition of the CalTrans Standard Specifications. The Class 2 aggregate base should be compacted to at least 95 percent relative compaction prior to HMA placement and compaction.

6.4 Seismic Design Parameters

Earthquake design parameters presented herein are based on the California Building Code (CBC) and the standard "Minimum Design Loads and Associated Criteria for Buildings and Other Structures," (ASCE 7-16), which, in turn, is based on a maximum considered earthquake ground motion, defined as the motion caused by an event with a 2-percent probability of exceedance within a 50-year period (recurrence interval of approximately 2,500 years). We used the site location (39.468533, -123.802040), site class D (stiff soil), and risk level II, as project input to Seismic Design Maps tool co-developed by the Structural Engineers

Association of California (SEAOC) and California's Office of Statewide Health Planning and Development (OSHPD) (SEAOC and OSHPD, 2019). Values of those inputs and model outputs are presented in Table 3.

We refer the building designer to the exemptions listed in ASCE 7-16 to determine whether a site-specific ground motion analysis is required.

Table 3. Summary of Seismic Design Parameters

Site Class	F_a	F_v	S_s	S_1	S_{MS}	S_{M1}	S_{DS}	S_{D1}	T_s
D	1.5	1.7	1.0	0.6	1.5	1.02	1.0	0.68	0.68

* F_v, S_{M1}, and S_{D1} may only be used for calculation of T_s.

The factors are defined as follows:

- S_s - Mapped spectral response acceleration, 5 percent damped, at 0.2 second period (times g).
- S_1 - Mapped spectral response acceleration, 5 percent damped, at 1.0 second period (times g).
- F_a – Short period coefficient to modify 0.2 second period of mapped spectral response accelerations.
- F_v – Long-period coefficient to modify 1.0 second period of mapped spectral response accelerations.
- S_{MS} – Maximum considered earthquake spectral response acceleration, 5 percent damped, at 0.2 seconds (times g).
- S_{M1} – Maximum considered earthquake spectral response acceleration, 5 percent damped, at 1.0 second period (times g).
- S_{DS} – Design spectral response acceleration, 5 percent damped, at 0.2 second period (times g).
- S_{D1} – Design spectral response acceleration, 5 percent damped, at 1.0 second period (times g).
- T_s S_{D1}/S_{DS}.

6.5 Utility Trench Backfill

Trench backfill quality and compaction should generally conform to the requirements of the Site Preparation and Grading section (Section 6.1) of this Memorandum. Where trenches closely parallel a shallow foundation element and the trench bottom is within a 2:1 plane projected outward and downward from the foundation, concrete slurry (two-sack minimum) should be used to backfill that portion of the trench below this plane. The use of slurry backfill is not required where a narrow trench crosses a footing at or near a right angle.

7.0 CONSTRUCTION CONSIDERATIONS

7.1 Groundwater

Shallow groundwater was encountered between 5.5 and 7 feet bgs during our exploration. Seasonal groundwater levels fluctuate and may rise above the depths explored. Provided construction is performed during the dry months of summer or early fall, it may not be a concern. If groundwater accumulates in foundation excavations, it should be pumped out prior to concrete placement.

7.2 Surface Drainage

The Site should generally be graded to provide positive surface drainage away from foundations and away from structures. A minimum gradient of 3 percent should be maintained for hardscape areas within 5 feet of a structure where this does not conflict with Americans with Disabilities Act (ADA) design requirements. A minimum 5 percent gradient should be maintained for landscaped areas not designed to receive foot traffic within 5 feet of a structure. The grading or landscaping design and construction should not allow water to pond on the Site within 10 feet of any engineered structure nor to migrate beneath any structure. Runoff from hardscaped areas, roofs, patios, and other impermeable surfaces should be contained, controlled, and directed into the Site storm drainage or infiltration systems.

7.3 Subsurface Drainage

Subdrains should be considered where the migration of moisture through concrete slab-on-grade floors would be detrimental, such as interior living space areas, slab subdrains should be installed to dispose of surface and/or groundwater that may seep and collect in the slab rock. At a minimum, subdrains should be constructed and routed away from foundations. Subdrains should be constructed as shown in Figures 3 and 4.

7.4 Temporary Slopes and Trench Excavations

Contractor is responsible for the stability of temporary slopes and trenches excavated at the Site and the design and construction of any required shoring. Shoring and bracing should be provided in accordance with all applicable local, state, and federal safety regulations, including the current Occupational Safety and Health Administration (OSHA) excavation and trench safety standards. Because of the potential for variable soil conditions, field modifications of temporary cut slopes may be necessary. Unstable materials encountered on the slopes during the excavation should be removed.

8.0 FUTURE GEOTECHNICAL SERVICES

To check for conformance with specific recommendations contained in this memorandum and to confirm assumptions made in the preparation of this memorandum, an appropriately qualified professional should be retained to perform the following:

- Review project plans and specifications;
- Observe subdrain installations;
- Observe Site grading activities and check exposed grades prior to placement of fill;
- Observe foundation excavations prior to placement of any forms or reinforcing steel; and,
- Observe placement of fill and perform in-place field density tests to check the required relative compaction is achieved.

9.0 LIMITATIONS

This memorandum has been prepared for the exclusive use of 1280 N Main, LCC Construction, their contractors, consultants, and appropriate public authorities for specific application to the planned new development. LACO has exercised a standard of care equal to that generated for this industry, so the information contained in this memorandum is current and accurate. The opinions presented in this memorandum are based upon information obtained from subsurface excavations, a Site reconnaissance, review of geologic maps and data available to us, and upon local experience and engineering judgment, and have been formulated in accordance with generally accepted geotechnical engineering practices

that exist in California at the time of this memorandum. In addition, geotechnical issues may arise that are not apparent at this time. No other warranty, expressed or implied, is made or should be inferred.

Data generated for this memorandum represent information gathered at that time and at the widely spaced locations indicated. Subsurface conditions may be highly variable and difficult to predict. As such, the recommendations included in this memorandum are based, in part, on assumptions about subsurface conditions that may only be observed and/or tested during subsequent project earthwork. Accordingly, the validity of these recommendations is contingent upon review of the subsurface conditions exposed during construction in order to check that they are consistent with those characterized in this memorandum. Upon request, LACO can discuss the extent of (and fee for) observations and tests required to check the validity of the recommendations presented herein.

The opinions presented in this memorandum are valid as of the present date for the property evaluated. Changes in the condition of the property can occur over time, whether due to natural processes or the works of man, on this or adjacent properties. In addition, changes in applicable standards of practice can occur, whether from legislation or the broadening of knowledge. Accordingly, the opinions presented in this memorandum may be invalidated, wholly or partially, by changes outside our control. Therefore, this memorandum is subject to review and should not be relied upon after a period of three years, nor should it be used, or is it applicable, for any property other than that evaluated. This memorandum is valid solely for the purpose, Site, and project described in this document. Any alteration, unauthorized distribution, or deviation from this description will invalidate this memorandum. LACO assumes no responsibility for any third-party reliance on the data presented. Additionally, the data presented should not be utilized by any third party to represent data for any other time or location.

10.0 REFERENCES

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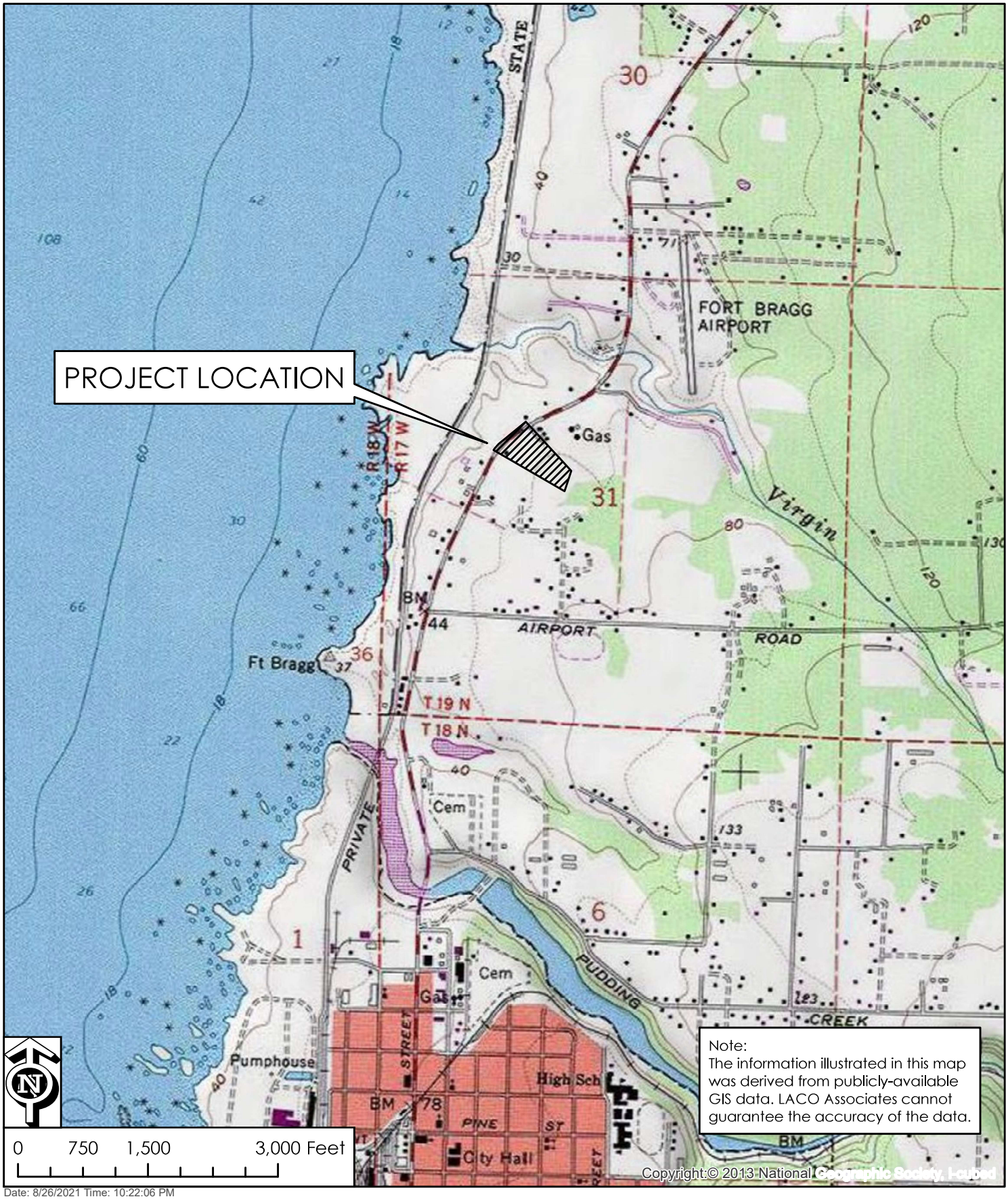
FIGURES

LACO EUREKA • UKIAH • SANTA ROSA 1-800-515-5054 www.lacoassociates.com	PROJECT	1280 N. MAIN, LLC: PHASE I ESA	BY CRP	FIGURE 1
	CLIENT	1280 N. MAIN, LLC	CHECK RD/KD	
	LOCATION	1280 N. MAIN ST. FORT BRAGG, CA	DATE 6/23/2021	JOB NO. 9016.05
		LOCATION MAP		



Date: 8/26/2021 Time: 10:22:06 PM
Path: P:\9000\9016 Yulupa Investments, LLC\9016.05 1280 N Main St Fort Bragg Planning Services\12 Figures_Maps\GIS\Figure 1 - Location (modified AAA).mxd

APPENDIX 2

Test Pit Logs

TEST PIT NUMBER TP1

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GP) Light Brown Gravel with Sand [FILL] dry, medium dense medium sand, subangular gravel up to 1.5 inch diameter, grass covered with fine roots in upper 6 inches	GB										
		(SP) Light Brown Poorly Sorted Sand dry, medium dense medium grained sand				R value = 56							
2.5			GB							NP	NP	NP	2
		(CLS) Brown motted Yellow Sandy Lean Clay moist, medium stiff medium grained sand	GB										
5.0													
		(CLS) Light Gray mottled Orange Sandy Lean Clay moist, medium stiff medium grained sand											
7.5			GB										

Bottom of test pit at 9.0 feet.

TEST PIT NUMBER TP2

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
▽ **AT TIME OF EXCAVATION** 5.50 feet
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SP) Light Brown Poorly Sorted Sand dry, loose to medium dense medium grained sand	GB										
2.5		(SP) Light Brown Poorly Sorted Sand with Clay dry, medium dense medium grained sand	GB										
5.0		(SP) Light Gray Poorly Sorted Sand wet to Saturated, medium dense medium grained sand, refusal due to hole collapsing, groundwater at 5.5 feet bgs ▽											

Bottom of test pit at 6.5 feet.

TEST PIT NUMBER TP3

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
▽ **AT TIME OF EXCAVATION** 7.00 feet
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SP) Light Brown Poorly Sorted Sand dry to moist, loose medium grained sand, fine to medium roots to 2 feet bgs	GB										
2.5		(SC) Reddish Brown mottled Gray Clayey Sand moist, medium dense medium grained sand, medium roots to 5 feet bgs	GB										
5.0		(SP) Light Gray Poorly Sorted Sand moist to wet, medium dense medium grained sand	GB										
7.5		(SP) Light Gray Poorly Sorted Sand moist to wet, dense medium grained sand, partially cemented, groundwater at 7 feet bgs, refusal due to hole collapsing											

Bottom of test pit at 8.0 feet.

TEST PIT NUMBER TP4

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GP) Brown Gravel with Sand [FILL] dry to moist, medium dense fine to medium grained sand, thin layer of concrete-like material, fine roots to 12 foot bgs, grass covered	GB										
		(SP) Light Brown Poorly Graded Sand moist, medium dense medium grained sand, sand collapsing											
2.5			GB										
5.0		(SP-SC) Brown Sand with Clay moist medium dense (more firm than layer above) medium sand	GB										
		(SW) Reddish Brown Gravelly Sand wet, medium dense medium grained sand, subrounded gravel up to 1 inch diameter	GB										
7.5		(SP) Light Gray Poorly Sorted Sand moist to wet, dense medium grained sand, partially cemented, groundwater at 7 feet bgs	GB										

Bottom of test pit at 8.0 feet.

TEST PIT NUMBER TP5

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GP) Gravel with Sand [FILL] moist, dense subangular gravel											
		Concrete											
		(GP-GC) Brown Poorly Gravel with Sand and Clay [FILL] dry to moist, very dense angular to subangular gravel	GB			R value of 64				NP	NP	NP	11
2.5													
		(SP) Gray mottled Orange Poorly Gravel Sand moist, medium dense medium grained sand	GB										
5.0			GB										
7.5		(SC) Black Clayey Sand moist, medium dense organic smell, refusal due to hole collapsing/ undercutting fill											

Bottom of test pit at 9.0 feet.

TEST PIT NUMBER TP6

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GP) Brown Gravel [FILL] dry to moist, dense angular to rounded gravel, fine to medium sand	GB										
2.5		(SP) Light Brown Poorly Graded Sand moist, medium dense medium grained sand, more firm at 3.5 feet bgs, medium roots to 4 feet bgs, collapsing	GB										
5.0													
7.5			GB										
10.0		(CL) Dark Brown Clay moist, stiff organic smell, minor organic matter, refusal due to hole collapsing/ undercutting fill	GB										

Bottom of test pit at 10.0 feet.

TEST PIT NUMBER TP7

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SP) Red Sand [Fill] dry, dense medium sand											
		(GP) Gravel [Fill] dry, dense subangular to subrounded up to 1 inch diameter											
		Well Graded Sand [Fill] dry, very dense medium sand, cemented, possibly lime treated, difficulty digging											
2.5		(SP) Light Brown Poorly Graded Sand moist, medium dense medium grained sand, refusal due to overlying layer											
		Bottom of test pit at 3.5 feet.											

TEST PIT NUMBER TP8

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GP) Brown Gravel [Baserock Fill] dry to moist, dense angular to rounded gravel, fine to medium sand											
		(SP) Well Graded Sand [Fill] dry, very dense medium sand, cemented, possibly lime treated, difficulty digging											
2.5		(SP) Light Brown Poorly Graded Sand moist, medium dense medium grained sand, more firm at 3.5 feet bgs, medium roots to 4 feet bgs, collapsing	GB										
5.0			GB										
		(CL) Dark Brown Clay moist, stiff organic smell, minor organic matter, refusal due to hole collapsing/ undercutting fill	GB										

Bottom of test pit at 6.5 feet.

APPENDIX 3

Laboratory Test Results

FINER THAN #200 SIEVE
ASTM C117/ASTM D-1140

PROJECT	Proposed Development	JOB NO.	9016.00	SHEET	
CLIENT	1280 N Main LLC	SAMPLE ID	231	1 of 1	
LOCATION	Fort Bragg, CA	TEST BY	GF	DATE	2/24/22
		CHECKED BY	GF	CHECK DATE	2/25/22

TP1 @ 2'-3' (SP)

(B)	Net sample (Dry)	362.6	gms
(C)	Dry sample after washing	355.8	gms
	Total Material finer than 200 sieve	6.8	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**1.9%**	

TP5 @ 1'-2' (GP-GC)

(B)	Net sample (Dry)	1926.6	gms
(C)	Dry sample after washing	1720.7	gms
	Total Material finer than 200 sieve	205.9	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**10.7%**	

0

(B)	Net sample (Dry)	0.0	gms
(C)	Dry sample after washing	0.0	gms
	Total Material finer than 200 sieve	0.0	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**#DIV/0!**	

0

(B)	Net sample (Dry)	0.0	gms
(C)	Dry sample after washing	0.0	gms
	Total Material finer than 200 sieve	0.0	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**#DIV/0!**	

0

(B)	Net sample (Dry)	0.0	gms
(C)	Dry sample after washing	0.0	gms
	Total Material finer than 200 sieve	0.0	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**#DIV/0!**	

0

(B)	Net sample (Dry)	0.0	gms
(C)	Dry sample after washing	0.0	gms
	Total Material finer than 200 sieve	0.0	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**#DIV/0!**	

LACO

ATTERBERG LIMITS
ASTM D-4318

PROJECT	Proposed Development			JOB NO. 9016.05	SHEET 1 of 1
CLIENT	1280 N Main LLC			SAMPLE ID 231	
SOURCE	TP5 @ 1'-2'	TEST BY	GF	DATE	2/24/22
SOIL TYPE	Dk Brn Gravel W/ Clay & Sand (GP-GC)	CHECKED BY	GF	CHECK DATE	2/25/22

ASTM D4318 ATTERBERG LIMITS

LIQUID LIMIT = ***N/A**
PLASTIC LIMIT = **N/A**
PLASTIC INDEX = **NON PLASTIC**

COMMENTS: Unable to cut groove without tearing or keep from sliding in cup.

* PER ASTM D4318 SECTION 11.4, LIQUID LIMIT COULD NOT BE DETERMINED.

SAMPLE CLASSIFIED AS NON PLASTIC.

LACO

ATTERBERG LIMITS
ASTM D-4318

PROJECT	Proposed Development			JOB NO. 9016.05	SHEET 1 of 1
CLIENT	1280 N Main LLC			SAMPLE ID 231	
SOURCE	TP1 @ 2'-3'	TEST BY	GF	DATE	2/24/22
SOIL TYPE	Brn Sand (SP)	CHECKED BY	GF	CHECK DATE	2/25/22

ASTM D4318 ATTERBERG LIMITS

LIQUID LIMIT = ***N/A**
PLASTIC LIMIT = **N/A**
PLASTIC INDEX = **NON PLASTIC**

COMMENTS: Unable to cut groove without tearing or keep from sliding in cup.

* PER ASTM D4318 SECTION 11.4, LIQUID LIMIT COULD NOT BE DETERMINED.

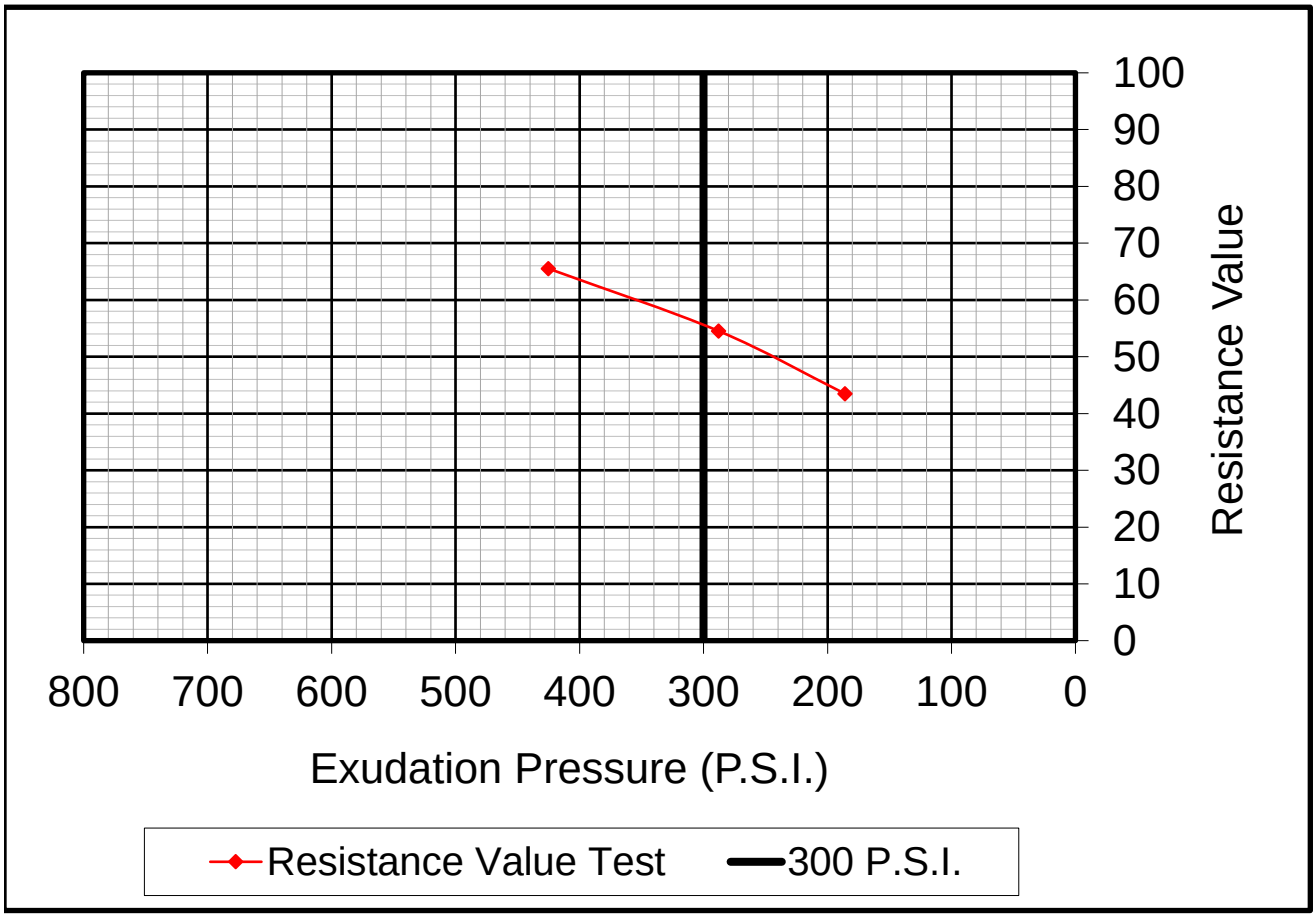
SAMPLE CLASSIFIED AS NON PLASTIC.

Pavement Engineering Inc.
Redding • Sacramento • San Luis Obispo
Concord • Santa Clarita

RESISTANCE (R) VALUE TEST

California Test 301

Laboratory No.: L220271
Project No.: 210169 (LACO Project No.: 9016.05)
Sample Date: February 11, 2022
Report Date: February 28, 2022
Client: LACO Associates
Project Name: 2022 Laboratory Testing (1280 N. Main St. Planning)
Sample Description: Brown Sand
Sample Location: TP-1 @ 1'-2'



Specimen No.	1	2	3
Moisture Content (%)	10.8	9.7	11.4
Dry Density (PCF)	107.1	107.6	106.2
Resistance Value (R)	55	66	43
Exudation Pressure (PSI)	288	425	186
Expansion Pressure	0	0	0
As Received Moisture Content (%)	10.8		

RESISTANCE VALUE AT 300 P.S.I. 56

AASHTO R18

Reviewed By: _____

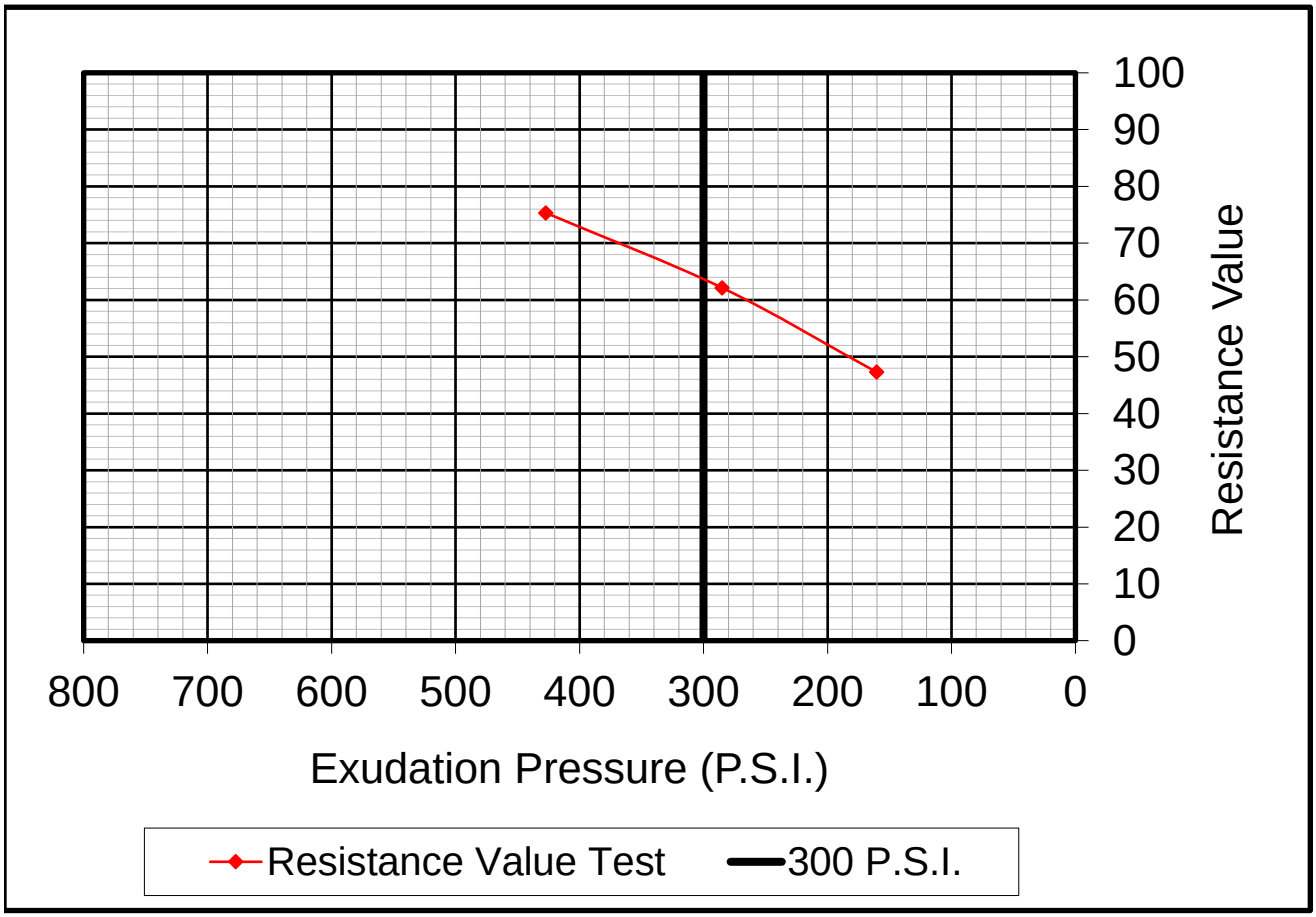
Brandon Rodebaugh
Materials Engineer

Pavement Engineering Inc.
Redding • Sacramento • San Luis Obispo
Concord • Santa Clarita

RESISTANCE (R) VALUE TEST

California Test 301

Laboratory No.: L220271
Project No.: 210169 (LACO Project No.: 9016.05)
Sample Date: February 11, 2022
Report Date: February 28, 2022
Client: LACO Associates
Project Name: 2022 Laboratory Testing (1280 N. Main St. Planning)
Sample Description: Brown Silty Gravel
Sample Location: TP-5 @ 1'-2'



Specimen No.	1	2	3
Moisture Content (%)	7.1	8.0	8.4
Dry Density (PCF)	133.0	133.3	132.3
Resistance Value (R)	75	62	47
Exudation Pressure (PSI)	427	285	160
Expansion Pressure	17	0	0
As Received Moisture Content (%)	7.1		

RESISTANCE VALUE AT 300 P.S.I. 64

AASHTO R18

Reviewed By: _____

Brandon Rodebaugh
Materials Engineer

LAWRENCE
& ASSOCIATES
ENGINEERS & GEOLOGISTS

022047.00

STORMWATER CONTROL PLAN AND

NO DISCHARGE TECHNICAL REPORT

FOR

DIRECT TRANSFER FACILITY

1280 NORTH MAIN STREET

FORT BRAGG, CALIFORNIA

August 24, 2022, revised September 1, 2022

Prepared For:

C&S Waste Solutions
3515 Taylor Drive
Ukiah, CA 95482

3590 Iron Court • Shasta Lake, California 96019 • (530) 275-4800 • fax (530) 275-7970 • www.lwrnc.com

Table of Contents

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Tables

Figures

Attachments

INTRODUCTION

At the request of C&S Waste Solutions (Client or Owner), Lawrence & Associates (L&A) has prepared this Stormwater Control Plan and No Discharge Technical Report (SCP or Report), which describes the adequacy of stormwater containment to meet the criteria for the Notice of Non-Applicability (NONA) under the State of California General Industrial Stormwater Permit (GISWP) and also to incorporate Low Impact Development (LID) requirements in accordance with the City of Fort Bragg, and by reference, the County of Mendocino LID Manual, for the proposed Direct Transfer Facility located at 1280 North Main Street within the City of Fort Bragg, Mendocino County, California. This report includes background, calculations, and ultimately a design to provide for on-site collection, best management practices (BMPs, through bio-retention) and onsite infiltration with no off-site discharge related to the industrial activities.

The Facility plans to operate a solid waste direct transfer station which will utilize the existing driveway, access roads, and formerly developed areas on the parcel, in addition to constructing a loading/unloading ramp for the direct transfer operations. The direct transfer operation will entail collection haul/route trucks directly emptying contents into transfer trailers (through use of the ramp). No materials will be placed on the ground and no structures are proposed as part of the ramp project. Current designs show the ramp construction of compacted gravel, although, the ramp may be paved in the future; the calculations in this report assume future paving of the ramp for stormwater purposes.

Approximately 70% of the site is undeveloped with existing trees and vegetation that will remain the same, with minor exceptions for new bioretention areas. The majority of the vegetated areas are proposed to be fenced and protected in their native condition.

The facility was formerly used for industrial purposes, generally in the southeastern (back) one-third of the parcel. The surface at the former industrial area is a mix of concrete and gravel surfaces. A gravel access road connects the back area of the site to an existing driveway along Highway 1. The driveway is currently gravel and will require at least the first 20 feet paved as part of an encroachment permit with Caltrans. This report includes assessment of drainage in the event the entirety of the access road is paved in the future.

EXISTING SOILS

Existing soil classification is derived from the SoilWeb mapping interface (UC Davis, Agricultural and Natural Resources); Approximate soil location and identification is shown on both **Figure 1** (DA-1) and **Figure 2** (DA-2). There are two types of soils at the site - Sidrak loamy sand (204) at the western quarter of the site (including most of the graveled access road) and Dune land (138) for the mounded vegetated area, ramp area, and remainder of the site. These soils are classed as “somewhat excessively drains”, or where water is removed from the soil rapidly.

CURRENT (PRE-PROJECT) SITE TOPOGRAPHY AND DRAINAGE CONDITIONS

The overall property generally slopes from southeast to northwest with a mounded area centrally located on the site. The eastern third of the site (referred to as 'ramp area' for purposes of this report), consists of the former industrial land use, with two drainage management areas (DMA's) as shown on attached **Figure DA-1**. The northern DMA (DMA-A) includes roughly half of the ramp area and slopes to the northwest across concrete and paved surfaces to the existing gate at the graveled access road. Runoff from this area continues from this point to the northwest within the access road and ultimately sheet flows as shown on the figure.

The south half of the ramp area, shown as DMA-B, slopes similarly from east to west, however do not discharge offsite and infiltrates at a localized depression as shown on Figure 1.

PLANNED IMPROVEMENTS AND DEVELOPED DRAINAGE CONDITIONS

The planned facility operational areas are limited to the ramp area (eastern portion) of the site and the ingress/egress road. The facility plans to retain nearly all existing surfaces including the gravel access road, gravel and concrete areas in the eastern portion of the facility, and nearly all of the vegetation within the western and central portions of the facility.

Proposed improvements in the eastern portion of the facility will be as follows:

1. New Ramp. The ramp will be an approximate 60-foot wide by 90-foot length combination ramp and landing that will serve for loading and unloading for the direct transfer operation. The ramp will consist of a perimeter gravity block wall system and compacted gravel fill. It is anticipated that the ramp may be paved in the future. Drainage calculations assume a paved surface condition for this feature.

2. Concrete V-ditch. Existing sheet flow as shown on the figures, conveys surface runoff from the northern portion of the 'ramp' area along the existing gravel road. For stormwater management purposes, a concrete v-ditch is proposed near the existing gate location to intercept surface water from DMA-A into a bio-retention area and thereon into an infiltration area.

3. Bio-retention and Infiltration areas. Bio-retention areas have been sized based on the Mendocino Low Impact Design Standards Manual v 2.2. The sequence of received runoff (flow) will include surface sheet flow runoff to bioretention areas, with overflow to infiltration areas.

A potential future improvement for the facility is paving the existing gravel access road to provide continuous pavement from the planned driveway at the frontage to the eastern ramp area. At such time this segment of access roadway is paved, the surface should be graded to in-

slope towards the interior of the property with an adjacent earthen v-ditch at least 12" in depth to provide onsite infiltration for runoff from the adjacent paving. Given the relatively small width of paving and diversion of runoff from the ramp area (discussed later in this report), no additional bioretention or separate infiltration (beyond the v-ditch) is necessary for this segment.

STORMWATER CONTROL PLAN – LID COMPONENT

The Mendocino Low Impact Design Standards Manual version 2.2 ("LID Manual") was used as a reference for this project. Drainage management areas (DMA's) were delineated for both existing and developed conditions and further summarized by surface type as shown in the figures. Table 1 of the LID Manual indicated Applicable Post-Construction Standards based on project type. As indicated above, while the current ramp design is gravel (pervious), there is the likelihood this will be paved in the near future based on facility needs for wet weather operation. For this reason, this document assumes the ramp is paved. The overall ramp surface area is roughly 5,400 SF, which meets the definition for a Regulated Project, including requirement for this Stormwater Control Plan (SCP).

The following information is presented in the same format for an SCP as shown in the LID Manual. The initial project information documentation and questions use the same forms as the LID manual. Tables from the LID manual, have been copied and included in **Attachment A**.

It is noted that the facility is preserving and protecting a large number of trees as part of the developed conditions for the project, of which the canopy coverage is roughly 39,180 SF (or 19,597 at 50% canopy coverage). Typically, 50% of the preserved canopy can be used as a credit towards LID compliance for this facility. However, tree preservation alone does not improve water quality or address infiltration capacity. As such, the data shown in **Attachment A** ignores the tree preservation being done by the facility and sizes bio-retention areas based on the stand-alone contributing areas from DMA's A and B.

NOTICE OF NON-APPLICABILITY (NONA) AND NO DISCHARGE

The GISWP in Section XX.C establishes the following requirements for Dischargers claiming "No Discharge" through the NONA:

1. For the purpose of the NONA, the Entity (Entities) is referring to the person(s) defined in section 13399.30 of the Water Code.
2. Entities who are claiming "No Discharge" through the NONA shall meet the following eligibility requirements:
    a. The facility is engineered and constructed to have contained the maximum historic precipitation event (or series of events) using the precipitation data collected from the National Oceanic and Atmospheric Agency's website (or other nearby precipitation data available from other government agencies) so that there will be no discharge of industrial storm water to waters of the United States; or,

   b. The facility is located in basins or other physical locations that are not hydrologically connected to waters of the United States.
3. When claiming the "No Discharge" option, Entities shall submit and certify via SMARTS both the NONA and a No Discharge Technical Report. The No Discharge Technical Report shall demonstrate the facility meets the eligibility requirements described above.
4. The No Discharge Technical Report shall be signed (wet signature and license number) by a California licensed professional engineer.

This report is structured to describe current conditions, soil conditions, hydrologic parameters, and stormwater modeling for the facility, and a conclusion section that presents the results of the stormwater modeling relative to pond capacity. When this report is uploaded to SMARTs, it will have complied with the above stated requirements from the GISWP Section XX.C for a No Discharge Technical Report.

INFILTRATION BASIN MODELING

Site drainage features and areas are shown on **Figure 2**. A single infiltration area is shown as the overflow from both bioretention areas (BMP-1 and BMP-2, respectively). For infiltration and modeling purposes, the infiltration model ignores the bioretention areas and does not include their contribution towards site infiltration. This is intended to reflect a conservative scenario for the project.

To size the infiltration basin, Lawrence & Associates (L&A) used a spreadsheet pond-sizing model developed in-house. The model calculates the stage and/or volume of a pond on a daily basis, accounting for inflow (from precipitation and the associated runoff, in this case) and outflow (from percolation through the bottom of the ponds and evaporation).

Table 1 describes the input parameters used in the model:

Table 1. Model Input Parameters

Input Parameter	Units	Description
Daily precipitation	feet	From historical record, NOAA Station Fort Bragg 5N; water years 1992-2006 because the period was of above-average rainfall.
Daily evapo-transpiration	feet	Estimated from "A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California", UC Cooperative Extension & DWR, August 2000.
Stormwater runoff	acre-feet/day	Runoff was calculated by multiplying the daily precipitation by the drainage areas.
Soil permeability	feet/day	Various permeability values were evaluated to assess the effect of differing percolation.

For the model calibration and period, we used precipitation data from October 1, 1991 through September 30, 2006. This period was chosen because it is considered a period of above-

average rainfall for the area. The above-average rainfall period was chosen by interpreting the cumulative deviation from mean precipitation (**Figure 3**). The cumulative deviation is calculated by first averaging the annual rainfall for the period of record, then calculating the difference from the average for each year, then accumulating the differences. The graph shows the accumulated difference for each water year. On a cumulative deviation graph, a rising curve indicates higher than normal annual rainfall, a falling curve indicates lower than normal annual rainfall, and a flat curve indicates average annual rainfall.

The evaporation estimates are in the form of Reference Evapotranspiration (ETo). ETo is converted to Pan Evaporation (a commonly measured parameter) by dividing by 0.76. Pan evaporation is usually converted to actual evaporation (*e.g.*, in a large water body) by multiplying by 0.75. Because these two factors cancel each other out, we used the ETo values directly from the estimated daily ETo from "A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California", UC Cooperative Extension & DWR, Appendix A, Table 1.

Data for precipitation and ETo are included in the attached electronic file.

Runoff was calculated by multiplying the area of each surface type (pervious vs. impervious) in each drainage area by the daily precipitation and the associated runoff factor. For impervious areas (paving) a runoff factor of 1 was used. For pervious areas, two runoff factors were considered - per the LID Manual a factor of 0.1 and per typical design standards (e.g. Rational Method) a factor of 0.7 was evaluated to be more conservative. As an additional conservative assumption, no evaporation of precipitation during transit was assumed because of the short travel lengths (*e.g.*, short travel times).

Permeability in the infiltration areas was set between 1×10^{-3} to rcm/sec (0.28 to 0.028 feet/day) to evaluate the effect of differing permeabilities on the ability of the infiltration area to contain runoff. The soils at the site are generally sandy and likely have permeabilities towards the faster end of this range (Fetter, C.W., *Applied Hydrogeology*, Table 4.6, p. 98). Using a slower permeability would be more conservative (*e.g.*, would not overestimate the ability of the infiltration area to percolate stormwater).

The infiltration area is designed as a linear feature at the west edge of the ramp area. It will have an overall footprint of 3,000 square feet and be 2 feet in depth.

Using the variables described above, the model calculates the infiltration area's volume on a daily basis. The generic term 'pond' is shown in the model to reflect the infiltration area.

Table 2. Infiltration Area Modeling Logic

Category	Units	Description
Day		Historical record date.
Beginning Volume of Water in Pond	acre feet	Starts with the previous day's ending volume.
Direct Precipitation on Pond	acre feet/day	Daily precipitation from historical record × maximum (total) pond area.
Stormwater Runoff	acre feet /day	Calculated as described above.
Total Inflow	acre feet /day	Sum of direct precipitation on pond and stormwater runoff.
Intermediate Theoretical Volume	acre feet	Intermediate calculation of volume are made to check whether pond has theoretically "overflowed". Volume = Beginning Volume + Inflow.
Leakage	acre feet /day	Leakage based on assigned hydraulic conductivity; leakage occurs throughout pond. Leakage is calculated using the Darcy equation (flow = hydraulic conductivity x gradient x area).
Evaporation (pond only)	acre feet /day	Evaporation from the water surface of the pond. Uses maximum pond area if water is present.
Total Outflow	acre feet /day	Sum of leakage and evaporation.
Final Volume of Water	acre feet	Intermediate volume - total outflow: If <0, then pond is empty. If >maximum possible volume, then = maximum volume. Otherwise, intermediate volume - outflow.
Spill	acre feet	If intermediate volume - outflow < 0, then no spill. If intermediate volume - outflow < max. pond volume, then no spill, else intermed. vol. - outflow - max. pond volume.

RESULTS

The predictive modeling shows that the 3,000 square foot infiltration area is adequate for the above-average precipitation event period. **Figure 4** shows a graph of infiltration area volume during the modeling period, for the model run using the most conservative assumptions - lower permeability (1×10^{-5} cm/sec) and higher runoff coefficient (0.7) for pervious areas. This illustrates that the infiltration area would have sufficient capacity to contain runoff from a period of higher historical precipitation without overtopping.

APPENDIX A
Electronic Modeling Files

DRAINAGE MANAGEMENT AREAS (DMA)	
DMA NAME	DMA AREA (sf)
A – GRAVEL	8,140
A – OPEN/LANDSCAPE	29,312
A – IMPERVIOUS	16,903
TOTAL	54,355
B – GRAVEL	32,050
B – OPEN/LANDSCAPE	13,102
B – IMPERVIOUS	9,380
TOTAL	54,532

APN: 069-231-30
APN: 069-231-35
APN: 069-231-34
APN: 069-231-21
APN: 069-231-39
APN: 069-231-26
APN: 069-231-28
(E) OVERHEAD POWER (TYP)
STATE HWY 1
APPROXIMATE PARCEL BOUNDARY
(E) FENCING (TYP)
(E) GRAVEL
(E) GRAVELED ENTRANCE
SOIL MAPPING BOUNDARY, UC DAVIS SOILWEB MAPPING
204 SIDRACK LOAMY SAND (DUNES) (HYD. GROUP A)
138 DUNE LAND (HYD. GROUP A)
(E) CHAIN GATE
(E) BERM
(E) AC PAVING
(E) CONCRETE
(E) WELL ASSEMBLY
(E) BASIN
DMA A
DMA B
NO FENCING THIS SIDE
(E) INFILTRATION LOWPOINT
"BRUSH"
(E) 30' EASEMENT
0 60 120 Feet
1' CONTOUR INTERVAL

NO.	DATE	REVISIONS	BY	CHK

PROJECT NO: 022047.00	PROJECT ID:
DRAWN BY: J. BEERS	SCALE: 1" = 30'
ENGINEER: D. BROWN	DATE:
CHECKED BY:	DATE:

ORIGINAL SCALE IN INCHES
0 1 2

LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

FORT BRAGG FREIGHT TERMINAL

1280 NORTH MAIN, LLC
1280 NORTH MAIN STREET
FORT BRAGG, CA

DRAINAGE SITE MAP EXISTING CONDITIONS

DRAWING: DA-1
SHEET: OF
DATE: 8/9/2022

p:\022047_waste_connections_ft_bragg\exist_drain.dwg J.R.B. 8/24/2022

DRAINAGE MANAGEMENT AREAS (DMA)	
DMA NAME	DMA AREA (sf)
A – GRAVEL	3,930
A – OPEN/LANDSCAPE	3,132
A – IMPERVIOUS	16,730
TOTAL	23,783
B – GRAVEL	21,770
B – OPEN/LANDSCAPE	18,852
B – IMPERVIOUS	13,910
TOTAL	54,532

(E) OVERHEAD POWER (TYP)

APPROXIMATE PARCEL BOUNDARY

STATE HWY 1

(N) GATE

CONNECT TO (E) FENCE

(E) GRAVEL

(N) V-DITCH REQ'D IF ACCESS ROAD IS PAVED (INFILTRATES, NO OUTLET)

(E) FENCING (TYP)

(N) AUTOMATED SWING ENTRY GATE (NO PUBLIC ACCESS)

PAVE (E) DRIVEWAY, ENCROACHMENT PERMIT THROUGH CALTRANS

(N) ADDRESS/MONUMENT SIGN

(N) FENCING TO PROTECT/ SCREEN (E) VEGETATION

A DA-3 REMOVE (E) GATE, INSTALL CONCRETE V-DITCH ACROSS ROAD

A DA-3 BMP-1 BIORETENTION (700 SF)

(N) TRUCK PARKING (3 SPACES)

DMA A

(E) AC PAVING

(E) CONCRETE

60'

LOADING/UNLOADING AREA

(E) WELL ASSEMBLY

TRAILER STAGING

PERIMETER BLOCK WALL

61'

90'

(N) FENCE

B DA-3 BMP-2 BIORETENTION (720 SF)

(N) INFILTRATION TRENCH / BASIN (3,000 SF TOTAL)

RAMP

SLOPE

204
SIDRACK LOAMY SAND (DUNES)
(HYD. GROUP A)

(E) PARKING (UNCHANGED)

(N) FENCING

SOIL MAPPING BOUNDARY, UC DAVIS SOILWEB MAPPING

138
DUNE LAND
(HYD. GROUP A)

(N) EMPLOYEE PARKING (2 SPACES, 1 ADA)

(E) GRAVEL

DMA B

FENCE LAYOUT TO COORDINATE WITH ADJACENT OWNER THIS LOCATION

REMOVE BRUSH AND PLACE GRAVEL

(E) 30' EASEMENT

APPROXIMATE PARCEL BOUNDARY

(E) FENCING (TYP)

(E) CONCRETE

N E S W

0 60 120 Feet

1' CONTOUR INTERVAL

NO.	DATE	REVISIONS	BY	CHK

PROJECT NO: 022047.00	PROJECT ID:
DRAWN BY: J. BEERS	SCALE: 1" = 30'
ENGINEER: D. BROWN	DATE:
CHECKED BY:	DATE:

ORIGINAL SCALE IN INCHES
0 1 2

LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

FORT BRAGG FREIGHT TERMINAL

1280 NORTH MAIN, LLC
1280 NORTH MAIN STREET
FORT BRAGG, CA

DRAINAGE SITE MAP PROPOSED IMPROVEMENTS

DRAWING: DA-2
SHEET: OF
DATE: 9/1/2022

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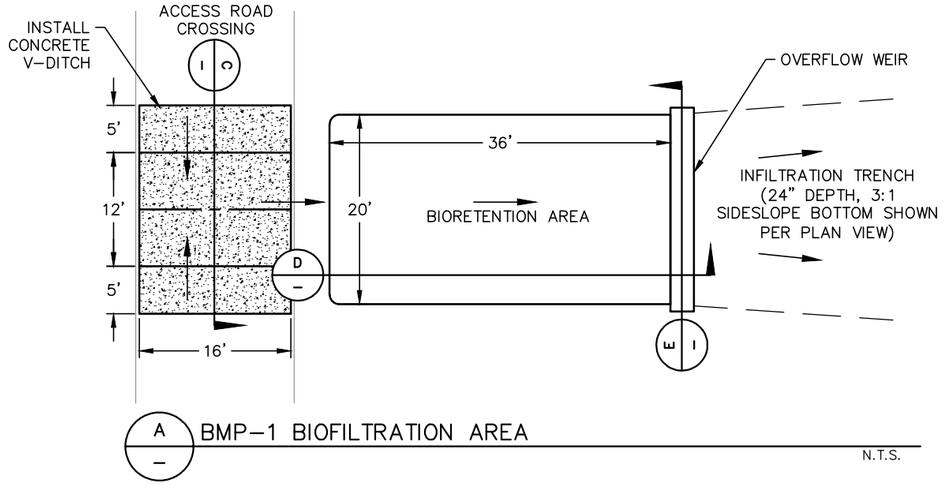
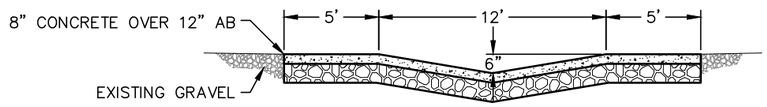


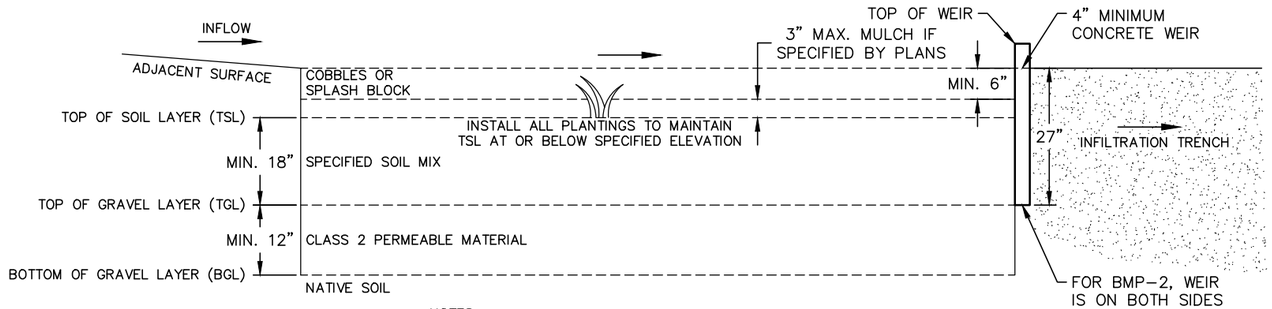
A — BMP-1 BIOFILTRATION AREA

N.T.S.



C — ACCESS ROAD CROSSING

N.T.S.



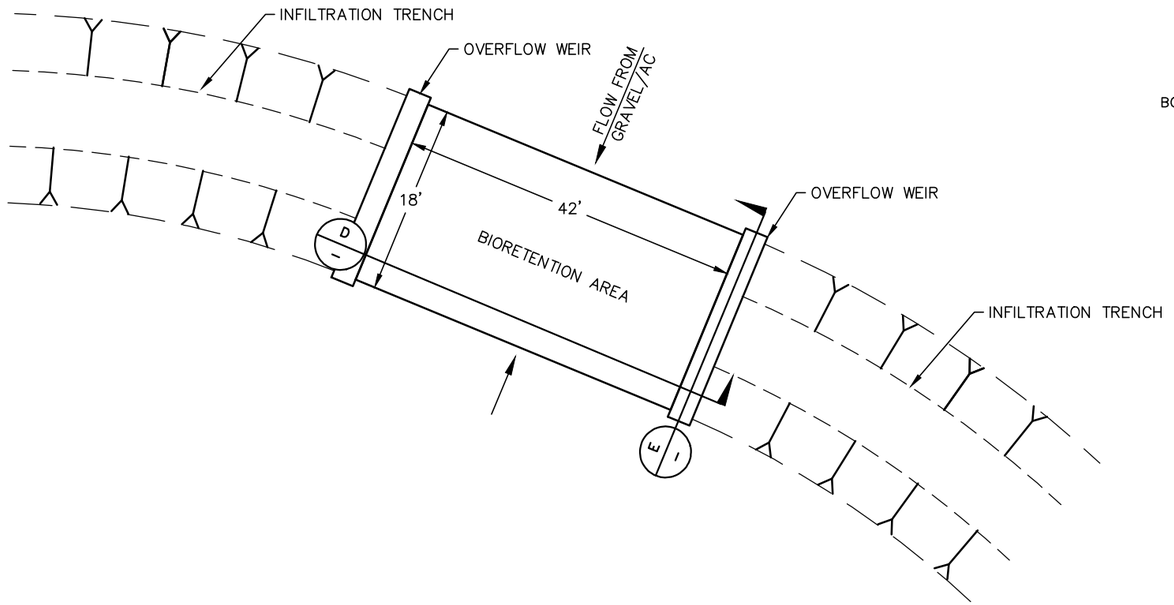
NOTES:

-NO LINER, NO FILTER FABRIC, NO LANDSCAPE CLOTH.

-MAINTAIN BGL, TGL, TSL, THROUGHOUT FACILITY AREA AT ELEVATIONS TO BE SPECIFIED IN PLAN.

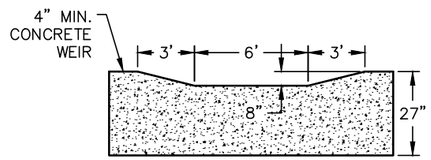
D — BIORETENTION DETAIL

N.T.S.



B — BMP-2 BIOFILTRATION AREA

N.T.S.



E — OVERFLOW WEIR SECTION

N.T.S.

NO.	DATE	REVISIONS	BY	CHK

PROJECT NO: 022047.00	PROJECT ID:
DRAWN BY: J. BEERS	SCALE:
ENGINEER: D. BROWN	DATE:
CHECKED BY:	DATE:

ORIGINAL SCALE IN INCHES

0 1 2

LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

FORT BRAGG FREIGHT TERMINAL

1280 NORTH MAIN, LLC
1280 NORTH MAIN STREET
FORT BRAGG, CA

DETAILS

DRAWING: DA-3

SHEET: OF

DATE: 8/24/2022

p:\022047_waste_connections_ft_bragg\details.dwg J.R.B. 8/24/2022

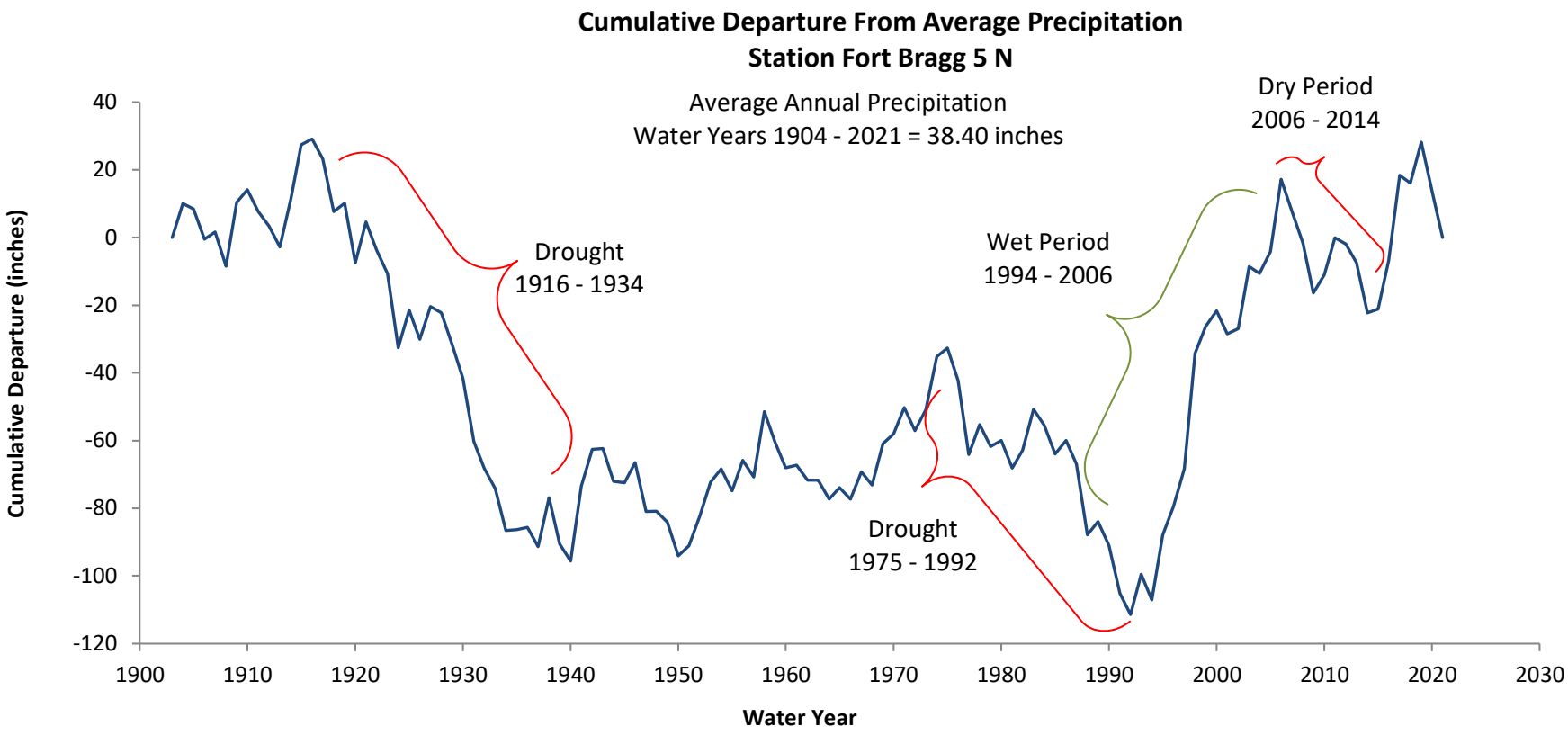

Cumulative Departure From Average Precipitation
Station Fort Bragg 5 N
Average Annual Precipitation
Water Years 1904 - 2021 = 38.40 inches
Dry Period
2006 - 2014
Drought
1916 - 1934
Wet Period
1994 - 2006
Drought
1975 - 1992
Cumulative Departure (inches)
40
20
0
-20
-40
-60
-80
-100
-120
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
2030
Water Year

FIGURE 3

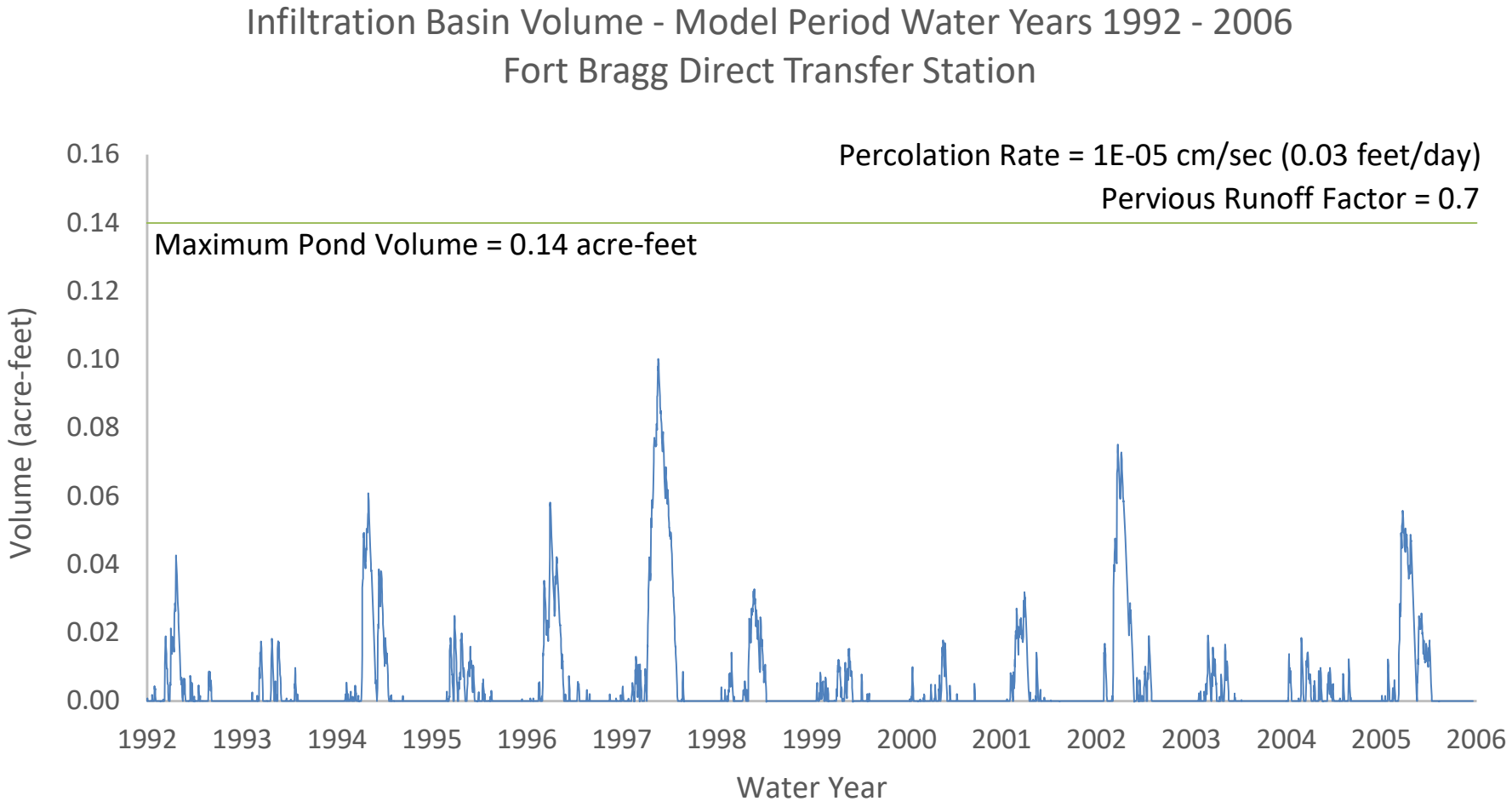

Infiltration Basin Volume - Model Period Water Years 1992 - 2006
Fort Bragg Direct Transfer Station
Percolation Rate = 1E-05 cm/sec (0.03 feet/day)
Pervious Runoff Factor = 0.7
Maximum Pond Volume = 0.14 acre-feet
Volume (acre-feet)
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
Water Year

FIGURE 4

Attachment A
Preliminary Stormwater Control Plan Forms
Operation and Maintenance Template

Preliminary Stormwater Control Plan (CDP, CUP, and SP ≥ 5000 sf)

For Office Use Only
Application No._____
Received By: _____

Instructions

The following worksheet is used to demonstrate that for each and every lot, the intended use can be achieved with a design which disperses runoff from the roofs, driveways, sidewalks, streets and other impervious areas to self-retaining pervious areas. It is also used to demonstrate that drainage to treatment and/or flow control facilities is feasible and that the project is in overall compliance with the MS4 permit. Use this form to assist you in designing your project to comply with the design standards for Multi-Parcel Regulated projects. The completed, signed Preliminary SCP for Subdivision Projects, a site map, plus any additional applicable information, must be submitted with your application to the Planning Department.

Project Name: Pacific Recycling Solutions - Direct Transfer Facility

Physical Site Address: 1280 North Main St., Fort Bragg, CA 95437

Project Applicant: Pacific Recycling Solutions

Mailing Address: 3515 Taylor Drive, Ukiah, CA 95482

Phone: (925) 768-6103 (Curt Fujii) email: curt.fujii@wasteconnections.com

Consultant's Information

Name: David Brown

Firm: Lawrence & Associates

Address: 3590 Iron Court, Shasta Lake, CA 96019

Email: dbrown@lwrnc.com

Phone: (530) 275-4800, cell (530) 391-7650

A. Project Information

1a. Does Project create or replace 1-acre or more of impervious surface?	☐ **Yes** (see question below)	☒ **No** (skip question 1b.)
b. If 'Yes' to the above question: Does project increase impervious surface from pre-project conditions?	☐ **Yes** (hydromodification requirements must be met)	☐ **No** (regulated project requirements must be met)
Total pre-project Impervious Surface (sf):		
Total new or replaced Impervious Surface Area (square feet) [Sum of impervious area that will be constructed as part of the project]		

Preliminary Stormwater Control Plan (CDP, CUP, and SP ≥ 5000 sf)

B. *Summary Table of Pervious to Impervious Surface*

The following table will be used by staff to ensure that adequate measures have been utilized within the project design to capture retain and/or infiltrate the design storm.

Each DMA shown in the table shall be designated with the same name on the site plan. All site design measures used to meet the runoff reduction goals and all treatment facilities utilized to capture remaining runoff volumes must be shown on the site plan at an appropriate scale. Please use the Flow Chart as a reference of the process.

1. **Utilize Worksheet 1 to Summarize Impervious to Pervious Ratio for each DMA (Parcel) to determine if further runoff reduction is needed using site design measures and/or bioretention**
2. **Utilize Site Design Measures to effectively Reduce Pervious Area**
3. **Utilize Bioretention or equivalent if reduction cannot be achieved using Site Design Measures**

Worksheet 1.

DMA Name	**Does impervious to pervious ratio achieve 2:1 or better?** (Yes or No)	**Can ratio be achieved using site design measures?** Utilize Table (2-7) found in the Regulated Projects SCP to aid in calculations	**If "No" in column C: Bioretention facility is required for DMA (parcel). List name and the estimated size (sf) of the facility** Utilize Table 8 found in the Regulated Projects SCP worksheet to aid in calculations
(A)	**(B)**	**(C)**	
Example A	*Yes*	*Yes*	----------
Example B	*No*	*Yes*	----------
Example C	*No*	*No*	*C : (1250 X .04)=50 sf*
Overall Facility	Yes	Yes	
(East) A	Yes	Yes	bioretention provided - see SCP
(East) B	Yes	Yes	bioretention provided - see SCP

C. *Preliminary Site Plan Checklist –items that must be include on the site plan*

- [X] Topographic lines (2 ft. contours)
- [X] On-site waterways/drainages, vegetation, and areas to be left undisturbed all shown with appropriate buffers
- [X] DMAs clearly delineated and labeled with name and area (square feet)

Preliminary Stormwater Control Plan (CDP, CUP, and SP ≥ 5000 sf)

- [X] Location of site design measures
- [X] Location, size, and name of Bioretention/Treatment Facility
- [X] Flow direction that clearly demonstrates the ability of self-retaining areas, infiltration site design measures, and treatment facilities to capture runoff from impervious surfaces
- [X] Hydrologic soil class

D. Operation and Maintenance Plan Requirements

Each Bioretention facility or equivalent will be required to have an operation and maintenance plan attached to the final SCP and shall include all details found in Appendix 5, 6, 7, and 8 of the LID Manual.

E. Additional Requirements

A detailed final Stormwater Control Plan with narrative sections will need to be submitted prior to issuance of a grading/building permit (see Appendix 3). However, completing the Preliminary SCP enables a more efficient and timely review of the final SCP.

F. Signature and Certification

I, the below signed, confirm that I have accurately described my project to the best of my ability, and that I have not purposely omitted any detail affecting my project's classification for stormwater regulation. I hereby certify that the site design measures and stormwater flow treatment measures identified herein as being incorporated into my project have been designed in accordance with the approved BMP Fact Sheet or equivalent, and are included in the final site plans submitted to Mendocino County Planning and Building Services. I also hereby certify that my project meets the stormwater runoff reduction criteria identified in Worksheet 2, or as determined through other approved means.

Signature

8/23/22
Date

David Brown
Print Name

I am the:

☐ Property Owner ☒ Applicant ☐ Contractor

Stormwater Control Plan for Regulated Projects

For Office Use Only
Application No._____
Received By: _____

Project Name: Pacific Recycling Solution - Direct Transfer Facility

Physical Site Address/APN: 1280 N. Main St., Fort Bragg, CA 95437

Project Applicant: Pacific Recycling Solutions (attn: Curt Fujii)

Mailing Address: 3515 Taylor Drive, Ukiah, CA 95482

Phone: (925) 768-6103, email: curt.fujii@wasteconnections.com

Consultant's Information

Name: David Brown

Firm: Lawrence & Associates QSD certification#: C69135

Address: 3590 Iron Court, Shasta Lake, CA 96019

Email: dbrown@lwrnc.com

Phone: 530-275-4800

Instructions

Based on the answers that you provided in the Construction and Post Construction Stormwater Runoff Control Checklist, you have determined that your project is classified as "regulated" for the purposes of the County of Mendocino MS4 Permit. Use this form to assist you in designing your project to comply with the County of Mendocino MS4 Permit design standards for regulated projects. The completed, signed SCP for Regulated Projects, plus any applicable, approved BMP Fact Sheets, must be submitted with your application to Mendocino County Planning and Building Services.

Type of Application/Project:

What type of application is this checklist accompanying?

- ☐ Subdivision
- ☒ Grading Permit
- ☐ Building Permit
- ☐ Design Review
- ☐ Use Permit
- ☒ Other (please specify) Zoning Concurrence Determination

Stormwater Control Plan for Regulated Projects

A. **Project Description**

Project Type and Description:	Ramp Construction
Total Pre-Project Impervious Surface Area (square feet)	8,446 SF
Total New or Replaced Impervious Surface Area (square feet) [Sum of impervious area that will be constructed as part of the project]	8,217 SF
Total Post-Project Impervious Surface Area (square feet)	16,663 SF

If your project includes more than 5,000 square feet in new or replaced impervious area, is your project one of the following project types?

- Detached single family homes that create and/or replace 2,500 square feet or more and are not part of a larger plan of development
- Interior remodels
- Routine maintenance or repair, such as exterior wall surface replacement or pavement resurfacing within an existing footprint
- Linear Underground/Overhead Projects (LUPs) without a discrete location that has 5,000 square feet or more of newly constructed contiguous impervious surface.
- Sidewalks built as part of new streets or roads and built to direct stormwater runoff to adjacent vegetated areas
- Bicycle lanes that are built as part of new streets or roads that direct stormwater runoff to adjacent vegetated areas
- Impervious trails built to direct stormwater runoff to adjacent vegetated areas, or other non-erodible permeable areas
- Sidewalks, bicycle lanes, or trails constructed with permeable surfaces
- Trenching excavation and resurfacing associated with LUPs
- Grinding and resurfacing of existing roadways and parking lots
- Construction of new sidewalks, pedestrian ramps, or bike lanes on existing roadways
- Routine replacement of damaged pavement such as pothole repair, or replacement of short, non-contiguous sections of roadway

☐ Yes ☒ No

If you answered "Yes" above, your project is a non-regulated project under the definitions in the County of Mendocino MS4 Permit. Please use the Checklist for Non-Regulated Projects *to assist you in your project design and application submittal.*

Stormwater Control Plan for Regulated Projects

B. Site Assessment (Opportunities and Constraints)

1. Soil Characteristics

I. Soil characterization method UC Davis SoilWeb mapping interface, Hydrologic Group A

II. Were infiltration rates assessed for the site? ☐ Yes ☒ No

If Yes, please attach soils testing report

2. Depth to Groundwater

I. What is the depth (below ground surface) to groundwater (in feet)? 8-12 feet

II. How was this determined? well pump test 8/12/22 at east end of property.

3. Existing Vegetation and Natural Areas

I. Are there any key natural vegetation areas, sensitive habitats, or mature trees on the site?

☒ Yes ☐ No

If yes, please draw and label these features on the existing conditions site plan map and attach a description of them to this document.

4. Drainage and Hydrograph

I. Are there any natural drainage features or modified natural drainage features on the site or directly adjacent to the site?

☐ Yes ☒ No

5. Potential Contamination

I. Is the project site within or near a registered contaminated site, according to the State Water Resources Control Board Geotracker Website (http://geotracker.waterboards.ca.gov/)?

☐ Yes ☒ No

If yes, please attach the applicable contaminated site report from the Geotracker website and note the location of the contaminated site on the existing conditions site plan map. Please attach a description how this contamination will affect your project design.

C. Project Layout Optimization

Optimizing the site layout can be done through the following methods:

1. Define the development envelope and protected areas, identifying areas that are most suitable for development and areas to be left undisturbed. Trees and vegetation to be fenced
2. Concentrate development on portions of the site with less permeable soils and preserve areas that can promote infiltration.
3. Limit overall impervious coverage of the site from paving and roofs.
4. Set back development from creek, wetlands, and riparian habitats to maximize vegetative buffer widths. n/a
5. Preserve significant trees. No trees to be removed. Existing trees to be fenced and protected.
6. Conform the site layout along natural landforms.
7. Avoid excessive grading and disturbance of vegetation and soils.
8. Replicate the site's natural drainage patterns.
9. Detain and retain runoff throughout the site.

Based on the features included in the existing conditions site plan, please ensure your project site plan applies project layout optimization measures to the greatest extent practicable, while still meeting the objectives of your project.

Have you attached a short description of how site optimization techniques have been integrated into the project design?

☒ Yes ☐ No Included as part of project description and introduction.

D. Source Controls

Does your project contain potential pollutant-generating activities or sources?

☐ Yes ☒ No Facility operations include direct transfer (truck to truck) of materials. No materials to be placed on the ground.

If Yes, please complete the Source Control Worksheet, available at the County of Mendocino Stormwater website (https://www.mendocinocounty.org/government/planning-building-services/stormwater), and available as Appendix 4 of the County of Mendocino Low Impact Development Technical Design Manual; list and identify, using a simple table format, the source or treatment control measure and locations as an attachment to the SCP document.

E. Drainage Management Areas

On the project site plan, please delineate and label all drainage management areas (refer to Sec. 6 of the manual). Record the DMA names and Areas in the table below.

Table 1. DMAs

DMA name	Area (square feet)
See attached report	

F. Site Design Measures

Please identify the site design measures incorporated into the project design and attach the applicable, approved BMP Fact Sheet or equivalent to this checklist. These measures must be discussed in the SCP and shown on the site design map.

☐ Rooftop and Impervious Area Disconnection

☐ Tree Planting and Preservation *Note: Trees preservation occurring, however stormwater BMP's focus on bioretention and infiltration for the planned facility.

☐ Rain Barrels and Cisterns

☐ Porous Pavement

☐ Flow-Through Planter

☒ Bioretention

Table 2. Area Calculations of *Self-retaining Areas* Used to Treat Impervious Areas

1 DMA Name	2 Area (sq. ft.)
Bioretention preferred BMP at this site - See Table 8	

Table 3. Runoff Factor (surface type)

Roofs and Paving	1.0
Landscaped Area	0.1
Bricks or solid pavers- grouted	1.0
Bricks or solid Pavers-on sand base	0.5
Pervious Concrete Asphalt	0.1
Turfblock or gravel	0.1
Open or Porous pavers	0.1

Tables 4-6 below should be used to quantify the amount of runoff that is reduced by using site design measures. Using the tables in chronological order will calculate the minimum size for your bioretention facility in order to meet the MS4 permit requirements. Several iterations may be need to size facilities according to the site design.

Table 4. Area draining to self-retaining areas

1 DMA Name (must correspond to area on the site map and on Table **1**)	**2** DMA Area (sq. ft.) (Table **1**)	**3** Type of Surface (Runoff Factor Table 3)	**4** Surface with Runoff Factor Column **2** X Column **3**	**5** Area of Self-retaining Area Receiving the Runoff (sq. ft.) (Table 2, Col. 2)	**6** Ratio Col. **4** : Col. **5** Not to exceed 2:1 ratio (if number exceeds 2:1 use table 5 - 6 to reduce tributary area and recalculate or go directly to Table 7)
Example	700	Roof (1.0)	700	100	7:1 (must use site design measures, bioretention or both)
Refer to Table 8 - Bioretention for this site					

Table 5. Tree Planting and Preservation (if not planting trees, go to Table 6)

1 DMA Name (must correspond to area on the site map)	2 DMA sq. ft. (from Table 4. Col. 6)	3 Deciduous (Input 100 for each deciduous tree)	4 Evergreen (Input 200 for each evergreen tree)	5 Total Tree Credit (Col. **3** + Col. **4**) (DMA runoff reduction)	6 New DMA Area Col. **2** – Col. **5** (for use in Table 6 - 8)
Example	700	--------	200	200	500 (new DMA size that must be treated with methods below Table 6-7)

Table 6. Rain Barrels and Cisterns (if not using site design measures, go to Table 8)

1 DMA Name (must correspond to area on the site map)	2 New DMA sq. ft. (Table 5, Col. 7 or, if no trees used, value from Table 4, Col. 2)	3 Number of Rain Barrels	4 Runoff Reduction from using a standard 55 gallon Rain Barrel = 88 sq. ft. Use the following if size is other than the standard (for every gallon of storage, approx. 1.6 sq. ft. of reduction is achieved)	5 Col. **3 X** Col. **4** (DMA runoff reduction)	6 New DMA Area Col. **2** - Col. **5**
Example	500	1	88	88	412 (go to Table 7 to recalculate Ratio)

Table 7. <u>New</u> Tabulation of areas draining to self-retaining area after use of site design measures (must achieve a 2:1 ratio; if not achievable, use table 8 to calculate the size of bioretention required)

1 DMA Name (must correspond to area on the site map)	**2** New Square footage of DMA (Col 6, Table 4,5,6)	**3** Area of Self-retaining Area Receiving the Runoff (Table 2, Col. 2)	**4** Ratio Column **2 :** Column **3** Not to exceed 2:1
Example	412 (Table 6)	100	4.12:1(still exceeds 2:1 go back, add more trees, rain barrels, or use bioretention – example uses bioretention, Table 8)
n/a			

Table 8. Tabulation of areas draining to Bioretention Facility See attached spreadsheet

1 DMA Name (must correspond to area on the site map)	**2** DMA sq. ft. (Table 1, Col 2 or new DMA sq. ft. Table 7, Col. 2)	**3** Runoff Factor Table 6 (skip if coming from Table 1)	**5** DMA Area Col. **2** x Col. **3**	**6** Standard Sizing Factor	**Minimum facility size** Col. **5** X Col. **6**	If site does not allow for the minimum size, recalculate DMA using additional Site Design Measures to further reduce the tributary size
Example	300	***1*** (already calculated in steps above,	300	0.04	12 sq. ft.	(proposed facility size on site plans)

		for this example)				
A-Pervious	7,062	0.1	706	0.04	28 SF (698 SF total)	Total for DMA-A = 697 SF (700 SF)
A-Impervious	16,730	1.0	16,730	0.04	669 SF (698 SF total)	
B-Pervious	13,910	1.0	13,910	0.04	556 SF (720 SF total)	*Bioretention required is sum of pervious and impervious min. facility sizes.
B-Impervious	40,662	0.1	4,062	0.04	163 SF (720 SF total)	Total for DMA-B = 719 SF (720 SF)

Table 9. Runoff Factors

Roofs and Paving	1.0
Landscaped Area	0.1
Bricks or solid pavers- grouted	1.0
Bricks or solid Pavers-on sand base	0.5
Pervious Concrete Asphalt	0.1
Turfblock or gravel	0.1
Open or Porous pavers	0.1

G. Operation and Maintenance in Perpetuity

Indicate whether an *Operation and Maintenance Plan* is accompanying this document (Appendix 9).

☐ Yes ☒ No

H. Stormwater Control Plan

A Stormwater Control Plan is required for all Regulated Projects. This worksheet is designed to be the SCP if all requested descriptions and site plans have been attached. This document will be used by the plan checker to confirm that adequate stormwater control measures are being implemented on the project.

Indicate whether all supporting descriptions and worksheets are accompanying this document, Stormwater Control Plan

☒ Yes ☐ No

Stormwater Control Plan for Regulated Projects

I. Signature and Certification:

I, the below signed, confirm that I have accurately described my project to the best of my ability, and that I have not purposely omitted any detail affecting my project's classification for stormwater regulation. I hereby certify that the site design measures and stormwater flow treatment measures identified herein as being incorporated into my project have been designed in accordance with the approved BMP Fact Sheet or equivalent, which is attached to this checklist, and are included in the final site plans submitted to Mendocino County Planning and Building Services. I also hereby certify that my project meets the stormwater runoff reduction criteria identified in the County of Mendocino MS4 Post-Construction Stormwater Calculator, or as determined through other approved means.

Signature

8/23/22
Date

David Brown, Lawrence & Associates
Print Name

I am the:

☐ Property Owner ☐ Contractor ☒ Applicant

Applicant Checklist for Regulated Projects; items that must be included in the Permit Packet

Items that must be on the Project Site Map	
☒	Exiting natural hydrological features (depressions watercourses, wetlands, riparian areas, undisturbed natural areas, significant natural resource areas)
☒	Existing and proposed site drainage network and connections to MS4 conveyances off-site
☒	Proposed design features and surface treatments used to minimize imperviousness and reduce runoff
☒	DMAs are delineated for the entire site and each is labeled with a unique identifier and is characterized as draining to self-retaining, self-treating, or draining to a bioretention facility
☒	Proposed locations and footprints of bioretention facilities
☒	Pollutant-generating source areas, including loading docks, food service areas, refuse areas, outdoor processes and storage, vehicle cleaning, repair or maintenance, fuel dispensing, equipment washing, etc. (Appendix 5)
Contents of Stormwater Control Plan (SCP)	
☒	Narrative or description of site features and conditions that constrain or provide opportunities for stormwater control
☒	Narrative of Site Design characteristics, building features, and pavement selections that reduce imperviousness of the site including the quantified runoff reduction.
☒	Completed tables showing square footage of proposed pervious and impervious areas, self-treating areas, self-retaining areas, and areas draining to bioretention facilities
☒	Preliminary designs, including calculations, for each bioretention facility. Elevations should show sufficient hydraulic head for each bioretention facility.
☐	General Maintenance requirements for bioretention facilities
☐	Statement accepting responsibility for interim operation and maintenance of facilities
☒	Stormwater Construction Checklist
☒	Certification by professional civil engineer, architect, landscape architect, or other approved professional

APPENDIX 7

Operation and Maintenance Template and Maintenance Declaration

For Office Use Only
Application No._____
Received By: _____

A. Responsible Individual (RI).

The RI is the person that will have direct responsibility for the maintenance of stormwater controls, maintain self-inspection records, and sign any correspondence with the County of Mendocino.

Name of RI: PACIFIC RECYCLING SOLUTIONS - BRUCE McCRACKEN

Phone: 707-234-6400

Project Name: FORT BRAGG DIRECT TRANSFER - 1280 NORTH MAIN.

Physical Site Address and/or APN: 1280 NORTH MAIN ST, FORT BRAGG

☒ Include from the Stormwater Control Plan Worksheet the *Drainage Management Area*s tabulations (tables #1-4)

☒ Include the site plan delineating the DMAs and the locations of the bioretention or equivalent facilities.

☒ Include the final construction drawings of the stormwater facilities:

- Plans, elevations, and details of bioretention facilities.
- Construction details and specifications, including: depths of sand and soil, compaction, pipe materials, and bedding.
- Location and layouts of inflow piping and piping to off-site discharge
- Native soils (lenses beneath the facilities)

B. Scheduled Maintenance Activities

The following activities will need to occur on an annual basis. Frequency may need to be adjusted depending on facility.

- **Refuse removal:** remove trash that collects near the inlets or that is trapped by vegetation. Clean out soil and debris blocking inlets or overflows.
- **Control weeds:** manual methods and soil amendments; non-natural (synthetic) pesticides should not be used.
- **Add mulch:** add mulch to maintain a mulch layer thickness of ~ 3 inches.
- **Pruning and replanting vegetation:** it may be necessary to replace or remove vegetation to ensure the proper functioning of the facility.
- **Check irrigation**: if irrigation exists, check to make sure the system is working as intended.

An annual self-certification letter will be mailed to the RI. This letter will serve as verification that all the stormwater facilities on the property are being maintained and remain operational. The letter should be signed and returned within 30 days.

C. Updates to the O & M Plan

Contact information for the Responsible Individual should be current. If the RI changes, the County of Mendocino's Planning and Building Department should be notified with the appropriate revisions.

D. O & M plans for other Facility Types

If your project included a non-standard stormwater treatment facility that was approved by the Planning and Building Services Department, such as a tree-box type system, than the O & M should reflect the manufacturer's recommended maintenance scheduling.

E. Signature and Certification:

"I, the RI/applicant accept responsibility for operation and maintenance of stormwater treatment and flow-control facilities until such time as this responsibility is transferred to a subsequent owner. Furthermore, a condition on the property deed will be recorded with the County Recorder's office indicating that a stormwater facility is present on the property and that the maintenance responsibility will transfer with property ownership in perpetuity."

_____ _____

Signature of the RI Date

_____

Print Name

* THIS SHEET SHOWN FOR REFERENCE ONLY - ORIGINAL TO BE SIGNED ONCE REPORT IS APPROVED.

I am the:

☐ Property Owner

☐ Applicant

☐ Contractor

LACO

September 21, 2021

9016.05

1280 N. Main, LLC
PO Box 630
Ukiah, California 95482

Attention: Ms. Kristyn Byrne

Subject: Phase I Environmental Site Assessment
1280 N. Main Street, Fort Bragg, California
Assessor's Parcel Number 069-231-21

Dear Ms. Byrne:

LACO Associates (LACO) presents the results of a Phase I Environmental Site Assessment (Phase I ESA) prepared for 1280 North Main Street, Fort Bragg, California, that is identified by Assessor's Parcel Number 069-231-21. This Phase I ESA was performed in accordance with the Master Services Agreement for Environmental Geology Services, between 1280 N. Main, LLC (User) and LACO, dated June 18, 2021.

If you have any questions, please contact us at (707) 462-0222.

Sincerely,
LACO Associates

Kelsey McLaughlin
Associate Geologist
PG No. 9813, Exp. 09/2022

AAA/FRR/KRM:hjc

LACO

Phase I Environmental Site Assessment

1280 North Main Street, Fort Bragg, California
Assessor's Parcel Number 069-231-21

September 21, 2021

Prepared for:
1280 N. Main, LLC

Prepared By:
LACO Associates, Inc

1072 North State Street
Ukiah, California 95482
707 462-0222
Project No. 9016.05

LACO

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Eureka | Ukiah | Santa Rosa | Chico

Kelsey McLaughlin
Associate Geologist
PG 9813, Exp. 09/2022

EXECUTIVE SUMMARY

LACO performed a Phase I Environmental Site Assessment (Phase I ESA) of real property identified by Assessor's Parcel Number (APN) 069-231-21, at 1280 North Main Street, Fort Bragg, California (the "Subject Property"). This Phase I ESA was completed in general accordance with the scope and limitations of ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E 1527-13), United States Environmental Protection Agency (US EPA) Standards and Practices for All Appropriate Inquiries (AAI) (40 CFR 312), and the Service Agreement between 1280 N. Main, LLC (Client/User) and LACO, dated June 18, 2021. Our provided recommendations are based on continued commercial/industrial use of the Subject Property.

The results of this Phase I ESA represent an opinion of the environmental condition of the property based on review of aerial photographs and other historical sources; review of information contained in federal, state, and local records; commonly known and specialized knowledge of the Subject Property; interviews of persons knowledgeable about current and past activities on the property and in the vicinity; records from regulatory authorities; observations made during the site visit on August 31, 2021; and our professional experience. Our recommendations are based on continued commercial/ industrial use for the Subject Property.

The purpose of the Phase I ESA is to evaluate whether the Subject Property is impacted by "recognized environmental conditions" (RECs), "historical recognized environmental conditions" (HRECs), "controlled recognized environmental conditions" (CRECs), or a "business environmental risk" (BER). A definition for a REC, HREC, CREC, or BER is provided below. These terms are not intended to include de minimis conditions that generally do not present a threat to human health and/or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government agencies.

This ESA is intended to satisfy one of the requirements of innocent landowner, contiguous property owner, or bona fide prospective purchaser defense limitations on CERCLA liability (hereinafter, the "landowner liability protections," or "LLPs") by constituting "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined at 42 U.S.C. §9601(35) (B).

REC Definition

According to ASTM E 1527-13 section 3.2.78, RECs are the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to release to the environment; 2) under conditions indicative of a release to the environment; or 3) under conditions that pose a material threat of a future release to the environment.

HREC Definition

According to ASTM E 1527-13 section 3.2.42, an HREC is a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.

CREC Definition

According to ASTM E 1527-13 section 3.2.18, a CREC is a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

BER Definition
According to ASTM E 1527-13 section 3.2.11, a BER is a risk that can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice.

Property Description

The Subject Property is located at 1280 North Main Street, inside the city limits of Fort Bragg, California (Figure 1 – Location Map). The legal description of the Subject Property is the grant deed provided in Appendix A. According to information provided by Parcelquest.com, the Subject Property occupies one parcel identified as APN 069-231-21 and is comprised of approximately 6.96 acres (Figure 2). The parcel is roughly trapezoidal in shape with relatively flat topography.

No structures are located on the Subject Property. Properties in the vicinity of the Subject Property comprise commercial and residential properties. There are no known private leach field

The Subject Property is located on the United States Geological Survey (USGS) Topographic Maps, Fort Bragg Quadrangle (7.5-minute series) at Township 19N, Range 17W, Section 31, Humboldt Meridian (Figure 1). Based on Google Earth elevation data, the Subject Property has an elevation of 45 to 65 feet relative to NAVD88. As identified on the APN map included as Figure 2, boundary measurements are as follows:

Address, APN:

Northern Boundary: Approximately 756 feet;
Southern Boundary: Approximately 928 feet;
Eastern Boundary: Approximately 255 feet; and,
Western Boundary: Approximately 483 feet.

Findings

The earliest record for the Subject Property is an aerial photograph from 1942; however, historical topographic records are present as early as 1943. The aerial photography and topographic map show structures are present at the southwest corner of the Subject Property. The structures are present in aerial imagery and maps until circa 1978. In the early 1990s, the Subject Property was developed as a concrete batch plant. In the early 2000s, the batch plant was used to support construction of the Noyo Bridge. Following construction of the Noyo Bridge, the batch plant was disassembled, and the Site has lain vacant. A water well was installed in the 1990s to support the batch plant. Records from the MCDEH indicate that the water well is unpermitted and therefore may present a BER for the User.

Opinion

The decision to classify a condition as a REC, HREC, CREC, or BER was based upon the conclusion that known or suspected hazardous substance or petroleum product releases had occurred at a location, and a reasonable inference could be made that the hazardous substance or petroleum product had impacted soil and/or groundwater quality at greater than de minimis quantities on the Subject Property and is relative to the planned use of the property. REC, HREC, CREC, and BER classifications attributable to hydraulically upgradient off-site sources are based upon hydrologic, geologic, and chemical/material specific factors that when combined lead to the opinion that off-site RECs may negatively impact on-site soil and groundwater conditions. Hydrologic and geologic factors include groundwater depth, flow rate, flow orientation, hydraulic gradient slope, soil hydraulic conductivity, permeability, and organic content. Chemical factors include retardation factors, decay rates, solubility, and diffusion/dispersion.

LACO did not identify a REC, HREC, or CREC for the Subject Property. One BER was identified for the Subject Property associated with a potentially unpermitted water well. Reasoning for classification for the BER is provided with the description of the condition in 4.2.2.

Conclusions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 of the property located at 1280 North Main Street, Fort Bragg, California (APN 069-231-21). Any exceptions to, or deletions from, this practice are described in Section 8.0 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the property, with the exception of the following BER:

Subject Property

The potentially unpermitted well located on the Subject Property may present a BER for the User (section 4.2.2 of this Phase I ESA report).

Recommendations

During the environmental site assessment of the Subject Property, 1 BER was identified. LACO recommends the User contact MCDEH if the proposed well is planned to be used as a water source for the Subject Property.

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1.0 INTRODUCTION

LACO performed a Phase I Environmental Site Assessment (Phase I ESA) of real property identified by Assessor's Parcel Number (APN) 069-231-21 and located at 1280 N. Main Street in Fort Bragg, California (the "Subject Property"). This Phase I ESA was completed in general accordance with the scope and limitations of ASTM *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E 1527-13), United States Environmental Protection Agency (US EPA) *Standards and Practices for All Appropriate Inquiries* (AAI) (40 CFR 312), and the Service Agreement between 120 N. Main, LLC (Client/User) and LACO, dated June 18, 2021. Our provided recommendations are based on continued commercial/industrial use of the Subject Property.

1.1 Purpose

The purpose of the Phase I ESA is to evaluate whether the Subject Property is impacted by "recognized environmental conditions" (RECs), "historical recognized environmental conditions" (HRECs), "controlled recognized environmental conditions" (CRECs), or a "business environmental risk" (BER). A definition for a REC, HREC, CREC, or BER is provided below. These terms are not intended to include *de minimis* conditions that generally do not present a threat to human health and/or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government agencies.

This ESA is intended to satisfy one of the requirements of innocent landowner, contiguous property owner, or bona fide prospective purchaser defense limitations on CERCLA liability (hereinafter, the "landowner liability protections," or "LLPs") by constituting "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined at 42 U.S.C. §9601(35) (B).

1.1.1 REC Definition

According to ASTM E 1527-13 section 3.2.78, RECs are the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to release to the environment; 2) under conditions indicative of a release to the environment; or 3) under conditions that pose a material threat of a future release to the environment.

1.1.2 HREC Definition

According to ASTM E 1527-13 section 3.2.42, an HREC is a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.

1.1.3 CREC Definition

According to ASTM E 1527-13 section 3.2.18, a CREC is a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

1.1.4 BER Definition

According to ASTM E 1527-13 section 3.2.11, a BER is a risk that can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice.

1.2 Scope of Services

The scope of services performed was in general accordance with the scope and limitations of ASTM's *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E 1527–13) and included records review, research of historical records, interviews with past and present owners and occupants, interviews with state and/or local government officials, a site reconnaissance, and an analysis of the Subject Property's physical setting.

1.3 Significant Assumptions

The following significant assumptions were made:

- All known and relevant information, knowledge, and experience have been provided by the User.
- The records used in our research are reliable

1.4 User Reliance

This Phase I ESA report documents the results and conclusions regarding the potential for site impairment by hazardous substances generated, used, or stored on the Subject Property and within the immediate vicinity of the Subject Property. This report has been prepared on behalf of the User, 1280 N. Main, LLC (Client). LACO assumes no responsibility with respect to Client's use or use by Client's employees, Client's customers, or other third parties. LACO shall not be liable for any special, consequential, or exemplary damages resulting in whole or in part from the Client's use of the data. This report is valid solely for the purpose, Subject Property, and project described in this document. Any alteration or deviation from this description will invalidate this report.

1.5 Limitations and Exceptions

This Phase I ESA was completed in general accordance with the scope and limitations of ASTM *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E 1527-13) and United States Environmental Protection Agency (US EPA) *Standards and Practices for All Appropriate Inquiries* (AAI) (40 CFR 312), and represents the standard of care equal to the customary practice of other professional consulting firms in the area performing Phase I ESAs.

According to ASTM E 1527-13, no ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of a Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property while recognizing reasonable limits of time and cost. All appropriate inquiry does not mean an exhaustive assessment. One of the purposes of ASTM standard practice is "to identify a balance between the competing goals of limiting the costs and time demands inherent in performing an environmental site assessment and the reduction of uncertainty about unknown conditions resulting from additional information."

This report is not an in-depth study of site contamination and should not be interpreted as such. No subsurface explorations of soil or groundwater conditions were performed, and no sampling or chemical analyses of any materials or waters on the Subject Property (for example soil, water, air, building materials) were conducted. Sampling and testing for contamination, subsurface explorations, and cleanup of hazardous materials are not within the scope of this Phase I ESA. This report does not offer any legal opinion, interpretation, or representation of any federal, state, or local environmental law, rule, regulation, or policy.

Information regarding certain contaminants and issues are outside the scope of this assessment, including the following:

- Naturally occurring asbestiform minerals
- Asbestiform minerals in construction materials
- Radon
- Lead-based paint
- Lead in drinking water
- Wetlands delineation
- Regulatory compliance
- Cultural and historical resources
- Industrial hygiene
- Health and Safety
- Ecological resources
- Endangered species
- Indoor air quality
- Biological agents
- Mold
- Geologic hazards
- Geotechnical site conditions
- Environmental Permits

Some information contained in this report has been obtained by LACO from publicly available sources and other secondary sources of information produced by outside entities other than LACO. Although care has been taken to ensure that the information contained in this report is current and accurate, LACO disclaims any and all liability for any errors, omissions, or inaccuracies in information and data produced by such outside entities, whether attributable to inadvertence or otherwise, and for any consequences arising therefrom. LACO makes no representation or warranty of any kind, express or implied, including, but not limited to, the warranties of fitness for a particular purpose or merchantability, with respect to the data furnished.

The required search of public agency records and environmental liens was performed by Environmental Data Resources (EDR), a private firm specializing in research of publicly available environmental records.

The findings presented in this report are based upon research and review of available data, interviews, discussions with local regulatory and advisory agencies, and observations made during site visits at the Subject Property. Observations describe only the conditions present at the time of reconnaissance of the Subject Property and are limited to accessible areas. Additionally, in evaluating the property, LACO has relied in good faith upon the representations and information provided by the individuals or firms noted in the report with respect to present operations and existing property conditions, as well as the historic uses of

the Subject Property. It must also be understood that changing circumstances in the property usage, proposed property usage, and changes in the environmental status of other nearby properties, can alter the validity and conclusions contained in this report. Therefore, the data obtained are clear and accurate only to the degree implied by the sources and methods used.

This report is valid solely for the purpose, Subject Property, and project described in this document. Any alteration or deviation from this description will invalidate this report.

2.0 SITE DESCRIPTION

2.1 Location and Legal Description

The Subject Property is located at 1280 North Main Street, Fort Bragg, California (Figure 1 – Location Map). The legal description of the Subject Property and preliminary title report are included in Appendix A.

According to information provided by Parcelquest.com, the Subject Property occupies approximately 6.96 acres and is identifies as APN 069-231-21. The Subject Property is located on the United States Geological Survey (USGS) Topographic Maps, Fort Bragg Quadrangle (7.5-minute series) at Township 19 North, Range 17 West, Section 31, Mount Diablo Base, and Meridian (Appendix B). The Subject Property is located within the city limits of Fort Bragg and the western extent is located within the California Coastal Zone.

2.2 Current Use of Property

The Subject Property is presently vacant.

2.3 Current Uses of Adjoining Properties

Current uses of adjoining parcels were gathered from visual observations performed during the site reconnaissance on August 31, 2021, and Parcelquest.com. Information from Parcelquest.com is deemed reliable but is not always accurate. Current uses of adjacent properties are as follows:

North: Three parcels are located along the northern boundary of the Subject Property:

- A parcel that is 0.84-acres (APN 069-231-30-01), is identified by address 1290 North Main Street, and is owned by Michael and Maribelle Anderson. The parcel is developed with a truck repair shop.
- A parcel that is 0.95-acres (APN 069-231-35-01), is identified by address 1292 North Main Street, and is owned by Kemppe Liquid Gas Corporation. The parcel developed and a business is present that stores and sales propane.
- A parcel that is 2.3-acres (APN 069-231-34-01), is identified by address 1296 North Main Street, and is owned by Michael and Maribelle Anderson. The parcel is developed with a truck shop and appears to be associated with the logging operation on the eastern adjoining parcel.

East: One parcel is located along the eastern boundary of the Subject Property: a 14-acre parcel (APN 069-231-39-00) that is identified by address 22601 North Highway 1, and is owned by

Michael and Maribelle Anderson. The parcel is developed and is used as a logging operation known as Anderson Logging, Inc. that provides tree falling and trucking services.

South: Two parcels are located along the southern boundary of the Subject Property:

- A parcel that is 4.7-acres (APN 069-231-28-00), is identified by address 1258 North Main Street, and is owned by Ronald Ray. The parcel is developed with self-storage buildings known as the Fort Bragg Mini Storage.
- The second parcel is 1.2-acres (APN 069-231-26-00), is identified by address 1270 North Main Street, and is owned by Ronald Ray. Recreation vehicles are stored on the property that appears to be associated with the Fort Bragg Mini Storage.

West: Highway 1, also identified as North Main Street or Shoreline Highway, adjoins the western property boundary. On the west side of Highway 1/North Main Street are six parcels:

- A parcel that is 0.88-acres (APN 069-232-09-00), is identified by address 1271 North Main Street, and is owned by Russell Perdock. The parcel appears to be developed with a single-family residence.
- A parcel that is 2.4-acres (APN 069-232-08-00), is identified by address 1281 North Main Street, and is owned by Jeanette Colombi. The parcel appears to be undeveloped.
- A parcel that is 0.37-acres (APN 069-232-04-00), is identified by address 22500 North Highway 1 and is owned by Tom and Julee Estes. The parcel appears to be undeveloped.
- A parcel that is 2.6-acres (APN 069-232-07-00), is identified by address 1291 North Main Street, and is owned by RJ Developers. The parcel appears to be undeveloped.
- A parcel that is 2.3-acres (APN 069-232-06-00), is identified by address 1301 North Main Street, and is owned by RJ Developers. The parcel appears to be developed with a single-family residence.
- A parcel that is 1.2-acres (APN 069-231-27-00), is identified by address 1260 North Main Street, and is owned by Ronald Ray. The parcel appears to be developed with a single-family residence.

2.4 Site and Vicinity General Characteristics

The Subject Property is defined by the boundaries of APN 069-231-21 and is trapezoidal in shape (Figure 2). The northern, southern, eastern, and western boundaries are approximately 756, 928, 255, and 483 feet long, respectively. The Subject Property is bound by highway one (also known as North Main Street and the Shoreline Highway) and residential properties to the west, and industrial and commercial properties to the north, south, and east.

The Subject Property is presently vacant and has no structures with the exception of a small shed used to house an electrical panel. The public presently uses the western portion of the property as parking to gain access to coastal trails to the Pacific Ocean. The majority of the property is undeveloped with the exception of an existing cistern well, asphalt paved areas, a gravel driveway along the northern boundary, and remnants of former concrete foundation. Two 2,500-gallon poly water storage tanks are present adjacent to the well. Access to the Subject Property is via Highway 1.

2.5 Physical Setting

The following physical setting sources were utilized:

- Fort Bragg 7.5 Minute Series Quadrangle (USGS, 2018)
- Geologic Map of California – Ukiah Sheet (Jennings and Strand, 1960)
- Flood Insurance Rate Map (FEMA, 2017)
- GeoTracker.waterboards.ca.gov
- Tsunami Inundation Zone (State of California, 2021)

2.5.1 Local Geology and Soils

The Subject Property is in the Coast Ranges geomorphic province of California which comprises primarily of marine deposits and volcanic rock seen in northwest-trending ridges and valleys subparallel to the San Andreas Fault Zone. As mapped by USGS (USGS, 2018), the Subject Property is situated at an elevation between approximately 45 to 65 feet relative to NAVD88. Based on a review of the Subject Property and published geologic maps (Jennings and Strand, 1960), the Subject Property is underlain by Pleistocene marine and marine terrace deposits, and is in proximity to undivided Cretaceous marine deposits. No faults are mapped in the immediate vicinity of the Subject Property.

2.5.2 Local Hydrology and Hydrogeology

The Subject Property is located approximately 0.3 miles east of the Pacific Ocean, and 0.2 miles south of Virgin Creek, a tributary to the Pacific Ocean. Based on local topography and drainage patterns, the inferred direction of local groundwater is northwesterly toward the Pacific Ocean. This is consistent with groundwater monitoring records on GeoTracker for an environmental site known as Eastman Transport, Inc. (California Regional Water Quality Control Board case number 1TMC358) located approximately 180 feet to the southwest of the Subject Property (Hanover Environmental Services, 2009). Based on historical depth to water measurements collected at Eastman Transport, Inc., groundwater may be encountered at depths ranging from 1.3 to 10.3 feet below ground surface at the Subject Property.

2.5.3 Flood Zone

The Subject Property is not mapped within the 100-year FEMA flood zone (FEMA, 2017).

2.5.4 Coastal Zone

The western portion of the Subject Property is located within the California coastal zone (California Coastal Commission, 1977).

2.5.5 Tsunami Inundation Zone

The Subject Property is not mapped within the tsunami inundation zone (State of California, 2021).

3.0 HISTORICAL INFORMATION

3.1 USGS Topographic Maps

Historical topographic maps of the Subject Property and surrounding area were reviewed. EDR's Topographic Map Report is included as Appendix B. The following table summarizes findings of the review:

Table A. Historical Topographic Maps

Map Year	USGS Quadrangle	Minute	Description
1943	Fort Bragg	15	Highway 1 is present in its current alignment. The map indicates that structures are present on the adjoining parcels to the north and west. Agricultural land is depicted on the eastern adjoining parcel. Train tracks are depicted approximately 550 feet west.
1947	Fort Bragg	15	No discernible changes since the previous map.
1960	Fort Bragg	7.5	A structure is depicted on the southwestern corner of the Subject Property. Further development is observed in the surrounding area including a new development labeled "Gas" located approximately 250 feet to the north. This appears to be associated with environmental records for Kemgas located at 1300 North Main Street and will be discussed further in section 4 A road has been constructed along the alignment of the railroad tracks approximately 550 feet to the west. The Fort Bragg airport is mapped approximately 1,600 feet to the northeast.
1978	Fort Bragg	7.5	No discernible changes to the Subject Property or adjoining properties. Further development is depicted in the vicinity.
2012	Fort Bragg	7.5	The topographic map does not contain symbols or information on building structures, only roads, water features, and topography.

3.2 Aerial Photographs

Historical aerial photographs provided by EDR (Appendix C) were reviewed. The following table summarizes findings of the photograph review:

Table B. Historical Aerial Photographs

Date Photo Taken	Photo Scale	Photo Condition	Description
1942	1" = 500'	Fair (black and white)	Subject Property features are not easily discernible. Subject Property appears vacant with the exception of what appears to be a structure near the southwest corner of the Subject Property. The rest of the Subject Property is partially covered in vegetation and sand dunes. A structure that appears residential is located on a western adjoining parcel, and on a southern parcel. A structure of unknown use on the northern adjoining parcel is visible.
1952	1" = 500'	Fair (black and white)	The southwestern corner of the Subject Property appears to have four structures of unknown use.
1964	1" = 500'	Good (black and white)	New residential and commercial developments appear in parcels surrounding the Subject Property.
1974	1" = 500'	Good (color)	Structures and trees appear to have been removed near the western Subject Property boundary.

Date Photo Taken	Photo Scale	Photo Condition	Description
1976	1" = 500'	Fair (black and white)	No discernable changes to the Subject Property.
1983	1" = 500'	Fair (infrared)	A driveway is discernible along the northern Subject Property boundary. New commercial/industrial developments appear adjacent to the Subject Property in their present locations.
1998	1" = 500'	Good (black and white)	Structures likely associated with the concrete bulk plant appear in the eastern area of the Subject Property.
2006	1" = 500'	Fair (color)	No discernable changes to the Subject Property.
2009	1" = 500'	Good (color)	No discernable changes to the Subject Property.
2012	1" = 500'	Good (color)	No discernable changes to the Subject Property.
2016	1" = 500'	Excellent (color)	No discernable changes to the Subject Property.

3.3 Fire Insurance Maps

An EDR search of the Sanborn Library for fire insurance maps covering the Subject Property identified that the Subject Property is unmapped. The Sanborn search certification is included as Appendix D.

3.4 Property Tax Files

EDR's Property Tax Map Report is included as Appendix E.

3.5 Recorded Land Title Records

No environmental liens or activity and use limitations were found for the Subject Property. A copy of the Deed is included in the EDR Environmental Lien and AUL Search report (Appendix A). The report identifies Aleandro Sarti Trustee as the property owner as of 2017. A copy of the preliminary title report is included in Appendix A.

3.6 City Directories

EDR conducted a review of city, cross-reference, and telephone directories at five-year intervals for the Subject Property and nearby properties. A copy of EDR's City Directory Image Report is provided in Appendix F. For the purpose of this Phase I ESA, only listings for the Subject Property, adjoining properties, and properties that have the potential to impact soil and groundwater quality to the Subject Property are listed below:

Subject Property – *1280 North Main Street, Fort Bragg, California*

- Fort Bragg Redi Mix (2000)

Northern Adjoining Parcels – *1290-1296 North Main Street, Fort Bragg, California*

- Fort Bragg Cycle Supplies (2010 to 2017)
- Anderson Logging Inc (2014 to 2017)
- Roach Brothers Incorporated (2000)
- Arts in Redwood (1992 to 1995)

Eastern Adjoining Parcel – *22601 North Highway 1, Fort Bragg, California*

- Frito Lay Inc (2005 to 2017)
- Matson Building Materials (2005 to 2017)
- North Coast Refrigeration & Electric (2010 to 2017)

Southern Adjoining Property – *1258, 1260, 1270 North Main Street, Fort Bragg, California*

- Burkhardt Turbines (1995 to 2000)
- Watercolors by Erin (1992 to 1995)
- Suntools (1992)
- Fort Bragg Mini Warehouse (1992 to present)

3.7 Historical Use Information on Adjoining Properties

Historical use information for adjoining properties was collected from EDR's City Directory Image Report, EDR's Historical Topographic Map Report, EDR Historical Aerial Photo Report, Sanborn Maps, and observations during the Site Reconnaissance. Adjoining properties have a history of agricultural and residential use from the 1940s to the 1950s. Since the 1950s, adjoining properties showed residential and commercial use.

4.0 REGULATORY RECORDS REVIEW

4.1 Standard Environmental Record Sources

A search of federal, state, and tribal environmental records for the Subject Property, and on properties within minimum search distances specified by US EPA AAI regulations and ASTM standards, was compiled by EDR, on July 30, 2021. A copy of the EDR Radius Map Report with GeoCheck is included as Appendix G. The following standard environmental record sources were reviewed using the approximate minimum search distance from the Subject Property as listed in Table C, below.

Table C. Federal, Tribal and State Record Sources

Database Acronym	Database	Agency	Information on Database	Minimum Search Distance (in miles)
AWP	Annual Workplan Sites	Cal EPA (California Environmental Protection Agency)	California Department of Toxic Substances Control (DTSC) workplan hazardous substances sites targeted for cleanup. State or Tribal equivalent to the National Priorities List (NPL).	1
Delisted NPL	Delisted National Priorities List Site List	United States Environmental Protection Agency (US EPA)	Sites deleted from the National Priorities List (NPL)	1

CA FID UST	California Facility Inventory Database for Underground Storage Tanks	Cal EPA	Contains historical listings of active and inactive underground storage tanks from the State Water Resources Control Board.	0.25
Cal-NFE	DTSC Properties Needing Further Evaluation	Cal EPA	Properties where contamination is suspected, but unconfirmed, and requiring further assessment. State or Tribal equivalent to CERCLIS.	0.25
CA SWF/LF	Solid Waste Information System	California Integrated Waste Management Board	California active, closed, and inactive landfills. State/Tribal landfill and/or solid waste disposal.	0.5
CERCLIS and SEMS	Comprehensive Environmental Responsibility Compensation and Liability Information Systems (CERCLIS) and Superfund Enterprise Management System (SEMS)	US EPA	SEMS tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly known as CERCLIS, renamed to SEMS by the EPA in 2015.	0.5
CERCLIS - NFRAP	Comprehensive Environmental Responsibility Compensation and Liability Information Systems – No Further Remedial Action Planned	US EPA	CERCLIS sites where no further remedial action is planned.	0.5
CERS	California Environmental Reporting System	Cal-EPA	Statewide web-based system that supports the electronic exchange of required Unified Program information among businesses, local governments, and the U.S. EPA.	0.125
CERS HAZ WASTE				0.25
CIWQS	California Integrated Water Quality System	State Water Resources Control Board (SWRCB) and Regional Water Quality Control Board (RWQCB)	A computer system used by the SWRCB and RWQCB that tracks information about places of environmental interest, manages permits and orders, inspections, violations, and enforcement activities.	0.001
CORTESE	CORTESE Hazardous Waste & Substances Sites List	Cal EPA and Office of Emergency Information	CORTESE list is designated by the State Water Resources Control Board (SWRCB) LUST, the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).	0.5
CPS-SLIC	Cleanup Program Sites – Spills, Leaks, Investigations, and Cleanups	California Water Boards	Investigations and cleanups of unauthorized discharges	0.5
CUPA, CUPA Lake	Certified Unified Program Agencies	Cal-EPA	The program protects Californians from hazardous waste and hazardous materials by ensuring local regulatory agencies consistently apply statewide standards when they issue permits, conduct inspections, and engage in enforcement activities.	0.25
ECHO	Enforcement & Compliance History Information	US EPA	Information for integrated compliance and enforcement information for regulated facilities throughout the United States. Data is released quarterly.	0.001
ERNS	Emergency Response Notification Systems	US EPA	Reported releases of oil and hazardous substances.	0.001

FEMA UST, UST, AST	Underground Storage Tank Listing (FEMA UST)	FEMA, EPA, SWRCB	Active UST facilities gathered from local regulatory agencies.	0.25
	Active underground storage tank facilities (UST)			
	Above petroleum storage tank facilities (AST)			
FINDS	Facility Index System	US EPA	An inventory of facilities monitored or regulated by the EPA.	0.001
HAZNET	Hazardous Waste Information System	California Department of Toxic Substances Control (DTSC)	Database the records annual hazardous waste shipments, as required by the Resource Conservation and Recovery Act (RCRA).	0.001
HIST CORTESE	Historical CORTESE	DTSC	CORTESE list is designated by the SWRCB LUST, the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). HIST CORTESE listings are no longer updated by the state agency.	0.5
HIST UST	Historical UST Registered Database	Local Agency, County, SWRCB	Historical listings of UST sites.	0.25
HWTS	Hazardous Waste Tracking System	California DTSC	Data repository for hazardous waste manifest and identification information. System active from 1993 to present.	0.001
Indian LUST	Leaking Underground Storage Tanks (LUST) on Indian Land	US EPA	LUST facilities on Indian land in California.	0.5
Indian UST	Underground Storage Tanks on Indian Land	US EPA	UST facilities on Indian land in California.	0.25
LUST	Leaking Underground Storage Tanks List	SWRCB	LUST sites included in GeoTracker.	0.5
NPDES	National Pollutant Discharge Elimination System	SWRCB	A permit program that addresses water pollution by regulating point sources that discharge pollutants to waters of the United States.	0.001
NPL	National Priorities List	US EPA	Federal Superfund sites	1
RCRA CORRACTS	Resource Conservation and Recovery Act	US EPA	Hazardous waste handlers with corrective action activity under RCRA.	1
RCRIS	Resource Conservation and Recovery Information System	US EPA	Sites which generate, store, treat, and/or dispose hazardous waste as defined under RCRA.	0.25
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank	SWRCB	Historical database for LUST sites.	0.001
SWEEP UST	Statewide Environmental Evaluation and Planning System	Local Agency	Private company that is no longer updated or maintained that was contacted by the SWRCB in the early 1990s.	0.25
US Eng Controls	Engineering Controls Site List	US EPA	List of sites with engineering controls in place.	0.5
US Inst Controls	Institutional Controls Site List	US EPA	List of sites with institutional controls in place.	0.5
US Brownfields	Brownfields Site List	US EPA	Listing of Brownfields properties.	0.5

VCP	Voluntary Cleanup Program Properties	Cal-EPA	Low-level threat properties where project proponents have requested DTSC involvement.	0.5
WDS	Waste Discharge System	SWRCB	Facilities that have been issued requirements for waste discharge. Data is released quarterly.	0.001

These databases identify minimum environmental records searched. LACO has also reviewed the results of over 30 additional databases identified by EDR (Appendix G). Information received from EDR was checked by LACO for accuracy of location and geographic relationship to the Subject Property. See pages 5 through 9 of the EDR report Executive Summary (Appendix G) for a list of all acronyms and associated descriptions.

4.1.1 Record Listings for the Subject Property

In searching the federal, state, and local regulatory agency databases, EDR identified 22 records within the search radius, specified by ASTM and AAI standards, of the Subject Property. Of the 22 records identified by EDR, one is for the Subject Property. Table D, below, presents a listing of the records listed by EDR for the Subject Property. For specific reports on the site listed in Table D, refer to the EDR Radius Map with GeoCheck Report included as Appendix G.

Table D. List of EDR Environmental Records for the Subject Property

Record / Facility Name	Address	Database
Granite Construction: Fort Bragg Facility	1280 North Main Street, Fort Bragg, California	NPDES, CIWQS

The database listings for the Subject Property are associated with industrial stormwater permits for the ready-mix concrete facility in 2006. No violations are indicated in the records for the database listings provided by EDR. Therefore, the database records associated with the Subject Property are not considered RECs.

4.1.2 Relevant Record Listings for Surrounding Properties

In searching the federal, state, and local regulatory agency databases, EDR identified 21 records for facilities within the search radius, specified by ASTM and AAI standards, of the Subject Property. Sites interpreted to present no risk to the soil and groundwater quality of the Subject Property are not addressed in this report. A summary of the listings is provided below in Table E and, if bold, is discussed further below. Table E provides the record listing, record address, the database in which the record is listed, and the current regulatory status of the listed record, if known. For specific reports on the sites listed in Table E, refer to the EDR Radius Map with GeoCheck Report included as Appendix G.

Table E. List of EDR Environmental Records within One-Mile Search Radius

Record Number	Facility Name	Address	Database(s)
1	**ANDERSON LOGGING INC.**	1296 N MAIN ST	CERS HAZ WASTE,HIST UST,CERS TANKS,NPDES,WDS,CIWQS,CERS
2			AST
3			RCRA NONGEN / NLR
4	KEMGAS	1300 N MAIN ST	RCRA NONGEN / NLR
5			AST

6			CERS HAZ WASTE,CERS TANKS,CERS
7	COMCAST - FORT BRAGG FFO	1260 NORTH MAIN STREET	RCRA-SQG
8	SUPERIOR PUMP & DRILLING INC	1251 N MAIN ST	RCRA NONGEN / NLR
9	EASTMAN TRANSPORT INC		HWTS,LUST,SWEEPS UST,HIST UST,CA FID UST
10	ROACH BROTHERS INC		AST
11	EASTMAN TRANSPORT, INC.		HIST UST
12	EASTMAN TRANSPORTING		LUST,CORTESE,HIST CORTESE,CERS
13	FORT BRAGG GUN CLUB	HWY 1	ENVIROSTOR,VCP
14	ORCA TOWING	1230 NORTH MAIN ST.	HWTS,CERS HAZ WASTE,HAZNET,CERS
15	ER CURTI INC	1230 N MAIN ST STE C	RCRA NONGEN / NLR
16	ORCA TOWING	1230 NORTH MAIN ST.	RCRA NONGEN / NLR
17	ROUSSIN, SHARON	22800 HIGHWAY 1, NORTH	LUST
18	ROUSSIN, SHARON		LUST,CORTESE,HIST CORTESE,CERS
19	FORT BRAGG GUN CLUB (FORMER)	22689 HIGHWAY 1, NORTH	CPS-SLIC,CERS
20	BAXMAN GRAVEL COMPANY	1221 MAIN STREET, NORTH	CPS-SLIC,CERS
21	GEO AGGREGATES	no address listed	US MINES

Records 1 through 3: Anderson Logging, Inc., 1296 North Main Street (Northern Adjoining Parcel)

Records indicate a history of fuel use and hazardous and non-hazardous waste generation. Of the database records reviewed, the following are of concern:

- A permit dated 1988 indicates that underground storage tanks containing 3,000 gallons of diesel and 2,800 gallons of regular gasoline are present that may not have been removed.
- Records indicate that the site services buses and stores waste oil indoors; however, the regulatory agency notes excellent housekeeping and no signs of leaks or stressed wildlife or vegetation.
- Record for an above-ground storage tank containing 54,305 gallons. No information is identified for the record with the exception of the volume of the tank.

The above records show a history of fuel use on the property in large quantities; however, because the interpreted groundwater flow direction is to the northwest, this facility is located inferred down-gradient from the Subject Property and therefore is interpreted to not likely impair groundwater quality. Additionally, based on visual observation during the site reconnaissance, the Subject Property is approximately 3 to 5 feet higher in elevation and separated by a berm. Therefore, due to the inferred groundwater flow direction, and the vertical separation between the Subject Property and Anderson Logging, the property located at 1296 North Main Street is not considered a REC for the Subject Property.

4.1.3 Orphan Sites

An orphan site is a listing with an undefined location. Typically, orphan sites result from poor address controls and are often duplicated in record searches. EDR identified three orphan sites during the standard environmental records search; these listings were reviewed by LACO for location and relevance or risk to the Subject Property. Of the orphaned sites, none are located within the distance specified by ASTM standard practice for review. Orphan sites are listed in the EDR Radius Map with GeoCheck Report included as Appendix G.

4.1.4 Vapor Encroachment Conditions

The risk for vapor intrusion caused by releases of hazardous substances into subsurface soil or groundwater was evaluated using EDR's VEC online application. The input criteria for the vapor screen included an assumed regional groundwater flow direction toward the northwest, based on topography and the locations of surface water bodies in the vicinity. Note that this screening does not account for any potential hazardous vapor conditions sourced at the Subject Property. EDR's Vapor Encroachment Screen is included as Appendix H. The vapor screen for the Subject Property did not identify a potential REC for the Subject Property.

4.2 Additional Environmental Information Sources

4.2.1 EDR Environmental Lien Report

LACO obtained an EDR Environmental LienSearch Report for the Subject Property (Appendix A). The report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls. EDR's Environmental Lien and AUL Search Report did not reveal any environmental liens or activity and use limitations (AULs).

4.2.2 Mendocino County Division of Environmental Health

On August 3, 2021, Ms. Fiona Roper of LACO electronically submitted a public records request to the Mendocino County Division of Environmental Health (MCDEH) public records request portal for records regarding the Subject Property and adjoining parcels. On August 20, 2021, the respondent emailed files pertaining to the Subject Property and the adjoining parcels at 1258, 1296, and 1300 North Main Street. No records were found for the adjoining parcels 1290 and 1292 North Main Street. The MCDEH files are included in Appendix I.

Subject Property – 1280 North Main Street

Three files pertaining to the Subject Property were located: an application for building permit; a memorandum for temporary use of a portable toilet during construction of the Noyo Bridge in 2002 that includes a hand-drawn site map from Rosenthal Construction for a portable Redimix batch plant; and, an expired water well permit from 1995.

The expired well permit may permit present a BER for the User as an existing well was observed during the site reconnaissance. Since the well permit is expired, the well may be unpermitted. Since the well may be unpermitted, and the construction methodology unknown since a well completion report is not available, the well may not be constructed to required standards. The well could be required to be properly abandoned by the MCDEH or state.

Southern Adjoining Parcel - 1258 North Main Street

The files obtained for the 1258 North Main Street parcel included correspondence and permit applications for a recirculating sand filter wastewater disposal system. The wastewater disposal system serves the North of Town Industrial Park and had failing conditions due the use of soap from a kitchen named Jams and Jellies in the park. There was no indication of potential impact of this wastewater disposal system on the Subject Property.

Northern Adjoining Parcel - 1296 North Main Street

The files obtained for the 1296 North Main Street parcel included a well completion report, well permit, an individual sewage disposal permit and correspondence regarding soil test data for the system's installation, a site map, and a building permit for a metal storage unit. The records show the following conditions existing on the property:

- Two truck barns located adjacent to the property line with the Subject Property that includes a 1,200-gallon diesel tank approximately 50 to 75 feet northwest of the Subject Property;
- Above ground storage tanks consisting of a 5,000-gallon unleaded gasoline tank and 5,000-gallon diesel tank location approximately 200 feet northwest of the Subject Property;
- A 10,000-gallon diesel above ground storage tank, solvent tank, drain oil tank, welding tank, and hydraulic motor oil at a location approximately 300 feet northwest of the Subject Property; and,
- and a shop building on the property.

Due to the inferred groundwater direction to the northwest, the chain-link fence between the Subject Property and northern adjoining parcel that prevents the use of the Subject Property as an access road, and that the visual observation during the site reconnaissance that the Subject Property is 3 to 5 feet higher in elevation than the northern adjoining parcel due to a berm/terrace, the northern adjoining parcel is not considered a REC for the Subject Property.

200 feet North to Northwest of Subject Property - 1300 North Main Street

The files obtained for the 1300 North Main Street parcel included a map of the Kemgas Kemppe Liquid Gas facility, a building permit application for installation of a 2,000-gallon diesel fuel tank, a request for comments for installation of a 30,000-gallon propane storage tank, building schematics for the facility, and files regarding the facility's individual sewage disposal system. The parcel is located inferred downgradient from the Subject Property and therefore is not considered a REC for the Subject Property.

4.2.3 Fort Bragg Fire Department

On August 3, 2021, Ms. Fiona Roper of LACO contacted Fort Bragg Fire department via email to inquire of any records regarding the Subject Property. To date, no response has been received and is considered a data gap.

4.2.4 Mendocino County Air Quality Management District

On August 3, 2021, Ms. Fiona Roper of LACO filed a request for public records to inquire if any records exist for the Subject Property. On August 8, 2021, Ms. Geneva Beaman responded by email that no records exist for the addresses provided. A certificate of no records is included in Appendix J.

4.2.5 North Coast Regional Water Quality Control Board

On August 3, 2021, Ms. Fiona Roper of LACO contacted the North Coast Regional Water Quality Control Board via email to inquire whether any records exist for the Subject Property and adjoining properties that were not available on the GeoTracker website. On August 3, 2021, Ms. Heidi Bauer responded that there are no records for the Subject Property in their files and on GeoTracker.

4.2.6 State of California Department of Toxic Substances Control

On August 3, 2021, Ms. Fiona Roper of LACO contacted the State of California Department of Toxic Substances Control (DTSC) about any enforcement actions associated with the Subject Property and

adjoining properties. Choua Her, the regional records coordinator, responded on August 4, 2021, that they had no information pertaining to the Subject Property.

4.2.7 Fort Bragg City Building Department

On August 33, 2021, Ms. Kelsey McLaughlin reviewed the files for the Subject Property and the 1280 North Main Street at the Fort Bragg Building Department. Reviewed records did not indicate a potential REC for the Subject Property. Records were in regards to the concrete batch plant that formerly occupied the Subject Property. EDR reported a building permit filed in 2002 for a batch plant on the Subject Property. A copy of the EDR Building Permit Report, which shows the results of a search of building department records for indications of environmental conditions, is attached as Appendix K.

5.0 USER-PROVIDED INFORMATION

5.1 Results of Title Records Search for Environmental Liens or Activity and Use Limitation

No environmental liens or activity use limitations (AULs) have been reported to the environmental professional by the User.

5.2 Specialized Knowledge or Experience of the User

No relevant specialized knowledge regarding the Subject Property was reported to the environmental professional by the User.

5.3 Actual Knowledge of the User

The User of the Phase I ESA reported that a concrete plant and construction storage yard were previously located at the Subject Property. Additional review indicates that the concrete plant and construction storage mentioned by the User was Granite Construction Company that has since been closed. The User also indicated that an adjoining property (north) was used as a truck stop that stored gasoline.

5.4 Commonly Known or Reasonably Ascertainable Information

It is commonly known and therefore reasonably ascertainable that the Subject Properties have been previously used for mixed commercial use. This understanding is based on information gained through the interview process, review of historical site documents and reports, and aerial photograph interpretation.

5.5 Reason for Significantly Lower Purchase Price

This section is not applicable as the reason for conducting this Phase I ESA is not related to a sale of the Subject Property.

5.6 Owner, Property Manager, and Occupant Information

The User indicated that the Subject Property is currently owned by Aleandro Sarti.

5.7 Reason for Performing Phase 1

The Client contracted this Phase 1 ESA to provide an assessment of the environmental condition of the Subject Property as part of a regulatory transaction.

5.8 Previous Report(s)

The Owner indicated that a previous Environmental Assessment had been performed on the Subject Property but did not provide a copy of the report. However, the owner may be referring to a floristic survey performed in December of 2007 (Nelson, 2007).

6.0 INTERVIEWS

Interviews consist of completing an ASTM E 1527-13 User Questionnaire and/or the ASTM E 1528-13 Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process questionnaire (specialized knowledge questionnaire). The owner completed the specialized knowledge questionnaire and a copy is provided in Appendix L. The User of this Phase I ESA has not provided a user questionnaire as of the filing date of this report. The lack of the user questionnaire is a data gap.

6.1 Interview with Owner

Mr. Roger Fenderson, the controller for the current owner, completed the specialized knowledge questionnaire on July 21, 2021. The owner identified that electric services for the Subject Property are provided by Pacific Gas and Electric, but did not identify if drinking water or septic is present. The owner is aware of previous Environmental Assessment performed on the Subject Property but did not provide a copy of the report. The owner may be referring to a floristic survey performed in December of 2007 by Playalina Nelson (Nelson, 2007).

The owner is aware that past uses of the Subject Property consist of a concrete plant and construction storage yard, and that an adjoining property is used as a truck shop.

7.0 SITE RECONNAISSANCE

A site visit was conducted by Ms. Kelsey McLaughlin on August 31, 2021. The property was reconnoitered using a visual survey of the areas accessible by vehicle and foot. Adjacent properties were viewed through fences from the Subject Property. Site photographs are included with this report as Appendix M.

7.1 General Site Setting

The Subject Property is located in the coastal area within the city limits of Fort Bragg. Highway 1, also identified as North Main Street, adjoins the western boundary of the Subject Property. The western portion of the Subject Property is used as parking by the public to access beaches along the Pacific Ocean. The Subject Property is vacant and the central portion is partially vegetated and partially covered in sand dunes. The immediate surrounding area appears to have a low-density development, with residential properties to the west, and commercial and industrial properties to the north, east, and south. Topography is generally flat-lying, with the exception of some berms and sand dunes throughout the Subject Property.

7.2 Description of Structures, Roads, and Other Improvements

7.2.1 Structures

No structures exist on the Subject Property with the exception of a small shed that houses the electrical panel.

7.2.2 Roads

Access to the Subject Property is via a paved driveway accessed off of highway 1 / north main street.

7.2.3 Drainage

No drain inlets were observed; however, stormwater is anticipated to drain via sheet flow to the west towards the Pacific Ocean. Precipitation is anticipated to infiltrate the ground surface in unpaved locations.

7.2.4 Security

A chain-link fence is located along the eastern, southern, and a portion of the northern boundaries. Additionally, a gate consisting of a chain with a lock is present on the driveway of the Subject Property that prevents access to the former concrete bulk plant area by vehicle. No other security services are known to exist or were reported to LACO by the User in the specialized knowledge questionnaire.

7.2.5 Heating/Cooling System

No structures, with the exception of a small shed, are present on Subject Property. Current or evidence of former heating or cooling systems were not seen during the site reconnaissance.

7.2.6 Sewage Disposal

It is unknown if a historical septic system exists on the Subject Property and evidence of one was not observed during the site reconnaissance. Review of public building records identified that porta-potties were historically used to serve the temporary bulk plant during construction of the Noyo Bridge (Appendix I). The owner questionnaire did not identify what septic services supply the Subject Property (Appendix L).

7.2.7 Potable Water Source

A private well provides water for the Subject Property and its location is shown on Figure 3. It is unknown if the well is of potable water quality.

7.3 Site Observations

A summary of features visually observed during the site reconnaissance on August 31, 2021, is provided in Table F below.

Table F. Summary of Site Reconnaissance

Feature	Observed	Not Observed
Existing Structures (shed)	X	
Evidence of Past Uses (Bulk Plant)	X	
Hazardous Substances and/or petroleum products (containers)		X
Aboveground Storage Tanks (AST's)		X
Underground Storage Tanks (UST's) or evidence of UST's		X
Strong, pungent, or noxious orders		X
Pools of liquid likely to be hazardous or petroleum materials		X
Drums		X
Unidentified substance containers		X
Potential polychlorinated biphenyl (PCB) containing equipment		X
Subsurface hydraulic equipment		X
Stains on floor, walls, or ceilings		X
Floor drains and sumps		X
Pits, ponds, or lagoons		X
Stained soil or pavement		X
Stressed Vegetation		X
Waste or wastewater discharges to surface or surface waters		X
Wells	X	
Septic Systems		X

7.3.1 Exterior Observations

The following general and specific exterior observations were made by Ms. Kelsey McLaughlin during the site reconnaissance on August 31, 2021 (Appendix M):

- Two poly water storage tanks are located adjacent to a private cistern well. The well was covered with a concrete lid.
- The eastern portions of the Subject Property had concrete and asphalt paving, and former foundations, that are associated with the former concrete batch plant.
- A small shed that houses the electric panel is located on the northern boundary.
- Trash piles were observed on the eastern portion of the Subject Property; however, the piles were small in size, and hazardous substances that could impair soil or groundwater quality were not noticed in them.
- Berms varying 3 to 10 feet in height are present on the eastern and central portions.

- The eastern portion of the Subject Property is accessed by a gravel driveway along the northern boundary. A gate consisting of a chain with a lock is present on the driveway to deter people from driving to the eastern portion of the Subject Property.
- Chain-link fences are present along the southern, eastern, and portion of the northern boundary.
- The central portion of the Subject Property appears to be undeveloped and is partially vegetated and partially covered in sand dunes.
- The western portion of the Subject Property is used as parking by the public to access coastal trails that extend to the Pacific Ocean.
- Other unpaved access roads were observed throughout the property.

8.0 DEVIATIONS

8.1 Data Gaps

AAI Section 312.20(g) states that

> To the extent there are data gaps ... that affect the ability of persons conducting all appropriate inquiries to identify conditions indicative of releases or threatened releases in each area of inquiry under each standard and practice, such persons should identify such data gaps, identify the sources of information consulted to address such data gaps, and comment upon the significance of such data gaps with regard to the ability to identify conditions indicative of releases or threatened releases of hazardous substances, pollutants, contaminants, petroleum and petroleum products, and controlled substances.

The following information was not readily available:

- Records for the Subject Property were not received from the Fort Bragg Fire Department.
- Records for the Subject Property were not received from the Fort Bragg Building Department.
- City directory information for the Subject Property prior to 1992.
- Site use prior to 1942.
- A user questionnaire was not completed by the User of this Phase I ESA.
- The use of the former building(s) located on the southwest corner of the Subject Property that is visible in aerial imagery from 1942 to 1964.

8.2 Exceptions or Deletions

There were no exceptions to, or deletions from, ASTM Practice E 1527-13.

9.0 ADDITIONAL SERVICES

LACO completed this report for our Client as a component of a broader scope of work related to the entitlement of the Subject Property.

10.0 FINDINGS

The earliest record for the Subject Property is an aerial photograph from 1942; however, historical topographic records are present as early as 1943. The aerial photography and topographic map show

structures are present at the southwest corner of the Subject Property. The structures are present in aerial imagery and maps until circa 1978. In the early 1990s, the Subject Property was developed as a concrete batch plant. In the early 2000s, the batch plant was used to support construction of the Noyo Bridge. Following construction of the Noyo Bridge, the batch plant was disassembled, and the Site has lain vacant. A water well was installed in the 1990s to support the batch plant. Records from the MCDEH indicate that the water well is unpermitted and therefore may present a BER for the User.

11.0 OPINION

The decision to classify a condition as a REC, HREC, CREC, or BER was based upon the conclusion that known or suspected hazardous substance or petroleum product releases had occurred at a location, and a reasonable inference could be made that the hazardous substance or petroleum product had impacted soil and/or groundwater quality at greater than de minimis quantities on the Subject Property and is relative to the planned use of the property. REC, HREC, CREC, and BER classifications attributable to hydraulically upgradient off-site sources are based upon hydrologic, geologic, and chemical/material specific factors that when combined lead to the opinion that off-site RECs may negatively impact on-site soil and groundwater conditions. Hydrologic and geologic factors include groundwater depth, flow rate, flow orientation, hydraulic gradient slope, soil hydraulic conductivity, permeability, and organic content. Chemical factors include retardation factors, decay rates, solubility, and diffusion/dispersion.

LACO did not identify a REC, HREC, or CREC for the Subject Property. One BER was identified for the Subject Property associated with a potentially unpermitted water well. Reasoning for classification for the BER is provided with the description of the condition in 4.2.2.

12.0 CONCLUSIONS

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 of the property located at 1280 N. Main Street, Fort Bragg, California (APN 069-231-21). Any exceptions to, or deletions from, this practice are described in Section 8.0 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the property, with the exception of the following BER:

Subject Property

- The potentially unpermitted well located on the Subject Property may present a BER for the User (section 4.2.2).

13.0 RECOMMENDATIONS

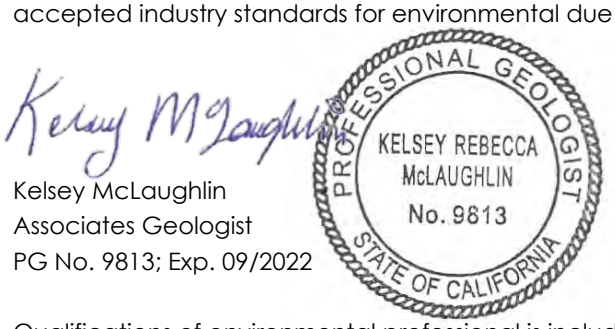
During the environmental site assessment of the Subject Property, 1 BER was identified. LACO recommends the User contact MCDEH if the proposed well is planned to be used as the water source for the Subject Property.

14.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312. I have the specific qualifications based on education,

training, and experience to assess a property of the nature, history, and setting of the Subject Property. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

The work and content of this Phase I ESA were conducted in accordance with ASTM E 1527-13 and generally accepted industry standards for environmental due diligence in place at the time of this report.



Kelsey McLaughlin
Associates Geologist
PG No. 9813; Exp. 09/2022

Qualifications of environmental professional is included as Appendix N.

15.0 REFERENCES

ASTM International, ASTM E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

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United States Environmental Protection Agency, 40 CFR Part 312 - Standards for Conducting All Appropriate Inquiries, Final Rule, November 2005.

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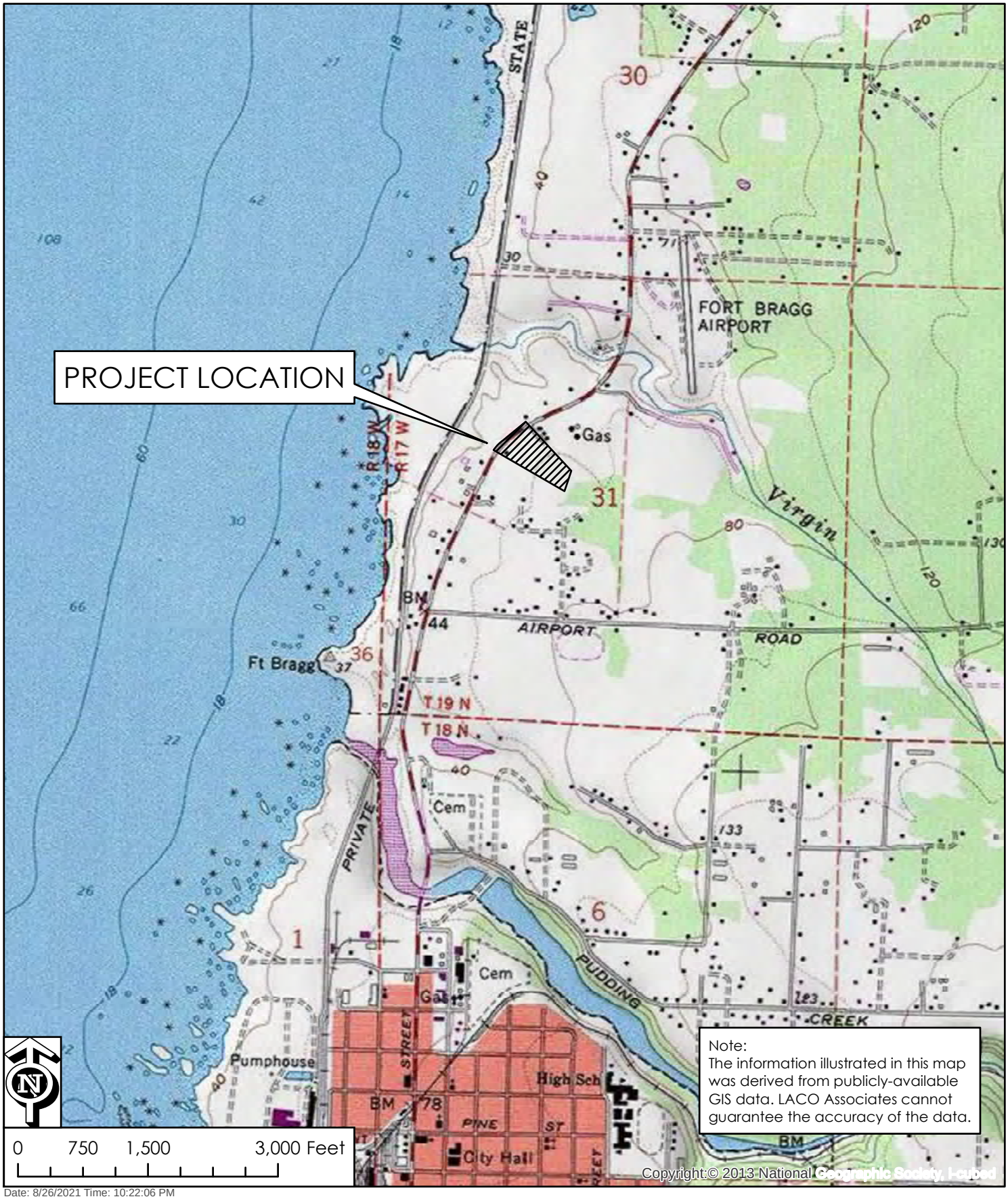
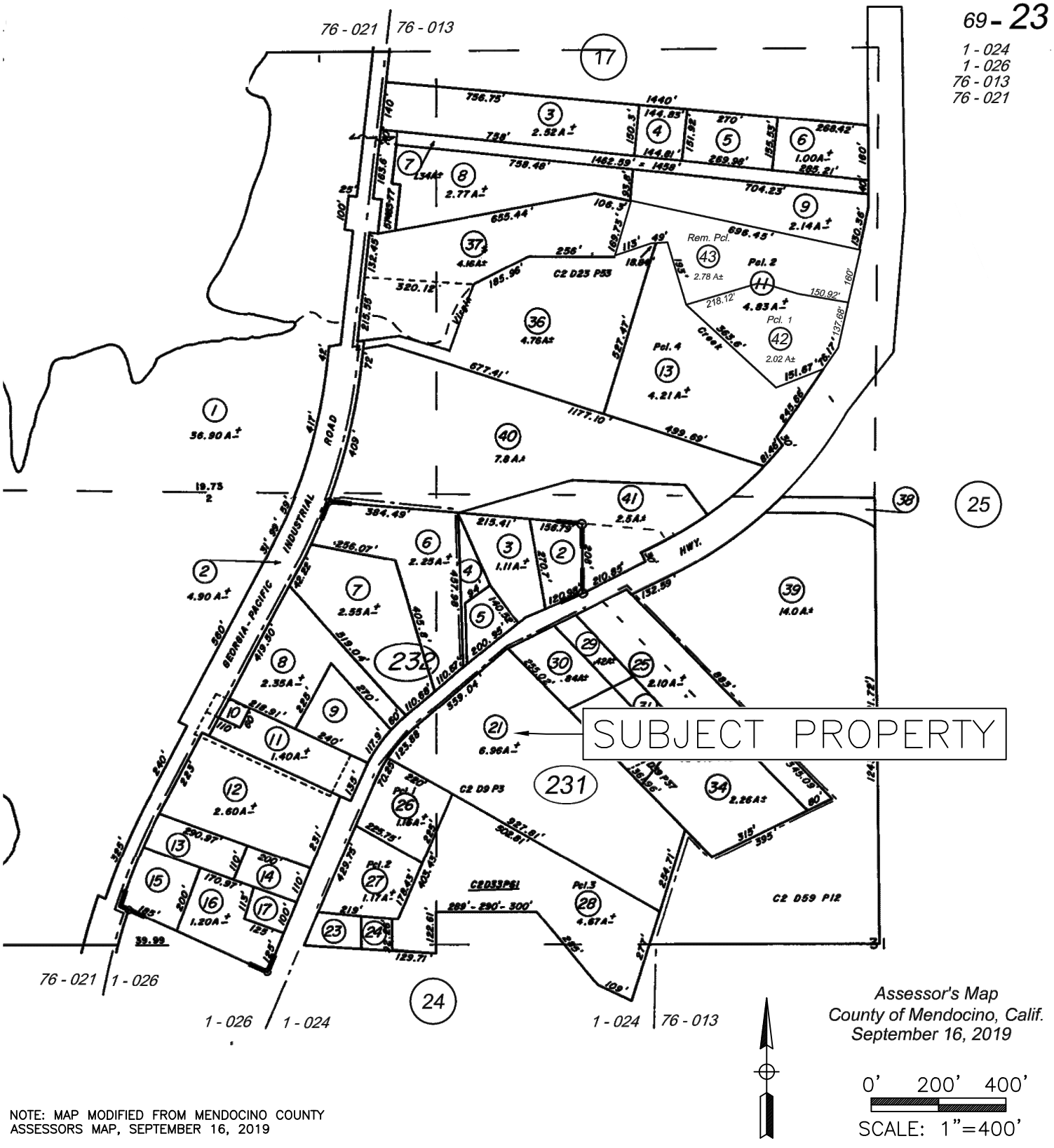
FIGURES

LACO ASSOCIATES			
EUREKA • UKIAH • SANTA ROSA 1-800-515-5054 www.lacoassociates.com	PROJECT 1280 N. MAIN, LLC: PHASE I ESA	BY CRP	FIGURE 1
	CLIENT 1280 N. MAIN, LLC	CHECK RD/KD	
	LOCATION 1280 N. MAIN ST. FORT BRAGG, CA	DATE 6/23/2021	JOB NO. 9016.05
	LOCATION MAP		



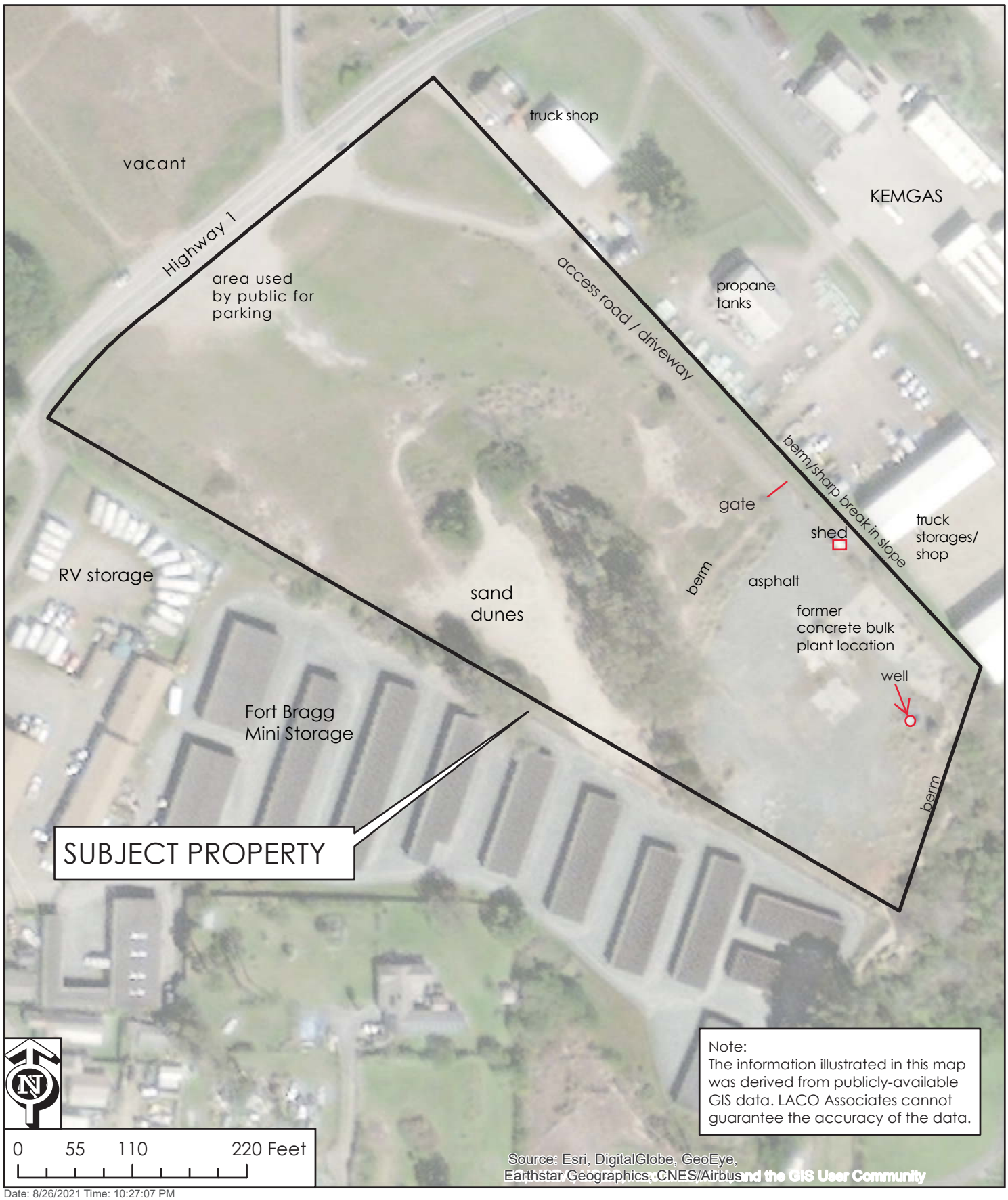
Date: 8/26/2021 Time: 10:22:06 PM
Path: P:\9000\9016 Yulupa Investments, LLC\9016.05 1280 N Main St Fort Bragg Planning Services\12 Figures_Maps\GIS\Figure 1 - Location (modified AAA).mxd

LACO EUREKA • UKIAH • SANTA ROSA 1-800-515-5054 www.lacoassociates.com	PROJECT	1280 N. MAIN: PHASE I ESA	BY	AAA	FIGURE
	CLIENT	1280 N. MAIN, LLC	DATE	8/25/2021	2
	LOCATION	1280 N. MAIN STREET, FORT BRAGG, CA	CHECK	KRM	JOB NO.
		PARCEL MAP	SCALE	AS SHOWN	9016.05



NOTE: MAP MODIFIED FROM MENDOCINO COUNTY ASSESSORS MAP, SEPTEMBER 16, 2019

LACO EUREKA • UKIAH • SANTA ROSA 1-800-515-5054 www.lacoassociates.com	PROJECT	1280 N. MAIN, LLC: PHASE I ESA	BY	CRP	FIGURE 3
	CLIENT	1280 N. MAIN, LLC	CHECK	RD/KD	
	LOCATION	1280 N. MAIN ST. FORT BRAGG, CA	DATE	6/24/2021	JOB NO. 9016.05
		EXISTING CONDITIONS SITE MAP			



Note:
The information illustrated in this map was derived from publicly-available GIS data. LACO Associates cannot guarantee the accuracy of the data.

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Path: P:\9000\9016 Yulupa Investments, LLC\9016.05 1280 N Main St Fort Bragg Planning Services\12 Figures_Maps\GIS\Figure 2 - Existing Cond. (modified AAA).mxd