City of Fort Bragg

416 N Franklin Street
Fort Bragg, CA 95437
Phone: (707) 961-2823
Fax: (707) 961-2802

Meeting Agenda

Special City Council

THE FORT BRAGG CITY COUNCIL MEETS CONCURRENTLY AS THE FORT BRAGG MUNICIPAL IMPROVEMENT DISTRICT NO. 1 AND THE FORT BRAGG REDEVELOPMENT SUCCESSOR AGENCY

Thursday, June 16, 2016 | **6:00 PM** | **Town Hall, 363 N Main Street**

Special Meeting: Caspar Transfer Station Revised Draft EIR

MEETING CALLED TO ORDER

PLEDGE OF ALLEGIANCE

ROLL CALL

1. PUBLIC HEARING

1A. 16-251 Public Hearing on the Revised Draft Environmental Impact Report for the Central Coast Transfer Station Project

Attachments: Public Hearing Notice - Central Coast Transfer Station EIR 6-16-16

Revised Draft EIR Central Coast Transfer Station

Items Handed Out at Meeting

ADJOURNMENT

The adjournment time for all Council meetings is no later than 10:00 p.m. If the Council is still in session at 10:00 p.m., the Council may continue the meeting upon majority vote.

STATE OF CALIFORNIA)
)ss.
COUNTY OF MENDOCINO)

I declare, under penalty of perjury, that I am employed by the City of Fort Bragg and that I caused this agenda to be posted in the City Hall notice case on June 10, 2016

_____

Chantell O'Neal, Administrative Assistant

ADA NOTICE AND HEARING IMPAIRED PROVISIONS:

It is the policy of the City of Fort Bragg to offer its public programs, services and meetings in a manner that is readily accessible to everyone, including those with disabilities. Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities.

If you need assistance to ensure your full participation, please contact the City Clerk at (707) 961-2823. Notification 48 hours in advance of any need for assistance will enable the City to make reasonable arrangements to ensure accessibility.

The Council Chamber is equipped with a Wireless Stereo Headphone unit for use by the hearing impaired. The unit operates in conjunction with the Chamber's sound system. You may request the Wireless Stereo Headphone unit from the City Clerk for personal use during the Council meetings.

This notice is in compliance with the Americans with Disabilities Act (28 CFR, 35.102-35.104 ADA Title II).

City of Fort Bragg

416 N Franklin Street
Fort Bragg, CA 95437
Phone: (707) 961-2823
Fax: (707) 961-2802

Text File

File Number: 16-251

Agenda Date: 6/16/2016 **Version:** 1 **Status:** Business

In Control: Special City Council **File Type:** Staff Report

Agenda Number: 1A.

Public Hearing on the Revised Draft Environmental Impact Report for the Central Coast Transfer Station Project

Caspar JPA of County of Mendocino and City of Fort Bragg
c/o Mendocino Solid Waste Management Authority
3200 Taylor Drive
Ukiah, CA 95482
Contact: Mike Sweeney, General Manager

NOTICE OF AVAILABILITY AND NOTICE OF PUBLIC HEARING AND REQUEST FOR COMMENTS ON THE REVISED DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE CENTRAL COAST TRANSFER STATION PROJECT

NOTICE IS HEREBY GIVEN that the Caspar Joint Powers Authority (JPA) of the County of Mendocino and City of Fort Bragg, as Lead Agency, has completed a Revised Draft Environmental Impact Report (Revised Draft EIR) for public review and comment for the Central Coast Transfer Station project pursuant to the California Environmental Quality Act (CEQA).The Mendocino Solid Waste Management Authority (MSWMA) is the representing partner agency of the Caspar JPA.

Applicant: Mendocino Solid Waste Management Authority(MSWMA)
State Clearinghouse Number: 2014012058

AVAILABILITY OF DOCUMENT: Public review and written comments on the Draft EIR are invited. The document is available for review at the following locations:

1) MSWMA office, 3200 Taylor Drive, Ukiah, CA 95482
2) Fort Bragg City Hall, 416 N. Franklin Street, Fort Bragg, CA 95482
3) Fort Bragg Library, 499 E. Laurel Street, Fort Bragg, CA 95482
4) MSWMA website at: http://mendorecycle.org/

PUBLIC REVIEW AND COMMENT PERIOD: State law requires a minimum 45 day public review period for the Revised Draft EIR. The public review period begins on May 11, 2016 and ends June 24, 2016 at 5:00 p.m. All comments must be submitted to the MSWMA within this time period.

Pursuant to CEQA Guidelines Section 15088.5(f)(2), new public comment on this Revised Draft EIR shall be limited to the chapters or portions of the EIR which have been revised and recirculated (i.e., chapters 2.0, 3.1, 3.3, 3.4, 3.9 and 4.0). In other words, the partial recirculation of the Revised Draft EIR is not an opportunity to re-submit comments or add additional comments on previously published topics left unchanged in the Revised Draft EIR.

Comments may be provided in writing, by email or orally at a public hearing or meeting. All comments received by the close of the comment period will be responded to in writing in the Final EIR. The Final EIR must be completed and certified by the Caspar JPA before a decision can be made on the proposed project.

Written comments may be submitted to: Mendocino Solid Waste Management Authority, 3200 Taylor Drive, Ukiah, CA 95482, Attention Mike Sweeney, General Manager: sweeney@pacific.net. Telephone (707) 468-9710, Fax (707) 462-3517.

PUBLIC HEARING: A public hearing is scheduled for purposes of receiving public comments on the Draft EIR on June 16, 2016 at or after 6:00 p.m. at the Fort Bragg Town Hall, 363 N. Main Street, Fort Bragg, California.

PROJECT LOCATION: The proposed project site for the new transfer station is located in unincorporated Mendocino County approximately 3.5 miles southeast of downtown Fort Bragg. The site lies within the Jackson Demonstration State Forest (JDSF) at 30075 State Route 20 and includes a portion of Assessor's Parcel Number (APN) 019-150-05.

PROJECT DESCRIPTION: The project is the construction and operation of a municipal solid waste transfer station serving the incorporated City of Fort Bragg and the surrounding unincorporated coastal area of Mendocino County extending from the town of Westport to the Navarro River. The proposed transfer station location is within a 17-acre portion of JDSF (APN 019-150-05), adjacent to State Route (SR) 20, at 30075 SR 20, Fort Bragg, California, and is 3.0 miles east of the intersection of State Highway 1 and SR 20.

CEQA STATUS: The Revised Draft EIR has been prepared consistent with CEQA (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations [CCR] Title 14, Section 15000 et seq.). The project could result in significant impacts and mitigation measures have been proposed to reduce the significance of impacts to a less than significant level in the areas of: air quality and odor, biological resources, cultural resources, geology and soils, hydrology and water quality, and transportation. All other resource categories were deemed to be less than significant or have no impact. The project site is not on any of the lists of hazardous waste sites enumerated under Governmental Code Section 65962.5.

The original Draft EIR was issued in February, 2015. The Revised Draft EIR modifies the following chapters: Project Description, Aesthetics, Air Quality & Odor, Biological Resources, Hydrology & Water Quality, and Alternatives Description & Analysis, and adds an Appendix L Bishop Pine Mitigation Plan. All other chapters of the original Draft EIR are unaltered and are incorporated by reference into the Revised Draft EIR.

Central Coast Transfer Station
Revised Draft Environmental Impact Report
State Clearinghouse #2014012058

April, 2016

Mendocino Solid Waste Management Authority
3200 Taylor Drive
Ukiah, CA 95482
Contact: Mike Sweeney, General Manager
(707) 468-9710

Table of Contents

1. Introduction to Revised Draft EIR	1-1
2. Revised Chapters of Draft EIR	2-1
2.0 Project Description	2-1
3.1 Aesthetics	3.1.1
3.2 Air Quality & Odor	3.2.1
3.4 Biological Resources	3.4.1
3.9 Hydrology & Water Quality	3.9.1
4.0 Alternatives Description & Analysis	4.1
Appendix L: Bishop Pine Mitigation Plan	

1. Introduction to Revised Draft EIR

The County of Mendocino ("County") and the City of Fort Bragg ("City"), acting together pursuant to their Caspar Joint Powers Agreement ("Caspar JPA"), are planning to construct and operate a new solid waste transfer station for the central coast region of Mendocino County ("Central Coast Transfer Station" or "Project").[1]

The site search and study of alternatives began in 2007. On August 13, 2013, the County Board of Supervisors and City Council selected 30075 Highway 20, Fort Bragg, as the preferred site for the Project and authorized preparation of an environmental impact report ("EIR") pursuant to the California Environmental Quality Act ("CEQA").

On January 27, 2014, the County and City issued and distributed a Notice of Preparation ("NOP") to announce their decision to prepare an EIR for the Central Coast Transfer Station project and solicit comments from agencies and the public concerning the scope of the EIR. Issuance of the NOP commenced a 30-day scoping period, during which a public scoping meeting was held at the Fort Brag Town Hall on February 19, 2014 to receive additional input regarding issues to be addressed in the EIR. The scoping period ended on February 25, 2014.

A Draft EIR (State Clearinghouse Number 201012058) was then prepared and issued on February 9, 2015, along with all required public notices, which commenced a 45-day public comment period that closed on March 26, 2015. During that public comment period, the City and County held a public meeting in Fort Bragg on March 19, 2015 to receive comments on the Draft EIR.

The County and City received extensive oral and written comments on the Draft EIR and prepared a Response to Comments document that was issued on June 26, 2015, detailing proposed revisions to the Draft EIR and providing responses to all significant environmental issues raised in the written and oral comments on the Draft EIR received during the public comment period.

Additional public comment was received following the issuance of the Response to Comments document. The City Council and Board of Supervisors held a joint meeting on July 21, 2015 and decided to continue the public hearing to allow staff to consult with the two State agencies that submitted comments on the day of the hearing. As a result of those consultations, the City Council and Board of Supervisors decided to revise and recirculate the Draft EIR.

[1] The City of Fort Bragg and/or the County of Mendocino would hold title to the new Central Coast Transfer Station site but would retain a private solid waste management company to design, build and operate the facility under a long-term contract to carry out these tasks and functions.

This Revised Draft EIR incorporates the original draft EIR by reference but amends and supersedes six of its chapters as identified and summarized below. Most of the changes were previously outlined in responses made in the Response to Comments document. In addition, this Revised Draft EIR includes new information regarding: the project's impact on Bishop Pine forest, the project's property transfer between Russian Gulch State Park and Jackson Demonstration State Forest ("JSDF"), and alternatives to the project. All changes to the original chapters in the draft EIR are highlighted by ~~strikethrough~~ for deletions and ***underlined*** ***bold face italics*** for insertions.

The following is a list of the Draft EIR chapters that have been revised and a summary of the revisions:

2.0 Project Description

- Section 2.5.1: additional discussion of land transfer of 12.6 acres to JDSF [p. 2.0.3]
- Section 2.55: discussion regarding the roofing and grading associated with the Project's recycling drop-off areas [p. 2.0.6]
- Table 2-1: add 2014 and 2015 [p. 2.0.7]
- Section 2.6, Required Permits & Approvals: addition of Cal Fire setback variance [p. 2.0.10]

3.1 Aesthetics

- Section 3.1.5, Impact AES-2: addition of discussion of litter prevention [p. 3.1.6]

3.3 Air Quality and Odor

- Section 3.3.2, Regulatory Framework: addition of Mendocino County Air Quality Management District ("MCAQMD") requirements concerning construction fugitive dust [p. 3.3.6]
- Table 3.3-3: replace Bay Area Air Quality Management District ("BAAQMD") thresholds with MCAQMD thresholds [p. 3.3.8]
- Section 3.3.5, Impact AQ-1: Addition regarding the applicability of MCAQMD Regulation 1, Rule 1-430 [p. 3.3.11]
- Table 3.3-4: replace Bay Area Air Quality Management District (BAAQMD) thresholds of significance with MCAQMD thresholds [p. 3.3.11]
- Table 3.3-5: replace Bay Area Air Quality Management District (BAAQMD) thresholds with MCAQMD thresholds [p.3.3.12]
- Section 3.3.5, Impact AQ-2: replace "BAAQMD" with "MCAQMD" [p. 3.3.13]

3.4 Biological Resources

- Section 3.4.3, Evaluation Criteria and Significance Thresholds: revised thresholds [p. 3.4.38]
- Section 3.4.4, Methodology: delete comment on Bishop Pine Forest [p.3.4.40]
- Section 3.4.5, Mitigation Measure BIO-1b: expand mitigation area at Assessor's Parcel #118-50-045 from 3.55 acres to entire 28.3 acre parcel [p 3.4.43]

- Section 3.4.5, Mitigation Measure BIO-1e: change mitigation ratio from 3:1 to 30:1 [p. 3.4.46]
- Section 3.4.5, Impact BIO-2: add discussion concerning the sensitive species ranking of Bishop Pine Forest and upgrade project impact conclusion to potentially "significant" [pp. 3.4.46 through 3.4.51 and Table 3.4-8]
- Section 3.4.5, Mitigation Measure BIO-2: change "BIO-2" to "BIO-2a" and increase pygmy forest mitigation area from 1.8 acres to 19.4 acres [p. 3.4.50]
- Section 3.4.5: add Mitigation Measure BIO-2b to address Bishop Pine Forest [p. 3.4.52]
- Section 3.4.5, Impact BIO-5: revise comment on Bishop Pine Forest [p. 3.4.53]
- Section 3.4.6, Cumulative Impacts: add reference to new BIO-2b [p. 3.4.54]
- New Appendix: Add Bishop Pine Mitigation Plan [Appendix L].

3.9 Hydrology and Water Quality

- Section 3.9.5, Impact HWQ-1, Operation: addition of discussion concerning the Project's recycling areas [p.3.9.11]
- Section 3.9.5, Mitigation Measure HWQ-4: amend title and add a fourth standard [p. 3.9.19]

4.0 Alternatives Description & Analysis

- Section 4.1.1: note that additional alternatives to be analyzed are Empire Waste Management property, Leisure Time RV Park, and Mendocino Parks & Recreation District property [p. 4.2]
- Section 4.2.2: Alternative 2: add comment on noise [p.4.5]
- Add Section 4.2.3: Alternative 3: Empire Waste Management property [p. 4.5]
- Add Section 4.2.4: Alternative 4: Leisure Time RV Park [p. 4.8]
- Add Section 4.2.5: Alternative 5: Mendocino Parks & Recreation District property [p. 4.10]
- Section 4.3: Revised to consider additional alternatives [p. 4.12]
- Section 4.4: Alternatives Not Carried Forward: delete references to sites now analyzed as alternatives [pp. 4.13-4.16]

Review process for Revised Draft EIR

Responses were provided to the public comments received on the original Draft EIR in the Response to Comments document published in June 2015. Pursuant to CEQA Guidelines Section 15088.5(f)(2), new public comment on this Revised Draft EIR shall be limited to the chapters or portions of the EIR which have been revised and recirculated (i.e., chapters 2.0, 3.1, 3.3, 3.4, 3.9 and 4.0). In other words, the partial recirculation of the Revised Draft EIR is not an opportunity to re-submit comments or add additional comments on previously published topics left unchanged in the Revised Draft EIR.

This Revised Draft EIR will be circulated for 45 days to allow interested individuals and public agencies to review and comment on the document. Written comments on the Revised Draft EIR, relating only to those chapters and portions which have been

revised, will be accepted by the Mendocino Solid Waste Management Authority (MSWMA) until the date which will be stated in the Notice of Availability. Public agencies, interested organizations and individuals are invited to submit comments to:

Mike Sweeney, General Manager
Mendocino Solid Waste Management Authority
3200 Taylor Drive
Ukiah, CA 95482
Email: sweeney@pacific.net

To facilitate understanding of and orderly responses to comments, please provide a separate sentence or paragraph for each comment, and note the page and chapter/section of the Revised Draft EIR to which the comment is directed.

The Revised Draft EIR is available for review at the address above, and at the Fort Bragg City Hall, 416 N. Franklin Street, Fort Bragg, and at the Fort Bragg Library, 499 E. Laurel Street, Fort Bragg. It is also available in downloadable format on the MSWMA website at http://mendorecycle.org.

Following the close of the comment period on the Revised Draft EIR, the lead agency will respond by preparing written responses to any significant environmental issues raised in timely comments on the revised/recirculated chapters of the Revised Draft EIR. The responses to the timely comments received on the Revised Draft EIR will be included in a new Response to Comments document.

2. Revised sections of draft EIR

2.0 Project Description

2.1 Project Overview

The Central Coast Transfer Station project would replace the existing solid waste transfer and disposal system (owned by the County of Mendocino and City of Fort Bragg, and operated by Solid Waste of Willits and Empire Waste Management) for the Central Coast region of Mendocino County with a new transfer station facility on SR 20. The new transfer station would be publicly owned and operated by a private contractor, and would allow direct haul of all solid waste to a destination landfill. The Central Coast region extends from the mouth of the Navarro River north to the southern edge of the town of Westport, and inland from the Pacific Ocean to a point approximately half-way to the inland valleys. It corresponds to the Coastal Zone of Mendocino County Solid Waste Refuse Collection Area No. 2, together with the incorporated City of Fort Bragg. In 2013, this wasteshed generated 11,882 tons of solid waste which is transferred by Empire Waste Management in truck haul pods and debris boxes.

The City of Fort Bragg and County of Mendocino would hold title to the Central Coast Transfer Station site but would not design, build, or operate the facility. A private solid waste management company would be retained under a long-term contract to carry out these functions. The contract would embody the mitigation measures set forth in this EIR. Some details of design and operation would be left to the discretion of the private operator. Any changes to the design would be analyzed for consistency with the project as described and analyzed in this EIR before approval of the contract with a private solid waste management company.

2.2 Project Location

The proposed project site for the new transfer station is located in unincorporated Mendocino County approximately 3.5 miles southeast of downtown Fort Bragg. The 17-acre site will be removed from Jackson Demonstration State Forest (JDSF) at 30075 State Route 20 (Figure 2-1 - Vicinity Map), and includes a portion of Assessor's Parcel Number (APN) 019-150-05 (Figure 2-2 - Site Plan). The removal of the site from JDSF was ~~mandated~~ a***uthorized*** by AB 384 (2011), the text of which is included as Appendix I.

2.3 Project Objectives

The proposed project has the following objectives:

- To provide cost-effective and environmentally-sound waste management services to the citizens of Fort Bragg and Mendocino County.

- To construct and operate a commercial transfer station able to accommodate waste from the wasteshed, peak periods and technological changes.
- To allow the Central Coast region's solid waste to be loaded for direct haul to a destination landfill, rather than being dumped and reloaded at the Willits Transfer Station.
- To increase the efficiency of solid waste transfer from the Central Coast region in order to minimize energy use, greenhouse gas emissions, truck trips, and costs.
- To achieve public ownership of the transfer station facility to ensure long-term protection of the public interest, while accommodating private operation by a qualified solid waste entity under a contract that ensures compliance with all federal, state and local regulations and requirements.
- To isolate the transfer station, as much as possible, from potentially conflicting land uses.
- To control the rising costs of managing solid waste and recyclables for the City of Fort Bragg and Mendocino County.

2.4 Existing Solid Waste Collection/Disposal System

Currently, the region's solid waste stream is handled in different pieces. The curbside solid waste is collected by Empire Waste Management, a franchisee under separate contracts with both the County of Mendocino and the City of Fort Bragg. The curbside collection vehicles have detachable bodies (commonly referred to as "pods") which are removed and stored at Empire Waste Management's truck depot at 219 Pudding Creek Road, Fort Bragg. The pods are then loaded three-at-a-time on a flatbed semi-trailer and hauled approximately 35 miles east on SR 20 to the Willits Transfer Station, where they are emptied out and the solid waste is reloaded for long-haul to Potrero Hills Landfill in Suisun City, California. Empire Waste Management also collects solid waste in roll-off boxes (also known as debris boxes) which are hauled two-at-a-time to Willits Transfer Station. Solid waste from private vehicles is received at the Caspar self-haul transfer station at 14000 Prairie Way, Caspar, the site of a closed landfill. The waste is received in debris boxes and pods, which are hauled by Empire Waste Management to the Willits Transfer Station.

The Central Coast region also has a second, smaller self-haul transfer station located at 30180 Albion Ridge Road, Albion. The waste is received in debris boxes which are hauled by Solid Wastes of Willits to the Willits Transfer Station.

2.5 Project Description

The project includes several related components:

2.5.1 Site Acquisition and Land Swap

Following a decision by the City and County to approve the project and a contract for design, construction and operation of the facility, the next step would be for the City and County to exercise their option to take ownership of the site pursuant to AB 384 (2011).

At the request of the County of Mendocino and City of Fort Bragg, AB 384 was enacted in 2011 and added new Section 4659 to the Public Resources Code, which included provisions authorizing a multi-party/multi-property land swap whereby the state would transfer ownership of the 17-acre

JDSF site (project site) to the County/City in exchange for either ownership of 35 acres at the Caspar Landfill site or control over its future uses.

Under AB 384, the 60-acre Caspar site (Figure 3 - Project Land Exchange Parcels), including the footprint of the closed landfill, would be the subject of a conservation easement granted to the California Department of Parks & Recreation (DPR). DPR would have the option of taking ownership of the 35 westernmost acres of the site (Figure 3). The interest of DPR in the property results from the site's adjacent proximity to Russian Gulch State Park. DPR has stated in the past that operations of the Caspar self-haul transfer station (and prior to 1992, the Caspar Landfill) cause a conflict with the State Park. DPR has not indicated any plans for the 35-acre Caspar property except to keep it vacant.

Further, under the land swap authorized by AB 384, ~~twelve~~ ***12.6*** acres of redwood forest at the northeastern corner of Russian Gulch State Park (Figure 3), comprising the entire Park northeast of County Road 409, would be transferred to Jackson Demonstration State Forest (JDSF). The purpose of this transfer would be to offset the loss of forest resources caused to JDSF at the Central Coast Transfer Station site. These ~~12~~ ***12.6*** acres would become part of JDSF's Caspar Creek Experimental Watershed Study area. The Caspar Creek Experimental Watershed Study area serves as a research area for evaluating the effects of timber management on streamflow, sedimentation, and erosion. The study area was established in 1961 as a cooperative effort between the CalFire and the United States Forest Service Pacific Southwest Research Station (PSW). PSW and CalFire have a 100-year Memorandum of Understanding to continue research at the site at least through 2099. Caspar Creek is one of 11 USFS Experimental Forests and Ranges selected in 2007 to complement the national network of Long Term Ecological Research sites.

The Caspar Creek Experimental Watershed Study is an intensive scientific research project that began in the 1960's to study the erosion impacts of heavy logging that was scheduled at that time along the South Fork of Caspar Creek.[Keppeler E., Lewis J., Lisle T., Effects of Forest Management on Streamflow, Sediment Yield, and Erosion, Caspar Creek Experimental Watersheds, U.S. Forest Service, Pacific Southwest Research Center, 2003. http://www.fs.fed.us/psw/publications/4351/Keppeler2007fog.pdf]

The study generated dozens of scientific papers and contributed to the creation of the State's Forest Practices Act in 1974. Significantly, researchers have found that long-term sediment impacts from the 1960's logging have persisted and are increasing, possibly due to deterioration of old logging roads and structures. Therefore scientific interest in the South Fork of Caspar Creek will persist and any logging whatsoever would continue to be conducted under a microscope.

No logging has occurred on the South Fork since the 1970's, but a new selective timber harvest is planned for 2017-18. It will not include any activity on the 12.6 acres to be acquired by JDSF. Following that timber harvest, no further activity is presently contemplated for the South Fork and would be unlikely to happen for at least 15 years [Pam Linsted, JDSF manager, email, November 25, 2015].

JDSF maintains a "road and trail corridor" alongside County Road 409, which includes a trail paralleling Road 409, that presently is interrupted by the 12.6-acre piece of the State Park. Upon transfer of the 12.6-acre piece of property to JDSF it would be incorporated into the road and trail corridor [Linsted, November 25, 2015]. This would provide additional protection from disturbance under the JDSF Management Plan's policy concerning "Aesthetics Related Buffers." The purpose of the buffer is to "maintain aesthetic qualities valued by the public" [JDSF Management Plan, p. 275]. What this would mean in practice is that little or no timber harvesting activity would occur on the property that would be visible from Road 409 through the property [Linstead, July 28, 2015], which constitutes the entire southwestern boundary of the 12.6 acres.

Further, habitat for the Marbled murrelet, a bird species that is California listed as endangered and federal listed as threatened, has recently been detected in Russian Gulch State Park. On July 16, 2015, State Parks environmental scientists identified over 20 trees on the 12.6 acres which are prime marbled murrelet habitat [email from Renee Pasquinelli to Linda Perkins, August 6, 2015]. These trees are located in the northerly and easterly part of the 12.6 acres, with some close to the existing boundary with JDSF [Pasquinelli, August 26, 2015]. This endangered-species habitat on the 12.6 acres is now documented and must be protected in accordance with the California and federal endangered species laws.

Should logging ever be proposed on the 12.6 acres, CEQA review in the form of a Timber Harvest Plan would be required. The Timber Harvest Plan approval process is equivalent to the environmental review process under CEQA because the California Department of Forestry and Fire Protection's timber harvesting regulatory program is a certified regulatory program pursuant to Public Resource Code § 21080.5. [CEQA Guidelines 14 CCR 15251(e)]. All timber harvests in JDSF are subject to a Timber Harvest Plan [Linsted, November 25, 2015].

2.5.2 Facility Construction

After obtaining the required permits, the company that was awarded the design-construction-operations contract would build the facility within the parameters set forth in the adopted EIR. As described in this EIR, the construction would entail land clearing, road improvements to SR 20, building and paving, and on-site utilities.

Site preparation would take approximately two weeks, followed by grading/excavation which would take approximately one month. Trenching would take approximately three weeks. Construction of the buildings would take approximately four months, and paving approximately two weeks. Construction equipment for site preparation and grading/excavation would include: excavator, rubber tired dozer, backhoe, dump truck, water truck, and vibratory roller. Building construction and

paving would include the following additional equipment: crane, forklift, generator sets, welders, flatbed truck, mini bobcat, and cement and mortar mixers.

Soil hauling volume is estimated at 5,000 cubic yards of export and 6,000 cubic yards of import, for a net import of 1,000 cubic yards. Asphalt has been estimated at approximately 1,200 cubic yards.

2.5.3 Facility operation

The transfer station would commence operations as described elsewhere in this section and receive the entire solid waste disposal stream from the Central Coast wasteshed, for transfer to a destination landfill.

1.1.1 2.5.4 Closure of existing facilities

With the opening of the new transfer station, the existing Caspar self-haul transfer station would cease operations and Empire Waste Management would cease its direct-haul transfer to Willits Transfer Station and instead use the new transfer station. The Albion self-haul transfer station would continue to operate but its solid waste would be redirected to the new Central Coast Transfer Station.

2.5.5 New Facility Description

The Central Coast Transfer Station facility would include a solid waste transfer building (with loading bay and unloading and waste areas), an outdoor recycling drop-off area, two scales and office (scalehouse), paved driveways, parking areas for the public and transfer trailers, two stormwater detention areas, a groundwater well, a septic tank and leachfield, and perimeter fencing immediately outside the developed project footprint. The site plan is shown in Figure 2-2. A single gate on SR 20 would accommodate all vehicle entry and exit. Vehicles would pull up at the scalehouse for inspection, weighing or volume measurement, and to pay applicable charges. The Transfer Building would be approximately 30,000 square feet and enclosed. Enclosure would reduce or prevent off-site noise, odors, and dust. In addition, the design would be compatible with installation of control measures such as negative-pressure ventilation with biofiltered exhaust, automated roll-up doors, and/or doorway air curtains, should they be necessary to prevent off-site transmission of odor.

Some vehicles would operate outdoors in the recycling area, most likely a single loader and occasional roll-off trucks to change-out debris boxes as necessary. These vehicles would use “white-sound” OSHA-approved backup alarms such as the Brigade which replaces the typical loud “ping” with a directional buzzing sound with much less range.

All solid and green waste (leaves, brush, landscape trimmings, and unfinished wood) would be deposited inside the transfer building. These materials would be loaded into transfer trailers using a method to be determined by the operator, such as a grapple crane. When a transfer trailer is fully loaded, it would be driven

Typical possum belly transfer trailer used for solid waste hauling

directly to a destination landfill to be specified under the operator's contract. The facility may utilize high-volume possum belly trailers to transport solid waste (the image is an example of a possum belly trailer, length may vary). These high-volume trailers can legally haul up to 10 percent more waste than a standard waste hauling trailer. More tons per load equates to less trips. Solid waste would typically be removed within 24 hours; however, it is possible that in some situations, such as weekends/holidays, waste could remain for up to 48 hours. Among the fully-permitted regional landfills that might receive the solid waste are Potrero Hills in Suisun City, Redwood in Novato, Sonoma Central in Petaluma, Anderson in Anderson, Ostrum Road in Wheatland, Lake County in Clearlake, Recology Hay Road in Vacaville, and Keller Canyon in Pittsburg. Green waste would be hauled to Cold Creek Compost in Potter Valley or another fully-permitted compost facility. Transfer vehicles leaving the facility would proceed east on SR 20.

The recycling drop-off area would duplicate the drop-off services presently provided at the Caspar self-haul transfer station. Cans, bottles, cardboard, paper and mixed plastics would be collected together in debris boxes (see outdoor recycling area in Figure 2-2). Scrap metal, appliances, electronics and concrete rubble would be received in paved bunkers or debris boxes. Used motor oil and used antifreeze would be collected in secure tanks with secondary containment (see outdoor recycling area in Figure 2-2). Other recyclable household hazardous waste items, including electronics, fluorescent lights, and batteries, would be collected in secure containment areas. All other hazardous wastes would be prohibited at the facility and customers would be referred to the periodic HazMobile household and small business hazardous waste mobile collection system.

For the purposes of evaluation and analysis in this EIR, a total of 4.72 acres is assumed to be disturbed by the project-- approximately 3.76 acres within the project footprint, and 0.96 acre for a 10-foot buffer (construction/temporary).

The site is heavily forested and as much of the original vegetation as possible would be preserved. No new landscaping is planned.

The motor oil recycling tank, antifreeze recycling tank, appliance recycling drop-off area, and electronics drop-off area will be roofed to shield from rainwater, and the area will be graded to prevent stormwater entry. The facility use permit will require daily clean-up of any spills or staining.

2.5.6 Hours of Operation

The transfer station would operate five days per week for self-haul customers and the franchised hauler, and two additional days per week for the self-haul customers only. The exact hours of operation would be determined by the operations contracts; however, it is anticipated to be between 8:00 a.m. and 5:00 p.m. There would be approximately four employees on site.

2.5.7 Capacity

Based on the current wastestream, documented by transfer station records, the solid waste throughput would average 35 tons per day year-round, with a peak day of 50 tons per day. The facility could handle a larger wastestream by more intensive utilization of the same infrastructure. The future size of the wastestream is speculative. There has been no growth (an actual decrease has occurred) in the region's disposal wastestream over the last ~~six~~ ***eight*** years as shown by Table 2-1, and City and County annual population growth projections are less than one percent.

According to the Fort Bragg General Plan Land Use Element, “it is expected that growth will continue to occur at a slow but regular pace (i.e., less than 0.5 percent per year) as experienced in the last decade (Fort Bragg 2012).” The Mendocino County General Plan “projects the County’s total population will increase to 93,166 persons by the year 2010, and then increase an average of 9.5 percent every 10 years to a population of 134,358 in 2050” (California Department of Finance 2007).

The region has a highly-developed waste diversion system and strong public support for waste diversion. One possible source of substantial future growth might be development of the 315-acre former Georgia-Pacific Mill Site in the City of Fort Bragg. While it is unknown if or when this development might occur, the possible mix of residential, commercial and industrial zoning for the Mill Site has been set forth in a draft specific plan. The proposed transfer station could accommodate the waste generation of the Mill Site development without the need for expansion of the original infrastructure. Based on the draft specific plan, the land uses would be of types that would utilize the curbside collection of the franchised hauler, meaning that the solid waste would be transported to the transfer station in relatively few trips by the hauler’s compactor trucks.

Table 2-1 Solid Waste Disposal in the Region

Year	Solid Waste Disposal of Region (tons)
2008	14,300
2009	12,334
2010	11,691
2011	11,078
2012	11,060
2013	11,882
2014	***12,034***
2015	***13,224***

Source: Disposal Reports, Willits Transfer Station

2.5.8 Facility Access and State Route Improvements

Access to the project site would be controlled by gate with security fencing surrounding the perimeter of the facility. The site will include two queuing lanes for ingress and one queuing lane for egress. Vehicles would enter and exit the facility directly from SR 20, which would be improved with deceleration and acceleration lanes as illustrated in Figure 2-2. SR 20 improvements would include acceleration and deceleration lanes per California Department of Transportation (Caltrans) standards. SR 20 would be widened from the roadway centerline north to accommodate the acceleration and deceleration lanes, and for the new eastbound left-turn pocket and westbound right-turn pockets at the proposed project access point.

All vehicles carrying solid waste and other materials that may have a fee charged for their disposal would enter and leave the site across the scales. Customers with mixed loads including items that

can be dropped off for free or that are paid for on a per item basis may be routed through the outdoor recycling area.

2.5.9 Utilities and Public Services

Potable water for the facility would be provided by a new on-site well. Sewer for the single restroom would be handled via an on-site septic tank and leachfield, or a holding-tank system. Three-phase electrical power is available on the SR 20 frontage.

2.5.10 Energy Usage

Operation of the solid waste transfer station would require electricity for general operation of the facility, lighting for the scalehouse and restroom, interior lighting for the unloading area, and security lighting. Except in unusual or emergency circumstances, all operations would take place during daylight hours so there would be no need for exterior lighting except for minimal security lighting which would be shielded and downcast. The transfer building would incorporate translucent panels in the ceiling and/or walls to provide interior illumination, thereby minimizing the need for interior lights.

Trucks and self-haul vehicles would use gasoline/diesel to deliver solid waste and recycling materials to the facility. Trucks would use diesel for delivery of the transfer trailers to a destination landfill. The amount of diesel used annually for the delivery of transfer trailers to the Willits Transfer Station under existing conditions is approximately 54,630 gallons per year. The amount of diesel used annually for the delivery of transfer trailers to a destination landfill under project conditions is unknown at this time.

Currently, the franchised hauler collection trucks make an average of 63 trips per week or 3,276 trips annually for its curbside collection routes throughout Fort Bragg and the unincorporated area. The trucks are based at 219 Pudding Creek Road, Fort Bragg, and return there to unload their pods. These trucks would be diverted to unload at the proposed transfer station, causing an average of eight additional miles of travel for each truck. The additional miles per year would be approximately 26,208 miles per year and approximately 8,293 gallons of diesel annually.

Self-haul vehicles currently drop off at the Caspar Transfer Station. The population centroid of the service area has been determined by the Mendocino County GPS Coordinator to be a point approximately one mile northeast of the intersection of SR 20 and SR 1. Since the entire service area has non-mandatory trash collection at similar prices for identical terms of service, the centroid for self-haul trip generation is assumed to be the same as the population centroid. From the SR 20 and SR 1 intersection, the Caspar Transfer Station is 6.8 miles away and the project site is 3.0 miles away, which would equate to approximately 7.6 miles saved per visit, or 162,032 miles per year. Using an estimate of 17 miles per gallon for self-haul vehicles, the amount of fuel saved would be approximately 9,531 gallons.

2.5.11 Stormwater Detention Facilities

Two stormwater detention facilities have been planned for the proposed project (Figure 2-2). The detention basins would be designed to be an impoundment lined with vegetated soil. Stormwater runoff would be conveyed from the site to these basins through bioswales and from surface runoff. Stormwater collects in the basins and the outlet would allow water to drain slowly, while sediment

and other particulate forms of pollutants settle out. At full capacity, the basins are designed to drain in at most 72 hours and at least 24 hours to prevent mosquito production and allow for capture of subsequent storms. These basins would be designed to remain dry except during a runoff event and the detention period afterward. When maintenance is required, accumulated sediment would be removed, characterized, and disposed of appropriately.

2.5.12 On-site Well

An on-site potable water well would be constructed to supply water for operations and for drinking water. The well would be located east of the facility (Figure 2-2) and would supply water to a holding tank, with sufficient capacity for the facility's needs including fire protection as required by CalFire. The well would be constructed according to the California Department of Public Health (CDPH) standards, which consider 100-foot offsets from the transfer station building and proper well construction including a sanitary seal, with adequate materials for the casing and screen. The pump used in the well would be a submersible pump logically tied with telemetry to the storage tank. An approximately 10-foot wide by 55-foot long road would be constructed leading to the pumphouse for the well. The road would be top dressed with gravel and the pumphouse would be approximately four feet by four feet. To protect groundwater quality, transfer trailers will be prohibited from parking on the eastern side of the facility through barriers and signage.

2.5.13 Holding Tank Sewer System

As an alternative to a septic tank and leachfield, a sewage holding tank could be provided subject to regulatory approval. The tank would be located in close proximity to the restrooms. The holding tank would be designed with sufficient capacity to accommodate five employees and several visitors per day. Construction of the holding tank would be in accordance with Mendocino County Division of Environmental Health's Minimum Standards for On-site Sewage Systems standards, including appropriate materials, access ports, and an over flow alarm. The tank would be emptied as necessary by a permitted septic tank service.

2.5.14 Caspar Transfer Station Closure

Closure of the Caspar self-haul transfer station would involve shutting the gate and ceasing acceptance of solid waste. This would occur within one week of the opening of the new transfer station. It is anticipated that removal of small and existing portable structures, including the gate house, lockers and stationary compactors, would occur at some point after the Caspar transfer station closes. At this time there is no requirement or intention to demolish any of the existing structures at the Caspar facility. Any future demolition would depend on funding and future use of the site by DPR.

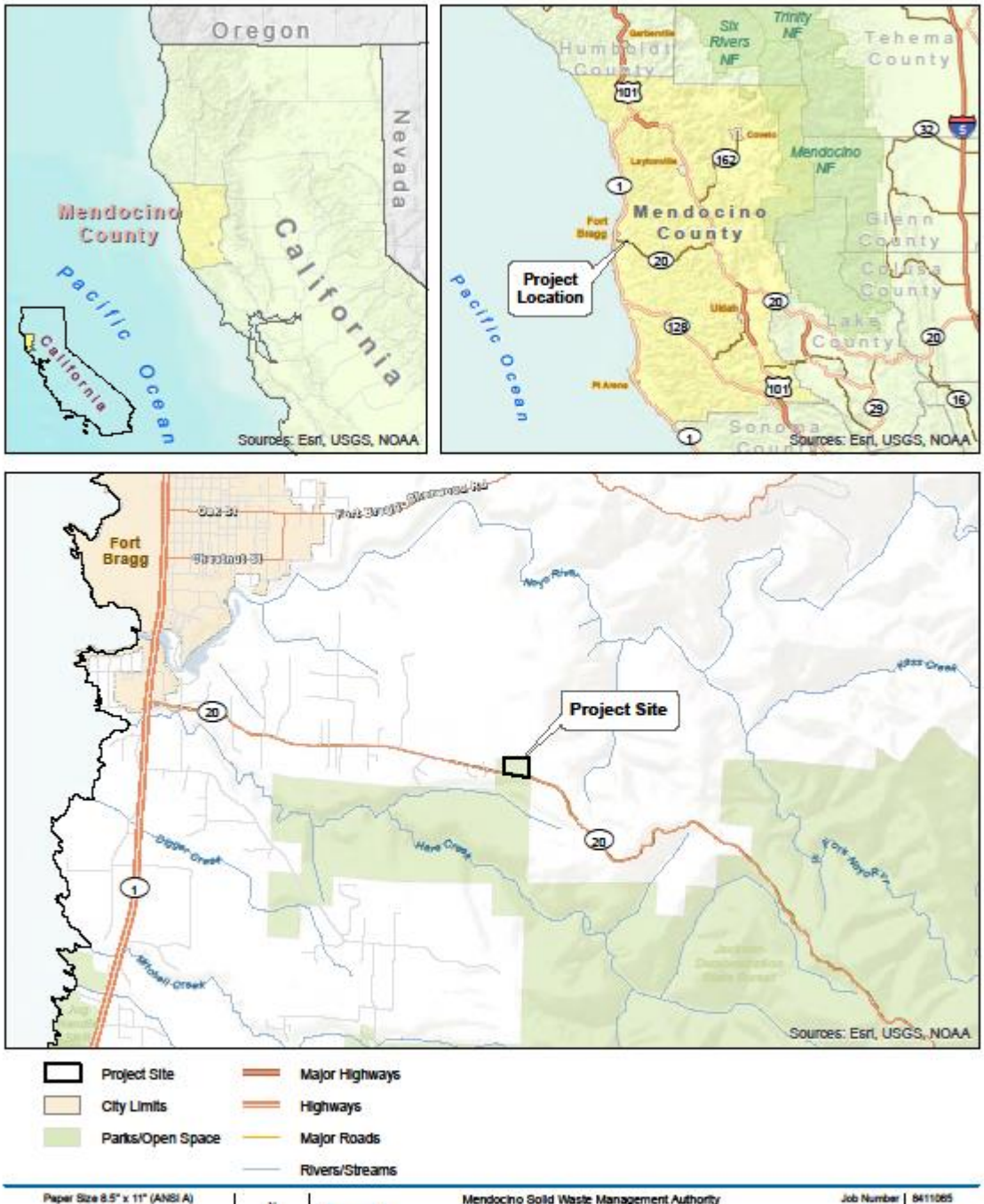
2.5.15 Construction Schedule and Duration

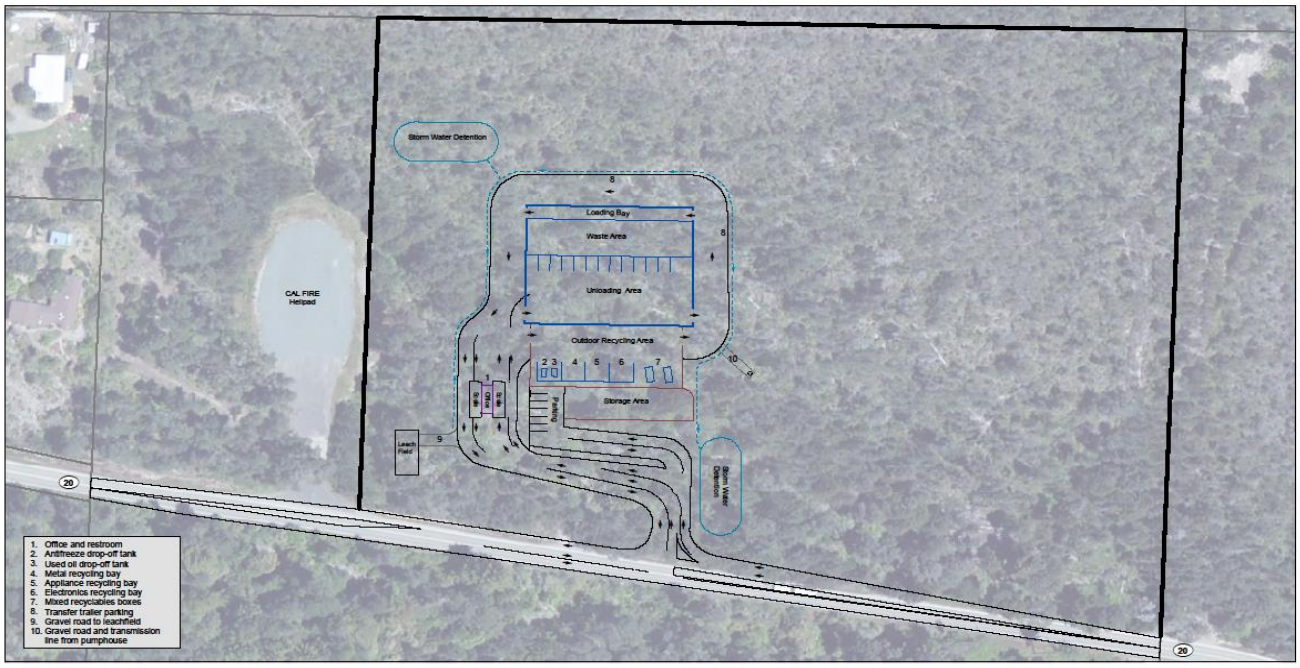
The timeline for construction is dependent on a number of factors. It is estimated that construction would commence within 24 months from certification of the EIR, followed by up to six months of construction depending on weather. Hours of construction would be between the hours of 8:00 AM and 6:00 PM.

2.6 Required Permits and Approvals

As anticipated by the existing provisions of the Caspar JPA agreement, the JPA will be amended to specify the roles of the City and County in transfer station contract administration, land title, and site supervision. The project would require the following permits/approvals:

- Acquisition of the project site by the County of Mendocino and the City of Fort Bragg
- Major use permit by the County of Mendocino as a Civic Type Use – Major Impact Services & Utilities
- Approval by California Department of Forestry & Fire Protection of a Timberland Conversion Plan, Timberland Conversion Permit, and Timber Harvest Plan
- Encroachment permit and related approvals by the California Department of Transportation for improvements to SR 20
- Solid waste facilities permit from the California Department of Resource Recovery & Recycling
- Stormwater discharge permit (National Pollutant Discharge Elimination System) from the Water Quality Control Board
- Well construction permit from the Mendocino County Health Department
- Permit for the construction of a septic system from the Mendocino County Health Department.
- ***Variance from California Department of Forestry & Fire Protection for reduced setback from vegetation because of non-flammability of building.***


Oregon
Nevada
California
Mendocino County
Pacific Ocean
Sources: Esri, USGS, NOAA
Six Rivers NF
Trinity NF
Tehama County
Humboldt County
Mendocino NF
Mendocino County
Fort Bragg
Project Location
Glenn County
Colusa County
Lake County
Sonoma County
Fort Bragg
Project Site
Sources: Esri, USGS, NOAA
Project Site
City Limits
Parks/Open Space
Major Highways
Highways
Major Roads
Rivers/Streams
Paper Size 8.5" x 11" (ANSI A)
Miles
Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet
Mendocino Solid Waste Management Authority
Central Coast Transfer Station EIR
Job Number 8411065
Revision A
Date 05 Nov 2014
Vicinity Map and Project Location
Figure 2-1



Paper Size 11" x 17" (ANSI B)

0 50 100 150 200 Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California II FIPS 0402 Feet

17 Acre Portion of APN 019-150-05

Parcels

Bio-swale

Direction of Travel

Mendocino Solid Waste Management Authority
Central Coast Transfer Station EIR

Job Number 8411065
Revision A
Date 20 Jan 2015

Site Plan

Figure 2-2

© 2013. While every care has been taken to prepare this map, GHD (and DATA CUSTODIAN) make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Data source: Data Custodian, Data Set Name/Title, Version/Date. Created by gdavidson

718 Third Street Eureka CA 95501 USA T 707 443 8326 F 707 444 8330 E eureka@ghd.com W www.ghd.com

3.1 Aesthetics

This section evaluates the potential impacts related to aesthetics and visual resources during construction and operation of the project. To provide the basis for this evaluation, the Setting section describes the existing scenic resources and visual character for the project area and the Regulatory Framework section describes the regulatory background that applies to the project.

3.1.1 Setting

The descriptions of existing conditions are accompanied by photographs of representative views taken during a site visit on May 7, 2014. The locations and viewpoints of each image are shown in Figure 3.1-1.

Visual Character of the Project Site

The project site consists of approximately 17 acres of relatively flat, coniferous forest, with dense underbrush. (see Images 1 through 4). The site has no built structures or roadways. SR 20 is adjacent to and directly south of the project site and the CalFire helipad is adjacent to and directly west of the project site.

Visual Character of the Surrounding Area

The dominant visual character in the immediate project area consists of forest land to the north, east, and south, and low density single family residential to the west. Between the single family homes and the project site is the CalFire emergency helipad. SR 20 provides access to the project site and runs in a predominantly east-west direction connecting the communities of Fort Bragg to the west and Willits to the east. SR 20 has one lane in each direction in the project vicinity with a minimal shoulder. Utility lines run along the south side of SR 20 in the project area.

The views for both eastbound and westbound travellers on SR 20 as they approach the project site include coniferous forest on both sides of the highway with utility lines along the south side of the highway (similar to Images 2 and 4).

3.1.2 Regulatory Framework

Federal

There are no federal regulations that apply to the proposed project related to visual resources in Mendocino County.

State

California Scenic Highway Program

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. According to the California Scenic Highway Program website, no State-designated scenic highways are located in the project vicinity (Caltrans 201). SR 20 is an Eligible State Scenic Highway though not officially designated.

Site Photographs

Image 1: Looking east at the project site from the west side of the helipad.

Image 2: Looking northeast at the project site from the south side of SR 20 across from the helipad entrance.

Image 3: Looking north at the approximate location of the project entry from the south side of SR 20.

Image 4: Looking northwest at the project site from the southeast corner of the project on the south side of SR 20.

Regional and Local

County of Mendocino General Plan Goals and Policies

The following are the goals and policies from the *Mendocino County General Plan* that are applicable to the project.

Goal RM-14 (Visual Character): Protection of the visual quality of the County's natural and rural landscapes, scenic resources, and areas of significant natural beauty.

Goal RM-15 (Dark Sky): Protection of the qualities of the County's night-time sky and reduced energy use.

Policy RM-80: Vegetation removal should be reviewed when involving five (5) or more acres, assessing the following impacts:

- Grading and landform modifications including effects on site stability, soil erosion and hydrology.
- Effects on the natural vegetative cover and ecology in the project area.
- Degradation to sensitive resources, habitat and fisheries resources.
- Compatibility with surrounding uses.
- Visual impacts from public vantage points.

Policy RM-126: New development should incorporate open space and resource conservation measures, coordinated with the surrounding area.

Policy RM-128: Protect the scenic values of the County's natural and rural landscapes, scenic resources, and areas of significant natural beauty.

Policy RM-132: Maintain and enhance scenic values through development design principles and guidelines, including the following:

- Development scale and design should be subordinate to and compatible with the setting.
- Reduce the visual impacts of improvements and infrastructure.
- Minimize disturbance to natural features and vegetation, but allow selective clearing to maintain or reveal significant views.

Policy RM-134: The County shall seek to protect the qualities of the night-time sky and reduce energy use by requiring that outdoor night-time lighting is directed downward, kept within property boundaries, and reduced both in intensity and direction to the level necessary for safety and convenience.

3.1.3 Evaluation Criteria and Significance Thresholds

The project would cause a significant impact related to aesthetic resources, as defined by the CEQA Guidelines (Appendix G), if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or

- Create a new source of substantial light or glare which would adversely affect day or night-time views in the area.

Areas of No Project Impact

As explained below, construction and operation of the project would not result in impacts related to one of the significance criteria identified in Appendix G of the current CEQA Guidelines as mentioned above. The following significance criterion is not discussed further in the impact analysis, for the following reasons:

- **Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a State scenic highway**. There are no officially designated state scenic highways within Mendocino County (Caltrans 2011). SR 20 within Mendocino County is eligible, but not officially designated. Therefore, the significance criterion related to substantially damaging scenic resources within a State scenic highway is not applicable to the proposed project.

3.1.4 Methodology

The visual impact analysis below evaluates the physical changes that would occur at the project site using the CEQA Guidelines significance thresholds described above. The potential for changes to views from visually sensitive land uses also is evaluated. The visual impacts are compared against the thresholds of significance discussed above.

The projects impacts from light and glare is measured for consistency with the Mendocino County General Plan Goal RM-15 and Policy RM-134.

There would be no physical changes to the Caspar self-haul transfer station except removal of some small structures, which could be considered a beneficial aesthetic impact to the site. Therefore, the Caspar site is not considered further in this analysis. Likewise, the transfer of 12.6 acres from Russian Gulch State Park to JDSF involves no physical changes and therefore no aesthetic impacts.

3.1.5 Impacts and Mitigation Measures

Impact AES-1: Substantial Adverse Effect on Scenic Vistas.

A scenic vista is generally defined (dictionary) as a view that has remarkable scenery or a broad or outstanding view of the natural landscape. These conditions do not exist at the project site or in the surrounding area. The site does have scenic qualities; however, they are not remarkable or outstanding. The project site and surrounding area includes forest land consisting of a variety of species, including pygmy forest; however, the proposed project would be situated within the central portion of the site, behind a screen provided by existing tall trees and undergrowth, as shown in Images 2 and 3, which would remain, so that views of the buildings and ancillary facilities would be shielded from off-site view. Consistent with Policies RM-126, RM-128, and RM-132, site construction would leave much of the surrounding natural vegetation, approximately 12 acres, as undisturbed open space on all sides with the exception of the entry point on SR 20. The visual impact to residences to the west is expected to be minimal because of the intervening trees, vegetation, and helipad that would shield views of the project site. The helipad was created with fill which has increased its elevation to approximately 433 feet (above sea level), thus creating a visual barrier between the neighboring properties and the project site which are at an elevation of approximately 397 feet. The distance from the center of the helipad and closest property line to the

west is approximately 250 feet. Therefore, development of the project site would not have a substantial adverse effect on a scenic vista. The impact to scenic vistas would be less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: **Less than significant.**

Impact AES-2: Substantially Degrade Existing Visual Character of Site and Surroundings.

The project site is surrounded by forest land to the north, east and south, and a helipad and single family residences to the west. The conversion of this site to a transfer station facility would alter the site's visual character by introducing buildings, paved areas, fencing, and automobile and truck traffic when in operation. However, as noted above under Impact AES-1, the proposed project facilities would be situated within the central portion of the site, behind a screen provided by existing vegetation, so that views of the buildings and ancillary facilities would be shielded by trees, vegetation, and topography, from off-site views.

The proposed transfer station building would have a peak height of approximately 50 feet, while other buildings on the site would generally be one story with typical heights of 20 feet or less. The main transfer station building would be approximately 275 feet from the edge of pavement on SR 20, and approximately 600 feet east of the nearest residential home to the west (Figure 2-2). Although travelers along SR 20 would have views of the facilities at the entryway, they would be fleeting and minimized by the existing trees which would be maintained as part of the project. Therefore, because of the distance of the main transfer station building from SR 20 and residences to the west, and the height of the existing trees and vegetation, as well as topography, views of the transfer station building and ancillary facilities would be minimal to non-existent in most instances. The impact to the visual character of the site and surroundings would not be substantial and therefore would be less than significant.

State Vehicle Code Section 23115 requires that all loads are properly secured to prevent litter and other articles from escaping. Transfer station operators warn self-hauling customers to comply and sometimes levy penalty rates for uncovered loads. The transfer station operators also routinely take responsibility for roadside litter clean-up in the vicinity of their facilities. The contract between the operator and the City and County will specify the litter prevention and clean-up responsibilities of the operator.

Mitigation Measures: No mitigation is necessary.

Level of Significance: **Less than significant.**

Impact AES-3: Impacts from Nighttime Lighting and Glare.

Under current conditions, the proposed project site does not generate any light or glare. Although the proposed transfer station would normally operate only during daylight hours, there would be outdoor lighting available for buildings, parking areas and other facilities in case unusual or emergency circumstances caused nighttime operation. The facilities are not expected to produce any perceived glare because operations would normally occur only in daylight hours and any exterior lighting would be shielded and downcast. Light poles would not be taller than necessary to provide appropriate lighting for security and safety. As noted previously, because of the distance of the transfer station building from SR 20 and residences to the west, and the density of the existing trees and vegetation, the facility's lighting would not be expected to adversely affect adjacent land

uses. Additionally, because facility lighting would be focused downward and not up into the sky, the project will be consistent with the County's "dark sky" goal and policy (Goal RM-15 and Policy RM-134) of seeking to protect the qualities of the nighttime sky by requiring that outdoor nighttime lighting is directed downward and kept within property boundaries. The impact from nighttime lighting and glare would be less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: **Less than significant.**

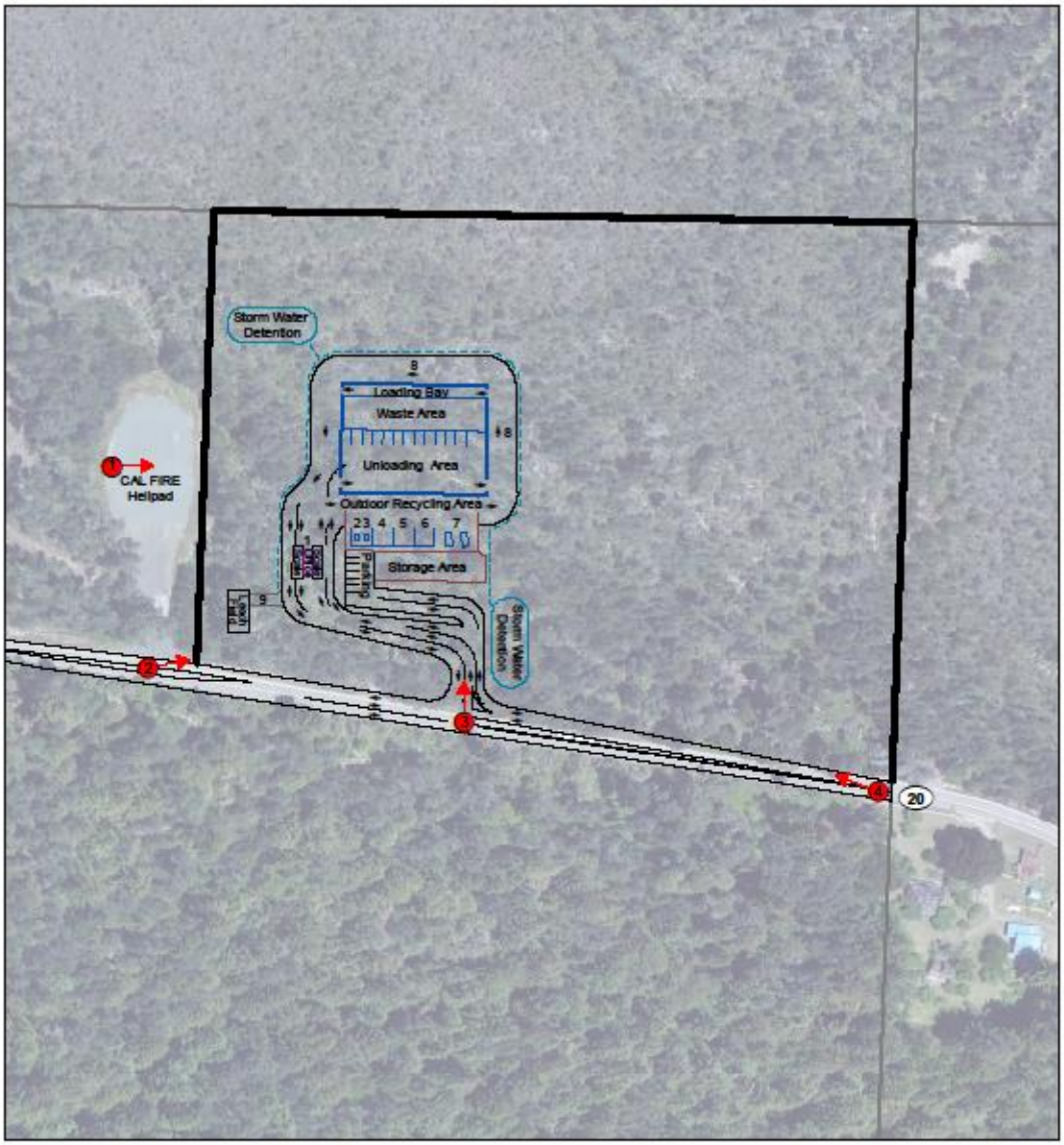
3.1.6 Cumulative Impacts

Impact AES-C-1: Result in Cumulatively Considerable Contribution to a Cumulative Impact Related to Aesthetic Resources.

The impacts to scenic vistas, visual character, and light/glare are not cumulatively considerable, because there are no cumulative projects located in the same viewshed as the project site. As shown in Table 3.0-1, the cumulative projects are all more than 2.9 miles from the project site. Additionally, impacts to a scenic vista or visual character would be dependent upon project- and site-specific variables, including proximity to visually sensitive receptors, the visual sensitivity of the respective development sites, and the operational characteristics of each development site. The potential impacts of other projects on a scenic vista or visual character of a development site and its surroundings would be evaluated on a project-by-project basis. It is assumed that cumulative development would progress in accordance with the Zoning/Development Code of the respective jurisdictions. Each project would be analyzed in order to ensure the construction-related Zoning/Development Code restrictions are consistently upheld. Cumulative impacts to a scenic vista or visual character would not be cumulatively considerable.

Mitigation Measures: No mitigation is necessary.

Level of Significance: **Less than significant.**



1. Office and restroom
2. Antifreeze drop-off tank
3. Used oil drop-off tank
4. Metal recycling bay
5. Appliance recycling bay
6. Electronics recycling bay
7. Mixed recyclables boxes
8. Transfer trailer parking
9. Unpaved driveway to leachfield

Image Viewpoint Location

Paper Size ANSI A
0 50 100 150 200
Feet
Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California II FIPS 0402 Feet

Mendocino Solid Waste Management Authority
Central Coast Transfer Station EIR

Job Number 8411065
Revision A
Date 30 Jul 2014

Viewpoint Locations

Figure 3.1-1

© 2012. Whilst every care has been taken to prepare this map, GHD (and DATA CUSTODIAN) make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Data source: Data Custodian, Data Set Name/Title, Version/Date. Created by jrousseau

3.3 Air Quality and Odor

This section includes a summary of applicable regulations, existing air quality and odor conditions and an analysis of potential impacts related to air quality and odor during construction and operation of the project. The impacts and mitigation measures section establishes the thresholds of significance, evaluates potential air quality and odor impacts, and identifies the significance of impacts. Where appropriate, mitigation is presented to reduce impacts to less-than-significant levels.

3.3.1 Setting

The proposed project would be located in Mendocino County in the North Coast Air Basin. The county covers 3,510 square miles and is bounded on the west by the Pacific Ocean and on the east by mountains that separate the North Coast and Sacramento River Air Basins. The county's east-west width varies from 35 to 60 miles, and its north-south length is approximately 80 miles. Within 20 miles of the ocean, the county landscape rises to 3,000 feet in a series of ridges parallel to the coast and separated by narrow valleys. The alluvial valleys that run parallel to the coast and mountain ranges are 1,000 to 1,500 feet above sea level in the central part of the county; and drop to 500 feet above sea level at the points where the Eel and Russian Rivers leave the County. The project site is located about 3 miles east of Fort Bragg.

The climate of Fort Bragg is maritime, with high humidity throughout the year. There are distinct wet and dry seasons. The rainy season lasts from October through April, accounting for about 90 percent of annual precipitation. The dry season, lasting from May through September, is characterized by regular intrusions of low clouds and fog that usually clear by late morning. Early afternoon generally is mostly sunny with low clouds moving in by evening. Temperatures are moderate, and the annual range is one of the smallest in the lower 48 states. During a typical year, the low temperatures are in the mid-30s (degrees Fahrenheit) and the high temperatures reach the mid-70s. The reason for the small temperature range is the proximity to the Pacific Ocean. The prevailing northwest wind blows across the cold, upwelling water that is almost always present along the Mendocino County coast.

Wind data for Fort Bragg are reported in the California Surface Wind Climatology (CARB 1984). The predominant wind flow is from the northwest. A secondary predominant flow is from the southeast, occurring primarily in fall and winter. The mean wind speed is 7.6 miles per hour (mph), with spring having the highest mean wind speed out of the northwest.

Existing Air Quality – Criteria Air Pollutants

California and the federal government (i.e., U.S. Environmental Protection Agency [EPA]) have established ambient air quality standards for several different pollutants. Most standards have been set to protect public health, but standards for some pollutants have other purposes, such as to protect crops, protect materials, or avoid nuisance conditions. Table 3.3-1 summarizes state and federal ambient air quality standards.

Among the pollutants that may be generated by the proposed project, those of greatest concern are emitted by motor vehicles. These pollutants include fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) and particulate matter less than 10 microns in diameter (PM_{10}). Other pollutants

that are less problematic to the region include ozone precursors NOX and reactive organic gases [ROG]) and carbon monoxide. The specifics of each of these pollutants are discussed below.

Particulate Matter

Particulate matter (PM) is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, and dust. Particles 10 microns or less in diameter are defined as "respirable particulate matter" or "PM10." Fine particles are 2.5 microns or less in diameter ($PM_{2.5}$) and, while also respirable, can contribute significantly to regional haze and reduction of visibility. Inhalable particulates come from smoke, dust, aerosols, and metallic oxides. Although particulates are found naturally in the air, most particulate matter found in the vicinity of the project site is emitted either directly or indirectly by motor vehicles, industry, construction, agricultural activities, and wind erosion of disturbed areas. Most $PM_{2.5}$ is comprised of combustion products such as smoke. Extended exposure to PM can increase the risk of chronic respiratory disease (BAAQMD 2011a). PM exposure is also associated with increased risk of premature deaths, especially in the elderly and people with pre-existing cardiopulmonary disease. In June 2002, the California Air Resources Board (CARB) adopted new ambient air quality standards for PM_{10} and $PM_{2.5}$, resulting from an extensive review of the health-based scientific literature. The U.S. EPA adopted a more stringent 24-hour $PM_{2.5}$ standard of 35 micrograms per cubic meter (µg/m3) in September 2006, replacing the older standard of 65 µg/m3 (BAAQMD 2012).

Ozone

Ground-level ozone is the principal component of smog. Ozone is not directly emitted into the atmosphere, but instead forms through a photochemical reaction of ROG and nitrogen oxides, which are known as ozone precursors. Ozone levels are highest from late spring through autumn when precursor emissions are high and meteorological conditions are warm and stagnant. Motor vehicles create the majority of ROG and NOX emissions in California. Exposure to levels of ozone above current ambient air quality standards can lead to human health effects such as lung inflammation and tissue damage and impaired lung functioning. Ozone exposure is also associated with symptoms such as coughing, chest tightness, shortness of breath, and the worsening of asthma symptoms (BAAQMD 2011). The greatest risk for harmful health effects belongs to outdoor workers, athletes, children, and others who spend greater amounts of time outdoors during periods of high ozone levels.

Carbon Monoxide

Carbon monoxide, known as CO, is a public health concern because it combines readily with hemoglobin in the bloodstream, reducing the amount of oxygen transported by blood. State and federal CO standards have been set for both 1-hour and 8-hour averaging times. The state 1-hour standard is 20 parts per million (ppm) by volume, and the federal 1-hour standard is 35 ppm. Both the state and federal standards are 9 ppm for the 8-hour averaging period. Motor vehicles are the dominant source of CO emissions in most areas. High CO levels develop primarily during winter, when light winds combine with ground-level temperature inversions (typically between evening and early morning). These conditions result in reduced dispersion of vehicle emissions. Also, motor vehicles emit CO at higher rates when air temperatures are low.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is an essential ingredient in the formation of ground-level ozone pollution. NO_2 is one of the NOX emitted from high-temperature combustion processes, such as those

occurring in trucks, cars, and power plants. Home heaters and gas stoves also produce NO_2 in indoor settings. Besides causing adverse health effects, NO_2 is responsible for the visibility reducing reddish-brown tinge seen in smoggy air in California. NO_2 is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract. Studies suggest that NO_2 exposure can increase the risk of acute and chronic respiratory disease (BAAQMD 2011). Due to potential health effects at or near the current air quality standard, the CARB recently revised the State ambient air quality standard for NO_2. The U.S. EPA recently adopted a new 1-hour NO_2 standard of 0.10 ppm.

Sulfur Dioxide

Sulfur dioxide is a colorless gas with a strong odor. It can damage materials through acid deposition. It is produced by the combustion of sulfur-containing fuels, such as oil and coal. Refineries, chemical plants, and pulp mills are the primary industrial sources of sulfur dioxide emissions. Sulfur dioxide concentrations in the Bay Area are well below the ambient standards. Adverse health effects associated with exposure to high levels of sulfur dioxide include irritation of lung tissue, as well as increased risk of acute and chronic respiratory illness (BAAQMD 2011).

Lead

Lead occurs in the atmosphere as particulate matter. It was primarily emitted by gasoline-powered motor vehicles, although the use of lead in fuel has been virtually eliminated. As a result, levels throughout the State have dropped dramatically.

Ambient Air Quality – Monitoring Station Data and Attainment Designations

Table 3.3-2 summarizes air quality data for monitoring stations in Mendocino County. Data from 2013 are the most recent available. The data reported in Table 3.3-2 show that ambient air quality standards were not exceeded over the 2010-2013 period at this monitoring station. Carbon monoxide, nitrogen dioxide, sulphur dioxide, and lead are not measured in the county due to the lack of emission sources. These pollutants have been measured at very low levels in the past.

Attainment Status

Areas that do not violate ambient air quality standards are considered to have attained the standard. Violations of ambient air quality standards are based on air pollutant monitoring data and are judged for each air pollutant, using the most recent three years of monitoring data. The North Coast Air Basin as a whole does not meet State standards for $PM_{10,}$ as designated by CARB. The air basin is considered attainment or unclassified for all other air pollutants. Unclassified typically means the region does not have concentrations of that pollutant that exceed ambient air quality standards.

Toxic Air Contaminants

Toxic Air Contaminants (TACs) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer or serious illness) and include, but are not limited to, the criteria air pollutants listed above. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level. The identification, regulation, and monitoring of TACs is relatively new compared to that for criteria air pollutants that have established ambient air quality standards. TACs are regulated or evaluated on the basis of risk to human health rather than comparison to an ambient air quality standard or emission-based threshold.

Table 3.3-1 Relevant California and National Ambient Air Quality Standards and Attainment Status

Pollutant	Averaging Time	California Standards	California Attainment Status	National Standards	National Attainment Status
Ozone	8-hour	0.070 ppm (137 µg/m^3)	Attainment	0.075 ppm (147µg/m^3)	Unclassified/ Attainment
	1-hour	0.09 ppm (180 µg/m^3)	Attainment	None	NA
Carbon Monoxide	1-hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Unclassified/ Attainment
	8-hour	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	
Nitrogen Dioxide	1-hour	0.18 ppm (339 µg/m^3)	Attainment	0.100 ppm (188 µg/m^3)	Unclassified/ Attainment
	Annual	0.030 ppm (57 µg/m^3)	Status not reported	0.053 ppm (100 µg/m^3)	
Sulfur Dioxide	1-hour	0.25 ppm (655 µg/m^3)	Attainment	0.075 ppm (196 µg/m^3)	Unclassified
	24-hour	0.04 ppm (105 µg/m^3)	Attainment	0.14 ppm (365 µg/m^3)	
	Annual	None	NA	0.03 ppm (56 µg/m^3)	
Respirable Particulate Matter (PM_{10})	24-hour	50 µg/m^3	Nonattainment	150 µg/m^3	Unclassified
	Annual	20 µg/m^3	Nonattainment	None	
Fine Particulate Matter ($PM_{2.5}$)	24-hour	None	NA	35 µg/m^3	Unclassified/ Attainment
	Annual	12 µg/m3	Attainment	12 µg/m3	

Source: CARB (2014a and 2014b)

Notes:
ppm = parts per million
mg/m3 = milligrams per cubic meter
µg/m3 = micrograms per cubic meter

Table 3.3-2 Highest Measured Air Pollutant Concentrations in Mendocino County

		Measured Concentration		
Pollutant	Average Time	2011	2012	2013
Ozone Ukiah	8-Hour	0.047 ppm	0.061 ppm	0.049 ppm
	1-Hour	0.066 ppm	0.066 ppm	0.059 ppm
Respirable Particulate Matter (PM_{10}) Fort Bragg	24-Hour	35 µg/m^3	40 µg/m^3	47 µg/m^3
	Annual	16 µg/m^3	13 µg/m^3	14 µg/m^3
Fine Particulate Matter ($PM_{2.5}$) Willits	24-Hour	26 µg/m^3	24 µg/m^3	26 µg/m^3
	Annual	10 µg/m^3	7 µg/m^3	NA

Source: CARB 2014c

Diesel exhaust is the predominant TAC in urban air with the potential to cause cancer. It is estimated to represent about two-thirds of the cancer risk from TACs (based on the statewide average). According to the CARB, diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the federal Hazardous Air Pollutants programs. California has adopted a comprehensive diesel risk reduction program. The U.S. EPA and the CARB adopted low-sulfur diesel fuel standards in 2006 that reduce diesel particulate matter substantially. The CARB recently adopted new regulations requiring the retrofit and/or replacement of construction equipment, on-highway diesel trucks, and diesel buses in order to lower PM2.5 emissions and reduce statewide cancer risk from diesel exhaust.

Sensitive Receptors

Sensitive receptors are people who are particularly susceptible to the adverse effects of air pollution. The CARB has identified the following people who are most likely to be affected by air pollution: children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases. Residential areas are also considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. The closest sensitive receptors include single-family residences 500 feet west or further and 1,000 feet east-southeast from the active parts of the facility.

3.3.2 Regulatory Framework

Federal

The federal Clean Air Act of 1977 (CAA) governs air quality in the United States. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act. At the federal level, the U.S. EPA administers the Clean Air Act. The California Clean Air Act is administered by the CARB and by the Air Quality Management Districts at the regional and local levels.

The U.S. EPA is responsible for enforcing the federal CAA. The U.S. EPA is also responsible for establishing the National Ambient Air Quality Standards (NAAQS). The NAAQS are required under the CAA and subsequent amendments. The U.S. EPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships and certain types of locomotives. The U.S. EPA has jurisdiction over emission sources outside State waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission standards established by the CARB.

State

In California, the CARB, which is part of the California Environmental Protection Agency, is responsible for meeting the State requirements of the federal Clean Air Act, administering the California Clean Air Act, and establishing the California Ambient Air Quality Standards (CAAQS). The California Clean Air Act, as amended in 1992, requires all air districts in the State to endeavor to achieve and maintain the CAAQS. The CARB regulates mobile air pollution sources, such as motor vehicles. It is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. The CARB

established passenger vehicle fuel specifications, which became effective in March 1996. It oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level.

Regional and Local

Mendocino County Air Quality Management District

The Mendocino County Air Quality Management District (MCAQMD) is one of 35 local air districts in California. The mission of the MCAQMD is to protect and manage air quality. The MCAQMD has permit authority over most types of stationary emission sources and can require stationary sources to obtain permits, impose emission limits, set fuel or material specifications, or establish operational limits to reduce air emissions. The MCAQMD regulates new or expanding stationary sources of toxic air contaminants. The District is managed by a five member Board of locally elected officials which currently consists of all five members of the Mendocino County Board of Supervisors.

In January 2005 the MCAQMD adopted the Particulate Matter Attainment Plan. The District is in attainment for all Federal criteria air pollutants and is also in attainment for all State standards except PM10. Districts designated non-attainment for all pollutants except PM10 are required to prepare an attainment plan. While the District is not required to prepare a PM10 attainment plan the District is required to prevent significant deterioration of local air quality and make reasonable efforts toward achieving attainment status for all pollutants. In general, 'reasonable progress' is defined as a 5% reduction in emissions per year, until the standard is attained. SB 656 requires the District to list particulate matter control measures it considers cost-effective and develop a schedule for their implementation. The Particulate Matter Attainment Plan is designed to serve as a summary of the District's current status, a long range planning tool, and a roadmap for future District policy.

Emissions of fugitive dust from grading operations would be subject to MCAQMD Rule 1-400(a), Rule 430(a) and Rule 430(b). The project operator would have to submit a Large Grading Operation Permit application to MCAQMD. Construction activities would be subject to District rules (as noted above) that prohibit the handling, transportation, or open storage of materials, or the conduct of other activities in such a manner that allows or may allow unnecessary amounts of particulate matter to become airborne except when reasonable precautions are taken to prevent emissions and District-required airborne dust control measures are implemented.

Mendocino County General Plan Goals and Policies

The Mendocino County General Plan contains goals, policies, standards, and implementation programs pertinent to air quality. The following general plan policies regarding air quality are considered relevant to the proposed project:

Policy RM-37: Public and private development shall not exceed Mendocino County Air Quality Management District emissions standards.

Policy RM-38: The County shall work to reduce or mitigate particulate matter emissions resulting from development, including emissions from wood-burning devices.

Policy RM-43: Reduce the effects of earth-moving, grading, clearing and construction activities on air quality.

Policy RM-44: New development should be focused within and around community areas to reduce vehicle travel.

Policy RM-45: Encourage the use of alternative fuels, energy sources and advanced technologies that result in fewer airborne pollutants.

Policy RM-46: Reduce or eliminate exposure of persons, especially sensitive populations, to air toxics.

Policy RM-47: Minimize the exposure of sensitive uses, such as residences, schools, day care, group homes or medical facilities to industrial uses, transportation facilities, or other sources of air toxics.

1.1.2 3.3.3 Evaluation Criteria and Significance Thresholds

The project would cause a significant impact related to odor and air quality, as defined by the CEQA Guidelines (Appendix G), if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

MCAQMD recommends that agencies use the Bay Area Air Quality Management District's (BAAQMD) Air Quality CEQA Guideline thresholds adopted in 2010 for projects in Mendocino County (MCAQMD 2010). One difference is that MCAQMD recommends that the Indirect Source Rule [Regulation 1, Rule 1-130(i)(1)] definition of an "Indirect Source" be used to set emission thresholds for ROG and NOX. Significance thresholds used to evaluate air quality and odor impacts from this project are described in Table 3.3-3.

Areas of No Project Impact

Conflict with or obstruct implementation of the applicable air quality plan. As discussed previously, the MCAQMD has published the Particulate Matter Attainment Plan in 2005, representing the most current applicable air quality plan for the County. This plan is designed to meet the requirements of Senate Bill 656 (2003), which required the District to list particulate matter control measures it considers cost-effective and develop a schedule for their implementation. This document is designed to serve as a summary of the District's current status, a long range planning tool and a roadmap for future District policy. Consistency with this plan is the basis for determining whether the proposed project would conflict with or obstruct implementation of an applicable air quality plan. The plan includes measures dealing with such topics as wood burning stoves, campfires, dust from unpaved roads, construction grading activities, and open burning. The plan does not include measures or policies that would apply directly to operation of the project. As for the control measure regarding grading activities during construction, the measure never went through the rule-making process and consequently was not adopted. Construction and operation of the project would not result in impacts related to conflicts with an applicable air quality plan.

Table 3.3-3 Air Quality Significance Thresholds

Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
Criteria Air Pollutants			
ROG	~~180~~ ***54***	180	~~None~~ ***40***
NO_x	~~42~~ ***54***	42	~~None~~ ***40***
PM_{10}	80	80	~~None~~ ***15***
$PM_{2.5}$	54	54	10
CO	~~Not Applicable~~ ***None***	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average) ***125 tons/year***	
Fugitive Dust	~~Construction Dust Ordinance or other~~ Best Management Practices	~~None~~ ***Same as above***	
Health Risks and Hazards for New Sources			
Excess Cancer Risk	10 per one million	10 per one million	
Chronic or Acute Hazard Index	1.0	1.0	
Incremental annual average $PM_{2.5}$	~~0.3~~ ***>3.0*** µg/m^3	~~0.3~~ ***>3.0*** µg/m^3	
Health Risks and Hazards for Sensitive Receptors (Cumulative from all sources within 1,000 foot zone of influence) and Cumulative Thresholds for New Sources			
Excess Cancer Risk	100 per one million		
Chronic Hazard Index	10.0		
Annual Average $PM_{2.5}$	0.8 µg/m^3		
Odors	5 confirmed complaints per year averaged over 3 years		

Sources: BAAQMD 2011; BAAQMD 2009; and MCAQMD ~~2003~~ ***2015***

(see http://www.co.mendocino.ca.us/aqmd/pdf_files/ceqa-criteria-and-ghg.pdf)

~~(see http://www.co.mendocino.ca.us/aqmd/pdf_files/ISR_Policy.pdf)~~

1.1.3 3.3.4 Methodology

Project Emissions

The air quality impact analysis considers construction and operational impacts associated with the proposed project. Construction and operation period air pollutants were 8odelled using the latest version of the California Emissions Estimator Model, CalEEMod (Version 2013.2.2).

The on-site construction modelling was based on the construction equipment inventories and schedule provided for the project (included in Appendix C). Modeled construction phases include Site Preparation, Grading, Trenching, Exterior Building, Interior Building, and Paving. The mobile emissions during construction, which include haul truck trips, vendor or delivery truck trips, and

worker trips, were included in the CalEEMod model. The modelling assumed that construction would occur in 2016. The project was entered as a 30,000 square foot light-industrial use on five acres. The provided equipment list and schedule were used to model construction equipment emissions. Localized construction period impacts associated with fugitive dust are evaluated through the appropriate application of best management practices recommended by BAAQMD to reduce PM_{10} emissions.

Project operation was assumed to produce emissions from traffic and use of off-road equipment to process material. CalEEMod was used to compute emissions from the off-road equipment that was assumed to include a large front-end loader, forklift and grapple crane. Although not quantified for this analysis, there is a small amount of diesel used at the existing Caspar facility from the intermittent use of a loader. Under the project, this loader would no longer be used as operations at the Caspar facility would cease. Implementation of the project also would reduce, by approximately half, the amount of waste handled at the Willits Transfer Station. Thus the equipment used to move and load materials there would not be used as frequently, resulting in reduced diesel usage at the Willits facility. Therefore, the modelling results presented in this analysis are conservative, looking only at the new on-site emissions from operations and not deducting emissions that would cease with the implementation of the new transfer facility.

Net traffic emissions associated with operation of the new facility, decommissioning of the Caspar facility, and discontinued use of the Willits Transfer Station by central coast, were computed using the EMFAC2011 model developed by the CARB. This included modelling of self-haul vehicles, franchise hauling trucks, and use of large trucks to transfer material to Willits. Self-haul vehicles were assumed to be a mix of light-duty trucks, medium-duty trucks, and light heavy duty trucks, consistent with the vehicle miles travelled distribution computed by EMFAC2011. Current haul trucks were assumed to consist of diesel-powered T6 heavy heavy duty trucks. New project haul trips were assumed to be made by larger T7 heavy heavy duty trucks. The franchise haul trucks were assumed to be Solid Waste Collection Trucks. Refer to Appendix C for additional detail on the assumptions and outputs.

The traffic emissions are based on the projected change in vehicle miles travelled (VMT) combined with the emissions rates computed using EMFAC2011. Changes to VMT are based on different vehicle travel characteristics for the existing scenario and the project scenario where all self-haul materials and collected solid waste are brought to the project site, then transferred to Willits in larger trucks (only mileage to Willits was calculated as miles between Willits and the destination landfill would remain the same with implementation of the project). Table 3.7-1, in Section 3.7 Greenhouse Gas Emissions and Energy, describes the distribution of VMT for existing conditions and the project conditions. The emission rates from EMFAC2011 are based on Mendocino County default annual conditions, aggregate year of 2016 and an average travel speed of 30 miles per hour.

Appendix C includes the CalEEMod model output and emissions computations that were made using EMFAC2011.

Impacts to Sensitive Receptors

A risk assessment of construction emissions was performed to assess cancer risk and PM2.5 exposure. Construction emissions were computed using CalEEMod, as described above. The truck and worker trip lengths were calculated as 0.3 miles to reflect on- or near-site travel.

Air quality modeling of annual average diesel particulate matter (DPM) and fugitive $PM_{2.5}$ concentrations was conducted using the EPA's ISCST3 dispersion model in a screening mode. The

ISCST3 model is a steady-state, multiple-source, dispersion model designed to calculate pollutant concentrations from single or multiple sources. The model is recommended by BAAQMD for predicting air pollutant/contaminant concentrations associated with various emissions sources. The ISCST3 model predicts pollutant concentrations at receptors located in areas of flat or complex terrain from a variety of emission source types including point, area, volume and line sources.

The U.S. EPA ISCST3 dispersion model was used in screening mode to calculate concentrations of DPM and $PM_{2.5}$ concentrations at existing sensitive receptors (residences) in the vicinity of the project construction area. The ISCST3 dispersion model is a BAAQMD-recommended model for use in modelled analysis of these types of emission activities for CEQA projects. The ISCST3 modeling utilized a single area source to represent the on-site construction emissions from the project site, one for DPM exhaust emissions and the other for fugitive $PM_{2.5}$ dust emissions. To represent the construction equipment exhaust emissions, an emission release height of six meters was used for the area source. The elevated source height reflects the height of the equipment exhaust stacks and the rise of the exhaust plume. For modelled fugitive $PM_{2.5}$ emissions, a near ground level release height of two meters was used for modelled the area source. Emissions from vehicle travel on-site and off-site within about 1,000 feet of the construction site were distributed throughout the modelled area sources. Construction emissions were modelled as occurring daily between 8 a.m. – 5 p.m. when a majority of the construction activity involving equipment usage would occur.

The model used a synthetic screening level meteorological data set to determine the annual concentrations in the air quality assessment. Screening modelled encompasses a number of conservative analytical modelled techniques for estimating extreme upper bound concentrations. These “worst-case” estimates are based on simplified, but conservative assumptions of dispersion meteorology. The primary purpose of screening modelled is to assess new potential sources whose impacts may be low enough that they will not pose a threat to ambient air quality standards or health risks, thus avoiding the need for further analysis. The screening meteorological data set was obtained from the BAAQMD and used a matrix of daytime dispersion parameters for each five (5) degrees of wind direction. From this, the ISCST3 model calculates a 1-hour average. Using the BAAQMD and CARB persistence factors, the 1-hour average was converted to an annual average by applying the recommended factor of 0.1 (BAAQMD 2012). DPM and fugitive $PM_{2.5}$ concentrations were calculated at nearby sensitive receptors at heights of 1.5 meters (4.9 feet) representative of the ground level exposures for the nearby residential structures.

Increased cancer risks were calculated using the modelled concentrations and BAAQMD recommended risk assessment methods for infant exposure (3rd trimester through two years of age), child exposure, and for an adult exposure (BAAQMD 2010). The cancer risk calculations were based on applying the BAAQMD recommended age sensitivity factors to the DPM exposure parameters. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. Infant, child, and adult exposures were assumed to occur at all residences during the entire construction period. Appendix B also includes the cancer risk calculations.

Odors

The handling and storage of solid waste can produce odors. Odors are generally considered an annoyance rather than a health hazard. The ability to detect and respond to odors varies considerably among the population and is quite subjective. The receptors nearest the site are residences to the west and southeast. Odors are analysed qualitatively, based on the potential for the site to generate odors and wind patterns in the area.

3.3.5 Impacts and Mitigation Measures

Impact AQ-1: Violate Any Air Quality Standard or Result in Cumulatively Considerable Net Increase of Any Criteria Pollutant for which the Project Region is in Non-attainment.

By its very nature, air pollution is largely a cumulative impact, in that individual projects are rarely sufficient in size to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions (BAAQMD 2011). Mendocino County is considered non-attainment for PM_{10}.

Most of the construction would occur over a 6-month period, or about 132 days. Table 3.3-4 presents the project's construction period emissions, based on the CalEEMod model results. Construction period emissions would not exceed significance thresholds. During grading and construction activities, dust would be generated. The amount of dust generated would be highly variable and is dependent on the size of the area disturbed at any given time, amount of activity, soil conditions, and meteorological conditions. Unless controlled, fugitive dust emissions during construction of the proposed project would be a significant impact. In addition to measuring the construction-related emissions against specified thresholds, the BAAQMD recommends that all proposed projects implement "basic construction mitigation measures" whether or not construction-related emissions exceed applicable thresholds. Incorporation of these measures also meets the construction-related threshold for fugitive dust identified in Table 3.3-3, which is to use best management practices during construction of a project. ***In addition, the Project would be subject to requirements of MCAQMD Regulation 1, Rule 1-430***. Therefore, without inclusion of the basic construction mitigation measures as defined by the BAAQMD, the impact during construction would be significant.

Table 3.3-4 Construction Criteria Air Pollutant Emissions

Facility Site	ROG	NO_x	PM_{10}	$PM_{2.5}$
Emissions in tons per year	0.43	1.29	0.05	0.04
Average Daily Emissions (pounds per day)[1]	6.5	19.5	0.8	0.6
Threshold (pounds per day)	~~180~~ ***54***	~~42~~ ***54***	~~80~~ ***82***	54
Exceed Threshold?	No	No	No	No

Notes: [1]Assuming 132 days of construction

Project operational emissions are presented in Table 3.3-5. These include on-site emissions based on CalEEMod modelling and mobile emissions based on the traffic analysis and EMFAC2011 emission factors. The combination of the increase in emissions from the facility and the decrease of mobile emissions would result in emission well below the significance thresholds (Note, even if the reduction in mobile emissions was not included, the project emissions would still be below the thresholds). Operation of the project would have less-than-significant impacts on air quality.

Table 3.3-5 Operational Criteria Air Pollutant Emissions

Facility Site	ROG	NO_x	PM_{10}	$PM_{2.5}$	*CO*
On-Site Emissions in tons per year	0.27	1.42	1.36	0.18	***0.55***
Mobile Emissions in tons per year	(0.14)	(1.30)	(0.10)	(0.07)	***(1.02)***
Average Daily Emissions (pounds per day)[1]	0.7	0.9	7.2	0.6	-
Threshold(tons per year)	***40***	***40***	***15***	***10***	***125***
Threshold (pounds per day)	180	42	80	54	-
Exceed Threshold?	No	No	No	No	***No***

Notes:
[1]Assuming 350 days of operation per year

Mitigation Measure AQ-1: Air Quality Control Measures during Construction.

The contractor shall implement the following Best Management Practices:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible and feasible. Building pads shall be laid as soon as possible and feasible, as well, after grading unless seeding or soil binders are used.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.
9. ***Include all applicable requirements contained in District Regulation 1, Rule 1-430.***

Level of Significance: Less than significant with mitigation.

Implementation of Mitigation Measure AQ-1 complies with the best management practices recommended by the BAAQMD to reduce construction related air emissions, including dust, to a

less-than-significant level. Therefore, Impact AQ-1 would be reduced to less than significant with implementation of the Mitigation Measure AQ-1.

Impact AQ-2: Expose Sensitive Receptors to Substantial Pollutant Concentrations.

Construction of the project would result in emissions of diesel particulate matter, a TAC that causes cancer. The MCAQMD does not have community risk assessment guidelines for evaluating these impacts. Therefore, the BAAQMD guidance for evaluating community risk impacts was used. Emissions of diesel particulate matter and fugitive $PM_{2.5}$ were predicted. These emissions were input to a dispersion model to predict the exposure at sensitive receptors near the project. Cancer risk computations were performed (refer to Appendix B for the outputs).

The location of the maximum modeled DPM and $PM_{2.5}$ concentration is shown on Figure 3.3-1.Increased cancer risks were calculated using the modeled concentrations and BAAQMD recommended risk assessment methods for both a child exposure (3rd trimester through two years of age) and adult exposure (BAAQMD 2010). Since the modeling was conducted under the conservative assumption that emissions occurred daily for a full year during the construction year, the default BAAQMD exposure period of 350 days per year was used.

Results of this assessment indicate that for project construction the incremental child cancer risk at the maximally exposed individual (MEI) receptor would be 11.6 in one million and the adult incremental cancer risk would be 0.6 in one million. This would be over the threshold of 10 in one million and would be a significant impact.

The maximum annual $PM_{2.5}$ concentration was 0.285 $\mu g/m^3$ occurring at the same location where maximum cancer risk would occur. This $PM_{2.5}$ concentration is below the ~~BAAQMD~~ ***MCAQMD*** threshold of ~~0.3~~ ***3.0*** $\mu g/m^3$ used to judge the significance of health impacts from $PM_{2.5}$.

Potential non-cancer health effects due to chronic exposure to DPM were also evaluated. The chronic inhalation reference exposure level (REL) for DPM is 5 $\mu g/m^3$ (BAAQMD 2011). The maximum predicted annual DPM concentration for project construction was 0.133 $\mu g/m^3$ (see Appendix B), which is much lower than the REL. The Hazard Index (HI), which is the ratio of the annual DPM concentration to the REL, is 0.027. This HI is much lower than the ~~BAAQMD~~ ***MCAQMD*** significance criterion of a HI greater than 1.0.

Operation of the project would generate some truck traffic and localized on-site emissions. The project would introduce about 10 to 15 daily truck trips. These would be considered minor and would not increase the overall cancer risk significantly. Impacts from pollutants emitted during operation would be less than significant.

Mitigation Measure AQ-2: Select Equipment during Construction to Minimize Emissions.

The Contractor shall follow the following standard: All diesel-powered off-road equipment larger than 50 horsepower and operating at the site for more than two days continuously shall meet U.S. EPA particulate matter emissions standards for Tier 2 engines or equivalent.

Level of Significance: Less than significant with mitigation.

Based on the significant result for child exposure to construction emissions, mitigation was applied to the sources of DPM in order to reduce the impacts to a less significant. Incorporating Mitigation Measure AQ-2, the modeling results with this mitigation in place would have a child cancer risk of 5.87 in a million with the adult incremental cancer risk of 0.3 in million, which is below the

significance threshold of 10 in one million. Therefore, implementation of Mitigation Measure AQ-2 would reduce the impact to less than significant.

Impact AQ-3: Create Objectionable Odors Affecting a Substantial Number of People.

The handling of waste material has the potential to cause odors. Potential odor issues would be a function of the strength of the odors emanating from the project, combined with the distance to the receptors (i.e., residences) and meteorological conditions. The handling and transfer of solid waste would occur inside of a fully enclosed building. The nearest residence is about 600 feet west of the project facility building where material transfer would occur. Wind data for Fort Bragg indicate a predominant wind from the northwest, with a secondary predominant wind from the east-southeast.

Odor problems from solid waste transfer stations are well understood because of the experience of thousands of such facilities throughout the United States. Municipal solid waste creates significant amounts of objectionable odor only when it degrades over time. Therefore, the primary means of odor avoidance is to transfer waste out of the facility quickly, with regular cleaning to ensure that residual waste doesn't build up. If transfer cannot be carried out rapidly enough to control odor, a variety of measures are available. The most important measure is to fully enclose the transfer building, with minimal door openings, so that spread of odor by dispersion or wind is reduced. Additional measures, in approximate order of cost and impact, include:

- Roll-up doors which can be automated to open only when a vehicle approaches.
- Air curtains on doorways. These help confine odors to the inside of the transfer station building.
- Deodorizing misting spray. Overhead sprays can neutralize odorous material.

  Several types of misting sprays are commercially available, including Odor X, NONOX, and Biomagic.
- Negative pressure ventilation with biofiltered exhaust.

  Biofilters are typically a large container filled with wood chips or compost that will scrub noxious odors out of exhaust air. An example is CR&R's Perris Transfer Station in Perris, California, which receives up to 3,000 tons per day and has reportedly eliminated odor problems after installation of a biofilter.

For the Central Coast Transfer Station, all handling of solid waste would occur inside of the building. The enclosed building would reduce the potential for odors. Typically, solid waste would be removed from the facility within 24 hours and would not remain at the site for more than 48 hours. The project is anticipated to include features to reduce odors; however, project design details are not available at this time. Since these control features have not been specified at this time, there is a potential for odors to be emitted from the facility that could result in odor complaints, potentially exceeding the threshold of five confirmed complaints per year averaged over three years. This would be a significant impact.

The outdoor recycling area would have a low potential to cause off-site odors. Bottles cans and other recyclable materials typically do not have strong odors. The localized odors produced by recyclable materials can be minimized through application of good management practices.

Mitigation Measure AQ-3: Implement Odor Reduction Measures.

The County and City shall require as an enforceable provision of the operations contract for the facility that no odors are detectable beyond the site boundaries. When approving the final building

design, the County and City will ensure that it is compatible with installation of any necessary odor control systems. The operations contract will require:

Design & Construction

1. Design of facility to ensure all transfer, handling and storage of solid waste material occurs within the fully enclosed building.

   A. The County Environmental Health Division, Local Enforcement Agent(LEA)for CalRecycle, has jurisdiction over odor impacts of a solid waste facility and conducts periodic inspections and responses to complaints. If the LEA confirms off-site odor at any time, the operator will be required to implement any or all of the following controls:. Air curtains at doorways

   B. Overhead misting system

   C. Negative pressure ventilation with exhaust air directed through biofilters

Operation

1. Close all doors when facility is not operating.
2. Ensure material is not stored on site for more than 48 hours.
3. Develop and implement best management practices to clean the facility on a daily basis, including removing all odor producing food waste from facility floors and equipment.
4. Provide neighbors with a contact name and phone number to report odor or dust complaints. Such complaints shall be documented. The source or cause of any odor will be identified and actions taken to mitigate the odors shall also be documented.

The County and City shall designate a staff member to receive, document, and follow-up on odor complaints. A record shall be kept of each complaint for a minimum of five years from the date the complaint is received.

Level of Significance: Less than significant with mitigation.

Implementation of Mitigation Measure AQ-3 provides basic odor minimization measures to be integrated into the project design and operation, with further measures that require “pre-plumbing” for additional odor-control systems, so that if complaints approach the established threshold, these additional measures would be implemented. Implementation of Mitigation Measure AQ-3 would reduce the impact to less than significant.

3.3.6 Cumulative Impacts

Impact AQ C-1: Result in a Cumulatively Considerable Contribution to Cumulative Impacts Related to Air Quality.

Project emissions of criteria air pollutants or their precursors would not make a considerable contribution to cumulative air quality impacts. As noted in the project analysis, air pollution, by nature, is mostly a cumulative impact. The significance thresholds applicable to construction and operational aspects of a project represent the levels at which a project’s individual emissions of criteria pollutants and precursors would result in a cumulatively considerable contribution to the region’s air quality conditions as described by BAAQMD (BAAQMD 2011).

The proposed project’s construction-period emissions exhaust would not exceed the quantitative significance thresholds, and fugitive dust emissions would be adequately controlled through

implementation of BAAQMD best management practices. Therefore, project construction would not make a considerable contribution to cumulative air quality impacts.

Significant community risk impacts to sensitive receptors from project construction were identified as 11.6 in one million. A review of cumulative construction projects that are planned and approved in the area (see Section 3.0, Table 3-1 of this Draft EIR) did not reveal any nearby projects within 1,000 feet of the Maximally Exposed Individual (MEI) to result in a cumulative construction health risk impact. Therefore, the cumulative analysis is the same as for the project. The project's contribution to the cumulative impact is 11.6 in one million, which is over the individual threshold and therefore a considerable contribution to the cumulative impact. The cumulative impact to TACs is significant.

Mitigation Measures: AQ-1 Air Quality Control Measures during Construction and AQ-2 Select Equipment during Construction to Minimize Emissions.

Level of Significance: Less than significant with mitigation.

Incorporating Mitigation Measure AQ-2, the modeling results with this mitigation in place would have a child cancer risk of 5.87 in a million with the adult incremental cancer risk of 0.3 in million, which is below the significance threshold of 10 in one million. Therefore, implementation of Mitigation Measure AQ-2 would reduce the projects contribution to the cumulative impact to less than significant.

PermanentFootprint_141104

ConstructionFootprint_141104

Parcels

(9) Residences within 1,000 feet of Project Area

Paper Size ANSI A
0 70 140 210 280 350
Feet
Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California II FIPS 0402 Feet

N

GHD

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality

Mendocino Solid Waste Management Authority
Central Coast Transfer Station EIR

Job Number 8411065
Revision A
Date 04 Nov 2014

Sensitive Receptors

Figure 3.3-1

180 Lonsdale Street Melbourne VIC 3000 Australia T 61 3 8687 8000 F 61 3 8687 8111 E melmail@ghd.com W www.ghd.com

G:\0016201 MendoSolidWasteMgmtAuthority\8411065 MSWMA TransferStationEIR\08-GIS\Maps\Figures\EIR\F3.3-1_SensitiveReceptors.mxd
© 2012. Whilst every care has been taken to prepare this map, GHD (and DATA CUSTODIAN) make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.
Data source: Data Custodian, Data Set Name/Title, Version/Date. Created by:jrousseau

3.4 Biological Resources

This section evaluates the potential impacts related to biological resources during construction and operation of the project. The setting section describes the existing environmental conditions for biological resources. The regulatory framework section describes the applicable regulations at the federal, state and local level. The impacts and mitigation measures section establishes the thresholds of significance, evaluates potential impacts to biological resources, and identifies the significance of impacts. Where appropriate, mitigation is presented to reduce impacts to less-than-significant levels. Information in this section is based in part on the Biological Resources Assessment prepared for this project by WRA in June 2013 (Appendix D).

3.4.1 Setting

Vegetation Communities

Sensitive biological communities include habitats that fulfill special functions or have special values, such as wetlands, streams, or riparian habitat. These habitats may be protected under federal regulations such as the Clean Water Act; state regulations such as the Porter-Cologne Act, and the California Department of Fish and Wildlife (CDFW) Streambed Alteration Program; or local ordinances or policies such as City or County tree ordinances. Other sensitive biological communities include habitats that fulfil special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database (CNDDB) [CDFW 2014a]. Sensitive plant communities are also provided in list format by CDFW (2009a). CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2012) methodology (see Table 3.4-1), with those alliances ranked globally (G) or statewide (S) with status of 1 through 3 considered to be of special concern as well as imperiled (CDFG 2007; CDFW 2014b).

Table 3.4-1 Score Value Ranges for Nature Serve Conservation Status Ranks

Calculated Score Value Range	Calculated Status Rank	Status Description	Definition	Threat Rank
score ≤1.5	G1, S1	Critically Imperiled	Less than 6 elemental occurrences (EO) or less than 1,000 individuals or less than 2,000 acres	S1.1 = very threatened S1.2 = threatened S1.3 = no current threats known
1.5< score ≤2.5	G2, S2	Imperiled	6-20 EOs or 1,000-3,000 individuals or 2,000-10,000 acres	S2.1 = very threatened S2.2 = threatened S2.3 = no current threats known

Calculated Score Value Range	Calculated Status Rank	Status Description	Definition	Threat Rank
2.5< score ≤3.5	G3, S3	Vulnerable	21-100 EOs or 3,000-10,000 individuals or 10,000-50,000 acres	S3.1 = very threatened S3.2 = threatened S3.3 = no current threats known
3.5< score ≤4.5	G4, S4	Apparently Secure	This rank is clearly lower than S3 but factors exist to cause some concern; i.e. there is some threat, or somewhat narrow habitat.	No threat rank
score >4.5	G5, S5	Secure	Demonstrably secure to ineradicable	No threat rank

Compiled from: CDFG 2007; NatureServe 2012

The application of global ranking (G#) for determination of sensitive communities is summarized in Table 3.4-1 (NaturServe 2009). Additionally, CDFW high priority natural community elements are reserved for those areas exhibiting high quality occurrences based on a criterion such as:

1. Lack of invasive species;
2. No evidence of human caused disturbance such as roads or excessive livestock grazing, or high grade logging; or,
3. Evidence of reproduction present (sprouts, seedlings, adult individuals of reproductive age), and no significant insect or disease damage, etc.

Non-sensitive biological communities are those communities that are not afforded special protection under CEQA, and other state, federal, and local laws, regulations, and ordinances. These non-sensitive communities may, however, provide suitable habitat for some special-status plant or wildlife species and are part of the general existing site conditions. Sensitive and non-sensitive habitat/vegetation types were mapped on the site and presented in the supporting biological resources evaluation to establish existing conditions at the project site (WRA 2013).

Numerous sites visits were conducted to identify suitable habitats for special-status species, and to map sensitive and non-sensitive habitats (WRA 2013). The site visit included study of 20.95 acres of APN 019-150-05 (i.e., the portion of the parcel which is north of Highway 20, and hereinafter referred to as the “property”, and “property study area”) in order to provide context for the actual 17-acre “project site” that is encompassed by the 20.95 acre property. The nomenclature and classification for habitat areas mapped on the property are presented in Table 3.4-2, and information is presented as a basis to evaluate whether mapped areas qualify as sensitive habitats by CDFW definition. Many of the habitats identified on the property study area are considered sensitive, including wetlands and at least portions of the cypress forest (particularly the stunted/pygmy portions, as well as areas where cypress are growing in conjunction with Bolander’s pine which is typical plant composition for pygmy forest). Resources mapped on the property are ***identified in Table 3.4.2***, quantified in Table 3.4-3 and presented on Figure 3.4-1.

Table 3.4-2 Nomenclature for Vegetation Communities on Property

Habitat	Vegetation Alliance	CNDDB Global (G) and State (S) Rank	Vegetation Association	Dominant Species and CRPR Status
Bishop pine forest ***alliance***	Bishop pine (*Pinus muricata)* Forest Alliance	G3 S3*	Bishop pine-evergreen huckleberry (*P. muricata-Vaccinium ovatum)*	*P. muricata* [CRPR none]
Cypress forest (tall)	Pygmy cypress (*Hesperocyparis pygmaea*) Forest Alliance	G2 S2	Mendocino cypress – tall (*H. pygmaea)*	*H. pygmaea* [CRPR 1B]
Cypress forest (intermediate)			Pygmy cypress / Bolander's pine (*H. pygmaea/Pinus contorta* ssp. *bolanderi*)	*H. pygmaea* [CRPR 1B] *P. contorta* ssp. *bolanderi* [CRPR 1B]
Cypress forest (pygmy); USACE Forested wetland			Pygmy cypress / Bolander's pine – pygmy (*H. pygmaea/P. contorta* ssp. *bolanderi*)	*H. pygmaea* [CRPR 1B] *P. contorta* ssp. *bolanderi* [CRPR 1B]
USACE Palustrine emergent wetland	Slough sedge sward (*Carex obnupta)* Herbaceous Alliance	G4 S3	Slough sedge/California sedge sward (*C. obnupta/C. californica)* Association	*Carex obnupta* [None] *C. californica* [CRPR 2]

See discussion under Impact BIO-2

Source: Sawyer et al. (2009)

Table 3.4-3 Existing Habitats Quantified for the Property

Habitat	Dominant Species	Property (acres)	Tree Count Estimate (#)	Regional Conditions (acres)[1]
Disturbed / ruderal	Various	1.11	NA	NA
Bishop pine forest ***alliance***	Bishop pine (*P. muricata)*	8.39	NA	14,900
Cypress forest (tall)	cypress (*H. pygmaea*)	4.78	776	NA
	Bolander's pine (*P. contorta* ssp. *bolanderi*)		100	
Cypress forest (intermediate)	cypress (*H. pygmaea*)	4.44	336	NA
	Bolander's pine		147	
Cypress forest (pygmy) / Forested wetland	cypress (*H. pygmaea*)	3.11	598	2,000
	Bolander's pine		496	
Palustrine emergent wetland	Various	0.22	NA	NA
Total		**20.95**		

[1] Regional conditions are estimated and presented for context utilizing a variety of sources that provide general mapping quantities for the area, yet are believed to be the most current data readily available based on conversation with CDFW and others (Miller, Linda 2014, Pers. Com). While approximately 4,420 acres of Pygmy Cypress forest type was mapped in 1998 by CALVEG in the area between Ten Mile and Navarro River (CDF 2005), some sources have indicated this may be reduced to as little as 2,000 acres, and mapping is highly variable on what definition, species composition, and tree height is used for this map unit. CDFW is working on mapping project currently to establish baseline existing conditions (Miller, Linda 2014, Pers. Com). 2,000 acres is used herein as a conservative estimate of what remains regionally of pygmy forest and as a basis for comparative analysis to project impacts (although project impacts are to intermediate and tall cypress/Bolander's pine). In 1998 CALVEG mapped 14,900 acres of Bishop pine in Mendocino County (CDF 2005).

Bishop Pine Forest Alliance: This community is known along the coast from Fort Bragg, Mendocino County to northwestern Sonoma County, and there are also stands on Point Reyes, Mount Tamalpais, and Monterey Peninsula (Sawyer et al. 2009). Vegetation associations include Bishop pine-evergreen huckleberry (*Pinus muricata-Vaccinium ovatum* Forest Association) and Bishop pine/Bolander's pine/ cypress (*Pinus muricata / P. contorta ssp. bolanderi / Hesperocyparis pygmaea* Forest Association). At the project site, this community is dominated by Bishop pine (*Pinus muricata*), with several subdominant tree species including pygmy cypress (*Hesperocyparis pygmaea*) [approximately 327 individuals scattered across the property within this map unit], Bolander's pine (*Pinus contorta* ssp. *bolanderi*) [approximately 47 individuals scattered across the property within this map unit], as well as western hemlock (*Tsuga heterophylla*), and coast redwood (*Sequoia sempervirens*). The overstory varies from somewhat open to completely closed containing mature to over-mature trees. The understory contributes to the vertical structure with a high density of shrubs and herbaceous layer. Shrub species include evergreen huckleberry (*Vaccinium ovatum*), Pacific rhododendron (*Rhododendron macrophyllum*), giant chinquapin (*Chrysolepis chrysophylla*), tanoak (*Notholithocarpus densiflorus*), and salal (*Gaultheria shallon*). Herbaceous species are sparse and include bracken fern (*Pteridium aquilinum*), bear grass (*Xerophyllum tenax*), and modesty (*Whipplea modesta*). Bishop pine forest occupies approximately 8.39 acres in the southwestern and south-central portion of the property.

Pygmy Cypress Forest Alliance: Cypress forest is known near the coast from Fort Bragg to Albion in Mendocino County, with true pygmy forest comprised of unique vegetation associations with pygmy/stunted trees growing on old uplifted marine terraces with restrictive acidic podzol-like soils (Blacklock Series), and in scattered stands south into Sonoma County (WRA 2013). Vegetation

Associations (as described by Sawyer et al. 2009) within this Forest Alliance include Pygmy Cypress Forest Association (*Hesperocyparis pygmaea* Association) and Pygmy Cypress/Bolander's Pine Forest Association (*Hesperocyparis pygmaea/Pinus contorta* ssp. *bolanderi* Association). A total of 12.33 acres of Pygmy Cypress Forest Alliance were mapped on the property, made up of the following three morpho-types (classified based on dominant species composition and tree class/size): "cypress forest – tall," "cypress forest – intermediate," and "cypress forest – pygmy," the first of which corresponds with the pygmy cypress Association, and the latter two correspond with the pygmy cypress/Bolander's pine Association. These mapping units/associations were based on species composition and height of individual trees, and may be correlated to soil conditions, with stunted trees (cypress forest - pygmy) located on areas mapped to have a shallow cemented hardpan within the soil. Individual trees were counted in several 50-foot radius vegetation plots, and numbers estimated across the stands (WRA 2013). The three morph-types are further described below.

Cypress Forest - Tall is dominated by Mendocino/pygmy cypress, with scattered individuals of Bishop pine. Although cypress dominates these areas, the soils do not appear to be limiting the growth of individual trees, and average heights range from 35 to 100 feet. These areas were mapped and classified at plant association level as Mendocino cypress (*H. pygmaea* Association). For the most part, this area lacks presence of Bolander's pine which when in conjunction with pygmy cypress trees, is considered to be the typical species composition of true Mendocino pygmy forest. The dense understory is dominated by tall shrubs including Pacific rhododendron, evergreen huckleberry, and salal. This morpho-type occupies approximately 4.78 acres in the southeastern and northwestern portions of the property. Tree counts within plots in this map unit estimate approximately 776 cypress (subdominant Bishop pine was not counted), and approximately 100 Bolander's pine scattered throughout (calculated to be less than 10% of trees present in this map unit).

Cypress Forest - Intermediate is dominated by Mendocino/pygmy cypress, with subdominants of Bishop pine and Bolander's pine. The average height of trees range from 15 to 35 feet, which could have partially limited growth pattern due to soils and/or soil moisture. The area was mapped and classified by vegetation association to be consistent with Pygmy cypress / Bolander's pine (*H. pygmaea/Pinus contorta* ssp. *bolanderi* Association). The understory is dominated by dense shrubs including hairy manzanita (*Arctostaphylos columbiana*), Pacific rhododendron, evergreen huckleberry, and salal (*Gaultheria shallon*). This morpho-type occupies approximately 4.44 acres in the northern and north-eastern portion of the property. Tree counts within plots in this map unit estimate approximately 336 cypress mostly of intermediate height (Bishop pine was not counted), and approximately 147 Bolander's pine scattered throughout.

Cypress Forest - Pygmy. A habitat unique to several areas along California's north coast, pygmy forest occurs in the western part of Mendocino County. Climatic and soil conditions have created a highly specific plant community with limited growth. In the pygmy forests, soil has been leached of its nutrients, is highly acidic, and is underlain by an iron hardpan. Due to the poor soil conditions, these communities are dominated by dwarf species of plants such as pygmy manzanita, pygmy cypress, Bolander pine, and lichens (WRA 2013). The area is dominated by pygmy cypress and Bolander's pine. The soils are thought to be limiting the growth of trees whose average height ranges from 5 to 15 feet and shrubs are stunted and sparse to absent in density. The understory is composed of short statured shrubs with noticeably greater interstitial space between thickets than in intermediate cypress forest and tall cypress forest areas at the site. Scattered shrub species include Labrador tea (*Rhododendron columbianum*), wax myrtle (*Morella californica*), salal, and

evergreen huckleberry. The herbaceous layer is sparse with bracken fern, bear grass, California sedge (*Carex californica*), and sporadic coast lilies (*Lilium maritimum*). Additionally, cryptogamic crusts formed from reindeer lichens (*Cladonia portentosa, Cladina impexa*) are present sporadically in open compacted areas. This morpho-type occupies approximately 3.11 acres in the eastern portion of the property and is analogous with the forested wetland map unit described below. Tree counts within plots in this map unit estimate approximately 598 cypress (stunted/pygmy) trees and approximately 496 Bolander's pine trees scattered throughout the property.

Federal and State Jurisdictional Wetlands and Waters

Palustrine Emergent Wetlands: Seasonal wetlands are known throughout California and are typically located in relatively flat locations underlain by soils with moderate to high clay content and/or substrates with a shallow impermeable layer within the upper profile. An approximately 0.22-acre seasonal palustrine emergent wetland (USACE jurisdictional) is located in the southeast corner of the property (Figure 3.4-1). This wetland is a slight concave depression which contains approximately 25 percent absolute cover of herbaceous species composed of predominantly slough sedge (*Carex obnupta*, OBL) and California sedge (FACW) [CRPR 2]. Trees and shrubs are rooted along the edge of this feature, include Bolander's pine (FAC), pygmy cypress (NL), evergreen huckleberry (FACU), and Labrador tea (OBL). The upper soil profile (0 to 9 inches) is composed of brown (7.5YR 5/8) matrix to dark grayish brown (10YR 4/2) sandy silts and silty clays with brown (7.5YR 5/8) on root channels. The subsurface layer (9 to 14 inches) is composed of very dark brown (10YR 2/2) clay loam with redoximorphic concentrations noted as present. Hydrology indicators include surface soil cracks (B6), a sparsely vegetated concave surface (B8), oxidized rhizospheres (C4), shallow aquitard (D3), and pass on the FAC-neutral test (D5). The boundary of this wetland was delineated based on topography and change in vegetation density.

Forested Wetlands: At the site, the boundary of USACE jurisdictional forested wetlands (USACE 2013) is analogous with the "cypress forest - pygmy" map unit (WRA 2013), and is approximately 3.11 acres. The vegetation is dominated by Bolander's pine (FAC), pygmy cypress (, NL), evergreen huckleberry (FACU), and Labrador tea (OBL), wax myrtle (FACW), salal (FACU), and California sedge (FACW). The upper soil profile (0 to 6 inches) is composed of light brownish gray (10YR 6/2) and brown (7.5YR 4/3) sandy clay loam. The subsoil (6 to 8 inches) is composed of yellowish brown (10YR 5/6) sandy clay loam with brown (10YR 5/8) redoximorphic features in the soil matrix. Hydrology indicators include oxidized rhizospheres (C3), water-stained leaves (B9), and a shallow aquitard (D3). The boundary of the forested wetland was delineated based on changes in soils and vegetation type, and the USACE provided a jurisdictional determination concurring with conditions as mapped by WRA (USACE 2013).

Waters of the U.S. and State: Other waters, besides wetlands, subject to USACE jurisdiction under Section 404 of the Clean Water Act include lakes, rivers and streams (including intermittent streams) for non-tidal areas. Non-tidal waters of the U.S. are defined at the ordinary high water mark (OHWM) following the USACE Regulatory Guidance Letter No. 05-05, *Ordinary High Water Mark Identification* (USACE 2005). Because the Regional Water Quality Control Board (RWQCB) does not currently ascribe a specific methodology for delineating Waters of the State, wetlands and non-wetland waters were assessed for this project following USACE guidelines and it is assumed that USACE jurisdictional wetlands are also jurisdictional by the RWQCB (although not exclusive to). The site does not contain non-wetland water features or other Waters of the U.S./State. A 200-foot linear ephemeral swale is located outside of the western edge of the property, and flows

westward and terminates in a Labrador tea thicket. This area is noted herein per inquiry by CDFW, but is outside the property and thus was not mapped.

Riparian and Other Wet Areas: The property was evaluated to locate potential intermittent streams not already designated wetlands or waters of the U.S./State as well as associated riparian habitat following the standard guidance provided in *A Field Guide to Lake and Streambed Alteration Agreements, Sections 1600-1607, California Fish and Game Code*. The guidance for CDFG Section 1602 jurisdiction is typically understood to include streams and to extend laterally to the top-of-bank (WRA 2013). If riparian vegetation is present within the top-of-bank, then CDFG jurisdiction extends to the outer dripline of such vegetation. Riparian vegetation does not exist on the property.

Special-Status Plant Species

Table 3.4-4 summarizes the potential for occurrence for the special-status plant species that are recorded as occurring in the vicinity of the site. Seven plant species were determined to have a moderate or high potential to occur at the site, and four plant species were identified and mapped at the site. Species descriptions for the special-status plant species identified at the site are presented below. The remaining plant species are unlikely or have no potential to occur due to one or more of the following reasons:

- Hydrologic conditions (e.g. marsh habitat, perennial streams) necessary to support some specific special-status plant(s) are not present at the site;
- Edaphic (soil) conditions (e.g. serpentine, volcanics) necessary to support some special-status plant(s) are not present at the site;
- Topographic positions and landforms (e.g. north-facing, slopes) necessary to support some special-status plant(s) are not present at the site;
- Associated vegetation communities (e.g. chaparral, coastal prairie, dune, bluff) necessary to support some special-status plant(s) are not present at the site;
- The degree of disturbance and/or presence of extensive highly competitive, non-native plant species (e.g. dense non-native annual grassland);
- The site is outside of the known elevation and/or localized distribution of some special-status plant(s) (e.g. coastal, montane).
- Special-status seasonally-appropriate plant surveys were conducted within appropriate time of year to identify species with moderate or high potential to occur at the site, and determined absence or presence of these species.

Table 3.4-4 Potential for Special-Status Plant Species to Occur on the Property

Species	Status[1]	Habitat Requirements	Potential to Occur On-site	Results
PLANTS				
pink sand verbena *Abronia umbellata* var. *breviflora*	1B	Coastal dune, coastal strand; located on foredunes and interdunes with low vegetation cover. Elevation range: 0 – 35 feet. Blooms: June – October.	**No Potential**. The property does not contain coastal dune or coastal strand habitat necessary to support this species.	**Not Present**.
Blasdale's bent grass *Agrostis blasdalei*	1B	Coastal dune, coastal bluff scrub, coastal prairie; located on sandy to gravelly substrate close to rocks of bluff faces; typically located in nutrient poor areas with sparse vegetation cover. Elevation range: 15 – 490 feet. Blooms: May – July.	**No Potential**. The property does not contain coastal dune, coastal bluff scrub, or coastal prairie habitat necessary to support this species.	**Not Present**.
pygmy manzanita *Arctostaphylos nummularia* ssp. *mendocinensis*	1B	Closed-cone coniferous forest; located acidic, sandy clay substrate in pygmy forest stands. Elevation range: 290 – 600 feet. Blooms: January.	**High Potentia**l. The property contains suitable substrate and pygmy forest habitat that may support this species. The nearest documented occurrence is approximately seven miles from the property.	**Not Observed**. This species was not observed during plant surveys in May and July (species vegetative state would have been visible and identifiable to species level outside of bloom period).
Humboldt County milk-vetch *Astragalus agnicidus*	SE; 1B	Broadleaf upland forest, redwood forest; located in disturbed openings in timber lands, on south-facing aspects, and along ridgelines. Elevation range: 585 – 2600 feet. Blooms: April – September.	**No Potential**. The property does not contain broadleaf upland forest or redwood forest necessary to support this species.	**Not Present**.
Point Reyes Blennosperma *Blennosperma nanum* var. *robustum*	SR; 1B	Coastal prairie, coastal scrub; located on open coastal hills underlain by sandy substrate. Elevation range: 30 – 475 feet. Blooms: February – April.	**No Potential**. The property does not contain coastal prairie or coastal scrub habitat necessary to support this species.	**Not Present**.

Species	Status[1]	Habitat Requirements	Potential to Occur On-site	Results
Thurber's reed grass *Calamagrostis crassiglumis*	2	Coastal scrub, freshwater marsh; typically located in marshy swales surrounded by grasslands or coastal scrub. Elevation range: 30 – 150 feet. Blooms: May – July.	**No Potential**. The property does not contain coastal scrub or freshwater marsh habitat necessary to support this species.	**Not Present**.
coastal bluff morning glory *Calystegia purpurata* ssp. *saxicola*	1B	Coastal dunes, coastal scrub; located on coastal bluffs. Elevation range: 30 – 330 feet. Blooms: May – September.	**No Potential**. The property does not contain coastal dune or scrub habitat necessary to support this species.	**Not Present**.
swamp harebell *Campanula californica*	1B	Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows, freshwater marsh, North Coast coniferous forest; typically located in wetlands within a variety of surrounding habitats. Elevation range: 3 – 1320 feet. Blooms: June – October.	**High Potential**. The property contains wet areas within closed-cone coniferous forest (Bishop pine forest, pygmy forest) that may support this species. The nearest documented occurrence is less than one mile from the property.	**Not Observed**. This species was not observed during seasonally-appropriate plant surveys conducted in May and July during species-specific bloom time.
California sedge *Carex californica*	2B	Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows, marshes and swamps; located in drier areas of swamps, bogs, and marsh margins. Elevation range: 290 – 1090 feet. Blooms: May – August.	**High Potential**. The property contains wetlands within closed-cone coniferous forest (pygmy forest) habitat that may support this species.	**Present**. Scattered individuals of this species were observed throughout the pygmy forest habitat and a seasonal wetland depression within and adjacent to the property.
lagoon sedge *Carex lenticularis* var. *limnophila*	2	Bogs and fens, marshes and swamps, North Coast coniferous forest; located on lakeshores and beaches. Elevation range: 0 – 20 feet. Blooms: June – August.	**Unlikely**. Although the property contains North Coast coniferous forest and wetlands, this species is known from coastal dune wetlands and beach pine.	**Not Present**.
livid sedge *Carex livida*	1A	Bogs and fens; historically known from sphagnum bogs. Elevation range: unknown. Blooms: June.	**No Potential**. The property does not contain sphagnum bog habitat necessary to support this species.	**Not Present**.

Species	Status[1]	Habitat Requirements	Potential to Occur On-site	Results
Lyngbye's sedge *Carex lyngbyei*	2	Marshes and swamps; brackish to freshwater. Elevation range: 0 – 35 feet. Blooms: April – August.	**Unlikely**. Although the property contains wetland habitat, marsh habitat is not present necessary to support this species.	**Not Present**.
deceiving sedge *Carex saliniformis*	1B	Coastal prairie, coastal scrub, meadows and seeps, coastal salt marshes and swamps; located in mesic sites. Elevation range: 10 – 750 feet. Blooms: June – July.	**No Potential**. The property does not contain coastal prairie, coastal scrub, meadow, or coastal salt marsh habitat necessary to support this species.	**Not Present**.
green yellow sedge *Carex viridula* var. *viridula*	2	Bogs and fens, freshwater marshes and swamps, North Coast coniferous forest; located in mesic sites. Elevation range: 0 – 5200 feet. Blooms: June – November.	**Moderate Potential**. The property contains coniferous forest (Bishop pine forest) with wetland sites that may support this species; however, this species is closely associated with Douglas fir-coast redwood forest habitat not present.	**Not Observed**. This species was not observed during seasonally-appropriate plant surveys conducted in May and July during species-specific bloom time.
Humboldt Bay owl's-clover *Castilleja ambigua* ssp. *humboldtiensis*	1B	Coastal salt marsh; located in marshes associated with salt grass, cordgrass, pickleweed, and jaumea. Elevation range: 0 – 10 feet. Blooms: April – August.	**No Potential**. The property does not contain coastal salt marsh habitat necessary to support this species.	**Not Present**.
Oregon coast paintbrush *Castilleja litoralis*	2	Coastal bluff scrub, coastal dune, coastal scrub; located on sandy substrate. Elevation range: 45 – 325 feet. Blooms: June.	**Unlikely**. The property does not contain coastal bluff scrub, coastal dune, or coastal scrub habitat necessary to support this species. The plant surveys did not note presence of this species on property.	**Not Observed**.
Mendocino Coast paintbrush *Castilleja mendocinensis*	1B	Coastal bluff scrub, coastal scrub, coastal prairie, closed-cone coniferous forest, coastal dune; typically located on open sea bluffs and cliffs. Elevation range: 0 – 520 feet. Blooms: April – August.	**No Potential**. The property does not contain coastal scrub, coastal prairie, or coastal closed-cone coniferous forest (beach pine forest) habitat necessary to support this species.	**Not Present**.

Species	Status[1]	Habitat Requirements	Potential to Occur On-site	Results
Howell's spineflower *Chorizanthe howellii*	FE; ST; 1B	Coastal dunes, coastal prairie, coastal scrub; located on sand dunes, sandy slopes, and sandy areas in coastal prairie. Elevation range: 0 – 115 feet. Blooms: May – July.	**No Potential**. The property does not contain coastal dune, coastal prairie, or coastal scrub habitat necessary to support this species.	**Not Present**.
Whitney's farewell-to-spring *Clarkia amoena* ssp. *whitneyi*	1B	Coastal bluff scrub, coastal scrub. Elevation range: 30 – 325 feet. Blooms: June – August.	**No Potential**. The property does not contain coastal scrub habitat necessary to support this species.	**Not Present**.
round-headed Chinese houses *Collinsia corymbosa*	1B	Coastal dunes, coastal prairie. Elevation range: 0 – 65 feet. Blooms: April – June.	**No Potential**. The property does not contain coastal dune habitat necessary to support this species.	**Not Present**.
Oregon goldthread *Coptis laciniata*	2	North Coast coniferous forest, meadows and seeps; located in mesic sites, roadsides, and streamsides. Elevation range: 0 – 3250 feet. Blooms: March – April.	**Unlikely**. The property contains North Coast coniferous forest, yet this species is closely associated with mesic sites (e.g. streambanks) in coast redwood-Douglas fir habitat.	**Not Present**.
bunchberry *Cornus canadensis*	2B.2	North coast coniferous forest, bogs and fens, meadows and seeps in a broad range of stand types and soil/site conditions. Elevation range: 200 – 6,000 feet. Blooms: May - July	**Unlikely**. The property contains coniferous forest that may support this species yet plant surveys conducted in May and July did not document presence of this species.	**Not Observed**.
Mendocino dodder *Cuscuta pacifica* var. *papillata*	1B	Coastal dunes; located in interdune depressions; likely hosts on lupines, catchflies, and cudweeds. Elevation range: 0 – 165 feet. Blooms: July – October	**No Potential**. The property does not contain coastal dune habitat necessary to support this species.	**Not Present**.
supple daisy *Erigeron supplex*	1B	Coastal bluff scrub, coastal prairie; typically located in grassy sites along the coastline. Elevation range: 30 – 165 feet. Blooms: May – July	**No Potential**. The property does not contain coastal scrub or coastal prairie habitat necessary to support this species.	**Not Present**.

Species	Status[1]	Habitat Requirements	Potential to Occur On-site	Results
bluff wallflower *Erysimum concinnum*	1B.2	Coastal dunes, coastal bluff scrub, coastal prairie. Elevation range: 0 – 600 feet. Blooms: March - May	**Unlikely**. Preferred coastal habitat is not present at the site. The plant surveys did not note presence of this species on property.	**Not Observed**.
Menzies' wallflower *Erysimum menziesii* ssp. *menziesii*	FE; SE; 1B	Coastal dune; located on stabilized and shifting dunes and coastal strand. Elevation range: 0 – 115 feet. Blooms: March – June.	**No Potential**. The property does not contain coastal dune habitat necessary to support this species.	**Not Present**.
Roderick's fritillary *Fritillaria roderickii*	SE; 1B	Coastal bluff scrub, coastal prairie, valley and foothill grassland; located on grassy slopes, mesas, and terraces. Elevation range: 45 – 1300 feet. Blooms: March – May.	**No Potential**. The property does not contain coastal bluff scrub, coastal prairie, or coastal grassland habitat necessary to support this species.	**Not Present**.
Pacific gilia *Gilia capitata* ssp. *pacifica*	1B	Coastal bluff scrub, coastal prairie, valley and foothill grassland. Elevation range: 15 – 3090 feet. Blooms: April – August.	**No Potential**. The property does not contain coastal bluff scrub, coastal prairie, or grassland habitat necessary to support this species.	**Not Present**.
dark-eyed gilia *Gilia millefoliata*	1B	Coastal dune. Elevation range: 5 – 100 feet. Blooms: April – July.	**No Potential**. The property does not contain coastal dune habitat necessary to support this species.	**Not Present**.
white seaside tarplant *Hemizonia congesta* ssp. *congesta*	1B	Coastal scrub, valley and foothill grassland; located in grassy valleys and hills, often fallow fields. Elevation range: 65 – 1820 feet. Blooms: April – November.	**No Potential**. The property does not contain coastal scrub or grassland habitat necessary to support this species.	**Not Present**.
short-leaved evax *Hesperevax sparsiflora* var. *brevifolia*	1B	Coastal bluff scrub, coastal dune; located on sandy bluffs and flats near the immediate coastline. Elevation range: 0 – 700 feet. Blooms: March – June.	**No Potential**. The property does not contain coastal bluff scrub or coastal dune habitat necessary to support this species.	**Not Present**.

Species	Status[1]	Habitat Requirements	Potential to Occur On-site	Results
pygmy cypress *Hesperocyparis pygmaea*	1B	Closed-cone coniferous forest; located on podzol-like soils (Blacklock series). Elevation range: 100 – 1950 feet.	**High Potential**. The property contains Blacklock series soils and closed-cone coniferous forest.	**Present**. Extensive stands of this species are located throughout the property, particularly as a stand-forming in the pygmy forest habitat.
Point Reyes horkelia *Horkelia marinensis*	1B	Coastal dunes, coastal prairie, coastal scrub; located on sandy flats and dunes near the coast; in open grassy sites within scrub. Elevation range: 15 – 1140 feet. Blooms: May – September.	**No Potential**. The property does not contain coastal dune, coastal prairie, or coastal scrub habitat necessary to support this species.	**Not Present**.
hair-leaved rush *Juncus supiniformis*	2	Marshes and swamps, bogs and fens; located in sites near the coast. Elevation range: 65 – 325 feet. Blooms: April – June.	**Unlikely**. Although the property contains wetland habitat, this species is known primarily from sphagnum bog habitat not present in the property.	**Not Present**.
Baker's goldfields *Lasthenia californica* ssp. *bakeri*	1B	Closed-cone coniferous forest, coastal scrub; located in openings in scrub and coastal forest habitat. Elevation range: 195 – 1690 feet. Blooms: April – October.	**No Potential**. The property does not contain coastal scrub or beach pine forest necessary to support this species.	**Not Present**.
perennial goldfields *Lasthenia californica* ssp. *macrantha*	1B	Coastal bluff scrub, coastal dune, coastal scrub. Elevation range: 15 – 1690 feet. Blooms: January – November.	**No Potential**. The property does not contain coastal bluff scrub, coastal dune, or coastal scrub habitat necessary to support this species.	**Not Present**.
coast lily *Lilium maritimum*	1B	Closed-cone coniferous forest, coastal prairie, coastal scrub, broadleaf upland forest, North Coast coniferous forest; typically located on sandy soils, often in raised hummocks or bogs, and roadside ditches. Elevation range: 15 – 1545 feet. Blooms: May – August.	**High Potential**. The property contains closed-cone coniferous forest and closed-cone coniferous forest (Bishop pine forest, pygmy forest) that may support this species.	**Present**. One concentrated and a second dispersed population of this species is located within or adjacent to the property, as mapped during seasonally-appropriate plant surveys conducted in May and July.

Species	Status[1]	Habitat Requirements	Potential to Occur On-site	Results
northern microseris *Microseris borealis*	2	Bogs and fens, meadows and seeps, lower montane coniferous forest. Elevation range: 3250 – 6500 feet. Blooms: June – September.	**No Potential**. The property does not contain bog, fen, meadow, seep, or lower montane coniferous forest habitat necessary to support this species.	**Not Present**.
Wolf's evening-primrose *Oenothera wolfii*	1B	Coastal bluff scrub, coastal dune, coastal prairie, lower montane coniferous forest; located on sandy substrates in mesic sites. Elevation range: 10 – 2600 feet. Blooms: May – October.	**Unlikely**. Although the property contains coniferous forest, this species is most closely associated with open grassy sites (prairie, scrub) on the coast.	**Not Present**.
seacoast ragwort *Packera bolanderi* var. *bolanderi*	2	Coastal scrub, North Coast coniferous forest. Elevation range: 100 – 2115 feet. Blooms: January – July.	**Unlikely**. The property contains North Coast coniferous forest, yet this species is associated with coast redwood-Douglas fir forest not present on the study property.	**Not Present**.
North Coast phacelia *Phacelia insularis* var. *continentis*	1B	Coastal bluff scrub, coastal dune; located on open maritime bluffs underlain by sandy substrate. Elevation range: 30 – 555 feet. Blooms: March – May.	**No Potential**. The property does not contain coastal bluff scrub or coastal dune habitat necessary to support this species.	**Not Present**.
Bolander's pine *Pinus contorta* ssp. *bolanderi*	1B	Closed-cone coniferous forest; located on podzol-like soils (Blacklock series), closely associated with Bishop pine and pygmy cypress. Elevation range: 240 – 815 feet.	**High Potential**. The property contains Blacklock series soils and closed-cone coniferous forest.	**Present**. Extensive stands of this species are located throughout the property, particularly as stand-forming in the pygmy forest habitat.
dwarf alkali grass *Puccinellia pumila*	2	Meadows and seeps, marshes and swamps; located in mineral spring meadows and coastal salt marshes. Elevation range: 1 – 35 feet. Blooms: July.	**No Potential**. The property does not contain mineral springs, meadow, seep, or marsh habitat necessary to support this species.	**Not Present**.

Species	Status[1]	Habitat Requirements	Potential to Occur On-site	Results
angel's hair lichen *Ramalina thrausta*	2B.1	Grows on trees in forested moist areas.	**Unlikely**. The property contains coniferous forest (Bishop pine forest), yet the species is not known from near the site.	**Not Observed**. This species was not observed by GHD project biologists per site visit May 7, 2014..
white beaked-rush *Rhynchospora alba*	2	Bogs and fens, meadows and seeps, marshes and swamps; located in freshwater perennial wetlands and sphagnum bogs. Elevation range: 195 – 6630 feet. Blooms: July – August.	**No Potential**. The property does not contain sphagnum bog or perennial marsh wetland habitat necessary to support this species.	**Not Present**.
great burnet *Sanguisorba officinalis*	2	Bogs and fens, meadows and seeps, broadleaf upland forest, marshes and swamps, North Coast coniferous forest, riparian forest; located on rocky serpentine seeps and streams. Elevation range: 195 – 4550 feet. Blooms: July – October.	**No Potential**. The property does not contain serpentine substrate necessary to support this species.	**Not Present**.
purple-stemmed checkerbloom *Sidalcea malviflora* ssp. *purpurea*	1B	Broadleaf upland forest, coastal scrub. Elevation range: 45 – 280 feet. Blooms: May – June.	**No Potential**. The property does not contain coastal prairie or broadleaf upland forest habitat necessary to support this species.	**Not Present**.
Monterey clover *Trifolium trichocalyx*	FE; SE; 1B	Closed-cone coniferous forest; located on poorly drained, nutrient-deficient soils with a hardpan; often in openings and burned areas. Elevation range: 95 – 780 feet. Blooms: April – June.	**Unlikely**. This species is most closely associated with Monterey pine forests of the Central Coast, with one occurrence from coast redwood-Douglas fir forest of the North Coast.	**Not Present**.
coastal triquetrella *Triquetrella californica*	1B	Coastal bluff scrub, coastal scrub, valley and foothill grassland; grows within 100 feet of the coastline in scrub and grasslands on open gravel substrates of roads, hillsides, bluffs, and slopes. Elevation range: 30 – 325 feet.	**No Potential**. The property does not contain coastal bluff scrub, coastal scrub, or grassland habitat necessary to support this species.	**Not Present**.

Species	Status[1]	Habitat Requirements	Potential to Occur On-site	Results
alpine marsh violet *Viola palustris*	2	Coastal scrub, bogs and fens; located in swampy and shrubby places in coastal scrub or bog habitat. Elevation range: 0 – 490 feet. Blooms: March – August.	**No Potential**. The property does not contain coastal scrub or coastal bog habitat necessary to support this species.	**Not Present**.

1) Key to status codes:

FE	Federal Endangered
FT	Federal Threatened
FC	Federal Candidate
FD	Federal De-listed
BCC	USFWS Birds of Conservation Concern
SE	State Endangered
SD	State Delisted
ST	State Threatened
SR	State Rare
SSC	CDFG Species of Special Concern
CFP	CDFG Fully Protected Animal
1A	CRPR List 1A: Plants presumed extinct in California
1B	CRPR List 1B: Plants rare, threatened or endangered in California and elsewhere
2	CRPR List 2: Plants rare, threatened, or endangered in California, but more common elsewhere
3	CRPR List 3: Plants about which more information is needed (a review list)
4	CRPR List 4: Plants of limited distribution (a watch list)

Potential to Occur:

No Potential	Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
Unlikely.	Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
Moderate Potential.	Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
High Potential.	All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Results: (WRA 2013; see Appendix D)

Present. Species was observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.

Not Present. Species is assumed to not be present due to a lack of key habitat components.

Not Observed. Species was not observed during surveys.

Source: Table compiled from the California Department of Fish and Wildlife (CDFW) Natural Diversity Database, U.S. Fish and Wildlife Service (USFWS) Species Lists, and California Native Plant Society (CNPS) Electronic Inventory searches of the Fort Bragg, Inglenook, Dutchmans Knoll, Noyo Hill, Mathison Peak, and Mendocino USGS 7.5 Minute Quadrangles (CDFW 2014a; CNPS 2014; USFWS 2014.

The seven plant species with a moderate to high potential to occur at the site are described below. Species accounts and distribution at the site, if present, are described below. Four species were observed at the site during the protocol-level survey in March, May, and/or July, 2012, and the results of the survey are presented in Table 3.4-5).

Table 3.4-5 Special-Status Plant Species Mapped on the Property

Species	CRPR Status	Property (acres)	Plant Estimate (#)
Mendocino cypress	List 1B	12.33*	2,038
Bolander's pine	List 1B		790
Coast lily	List 1B	0.06	114
California sedge	List 2B	0.09	894

Source: WRA 2013

*12.33 acres consists of the three morpho-types of cypress forest mapped at the site—a) cypress forest (tall) that is dominated by cypress, b) cypress forest (intermediate) and cypress forest (pygmy) the later two of which are dominated by combination of both cypress and Bolander's pine.

Mendocino manzanita (*Arctostaphylos nummularia* var. *mendocinensis*). CRPR 1B. High Potential (Not Present). Mendocino manzanita is an evergreen shrub in the heath family (Ericaceae) that blooms in January, but is identifiable by vegetation and ecological characteristics throughout the year. This species is located on highly acidic sandy clay podzol-like substrates (Blacklock soil series) in closed-cone coniferous forest (pygmy forest) at elevations ranging from 290 to 650 feet (CNPS 2014, CDFG 2014a). Associated species include pygmy cypress , Bolander pine, Bishop pine, evergreen huckleberry, Pacific rhododendron, Labrador tea (*R. columbianum*), California wax myrtle, and giant chinquapin.

There is one CNDDB record for Mendocino manzanita in the greater vicinity of the property. The nearest documented occurrence is from March 1956 east of Fort Bragg, within one mile of the property. The most recent documented occurrence is from December 2003 in Jughandle State Park, approximately four miles southwest of the property (WRA 2013). Mendocino manzanita was determined to have a high potential to occur at the site due to the presence of suitable habitat, associated species, and Blacklock soils; however, this species was not observed during the protocol-level surveys performed in March, May, or July 2012.

Swamp harebell (*Campanula californica*). CRPR 1B. High Potential (Not Present). Swamp harebell is a perennial forb in the harebell family (Campanulaceae) that blooms June to October. It typically occurs in wetlands on acidic soils in bog and fen, closed-cone coniferous forest, coastal prairie, meadow, freshwater marsh, and North Coast coniferous forest habitat at elevations ranging from 3 to 1,320 feet (CNPS 2014, WRA 2013). Associated species include pygmy cypress, Bolander pine, Bishop pine, red alder (*Alnus rubra*), coast redwood, Douglas fir (*Pseudotsuga menziesii*), Pacific reedgrass (*Calamagrostis nutkaensis*), lady fern (*Athryium filix-femina*), California blackberry (*Rubus ursinus*), salmonberry (*R. spectabilis*), Labrador tea, Nootka rose (*Rosa nutkana*), evergreen huckleberry, tinker's penny (*Hypericum anagalloides*), sedges (*Carex* spp.), rushes (*Juncus* spp.), and horsetail (*Equisetum* spp.) (WRA 2013).

Swamp harebell is known from 26 USGS 7.5-minute quadrangles in Marin, Mendocino, Santa Cruz, and Sonoma counties (CNPS 2014). There are 27 CNDDB records (WRA 2013) in the greater vicinity of the property. The nearest documented occurrence is from August 1983 along Summers Lane, approximately one mile northwest of the property (WRA 2013). The most recent documented

occurrence from Mendocino County is from July 2007 in Little Valley Creek Basin, approximately six miles north of the property (WRA 2013). Swamp harebell was determined to have a high potential to occur at the site due to the presence of associated species, suitable habitat, suitable hydrologic and edaphic conditions, and the relative location of the documented occurrences. However, this species was not observed during the protocol-level rare plant survey conducted in July 2012 (blooms June through October).

California sedge (*Carex californica*). CRPR 2B. High Potential (Present). California sedge is a perennial graminoid in the sedge family (Cyperaceae) that blooms May to August. It typically occurs in drier portions of wetlands in bogs and fens, closed-cone coniferous forest, coastal prairie, meadows, and marshes and swamps at elevations ranging from 290 to 1090 feet (CNPS 2014, WRA 2013). Associated species pygmy cypress, Bolander's pine, evergreen huckleberry, Pacific rhododendron, Labrador tea, salal, glossy-leaf manzanita (*Arctostaphylos nummularia*), coast lily, bracken fern, and coast sedge (WRA 2013).

There are 21 CNDDB records for California sedge within the greater vicinity of the property. The nearest and most recent documented occurrence is from June 2010 along Summers Lane, approximately one mile northwest of the property (WRA 2013). California sedge was determined to have a high potential to occur on the property due to suitable substrate and hydrologic conditions, associated habitats and species, and the relative location of nearest documented occurrences. California sedge individuals were observed on the property with the densest populations located in transitional cypress forest and pygmy forest. Individuals within the transitional and pygmy forest community were estimated based on vegetation plot data, with a total estimate of 644 individuals. Populations within the tall cypress forest and seasonal wetland communities were discrete, and 250 individuals were counted and mapped (see Figure 3.4-1). Therefore, an estimated total of 894 individuals are estimated to be present on the property.

Green yellow sedge (*Carex viridula* var. *viridula*). CRPR 2. Moderate Potential (Not Present). Green yellow sedge is a perennial graminoid in the sedge family (Cyperaceae) that blooms from June to November. It typically occurs in mesic sites within bog and fen, freshwater marsh and swamp, and North Coast coniferous forest habitat at elevations ranging from 0 to 5,200 feet (CNPS 2014). Observed associated species include Buxbaum's sedge (*Carex buxbaumii*), flaccid sedge (*C. leptalea*), northern bugleweed (*Lycopus uniflorus*), and marsh pea (*Lathyrus palustris*) (WRA 2013).

Green yellow sedge is known from eight USGS 7.5-minute quadrangles in Del Norte, Humboldt, Mendocino, and Tuolomne counties (CNPS 2014). There is one CNDDB record within the greater vicinity of the property. The nearest and most recent documented occurrence from Mendocino County is undated located in Inglenook Fen, MacKerricher State Park, approximately seven miles north of the property (WRA 2013). Green yellow sedge was determined to have a moderate potential to occur on the property due to the presence of associated habitats; yet few areas at the property contain hydrology sufficient to support this species. Green yellow sedge was not observed during protocol-level rare plant surveys conducted in July 2012 (blooms June through November).

Pygmy cypress (*Hesperocyparis pygmaea*). CRPR 1B. High Potential (Present). Pygmy cypress is an evergreen tree in the cypress family (Cupressaceae) which is identifiable throughout the year. It typically is stand forming on podzol-like soils (e.g. Blacklock soil series) within closed-cone coniferous forest at elevations ranging from 100 to 1,950 feet (CNPS 2014, CDFG 2014a). Observed associated species include Bishop pine, Bolander's pine (*P. contorta* ssp. *bolanderi*), coast redwood, evergreen huckleberry, Labrador tea, Pacific rhododendron, redwood manzanita

(*Arctostaphylos columbianum*), Eastwood manzanita (*A. glandulosa*), glossy-leaf manzanita (*A. nummularia*), salal, coast lily, bracken fern (*Pteridium aqulinum*), and bear grass (CDFG 2014a).

Pygmy cypress is known from 12 USGS 7.5-minute quadrangles in Mendocino and Sonoma counties (WRA 2013). There are 22 CNDDB records within the greater vicinity of the property, and 81 other records from Mendocino County (WRA 2013). The nearest documented occurrence is along Summers Lane, approximately one mile northwest of the property. The most recent documented occurrence is from Mendocino County near Noyo Hill in Jackson Demonstration State Forest, approximately 1.5 miles south of the property. Pygmy cypress was determined to have a high potential to occur at the property due to the presence of suitable soil, associated species, and the relative location of the nearest documented occurrences. Several hundred individuals of pygmy cypress were observed within three morpho-types mapped and classified at the property: cypress forest-tall, cypress forest-intermediate, and cypress forest-pygmy, based on tree height, sub dominant/associated tree species, and understory density and species (see Figure 4.3-1). Within the three morpho type polygons, approximately 2,038 individuals were estimated within the property based on vegetation plot data (WRA 2013).

Coast lily (*Lilium maritimum*). CRPR 1B. High Potential (Present). Coast lily is a rhizomatous perennial forb in the lily family (Fabaceae) that blooms from May to August. It typically occurs in wetlands on sandy substrates in hummocks, roadsides, ditches, and undisturbed areas in closed-cone coniferous forest, North Coast coniferous forest, broadleaf upland forest, coastal prairie, coastal scrub, and freshwater marsh and swamp habitat at elevations ranging from 15 to 1,545 feet (CNPS 2014, CDFG 2014a). Observed associated species include Douglas fir, coast redwood, Bishop pine, Bolander's pine (*P. contorta* ssp. *bolanderi*), tanoak, giant chinquapin, wax myrtle, evergreen huckleberry, evergreen violet (*Viola sempervirens*), bracken fern, and deer fern (*Blechnum spicant*).

Coast lily is known from 19 USGS 7.5-minute quadrangles in Marin, Mendocino, San Francisco, San Mateo, and Sonoma counties. There are 23 CNDDB records within the greater vicinity of the property, and 59 other records from Mendocino County. The nearest documented occurrence is from July 1974 along California Highway 20 immediately adjacent to the property. The most recent documented occurrence from Mendocino County is from June 2007 at the Glass Beach Headlands, approximately four miles northwest of the property (WRA 2013). Coast lily has a high potential to occur in the property due to the presence of the associated habitat, suitable substrate and hydrology, associated species, and the relative locations of documented occurrences. Two sub-populations of coast lily were observed and mapped within the property (see Figure 4.3-1). The first population is located near Highway 20 in the southwest corner of the property within Bishop pine forest; approximately 104 individuals were documented. The second population is composed of five individuals and is located within pygmy cypress forest in the eastern portion of the property. Most individuals were in bud or flower when observed during protocol-level surveys in May and/or July 2012 (blooms: May through August).

Bolander's pine (*Pinus contorta* ssp. *bolanderi*). CRPR 1B. High Potential (Present). Bolander's pine is an evergreen tree in the pine family (Pinaceae) that is identifiable throughout the year based on vegetative structures and cones. It typically occurs on podzol-like soils in closed-cone coniferous forest habitat at elevations ranging from 240 to 815 feet (CNPS 2014, CDFW 2014a). Observed associated species include pygmy cypress, Bishop pine, Labrador tea (*Rhododendron columbianum*), Pacific rhododendron, wax myrtle, evergreen huckleberry, giant chinquapin, California sedge, bracken fern, coast lily, and bear grass (WRA 2013).

Bolander's pine is known from six USGS 7.5-minute quadrangles in Mendocino County (CNPS 2014). There are 23 CNDDB records in the greater vicinity of the property, and 45 other records from Mendocino County. The nearest documented occurrence is along Summers Lane, approximately one mile northwest of the property. The most recent documented occurrence from Mendocino County is from October 2002 in Van Damme State Park, approximately ten miles south of the property (WRA 2013). Bolander's pine was determined to have a high potential to occur at the property due to the presence of associated species, suitable substrate, and the relative location of the nearest documented occurrences. Several hundred individuals of Bolander's pine were observed on the property, with the densest stands located in conjunction with cypress trees. Approximately 790 individuals were estimated on the property based on vegetation plot data (WRA 2013).

Special-Status Wildlife Species

Table 3.4-6 summarizes the special-status wildlife species recorded with presence in the greater vicinity of the property, and evaluates the potential for each of the species to occur on the property. No special-status wildlife species were observed on the property during the site assessment. Nine special-status wildlife species have a moderate to high potential to occur at the property. For the remaining species, the property either lacks potentially suitable habitat or the site may contain potential habitat, but the habitat is disturbed to the extent that the occurrence of special-status species is unlikely. Special-status wildlife species with a moderate to high potential to occur on the property are discussed below.

Table 3.4-6 Potential for Special-Status Wildlife Species to Occur in the Property

Species	Status	Habitat Requirements	Potential to Occur on the Property
Mammals			
Antrozous pallidus pallid bat	SSC	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Unlikely**. Suitable roosting sites are not present on the study property, although this species may occasionally forage over the area.
Aplodontia rufa nigra Point Arena mountain beaver	FE, SSC	Live in underground burrow systems with openings under vegetation, often on steep north-facing slopes or in gullies. The burrows are found in moist areas with well-drained soil.	**No potential**. The property is outside of known range of this species.
Arborimus pomo Sonoma tree vole	SSC	Occurs in old-growth and other forests, mainly Douglas-fir, redwood, and montane hardwood-conifer habitats. Feeds only on conifer leaves, almost exclusively on Douglas-fir.	**High Potential**. Suitable habitat is present on the property, and it is within the known range of this species.
Corynorhinus townsendii townsendii Townsend's big-eared bat	SSC, WBWG High	Primarily found in rural settings in a wide variety of habitats including oak woodlands and mixed coniferous-deciduous forest. Day roosts highly associated with caves and mines.	**Unlikely**. Suitable roosting sites are not present, although this species may occasionally forage over the property.
Eumetopias jubatus steller [northern] sea lion	FT	Breeds on Año Nuevo, San Miguel and Farallon islands, Point Saint George, and Sugarloaf. Hauls-out on islands and rocks. Needs haul-out and breeding sites with unrestricted access to water, near aquatic food supply.	**No potential**. The study property does not contain coastal or marine habitat.
Lasionycteris noctivagans silver-haired bat	WBWG Med Priority	This forest inhabitant is known to occur from southeastern Alaska in summer, to northeastern Mexico in winter and in xeric habitats at low elevations during seasonal migrations. They can roost in tree cavities or in bark crevices on tree trunks, especially during migration.	**Moderate potential**. Mature trees and snags that support cavities or exfoliating bark may provide roosting habitat onsite.

Species	Status	Habitat Requirements	Potential to Occur on the Property
Lasiurus cinereus hoary bat	WBWG Med Priority	Widespread occuring in all states except Alaska and south Florida. Most migrate to South America for the winter, although some stay and hibernate. Roost in the foliage of trees, and occasionally in caves, or manmade structures such as bridges and abandoned mines. It prefers woodland, mainly coniferous forests, and hunts over open areas or lakes. Mating occurs during the fall when migrating south. Young are born between May and July. Their diet consists mainly of moths.	**Moderate potential**. Mature trees with canopy or trees that support cavities or exfoliating bark may provide roosting habitat.
Martes pennanti pacifica Pacific fisher	FC, SSC	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Use cavities, snags, logs and rocky areas for cover and denning. Need large areas of mature, dense forest.	**Unlikely**. Although the study property contains suitable habitat elements, it is it not within the known current range of the species.
Myotis lucifugus little brown bat	WBWG Med Priority	Found across the US. Roosts in buildings, trees, and under rocks. Prefer forested land near water.	**Moderate potential**. Mature trees and snags that support cavities or exfoliating bark may provide roosting habitat if present onsite.
Myotis thysanodes fringed myotis	WBWG High Priority	Associated with a wide variety of habitats including mixed coniferous-deciduous forest and redwood/sequoia groves. Buildings, mines and large snags are important day and night roosts.	**Moderate potential**. Mature trees and snags that support cavities or exfoliating bark may provide roosting habitat. This species may occasionally forage over the property.
Myotis Volans long-legged myotis	WBWG High Priority	Generally associated with woodlands and forested habitats. Large hollow trees, rock crevices and buildings are important day roosts. Other roosts include caves, mines and buildings.	**Unlikely**. Suitable roosting sites are not present, although this species may occasionally forage over the property (WRA 2013).
Phoca vitulina richardsi Pacific harbor seal	MMPA	Occurs in marine and estuarine environments the length of California. Breeds on islands; hauls out on mainland sites.	**No potential**. The study property does not contain coastal or marine habitat.
Zalophus californianus California sea lion	MMPA	Occurs in marine and estuarine environments from Vancouver Island, British Columbia to the southern tip of Baja California. Breeds on offshore islands from the Channel Islands southward. Hauls out on mainland sites.	**No potential**. The property does not contain coastal or marine habitat.

Species	Status	Habitat Requirements	Potential to Occur on the Property
Birds			
Accipiter gentilis northern goshawk	SC, SSC	Year-round resident within and on the edges of mixed and coniferous forests. Usually occurs in mature, old-growth forests. Hunts medium-sized birds.	**Unlikely**. The property is located to the west of this species' Mendocino County distribution as per a recent monograph (as referenced by WRA 2013).
Agelaius tricolor tricolored blackbird	SSC	Resident, though wanders during the non-breeding season. Highly colonial when breeding. Usually nests over or near freshwater in dense cattails, tule, or thickets of willow, blackberry, wild rose or other tall herbs.	**No Potential**. The property does not contain any typical nesting habitat, and is located outside of this species' limited breeding distribution in Mendocino County per a recent monograph (per WRA 2013).
Aquila chrysaetos golden eagle	CFP	Found in rolling foothill and mountain areas, sage-juniper flats, and dessert. Cliff-walled canyons provide nesting habitat in most parts of range; also nests in large, often isolated trees.	**Unlikely**. The property contains dense, coniferous forest canopy not suitable for foraging. May rarely occur in the vicinity during dispersal or other movements.
Asio flammeus short-eared owl	SSC	Resident and winter visitor. Found in open, treeless areas (e.g. marshes, grasslands) with elevated sites for foraging perches and dense vegetation for roosting and nesting.	**No Potential**. The property does not contain suitable open habitat, and species is not known to breed in Mendocino County per a recent monograph (WRA 2013).
Asio otus long-eared owl	SSC	Largely resident. Nests in a variety of woodland habitats, including coniferous, oak and riparian. Requires adjacent open land (e.g. grasslands, meadows) for foraging, and the presence of old nests of other birds for nesting.	**Unlikely**. The property is forested, and there is very limited open habitat in the vicinity.
Athene cunicularia burrowing owl	SSC	Occurs in open grasslands and shrublands with sparse vegetation. Roosts and nests in mammal burrows, typically those of ground squirrels. Preys upon insects and small vertebrates.	**No Potential**. The property contains no habitat suitable for this species, and is outside of its range per a recent monograph in Shuford and Gardali (2008).

Species	Status	Habitat Requirements	Potential to Occur on the Property
Brachyramphus marmoratus marbled murrelet	FT, SE	Occurs in coastal marine habitats for much of the year. Breeds in old-growth conifer stands (e.g. redwood, Douglas fir) containing platform-like branches, along the coast.	**Unlikely**. The property lacks stands of old-growth redwood and Douglas fir that provide breeding habitat. There are not CNDDB breeding occurrences reported within ten miles of the property (WRA 2013). Species may fly over the area if inland breeding sites exist.
Buteo regalis ferruginous hawk	BCC	Winter visitor. Found in open habitats including grasslands, sagebrush flats, desert scrub and low foothills surrounding valleys.	**No Potential**. The property does not contain habitat typical of this species.
Chaetura vauxi Vaux's swift	SSC	Summer resident, primarily in forested areas. Nests in tree cavities, favoring those with a large vertical extent. Also uses chimneys and similar manmade substrates.	**Moderate Potential**. This species breeds throughout Mendocino County according to a recent monograph (WRA 2013).
Charadrius alexandrinus nivosus western snowy plover	FT, SSC	Resident and winter visitor. Found on sandy beaches, salt pond levees and shores of large alkali lakes. Need sandy gravelly or friable soils for nesting.	**No Potential**. The property does not contain beach, levee, or lake shore habitat necessary to support this species.
Circus cyaneus northern harrier	SSC	Resident and winter visitor. Found in open habitats including grasslands, prairies, marshes and agricultural areas. Nests in dense vegetation on the ground, typically near water.	**Unlikely**. Although this species breeds in coastal Mendocino County (WRA 2013), the property is forested and does not contain suitable open habitat.
Contopus cooperi olive-sided flycatcher	SSC	Summer resident. Breeds in montane coniferous forests, as well as mixed forests along the coast. Often associated with edge habitats.	**Moderate Potential**. The property contains coniferous forest, with some edge areas.
Dendroica petechial yellow warbler	SSC	Summer resident. Nests in riparian stands of willows, cottonwoods, aspens, sycamores, and alders. Also nests in montane shrubbery in open coniferous forests. Occurs widely during migration.	**Unlikely**. The property does not contain any riparian habitat and provides no breeding habitat for this species. May occur occasionally during migration.
Diomedea albatrus short-tailed albatross	FE, SSC	Pelagic; comes to land only when nesting. Nests on remote Pacific islands. Rare in the eastern Pacific.	**No potential**. This species is entirely marine within the coastal California region.

Species	Status	Habitat Requirements	Potential to Occur on the Property
Elanus leucurus white-tailed kite	CFP	Resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, marshes and agricultural areas. Preys on small diurnal mammals and other vertebrates.	**No Potential**. The property does not contain open grassland, prairie, or marsh habitat necessary to support this species.
Falco peregrinus anatum American peregrine falcon	FD, SE, CFP	Resident and winter visitor. Typically found near water, including rivers, lakes, wetlands and the ocean. Requires protected cliffs, ledges or anthropogenic structures for nesting. Forages widely, feeding on a variety of avian prey, mostly waterbirds.	**Unlikely**. The property does not contain cliffs or anthropogenic structures typically used for nesting. May occasionally forage over the site.
Fratercula cirrhata tufted puffin	SSC	Pelagic and coastal marine. Nests along islands, islets, or (rarely) isolated mainland cliffs. Requires sod or earth to burrow. Forages at sea, primarily for fish.	**No potential**. The property does not contain coastal marine habitat.
Gavia immer common loon	SSC	Winter visitor, in coastal estuarine and subtidal marine habitats. Also occurs on large inland water bodies.	**No potential**. The property does not contain suitable aquatic habitat for this species.
Haliaeetus leucocephalus bald eagle	FD, SE, CFP, BCC	Primary a winter visitor, with limited breeding in the region. Requires large bodies of water, or free-flowing rivers with abundant fish adjacent snags or other perches. Nests in large, old-growth, or dominant live tree with open branchwork.	**Unlikely**. The property does not contain large bodies of water and thus provides no typical habitat or foraging resources for this species. May occasionally fly over the area.
Histrionicus histrionicus harlequin duck	SSC	Winter visitor to marine waters along the coast; breeds inland along streams in the northern Sierra Nevada.	**No Potential**. The property does not contain coastal marine habitat.
Lanius ludovicianus loggerhead shrike	SSC	Resident in open habitats with scattered shrubs, trees, posts, etc. from which to forage for large insects and small vertebrates. Nests are well-concealed above ground in densely-foliaged shrub or tree.	**No Potential**. The property does not contain open areas, and is outside of its limited Mendocino County breeding range per a recent monograph in Shuford and Gardali (2008).
Melanerpes lewis Lewis's woodpecker	BCC	Winter visitor, occurring in oak savannahs and various open woodland habitats. Often associated with recently-burned areas.	**Unlikely**. The property does not contain open woodland or oak woodland habitat necessary to support this species.

Species	Status	Habitat Requirements	Potential to Occur on the Property
Numenius americanus long-billed curlew	BCC	Winter visitor. Winters in large coastal estuaries, upland herbaceous areas, and croplands. Breeds in northeastern California in wet meadow habitat.	**No Potential**. The property does not contain suitable wetland, mudflat or grassland habitat for this species.
Oceanodroma homochroa ashy storm petrel	SSC	Pelagic and coastal marine. Breeds on the Farallon Islands off of the San Francisco/Marin Coast.	**No Potential**. The property does not contain pelagic or coastal marine habitat.
Pelecanus occidentalis californicus California brown pelican	CFP	Winter/non-breeding visitor to estuarine, marine subtidal, and marine pelagic waters along the coast. Nests on offshore islands of southern California.	**No Potential**. The property does not contain coastal marine habitat.
Phoebastris albatrus Short-tailed albatross	FE	Pelagic and coastal marine.	**No Potential**. The property does not contain pelagic or coastal marine habitat.
Progne subis purple martin	SSC	Summer resident. In NW California, typically breeds in coniferous forest and woodlands. Nests in tree cavities, usually high off the ground, and in the cavities of human-made structures (e.g. bridges, utility poles).	**Moderate Potential**. The property contains coniferous forest with potential tree cavities for nesting, and there is a documented breeding occurrence within four miles (WRA 2013).
Riparia riparia bank swallow	ST	Summer resident in lowland habitats in western California. Nests in areas with vertical cliffs and bands with fine-textured or sandy soils in which to burrow, typically riparian areas or coastal cliffs.	**No Potential**. The property does not contain suitable nesting habitat and is outside of this species' known breeding range in the state.
Selasphorus rufus rufous hummingbird	BCC	Summer resident in northwestern California. Breeds in a wide variety of habitats that provide nectar-producing flowers. Occurs throughout the state during migration.	**Unlikely**. The property is south of this species' limited California breeding range. May occur occasionally during migration.
Selasphorus sasin Allen's hummingbird	BCC	Summer resident along the California coast. Breeds in a wide variety of forest and woodland habitats that provide nectar-producing flowers, including parks and gardens. Migration generally limited to the coastal zone.	**Moderate Potential**. The property includes nectar plants and provides suitable breeding habitat for this species.

Species	Status	Habitat Requirements	Potential to Occur on the Property
Strix occidentalis caurina northern spotted owl	FT, SSC	Resident. Typically occurs in large patches of old-growth coniferous forest. Prefers dense, structurally complex canopies with large trees for foraging and roosting. Nests on horizontal substrates in dense canopy, e.g. large cavities and broken tree tops.	**Unlikely**. Coniferous forest within the property lacks structurally-complex, old-growth characters typically favored by this species. Per CDFG's Spotted Owl Viewer, the nearest documented breeding occurrences are located approximately 1.2 miles east of the property. May occasionally forage in the area, but breeding is unlikely.
Synthliborampus hypoleucus Xantus's murrelet	ST	Pelagic and coastal marine. Breads on offshore islands of southern California. Strays to northern California at sea during the non-breeding season.	**No Potential**. The property does not contain coastal marine habitat.
Reptiles and Amphibians			
Ascaphus truei Pacific tailed frog	SSC	Occurs from Mendocino County and north, in cold permanent streams, usually in forested areas of high precipitation. Primarily aquatic.	**No potential**. Although there are several documented occurrences within five miles (WRA 2013), the property does not contain stream habitat for this species.
Emys (Actinemys) marmorata Western pond turtle	SSC	Occurs in perennial ponds, lakes, rivers and streams with suitable basking habitat (mud banks, mats of floating vegetation, partially submerged logs) and submerged shelter.	**No potential**. The property does not contain aquatic habitat necessary to support this species.
Rana aurora northern red-legged frog	SSC	Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive emergent and/or riparian vegetation. Documented to disperse through upland habitats after rains. R. aurora found north of Big River (includes project site). South of Big River to Elk Creek is integrade zone (Shaffer 2004).	**Unlikely**. The property does not contain suitable aquatic breeding habitat for this species.
Rana boylii foothill yellow-legged frog	SSC	Found in or near rocky streams in a variety of habitats. Feed on both aquatic and terrestrial invertebrates.	**No potential**. The property does not contain stream habitat necessary to support this species.

Species	Status	Habitat Requirements	Potential to Occur on the Property
Rhyacotriton variegatus southern torrent salamander	SSC	Cold, permanent seeps and small streams with rocky substrate.	**No potential**. Although there is a documented occurrence in Hare Creek to the southwest (WRA 2013), the property does not contain stream or suitable seep habitat.
Fishes			
Eucyclogobius newberryi tidewater goby	FE, SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	**No Potential**. The property does not contain any aquatic habitat necessary to support this species.
Oncorhynchus kisutch Northern California steelhead	FE	Anadromous, spending time in the ocean, and spawning in coastal rivers and creeks.	**No Potential**. The property does not contain any aquatic habitat necessary to support this species.
Oncorhynchus tshawytscha chinook salmon - CA Coast ESU	FT, RP, NMFS	Anadromous, spending most of its life cycle in the ocean, but spawning in coastal rivers and creeks. The CA Coast ESU includes naturally spawned populations from rivers and streams south of the Klamath River (exclusive) to the Russian River (inclusive).	**No Potential**. The property does not contain any aquatic habitat necessary to support this species.
Oncorhynchus mykiss steelhead - Northern CA ESU	FT, NMFS, SSC	Anadromous, spending most of its life cycle in the ocean, but spawning in coastal rivers and creeks. The federal designation refers populations occurring below impassable barriers in coastal basins from Redwood Creek to, and including, the Gualala River. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for one or more years before migrating downstream to the ocean.	**No Potential**. The property does not contain any aquatic habitat necessary to support this species.

Species	Status	Habitat Requirements	Potential to Occur on the Property
Invertebrates			
Danaus plexippus monarch butterfly	None	Winter roost sites in wind-protected tree groves (eucalyptus, Monterey pine or Monterey cypress), with nectar and water sources nearby. Individuals occur widely. No formal listing, winter roosts monitored by CDFW)	**Unlikely**. The property is forested, containing no typical tree grove habitat. Individual monarchs may occasionally pass through the property.
Lycaiedes argyrognomon lotis Iotis blue butterfly	FE	Known from sphagnum-willow bogs in association with Bishop pine, pygmy forests and similar habitats. Harlequin lotus (*Hosackia gracilis*) is the suspected host plant.	**Unlikely**. The site contains pygmy cypress and Bishop pine forest, yet sphagnum-willow bog habitat or harlequin lotus are not present. Individual species may occasionally pass through the property.
Speyeria zerene behrensii Behren's silverspot butterfly	FE	Inhabits coastal terrace prairie habitat. Host plant is dog violet (*Viola adunca*).	**No Potential.** The site does not contain coastal terrace prairie habitat for dog violets.

1) Key to status codes:

FE	Federal Endangered
FT	Federal Threatened
FC	Federal Candidate
FD	Federal De-listed
BCC	USFWS Birds of Conservation Concern
SE	State Endangered
SD	State Delisted
ST	State Threatened
SR	State Rare
SSC	CDFG Species of Special Concern
CFP	CDFG Fully Protected Animal
WBWG	Western Bat Working Group High or Medium Priority species

Potential to Occur:

No Potential	Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
Unlikely.	Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
Moderate Potential.	Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
High Potential.	All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Source: Table compiled from the California Department of Fish and Wildlife (CDFW) Natural Diversity Database (CNDDB), U.S. Fish and Wildlife Service (USFWS) Species Lists, electronic database searches of the Fort Bragg, Inglenook, Dutchmans Knoll, Noyo Hill, Mathison Peak, and Mendocino USGS 7.5 Minute Quadrangles (CDFW 2014a; USFWS 2014).

Sonoma tree vole (*Arborimus pomo*), CDFW Species of Special Concern. High Potential. The Sonoma tree vole is distributed along the northern California coast from Sonoma County to the Oregon border. It occurs in old-growth and other forest types of Douglas fir and other conifers, including stands of Bishop pine. This species breeds year-round, but most often from February through September. Nests are constructed preferentially in tall trees, and may be situated on a whorl of limbs against the trunk, or at the outer limits of branches. Males nest most frequently in a tree nest constructed of needles, or less frequently in shallow burrows at the base of the tree, beneath litter. Females tend to spend most of their lives in trees, constructing large, domed nursery nests of needles at six to 150 feet above the ground. In young second-growth Douglas fir, nests can be placed on broken tops of trees, although old-growth Douglas fir stands likely provide the optimal structural components for nest building. The Sonoma tree vole is a coniferous needle specialist; needles and twigs are gathered primarily during the night, and may be consumed where found or brought to the nest. Needle resin ducts are removed. The remaining part is eaten, and the resin ducts may be used to line the nest cup. This unique nest lining is an identifying characteristic of this species.

This species was not observed during the reconnaissance-level site visit, nor were sign of its presence observed. However, there are several documented occurrences within five miles of the property (WRA 2013), and the property contains mature Bishop pine and other conifers. For these reasons, Sonoma tree vole has a moderate to high potential to be present.

Silver-haired bat (*Lasionycteris noctivagans*) Western Bat Working Group "Medium Priority" Species. Moderate Potential. This north temperate zone conifer and mixed conifer/hardwood forests inhabitant is known to occur from southeastern Alaska in summer, to northeastern Mexico in winter and in xeric habitats at low elevations during seasonal migrations. Maternity roosts appear to be almost exclusively in trees which include inside natural hollows and bird excavated cavities or under loose bark of large diameter snags. Both males and females change roosts frequently, and use multiple roosts within a limited area throughout the summer, indicating that clusters of large trees are necessary.

While the property does not contain optimal roosting habitat for this species, and foraging areas over water are not present, cavities and exfoliating bark within mature conifers may provide suitable roosting locations during certain portions of the year, therefore this species has moderate potential to be present on the property.

Hoary bat (*Lasiurus cinereus*) Western Bat Working Group "Medium Priority" Species. Moderate Potential. This species is widespread from near the limit of trees in Canada, southward at least to Guatemala, and from Brazil to Argentina and Chile in South America. Hoary bats are uncommon in the eastern U.S. and in the northern Rocky Mountains, but are more common in the prairie states and Pacific Northwest. They are associated with forested habitats in the west. Most migrate to South America for the winter, although some stay and hibernate. These bats roost in the foliage of trees, and occasionally in caves, or manmade structures such as bridges and abandoned mines. It prefers woodland, mainly coniferous forests, but hunts over open areas or lakes. Mating occurs during the fall when migrating south. Young are born between May and July. Their diet consists mainly of moths.

While the property does not contain optimal roosting habitat for this species, and foraging areas over water are not present, canopy within mature conifers may provide suitable roosting locations during certain portions of the year, therefore this species has moderate potential to be present on the property.

Fringed myotis (*Myotis thysanodes*), Western Bat Working Group "High Priority" Species. Moderate Potential. This bat ranges through much of western North America and is found in various habitats, including desert scrubland, grassland, sage-grass steppe, old-growth forest, and subalpine coniferous and mixed deciduous forest. Oak and pinyon-juniper woodlands are most commonly used. Fringed Myotis roosts in colonies from ten to 2,000 individuals, although large colonies are rare. Caves, buildings, underground mines, rock crevices in cliff faces, and bridges are used for maternity and night roosts, while hibernation has only been documented in buildings and underground mines. Tree-roosting has also been documented in Oregon, New Mexico, and California (WBWG 2012).

While the property does not contain optimal roosting habitat for this species, cavities and exfoliating bark within mature conifers may provide suitable roosting locations during certain portions of the year, therefore this species has moderate potential to be present on the property.

Little brown bat (*Myotis lucifugus*) Western Bat Working Group "Medium Priority" Species. Moderate Potential. Found in mesic, typically forested, areas of temperate across North America. This species is an ecological generalist exploiting a wide variety of natural and man-made roost sites and a wide spectrum of flying insect prey, including emerging adults of aquatic species. Summer maternity colony sites (consisting largely of reproductive females and dependent young) include tree cavities, caves and human-occupied structures.

While the property does not contain optimal roosting habitat for this species, and foraging areas over water are not present, cavities and exfoliating bark within mature conifers may provide suitable roosting locations during certain portions of the year, therefore this species has moderate potential to be present on the property.

Vaux's swift (*Chaetura vauxi*), CDFW Species of Special Concern. Moderate Potential. Vaux's swift is a summer resident in California, breeding on the coast from central California northward and in the Cascades and Sierra Nevada. Nesting occurs in large, accessible, chimney-like tree cavities that allow birds to fly within the cavity directly to secluded nest sites. Such cavities usually occur in conifers, particularly redwoods (as reported by WRA 2013). Chimneys and similar manmade substrates are also used for nesting. This species is highly aerial and forages widely for insects in areas of open airspace. During migration, nocturnal roosting occurs communally; favored roosts may host thousands of individuals. The property contains conifers with some large, vertical-oriented cavities, and thus provides suitable breeding habitat and this species has moderate potential to be present on the property.

Olive-sided flycatcher (*Contopus cooperi*), CDFW Species of Special Concern. Moderate Potential. The olive-sided flycatcher is a summer resident in California, wintering in Central and South America. It breeds in a variety of forested habitats, typically coniferous forests at higher elevations, but also in mixed forest and woodlands at lower elevations. Breeding habitat is often associated with forest openings and edges, both natural (e.g., meadows, canyons) and man-made (e.g., logged areas) (as reported by WRA 2013). Nests are usually in conifers, and placed at variable height on the outer portions of branches. This species forages for insects, usually from prominent tree snags. The coniferous forest of the property provides suitable breeding habitat, particularly in its western portion along edge areas and this species has moderate potential to be present on the property.

Purple martin (*Progne subis*), CDFW Species of Special Concern. Moderate Potential. This large swallow is an uncommon summer resident in California, breeding in forest and woodlands at low- to mid- elevations throughout much of the state. Nesting occurs primarily in tree cavities; trees

selected are usually taller or isolated, with low canopy cover at the nest height, and situated on the upper portions of slopes and/or near bodies of water where large insects (favored prey) are abundant (as reported by WRA 2013). Conifers are the most frequently used tree type in northern California. Manmade structures with suitable cavities such as bridges or utility poles are also used. Coniferous forest within the property includes taller trees with potential cavities, and recent nesting has been documented within four miles of the property (WRA 2013). This species has moderate potential to be present on the property.

Allen's hummingbird (*Selasphorus sasin*), USFWS Bird of Conservation Concern. Moderate Potential. Allen's hummingbird, common in many portions of its range, is a summer resident along the majority of California's coast and a year-round resident in portions of coastal southern California. Breeding occurs in association with the coastal fog belt, and typical habitats used include coastal scrub, riparian, woodland and forest edges, and eucalyptus and cypress groves (WRA 2013). Feeds on flower nectar, and forages for insects and spiders. The property provides some forest edge habitat as well as nectar plants; this species has a moderate potential to be present, including breeding.

3.4.2 Regulatory Framework

Many sensitive biological resources in California are protected and/or regulated by federal, state, and local laws and policies. Those most applicable to the proposed project are summarized below.

Federal

Federal Endangered Species Act

The federal Endangered Species Act of 1973 (ESA) recognizes that many species of fish, wildlife, and plants are in danger of or threatened with extinction and established a national policy that all federal agencies should work toward conservation of these species. The Secretary of the Interior and the Secretary of Commerce are designated in the act as responsible for identifying endangered and threatened species and their critical habitats, carrying out programs for the conservation of these species, and rendering opinions regarding the impact of proposed federal actions on endangered species. The act also outlines what constitutes unlawful taking, importation, sale, and possession of endangered species and specifies civil and criminal penalties for unlawful activities.

Biological assessments are required under Section 7(c) of the act if listed species or critical habitat may be present in the area affected by any major construction activity conducted by, or subject to issuance of a permit from, a federal agency as defined in Part 404.02. Under Section 7(a)(3) of the act every federal agency is required to consult with the USFWS or NOAA Fisheries on a proposed action if the agency determines that its proposed action may affect an endangered or threatened species.

Section 9 of the ESA prohibits the "take" of any fish or wildlife species listed under the ESA as endangered or threatened. Take, as defined by the ESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such action." However, Section 10 allows for the "incidental take" of endangered and threatened species of wildlife by non-federal entities. Incidental take is defined by the ESA as take that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." Section 10(a)(2)(A) requires an applicant for an incidental take permit to submit a "conservation plan" that specifies, among other things, the impacts that are likely to result from the taking and the measures the permit applicant will undertake to minimize and mitigate such impacts. Section 10(a)(2)(B) provides statutory criteria that must be satisfied before an incidental take permit can be issued.

Clean Water Act, Section 404

Proposed discharges of dredged or fill material into waters of the U.S. require USACE authorization under Section 404 of the Clean Water Act (CWA) [33 U.S.C. 1344]. Waters of the U.S. generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands (with the exception of isolated wetlands). Wetlands subject to the CWA Section 404 are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 [b]; 40 CFR 230.3 [t]). The USACE identifies wetlands using a "multi-parameter approach," which requires positive wetland indicators in three distinct environmental categories: hydrology, soils, and vegetation. According to the USACE Wetlands Delineation Manual, except in certain situations, all three parameters must be satisfied for an area to be considered a jurisdictional wetland. The Regional Supplement to the Corps of Engineers Wetland Delineation Manual (USACE 2010) is also utilized when conducting jurisdictional wetland determinations in areas identified within the boundaries of the arid west.

The CWA also defines the ordinary high water mark as the Section 404 jurisdictional limit in non-tidal waters. When adjacent wetlands are present, the limit of jurisdiction extends to the limit of the wetland. Field indicators of ordinary high water include clear and natural lines on opposite sides of the banks, scouring, sedimentary deposits, drift lines, exposed roots, shelving, destruction of terrestrial vegetation, and the presence of litter or debris. Typically, the width of waters corresponds to the two-year flood event.

Clean Water Act, Section 401

Section 401 of the CWA requires applicants acquiring a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States, to also obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. The appropriate RWQCB regulates Section 401 requirements (see under State below).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (50 CFR 10.13) established federal responsibilities for the protection of nearly all species of birds, their eggs and nests. A migratory bird is defined as any species or family of birds that live, reproduce or migrate within or across international borders at some point during their annual life cycle. "Take" is defined in the MBTA "to include by any means or in any manner, any attempt at hunting, pursuing, wounding, killing, possessing or transporting any migratory bird, nest, egg, or part thereof." Only non-native species such as feral pigeon (*Columba livia*), house sparrow (*Passer domesticus*), and European starling (*Sturnus vulgaris*) are exempt from protection.

State

California Environmental Quality Act

Rare or endangered plant or wildlife species are defined in the CEQA Guidelines Section 15380; endangered means that survival and reproduction in the wild are in immediate jeopardy. Rare means that a species is either presently threatened with extinction or that it is likely to become endangered within the foreseeable future. A species of animal or plant shall be presumed to be rare or endangered if it is listed in Sections 670.2 or 670.5, Title 14, California Administrative Code; or Title 50, Code of Federal Regulations Sections 17.11 or 17.12 pursuant to the federal Endangered Species Act as threatened or endangered.

California Endangered Species Act

The California Endangered Species Act (CESA) includes provisions for the protection and management of species listed by the State of California as endangered or threatened or designated as candidates for such listing (Fish and Wildlife Code Sections 2050 through 2085). The act requires consultation "to ensure that any action authorized by a State lead agency is not likely to jeopardize the continued existence of any endangered or threatened species or results in the destruction or adverse modification of habitat essential to the continued existence of the species" (Section 2053). California plants and animals declared to be endangered or threatened are listed at 14 CCR 670.2 and 14 CCR 670.5, respectively. The State prohibits the take of protected amphibians (14 CCR 41), protected reptiles (14 CCR 42), and protected furbearers (14 CCR 460). The CDFW may also authorize public agencies through permits or a memorandum of understanding to import, export, take, or possess any endangered species, threatened species, or candidate species for scientific, educational, or management purposes (Section 2081[a]). The CDFW may also authorize, by permit, the take of endangered species, threatened species, and candidate species provided specific conditions are met (Section 2081[b]).

California Fish and Game Code

The recently renamed California Department of Fish and Wildlife (CDFW) enforces the California Fish and Game Code (CFGC), which provides protection for "fully protected birds" (Section 3511), "fully protected mammals" (Section 4700), "fully protected reptiles and amphibians" (Section 5050), and "fully protected fish" (Section 5515). With the exception of permitted scientific research, no take of any fully protected species is allowed.

Section 3503 of the CFGC prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Subsection 3503.5 specifically prohibits the take, possession, or destruction of any birds in the orders Falconiformes (hawks and eagles) or Strigiformes (owls) and their nests. These provisions, along with the federal MBTA, essentially serve to protect nesting native birds. Non-native species, including European starling and house sparrow, are not afforded protection under the MBTA or CFGC.

Streams, lakes, and riparian vegetation as habitat for fish and other wildlife species, are subject to jurisdiction by the CDFW under Sections 1600-1616 of the CFGC. Activity that will do one or more of the following, generally require a Section 1602 Lake and Streambed Alteration Agreement: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. The term "stream," which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Riparian is defined as, "on, or pertaining to, the banks of a stream;" therefore, riparian vegetation is defined as, "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself." Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from the CDFW.

Clean Water Act and the State of California's Porter-Cologne Water Quality Control Act

The State Water Resources Control Board (SWRCB) regulates construction storm water discharges through SWRCB Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges that Have Received State Water Quality Certification." The State's authority to regulate activities in wetlands and waters resides primarily with the SWRCB, which in turn has authorized the State's nine RWQCBs, discussed below, to regulate such activities. Under Section 401 of the federal CWA, every applicant for a federal permit for any activity that may result in a discharge to a water body must obtain State Water Quality Certification that the proposed activity will comply with state water quality standards.

In the project area, the North Coast RWQCB (NCRWQCB) regulates construction in waters of the U.S. and waters of the State, including activities in wetlands, under both the CWA and the State of California's Porter-Cologne Water Quality Control Act (California Water Code, Division 7). Under the CWA, the RWQCB has regulatory authority over actions in waters of the U.S., through the issuance of water quality certifications, as required by Section 401 of the CWA, which are issued in conjunction with permits issued by the USACE under Section 404 of the CWA. The RWQCB must certify that a USACE permit action meets State water quality objectives (§401 CWA, and Title 23 CCR 3830, et seq.) before a USACE permit is issued. Activities in areas that are outside of the jurisdiction of the USACE (e.g., isolated wetlands, vernal pool, or stream banks above the ordinary high water mark) are regulated by the nine RWQCBs, under the authority of the Porter-Cologne Act, and may require the issuance of either individual or general waste discharge requirements.

The California Wetlands Conservation Policy (Executive Order W-59-93) establishes a primary objective to "ensure no overall net loss … of wetlands acreage and values in California." The RWQCBs implement this policy and the Basin Plan Wetland Fill Policy, both of which require mitigation for wetland impacts.

State Species of Special Concern

The CDFW maintains list of species and habitats of special concern. These are broadly defined as species that are of concern to the CDFW because of population declines and restricted distributions, and/or they are associated with habitats that are declining in California; the criteria used to define special-status species are described by the CDFW. Impacts to special-status plants, animals, and habitats may be considered significant under CEQA.

State Species of Special Concern include those plants and wildlife species that have not been formally listed, yet are proposed or may qualify as endangered or threatened, or are candidates for such listing under the California Endangered Species Act (CESA). This affords protection to both listed species and species proposed for listing. In addition, CDFW Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, United States Fish and Wildlife Service (USFWS) Birds of Conservation Concern, and CDFW special-status invertebrates are considered special-status species by CDFW. Plant species included within the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (Inventory) with California Rare Plant Rank (CRPR) of 1 and 2 are also considered special-status plant species. Few Rank 3 or Rank 4 plants meet the definitions of Section 1901 Chapter 10 of the Native Plant Protection Act (see below) or Sections 2062 and 2067 of the CDFG Code that outlines the California Endangered Species Act. There are occasions where CRPR List 3 or 4 species might be considered of special-concern particularly for the type locality of a plant, for populations at the periphery of a species range, or in areas where the taxon is especially uncommon or has sustained heavy losses, or from populations exhibiting unusual morphology.

Also under the jurisdiction of CDFW and considered sensitive are vegetation alliances with a State ("S") ranking of S1 through S3 in the *List of Vegetation Alliances* (CDFG 2009a). CDFG ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database (CNDDB).

Native Plant Protection Act

The CDFW administers the California Native Plant Protection Act (CNPPA) (Sections 1900–1913 of the CFGC). These sections allow the California Fish and Game Commission to designate rare and endangered plant species and to notify landowners of the presence of such species. Section 1907 of the CFGC allows the Commission to regulate the "taking, possession, propagation, transportation, exportation, importation, or sale of any endangered or rare native plants." Section 1908 further directs that "[n]o person shall import into this state, or take, possess, or sell within this state, except as incident to the possession or sale of the real property on which the plant is growing, any native plant, or any part or product thereof, that the Commission determines to be an endangered native plant or rare native plant."

California Species Preservation Act

The California Species Preservation Act (CFGC Sections 900–903) includes provisions for the protection and enhancement of the birds, mammals, fish, amphibians, and reptiles of California. The administering agency is the CDFW.

Regional and Local

Mendocino County General Plan Goals and Policies

Following are the Mendocino County General Plan goals and policies most applicable to biological resources for the proposed project.

Goal RM-7 (Biological Resources): Protection, enhancement and management of the biological resources of Mendocino County and the resources upon which they depend in a sustainable manner.

Policy RM-24: Protect the County's natural landscapes by restricting conversion and fragmentation of timberlands, oak woodlands, stream corridors, farmlands, and other natural environments.

Policy RM-25: Prevent fragmentation and loss of our oak woodlands, forests, and wildlands and preserve the economic and ecological values and benefits.

Policy RM-28: All discretionary public and private projects that identify special-status species in a biological resources evaluation (where natural conditions of the site suggest the potential presence of special-status species) shall avoid impacts to special-status species and their habitat to the maximum extent feasible. Where impacts cannot be avoided, projects shall include the implementation of site-specific or project-specific effective mitigation strategies developed by a qualified professional in consultation with state or federal resource agencies with jurisdiction (if applicable) including, but not limited to, the following strategies:

- Preservation of habitat and connectivity of adequate size, quality, and configuration to support the special-status species. Connectivity shall be determined based on the specifics of the species' needs.

- Provision of supplemental planting and maintenance of grasses, shrubs, and trees of similar quality and quantity to provide adequate vegetation cover to enhance water quality, minimize sedimentation and soil transport, and provide adequate shelter and food for wildlife.
- Provide protection for habitat and the known locations of special-status species through adequate buffering or other means.
- Provide replacement habitat of like quantity and quality on- or off-site for special-status species.
- Enhance existing special-status species habitat values through restoration and replanting of native plant species.
- Provision of temporary or permanent buffers of adequate size (based on the specifics of the special-status species) to avoid nest abandonment by nesting migratory birds and raptors associated with construction and site development activities.
- Incorporation of the provisions or demonstration of compliance with applicable recovery plans for federally listed species.

Policy RM-29: All public and private discretionary projects shall avoid impacts to wetlands if feasible. If avoidance is not feasible, projects shall achieve no net loss of wetlands, consistent with state and federal regulations.

Policy RM-31: For the purposes of implementing this General Plan, the County defines “special status species” and “sensitive biotic communities” to include all species and habitat identified as such by the California Department of Fish and Game, U.S. Fish and Wildlife Service, or NOAA Fisheries.

Policy RM-72: New development shall protect sensitive environments and resource corridors while maintaining compatibility with adjacent uses.

Policy RM-73: The design of new development should emphasize the avoidance of sensitive resources and environments rather than their removal and replacement.

Policy RM-74: Discretionary development shall be designed or conditioned to achieve no net loss of sensitive resources.

Policy RM-75: Protection of existing sensitive resources is the highest priority. Onsite replacement or offsite replacement, protection or enhancement is less desirable.

Policy RM-76: Limit land use density and intensity within and adjacent to critical wildlife habitats, such as wetlands, deer wintering range, old growth forests and riparian corridors.

Policy RM-79: Encourage farmers, land owners and property managers to protect sensitive environments, and minimize the effects of recreation, tourism, agriculture and development on these resources. Promote techniques and features such as:

- Habitat contiguity,
- Wildlife corridors,
- Maintaining compatibility with adjacent uses,
- Maintaining habitat for sensitive plant and animal species.

Policy RM-80: Vegetation removal should be reviewed when involving five (5) or more acres, assessing the following impacts:

- Grading and landform modifications including effects on site stability, soil erosion and hydrology.
- Effects on the natural vegetative cover and ecology in the project area.
- Degradation to sensitive resources, habitat and fisheries resources.
- Compatibility with surrounding uses.
- Visual impacts from public vantage points.
- Cumulative and growth-inducing impacts.

For the purposes of implementing this policy, "vegetation removal" does not include state-regulated timber harvest

Policy RM-81: Vegetation management and landscaping for public and private development should emphasize protection and continuity of natural habitats and hydrology.

Policy RM-84: Protect "pygmy" ecosystems ("pygmy" and "transitional pygmy" vegetation and soils) through the use of measures that include minimizing:

- Vegetation removal,
- Disruption of vegetation continuity, and
- The introduction of water and nutrients due to human activity, sewage disposal systems, animals or agricultural uses.

Also:

- Limit subdivision of land on agricultural lands adjacent to "pygmy" ecosystems, and
- Promote best management practices to minimize impacts.

3.4.3 Evaluation Criteria and Significance Thresholds

The project would cause a significant impact related to biological resources, as defined by the CEQA Guidelines (Appendix G), if it would:

- 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;

  Significance Threshold

  Loss or harm of individuals or loss of habitat for listed or candidate species or species of special concern

  Loss of individuals or eggs protected under the MBTA

- 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 U.S. Fish and Wildlife Service;

  Significance Threshold: Pygmy Cypress Forest

  ~~Imperiled Sensitive Habitats (State Rank S1 and S2 per CDFW criteria)~~

– Removal of more than zero (0) acres of sensitive habitat at project site

Significance Threshold: Bishop Pine Forest Alliance

~~Bishop Pine Habitat--High Quality (State Rank S3 per CDFW criteria)~~

– Loss of more than 1 acre at project site, and

– Loss of more than 1% of regional habitat

~~Bishop Pine Habitat--Low Quality (Uncertain State Rank per CDFW criteria)~~

~~– Loss of more than 5 acre at project site, and~~

~~– Loss of more than 10% of regional habitat~~

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

  Significance Threshold

  More than zero (0) acres of fill in wetlands, waters of the U.S., or waters of the State

- 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;

  Significance Threshold

  Creation of a barrier to movement resulting in loss or harm to native resident or migratory fish or wildlife species

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;

  Significance Threshold

  Removal or damage that leads to mortality of any tree species protected by a Preservation Policy or Tree Ordinance

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

  Significance Threshold

  Conflict with an approved habitat conservation plan

Areas of No Project Impact

As explained below, the project would not result in impacts related to one of the significance criteria identified in Appendix G of the current California Environmental Quality Act (CEQA) Guidelines. The following significance criteria are not discussed further in the impact analysis, for the following reasons:

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan as there are no such special plans that would govern the project.

3.4.4 Methodology

The assessment of potential impacts to biological resources is based on the relationship between species and habitat distribution and the locations and activities proposed for construction and operation of the project. Potential impacts on special-status plants and wildlife has been based on known occurrences or on the likelihood that suitable habitat for special-status species would be affected.

A biological resources assessment was prepared for the project (WRA 2013). Information on special-status plant and animal species was compiled through a review of the literature and database search. Database searches for known occurrences of special-status species focused on the Fort Bragg, Inglenook, Dutchmans Knoll, Noyo Hill, Mathison Peak, and Mendocino U.S. Geologic Service 7.5-minute topographic quadrangle. The following sources were reviewed to determine which special-status plant and wildlife species have been documented in the vicinity of the property:

- U.S. Fish and Wildlife Service (USFWS) quadrangle species lists (USFWS 2014)
- California Natural Diversity Database records (CNDDB) (CDFW 2014a)
- California Native Plant Society (CNPS) Electronic Inventory records (CNPS 2014)

The potential for special-status species or habitats to occur on the property was evaluated by first determining which special-status species occur in the vicinity of the property through literature and database searches. The initial evaluation of the property, as to presence of non-sensitive biological communities, was conducted by determining what potential sensitive communities would be present, evaluating the property for presence of sensitive communities and mapping/designating such areas, and making a determination as to what would constitute a “non-sensitive” community. It should be noted that the CEQA Checklist and CEQA Guidelines Section 15065, do not restrict impact analysis to “high priority” or “sensitive” natural communities, as further discussed below and addressed by project-specific significance threshholds.

Significance thresholds have been provided for quantitative evaluation of impacts in relation to thresholds, particularly providing quantitative levels for item two (bullet two above), regarding potential impacts to areas potentially considered sensitive habitats. The significance thresholds allow for evaluation of impacts to habitats, for this project, in relation to regional context, and for evaluation of whether an impact constitutes a “substantial” adverse effect according to thresholds. The *CEQA Guidelines Section 15382* sets forth the following definition for significant effect: “Significant effect on the environment” means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including … flora, fauna..”, etc. The *CEQA Guidelines Section 15064(b)* indicates that a strict definition of significant effect is not always possible because the significance of an activity may vary with the setting. According to *CEQA Statutes Section 21083 an*d *CEQA Guidelines Section 15065* a project is considered to have a significant effect on the environment if: “The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of fish or wildlife population, cause a fish or wildlife species to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or significantly reduce the number or restrict the range of an endangered, rare, or threatened species.” With this regional context in mind, the impacts to Bishop pine forest are evaluated under project-specific significance thresholds provided in Section 3.4.3 above, as developed by project biologist and the lead agency to further define what constitutes a substantial impact. The lead agency concludes that less than 1% impact regionally to habitats ~~with S3 (vulnerable) ranking~~ does not constitute a substantial degradation to quality of the environment,

or substantial reduction in habitat of fish or wildlife causing such species to drop below self-sustaining levels, threaten to eliminate a plant or animal community, etc, as further elaborated on above.

The Caspar site is already developed and consists of unvegetated areas as well as some previously logged and remnant forest areas adjacent to the existing facility that is proposed for closure. As part of the closure of the facility, there would be no new ground disturbance. Therefore, there would be no impact to biological resources at the Caspar site. Impact to biological resources from closure of the Caspar facility is not discussed further ***except as a mitigation site as described in Appendix L.***

3.4.5 Impacts and Mitigation Measures

Impact BIO-1: Substantial Adverse Effect on Special-Status Species

The County and City minimized the amount of impacts to sensitive-listed tree species through adjustment of the project footprint, and eliminated impact to the most sensitive area that is stunted and mapped as cypress forest-pygmy. This minimization and avoidance effort was conducted during the project planning phase and project layout/design per guidance of RM-74 that suggests prioritizing minimization and avoidance prior to a replacement or enhancement approach. The project layout also minimized fragmentation to sensitive species by placing the project site centered on Bishop pine area and maintaining connectivity of remaining sensitive listed plants with adjacent areas of similar character.

The proposed project would directly or indirectly impact populations of CRPR List 1B plant species. Potential impacts are shown in Table 3.4-7 and described further below.

Table 3.4-7 Project Impacts to Special Status Plant Species

On Property Existing				Impact			
Species	CRPR List	Area (acres)	Individual Plant Estimate (#)	Area (acres)	Percent of Project Site	Individual Plant Estimate (#)	Percent # of Plants
Mendocino cypress	List 1B	12.33	2,037	0.580	5%	230	11%
Bolander's pine	List 1B		790			38	5%
Coast lily	List 1B	0.06	109	0.003	5%	10	9%
California sedge	List 2	0.09	894	0.000	0%	0	0%

The project footprint would avoid the population of California sedge [CRPR List 2]. There would be no direct or indirect impact to California sedge.

The project would permanently impact five individual Coast lily (CRPR List 1B) plants within the project footprint. In addition, a 0.003 acre area where this plant is mapped would be temporarily impacted, either directly or indirectly, during construction. A portion of the 0.003 acres is within the construction buffer, with the remaining habitat close to the construction area and therefore threatened indirectly. The 0.003 acre potential impact area is estimated to include an additional five

individual plants based on percent of the subpopulation polygon being impacted, with individual plant counts for the entire property provided by field biologist during seasonally-appropriate plant surveys. Temporary and permanent impacts to Coast lily would be significant. Reference Figure 3.4-2 for permanent and construction impacts by habitats and rare plants.

The project would permanently impact approximately 0.58 acre of Mendocino cypress and Bolander's pine (both CRPR List 1B) (within areas categorized as cypress forest-tall and cypress forest-intermediate). Additionally, there are scattered cypress and Bolander's pine within the Bishop pine map unit. Impact to these individual trees is based on tree counts conducted within plots, and not based on acreage due to the scattered nature and low percent cover of these two species within the Bishop pine map unit. In total, approximately 229 Mendocino cypress and approximately 38 Bolanders' pine are estimated to be impacted within the Bishop pine forest, cypress forest-tall, and cypress forest-intermediate based on estimates from tree counts conducted within plots at the property (WRA 2013). Impacts to Bolander's pine and Mendocino cypress would be significant.

The biological evaluation for the project site (WRA 2013) stated that the Sonoma tree vole, a State species of special concern, could be present at the site since conifer habitat is present and the site is within the known species range, and if present could be impacted during construction due to tree removal. Impacts to the Sonoma tree vole would be significant.

The biological evaluation for the project site (WRA 2013) determined the following special-status bird species could be present at the site, and could be impacted during construction due to tree removal: Vaux's swift, Olive-sided fly catcher, purple martin, Allen's hummingbird, all of which are State Species of Special Concern. These are summer resident avian species. There is also the potential for passerine migratory bird species to fly over or stop at the site. Nesting habitat for such species is not high quality, yet seasonal or occasional presence and/or nesting cannot be ruled out at this point in time. Impacts to special-status bird species and birds protected under the Migratory Bird Act would be significant. Project construction occurring during the March 15 through August 15 breeding season may have an adverse impact on breeding success for special-status bird species. Impacts to special-status birds would be significant.

The biological evaluation for the project site (WRA 2013) determined that the site has moderate potential to support roosting locations for some bat species listed as having "moderate to high priority for survey" per Western Bat Working Group (WBWG), and could be impacted through tree removal if present at the site. Several special-status bat species, including the Townsend's big-eared bat, silver-haired bat, hoary bat, little brown bat, and fringed myotis, have the potential to occur on the project site. No bats were observed during site evaluations, and none of the bat species are expected to occur in substantial numbers at the project site. Breeding and foraging habitat for these species on the project site and in adjacent areas is generally marginal because rock outcrops, decadent trees, and caves with suitable bat habitat are sparse to non-existent for these bat species. However, they still could forage over the project site and roost under bark or in cavities of trees. Project construction occurring during the March 1 through August 31 bat breeding season may have an adverse impact on breeding success for special-status bat species. Impacts to special-status bats could be significant.

Mitigation Measure BIO-1a: Mitigate Impacts to Coast Lily

The County and City shall implement the following measures to mitigate the temporary and permanent impacts to Coast lily plants during construction and operation of the project:

<u>During Construction (0.003 acre subpopulation polygon)</u>

The building contractor shall install construction avoidance fencing at the interface of project footprint and the edge of the 0.003 acre coast lily subpopulation present on the south edge of the project site (refer to Figure 3.4-1 of the Draft EIR). The fencing will be at a minimum 100 linear feet in length to provide a barrier between the construction footprint and adjacent coast lily subpopulation. The construction fencing will be placed so that there is no “construction buffer” in this area, so as to avoid direct impacts to coast lily individuals. The construction avoidance fencing shall be installed by a qualified biologist and inspected weekly for the duration of construction to ensure that the fencing remains installed properly.

<u>During Operation (0.003 acre subpopulation polygon)</u>

Permanent fencing shall be installed prior to operation of the project. The fencing shall be approximately 100 feet in length and placed between the driveway leading to the scalehouse and the subpopulation polygon so as to create a permanent barrier from project operation. Perimeter fencing installed around the perimeter of the transfer station facility may suffice as protection of the subpopulation polygon from operational activities.

<u>Five Individual Coast Lily Plants</u>

The five individual coast lily plants, as identified within the project footprint on Figure 3.4-1 of the Draft EIR, shall be relocated, if possible, to the south subpopulation area. If relocation is not possible a nursery will be contracted to provide locally sourced plant stock and the five plants will be replaced at a 2:1 ratio. The plant stock or plantings shall be placed in an area adjacent to the south subpopulation. The plant replacement (whether through relocation and/or replanting) shall require annual monitoring for two years, with 100% success. To ensure meeting the 100% success criteria it is recommended that supplemental planting occur at a minimum of 20% (i.e.: 1 additional plant for relocation or two additional plants for nursery-provided plant stock).

Mitigation Measure BIO-1b: Mitigate Impact to Mendocino Cypress and Bolander’s Pine

The impacts to CRPR listed tree species Mendocino cypress and Bolander’s pine (a 0.58 acre area) shall be mitigated through preservation at an offsite location. ~~The County and City proposes to use a portion of a 28-acre site identified as Assessor’s Parcel Number (APN) 118-50-045 which is adjacent to and north of the Caspar transfer station facility and is forested including cypress, Bishop Pine, and other related species. A photograph of the proposed mitigation site is provided as Figure 3.4-3 and the location is shown on Figure 2-3. This parcel was declared surplus by the County in 2011 and listed for sale. It is zoned Rural Residential with potential for development of a single-family house. On September 22, 2014, the County Board of Supervisors rescinded the designation as surplus and reserved the parcel for conservation mitigation if required for this project and/or other projects that could have forestry impacts. The County, owner of this property, shall place a conservation easement over a portion of it to permanently preserve an area at a 3:1 ratio for areas of sensitive listed tree species (cypress and Bolander’s pine) that are impacted at the new Central Coast Transfer Station site. At a 3:1 ratio, the conservation easement shall result in preservation of 1.75 acres of mixed cypress and Bolander’s pine forest. Impacts to Cypress forest - tall and Cypress forest - intermediate, based on CNDDB rank of S2 for the overall forest classification (versus status/listing of individual tree species), are mitigated as detailed in Mitigation Measure BIO-2, which requires a conservation easement of 1.8 acres (3:1 ratio for impacts to total of 0.6 acres of CNDDB S2 ranked forest). The 1.75 acres required in Mitigation Measure BIO-1b is in addition to the 1.8 acres required in Mitigation Measure BIO-2, but are coincident to the 1.8 acres (total preservation of 3.55 acres).~~

To mitigate for the removal of individual Mendocino pygmy cypress trees (approximately 229 individuals of intermediate and tall morphotypes) and Bolander's pine (approximately 38 individuals), present within 0.58 acre impact area mapped as Pygmy cypress Alliance (tall and intermediate morphotypes), as well as where individual CRPR listed trees are scattered within the Bishop Pine Alliance proposed for removal, the County shall create the Caspar Pygmy Forest Preserve on the 28.3 acre County-owned parcel off Prairie Way in Caspar (APN 118-500-45).[2] The County shall execute appropriate legal documents to guarantee that the Caspar Pygmy Forest Preserve will remain undeveloped in perpetuity and only accessible for botanical research and other activities consistent with undiminished protection of the habitat. The preservation may be accomplished by transferring title or an easement to an established conservation organization subject to a preservation covenant, or, if no such organization is found, by the County recording a covenant creating a conservation easement on behalf of the public. In that instance, the County shall secure all access points to the property and post warning signs. Quarterly inspection of the Caspar Pygmy Forest Preserve shall be made by County personnel along with their routine mandatory inspections of the cover of the nearby closed Caspar Landfill. The inspections of the Preserve shall ensure all access points remain secure and signage is in place, and that no vandalism or trash dumping occurs, and propose and implement remedial activities if necessary to maintain current condition of the Preserve. A vegetation description and map map of the mitigation parcel are included in Appendix L.

Mitigation Measure BIO-1c: Minimize and Avoid Impacts to Sonoma Tree Vole.

The County and City shall consult with CDFW to minimize and avoid potential impacts to Sonoma tree vole during tree removal and project construction activities. Trees shall be removed during the non-breeding season (October to January). If seasonal avoidance of breeding time (February through September) cannot be implemented for tree removal activities, pre-construction surveys shall be conducted by a qualified biologist, in a manner such as follows (to be refined if necessary in consultation with CDFW):

- No more than two weeks before tree removal activities begin, a biologist will assess what portions, if any, of the tree removal area and areas within 50 feet of tree removal, is potential tree vole habitat, based on species composition and discussion with CDFW.
- If tree vole habitat is located on portions of the property within 50 feet of tree removal areas, a qualified biologist shall conduct a survey for presence of the species on the property in areas within 50 feet of tree removal and construction footprint.
- A standard survey methodology shall include at least two trained observers conducting visual searches for tree vole nests while walking along transects spaced 25 meters apart. When either fecal pellets, resin ducts, or potential nests are observed, vole nests must be confirmed

[2] ***Currently, that 28.3-acre parcel is undeveloped, but is zoned Rural Residential with the potential for development of one or more single-family houses. The site has a variety of habitats present, mostly consisting of Cypress forest pygmy/forested wetland, Bishop Pine Forest Alliance, and pygmy forest morphotypes (intermediate and tall cypress trees). A photograph of the proposed mitigation site is provided as Figure 3.4-3 and the location is shown on Figure 2-3. Vegetation communities mapping conducted at the site documented 12.3 acres of intermediate and tall morphotypes (the former of which includes Bolander's pine subdominant), as well as 7.1 acres of high quality pygmy cypress (short morphotype) mixed with Bolanders pine (WRA 2015). Therefore, a total of 19.4 acres of pygmy cypress forest will be preserved. A separate evaluation concluded that the proposed Caspar Pygmy Forest Preserve is composed largely of undisturbed pygmy cypress woodland (Heise 2015, Appendix B).***

by climbing trees and examining all potential nests to see if they contain evidence of occupancy by tree voles (fecal pellets, resin ducts, and conifer branch cuttings).

- If occupied habitat is identified during pre-construction surveys***, clearing/construction activities shall be suspended while the*** biologist consults with CDFW to determine how to avoid disruption to breeding activity or if individual relocation is possible.

Mitigation Measure BIO-1d: Conduct pre-construction Avian Surveys for Nesting Passerine Birds and Avian Species of Special Concern.

The building contractor shall conduct vegetation clearing activities if possible during the fall and/or winter months from August 16 to March 14, outside of the active nesting season for migratory bird species (i.e., March 15 to August 15). If vegetation cannot be removed during the non-breeding season, the applicant shall have a qualified biologist conduct preconstruction surveys within impact area from ground disturbance and tree removal, to check for nesting activity of migratory and special-status bird species. The biologist shall conduct the preconstruction surveys within the 14-day period prior to vegetation removal and ground-disturbing activities (on a minimum of three separate days within that 14-day period). If ground disturbance and tree removal work lapses for 15 days or longer during the breeding season, a qualified biologist shall conduct supplemental avian preconstruction survey before project work may be reinitiated.

If nesting activity is detected within the project footprint or within 300 feet of construction activities, the applicant shall have trees flagged that are supporting breeding, and will not remove those trees until the nests have fledged. Construction activities shall avoid nest sites until the biologist determines that the young have fledged or nesting activity has ceased. If nests are documented outside of the construction (disturbance) footprint, but within 300 feet of the construction area, buffers will be implemented if deemed appropriate in coordination with CDFW.

Mitigation Measure BIO-1e: Avoid Impacts to Special-Status Bat Species.

The County and City shall conduct tree removal activities outside of the bat breeding period of March 1 through August 31 if possible, so ideally tree removal would occur from September 1 to February 28. If trees cannot be removed during this time, the following measures shall be implemented:

- A qualified biologist shall be retained to conduct a habitat assessment at least 30 days and no more than 90 days prior to construction activities (i.e., ground-clearing and grading, including removal or trimming of trees) of all trees on the site that are proposed for removal. The assessment shall be designed to identify trees containing suitable roosting habitat for bats and to identify mitigation measures needed to protect roosting bats.
- If the habitat assessment identifies suitable special-status bat habitat and/or habitat trees, the biologist shall identify and evaluate the type of habitat present at the project site and specify methods for habitat and/or habitat tree removal in coordination with CDFW based on site-specific conditions. If bat habitat is present, removal of trees or areas that have been identified as habitat shall occur in two phases over two days under the supervision of a qualified biologist. In the afternoon on day one, limbs and branches of habitat trees without cavities, crevices and deep bark fissures would be removed by chainsaw. On day two, the entire tree can be removed. If trees with cavities, crevices and deep bark fissures are proposed for removal, CDFW shall be consulted for removal methods.

Level of Significance: Less than significant impact with mitigation.

Mitigation Measure BIO-1a would mitigate the impact through a combination of avoidance, minimization, and replacement or relocation of individual plants and is consistent with RM-28.

Mitigation Measure BIO-1b would preserve ***pygmy cypress (short, intermediate and tall morphotypes)*** at ~~a 3:1 ratio~~ ***an approximate 30:1 ratio based on acreage, to compensate for impacts to Mendocino pygmy cypress intermediate and tall morphotypes, and scattered individual Mendocino pygmy cypress and Bolander's pine within the Bishop Pine Forest map unit, in*** areas with cypress and Bolander's pine species composition, similar to the area of impact. Unless permanently preserved, portions of the proposed preservation site could be threatened by future development and/or encroachment from adjacent uses. Mitigation Measure BIO-1b is consistent with the intent of Mendocino County General Plan Policy RM-28 which calls for implementation of site-specific or project-specific effective mitigation strategies including preservation. Preservation will provide an immediate and permanent protection of an existing habitat similar to that being impacted, at an appropriate mitigation ratio to compensate for the use of offsite location and the proposed activity of preservation. The impact to Mendocino cypress and Bolander's pine is less than significant with mitigation.

Mitigation Measure BIO-1c identifies avoidance measures, and if avoidance is not possible outlines the process for identifying occupied habitat, and then requiring, in accordance with General Plan Policy RM-28, consultation with CDFW to determine appropriate avoidance measures if occupied habitat is found. The proposed mitigation outlines the procedure for avoidance and is consistent with the Mendocino County General Plan, therefore the impact is less than significant after mitigation.

Implementation of Mitigation Measure BIO-1d provides protection measures during construction for special-status birds and would mitigate potential impacts on special-status and migratory birds to less-than-significant levels by requiring pre-construction surveys by a qualified biologist to determine whether special-status or migratory bird nests are present at or near the project site and ensuring protection of nests and young until they have fledged.

Implementation of Mitigation BIO-1e provides protection measures for special-status bats during tree removal and would reduce the impacts to special-status bats because the disturbance caused by chainsaw noise and vibration during tree removal, coupled with the physical alteration of the branches and limbs may cause the bats to abandon the roost tree after nightly emergence for foraging. Removing the tree the next day prevents re-habituation and reoccupation of the altered tree, thereby reducing impacts to roosting bats to less-than-significant levels.

Impact BIO-2: Substantial Adverse Effect on Sensitive Natural Community.

The proposed project has the potential to permanently impact habitats considered sensitive natural communities by CDFW. ~~While not considered imperiled, there are also impacts anticipated to Bishop pine forest, a State Rank 3 (vulnerable) habitat.~~ Potential impacts are shown in Table 3.4-8 below.

Table 3.4-8 Project Impacts to Special Status Habitats

Existing				Impacts		
Habitat	Global (G) / State (S) Rank	Total On-Property (acres)	Regional Conditions (acres)	Total Impact (acres)	% Onsite acres	% Regional acres
Bishop pine forest ***alliance***	G3 S3***	8.4	14,900*	4.0	48.2%	0.03%
Cypress forest (tall)	G2 S2	4.8	2,000**	0.3	6.8%	0.03%
Cypress forest (intermediate)		4.4		0.3	5.8%	
Cypress forest (pygmy) / forested wetland		3.1		0.0	0.0%	

NA = Not Available
*CALVEG 1998 mapped 14,900 acres of Bishop pine forest in Mendocino County
**While 4,000 acres of cypress forest is often quoted as extent of this habitat type, some authors have indicated this may be reduced to as little as 2,000 acres currently. CDFW is working currently on mapping to establish baseline existing conditions (Miller 2014 Pers. com.). 2,000 acres is used herein as a conservative estimate of what remains regionally of pygmy forest and as a basis for comparative analysis, although it does not take into consideration eco tones, gradations, and various definitions of pygmy forest, nor is it known what species composition and tree heights this acreage estimate includes.
******A letter from CDFW asserts that this habitat is G2 S2. See discussion below and lead agency response.***

The County and City have minimized the project footprint, and eliminated impact to the cypress forest—pygmy morpho-type, where Bolander's pine and Mendocino/pygmy cypress are growing in a unique ecosystem connection with restrictive soil conditions. This effort to minimize impact to cypress forest—pygmy was conducted during the project planning and layout phase. The project layout has also minimized fragmentation to the more sensitive habitats at the property by placing the project site centered within the Bishop pine forest area and completely out of the cypress forest—pygmy morpho-type habitat area..

The project footprint and construction buffer will permanently impact a total of up to 0.6 acres of cypress forest (State Rank S2) consisting of two morpho-types (cypress forest—tall, and cypress forest—intermediate). The impact to cypress forest—intermediate is 0.3 acre. The cypress forest—intermediate has similar species composition as true cypress forest—pygmy with the similar species assemblage with presence of Bolander's pine, yet a more established and denser understory. Additionally, the intermediate tree height indicates the area is not limited in tree growth pattern from restrictive soil conditions, and it is therefore assumed that some of the restrictive soil conditions typical of true pygmy forest ecosystem may not be present within this map unit at the property. Still, due to species composition as well as with the State Rank (S2) of imperiled for the habitat type, and for the purposes of this analysis in regards to requirements of County General Plan and priority for minimization of impacts to pygmy forest, as well as project significance thresholds set at impact above zero (0), impacts to this area are considered significant. The impact to cypress forest (tall) is 0.3 acre. The cypress forest (tall) map unit, with dense shrub and herbaceous understory, and with the low coverage of Bolander's pine (a component of the pygmy forest ecosystem), does not show signs of restrictive soil conditions that are a part of the unique ecosystem relationship between vegetation and soils within the true pygmy forest. This area is considered to lack some of the soil and vegetation components typical of the pygmy forest ecosystem. Still, for the purposes of this analysis and given the State Rank (S2) of imperilled for this habitat type based on dominant species

of tree, as well as project significance threshold set at impact above zero (0), impacts to this sensitive cypress forest area are considered significant.

~~While not considered imperiled,~~ The project will also impact approximately 4.0 acres of Bishop pine forest alliance habitat. ~~a State Rank S3 (vulnerable) habitat.~~ This Bishop pine forest ***alliance***

is evaluated as to whether the area is considered high priority natural community based on the following three CDFW criteria (CDFW 2014):

1) Lack of invasive species: Although the site has not specifically been evaluated from an invasive species perspective, multiple site visits did not document extensive coverage of invasive species listed as high-priority by CalIPC (Invasive Plant Council) within the Bishop pine forest, although there are likely non-native species present in varying coverages depending on proximity to roads and modified areas. The Bishop pine forest is likely to be of moderate to high priority based on this criterion.

2) No evidence of human caused disturbance such as roads or excessive livestock grazing, or high-grade logging: There are roads on the perimeter of the property, evidence of historic logging and site access, and an almost barren helicopter pad to the west of the Bishop pine forest. The Bishop pine forest is determined to be of moderate priority based on this criterion.

3) Evidence of reproduction present (sprouts, seedlings, adult individuals of reproductive age), and no significant insect or disease damage, etc: Evidence of reproduction within the Bishop pine forest was not specifically evaluated, yet the area is a relatively even-age stand and sprouts and seedlings were not noted. The area does not appear to have insect or disease damage. The Bishop pine forest is determined to be of moderate priority based on this criterion.

The Bishop pine forest ***alliance*** ~~(State Rank S3)~~ on the property is therefore potentially moderate to high priority per the above CDFW criteria. The CEQA Checklist and CEQA Guidelines Section 15065, however, do not restrict impact analysis to “high priority” or “vulnerable” natural communities. The *CEQA Guidelines Section 15382* sets forth the following definition for significant effect, and as further addressed in the project significance thresholds developed by the lead agency and described above in the Significance Criteria section: “Significant effect on the environment” means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including … flora, fauna..”, etc. The *CEQA Guidelines Section 15064(b)* indicates that a strict definition of significant effect is not always possible because the significance of an activity may vary with the setting. According to *CEQA Statutes Section 21083 an*d *CEQA Guidelines Section 15065* a project is considered to have a significant effect on the environment if: “The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of fish or wildlife population, cause a fish or wildlife species to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or significantly reduce the number or restrict the range of an endangered, rare, or threatened species.” With this regional context in mind, the impacts to Bishop pine forest ***alliance*** are evaluated under project-specific significance thresholds provided in Section 3.4.3 above. As provided in Table 3.4-8 above at the beginning of the Impact BIO-2 discussion, it is estimated that in relation to regional extent and quantity of Bishop pine mapped as occurring in Mendocino County (CDF 2005), the project impacts of 4.0 acres constitute approximately 0.03% of areas regionally mapped as Bishop pine forest. ~~Per the thresholds (loss of more than 1 acre of high quality habitat and loss of more than 1% of regional high quality habitat), the loss of less than 1% of regional potentially sensitive Bishop pine habitat is determined to be less than significant.~~

A comment letter issued by the California Department of Fish & Wildlife [March 24, 2015] asserted that the Global and State rankings for "Northern Bishop Pine" are G2 S2 and that this ranking should apply to the Bishop Pine forest alliance that exists at the project site. For the following reasons, it appears that there is reasonable uncertainty about which Global and State rank applies to the Bishop Pine species at the project site.

Based on the detailed, site-specific biological surveys conducted at the project site, it was determined that the site consists of "Bishop Pine Forest Alliance"—that is, a mixture of tree species with Bishop Pine as the predominant, tallest species but sharing the acreage with substantial numbers of other tree and shrub species. There is substantial documentation from CDFW itself and other sources that "Northern Bishop Pine" is an outdated classification that should not apply.

The County and City retained botanical consultants WRA Associates in 2013 to perform the detailed, on-site Biological Resources Assessment of the project site (Appendix D of DEIR). WRA classified the affected acres as "Bishop Pine Forest Alliance G3 S3" and described it as follows:

"This community is dominated by Bishop pine (Pinus muricata), with several characteristic and subdominant tree species including pygmy cypress (Hesperocyparis pygmaea), Bolander's pine (Pinus contorta ssp. bolanderi), western hemlock (Tsuga heterophylla), and coast redwood (Sequoia sempervirens). The overstory is somewhat open to completely closed containing mature to over-mature trees. The understory contributes to the vertical structure with a high density of shrubs and depauperate herbaceous layer. Shrub species include evergreen huckleberry (Vaccinium ovatum), Pacific rhododendron (Rhododendron macrophyllum), giant chinquapin (Chrysolepis chrysophylla), tanoak (Notholithocarpus densiflorus), and salal (Gaultheria shallon). Herbaceous species are sparse and include bracken fern (Pteridium aquilinum), bear grass (Xerophyllum tenax), and modesty (Whipplea modesta)." [DEIR, Appendix D, p. 16]

This description is completely consistent with the definition of "Bishop Pine Forest Alliance" established by the U.S. Forest Service:

"Bishop Pine (Pinus muricata) occurs discontinuously along the coast from Humboldt County south to San Francisco at elevations below about 980 feet (300 m) in this zone. It is abundant in Mendocino and Sonoma Counties. Stands also exist in San Luis Obispo and Santa Barbara Counties, the Channel Islands and Baja California. The Bishop Pine type identifies stands in which it is the dominant conifer, commonly occurring on shallow, acidic or often poorly drained soils. Very dense, even-aged stands may develop after intense fire occurrences after this closed-cone pine releases its seeds. This type has been mapped in eight subsections of the Coast Section and one inland, older naturalized stand in the Central Franciscan Subsection of the Ranges Section. Understory herbaceous species such as Brakenfern (Pteridiumaquilinum) and Sword Fern (Polystichummunitum and shrubs such as Coffeeberry (Rhamnuscalifornica) and California Huckleberry (Vacciniumovatum) are common understory plants. Other associated trees include Douglas-fir (Pseudotsugamenziesii), Bolander Pine (P. contortassp. bolanderi), Pygmy Cypress(Cupressusgovenianassp. pygmaea or Calliptropsispygmaea), Madrone (Arbutusmenziesii), Shore Pine (P. contortassp. contorta) and Redwood (Sequoiasempervirens)."
http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_046448.pdf

The WRA Biological Resources Assessment included several photos of the Bishop Pine area which clearly show the mixture of other species which separate the individual Bishop Pine trees and dilute their presence on these acres. [DEIR, Appendix D]

In classifying the Bishop Pine Forest Alliance, WRA used the CDFW Natural Communities List which has the following entries:

	[Global and State Rank]	[CNDDB Code]
Pinus muricata (Bishop pine forest) Alliance	*G3 S3*	
Northern Bishop Pine Forest	*G2 S2.2*	*CTT83121CA*
Southern Bishop Pine Forest	*G2 S2.2*	*CTT83122CA*

nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=24716&inline=1

The last column with the "CNDDB Code" instructs that the "Northern Bishop Pine Forest" classification should not be used. Specifically, the current CDFW website states:

"Holland types originally tracked by the CNDDB are referenced with a code beginning with 'CTT.' These are provided as 'legacy information' with the understanding that Holland CTT codes and community types are no longer supported by DFG. Instead, all new information on terrestrial natural communities should use the State's standard nomenclature as provided in the current Natural Communities List."

[CDFW, dfg.ca.gov/biogeodata/vegcamp/natural_comm_background.asp, August 8, 2014; May 1, 2015.]

The Natural Communities Lists posted by CDFW show 'Northern Bishop pine' with the Holland CTT code CTT 83121CA. Per CDFW, the 'Northern Bishop pine' is a legacy "Holland type" category which is 'no longer supported' and does not have a key for classification/application for a vegetation stand. Indeed, in a report issued by CDFW in February 2016 entitled the "Classification of the Vegetation Alliances and Associations of Sonoma County, California [http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=115808]," CDFW includes information solely on the Bishop Pine forest alliance and makes no mention of the no longer supported "Northern Bishop Pine" legacy classification, despite the fact that bishop pine in Sonoma County is within the northern geographic range of the species. More importantly, that report also states that the Bishop Pine forest alliance is ranked G3/S3.

As a result of this uncertainty as to Bishop Pine's true rank, imperiled status and regional distribution (most recent data mapping the regional extent of Bishop pine in Mendocino County dates back to 1998) the project's potential to remove 4 acres of Bishop Pine forest alliance is conservatively considered to be a significant impact requiring mitigation. As detailed below in Mitigation Measure Bio-2b, that mitigation involves a suite of efforts to preserve existing high quality Bishop Pine forest, enhance existing degraded Bishop Pine forest and create brand new Bishop Pine forest. All told, this suite of measures provide mitigation at a ratio of 3:1.

Mitigation Measure ~~BIO-2:~~ *BIO-2a:* Mitigate Impacts to Cypress forest-tall and Cypress forest – intermediate.

The impacts to 0.6 acres of Cypress forest habitat shall be mitigated through preservation at an offsite location. The County and City propose to use ~~a portion of~~ a site identified as Assessor's Parcel Number (APN) 118-50-045 which is adjacent to and north of the Caspar transfer station parcel. A conservation easement will be placed over ~~a portion of~~ the preservation site to permanently preserve an area ~~at a 3:1 ratio~~ to ***compensate for*** areas of impact at the proposed project site (Cypress forest-tall and Cypress forest – intermediate). ~~At a 3:1 ratio,~~ The conservation easement ~~shall include a minimum of 1.8 acres and~~ may consist of a mixture of the three cypress morphotypes; pygmy, intermediate, and/or tall cypress and Bolander's pine forest. The ~~1.8 acres~~ ***acreage*** is in addition to the area ~~already~~ being preserved for impacts to sensitive-listed individual tree species within the habitats mitigated for under BIO-2 (cypress forest--tall and intermediate--map units), and shall be coincident to the area placed under conservation easement per Mitigation Measure BIO-1b. ~~Therefore, in addition to the 1.75 acres proposed for permanent preservation as part of Mitigation Measure BIO-1b, an additional 0.05 acres shall be included in the preservation area for a minimum of 1.8 acres.~~

To mitigate for the removal of 0.58 acre of Mendocino pygmy cypress (tall and intermediate morphotypes) [12.6% of onsite map units] the County will designate the Caspar Pygmy Forest Preserve encompassing a 28.3 acre parcel.[3] The County will execute appropriate legal documents to guarantee that the Caspar Pygmy Forest Preserve will remain undeveloped in perpetuity and accessible for botanical research and other activities consistent with undiminished protection of the habitat. This may be accomplished by transferring title or an easement to an established conservation organization subject to a preservation covenant, or, if no such organization is found, by the County recording a covenant creating a conservation easement on behalf of the public. In that instance, the County will secure all access points to the property and post warning signs. Periodic inspection of the Caspar Pygmy Forest Preserve will be made by County personnel at the same times as the mandatory inspections are made of the cover of the nearby closed Caspar Landfill.

A vegetation description and map of the mitigation parcel is included in Appendix L.

Level of Significance: Less than significant with mitigation.

[3] ***The County-owned parcel off Prairie Way in Caspar (APN 118-500-45) is undeveloped, is zoned Rural Residential with the potential for development of one or more single family houses. The proposed preservation site has a variety of habitats present, including pygmy cypress forest (short morphotype), Bishop Pine Forest Alliance, and pygmy cypress intermediate and tall morphotypes. A photograph of the proposed mitigation site is provided as Figure 3.4-3 and the location is shown on Figure 2-3. Vegetation communities mapping conducted at the site documented 12.3 acres of intermediate and tall morphotypes, as well as 7.1 acres of high quality pygmy cypress (short morphotype) [WRA 2015]. Therefore, a total of 19.4 acres of pygmy cypress forest will be preserved. This mitigation in the form of preservation would result in an approximate 30:1 mitigation ratio for impacts. A separate independent evaluation of the site concluded that the proposed Caspar Pygmy Forest Preserve "is composed largely of undisturbed pygmy cypress woodland" (Heise 2015).***

The preservation site is identified as APN 118-50-045, and is adjacent and to the north of the current Caspar facility. The preservation site has similar, if not more pygmy-forest oriented species composition, compared to the area of impact, with a mixture of true pygmy forest (stunted with both cypress and Bolander's pine present) as well as intermediate cypress and Bolander's pine areas, and some Bishop pine (per GHD May 2014 site visit). . Unless preserved, portions of this site could be threatened by future development and/or encroachment from adjacent uses. For potential impacts to habitats with State Rank S1 or S2, preservation is deemed an appropriate mitigative activity for these areas since attempts for direct replacement of the habitats would be linked to a unique ecosystem relationship, which in this case includes slow growing species within a setting of restrictive soil conditions. Preservation will provide an immediate and permanent protection of an existing habitat similar to that being impacted, at an appropriate mitigation ratio ~~(3:1)~~ to compensate for the use of offsite location and the proposed activity of preservation. The ~~3:1~~ ratio is appropriate rate as it provides compensation for the use of an offsite location (versus onsite) as well as the use of preservation as opposed to other mitigation strategies such as replacement. A temporal loss is not anticipated. The mitigation approach is consistent with RM-28 which allows for preservation as a mitigative approach for impacts to special-status species habitat, and RM-74 that prioritizes minimization and avoidance prior to employing replacement, protection, or enhancement measures. In conjunction with the avoidance and minimization activities conducted during project planning, and after proposed preservation/protection activities, the impact is determined to be less than significant.

Mitigation Measure BIO-2b: Mitigate impacts to Bishop Pine Forest Alliance.

The impacts from removal of 4.0 acres of Bishop Pine Forest Alliance at the project site will be mitigated as follows:

1. ***Preservation of 5.76 acres of Bishop Pine Forest at the Caspar Pygmy Forest Preserve (APN 118-500-45), which is described above in Mitigation Measure BIO-2a. As shown on the vegetation map (included in Appendix L), a substantial area in the center of this parcel is Bishop Pine Forest. Unless preserved, this parcel would be surplus property available for sale and residential development. The provisions for protection, ownership and management of the mitigation parcel are described above in Mitigation Measure BIO-2a.***
2. ***Restoration of 6.29 acres of Bishop Pine Forest at the closed Caspar Landfill property (APN 118-500-11) owned by the County of Mendocino and City of Fort Bragg. The restoration will consist of reestablishment of 1.01 acres where Bishop Pine is absent and enhancement of 5.28 acres where the Bishop Pine habitat currently exists but is seriously degraded. The plan for reestablishment and enhancement was prepared by WRA Associates and is attached as Appendix L.***

In combination, these mitigation measures will increase the acreage of protected Bishop Pine Forest under public ownership. As stated by the WRA Associates report, these measures "may also be considered as mitigation for impacts to Bishop pine forest at the proposed transfer station on Highway 20." [Bishop Pine Forest Mitigation Plan, WRA Associates, April, 2016, p. 1]

Level of Significance: Less than significant with mitigation.

As described above in Mitigation Measure BIO-2b, the Bishop Pine forest removed by the project will be mitigated by a combination of preservation, restoration and enhancement at a 3:1 ratio compared to the acreage removed.

Impact BIO-3: Substantial Adverse Effect on Federally Protected Wetlands.

Approximately 0.22 acres of USACE palustrine emergent wetlands, and 3.11 acres of USACE forested wetlands (that coincide with cypress forest—pygmy polygon) were mapped within the property (WRA 2012). There are forested wetlands approximately 50 feet north and over 100 feet east of the project footprint. The palustrine emergent wetland area is approximately 200 feet east of the project footprint and approximately 25 feet north of the SR 20 improvements. The USACE provided a jurisdictional determination concurring with the wetland delineation as mapped (USACE 2013). State jurisdictional areas beyond the USACE jurisdictional wetlands, such as isolated wetlands or other waters, seasonal/ephemeral drainages, etc., were not observed and are believed to be coincident with USACE jurisdictional wetlands. The project footprint avoids impacts to state and federal jurisdictional wetlands and waters. There would be no impact to federally protected wetlands.

Mitigation Measures: No mitigation is necessary.

Level of Significance: No impact.

Impact BIO-4: Interfere Substantially with Movement of Native Resident or Wildlife Species or With Established Native Resident or Migratory Wildlife Corridors, or Impede Use of Native Wildlife Nursery.

The project site is not a migratory wildlife corridor nor does it support a native wildlife nursery. With regard to protection under the Migratory Bird Act, refer to the analysis under Impact BIO-1.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than significant.

Impact BIO-5: Conflict with Local Policies or Ordinances Protecting Biological Resources.

The project does not conflict with approved local, regional, or state habitat conservation plans, as there are no such special plans that would govern the project other than compliance with Mendocino County General Plan goals and policies in relation to minimization of impacts to biological resources, as discussed under Impact BIO-1 and BIO-2 above. Impact BIO-2 and Mitigation Measure***s*** BIO-2***(a) and (b)*** address minimization of impacts to pygmy forest ***and Bishop Pine Forest*** where feasible per the guidance of County General Plan goals and policies, ***in accordance with Policy RM-28's directive to "Provide replacement habitat of like quantity and quality on on- or off-site for special-status species."***. The project does not conflict with local policies for the protection of biological resources.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than significant.

3.4.6 Cumulative Impacts

Impact BIO-C-1: Result in Cumulatively Considerable Contribution to Cumulative Impacts Related to Biological Resources.

Project impacts to Coast lily would be mitigated to a no-net loss level. Therefore, the project would not contribute to a cumulative impact to Coast lily.

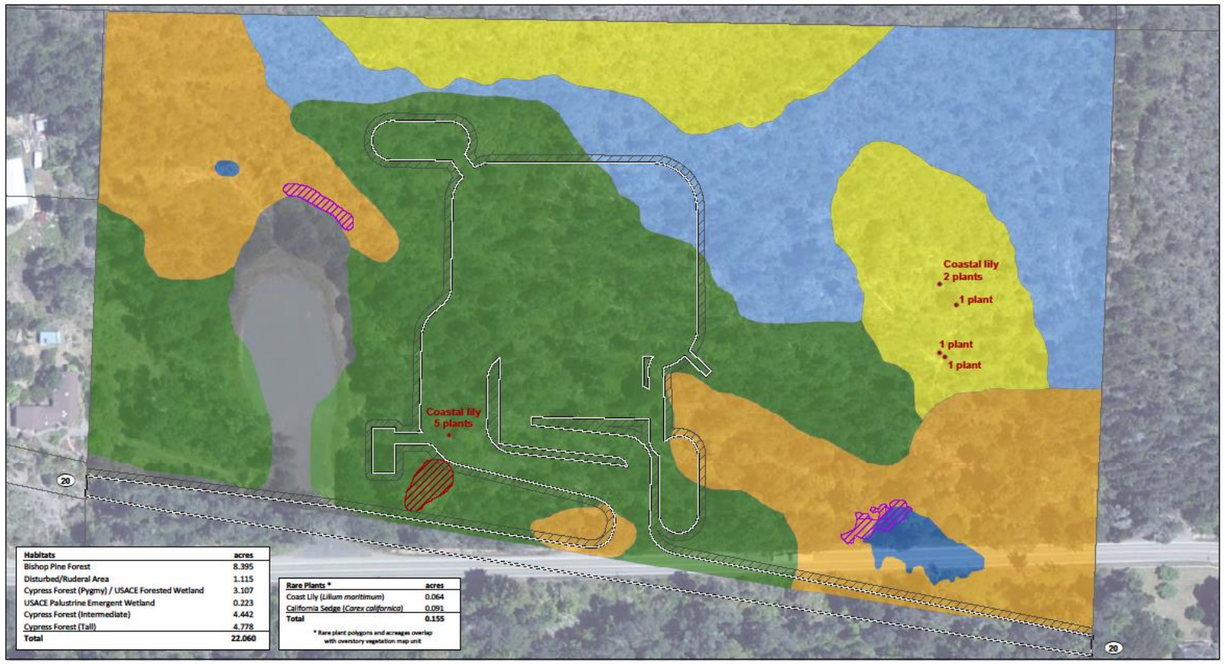
Project impacts to cypress forest-intermediate, and cypress forest-tall, which are State Rank S2 habitats, have been assessed both from a habitat perspective (calculated on an acreage basis), and on an individual tree basis for CRPR sensitive listed tree species dominant within some tree stands at the site. On a regional basis, the project impact (prior to mitigation) would be approximately up to 0.03%, although this calculation utilizes the estimate of 2,000 acres for regional extent of pygmy forest, while the project impacts are actually to cypress forest—intermediate and tall (not to cypress forest-pygmy). The cumulative projects listed in Table 3.0-1, do not currently have identified impacts to cypress forest—intermediate and/or cypress forest—tall habitat. Therefore, the project plus cumulative project would not result in cumulative impact to cypress forest—intermediate and —tall. There is no impact from the project to cypress forest—pygmy as this sensitive area on the property has been avoided through project layout.

Project impacts to Bishop pine forest~~, which is State Rank S3 habitat,~~ have been assessed from a habitat perspective on an acreage basis within the regional context of habitat extent and quantity. On a regional basis, the project impact would be approximately up to 0.03% of the habitat mapped in the County. Per the individual project thresholds (loss of more than 1 acre of ~~high quality~~ habitat and loss of more than 1% of regional ~~high quality~~ habitat), the loss of less than 1% of regional potentially sensitive Bishop pine habitat is less than significant. Of the cumulative projects listed in Table 3.0-1, none have known impacts to Bishop pine. ***Additionally, Mitigation Measure Bio-2b increases the acreage of Bishop Pine Forest under public protection and adds new Bishop Pine Forest.*** Therefore, the project plus cumulative project would not result in additional cumulative impact.

With regard to impacts to special-status birds, bats, and voles, it is assumed the cumulative projects could have similar impacts as described for the project and would follow similar mitigation included in this EIR. The mitigation measures identified in this EIR comply with all appropriate policies for preserving and protecting biological resources in the Mendocino County General Plan and follow standard procedures recommended by resource agencies. Specific cumulative projects, as well as other projects in the greater Mendocino Coast area would be required to follow similar mitigation to avoid or protect special-status birds and bats. Therefore, impacts remaining after implementation of mitigation would not occur or would be minor and would not make a considerable contribution to cumulative impact on special-status birds, bats, or voles.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than significant.



Habitats	acres
Bishop Pine Forest	8.395
Disturbed/Ruderal Area	1.115
Cypress Forest (Pygmy) / USACE Forested Wetland	3.107
USACE Palustrine Emergent Wetland	0.223
Cypress Forest (Intermediate)	4.442
Cypress Forest (Tall)	4.778
Total	**22.060**

Rare Plants *	acres
Coast Lily (*Lilium maritimum*)	0.064
California Sedge (*Carex californica*)	0.091
Total	**0.155**

* Rare plant polygons and acreages overlap with overstory vegetation map unit

Paper Size 11" x 17" (ANSI B)

0 50 100 150 200 Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California II FIPS 0402 Feet

N

Bishop Pine Forest
Disturbed/Ruderal Area
Cypress Forest (Pygmy) / USACE Forested Wetland
USACE Palustrine Emergent Wetland
Cypress Forest (Intermediate)
Cypress Forest (Tall)
Rare Plant Individuals - Coast Lily
Rare Plants - California Sedge
Rare Plants - Coast Lily
Construction Footprint
Permanent Footprint
Parcels

Mendocino Solid Waste Management Authority
Central Coast Transfer Station EIR

Job Number 8411065.04
Revision A
Date 04 Nov 2014

Permanent & Construction Footprints
Existing Conditions - Biology

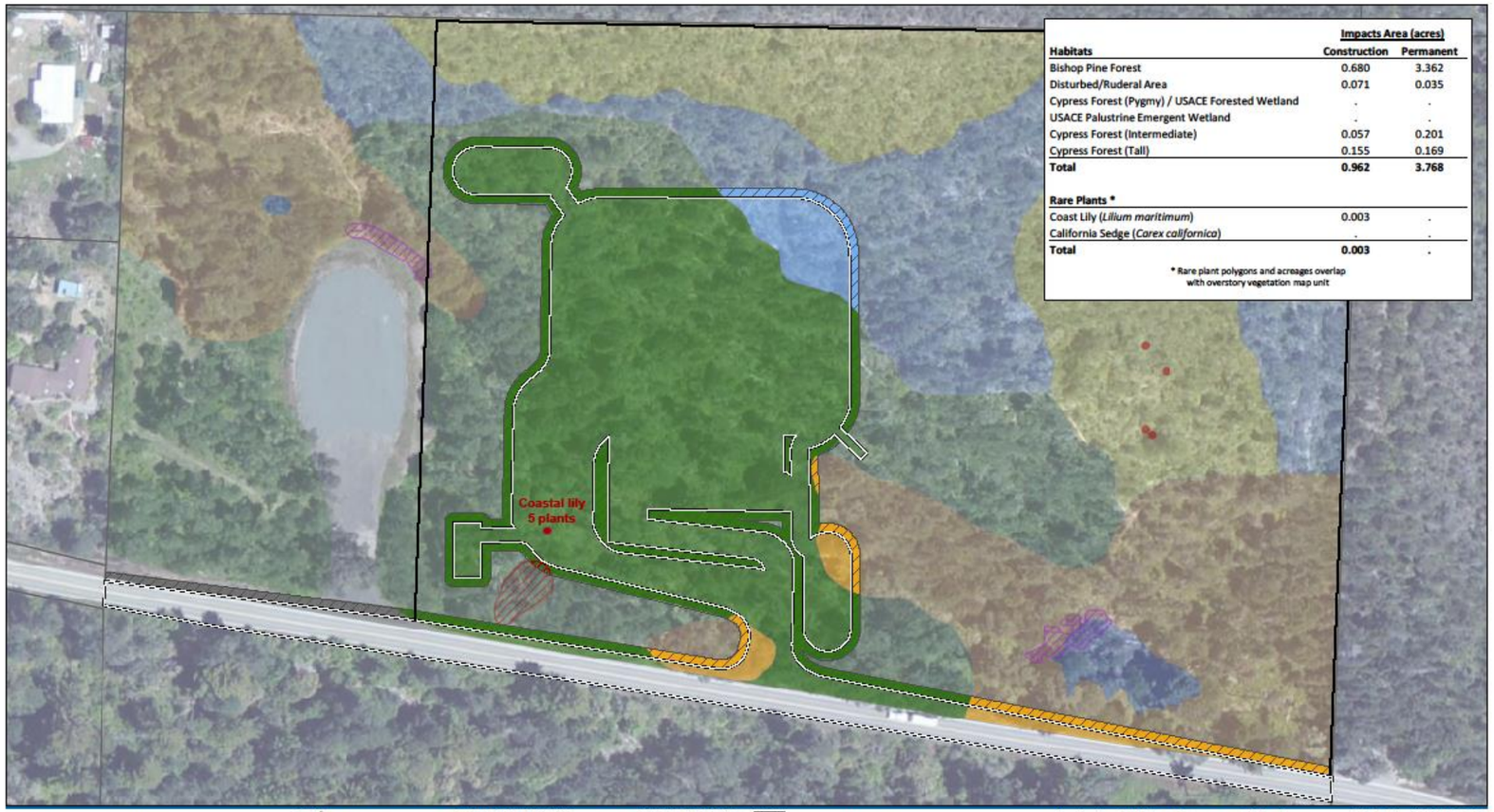
Figure 3.4-1

718 Third Street Eureka CA 95501 USA T 707 443 8326 F 707 444 8330 E eureka@ghd.com W www.ghd.com

© 2012. While every care has been taken to prepare this map, GHD (and DATA CUSTODIAN) make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Data source: Data Custodian, Data Set Name/Title, Version/Date. Created by:(initials)

This page intentionally left blank



Habitats	Impacts Area (acres) Construction	Permanent
Bishop Pine Forest	0.680	3.362
Disturbed/Ruderal Area	0.071	0.035
Cypress Forest (Pygmy) / USACE Forested Wetland	.	.
USACE Palustrine Emergent Wetland	.	.
Cypress Forest (Intermediate)	0.057	0.201
Cypress Forest (Tall)	0.155	0.169
Total	**0.962**	**3.768**
Rare Plants *		
Coast Lily (*Lilium maritimum*)	0.003	.
California Sedge (*Carex californica*)	.	.
Total	**0.003**	.

* Rare plant polygons and acreages overlap with overstory vegetation map unit

Paper Size 11" x 17" (ANSI B)

0 50 100 150 200 Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California II FIPS 0402 Feet

N

Bishop Pine Forest
Disturbed/Ruderal Area
Cypress Forest (Pygmy) / USACE Forested Wetland
USACE Palustrine Emergent Wetland
Cypress Forest (Intermediate)
Cypress Forest (Tall)
Rare Plant Individuals - Coast Lily
Rare Plants - California Sedge
Rare Plants - Coast Lily
Construction Footprint
Permanent Footprint
Parcels

Mendocino Solid Waste Management Authority
Central Coast Transfer Station EIR

Job Number 8411065.04
Revision A
Date 04 Nov 2014

Permanent & Construction Footprints Impacts - Biology

Figure 3.4-2

© 2012. While every care has been taken to prepare this map, GHD (and DATA CUSTODIAN) make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Data source: Data Custodian, Data Set Name/Title, Version/Date. Created by jrousseau

718 Third Street Eureka CA 95501 USA T 707 443 8326 F 707 444 8330 E eureka@ghd.com W www.ghd.com

This page intentionally left blank

Mitigation Site

Parcels

Rivers/Streams

Paper Size 8.5" x 11" (ANSI A)
0 100 200 300 400 500
Feet
Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California I FIPS 0401 Feet

Mendocino Solid Waste Management Authority
Central Coast Transfer Station EIR

Job Number 8411065
Revision A
Date 07 Nov 2014

Mitigation Site

Figure 3.4-3

718 Third Street Eureka CA 95501 USA T 707 443 8326 F 707 444 8330 E eureka@ghd.com W www.ghd.com

\\ghdnet\ghd\US\Eureka\Projects\Legacy\Projects\001020\ MendoSolidWasteMgmtAuthority\8411065 MSWMA TransferStationEIR\08-GIS\Maps\Figures\EIR\F3.4-3_MitigationSite.mxd
© 2012. While every care has been taken to prepare this map, GHD (and DATA CUSTODIAN) make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Data source: USDA NAIP Imagery, 2010; USA Base Map, 2013; GHD data, 2013. Created by:engutierrez

3.9 Hydrology and Water Quality

This section evaluates the potential impacts related to hydrology and water quality during construction and operation of the project. To provide the basis for this evaluation, the Setting section describes the hydrological setting for the project area, including regional and local surface water and groundwater characteristics. Descriptions in this section are based on reviews of published information, reports, and plans regarding regional and local hydrology, climate, topography, and geology. The evaluation section establishes the thresholds of significance, evaluates potential hydrology and water quality impacts, and identifies the significance of impacts. Where appropriate, mitigation measures are presented to reduce impacts to a less than significant level.

3.9.1 Setting

The following discusses the hydrology and water quality-related context in which the proposed project would be constructed and would operate, including descriptions of the project area and stormwater management system of the project site; regional climate and hydrology; beneficial uses of surface waters; surface water quality; drainage and flooding; and local groundwater basin and beneficial uses. The setting focuses on the site for the proposed Central Coast Transfer Station. Closure of the Caspar Facility and the land transfer described in the Project Description would not result in new land uses or ground disturbance that would affect the hydrology or water quality of the area. Therefore, the hydrology and water quality-related context for the Caspar Facility and land transfer areas are not described in this section.

Regional Climate

The project area is characterized by cool, foggy summers and cool, rainy winters. Due to the proximity to the Pacific Ocean, the project site has very mild weather throughout the year. Most of the rainfall occurs from November to April with some light showers during the summer. Fog and low overcast clouds are common within the area, especially during the evening and early morning hours. The intense maritime effect of the Pacific Ocean causes uniquely cool summers for the area. In places a few miles inland, consistently hotter summer temperatures are found, a phenomenon typical of the Californian coastline.

January is the coldest month, with an average maximum temperature of 55.1 °F (12.8 °C) and an average minimum temperature of 39.9 °F (4.4 °C). The warmest month of the year is September, which has an average maximum temperature of 65.8 °F (18.8 °C) and an average minimum temperature of 49.2 °F (9.6 °C). Freezing temperatures occur during the winter months with an average of 11.1 days annually (NOAA 2014).

More than 96 percent of the total precipitation occurs in an 8-month period beginning in October and ending in May. Average annual precipitation is 40.24 inches at the project site. The wettest year on record was 1995 with 61.90 inches and the driest year on record was 2013 with 12.31 inches. The maximum precipitation recorded in one month was 21.60 inches in December 2002. The maximum 24-hour rainfall was 4.36 inches on December 28, 2002. Snow is extremely rare at the project site with the only recorded snowfall in January 1907 (NOAA 2014).

Regional Hydrology

The proposed project site was evaluated by LACO and Associates (LACO) in June 2012 to determine soil characteristics and drainage features (LACO 2012). The site was determined to be

characterized by relatively flat (2 to 5% slopes) to gently sloping (5 to 9% slopes) terrain. Elevations at the site range from a low of approximately 400 feet above mean sea level (msl) on the western portion to a high of approximately 430 feet msl at the northeast corner. Surface drainage on the site is generally split into two different drainage areas. The northwestern portion of the site generally drains to the northwest, while the southeastern portion of the site drains to the ~~east.~~ ***south.*** The undeveloped site is predominately covered by a very dense mixed forest with the only clearings consisting of a turnout off Highway 20, and jeep trails along a portion of the north and east perimeters. There are no creeks located on the project site.

Beneficial Uses of Surface Waters

The current 2011 Basin Plan prepared by the North Coast Regional Water Quality Control Board (NCRWQCB) identifies the beneficial uses of surface waters and groundwater within its region (NCRWQCB 2011). The Basin Plan assigns beneficial uses by Hydrologic Areas and Sub Areas. The project is located within the Noyo River Hydrologic Area (113.20), which includes the following existing beneficial uses: Municipal and Domestic Supply; Agricultural Supply; Industrial Service Supply; Groundwater Recharge; Hydropower Generation; Freshwater Replenishment; Navigation; Water Contact Recreation; Non-Contact Water Recreation; Commercial and Sport Fishing; Warm Freshwater Habitat; Cold Freshwater Habitat; Wildlife Habitat; Rare, Threatened, or Endangered Species; Migration of Aquatic Organisms; Spawning, Reproduction, and/or Early Development; and Aquaculture. The beneficial uses provide the basis for determining appropriate water quality objectives for the region (NCRWQCB, p. 2-11 2011).

Surface Water Quality

In accordance with Section 303(d) of the Federal Clean Water Act, state governments must present the U.S. Environmental Protection Agency (U.S. EPA) with a list of “impaired water bodies,” defined as those water bodies that do not meet water quality standards, even after point sources of pollution have been equipped with the minimum required levels of pollution control technology.

The current 2010 Clean Water Act Section 303(d) list assigns impaired water bodies by Hydrologic Areas and Sub Areas. The project is located within the Noyo River Hydrologic area, which is listed as impaired for sediment/siltation and water temperature (SWRCB 2010).

Placement of a water body on the Section 303(d) list acts as the trigger for developing a Total Maximum Daily Load (TMDL), which is a pollution control plan for each water body and associated pollutant/stressor on the list. The TMDL identifies the quantity of a pollutant that can be safely assimilated by a water body without violating water quality standards.

A TMDL for sediment in the Noyo River was adopted by the United States Environmental Protection Agency (USEPA) on December 16, 1999. The TMDL includes numeric targets, source analysis, and sediment loading rates within the watershed (USEPA 1999). To date, no TMDL has been developed for the Noyo River temperature impairment.

Drainage and Flooding

The Federal Emergency Management Agency (FEMA) delineates regional flooding hazards as part of the National Flood Insurance Program. According to local Flood Insurance Rate Maps, the project site is not located within a 100-year floodplain, or other flood area (FEMA 2011).

Areas along streams may be inundated during major or prolonged storms. FEMA has mapped the areas susceptible to flooding during the 100-year storm event. While the 100-year floodplain may

be relatively limited in extent along smaller streams or streams incised valleys, the floodplain can be wide and extensive for major rivers, particularly where they pass through relatively flat valleys.

Floodways are the portion of the stream that carries peak runoff. Floodways cannot be filled or developed without causing increased flooding in other parts of the watershed.

In addition to natural flood hazards, flooding can occur as a result of inundation caused by failure of a dam, a result of seiches (i.e., earthquake-induced oscillating waves in an enclosed water body), tsunamis (i.e., earthquake-induced waves formed in the open ocean that reach a shoreline), or mudflows. The project area is not located near isolated bodies of water that would be subject to inundation by seiche. Similarly, the project area is not located within a coastal area subject to inundation from tsunami (Cal EMA 2009). The topography of the project area is generally flat and no areas that are likely to produce mudflows have been mapped or are present (USGS 1997).

Local Groundwater Basin and Beneficial Uses

The project area is located within the Fort Bragg Terrace Area Groundwater Basin (Basin 1-21). The groundwater system within the basin provides numerous benefits to the region, including rural residential and municipal water supplies, irrigation water for agriculture, and base flow to streams and surface water bodies.

The basement rock in the project area is coastal belt Franciscan complex, composed primarily of greywacke sandstone with shale lenses. Unconformably overlying the Franciscan complex are quaternary marine terrace deposits, including the older Lower Caspar Orchard deposits, which underlie the project site. The marine deposits consist mainly of fine-grained sand, with interbedded clayey layers.

The current 2011 Basin Plan prepared by the NCRWQCB identifies the beneficial uses of groundwater within its region. The Basin Plan assigns the following existing beneficial uses for groundwater: Municipal and Domestic Supply; Agricultural Supply; Industrial Water Supply; Industrial Process Water Supply; and Freshwater Replenishment to Surface Waters; among others (NCRWQCB 2011).

3.9.2 Regulatory Framework

Federal

Clean Water Act

The federal Clean Water Act (CWA), enacted by Congress in 1972 and amended several times since, is the primary federal law regulating water quality in the United States and forms the basis for several State and local laws throughout the country. The CWA established the basic structure for regulating discharges of pollutants into the waters of the United States. The CWA gave the U.S. EPA the authority to implement federal pollution control programs, such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling nonpoint source pollution. At the federal level, the CWA is administered by the U.S. EPA and U.S. Army Corps of Engineers (USACE). At the state and regional levels in California, the act is administered and enforced by the SWRCB and the nine RWQCBs.

Section 303(d) of CWA requires state governments to present the U.S. EPA with a list of “impaired water bodies,” defined as those water bodies that do not meet water quality standards, even after point sources of pollution have been equipped with the minimum required levels of pollution control technology.

Sections 404 and 401 of the CWA require permitting and state certification for construction and/or other work conducted in “waters of the United States.” Such work includes levee work, dredging, filling, grading, or any other temporary or permanent modification of wetlands, streams, or other water bodies.

National Flood Insurance Program

FEMA administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues Flood Insurance Rate Maps identifying which land areas are subject to flooding. The maps provide flood information and identify flood hazard zones in each community. The design standard for flood protection is established by FEMA, with the minimum level of flood protection for new development determined to be the 1-in-100 annual exceedance probability (i.e. the 100-year flood event).

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate industrial and municipal discharges to surface waters of the United States. NPDES permit regulations have been established for broad categories of discharges including point source municipal waste discharges and nonpoint source stormwater runoff.

NPDES permits identify limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits.

State

Porter Cologne Water Quality Control Act

The Porter Cologne Water Quality Control Act is the primary statute covering the quality of waters in California. Under the Act, the SWRCB has the ultimate authority over State water rights and water quality policy. The nine RWQCBs regulate water quality under this Act through the regulatory standards and objectives set forth in Water Quality Control Plans (also referred to as Basin Plans) prepared for each region.

The five-member SWRCB allocates water rights, adjudicates water right disputes, develops state-wide water protection plans, establishes water quality standards, and guides the nine RWQCBs located in the major watersheds of the state. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California’s waters. The SWRCB is responsible for implementing the Clean Water Act, issues NPDES permits to cities and counties through RWQCBs, and implements and enforces the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (Order No. 2009-0009, as amended by Order No. 2010-0014). Order No. 2009-0009 took effect on July 1, 2010 and was amended on February 14, 2011. The Order applies to construction sites that include one or more acre of soil disturbance. Construction activities include clearing, grading, grubbing, excavation, stockpiling, and reconstruction of existing facilities involving removal or replacement.

Safe Drinking Water Act

The 1974 Federal Safe Drinking Water Act, as amended in 1986 and 1996, requires the protection of drinking water and its sources (i.e., rivers, lakes, reservoirs, springs, and groundwater wells). The

act authorizes the EPA to set national standards for drinking water to protect against pollutants. The EPA, states, and local agencies work together to enforce these standards.

In California, the EPA has delegated the responsibility of administration of the California drinking water system to the California Department of Health Services (DHS). The DHS is accountable to the EPA for program implementation and for adopting standards and regulations that are at least as stringent as those developed by the EPA. The applicable state primary and secondary maximum contaminant levels (MCLs) are set forth in Title 22 CCR Division 4, Chapter 15, Article 16.

Water Rights in California

California has a dual system of water rights for surface water that recognizes both riparian and appropriative rights. A riparian right is the right to use water based on the ownership of property which abuts a natural watercourse. Water claimed by virtue of a riparian right must be used on the riparian parcel, and cannot be sold for use elsewhere. An appropriative right is an entitlement to water based on the actual use of the water. Appropriate rights may be sold or transferred.

California recently has passed three bills (AB 1739, SB 1168, and SB 1319), which together create a framework for implementing sustainable, local groundwater management for the first time in California history. However, these recently approved bills do not apply to this project as the groundwater sustainability plans will not come into effect until 2020 or 2022 depending on the priority level assigned to the various groundwater basins. Generally, landowners overlying a groundwater resource have a right to make reasonable use of that groundwater. The project will use groundwater under this principle.

Regional and Local

Regional Water Quality Control Board

Regional Water Boards adopt and implement Water Quality Control Plans (Basin Plans) which recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. The current 2011 Basin Plan prepared by the NCRWQCB provides a definitive program of actions designed to preserve and enhance water quality and to protect beneficial uses of water in the North Coast Region.

The NCRWQCBs' planning process also includes water quality planning programs (adoption, review, and amendment of state-wide and basin water quality control plans and policies), including development and adoption of TMDLs and implementation plans; regulatory programs (permitting and control of discharges to water through "NPDES" and WDR permits, discharge to land – "Chapter 15," and storm water and storage tanks programs); monitoring and quality assurance programs; nonpoint source management programs, including the "Watershed Management Initiative;" and funding assistance programs, including grants and loans.

North Coast RWQCB Basin Plan

As set forth in the Basin Plan, specific beneficial uses of surface water and groundwater have been established for the Hydrologic Area in which the project is located (see Section 3.9.1, Setting). To protect these beneficial uses, the Basin Plan sets forth the following water-resource protection objectives for inland surface waters:

<u>Color:</u> Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses.

<u>Tastes and Odors</u>: Waters shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance or adversely affect beneficial uses.

Floating Material: Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

Suspended Material: Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.

Settleable Material: Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.

Oil and Grease: Waters shall not contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.

Biostimulatory Substances: Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

Sediment: The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

Turbidity: Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution within which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.

pH: The pH shall conform to those limits listed in the basin plan. The pH shall not be depressed below 6.5 nor raised above 8.5.

Changes in normal ambient pH levels shall not exceed 0.2 units in waters with designated marine (MAR) or saline (SAL) beneficial uses nor 0.5 units within the range specified above in fresh waters with designated COLD or WARM beneficial uses.

Dissolved Oxygen: The dissolved oxygen concentrations shall not be reduced below the following minimum levels at any time:

- Waters designated WARM, MAR, or SAL — 5.0 mg/l
- Waters designated COLD — 6.0 mg/l
- Waters designated SPWN — 7.0 mg/l
- Waters designated SPWN during critical spawning and egg incubation period — 9.0 mg/l

Bacteria: The bacteriological quality of waters of the North Coast Region shall not be degraded beyond natural background levels. In no case shall coliform concentrations in waters of the North Coast Region exceed the following:

- In waters designated for contact recreation (REC-1), the median fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed 50/100 ml, nor shall more than ten percent of total samples during any 30-day period exceed 400/100 ml (State Department of Health Services).
- At all areas where shellfish may be harvested for human consumption (SHELL), the fecal coliform concentration throughout the water column shall not exceed 43/100 ml for a 5-tube decimal dilution test or 49/100 ml when a three-tube decimal dilution test is used (National Shellfish Sanitation Program, Manual of Operation).

Temperature: Temperature objectives for COLD interstate waters, WARM interstate waters, and Enclosed Bays and Estuaries are as specified in the "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays of California" including any revisions thereto. In addition, the following temperature objectives apply to surface waters:

- The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses.
- At no time or place shall the temperature of any COLD water be increased by more than 5°F above natural receiving water temperature.
- At no time or place shall the temperature of WARM intrastate waters be increased more than 5°F above natural receiving water temperature.

Toxicity: All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the Regional Water Board.

The survival of aquatic life in surface waters subjected to a waste discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary for other control water that is consistent with the requirements for "experimental water" as described in Standard Methods for the Examination of Water and Wastewater, 18th Edition (1992). As a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a 96-hour bioassay.

In addition, effluent limits based upon acute bioassays of effluents will be prescribed. Where appropriate, additional numerical receiving water objectives for specific toxicants will be established as sufficient data become available, and source control of toxic substances will be encouraged.

Pesticides: No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no bioaccumulation of pesticide concentrations found in individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no bioaccumulation of pesticide concentrations found in bottom sediments or aquatic life.

Waters designated for use as domestic or municipal supply shall not contain concentrations of pesticides in excess of the limiting concentrations set forth in California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64444.5.

Chemical Constituents: Waters designated for use as domestic or municipal supply shall not contain concentrations of chemical constituents in excess of the limits specified in California Code of Regulations, Title 22, Chapter 15, Division 4, Article 4, Section 64435.

Waters designated for use as agricultural supply shall not contain concentrations of chemical constituents in amounts which adversely affect such beneficial use.

North Coast RWQCB NPDES Permit

Projects that discharge stormwater runoff to waters of the U.S. from land disturbances greater than one acre require a General Construction Stormwater Discharge Permit from the RWQCB, as required under NPDES Order No. 2009-0009, as amended by Order No. 2010-0014. To obtain a permit, a discharger files a Notice of Intent to be included under the State's NPDES permit.

General conditions of the permit require that dischargers must eliminate non-stormwater discharges to stormwater systems, develop and implement a Storm Water Pollution Prevention Plan (SWPPP), and perform inspections of stormwater pollution prevention measures.

Mendocino County Groundwater Ordinance

The Mendocino County Groundwater Ordinance (Ordinance) is the guidance document that the County Environmental Health Division uses to evaluate proof of water, as required in Policy 6b. The standards from the Ordinance are used as the significance thresholds for groundwater quantity impacts discussed in this Section.

Mendocino County General Plan Goals and Policies

The Mendocino County General Plan contains the following goals and policies that are relevant to hydrology and water quality for the project:

Goal RM-2 (Water Supply): Protection, enhancement, and management of the water resources of Mendocino County.

Goal RM-3 (Water Quality): Land use development and management practices that protect or enhance water quality.

Policy RM-18: No division of land or Use Permit shall be approved without proof of an adequate (as defined by the County Environmental Health Division) potable water supply for each parcel being created or proposed for special use.

Policy RM-19: Promote the incorporation of project design features that will improve water quality by minimizing impervious surface areas, maximizing on-site retention of storm water runoff, and preserving existing vegetation to the extent possible. Examples include:

- Using Low Impact Development (LID) techniques.
- Updating the County's Building Codes to address "green" building and LID techniques that can reduce pollution of runoff water, and promoting these techniques.

Policy RM-20: Require integration of storm water best management practices, potentially including those that mimic natural hydrology, into all aspects of development and community design, including streets and parking lots, homes and buildings, parks, and public landscaping.

3.9.3 Evaluation Criteria and Significance Thresholds

The project would cause a significant impact related to hydrology and water quality, as defined by the CEQA Guidelines (Appendix G), if it would:

- Violate any water quality standards or waste discharge requirements;

  Significance Threshold (Sources)

  Non-compliance with Waste Discharge Requirements for Low Threat Discharges to Surface Waters in the North Coast Region (NCRWQCB Order No. R1-2009-0045)

  Non-compliance with the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities. (State Water Resources Control Board Order No 2009-0009 as amended by Order No 2012-0006)

- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);

  Significance Threshold (Sources)

  Mendocino County Coastal Groundwater Development Guidelines

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Inundation by seiche, tsunami, or mudflow.

Areas of No Project Impact

As explained below, construction of the project would not result in impacts related to several of the significance criteria identified in Appendix G of the current CEQA Guidelines. The following significance criteria are not discussed further in the impact analysis, for the following reasons:

- **Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map**. The proposed project does not include the construction of new housing or structures for human occupancy. Therefore, the significance criterion related to the placement of housing within a 100-year flood hazard zone is not applicable to the proposed project and is not discussed further.
- **Place within a 100-year flood hazard area structures which would impede or redirect flood flows**. The proposed project does not include the construction of structures within a FEMA designated 100-year flood hazard area. Therefore, the significance criterion related to impeding or redirecting flood flows within a 100-year flood hazard area is not applicable to the proposed project and is not discussed further.
- **Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam**. The proposed project does not include the construction of structures within an area subject to inundation

from failure of a levee or dam (Mendocino County 2008). Therefore, the significance criterion related to flooding as a result of the failure of a levee or dam is not applicable to the proposed project and is not discussed further.

- **Expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow**. The project area is not located near an isolated body of water that would be subject to inundation by seiche. The proposed project does not include the construction of structures within an area subject to inundation from a tsunami (Cal EMA 2009). The project area is generally flat and not capable of a mudflow event and according to the MHMP has a landslide hazard rating of low (Mendocino County 2008). Therefore, the significance criterion related to inundation by seiche, tsunami, or mudflow is not applicable to the proposed project and is not discussed further.

3.9.4 Methodology

Potential impacts to hydrology and surface water quality are evaluated for both construction and operational activities. The project is evaluated to determine compliance with applicable federal, State, and local permitting and design requirements related to storm water quality, flooding, and drainage. Potential impacts related to groundwater depletion are evaluated, including the potential for pumping of groundwater for excavation dewatering. Flooding impacts are evaluated by determining if the project is located within a FEMA flood hazard area or other area of flooding, as well as assessing the project's compliance with local storm water requirements. The evaluation also considers additional runoff from new impervious areas, and whether such increases would exacerbate flooding at or downstream of the project area. Regional documents and maps were reviewed to identify hydrology and water quality resources that could be directly or indirectly affected by construction or operational activities.

The Caspar site is already developed and there would be no new ground disturbance or changes in the existing drainage as part of site closure. Therefore, there would be no impact to hydrology and water quality at the Caspar site. Therefore, impacts to hydrology and water quality-related impacts at the Caspar Facility are not described further.

3.9.5 Impacts and Mitigation Measures

Impact HWQ-1: Violate any Water Quality Standards or Waste Discharge Requirements.

The project is required to obtain and comply with necessary permits and comply with other Mendocino County and the NCRWQCB requirements, acting to prevent, or essentially reduce the potential for the project to violate any water quality standards or waste discharge requirements.

<u>Construction</u>

SWRCB Order No. 2009-0009 applies to public and private construction projects that include one or more acres of soil disturbance. Because the proposed Central Coast Transfer Station site is anticipated to disturb up to 4.72 acres of land, compliance with Order No. 2009-0009 would be required. Therefore, if construction activities associated with the project are not properly managed, applicable water quality standards and waste discharge requirements could be violated. The impact is considered significant.

Well Development

The proposed project would require a groundwater well to be drilled and operated for on-site water use. The short term impacts associated with construction and well development activities, are

related to site grading, exploratory drilling, well installation, well head and well house construction, well development, connection piping trenching and storage tank construction.

Well drilling activities would include a reverse mud rotary drilling technique utilizing a mud slurry to remove drill cuttings from the bore hole shaft. These cuttings and mud slurry are circulated through settlement tanks and not allowed to flow over the surface of the site or commingle with surface waters. The contractor would utilize large on-site tanks for well drilling and testing operations. The drilling mud would be contained in these tanks and removed from the site. Because the slurry would not be discharged but would be contained and removed, the impact to water quality associated with well drilling activities is considered less than significant.

After drilling is complete, the well would be developed by purging and testing. Well development purging consists of flushing the developed well and removal of any residual drilling mud. A pump test consists of continuous pumping and well performance monitoring over an approximately 72-hour period, and takes place after the well development purging. In addition, during this phase of construction, the well is disinfected with chlorine (sodium hypochlorite).

Well testing water that is discharged to the environment is required to conform to pertinent water quality standards. Well development and well pump test discharge water could be high in suspended solids and could contain chlorine residual. Impacts to water quality from discharge of well testing water are considered significant.

Operation

Some liquids could be generated on the tipping floor from cleaning, odor reduction misting, or solid waste trucks when unloading solid waste after rainstorms. The design of the main indoor drainage control system would direct liquids from the waste and unloading areas to flow through a clarifier to remove solids, then to an on-site 500-gallon above ground storage tank. Liquids would not be allowed to leave the site and stormwater would not be allowed to enter the building. Facility and equipment inspections, combined with monitoring of the storage tank containment area, allow for the detection of potential sources of leachate leaks to the environment and early corrective actions to be implemented if necessary. The amount of wastewater generated is expected to be of such minimal quantity that most of the water is anticipated to evaporate. Facility operations would include removal of the wastewater by a licensed waste hauler with disposal at a permitted wastewater treatment facility when the tank becomes full. Therefore, impacts related to wastewater generated from operations would be less than significant.

The motor oil recycling tank and antifreeze recycling tank planned for the recycling drop-off area are standard features used at many transfer stations. The motor oil tank will have double-containment and be encased in concrete to protect it from any rupture. Likewise, the antifreeze recycling tank would have external containment to prevent any leaks from escaping. Nevertheless, public use can cause minor small spills when motor oil or antifreeze are being poured into the tanks, which could be carried away if exposed to rain/stormwater . Also, appliances and electronics in recycling drop-off areas create a potential for minor transmission of contaminants if similarly exposed to rain. Exposure to rain will be prevented by roofing these oil, antifreeze and appliance/electronics recycling areas and grading to prevent infiltration of stormwater.

Stormwater discharges from operation of the project are required to comply with applicable provisions and performance standards stated in the National Pollutant Discharge Elimination System (NPDES) permit. As required by the NPDES permit, County and NCRWQCB requirements,

waste materials will not be discharged to drainage areas. Because the Central Coast Transfer Station has the potential to discharge pollutants from a point source (e.g., leaking oil from hauling trucks), the facility would be required to obtain an Industrial SWPPP under California Water Code Section 13260. The impact to water quality during operation of the project is considered significant.

Construction and operations of the proposed project would result in potentially significant water quality impact.

Mitigation Measure HWQ-1a: Manage Construction Storm Water.

The County and City shall obtain coverage under State Water Resources Control Board Order No. 2009-0009-DWQ, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities, as amended by Order No. 2012-0006. In compliance with the NPDES requirements, a Notice of Intent (NOI) shall be prepared and submitted to the NCRWQCB, providing notification and intent to comply with the State of California General Permit. In addition, a Construction Storm Water Pollution Prevention Plan (SWPPP) shall be prepared for pollution prevention and control prior to initiating site construction activities. The Construction SWPPP shall identify and specify the use of erosion sediment control best management practices (BMPs) for control of pollutants in stormwater runoff during construction related activities, and shall be designed to address water erosion control, sediment control, off-site tracking control, wind erosion control, non-stormwater management control, and waste management and materials pollution control. A sampling and monitoring program shall be included in the Construction SWPPP that meets the requirements of the NCRWQCB to ensure the BMPs are effective. A Qualified Storm Water Pollution Prevention Plan Practitioner shall oversee implementation of the Plan, including visual inspections, sampling and analysis, and ensuring overall compliance.

Mitigation Measure HWQ-1b: Industrial Storm Water General Permit.

The County and City shall obtain coverage under State Water Resources Control Board Order No. 97-03-DWQ, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities. This shall include submittal of a notice of intent to obtain permit coverage, and preparation, retention on site, and implementation of a SWPPP. The SWPPP shall identify the sources of pollution that affect the quality of industrial storm water discharges and authorized non-storm water discharges, and describe and ensure the implementation of best management practices to reduce or prevent pollutants in industrial storm water discharges. The SWPPP shall also include a monitoring program and other requirements contained in Order No. 97-03. Implementation of the SWPPP shall include the necessary inspections, monitoring, and overall compliance.

Level of Significance: Less than significant with mitigation.

Implementation of Mitigation Measures HWQ-1a and HWQ-1b would mitigate potential impacts on water quality standards and waste discharge requirements to a less than significant level by complying with, and receiving coverage under, the NPDES General Permit for Discharge of Stormwater associated with construction and operational activities. The implementation of BMPs, consistent with the requirements of the site's NPDES General Permit for Discharge of Stormwater associated with Construction Activity and the SWPPP, would ensure that the project does not violate any water quality standards or waste discharge requirements. With implementation of Mitigation Measures HWQ-1a and HWQ-1b, the projects construction and operational water quality impacts would be reduced to a less than significant level.

Mitigation Measure HWQ-1c: Well Development According to Mendocino County and California State Standards.

The contractor shall ensure that any well development and well pump test water is disposed of in accordance to the discharge limitations of the NCRWQCB general permit for Dewatering and Other Low Threat Discharges to Surface Waters if disposed of in the drainage system. If sediment concentrations are in excess of surface discharge standards then compliance shall be achieved through the on-site detention of water in a storage tank to allow for the settlement of suspended solids. In addition, the contractor shall discharge all well development disinfection discharges containing chlorine residuals after treating the discharge to meet discharge requirements. With implementation of the above mitigation measures, the water quality impacts due to well development would be reduced to a less-than-significant level.

Level of Significance: Less than significant with mitigation.

Implementation of Mitigation Measure HWQ-1c would mitigate potential impacts on water quality standards and waste discharge requirements to a less than significant level by complying with NCRWQCB general permit for Dewatering and Other Low Threat Discharges to Surface Waters. With implementation of Mitigation Measures HWQ-1c, the project's construction water quality impacts would be reduced to a less than significant level.

Impact HWQ-2: Substantially Deplete Groundwater Supplies or Interfere Substantially with Groundwater Recharge.

Pumping of groundwater that causes the groundwater gradient (slope of the water table surface) to change either its direction or its magnitude by more than 10% of the pre-Project direction and magnitude is considered significant (groundwater flow is directionally proportional to the gradient). Based on the Mendocino County Coastal Groundwater Development Guidelines, a project using groundwater cannot cause interference of more than 10% of the existing drawdown at neighboring wells or reduction of well yield to less than 90% of the maximum-day demand. Excessive groundwater pumping has the potential to significantly impact the underlying aquifer and lower the local groundwater table.

A groundwater study was performed for the proposed Mendocino Coast Regional Park and Golf Course project adjacent to, and north of the project site. Prepared by Lawrence and Associates (March 2005), the study included the installation of several pumping and observation wells. The wells were drilled to a maximum depth of 91 feet below ground surface (bgs), where bedrock was encountered. The pumping and observation wells were constructed approximately 1,800 feet north of the project site and within the same geologic unit (Lower Caspar Orchard marine terrace sediments) underlying the project site. Testing of the wells determined groundwater was approximately 20 feet bgs and produced a long term yield of 4 to 5 gallons per minute (gpm) for a 2-inch diameter well with a 40-foot well screen.

The model area developed by Lawrence and Associates (March 2005), while considerably larger than the project area, included the location of the proposed project. A total of 24 wells, pumping at an average rate of 10 gpm were evaluated to access the possible impacts to groundwater. It was determined that neither the direction nor magnitude of the groundwater gradient changed significantly with pumping. The groundwater model predicted that the water pumped was approximately 92% from aquifer storage and about 8% from a reduction in stream flow from Newman Gulch. It was determined that the reduction in flow was less than the standard significance of 10 percent. In addition, the groundwater model showed that pumping from the wells would not cause the standards of significance for groundwater level or quantity to be exceeded.

Based on the geotechnical investigation performed by LACO and Associates (June 2012) for the project site, a groundwater well with a screen interval between 25 to 60 feet bgs within the terrace sediments at the site will likely provide at least 2 gpm. The report recommended that at a minimum, the well should be located at least 100 feet from the leachfield, and at the easterly portion of the site where the terrace sediments are likely thicker and the higher elevation will facilitate gravity flow to the facility. During the site investigation by LACO, groundwater was encountered at the project site to be on average 10 feet bgs. In the upslope areas, shallow perched groundwater was encountered at depths ranging from approximately 2 to 5 feet bgs.

Water demand for the project is expected to be less than 1,000 gallons per day, mainly for employee use. Assuming the groundwater well produces 2 gpm, the pump would need to operate for about 9 hours per day to meet the projects daily water demand.

The required groundwater production rate would be lower than the significance threshold of 10 percent. Therefore, impacts from groundwater pumping would be less than significant.

Mitigation Measures: No Mitigation is necessary.

Level of Significance: Less than significant.

Impact HWQ-3: Substantial Additional Sources of Polluted Runoff or Otherwise Substantially Degrade Water Quality.

The development of the proposed project would alter the types, quantities, and timing of stormwater contaminates relative to existing conditions. If this stormwater runoff is uncontrolled and not treated, the water quality of the discharge could affect off-site drainage channels and downstream water bodies.

Construction activities could result in stormwater discharges of suspended solids and other pollutants into local drainage channels from the project site. Construction related chemicals (e.g., fuels, paints, adhesives, etc.) could be washed into surface waters by stormwater runoff. The deposition of pollutants (e.g., gas, oil, etc.) onto the ground surface by construction equipment could similarly result in the transport of pollutants to surface waters by stormwater runoff or in seepage of such pollutants into groundwater.

The operation of the proposed project site could also introduce new stormwater pollutant sources. These pollutant sources would include oils and greases, petroleum hydrocarbons (e.g., gas and diesel fuels), nitrogen, phosphorous, and heavy metals. These pollutants could adversely affect stormwater discharges from the site.

The Local Enforcement Agency's Solid Waste Facilities permit for the potential site would prohibit the discharge of drainage containing solids, wash water, or leachate from solid wastes (14 CCR Article 6). The proposed project would be required to comply with these requirements by containing waste processing operations within the interior of the transfer station building and directing contact water into the building's interior collection system. Therefore, the discharge of drainage during operation from the solid waste processing area would not occur.

The type and concentration of stormwater discharge contaminants for developed areas varies based on a variety of factors, including intensity of urban uses such as vehicle traffic, types of activities occurring on site, types of chemicals used on-site (e.g., pesticides, herbicides, cleaning agents, petroleum by-products), road surface pollutants, and rainfall intensity. The design of the facility's stormwater management system would incorporate Low Impact Development (LID) strategies including minimization of the amount of stormwater generated and treated, retention and

detention in vegetated bioswales, rain gardens, and oil/water separators in order to limit the contaminants entering stormwater flows. However, due to the industrial nature of the proposed project, there is the potential to contribute additional sources of polluted runoff and to degrade water quality during site operations if not handled properly and done in compliance with State regulations. The impact to water quality is considered significant.

Mitigation Measures HWQ-1a: Manage Construction Storm Water and HWQ-1b: Industrial Storm Water General Permit.

Level of Significance: Less than significant with mitigation.

As described above under HWQ-1a and HWQ-1b, the implementation of BMPs, consistent with the requirements of the site's NPDES General Permit for Discharge of Stormwater associated with construction and operational activities, would ensure that the project does not violate any water quality standards. With implementation of the Mitigation Measures HWQ-1a and HWQ-1b, the project's construction and operational water quality impacts would be reduced to a less than significant level.

Impact HWQ-4: Substantially Alter Existing Drainage Pattern, or Substantially Increase Rate or Amount of Runoff in a Manner which would Result in Flooding On- or Off-site.

The project would not significantly alter the existing drainage patterns at the site. However, development of the project could lead to increased runoff due to removal of vegetation and the creation of impervious surfaces. Culverts, storm drains, seasonal drainage swales, and inlet and outlet structures would need to be constructed to manage stormwater. Prevention of localized flooding would depend on adequately sizing the onsite drainage features. The County requires that drainage features be designed in accordance with the Mendocino County Drainage Standards, and that peak runoff for the 2, 10, 50 and 100-year/24-hour storm events following development are not greater than under pre-development conditions.

A surface water hydrologic analysis has been performed for the project, considering pre- and post-development conditions (GHD 2014) and can be found in Appendix G. As part of this analysis the project area was divided into two drainage areas, identified as Drainage Area 1 and 2 (see Figure 2-3, in the Hydrologic Study located in Appendix G). A comparison of the peak runoff rates and volume for the 2, 10, 50 and 100-year/24-hour storm events under existing and project conditions are presented in Table 3.9-1. Comparing existing conditions to project conditions, shows that the project would increase runoff rates and volumes as a result of the change in land use due to the increase in impervious area (e.g., roofs and pavement surfaces), resulting in a significant impact.

The hydrologic report did not explicitly assess the stormwater contribution from the groundwater well house and access road (10-foot wide and 55-foot long), which would add approximately 0.01 acres of impervious area to the project site. Further review determined that the addition of 0.01 acres of impervious area would add approximately 0.02 cfs to the stormwater runoff for the facility.

Given the conservative nature of the hydrologic analysis, the original estimate of the amount of impervious area for the proposed transfer station took into account the entire foot print of the facility. This estimate is considered conservative due to the fact that the facility is not entirely impervious (e.g., some areas will be gravel and have grass strips). If the pervious areas were subtracted out and the impervious area of the well house and access road are added to the hydrologic analysis, there would be no net increase in the amount of impervious area. Therefore, the predicted stormwater runoff volumes in the hydrologic analysis are still considered valid.

Stormwater captured in the project area will be conveyed through sheet flow to a series of bioswales that surround the facility. The purpose of the bioswales is to control the concentration of flow from the project area as well as filter out sediment and chemical constituents that could impair water quality. This would be achieved by allowing stormwater to partially infiltrate and pass through the bioswale before being released to the detention basins.

Bioswales have been shown to remove pollutants such as phosphorous, metals (e.g., Cu, Zn, Pb), nitrogen, solids, organics, and bacteria at removal rates ranging from 68-98% (CASQA 2003). In order to handle runoff effectively, a bioswale needs to be sized appropriately for the area that it collects stormwater.

Table 3.9-1: Peak Runoff Rates and Volumes for Pre and Post-Project Conditions

Drainage Area		2-year/24-hour			10-year/24-hour			50-year/24-hour			100-year/24-hour		
		Pre-Project	Post-Project	% Diff.	Pre-Project	Post-Project	% Diff.	Pre-Project	Post-Project	% Diff.	Pre-Project	Post-Project	% Diff.
Basin 1	Peak Flow (cfs)	3.8	5.2	26%	8.0	10.0	15%	12.8	14.3	10%	14.7	16.1	9%
	Total Storm Volume (ac-ft)	0.22	0.30	26%	0.48	0.56	15%	0.74	0.82	10%	0.84	0.92	9%
Basin 2	Peak Flow (cfs)	4.6	5.5	16%	10.0	11.0	8%	15.5	16.4	6%	17.8	18.7	5%
	Total Storm Volume (ac-ft)	0.27	0.32	16%	0.58	0.63	8%	0.89	0.94	6%	1.02	1.07	5%

Estimating the size of the required swale should be based on estimates that include site runoff, site soils, slope, swale vegetation, infiltration time, and space available. Based on the results of the surface water hydrologic analysis performed for the project, water surface elevations for the receiving stormwater channels are approximately 1-foot or less (assuming a 2-foot wide channel) and channel velocities are not expected to be above 4 feet per second (fps), under all storm events

A preliminary detention basin analysis was conducted to determine approximate detention basin volumes that would be necessary to keep runoff rates and volumes to pre-project conditions (GHD 2014). The detention basins were sized to reduce peak flow rates and volumes to pre-project conditions. These results were then compared to results from methods used to size detention ponds to minimize sediment transport potential from on-site to off-site drainages. The results from the hydrologic analyses demonstrate that use of the proposed detention ponds would serve to retain the potential increase in peak flows, runoff volumes, and increased sedimentation associated with conversion from existing to project conditions.

The required detention pond volumes are presented in Table 3.9-2. As shown in Table 3.9-2, the detention basin sizes presented can be constructed on-site.

Table 3.9-2: Detention Basin Volumes

Drainage Area	Detention Basin Volume (ac-ft)
Basin 1	0.77
Basin 2	0.85

The largest storage volume required is for Detention Basin 2, with 0.85 acre-feet. Based on the results of the surface water hydrologic analysis for the project site, the required area for each detention basin is approximately 50 by 129 feet.

The drainage patterns for the project area are unlikely to significantly change under the proposed project. Under existing conditions, overland flow from Drainage Area 1 and 2 flows predominately to the northwest and to the south, respectively. Runoff generated on-site would continue to be allowed to flow in the same orientation and direction as under existing conditions.

Mitigation Measure HWQ-4: Reduce Potential for *Increased* Offsite Runoff.

The applicant shall design and construct detention basins within the project area to reduce stormwater runoff volume, rates, and sedimentation in addition to allowing stormwater to infiltrate. The specific locations of these detention basins will be determined during the development of the grading and drainage plans, as required by Mendocino County. To facilitate this, the applicant shall submit a final detailed design-level hydrologic and hydraulic analysis as necessary to Mendocino County detailing the implementation of the proposed drainage plans, including detention basin facilities that will conform to the following standards and include the following components, at a minimum:

3. The project shall ensure the peak runoff for the 2-, 10-, 50- and 100-year/24-hour storm events for post-development conditions is not greater than under existing conditions. The final grading and drainage plan, including detention basin designs, shall be prepared by a California licensed Professional or Civil

Engineer. All design and construction details shall be depicted on the grading and drainage plans and shall include, but not be limited to, inlet and outlet water control structures, grading, designated maintenance access, and connection to existing drainage facilities.

4. Mendocino County shall review and approve the grading and drainage plans prior to implementation to ensure compliance with County standards. The project shall incorporate any additional improvements deemed necessary by the County.

5. Once constructed, the drainage components, including detention basins and conveyance structures will be inspected by the County and maintained per the guidelines outlined in the projects SWPPP.

6. ***The detention basins shall be designed to completely drain within 24 to 96 hours (also referred to as "drawdown time"). The 24-hour limit is specified to provide adequate settling time; the 96-hour limit is specified to mitigate vector control concerns (e.g., mosquitoes). The project shall employ erosion control practices (i.e., temporary seeding and mulching) to reduce the amount of sediment flowing into the basin. The outlet structures shall be armored (e.g., riprap lined or equivalent) and designed to evenly spread stormwater where appropriate and slow velocities to prevent erosion and re-suspension of sediment. Specifically, the northern most detention basin shall have a vertical outlet pipe located within the detention basin that is connected to a pipe manifold that discharges stormwater in a regulated manner through a minimum of four equally spaced discharge pipes. By spacing the diffuser pipes a minimum of 25 feet from each other and discharging into an existing drainage located in the Bishop Pine Forest, stormwater infiltration will be promoted while not impacting the pygmy forest. The southernmost detention basin shall utilize a similar approach to managing stormwater, but will only consist of one outlet pipe that discharges directly to the existing drainage swale on Highway 20.***

The contractor shall ensure that all disturbed areas of the project are graded in conformance with the approved grading and drainage plans in such a manner as to direct stormwater runoff to properly designed detention basins.

Level of Significance: Less than significant with mitigation.

Implementation of Mitigation Measure HWQ-4 would reduce the impact to less than significant by requiring the project to incorporate all necessary drainage and stormwater management systems, and to comply with all stormwater system design, construction, and operational requirements in the mitigation measure and by Mendocino County. In combination, the project's stormwater management components and compliance with mitigation measures and regulatory requirements act to preclude potentially adverse drainage and stormwater runoff impacts.

More specifically, the project drainage concepts will maintain the site's primary drainage patterns, and will modify and enhance drainage areas in order to accept developed stormwater discharged from the project site. Stormwater conveyance capabilities and capacities provided by the project will ensure that post-development stormwater runoff volumes and velocities do not exceed pre-development conditions. In addition, long term maintenance of stormwater controls would be required for compliance with the project's SWPPP.

3.9.6 Cumulative Impacts

Impact HWQ-C1: Result in a Cumulatively Considerable Contribution to Cumulative Impacts Related to Hydrology and Water Quality.

Cumulative projects identified in Table 3.0-1 would have the potential to affect water quality and increased runoff during construction and long-term operation. The projects would contribute stormwater flows to the local and regional drainage facilities. However, construction activities associated with cumulative projects would be subject to existing federal, State, and local regulations. Existing County policies for project design and approval, as well as NCRWQCB regulations, would minimize potential impacts to a less than significant level. Implementation of the Project plus the cumulative projects would not result in a significant cumulative impact on hydrology and water quality. Therefore, cumulative impacts would be less than significant.

Mitigation Measures: No Mitigation is necessary.

Level of Significance: Less than significant.

4.0 Alternatives Description and Analysis

4.1 Introduction

This chapter presents the alternatives analysis for the project. Section 15126.6(a) of the CEQA Guidelines requires EIRs to “describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.” Section 15126.6(b) of the CEQA Guidelines also identifies the purpose of an EIR’s discussion and analysis of project alternatives which is to identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The CEQA Guidelines further require that the alternatives be compared to the proposed project’s environmental impacts and that the “no project” alternative be considered (Section 15126.6[d][e]). CEQA Guidelines Section 15126.6(e)(1) states that the purpose of describing and analyzing the no project alternative is “to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project.” The no project analysis is required to “discuss the existing conditions at the time the notice of preparation is published…as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services (Section 15126.6[e][2]). If the project is a “development project on identifiable property, the “no project” alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. In certain instances, the no project alternative means “no build” wherein the existing environmental setting is maintained. This would be the case for the Central Coast Transfer Station project. The "no project" alternative would entail continuing existing self-haul operations at the Caspar Facility and continuing use of the Willits Transfer Station as the coast's commercial long-haul transfer station.

4.1.1 Identifying Project Alternatives

The County of Mendocino and City of Fort Bragg began their search for a potential transfer station site in 2007. Consultants surveyed dozens of potential locations throughout the greater Fort Bragg

area. From 2009 to 2011, City and County staff studied five potential locations. In 2011, the City and County named two of these sites as finalists for more intensive investigation, and on August 13, 2013, designated 30075 Fort Bragg-Willits Road (SR 20) as the preferred project site. The alternatives analyzed in this chapter in addition to the proposed project include the No Project Alternative***, the Caspar Landfill Site Alternative, the Empire Waste Management Pudding Creek Road Site Alternative, the Leisure Time RV Park Site Alternative, and the Mendocino Parks & Recreation District Property Alternative***.~~and the Caspar Site. Alternative.~~ ***These alternatives were chosen for analysis because they either (1) could potentially meet the project objectives or (2) are currently used for solid waste activities.*** The environmentally superior alternative is discussed in Section 4.3, and alternatives which were ***previously*** considered but are not being carried further in this Draft EIR are described in Section 4.4 below.

4.2 Description of Alternatives

A conceptual design of the transfer station facility appears in Figure 2-2 for the preferred project site at 30075 Highway 20. If placed at any alternative location, the transfer station would include the same elements of approximately the same size, although the configuration could be altered. Operational standards would be essentially the same as set forth in Chapter 2.0, Project Description.

4.2.1 Alternative 1: No Project Alternative

Under the No Project Alternative solid waste in the coastal wasteshed would continue to be handled in the same manner as under existing conditions. Waste would be hauled to the Willits Transfer Station and self-haul would continue to occur at the Caspar facility. No new development would occur at the SR 20 site. Existing haul routes would remain the same and there would be no modification to any of the existing facilities including those at the Caspar, Pudding Creek, or Albion sites.

The SR 20 site is currently undeveloped and consists of various forest land and vegetation. Under the No Project Alternative the SR 20 site would remain as part of the JDSF. In the short- and long-term, no changes are expected to the project site. Therefore, the project site would remain in its undeveloped, forested, and vegetated state.

Under the No Project Alternative the hauling inefficiency would remain the same as under existing conditions. The No Project Alternative includes no changes or improvements to the existing facilities and therefore would not increase criteria air pollutants, energy use, GHG emissions, noise, or traffic relative to existing conditions; however, the efficiencies that would be gained with the project would not occur. In fact, in the context of GHG, the project would cause a net reduction of emissions and therefore results in a beneficial impact which would be lost under this No Project Alternative. Accordingly, impacts of the No Project Alternative on air quality, GHG emissions, as well as energy, would be greater than with the project.

Under the No Project Alternative there would be no vegetation removal, ground disturbance or construction, and therefore there would be no impact on aesthetics, forest resources, biological resources, cultural resources, geology, hazards, or land use.

4.2.2 Alternative 2: Caspar Landfill Site

The Caspar site is located at 14000 Prairie Way in Caspar (Figure 2-3). The 62-acre Caspar site was used for a landfill from 1967 to 1992 and for a self-haul transfer station from 1992 until the present. It is jointly owned by the County and City. The surrounding area is rural residential. The nearest residence is 950 feet from the transfer station area and there are three residences within 1,000 feet. Russian Gulch State Park borders the facility to the south.

The Caspar site was originally forest land but much of the original vegetation was stripped many years ago and there is now a large cleared area used for the existing self-haul facility. Little or no vegetation removal would be required if the proposed project was sited at the Caspar site.

A proposal from the County Solid Waste Division in 2006 for a new 2,500 square-foot self-haul building included schematics that showed how new construction could fit into the existing developed area. A commercial transfer station would require a larger footprint but it could be placed at the same spot, toward the southern end of the existing facilities. Electrical service, road access, and water wells are already established at the Caspar site, and on-site wastewater disposal could be developed to replace the existing portable toilets.

Aesthetics

The visual resource impacts of this alternative would be greater than the proposed project because the existing Caspar site has less vegetation to shield views of a new facility from a greater number of residences and recreational users. Even though this alternative would include development of a transfer station facility at an existing solid waste facility, there would be greater viewsheds impacted at the Caspar site compared to the proposed project site.

Agriculture and Forest Resources

There would be no impact to agricultural resources or conflict with a Williamson Act or agricultural zoning with Alternative 2 because the site is not zoned for agricultural uses, is not prime agricultural land and is not subject to any Williamson Act contracts. There would also be no forest land impacts with Alternative 2 because this alternative is already developed as a solid waste facility and would not require the removal of forest land to expand the facility.

Air Quality

The air quality impacts, for both air pollutants and air contaminants, associated with construction activities at the Caspar site would generally be similar to the proposed project, assuming development of a similar transfer station. The operational air quality impacts with this alternative would be approximately the same as the proposed project if the transfer station is constructed at the Caspar site because operation would be similar to the proposed project. However, the air pollutant emissions from transfer trailers, franchise hauler's collection trucks and self-haul vehicles would be higher with this alternative than the proposed project because the Caspar site is approximately seven miles south of the approximate center of waste generation, which is considered to be the intersection of SR 1 at SR 20. Overall, this alternative would have greater air quality impacts than the proposed project.

Biological Resources

Implementation of this alternative would eliminate the biological resources impacts anticipated with implementation of the proposed project because this site is already developed and used as a transfer station. A commercial transfer station at the Caspar site could be placed within the boundaries of the existing facility, toward the southern end of the site. Because the Caspar site is already developed, the biological resources impacts associated with this alternative would be less than with the proposed project.

Cultural Resources

The potential impacts on cultural resources anticipated with this alternative are expected to be less than with the proposed project because the Caspar site is already developed including paved and graded areas. However, as with the proposed project, construction of the project at the Caspar site could unearth unknown cultural resources which would be a significant impact. The same mitigation measures for the proposed project (Mitigation Measures CR-1, CR-2, and CR-3) would also be applicable to this alternative.

Geology and Soils

The Caspar site is located in a similar geologic area, and with similar soils, as the proposed project site. Also, the Caspar site is relatively flat and has been partially developed. Therefore, the development of the Caspar site for transfer station operations would be expected to result in the same seismic and erosion hazards that would be anticipated with development of the project site.

Greenhouse Gas Emissions

Operationally, this alternative would have similar emissions as the proposed project because they would both be similarly sized. Overall, this alternative would generate higher emissions than the proposed project because the Caspar site is approximately seven miles south of the approximate center of waste generation (SR 1 at SR 20), which means collection trucks (and self-haul vehicles) would need to make an average round trip of approximately 14 miles to the Caspar site to empty each load. Since the outbound transfer trucks will exit the region via SR 20, they would similarly have to drive these additional miles.

Hazards and Hazardous Materials

The Caspar site would include the same uses on a similarly sized site as the proposed project. Therefore, the Caspar site would generally have the same hazard impacts as the proposed project.

Hydrology and Water Quality

Similar to the project site, the Caspar site is relatively flat and would not experience excessive erosion with additional site development. The Caspar site would direct stormwater runoff to the existing facilities currently used by the existing transfer station. Also, the Caspar site is already partially developed with impervious surfaces. Therefore, it would not be expected to substantially increase the peak runoff during storm events. As with the project site, the hydrology and water quality impacts associated with this site would be considered less than significant following implementation of appropriate hydrology and water quality mitigation measures. The hydrology impacts associated with this alternative are anticipated to be less than with the proposed project.

Land Use and Planning

The Caspar site would require an amendment to its Major Use Permit for the new facility. However, since the site is already used for solid waste transfer activities, the issues involved with the amendment would be limited. Therefore, the land use impacts of this alternative would be ***similar or slightly*** less than the proposed project ~~if a new transfer building was fully enclosed~~***which also requires a Major Use Permit.***

Noise

Similar to the proposed project, development of this alternative would generate construction noise associated with the use of heavy equipment for demolition, site grading and excavation, installation of utilities, paving, and building fabrication. The noise impact of a facility at Caspar would depend on whether the transfer building was fully enclosed. If it was not, noise impacts could be greater than the proposed project. However, the Caspar site has fewer residential homes within the project vicinity compared to the proposed project. ***The existing ambient noise level at Caspar reflects the outdoor operations of the self-haul transfer facility. An enclosed new transfer station would buffer and significantly reduce most of that source of noise generation. Like the proposed project, the Caspar alternative would not create a significant noise impact.***

Transportation

Transportation impacts associated with this alternative would be greater than with the proposed project. Due to the Caspar site's location, collection trucks and self-haulers must drive through the intersection of Highway 1 and County Road 409 to access the site. Caltrans has stated that this intersection is substandard for large, slow truck traffic and has limited potential for improvements because of the presence of the Highway 1 bridge over Caspar Creek just to the north. Caltrans has indicated that the left turn pocket off Highway 1 is 300 feet and the standard size would need to be 435 feet.

The Caspar site's geographic location is relatively inefficient for purposes of a regional transfer station. Caspar was originally purchased by the City and County for use as a landfill, so a remote location was desirable. A transfer station, conversely, is most efficient when it is close to the center of waste generation and to the route of outhaul. The Caspar site is approximately seven miles south of the approximate center of waste generation (Highway 1 at SR 20), which means collection trucks would need to make an average round trip of approximately 14 miles to the Caspar site to empty each load. Since the outbound transfer trucks will exit the region via SR 20, they would similarly have to drive these additional miles. Compared to the proposed project site on SR 20, the Caspar location would result in approximately 25,000 additional miles of truck travel per year.

Consistency with Project Objectives

The Caspar alternative would meet the project's objectives but be less successful than the preferred site in efficiency of hauling, minimizing hauling costs, isolation from potentially conflicting land uses, and controlling future solid waste costs.

4.2.3 Alternative 3: Empire Waste Management Pudding Creek Road Site

Empire Waste Management, the franchised solid waste collector for the City and County, owns 9.24 acres at 219 Pudding Creek Road, Fort Bragg, which accommodates a recycling buy-back center, truck garage, waste loading platform, and truck depot. There is space on

the northern edge of this property to accommodate the construction and operation of a transfer station akin to the proposed project. Empire Waste Management is willing to build such a facility, but only under its own ownership and operation,

This site's existing land uses and conditions include recycling and heavy truck operations and related utilities, paved access, and other services.

Aesthetics

The project would be consistent with the existing industrial-type structures and would add little new aesthetic impact and have the same less-than-significant aesthetic impact as the proposed project.

Agriculture and Forest Resources

There would be no impact to agricultural resources or conflict with a Williamson Act or agricultural zoning with Alternative 2 because the site is not zoned for agricultural uses, is not prime agricultural land and is not subject to any Williamson Act contracts. There would also be no forest land impacts with Alternative 2 because this alternative site is already developed as a solid waste facility with industrial uses and would not require the removal of forest land to expand the facility to include a new transfer station.

Air Quality

The air quality impacts, for both air pollutants and air contaminants, associated with construction activities at this alternative site would generally be similar to the proposed project, assuming development of a similar transfer station. The operational air quality impacts with this alternative would be approximately the same as the proposed project if the transfer station is constructed at this site because operation would be similar to the proposed project. Air pollutant emissions from transfer trailers would be slightly higher than the proposed project because of its more distant location from the Highway 20 exit corridor, however this would be offset by a slightly lower total mileage driven by collection trucks. On balance, the air quality impact of this alternative would be the same as the proposed project.

Biological Resources

Implementation of this alternative would not result in any significant biological resources impacts because this site is already developed and used as a solid waste facility.

Cultural Resources

The potential impacts on cultural resources anticipated with project development at this alternative site are expected to be less than with the proposed project because the Pudding Creek site is already developed, including paved and graded areas and with industrial uses.

However, as with the proposed project, construction of the project at the Pudding Creek site could unearth unknown cultural resources which would be a significant impact.

Geology and Soils

This alternative site is located in a similar geological area as the proposed project and is flat and developed. Seismic and erosion hazards are the same as the proposed project.

Greenhouse Gas Emissions

Operation of a transfer station at this alternative site would have similar emissions as the proposed project because they would both be similarly sized. Transfer trucks would travel an additional 10.8 miles per trip compared to the proposed project. This would be approximately offset by lesser mileage driven by solid waste collection trucks which would terminate their routes at the same location as the Empire Waste Management transfer station. Overall, the greenhouse gas impact would be about the same as the proposed project.

Hazards and Hazardous Materials

Construction and operation of a transfer station at this alternative site would involve the same uses on a similarly sized site as with the proposed project. Therefore, this alternative would generally have the same hazard impacts as the proposed project.

Hydrology and Water Quality

This site has developed storm water management and thus construction and operation of a transfer station at this alternative site should not result in significant water quality impacts.

Land Use and Planning

The property is zoned industrial and a use permit would be required from the City of Fort Bragg. This alternative site is situated in close proximity to the numerous residences. The 63-unit Ocean Lake Subdivision is situated adjacent to and immediately north of the site. The transfer station building would be at the north side of the property since this is the only available space. Therefore it would be less successful than the proposed project in meeting the project objective of isolation from other land uses.

Noise

Immediately north of the site is the 63-unit Ocean Lake Subdivision. The transfer station building would be at the north side of the property. A transfer station on this site would have a greater potential for creating significant noise impacts to a larger number of residences when compared to the proposed project.

Transportation

Given this alternative site's location on the north side of the City of Fort Bragg, approximately 2.6 miles beyond the City center on Main Street, access for a transfer station traffic at this site would be through the City's congested Main Street (SR 1), which reduces from four to two lanes at Laurel Street, creating a "choke point" with substantial backups during peak periods and seasons. Furthermore, development of a transfer station at this location would likely require installation of a traffic signal at the intersection of SR 1 and Pudding Creek Road.

Consistency with Project Objectives

The Empire Waste Management alternative would meet some of the project's objectives but not the objective calling for public ownership of the transfer station site. It would be less successful than the proposed project in efficiency of transfer, hauling expense, isolation from potentially conflicting land uses, and controlling rising solid waste costs.

4.2.4 Alternative 4: Leisure Time RV Park Site

This alternative site is located at 30801, State Route 20 in Fort Bragg. The property is a 24.3 acre parcel on the south side of SR 20, less than 1/2 mile west of the proposed project site. It is currently used as a trailer park for both short-term visitors and long-term residents. Acquisition of the property would significantly increase the capital expense of development of a transfer station when compared to the proposed project's no-cost site acquisition option. The property has 700 feet of frontage on SR 20, with good sight distance in both directions. No major streams or waterways are located on the property and approximately 12 acres are flat and useable. The southern portion of the property is densely vegetated and falls off steeply to Hare Creek which lies approximately 1,000 feet away. A seven-acre portion of the property is already cleared of forest. Private sewer and water systems are in place.

Aesthetics

The visibility of the project to Highway 20 and to nearby residences would depend on its placement on the property. There is only a thin screen of vegetation along the boundaries to the north and west. Construction and operation of the proposed project at this alternative site could result in greater aesthetic impacts, due to the height of the transfer building, than the proposed project, which would be completely shielded by trees and other vegetation.

Agriculture and Forest Resources

There would be no impacts to agricultural resources or forestland, or conflict with a Williamson Act or agricultural zoning if the project were to be developed at this site .

because the site is not zoned for agricultural or timberland uses, is not prime agricultural land and is not subject to any Williamson Act contracts.

Air Quality

The air quality impacts, for both air pollutants and air contaminants, associated with construction activities at this site would generally be similar to the proposed project, assuming development of a similar transfer station. The operational air quality impacts with this alternative would be approximately the same as the proposed project if the transfer station is constructed at this site because operation would be similar to the proposed project. Transportation impacts would also be the same, since the two sites are in close proximity.

Biological Resources

Since 7 acres of this site have been cleared of vegetation, impact to biological resources is unlikely if the transfer station was to be constructed/operated on those acres.

Cultural Resources

The potential impacts on cultural resources anticipated with project development at this alternative site are expected to be less than with the proposed project because the site is already developed. However, as with the proposed project, construction of the project at the site could unearth unknown cultural resources which would be a significant impact.

Geology and soils

This site is located in a similar geological area as the proposed project and is flat and developed. Seismic and erosion hazards would be similar to the proposed project.

Greenhouse Gas Emissions

This site is close to the proposed project site and would therefore have the same positive impact on greenhouse gas emissions compared to existing conditions.

Hazards and Hazardous Materials

This site would include the same uses on a similarly sized site as the proposed project. Therefore, this site would generally have the same hazard impacts as the proposed project.

Hydrology and Water Quality

Domestic water supply and wastewater disposal systems currently exist at the site (well and septic). This site is relatively flat with developed drainage associated with its trailer park and campground development. The southern portion of the property is densely vegetated and falls off steeply to Hare Creek which lies approximately 1,000 feet away. Additional runoff from transfer station development would need to be addressed and managed for release to the south in order to mitigate potentially significant impacts to the Hare Creek watershed.

Land Use and Planning

The property is zoned Forest Land and would require a major use permit to allow transfer station development. The site is close to many residences to the northwest, west, and east. The closest residential building is approximately 20 feet from the western boundary. There are approximately 24 residential parcels within 1,000 feet of the western boundary and 12 parcels within 1,000 feet of the eastern boundary. Leisure Time RV Park currently has 12 permanent residents and 10 six-month renters who would have to be evicted to make room for a transfer station. According to the park manager, the park has become increasingly attractive to low-income residents being priced out of the Fort Bragg rental market because they can more easily afford the approximately $500 per month space rental at Leisure Time RV Park. [Personal conversation with Kimberly Murphy, Leisure Time RV Park manager, July 23, 2015].

In addition to permanent residents, the 35-year-old Leisure Time RV Park has been important for Fort Bragg's tourist economy with its available tent camping and RV sites are completely filled during peak vacation times. To accommodate growing demand, the park owner is building a new leach field at an approximate cost of $100,000. [Personal conversation with Kimberly Murphy, Leisure Time RV Park manager, July 23, 2015].

Placing the transfer station at Leisure Time RV Park would require the eviction of current residents, the elimination of a low-cost housing alternative for the region, destruction of an important local business serving the tourist industry, and placement of this new industrial land use in proximity to a far greater number of nearby residences than the proposed project site.

Noise

Noise from construction and operation of a transfer station at this alternative site would adversely affect 36 residences within 1,000 feet of the property. Accordingly, potential noise impacts of this alternative are greater than the proposed project because the proposed project site's vegetation would better screen and buffer construction and operational noise and because there are fewer residences in close proximity.

Transportation

Since this site is only 0.6 miles away from the proposed project site and also is on Highway 20, transportation impacts would be similar to the proposed project. Similar improvements would be required to Highway 20 to create turn lanes.

Consistency with Project Objectives

The Leisure Time RV Park alternative would meet most of the project's objectives but would be less successful than the proposed project in isolating from potentially conflicting land uses.

4.2.5 Alternative 5 Mendocino Parks & Recreation District Property

This alternative site is located at 30812 State Route 20 in Fort Bragg and contains 173.5 acres of primarily undeveloped forestland. Approximately seven acres were cleared of vegetation for use as a stockpile area, and would therefore be the most appropriate part of the property for transfer station development. This seven-acre cleared area is located in the southwestern corner of the property, close to the intersection of SR 20 with Summers Lane. An access driveway connects to SR 20, with good sight distance in both directions.

As of March, 2016, the property is owned by the Mendocino Parks & Recreation District, which has filed for bankruptcy and owes approximately $2.3 million on the property. The property is listed for sale. Acquisition cost would significantly increase the capital expense of transfer station development at this alternative site. Furthermore, the City of Fort Bragg already tried but failed to purchase the property at fair market value in early 2014 since the District rejected the City's offer. Accordingly, public entity acquisition of this site may not be feasible because public entities are prohibited by law from paying more than fair market value for property and the District has already rejected the City's fair market value offer to purchase the site.

Aesthetics

Like the proposed project, a transfer station at this site could be located to be completely shielded from view behind existing forest vegetation.

Agriculture and Forest Resources

There would be no impact to agricultural resources or conflict with a Williamson Act or agricultural zoning with this site. There would also be no forest land impacts if the project was located on the cleared acreage.

Air Quality

The air quality impacts, for both air pollutants and air contaminants, associated with construction and operational activities at this site would generally be similar to the proposed project, assuming development of a similar transfer station. Transportation impacts would be the same, since the two sites are in close proximity.

Biological Resources

Since 7 acres of this site have been cleared of vegetation, there probably would be no significant impact to biological resources if the transfer station was located on those acres, except for potential impact noted below under Hydrology and Water Quality.

Cultural Resources

The potential impacts on cultural resources anticipated with project development at this alternative site are expected to be less than with the proposed project because the site is already cleared. However, as with the proposed project, construction of the project at the site could unearth unknown cultural resources which would be a significant impact.

Geology and soils

This site is located in a similar geological area as the proposed project and is flat and developed. Seismic and erosion hazards are probably the same as the proposed project.

Greenhouse Gas Emissions

This site is close to the proposed project site and would therefore have the same positive impact on greenhouse gas emissions compared to existing conditions.

Hazards and Hazardous Materials

This site would include the same uses on a similarly sized site as the proposed project. Therefore, this site would generally have the same hazard impacts as the proposed project.

Hydrology and Water Quality

The site is the headwaters of Sholars Bog and drains to the northwest into pygmy forest. Additional runoff from transfer station development would need to be carefully addressed and managed in order to mitigate potentially significant runoff impacts to the watershed. Mitigating these potential impacts would be similar or more challenging than the mitigation necessary for the proposed project site. Groundwater is available for transfer station operations.

Land Use and Planning

The property is zoned Forest Land and would require subdivision from the remainder of the larger parcel and a major use permit to allow transfer station development. Acquisition would be possible only if the property was available at a price not greater than the appraised value, which has not been the case in the past. Thirty-five residences are within 1,000 feet of the northern and western borders.

Noise

The nearby residences to the north and west would be subject to noise impact from the transfer station, which would be relatively greater in impact than the proposed project site due to lesser ambient noise from Highway 20 traffic.

Transportation

Since this site is only 0.6 miles away from the proposed project site on Highway 20, transportation impacts would be similar to the proposed project. Similar improvements would be required to Highway 20 to create turn lanes.

Consistency with Project Objectives

The Mendocino Parks and Recreation District alternative would meet most of the project's objectives but would be less successful than the preferred site in achieving public ownership and isolating from potentially conflicting land uses.

4.3 Environmentally Superior Alternative

As summarized in Table 1-1, in Chapter 1, the project would have impacts to air quality, odors, biological resources, cultural resources, geology and soils, hydrology, and transportation, all of which have been mitigated to less than significant. Based on the analysis above, the No Project Alternative has greater impacts than the project under two resource categories (GHG emissions and energy) and fewer impacts under all other categories.

~~While~~ Alternative 2: Caspar Site has greater impacts than the project under five resource categories (aesthetics, air quality, GHG emissions, energy, and traffic) with all other resource impacts being the same (odor, cultural, geology, and hazards) or less (biological resources, hydrology, and land use).

Alternative 3: Empire Waste Management has equivalent impacts to the proposed project under most criteria except greater impacts on land use, transportation and noise and lesser impacts on biological and cultural resources and hydrology.

Alternative 4: Leisure Time RV Park has equivalent impacts to the proposed project under most criteria except greater impacts on aesthetics, land use and noise and lesser impacts on biological and cultural resources.

Alternative 5: Mendocino Parks & Recreation District has equivalent impacts to the proposed project under most criteria except greater impacts on land use and noise and lesser impacts on biological and cultural resources. Greater impacts on hydrology (storm water management) are possible but undetermined.

Selection of the environmentally superior alternative could depend on what weight is given to the various environmental impacts. This can be a subjective judgment. If it is assumed that all categories of environmental impact have equal weight, then the environmentally superior

alternative, based on the analysis above, is the No Project Alternative because it has the fewest number of impacts to environmental resources.

According to CEQA Guidelines Section 15126.6(e), if the No Project Alternative is determined to be the environmentally superior alternative, then the EIR shall also identify an environmentally superior alternative among the other alternatives. ***Measured solely by the number of categories of impact, the Mendocino Parks and Recreation District alternative should be so identified.*** ~~Among the other alternatives, the environmentally superior alternative is the proposed project as mitigated, given it would achieve greater reductions in various environmental resource categories including aesthetics, air quality, energy consumption, greenhouse gas emissions, and transportation. Although it has greater impacts to biological resources than Alternative 2, the impacts have been fully mitigated and are outweighed by the beneficial impact to GHG emissions and energy consumption.~~

Alternatives 3, 4 and 5 would have greater impacts than the proposed project due to their proximity to a larger number of residences. Placing a solid waste transfer station in close vicinity to residences is an environmental impact that the lead agency has sought to minimize throughout the siting process.

The following chart summarizes the density of residential development around certain sites:

Site	***Closest residence (feet) from site boundary***	***Number of residences within 1000 feet from site boundary***
Project site Highway 20	***360****	***14***
Caspar transfer station site	***200***	***11***
Empire Waste Management Pudding Creek	***150***	***62***
Leisure Time RV Park	***20*****	***36***
Mendocino Coast Parks & Recreation	***20***	***35***

Source: GoogleEarth
****A residence across Highway 20 (Thorbecke) is closer than 360 feet to the site's property boundary, but the transfer station facilities would be built at the far western end of the property, at least 700 feet from Thorbecke.***
*****Not including residents of the RV Park.***

4.4 Alternatives Considered but not Carried Forward in this EIR

4.4.1 Georgia-Pacific Woodwaste Landfill, Georgia-Pacific Haul Road, Fort Bragg

Approximately 20 acres of the 80-acre Georgia-Pacific woodwaste landfill property could be the site of a transfer station; however, the owner is not willing to sell. Its remote location would have the advantage of isolation from other land uses, but the least expensive access route would be Summers Lane, which is a narrow residential road. In addition to improvements to Summers Lane, Summers Lane would need to be extended 3,000 feet to reach the woodwaste landfill property. A 2007 estimate of these road improvement costs was estimated at $2 million. There is no electric service currently to this site. This potential site is comprised entirely of pygmy forest. Together with the new road construction and installation of utilities, this site would require removal of more forest land than other sites, the owner is continuing to address SWRCB clean-up requirements, and the owner is not a willing seller.

~~4.4.2 Empire Waste Management, 219 Pudding Creek Road, Fort Bragg~~

~~Empire Waste Management, the franchised solid waste collector for the City and County, owns 9.24 acres which accommodates a recycling buy-back center, truck garage, and truck depot. There is space on the northern edge of this property where a transfer station building could be built. Empire Waste Management is willing to build such a facility, but only under its own ownership and operation, therefore, one of the primary project objectives of public ownership could not be met.~~

~~This site would have the advantages of pre-existing uses for recycling and heavy truck operation, together with existing utilities, paved access, and other services. The disadvantages of this site arise from its location on the north side of the City of Fort Bragg, approximately 2.6 miles beyond the City center on Main Street. Access for transfer station traffic would be through the City's congested Main Street (SR 1), which reduces from four to two lanes at Laurel Street, creating a "choke point" with substantial backups during peak periods and seasons. The City does not want to increase truck traffic at this location. Furthermore, development of a transfer station at this location would likely require installation of a traffic signal at the intersection of SR 1 and Pudding Creek Road.~~

~~A transfer station at this site would be very close to the 63-unit Ocean Lake Subdivision which borders Empire Waste Management's property to the north, therefore, it would be less successful in meeting one of the project objectives of isolation from other land uses.~~

4.4.3 California Western (Skunk Train) Railroad

Solid waste transfer via railroad, instead of highway, was suggested by some people who commented on the scope of this EIR. If it were feasible, rail haul would alter the design of the project, but it would not eliminate the need for a transfer station facility where both the franchised collector's trucks and self-haul vehicles could dump waste.

Rail haul requires extra steps in loading and unloading compared to truck haul and is only used in the solid waste industry for very long hauls, typically several hundred miles or more. The California Western Railroad connects Fort Bragg to Willits but there is no rail service beyond Willits. Therefore, the use of rail haul for this project would require unloading and reloading at the Willits

Transfer Station (which is close to the California Western Railroad tracks). This would be inconsistent with one of the project objectives which is to make it possible for Central Coast solid waste to be hauled directly to a destination landfill.

Rail haul on the California Western Railroad route would be subject to occasional interruption due to landslides, washouts, and tunnel collapse. Therefore, a truck haul backup would need to be constantly available, either by maintaining specialized flatbed semi-trailers that can accommodate the rail containers, or by using conventional truck transfer trailers. Either approach would impose additional costs.

Rail haul wouldn't avoid the need for a transfer station facility similar in size to the proposed project, therefore, the siting challenge would be altered, but not eliminated. Presumably the new site would be adjacent or very near to the California Western Railroad depot at the west end of Laurel Street. Due to frequent traffic congestion, the City of Fort Bragg has opposed siting a transfer station anywhere north of the point where Main Street reduces down to two lanes. Also, land near the California Western Railroad depot is valuable and privately owned, meaning that acquisition would be costly and possibly require condemnation. The vicinity of the California Western Railroad depot includes extensive residential, commercial, tourist, and historic sites.

4.4.4 Leisure Time RV Park, 30801 SR 20, Fort Bragg

~~This property is a 24.3 acre parcel on the south side of SR 20 currently used as a trailer park. The owner has offered to sell the property for $1.2 million; however, this would significantly increase the capital expense of development of a transfer station. The property has 700 feet of frontage on SR 20, with good sight distance in both directions. No major streams or waterways are located on the property and approximately 12 acres are flat and useable. A seven-acre portion of the property is already cleared of forest. Private sewer and water systems are in place.~~

~~This site would have some of the same advantages as the proposed project site, which is approximately 0.7 mile farther east on SR 20. The proposed project site and this site both lie along the exit route for solid waste transfer on SR 20. This site would require removal of little or no forest since a substantial area is already cleared. However, it is close to many residences to the northwest, west, and east. The closest residential building is approximately 20 feet from the western boundary. There are approximately 24 residential parcels within 1,000 feet of the western boundary and 12 parcels within 1,000 feet of the eastern boundary. Therefore it would be less successful in meeting one of the project objectives of isolation from other land uses.~~

~~4.4.5 Mendocino Parks & Recreation District Property, 30812 SR 20, Fort Bragg~~

~~These 173.5 acres are presently undeveloped land, mostly forested. As of October, 2014, the property is owned by the Mendocino Parks & Recreation District which is in bankruptcy and owes approximately $2.3 million on the property. The property is listed for sale. Acquisition cost would significantly increase the capital expense of transfer station development. Furthermore, the City of Fort Bragg attempted to purchase the property at fair market value as established by an appraisal~~

~~in early 2014 and its purchase offer was rejected, thus it is not certain that the property could be sold to a public entity (public entities are prohibited by law from paying more than fair market value for property).~~

~~No major streams or waterways are located on the property. It is flat to gently sloping and mostly forested with Pygmy species. It contains some wetlands. The property is the headwaters of the Sholars Bog.~~

~~Approximately seven acres were cleared of vegetation for use as a stockpile area, and would therefore be the most appropriate as part of the property for transfer station development. This cleared area is located in the southwestern corner of the property, close to the intersection of SR 20 with Summers Lane. An access driveway connects to SR 20, with good sight distance in both directions.~~

~~This site would have some of the same advantages of the preferred site, which is about 0.7 mile farther east on SR 20. Both lie along the exit route for solid waste transfer. This site would require removal of little to no forest since a substantial area is already cleared. However, it is closer to a much greater number of residences to the northwest, west, and south. The closest neighbor's building is 20 feet from the northern boundary of the site. There are approximately 35 residential parcels within 1,000 feet of the western and northern borders. Therefore, it would be less successful in meeting the project objective of isolation from other land uses.~~

This page intentionally left blank

Bishop Pine Forest Mitigation Plan – Central Coast Transfer Station

MENDOCINO SOLID WASTE MANAGEMENT AUTHORITY
MENDOCINO COUNTY, CALIFORNIA

Prepared For:

Mendocino Solid Waste Management Authority,
3200 Taylor Rd
Ukiah, CA 95482

Contact: Mike Sweeney
sweeney@pacific.net

Prepared By:

WRA, Inc.
2169-G East Francisco Boulevard
San Rafael, CA 94901

Contact: Matt Richmond
richmond@wra-ca.com

Date:

April 28, 2016

WRA Project No. 25260

2169-G East Francisco Blvd., San Rafael, CA 94702 (415) 454-8868 tel info@wra-ca.com www.wra-ca.com

TABLE OF CONTENTS

1.0 INTRODUCTION....1

2.0 EXISTING CONDITIONS....1
- 2.1 Restoration Parcel....1
- 2.2 Preservation Parcel....4

3.0 BISHOP PINE ECOLOGY....6

4.0 RESTORATION METHODS....6
- 4.1 Burn Piles....9
- 4.2 Woody Debris Piles....10
- 4.3 Supplemental Planting (if applicable)....10
- 4.4 Invasive Species Management....12
- 4.5 Refuse Removal....14

5.0 AVOIDANCE AND MINIMIZATION MEASURES....14

6.0 MONITORING....15
- 6.1 Photo Monitoring....15
- 6.2 Permanent Plots....16
- 6.3 Fixed Transects....16
- 6.4 Qualitative Assessment....16
- 6.5 Monitoring Reports....16

7.0 PERFORMANCE GOALS....17

8.0 REFERENCES....18

LIST OF TABLES

Table 1. Tree and shrub planting palette 11
Table 2. Cal-IPC Ranks of Invasive Species in Restoration Parcel 12

FIGURES

Figure 1. Location of Restoration and Preservation Parcels 2
Figure 2. Preservation Parcel Vegetation Communities 5
Figure 3. Restoration Areas 8

LIST OF APPENDICES

Appendix A – Representative Photographs of Restoration Parcel

1.0 INTRODUCTION

At the request of the Mendocino Solid Waste Management Authority (MSWMA), WRA, Inc. (WRA) evaluated the potential for the Caspar Transfer Station (Restoration Parcel) and an adjacent parcel, identified by Mendocino County, proposed for preservation (Preservation Parcel) as mitigation for temporary and permanent impacts to 4.0 acres of Bishop pine forest at the site of the proposed transfer station on Highway 20.

WRA conducted a site visit to the Restoration Parcel (APN 118-500-11) on September 3 and November 20, 2015 to asses existing conditions and potential areas for Bishop pine forest restoration. WRA determined the Restoration Parcel can provide approximately 5 acres of Bishop pine forest enhancement and 1 acre of Bishop pine forest re-establishment for a total of approximately 6 acres of Bishop pine forest restoration.

In addition to Bishop pine forest restoration efforts proposed in the Restoration Parcel, the Preservation Parcel (APN 118-500-45) may also be considered as mitigation for impacts to Bishop pine forest at the proposed transfer station on Highway 20. This parcel was identified by Mendocino County and MSWMA in comments to the EIR for the proposed transfer station on Highway 20. The Preservation Parcel is a 28-acre parcel located adjacent to the Caspar Transfer Station which contains relatively intact pygmy cypress forest and Bishop pine forest. On April 18, 2015, WRA visited the parcel proposed for preservation to map vegetation types and determined that approximately 5.76 acres of Bishop pine forest is present. Because the Preservation Parcel is proposed for preservation rather than restoration, the restoration efforts described in this Mitigation Plan do not pertain to the Preservation Parcel.

WRA has prepared this Bishop Pine Forest (BPF) Mitigation Plan (herein referred to as the "Mitigation Plan") on behalf of the MSWMA for proposed restoration efforts at the Caspar Transfer Station (Restoration Parcel). This Mitigation Plan provides guidance for restoration efforts at the Transfer Station, including guidelines for the implementation, management, and monitoring of the BPF restoration. The Mitigation Plan also outlines the criteria and methodology that will be used to determine the success of the restoration efforts.

2.0 EXISTING CONDITIONS

2.1 Restoration Parcel

The Restoration Parcel is located at 15000 Prairie Way in unincorporated Mendocino County (Figure 1). The County-owned 62 acre parcel supports several vegetation types with the majority being pygmy cypress woodland, BPF, ruderal vegetation, and non-native grassland. Areas of development include several small outbuildings, developed roads, and infrastructure which allows for the temporary storage of garbage, recycling, and other waste materials. A decommissioned landfill occupies the majority of the eastern third of the Restoration Parcel. WRA conducted site visits on September 3 and November 20, 2015 to document existing conditions at the site in an effort to assess the type and condition of vegetation present and potential to restore and enhance BPF.

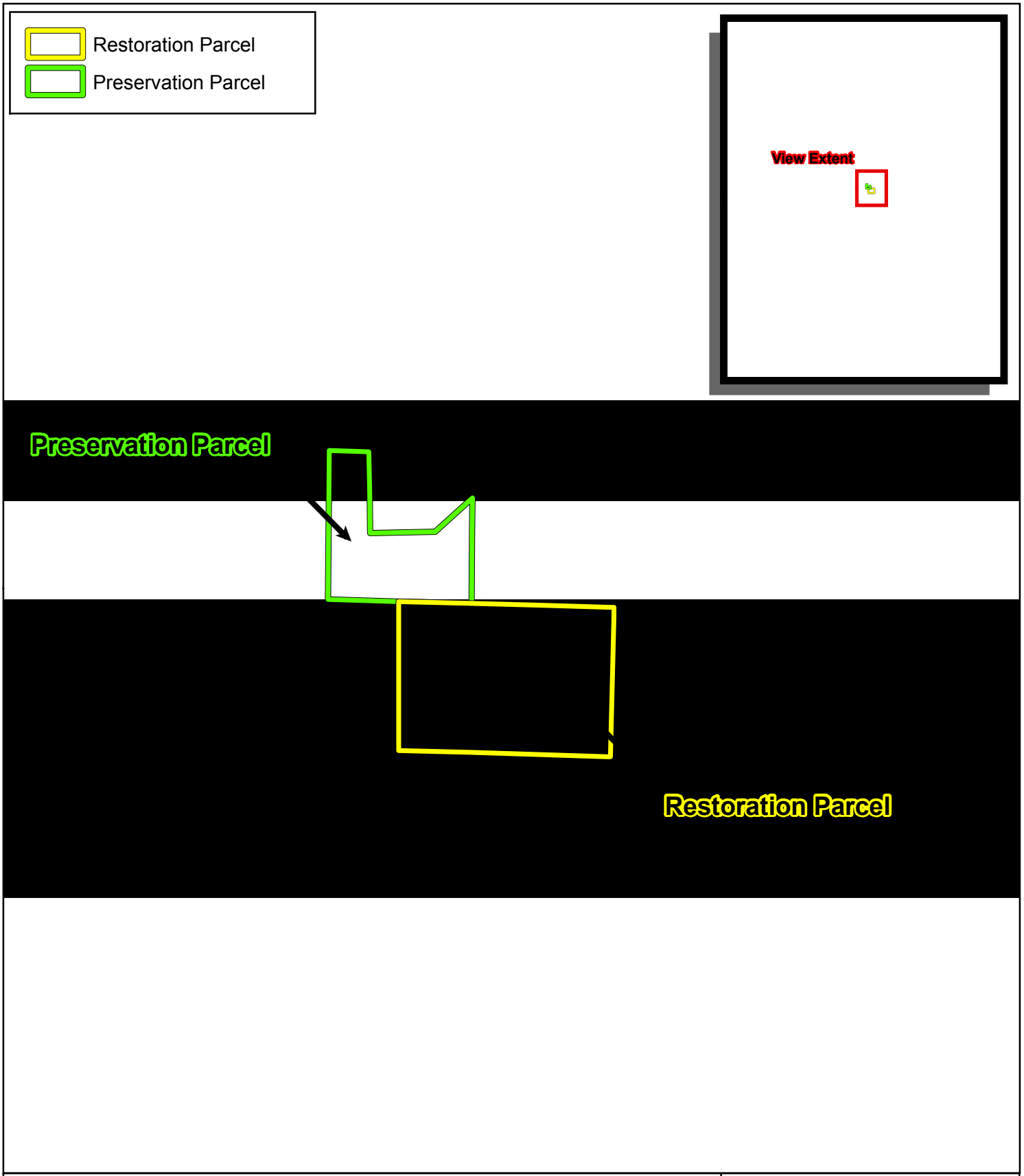


Figure 1. Locations of Restoration and Preservation Parcels

N
W E
S

0 500 1,000 2,000
Feet

Mendocino County, California

[redacted]

Map Prepared Date: 4/7/2016
Map Prepared By: Fhourigan
Base Source: Esri Streaming - National Geographic
Data Source(s): WRA

Path: L:\Acad 2000 Files\25000\25260\GIS\ArcMap\LocationMap.mxd

Dense ruderal vegetation occurs in the north central portion of the Restoration Parcel; consisting primarily of non-native, invasive species such as gorse *(Ulex europaea*), pampas grass (*Cortaderia jubata*), bull thistle (*Cirsium vulgare*), Scotch broom (*Cytisus scoparius*), and wild radish (*Raphanus sativus*). While Bishop pines occur along the edges of the ruderal vegetation, no natural recruitment of Bishop pine into the ruderal area was observed. The majority of the eastern third of the Restoration Parcel is buried and covered landfill. However, a strip of land south of the landfill, bordering Russian Gulch State Park property, was successfully restored with pygmy cypress and other native species (Winzler and Kelly 1994) as part of a past restoration effort within the Restoration Parcel. Developed areas occur in the center portion of the Restoration Parcel and are surrounded by ruderal vegetation or highly disturbed native vegetation, including approximately four acres of degraded BPF and transitional pygmy cypress woodland. Less impacted pygmy cypress woodland and BPF occurs in the entire western third of the Restoration Parcel. Non-native grasslands occupy the majority of the southern central portion of the Restoration Parcel. This vegetation type surrounds a small patch of disturbed pygmy cypress woodland and areas of bare soil.

The Restoration Parcel is located on land which was likely dominated by native pygmy cypress woodland and BPF, as apparent by the surrounding vegetation and adjacent soil types. The soil survey of Mendocino County, Western Part (USDA 1999) indicates the soil type of the Restoration Parcel as Pits and Dumps, while immediately adjacent to the Restoration Parcel, Shinglemill-Gibney, Blacklock and Tropaquepts soils are present. Shinglemill soils are poorly drained very deep loams with slow to medium runoff and are considered hydric (USDA 1999). Gibney soils are somewhat poorly drained very deep loam soils with slow runoff and slow permeability (USDA 1999). Blacklock soils are very poorly drained shallow sandy loams with slow to medium runoff and moderate permeability and are considered hydric. Many areas of Blacklock soil have a concrete hardpan in the B-horizon (USDA 1999).

Within the Restoration Parcel, three special status plant species were observed during the site visits. These special status species are typically associated with BPF and pygmy transitions like those occurring here and the plant ecology of these species are listed below. The special status species include: Mendocino Manzanita (*Arctostaphylos nummularia* ssp. *mendocinensis*, CRPR 1B.2), Bolander's pine (*Pinus contorta* ssp. *Bolander'si*, CRPR 1B.2) and pygmy cypress (*Hesperocyparis pygmaea*, CRPR 1B.2). A protocol-level special-status species survey inclusive of mapping and census of these species was not conducted by WRA at the time of the site visits.

Mendocino manzanita is an evergreen shrub in the heath family (Ericaceae) that blooms in January, but is identifiable through vegetation characteristics and habitat throughout the year. It typically occurs on acidic, sandy-clay soils with a hardpan (e.g. Blacklock soil series) in closed-cone coniferous forest (pygmy forest) at elevations ranging from 290 to 650 feet (CNPS 2015, CDFW 2015). Known associated species include pygmy cypress, Bolander's's pine, Pacific rhododendron (*Rhododendron macrophyllum*), Labrador tea (*R. columbianum*), bear grass (*Xerophyllum tenax*), and California sedge (*Carex californica*) (CDFW 2015).

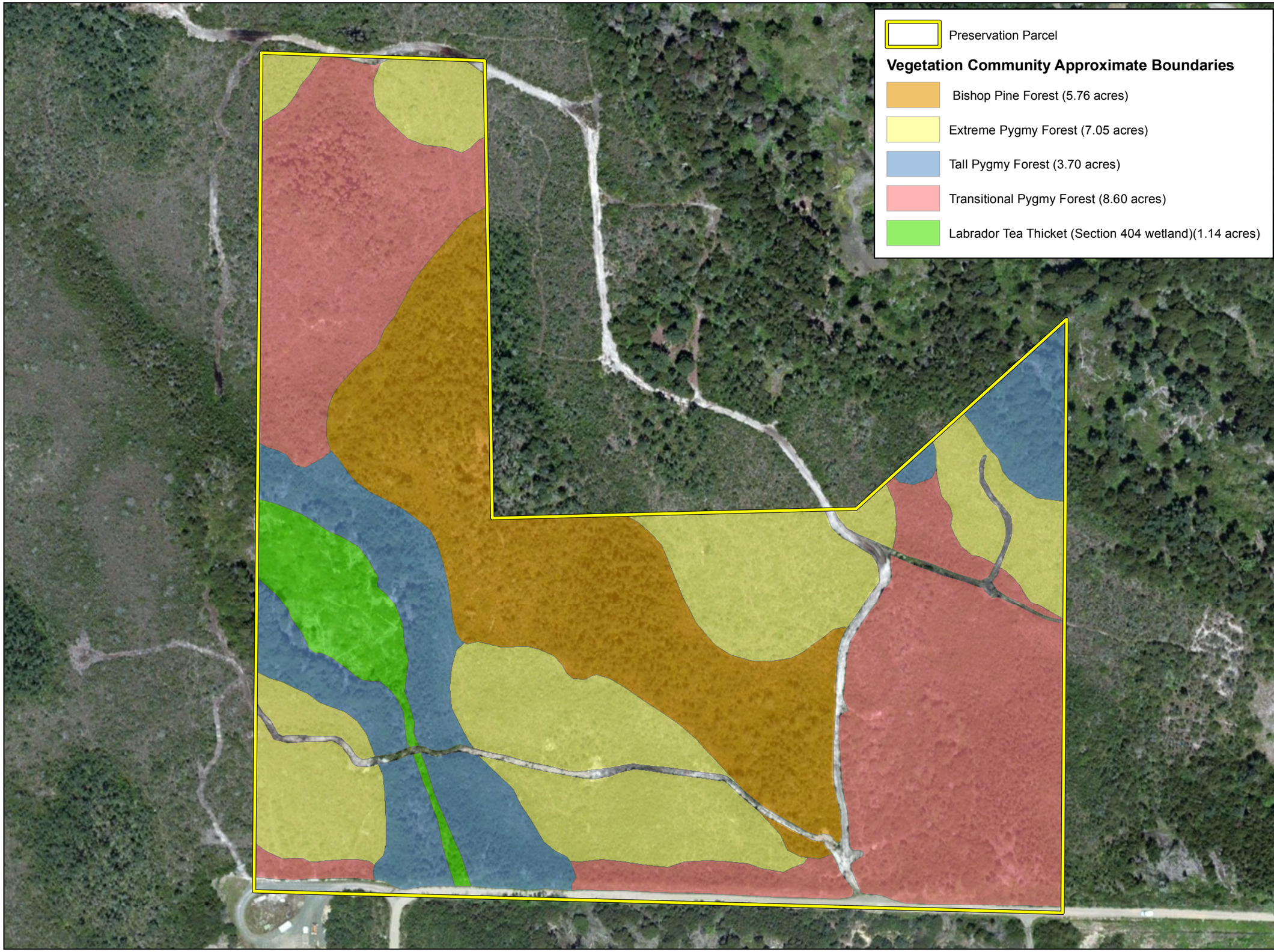
Bolander's pine is an evergreen tree in the pine family (Pinaceae) that is identifiable throughout the year based on vegetative structures and cones. It typically occurs on podzol-like soils in closed-cone coniferous forest habitat at elevations ranging from 240 to 815 feet (CNPS 2015, CNDDB 2015). Known associated species include pygmy cypress, Bishop pine (*Pinus*

*muricat*a), Labrador tea, Pacific rhododendron, wax myrtle (*Morella californica*), evergreen huckleberry (*Vaccinium ovatum*), giant chinquapin (*Chrysolepis chrysophylla*), California sedge, bracken fern (*Pteridium aquilinum*), coast lily (*Lilium maritimum*), and bear grass (CDFW 2015).

Pygmy cypress is an evergreen tree in the cypress family (Cupressaceae) that releases pollen in the spring and is identifiable by vegetative characters year-round. It typically occurs on nutrient-deficient, acidic spodosols (Blacklock fine sandy loam) which pond throughout the wet season, but individuals can be located on deeper more fertile substrates, in closed-cone coniferous forest at elevations ranging from 95 to 1950 feet (CNPS 2015, CDFW 2015, CSRL 2013). Pygmy cypress is typically stand-forming and often dwarfs due to rooting on nutrient-deficient, acidic soils. Known associated species include Bolander's's pine, Bishop pine, Douglas fir (*Pseudotsuga menziesii*), Pacific rhododendron, Labrador tea, evergreen huckleberry, red huckleberry (*Vaccinium parvifolium*), salal (*Gaultheria shallon*), Mendocino manzanita, bear grass, California sedge, coast lily, and bracken fern (CDFW 2015).

2.2 Preservation Parcel

The Preservation Parcel (APN 118-500-45) is a 28-acre parcel located adjacent to the Restoration Parcel on Prairie Way in unincorporated Mendocino County (Figure 1). The Preservation Parcel contains Bishop pine forest (Sawyer et. al 2009), Labrador tea thickets (Sawyer et. al 2009), extreme pygmy forest, tall pygmy forest, transitional pygmy forest (WRA 2002) (Figure 2). Bishop pine forest occupies approximately 5.76 acres in the central portion of the parcel. This community is dominated by Bishop pine (*Pinus muricata*), with several characteristic and subdominant tree species including pygmy cypress (*Hesperocyparis pygmaea*) and Bolander pine (*Pinus contorta* ssp. *bolanderi*). The overstory is somewhat open to completely closed, containing mature to over-mature trees. The understory contributes to the vertical structure with a high density of shrubs and a depauperate herbaceous layer. Shrub and understory tree species include evergreen huckleberry (*Vaccinium ovatum*), Pacific rhododendron (*Rhododendron macrophyllum*), giant chinquapin (*Chrysolepis chrysophylla*), tanoak (*Notholithocarpus densiflorus*), and salal (*Gaultheria shallon*). The herbaceous layer is sparse and includes bracken fern (*Pteridium aquilinum*) and western sword fern (*Polystichum munitum*).



wra
ENVIRONMENTAL CONSULTANTS

APN# 118-500-45

Mendocino County, California

Figure 2.

Vegetation Communities of Preservation Parcel

N
W E
S

0 80 160 240 Feet

Map Prepared Date: 4/24/2015
Map Prepared By: Chris Zumwalt
Base Source: ESRI Streaming 6/16/2010
Data Source(s): WRA

Path: L:\Acad 2000 Files\25000\25112\GIS\ArcMap\Vegetation Communities.mxd

3.0 BISHOP PINE ECOLOGY

Bishop pine occurs in nine disjunct populations along the California coast from Humboldt County south to Santa Barbara County (Sawyer et al. 2009). It is also found on Santa Cruz and Santa Rosa islands and in Baja California and mainland Mexico. Stands occur on ridges, headlands, maritime terraces, and sand dunes in areas with regular spring and summer fog. On the Mendocino coast, Bishop pine occurs in stream canyons on Caspar soils where it occurs with coast redwood (*Sequoia sempervirens*), on Noyo soils on uplifted marine terraces where it is the dominant or co-dominant with pygmy cypress, chinquapin (*Chrysolepis chrysophylla*), coast redwood or tan oak (*Notholithocarpus densiflorus*) and on Blacklock soils on uplifted marine terraces where it is co-dominant with pygmy cypress and Bolander's pine (Sholars 1982). Caspar soils are well drained sandy loam or sandy clay loam soils with slow to rapid permeability and runoff (USDA 1999). Noyo soils are poorly drained sandy loam or sandy clay loam soils with slow to medium runoff and very rapid to very slow permeability (USDA 1999). Blacklock soils are poorly drained sandy loam soils with a concreted hard pan; permeability is moderate to very slow with slow to medium runoff (USDA 1999).

Bishop pine trees typically live 80 to100 years with most populations typically occurring as even-aged stands that originate after stand-replacing fires. Bishop pine is facultatively serrotinous in the northern part of its range, meaning cones open to release seeds primarily after fires, but also on hot days and at sunny forest edges. Bishop pine trees do not resprout after fire; instead, regeneration is generally triggered by the nutrient availability of bare mineral soil and lack of cover resulting from fire; the combination of fire and exposed soil triggers germination of seeds. Bishop pine seedlings have intermediate shade tolerance which allows them to grow at the edges of dense forests where sunlight can reach the forest floor (Sugnet 1984). The range in seedling density regeneration varies greatly, as reported in the literature. In the year following the Vision Fire in Point Reyes, California, the density of Bishop pine seedling regeneration averaged as high as 25 seedlings per square meter, declining to an average of 11 seedlings per square meter the following year (Holzman 2003). On Santa Cruz Island, seedling regeneration density in the absence of fire was recorded to be approximately 0.13 seedlings per square meter (Walter and Taha 1999).

Stands of BPF along California's north coast vary in terms of species composition, health, and longevity which is primarily due to historic fire suppression and the increasing age of many stands. In the absence of stand replacing fires for duration of more than 80 years, Bishop pine stands along the north coast exhibit a significant increased susceptibility to disease and decline (Vogl et al. 1988). Typical indicators of disease and decline include excessive gall formation on large branches and stems, browning foliage, large branch dieback, pitch cankers on bole and branches, excessive beetle damage, and tree mortality (Gordon et al. 2001).

4.0 RESTORATION METHODS

The goal of the BPF restoration is to expand the distribution through encouragement of natural regeneration, as well as to improve the condition and health of existing BPF stands in the Restoration Parcel. Six locations within the Restoration Parcel have been identified as areas of restoration and will undergo either enhancement activities (Enhancement Areas) or re-establishment activities (Re-Establishment Area) and are collectively referred to as the Restoration Areas (Figure 3). These Restoration Areas are a subset of and occur within the Restoration Parcel. Representative photographs of the Restoration Areas are included in

Appendix A. There are approximately 5 acres of Enhancement Areas and 1 acre of Re-Establishment Area.

The Restoration Areas are composed of a combination of degraded transitional pygmy cypress woodland, degraded BPF, and ruderal vegetation. In general, the transitional pygmy cypress woodland consists of slightly stunted Bolander's pine, pygmy cypress, and Bishop pine (*Pinus muricata)* having an open canopy with an understory containing exposed bare soil and large individuals of pampas grass scattered throughout. Included in the understory are short and sparsely distributed native shrubs including wax myrtle and evergreen huckleberry.

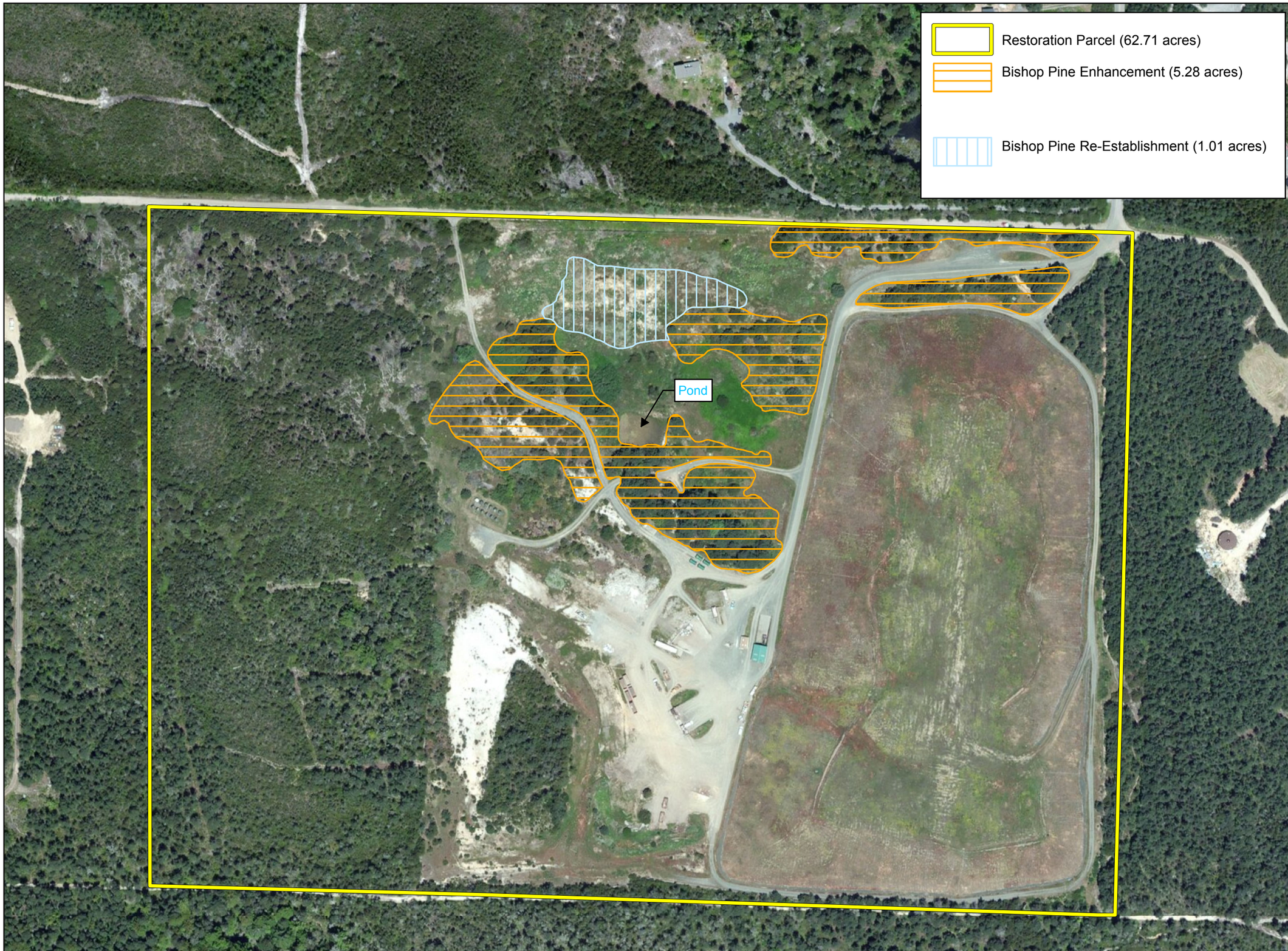
The BPF in the Restoration Areas is dominated by mature individuals of Bishop pine and in some areas pygmy cypress, reaching heights of approximately 30 feet. The canopy is somewhat open, containing young to mature trees with several decadent individuals. The understory is open to dense, consisting of native and invasive shrubs and an open to dense, weedy herbaceous layer.

Native shrub species observed include wax myrtle, evergreen huckleberry, salal, coyote bush (*Baccharis pilularis*), Mendocino manzanita, and California blackberry (*Rubus ursinus*). Invasive shrubs in the understory include French broom (*Genista monspessulana*), pampas grass, gorse, Himalayan blackberry (*Rubus armeniacus*), scotch broom (*Cytisus scoparius*), and cotoneaster (*Cotoneaster* sp.). Species observed in the herbaceous layer include non-natives such as nit grass (*Rytidosperma penicillatum*), wild radish, bull thistle, as well as native species such as strawberry (*Fragaria chiloensis*) and bracken fern. An area of BPF within the Restoration Areas contains many degraded metal appliances or other discarded metal household items which are relicts of the site's historical and current use as a waste transfer station.

Ruderal vegetation consists of dense non-native, invasive species including gorse, pampas grass, bull thistle, Scotch broom, and wild radish.. While Bishop pine occur along the edges of the ruderal vegetation, no natural recruitment of Bishop pine into the ruderal areas was observed.

Enhancement Areas support disturbed BPF and transitional pygmy cypress woodland which will be enhanced through removal of invasive species, refuse and outbuildings, combined with the use of small burn piles to stimulate seed germination of the existing Bishop pine seed bank.

The Re-Establishment Area currently is comprised of ruderal vegetation with Bishop pine occurring nearby. Re-Establishment actions include invasive species removal and management along with encouragement of natural regeneration using woody debris placement and/or burn piles. Because the Enhancement Areas support existing BPF the number of additional Bishop pines to be recruited is expected to be less than in the Re-Establishment Area. When Bishop pine forests are burned, the resulting density of the seedlings is typically very high (Holzman 2003); even without fire, density of seedlings in a regenerating Bishop Forest is relatively high (Walter and Taha 1999). In the light of these facts, the amount of Bishop pine seedling natural recruitment in the Re-Establishment Area is expected to be higher than in the Enhancement Areas.



wra
ENVIRONMENTAL CONSULTANTS

Caspar Transfer Station (Restoration Parcel)
Mendocino County, California

Figure 3.

Bishop Pine Enhancement and Re-Establishment Areas

N
W E
S

0 150 300
Feet

Map Prepared Date: 12/18/2015
Map Prepared By: dchan
Base Source: ESRI Streaming Imagery
Data Source(s): WRA

Path: L:\Acad 2000 Files\25000\25260\GIS\ArcMap\Bishop Pine.mxd

The use of invasive species removal will be employed to augment site conditions more favorable to Bishop pine and other native species. Following invasive species removal, burn piles and/or placement of Bishop pine trees and other locally native, conifer woody refuse will be used to encourage natural regeneration and recruitment of Bishop pine and other native BPF species. A 2003 study indicated fires with limited overstory mortality were frequent disturbances in coast redwood forests along the Mendocino Coast prior to the early 20th century (Brown and Baxter 2003), suggesting that frequent low intensity fires are the typical fire regime regional Bishop pine and other associated native species are adapted to. The burn piles proposed for natural regeneration and recruitment are intended to simulate similar low intensity fire regimes.

In the Enhancement Areas, burn piles are expected to stimulate natural germination of the existing Bishop pine seed bank and release seed from the cones through the heat and subsequent exposed soil and ash. The fire is expected to trigger Bishop pine seedlings to emerge from the soil, providing a new generation of Bishop pine individuals.

Despite Bishop pine occurring in close proximity, it is believed there is a limited seed bank in the Re-Establishment Area soil, indicated by the absence of natural recruitment in these areas. However other factors may be influencing the lack of recruitment as well. Laying down woody debris and cones from surrounding BPF will be utilized to provide a potential seed source in the Re-Establishment Area. Bishop pines are facultatively serotinous, therefore a hot day can stimulate the release of seeds from cones and initiate germination. If the post restoration monitoring reveals the rate of natural regeneration through the placement of woody debris alone hinders performance goal achievement, then additional adaptive management actions described in sections 4.1 and 4.3 below will be initiated.

4.1 Burn Piles

Natural Bishop pine regeneration is preferred over seedling planting for a number of reasons including, preserving the local genetic diversity and encouraging native mycorrhizal associations as well as to avoid potential introduction of plant diseases. Natural regeneration can be encouraged by burning understory shrubs, downed woody debris, and leaf and needle litter to expose bare mineral soil and to stimulate the release of cone seeds. Burn piles will be located primarily in the openings and along the edges of BPF and transitional pygmy cypress woodland stands with low levels of natural regeneration. Burn piles will be used as the primary source for natural regeneration in the Enhancement Areas and a secondary source in the Re-Establishment Areas and shall only be employed if the primary source (woody debris piles) appears to hinder performance goal achievement.

Burn piles timing and size will be limited to the requirements of Air Quality Control Board and will likely require a County permit before ignited. The burn piles should be short, wide, and composed of woody debris of native trees and shrubs, fallen cones, and branches with cones limbed from living or dead Bishop pine. To a lesser extent pygmy cypress and Bolander's pine trees should be used as well. Material for the burn piles should be collected from the Restoration Parcel. Number of limbs gathered from living trees will be limited to 10 percent of the total limbs on the tree. Ashes from the burn piles should be left in place to encourage the germination of any seeds released during the burn and to provide soil cover. Wood ash is high in calcium carbonate, a well-known liming agent used to increase pH of soils. A 1956 study which tested edaphic restrictions of Bishop pine indicated when a liming agent is added to

Blacklock soil, an increase of mycorrhizae growth on Bishop pine roots occurs (McMillan 1956) suggesting that wood ash may promote mycorrhizal growth, a well-known beneficial association between plants and fungi.

4.2 Woody Debris Piles

As with burn piles, woody debris piles offer a natural way to encourage regeneration of Bishop pine and other native conifers. In the Re-Establishment Areas, regeneration of Bishop pine and other native trees and shrubs will be triggered through laying down of Bishop pine branches and cones in several patches over the entire area following invasive species removal efforts. Woody debris piles will be the primary source of Bishop pine regeneration for the Re-Establishment Area.

Approximately fifty percent of the Re-Establishment Area will be covered in four foot square patches of woody debris from Bishop pine and other native species collected from the Restoration Parcel. Woody debris includes fallen branches and cones as well as branches cut from living trees. Number of limbs gathered from living trees will be limited to 10 percent of the total limbs on the tree. The woody debris should be placed in piles in such a way that overlapping occurs and is limited to a height of two feet; it is expected this technique will create small niches suitable to trigger germination and growth of Bishop pine seedlings and other native trees and shrubs typical of BPF. Placement of woody debris should be accomplished by hand to the greatest extent feasible.

Bishop pine cones are facultatively serotinous meaning cones are able to open during hot days. The placement of the woody debris will minimize wind and increase the local temperature; it is expected this micro-climate will trigger cones to open, releasing seeds and initiating germination. If conditions are suitable natural regeneration is expected within one year. The effectiveness of this method will be based on the number of observed seedlings in the woody piles following year one.

Invasive species control will occur over the entire Re-Establishment Area as described in section 4.4 in an effort to prepare the sites in a manner that increases the success of the establishment of sapling trees and additional native species.

4.3 Supplemental Planting (if applicable)

Because the success of natural regeneration is dependent upon many variables, in order to meet performance goals, restoration efforts may be supplemented by plantings of bare root or potted native plants. The number of plantings required is dependent upon the success of natural regeneration and should be determined by a qualified biologist based on the performance goals described below in Section 7.0. Table 1 lists the trees and shrubs species recommended for supplemental planting. These species were selected based on their presence onsite or in the greater Restoration Parcel and described in the literature as occurring in BPF. To preserve regional genetic integrity and assist with adaptation to onsite conditions, all trees and shrubs should be propagated from native species collected onsite or nearby, to the greatest extent feasible. Trees and shrubs should be grown in 1-gallon pots or larger and the growing medium should be standard, well-drained nursery soil amended with approximately 1 to 2 percent of native onsite BPF soil to help establish plant/mycorrhizal relationships (Winzler and Kelly 1994). Plants should be installed during the month of December, or thereabouts, to take advantage of the rainy season. All tree and shrub plantings should be mulched with a 2- to 4-

inch layer of woodchips created from the grinding of onsite native woody debris and should be managed for invasive species.

Table 1. Tree and shrub planting palette

Scientific Name	Common Name
Trees	
Pinus muricata	Bishop pine
Notholithocarpus densiflorus	Tan oak
Chrysolepis chrysophylla	Chinquapin
Pinus contorta ssp. contorta	Bolander's pine
Hesperocyparis pygmea	Pygmy Cypress
Shrubs	
Vaccinium ovatum	Evergreen huckleberry
Morella californica	Wax myrtle
Arctostaphylos columbiana	Columbia manzanita
Xerophyllum tenax	Bear grass
Gaultheria shallon	Salal
Pteridium aquilinum var. pubescens	Bracken fern
Frangula purshiana	Cascara

Site Preparation

Site preparation will be initiated through localized removal of non-native grasses, herbs and shrubs surrounding potential plant holes, while maintaining all established native trees and shrubs, to the greatest extent feasible. Once invasive species are removed, manual or mechanical tools will be used for excavating holes for the placement of individual seedlings or cuttings. To promote growth, fertilizer will be added to each excavated hole prior to planting. Previous supplemental planting conducted within the Restoration Parcel indicated one-third ounce of Osmocote fertilizer provides a sufficient amount of nutrients for plantings (Winzler and Kelly 1994).

Irrigation

If supplemental plantings are necessary, a temporary irrigation system may be necessary to irrigate the containerized plantings for the first two to three years following planting. A qualified biologist will determine the appropriate irrigation rate, timing, and duration and communicate that information to MSWMA. After the third year, native plantings should become adequately established such that normal rainfall will provide the necessary hydrology for plant growth and maintenance.

Browse Control

Browse control devises consisting of one of three types of browse control devices should be installed around individual tree or shrub plantings if evidence of browsing is detected during monitoring:

1. Deer browse devises should be constructed of 4-inch by 4-inch welded wire mesh 4 feet in height and secured to #6 rebar. The rebar should be 5 feet in length and installed at least 1 foot into the ground.

2. Rabbit and ground squirrel devices should be constructed of hardware cloth, folded outwards and buried at least 2 inches, and secured by wood stakes.

3. Small mammal devices should be Tubex or similar.

4.4 Invasive Species Management

The entire Restoration Parcel contains a number of non-native, invasive species such as pampas grass, teasel *(Dipacus* sp.), scotch broom, bull thistle, gorse, and Himalayan blackberry. At a minimum, all invasive species within the Restoration Areas should be removed. However to ensure best possible success of restoration activities it is recommended that invasive species with a California Invasive Plant Council (Cal-IPC; 2015) rating of “high” or “moderate” be eradicated and managed within the entire Restoration Parcel.

Non-native annual grasses, which are a ubiquitous part of California’s landscape and are abundant at the site, should be excluded from invasive vegetation management efforts. Additionally a large patch of periwinkle (*Vinca major*, Cal-IPC Moderate) which seems to be isolated by topographic features will be excluded from the invasive vegetation management efforts. However, if encroachment of periwinkle impacts restoration efforts, eradication should be considered.

To control invasive species in the entire Restoration Parcel, a survey should be conducted, noting the location and approximate size of invasive species populations on maps. Survey efforts should be followed-up with invasive species eradication in the spring or early summer, or as appropriate for the biology of the species, and herbicide application directions. Eradication measures will consist of a combination of hand removal, mowing, weed whipping, or herbicide treatments. If used, herbicides will be approved for use in riparian settings and will be applied by hand by an appropriately licensed applicator. Control of invasive species throughout the greater Restoration Parcel is recommended to limit the spread into Restoration Areas once the invasive species have been removed from those areas.

Table 2. Cal-IPC Ranks of Invasive Species in Restoration Parcel

Scientific Name	Common Name	Cal-IPC Rank (2015)
Ulex europaeus	Gorse	High
Cortaderia jubata	Pampas grass	High
Rubus armeniacus	Himalayan blackberry	High
Cytisus scoparius	Scotch broom	High

Scientific Name	Common Name	Cal-IPC Rank (2015)
Genista monspessulana	French broom	High
Cirsium vulgare	Bull thistle	Moderate
Dipsacus sp.	Teasel	Moderate

Currently, invasive species occur in all Restoration Areas. All reasonable efforts should be made to control and remove existing or newly established populations of invasive species that may threaten onsite Bishop pine regeneration efforts and native understory development. Priority invasive plants include those listed in Table 2.

Recommended invasive species control methods include hand or mechanical removal and/or the use of herbicides. These methods are outlined below and can be used individually or in combination to eradicate or contain most invasive plant populations encountered in the Restoration Areas.

Hand/Mechanical Removal

Hand removal or use of small handheld equipment (such as a weed wrench or a chainsaw) is the preferred method of removing invasive species. Many species must be removed entirely and disposed of carefully, including stems and all root fragments, to prevent regeneration or spread. If plant material cannot be removed completely, black plastic can be laid over areas after hand or mechanical tools have been used to reduce plant material to ground-level.
Pruning and appropriate disposal of flowers and seed heads can help to prevent spread if removal of the entire plant is not possible or is planned for a later date.

The use of weed-eaters (or “weed-whackers”) or similar trimmers with string or metal blades is appropriate for mowing contiguous patches or large individuals of certain invasive species. Complete removal of perennial species also requires digging of the roots and/or rhizomes, but mowing can be used to suppress growth and prevent seeding until future removal is performed. Any mowing should be performed with care to avoid interspersed native species.

If hand or mechanical removal methods are tried and found to be ineffective after one year of treatment, or if it is well documented that control of a particular species is not practicable without the use of herbicides, then hand removal may be supplemented with chemical controls and implemented as described below.

Herbicides

Glyphosate- or triclopyr-based herbicides, such as Round-up and Garlon, may be utilized if invasive plants cannot be managed through other methods. The herbicide must be applied according to the label, using a localized spot-treatment method and with care to avoid drift onto native plants. Herbicides may not be used when rain is predicted within 24 hours after application or within 25 feet of any sensitive species or waterbody. This recommendation does not obviate the need to obtain any other applicable approvals or licenses for the use of these chemicals, should it be necessary.

4.5 Refuse Removal

Portions of the Restoration Areas contain refuse such as washing machines, bathtubs, construction materials, and other types of refuse. All refuse should be removed from the Restoration Areas and should be disposed of in an appropriate offsite location. It is expected that native wildlife may be living amongst the refuse, including sensitive wildlife species; therefore, it is recommended that a qualified biologist be present during removal of the refuse to ensure that no wildlife species are harmed. If wildlife species are observed during removal activities, the species should be allowed to leave the area on its own accord prior to resuming removal activities.

Several outbuildings occur within the central portion of the Restoration Parcel, adjacent to Enhancement Areas, and should be removed from the site, if feasible.

Staging areas for machinery to be used for the removal of refuse and outbuildings should be located in previously impacted portions of the Restoration Parcel. Access to the Restoration Areas should be limited to existing roadways to the greatest extent feasible, and the use of heavy machinery within the Restoration Areas should be limited to minimize soil compaction.

5.0 AVOIDANCE AND MINIMIZATION MEASURES

Restoration activities include invasive species removal, herbicide use, refuse removal, vegetation clearing, and outbuilding demolition and removal. To avoid potential impacts to sensitive wildlife and plant species associated with the proposed restoration activities, the following avoidance and minimization measures are recommend in order to comply with local environmental regulations.

<u>Breeding Birds</u>

The bird breeding season typically extends from February 1 to August 31. Ideally, the clearing of vegetation and any ground disturbance can be accomplished during the non-breeding season, between September 1 and January 31. If these activities cannot be done during the non-breeding season, a qualified biologist should perform breeding bird surveys within 14 days of the onset clearing of vegetation and refuse. If active bird nests are observed, no vegetation clearing activities should occur within 100-feet of the exclusion zone. The exclusion zone may vary depending on species, habitat, and level of disturbance and should be determined by a qualified biologist. The exclusion zone should remain in place around the active nest until all young are no longer dependent upon the nest.

<u>Bat Roosts</u>

As with birds, bat roost sites can change from year to year, making pre-disturbance surveys necessary to determine the presence or absence of bat roost sites in a given area. Bat surveys do not need to be performed if work or vegetation removal is conducted between September 1 and October 31, after young have matured and prior to the bat hibernation period. However, if it is necessary to remove trees or otherwise disturb potential bat roost sites between November 1 and August 31, pre-disturbance surveys should be conducted by a qualified biologist. Bat surveys involve surveying trees, rock outcrops, and buildings subject to removal or demolition for evidence of bat use (guano accumulation or acoustic or visual detections). If bats are found,

a minimum 50-foot buffer should be implemented around the roost. Removal of roosts should occur in September and October, or after the bats have left the roost.

Sensitive Plant Species

Several sensitive plant species are known to occur in the Restoration Areas, including Mendocino Manzanita, pygmy cypress and Bolander's pine. Occurrences of sensitive plant species should be identified and flagged by a qualified biologist prior to initiation of restoration activities. Sensitive plant species should be avoided during the removal of invasive species and implementation of burn piles.

6.0 MONITORING

Monitoring will include three components: (1) assessing tree and shrub regeneration, (2) assessing plant species composition and percent cover, and (3) assessing invasive species presence.

Monitoring of the Re-Establishment and Enhancement Areas should occur over a period of five years to document habitat development and to determine whether performance goals will be met. Monitoring will be conducted annually in the spring or early summer to identify potential invasive species issues, to document vegetation composition, cover, and document establishment and survival of target tree and shrub seedlings and/or plantings. Monitoring should begin during the first full growing season following initial enhancement and re-establishment activities.

Monitoring will include documentation and quantification of seedling regeneration and the presence of invasive species or other threats including erosion and trash or other signs of human disturbance through qualitative observations as well as fixed transects and permanent plots. If supplemental planting occurs, fixed transects will be established to evaluate the cover of native vegetation and invasive species in these areas. Permanent plots will be established in burn pile areas to document density and species composition of revegetation efforts. Monitoring will also include the use of photographs (photo points) to compare the growth of vegetation within the Enhancement and Re-Establishment Areas over time.

A monitoring report assessing the implementation of this Mitigation Plan and progress toward meeting performance goals will be submitted to the MSWMA by December 31 of each monitoring year. The report will be written by a qualified biologist that has experience conducting BPF monitoring. If problems are encountered that threaten the achievement of performance goals, the report should recommend adaptive management actions to be carried out by the applicant. Monitoring methods and final performance goals are outlined below.

6.1 Photo Monitoring

Photo documentation of restoration efforts will be conducted for Re-Establishment and Enhancement Areas to provide a visual assessment of growth of vegetation over time. In each Restoration Area, a minimum of four permanent photo point locations will be selected and taken in the same aspect to allow for inter-annual comparison.

6.2 Permanent Plots

Permanent square plots will be established in the area of each burn pile (size to be determined by local ordinances), measuring three meters on each side. Within each plot, the percent cover of each species will be visually approximated to determine the cover of native, non-native, and invasive species. Results from the plots will be averaged to determine the overall percent coverage and composition of plant species for the Restoration Areas. These data will then be examined to assess whether vegetation coverage is meeting the performance goals.

6.3 Fixed Transects

If supplemental planting occurs, fixed transects will be utilized to determine plant species cover. Within each transect, the percent cover of each species will be visually approximated in a half meter squared quadrat placed on ten foot intervals to determine the cover of native, non-native species, and invasive species. Results will be averaged to determine overall percent coverage and composition of plant species for the Restoration Areas. This data will be examined to assess whether vegetation coverage is meeting the performance goals.

6.4 Qualitative Assessment

A qualitative assessment of invasive plant species distribution and cover will occur during the spring monitoring visit in all Restoration Areas. Surveys will document the approximate location and cover of any invasive species rated at “high” or “moderate” by the Cal-IPC (2015) which have re-established in the Restoration Areas (if applicable), exclusive of non-native annual grasses and periwinkle (*Vinca major*). Results and recommendations of the invasive species assessment will be provided in the monitoring report.

A tally and condition assessment of all new Bishop pine seedlings will be conducted within the burn piles and woody debris piles. The monitoring biologist will make a general assessment of plant vigor as affected by shading, water availability, and other factors. The biologist conducting the monitoring will determine whether to recommend additional burn piles or supplemental planting of trees and shrubs based on the progress in meeting performance goals for plant survival and percent cover.

If supplemental planting occurs, the number of living trees and shrubs will be tallied and compared to the number of original plantings. Survivorship of the BPF plantings will be assessed visually. In addition, the monitoring biologist will make a general assessment of plant vigor, as affected by irrigation, browse, and other factors to determine whether to recommend replacing trees or shrubs that die based on the progress in meeting performance goals for plant survival and cover. In later stages of the monitoring period, individual tree and shrub plantings may begin to exhibit the effects of competition with adjacent plantings; this could result in the death of some plantings, but is not indicative of poor performance.

During each monitoring site visit, the general condition of the Restoration Areas including trash or other refuse will be noted. Recommendations for additional measures will be provided if necessary.

6.5 Monitoring Reports

An annual monitoring report will be submitted to the MSWMA by December 31 each year. The report will be prepared by a qualified biologist with experience in BPF habitat monitoring. The

report will assess progress towards meeting performance goals and identify any problems with erosion, refuse, invasive plants, and/or other general causes of habitat degradation. If necessary, adaptive management actions will be recommended. Monitoring reports will be submitted each monitoring year for five years.

7.0 PERFORMANCE GOALS

Restoration performance will be assessed using the following performance goals:

1. Invasive species with a “High” or “Moderate” Cal-IPC rating will comprise less than 5 percent relative cover in the Enhancement and Re-Establishment Areas. An area of three feet diameter around any Bishop pine seedlings or saplings will be kept clear of all invasive or non-native species through the use of invasive species management methods described in Section 4.4.

2. Relative percent cover of native species will exceed 25% by the end of the five-year monitoring period. If, after the first three seasons, it is determined that plant cover is not on track to meet the 25% cover requirement by the end of the five-year monitoring period, supplemental measures should be conducted to meet performance goals; supplemental measures include additional burn piles or supplemental planting of appropriate native understory species.

3. The Restoration Areas will show no signs of significant erosion, refuse disposal, or other anthropogenic impacts except only those necessary for the management and monitoring activities outlined in this plan. Refuse or other anthropogenic items observed will be removed off-site to the proper disposal locations. Standard construction erosion BMP’s, including the use of wattles and silt fencing will be utilized in erosive areas, if observed.

4. Given the highly disturbed condition of the Restoration Areas, natural revegetation is not expected to be as vigorous as in a natural environment. Performance goals for number of Bishop pine seedlings will reflect this expectation. In the Re-Establishment Area, approximately 250 Bishop pine saplings should be present after two years of monitoring. In later stages of the monitoring period, individual trees may begin to exhibit the effects of competition with adjacent plantings; this could result in the death of some trees, therefore Bishop pine saplings at the end of the five-year monitoring period should be approximately 190 trees. In the Enhancement Areas the Bishop pine forest is mostly mature so optimal tree density is already established, therefore at least 100 Bishop pine saplings should be present

8.0 REFERENCES

California Invasive Plant Council (Cal-IPC). 2015. California Invasive Plant Inventory: Cal-IPC Publication 2006-2. California Invasive Plant Council, Berkeley, CA. Available online: http://www.cal-ipc.org/ip/inventory/index.php.

Gordon, T., A. Storer, and D. L. Wood. 2001. "The Pitch Canker Epidemic in California." Plant Disease 85(11) 1128-1139.

Holzman, B. 2003. Post-fire vegetation response in the Bishop pine forest at Point Reyes National Seashore. Lessons learned from the October 1995 Vision fire. Point Reyes Station, CA. Point Reyes National Seashore: 64-79.

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, 2nd Edition. California Native Plant Society in collaboration with California Department of Fish and Game. Sacramento, CA. 1300 pp

Sholars, R. 1982. The Pygmy Forest and associated plant communities of Coastal Mendocino County, CA. Black Bear Press, Mendocino, CA.

Sugnet, P.W. 1984. Fire History and Post-fire Stand Dynamics of Inverness Bishop Pine Populations. MS Thesis, University of California Berkeley.

U.S. Department of Agriculture (USDA). 1999. Soil Survey of Mendocino County, Western Part, California. In cooperation with U.C. Agricultural Experiment Station and U.S. Department of the Interior, Bureau of Land Management.

U.S. Department of Agriculture, Natural Resources Conservation Service (USDA). 2005. Web Soil Survey: Mendocino County, Western Part, California soil maps. Version 1, January 12, 2005. Available online: http://websoilsurvey.nrcs.usda.gov

Vogl, R., W. Armstrong, et al. 1988. The closed-cone pines and cypress. *In:* M. Barbour and J. Major (eds.). The Terrestrial Vegetation of California. University of California Press, Berkeley, CA

Walter, H. S. and L. A. Taha. 1999. Regeneration of Bishop pine (*Pinus muricata*) in the absence and presence of fire: a case study from Santa Cruz Island, California. P. 7. In: Fifth California Islands Symposium. Santa Barbara, California. March. Pp. 36. [Abstract]

Winzler and Kelly. 1994. Visual Screen Plan and Environmentally Sensitive Habitat Area Restoration Plan.

WRA 2002. Biological Resources Assessment: Portion of Jackson State Demonstration Forest

Appendix A
Representative Photographs of Mitigation Area

Photo 1. A representative photo of the transitional pygmy forest in one of the Enhancement Areas,

Photo 2. Photo showing pampas grass which is seen throughout the Restoration Parcel, including the Restoration Areas. This photo was taken in an Enhancement Area.

Photo 3. Photo showing a berm which contains the pond located amongst the restoration areas and is included in the Enhancement Area. It is covered with Scotch broom and other invasive species.

Photo 4. A photo showing one of the several outbuildings located immediately adjacent to Enhancement Areas.

Photo 5. A photo showing existing natural recruitment within the Enhancement Areas.

Photo 6. Photo showing the dense weedy understory of the existing Bishop pine forest.

Photo 7. Photo showing the dense weedy understory of the existing Bishop pine forest.

Photo 8. Photo showing existing trees and conditions. Note dead trees to the right of the picture.

Photo 9. Representative photo showing Re-Establishment Area. The area is dominated by invasive species which will need to be managed.

Photo 10. Additional photo showing Re-Establishment Area.

Photo 11. Photo showing existing Bishop pine forest in Enhancement Areas near the main entrance.

Photo 12. Photo showing weedy understory of existing Bishop pine forest near the main entrance.

SIERRA CLUB
FOUNDED 1892

Sierra Club, Mendocino Group
P.O. Box 522
Mendocino, CA 95460

June 15, 2016

Board of Supervisors, Mendocino County
Fort Bragg City Council

Mr. Mike Sweeney, General Manager
Mendocino Solid Waste Management Authority
3200 Taylor Drive
Ukiah, CA 95482 Sweeney@pacific.net

Re: Revised Draft Environmental Impact Report for the Proposed Central Coast Transfer Station in Fort Bragg.

Upon review of the Revised Draft Environmental Impact Report (RDEIR) we would like to enter the following comments.

We are primarily concerned with the impact to the Mendocino Pygmy Cypress Woodland (Pygmy Forest) and the Northern Bishop Pine Forest (Bishop Pines), and with the impact on Russian Gulch State Park (RGSP).

1. In repeated iterations of the EIR document, the goal of "avoiding or substantially lessening" impacts to sensitive habitats is not explored completely. Both the Pygmy Forest and the Bishop Pines will be impacted during development of the transfer station if it is sited in the proposed location, yet there are two other sites within 1 mile that would avoid this impact while offering all the benefits claimed by the proposed site.

These two sites, Leisure Time RV Park and Mendocino Parks & Recreation parcel are mentioned in the Revised DEIR but with so little attention to the value of avoiding the Pygmy Forest and Bishop Pine habitats that they are dismissed out of hand. This is inadequate for analysis at this level. In addition, the use of current parcel boundaries instead of facility boundaries for determining distance to residences gives an inaccurate reading of the impacts.

We again urge the City/County JPA to choose a site that does NOT impact the Pygmy Forest and Bishop Pines. Since there are reasonable choices at close hand, why not chose one that fulfills the mandates of the California Environmental Quality Act and the California Fish & Game Codes? An alternative site is the only answer to avoiding this key question of impact.

2. In reading the proposed mitigations for impacts (assuming the proposed site) we find that the EIR has failed to include the regulatory role of the California Coastal Commission, which has not even been notified of the project EIR. The current Caspar transfer station as well as part of the proposed Preservation parcel of Pygmy Forest lies within the Coastal Zone, and any planning for activities within those areas must have the approval of the Coastal Commission. There is no detailed plan for remediation of the Caspar Transfer station site if it is abandoned, nor monitoring of it or the proposed Preserve. In any case, protecting a preserve of Pygmy Forest is not adequate to meet the goal of "no net loss" of Pygmy Forest. Irreplaceable unique habitat cannot be planted, transplanted or "developed" for hundreds of years.

3. The loss of 12.6 acres of protected forest from Russian Gulch State Park is not addressed in any way. This is an essential part of the trade and must be evaluated with the same rigor as the proposed site. As state park land, the trees and other vegetation are protected from destruction and are accessible for recreation, as was mandated at the creation of the park. A transfer would mean a lesser level of protection for the marble murrelet habitat, the Mushroom Corners foraging grounds and recreational trails. The State Parks cannot simply trade these away without thorough evaluation, even to another state agency. Jackson Demonstration State Forest (JDSF) does not provide the same level of protection, so an impact is certainly probable. The restrictions mentioned in the EIR are not permanent nor complete. The State Parks letter of July 21, 2015 already stated that State Parks will not support the proposed land exchange, and no effort has been made by the JPA to reach another agreement.

4. The CA Dept. of Fish & Wildlife has repeatedly stated that the analysis of all the properties involved must be included in the EIR, but the JPA has not seen fit to consult with any of the agencies concerned. CalFire, State Parks and JDSF must all be on board with the analysis and the conclusions stated before the JPA can reasonably expect the EIR to be certified.

5. The analysis of the environment of the proposed site is inadequate in that it ignores the other 12 acres of Pygmy Forest and Bishop Pines that are included

within the 17 acres of the proposed site. Moving this area from JDSF, where it is protected habitat by the JDSF Management Plan, to the ownership of the JPA is an impact in itself, and will open this area to further unmonitored impacts as time goes on. We believe that this should also be evaluated in this EIR because the County has no protective statues for Pygmy Forest once it becomes private County property.

6. The biggest concern of all is the continued reliance of hauling trash hundreds of miles away to dispose of it. The whole proposal is dependent on this strategy, while across the country municipalities are devising much more innovative methods to deal with the waste stream. We do not see any progress in this proposal toward more efficient and life-affirming methods of disposing of waste. We want to hear new ideas and see new proposals, not just more of the same. It's inadequate planning to ship our trash 150 miles away, at great expense, and claim it is solved.

Please pick a new site and propose a modern facility.

Sincerely,
Mendocino Group, Sierra Club

Rixanne Wehren

Mary Walsh, Chair
Linda Perkins, Conservation Chair
Rixanne Wehren, Coastal Committee Chair

Gmail

Jeremy James <theantiquerestorer@gmail.com>

RDEIR

1 message

[redacted] Thu, Jun 16, 2016 at 5:32 PM
[redacted]

Dear Friends,

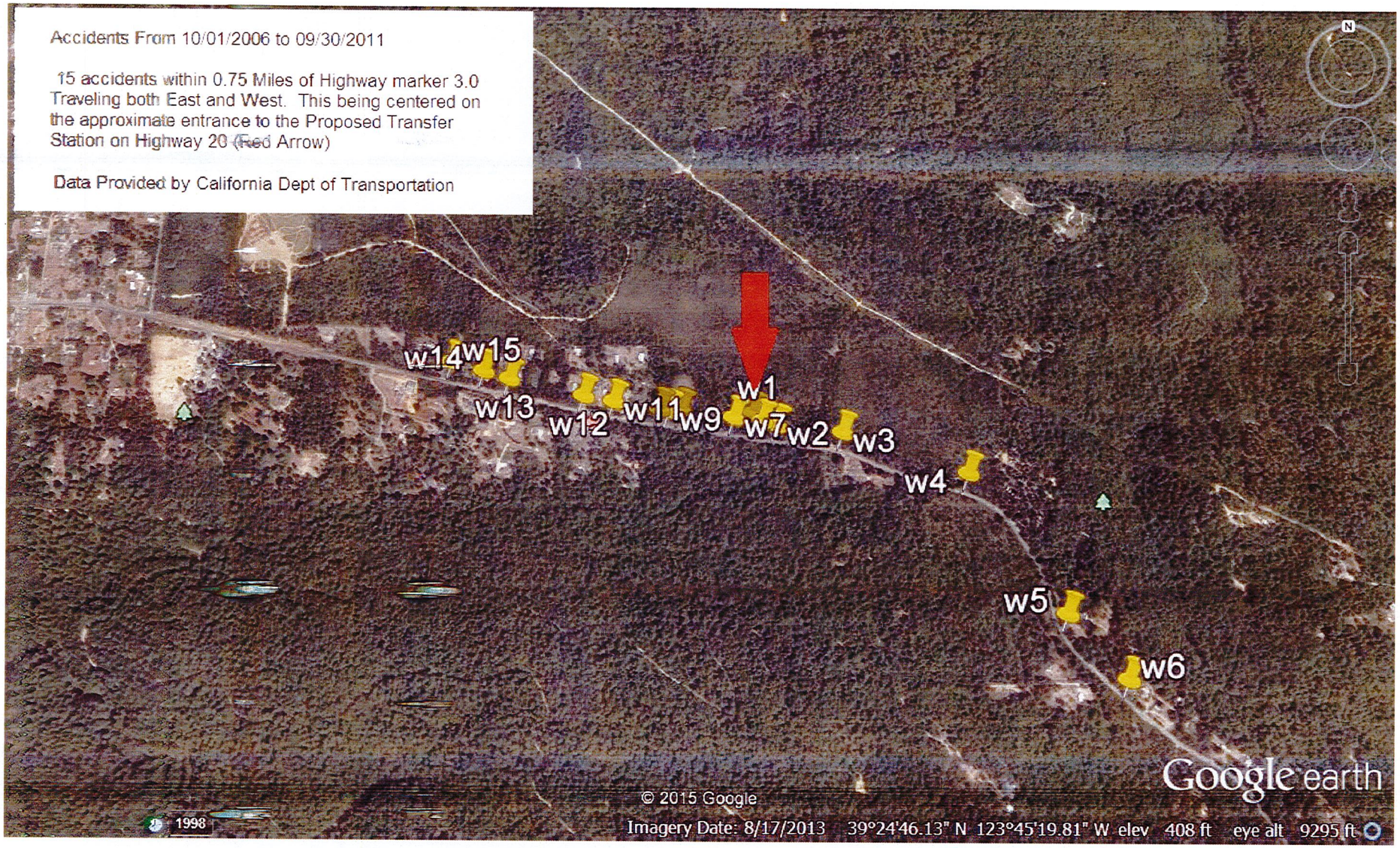
The DEIR is replete with misleading and erroneous so called mitigating factors. I shall try to address some of those in my statement at the next meeting of the MCBS and FBCC on [redacted]

Below I give one example of it. In my initial comments on the EIR and statement addressed to Mike Sweeney I raised a number of issues including that of "increased traffic congestion that could lead to a higher incidence of accidents at a vulnerable section of Highway 20 marked by a sharp turn a couple of hundred yards east of the proposed station". The DEIR response to this comment was "…. Caltrans District 1 performed a safety analysis for the quarter mile segment of Highway 1 located either side of the proposed project site, The analysis covered a three year period between 2009 and 2011. The analysis identified two collisions within the three year period which corresponds to a total collision rate within the segment analyzed of 48 per cent less than the statewide average." We went back to the California Department of Transportation (TSAR-Accident – Detail) for the period 10/01/2006 to 09/30/2011. We took a somewhat longer distance of approximately 0.75 miles from the proposed site (3 mile marker) travelling both east and west and found no less than 15 accidents as the attached map shows. Living on Cherry Cove Ranch next to the proposed site we have become very aware of the dangers the turn presents (among others we have had to cope with at least one fatality, a serious brush fire caused by an accident, at least two occasions where our picket fences along the highway were destroyed and calls for help in the middle of the night).

We hope that you'll express your concerns at the meeting and help convince the FBCC and MCBS that an alternative site would be much preferable.

All the best,

Erik and Charla Thorbecke


Accidents From 10/01/2006 to 09/30/2011
15 accidents within 0.75 Miles of Highway marker 3.0 Traveling both East and West. This being centered on the approximate entrance to the Proposed Transfer Station on Highway 20 (Red Arrow)
Data Provided by California Dept of Transportation
w14
w15
w13
w12
w11
w9
w1
w7
w2
w3
w4
w5
w6
© 2015 Google
Imagery Date: 8/17/2013 39°24'46.13" N 123°45'19.81" W elev 408 ft eye alt 9295 ft
Google earth
1998

30200 Hwy 20
Fort Bragg, CA 95437

Dear Councilor,

I am concerned about the transfer station proposed for Highway 20. I believe the proposed station threatens the habitat of the forest and its inhabitants and will have a negative impact on the proposed reservoir and nearby properties.

I am particularly concerned with what is not addressed in the EIR, namely the future of waste management here and elsewhere. Communities will one day be charged with taking responsibility for their own garbage in order to preserve the environment and conserve resources. Shifting the location of a dump and expecting different results is absurd; plus, there are better solutions to our garbage problems.*

There's a functioning transfer station on Pudding Creek with access via city streets or the GP mill site. Garbage trucks could be restricted to times the city streets are quiet.

The residents of Road 409 have spoken out about the stench, traffic problems, litter, air and water pollution, and other environmental hazards, and they are forcing the joint powers to close their station. The same problems will force the early closure of the five-million-dollar boondoggle on Highway 20, and there are even more environmental hazards along the way should the operation proceed.

To assert, as Mr. Sweeney has repeatedly done, that the stench of garbage would be eliminated by fully-enclosed trailers and sweetened with perfume, ignores our olfactory senses and the repugnance many people feel about dealing with stink by sweetening it. Moreover, self-haulers will not be required to perfume their loads.

The proposed seventeen acres on Highway 20 is presently pristine pygmy with rare and endangered plants and nesting birds. There are some 2000 acres of pygmy in the world, mostly in California. We cannot replace the pygmy forest once the land is bulldozed and paved over, as is proposed. The proposal to move some pygmy is ludicrous according to the Fish and Wildlife. commission.

While promising that nearby properties will not be affected, the noise and traffic created while the garbage station is being built and the roads widened are not mitigated. It goes without saying that property values will be compromised. The potential threat to life and limb due to the proximity of the helicopter pad adjacent to the proposed station poses an even greater danger. The helipad saves lives when the local hospital is mired in fog and landing there is prohibited. The helipad is also used by CDF in times of forest fire or other emergencies. If a someone dies because helicopters cannot land or take off, there will be lawsuits.

Fort Bragg's economy is based on a thriving tourist trade. With the addition of several large trucks a day and heavy construction, Highway 20 will experience logjams and vehicular accidents that will keep tourists away. Self-haulers will litter the highway, undetected by Fort Bragg's police but quite apparent to residents who will have to avoid the litter while driving at or below the posted speed limit of 55 mph.

While Mr. Sweeney claims no water will be leached into the ground, cleanup and restroom effluent will undoubtedly infiltrate the ground, poisoning local wells and the reservoir that the city is building less than two miles downstream from the proposed plant. In times of drought, the deep transfer station well could dry up other area wells.

In order to assess the impact of constructing and operating this plant, many tests must be undertaken. For example, a soils report by a geotechnical engineer based on a minimum of fifteen-foot borings at various locations on site should be undertaken. If the soil is sandy clay with a caliche base at, say, twelve feet, drainage can be sent downhill and the city's water poisoned.

The projected cost of $5,000,000 will likely be recouped by raising rates and cutting safeguards. There are better solutions to our garbage problems. I entreat the authorities to look elsewhere. What failed to appease the residents of 409 is not going to please the residents and travelers along Highway 20.

Thank you for your attention.

Sincerely,

John Fremont

John Fremont

* A cogeneration plant can provide electricity while burning our trash, and waste management authorities should look into acquiring cost-effective burners, now or in the near future. Controlling our own trash will create jobs that can be paid for by the bottles and cans and electronics we recycle. Presently, we have little control over how much we pay to have our trash hauled or the tipping fee charged self-haulers. The projected five million dollar cost for the new dump will be paid for by the people in the form of increased taxes or fees, despite the pretense that the dump's operator will absorb the cost of construction without raising disposal rates.

While waiting for cogeneration technology to become cost effective for smaller communities, it will be cleaner and cheaper to transfer our garbage by rail. The Skunk train is ready and available to haul trash from Fort Bragg to Willits. I was surprised to learn that Mr. Sweeney had not contacted Robert Pinole, the Skunk train manager, prior to the presentation of the previous EIR. It is evident that Mr. Sweeney has already made up his mind that a transfer station on Highway 20 is the best available option. Mr. Pinole says he can do it faster and cleaner with available equipment.

Meanwhile, county residents should learn how to compost their waste to fertilize their gardens. Local gardens and farmers markets are increasingly important and, in times of drought, vital to the preservation of rural economies.