

**Draft Initial Study and Mitigated Negative
Declaration for the
Friends of the Dunes Trail and Habitat
Restoration Project**

**Humboldt County Planning and Building
Department**

June 2022

CHAPTER 1. PROJECT INFORMATION

PROJECT TITLE

Friends of the Dunes Trail and Habitat Restoration Project on the former "Barr" Property (APN: 400-011-075)

PROJECT OVERVIEW

A Coastal Development Permit (CDP; CDP-06-49MMX) and Conditional Use Permit/Special Permit (CUP/SP; CUP-06-14MMX/SP-06-71M), as amended in 2008 and 2009, along with a Lot Line Adjustment (LLA-06-08)/Special Permit (SP-06-71), allowed the continued use of an existing residence as the Humboldt Coastal Nature Center (HCNC), the relocation of a parking area, a parcel merger, removal of 19 nonnative trees, and trail establishment and restoration activities on an approximately 93-acre site in the Manila area of Humboldt County. The site is managed by the Friends of the Dunes (FOD). The proposed FOD Trail and Habitat Restoration Project (project) would further amend the existing CDP and CUP/SP to Lupin Drive and Stamps Lane (**Attachment A**) on the 3.6-acre former Barr property that abuts FOD property. This Initial Study (IS)/Mitigated Negative Declaration (MND) assesses the environmental effects of activities that would be authorized through the permit amendments (the "proposed project"). The proposed project would allow trail work and native plant restoration. Specific activities would include establishment of a trailhead and a "No Parking" sign. Public access would allow pedestrians, dog walking, and horseback riding on designated trails during daylight hours only. An existing "private property" sign and metal gate at the proposed trailhead would be removed and replaced with a new fence designed to allow pedestrian and horse access while blocking access to motorized vehicles. These improvements are intended to minimize impacts on sensitive habitat while allowing continued access by hikers, equestrians, and dog walkers.

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PROJECT LOCATION

The project is located in the Manila area of Humboldt County, at the terminus of Stamps Lane and at the north side of Lupin Drive, approximately 1,000 feet west of the intersection of New Navy Base Road and Lupin Drive, on the property known as 365 Lupin Drive, and the property known to be in the north half of Section 03 Township 05 North Range 01 West, Humboldt Baseline Meridian. The site is situated south of the FOD property and east of the Manila Community Services District (MCSD) and is part of a larger contiguous coastal dune ecosystem under management by several entities [**Figure 1**].

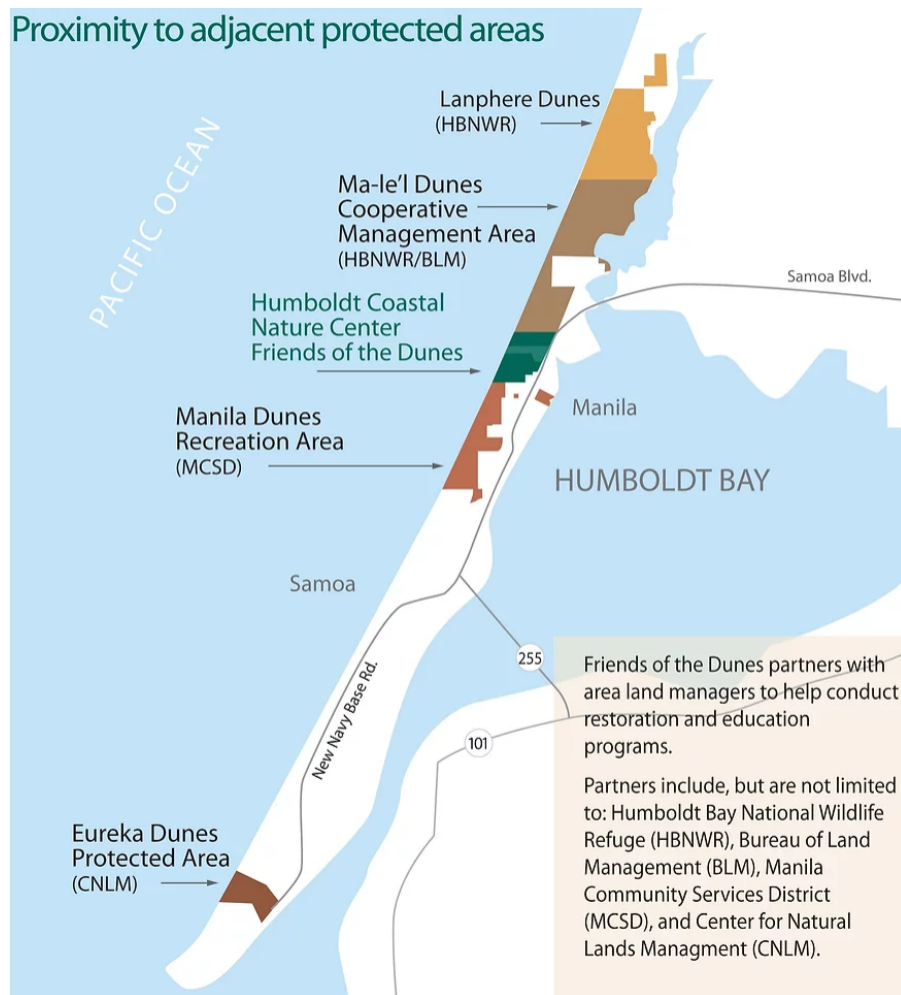


FIGURE 1. PROJECT LOCATION SHOWING THE CONCEPTUAL AREA (IN GREEN) COVERED BY THE FRIENDS OF THE DUNES 2021 RESTORATION MANAGEMENT PLAN

General Plan Land Use Designations

- APN 400-011-075: Residential Low Density (RL), Density: 1–8 dwelling units per acre;
- APN 400-011-077: Public Facilities (PF), Density: N/A;
- APN 506-111-004, 506-111-024: Natural Resources (NR), Density: N/A;
- APN 506-111-021, 506-111-025: Natural Resources (NR), Agricultural/General (AG), Density: N/A.

Zoning Designations

- APN 400-011-075: RS-5-M/A,B: Residential Single Family—Minimum lot size 5,000 square feet (RS-5), Manufactured Home (M)/Archaeological Resource Area Outside Shelter Cove (A), Beach and Dune Areas (B);
- APN 400-011-077: PF1/B: Public Facility (Urban)(PF1)/Beach and Dune Areas (B);
- APN 506-111-024: NR/B: Natural Resources (NR)/Beach and Dune Areas (B);

- APN 506-111-021, 506-111-025: NR/B;RA-2.5/B: Natural Resources (NR)/Beach and Dune Areas (B); Rural Residential Agriculture-Minimum lot size 2.5 acres (RA-2.5). Beach and Dune Areas (B);
- APN 506-111-004: NR/A,B,W: Natural Resources (NR)/Archaeological Resource Area Outside Shelter Cove (A), Beach and Dune Areas (B), Coastal Wetlands (W).

PROJECT BACKGROUND

In 2007, the Humboldt County Planning Commission (PC) approved CDP-06-49/CUP-06-49 along with Lot Line Adjustment (LLA-06-08)/Special Permit (SP-06-71) for FOD to use an existing residence as the HCNC office/education center, establish trails, and conduct restoration activities on approximately 30.5 acres of beach and dune habitat. The restoration work included manual removal of yellow bush lupine (*Lupinus arboreus*), European beachgrass (*Ammophila arenaria*), iceplant (*Carpobrotus edulis*), and pampas grass that threaten endangered species and rare plant communities. Other related development included a restroom building, covered outdoor area, parking lot improvements, and signage/trail markers. A CDP is required for all development within the Coastal Zone. The SP established parking standards based on existing use levels at the Manila Community Center. An IS/Negative Declaration (ND) was prepared and approved by the PC.

In 2008, the PC approved modifications to the approved FOD CDP/CUP (CDP-06-49M/CUP-06-49M) permits to allow restoration and trail work on an additional approximately 34.7 acres of newly acquired property, the relocation of the parking area and a Notice of Merger. An addendum to the ND was prepared as part of this amendment process.

In 2009, the PC approved modification and extension to the previously approved and modified CDP/CUP/SP (CUP-06-49MMX/CUP-06-14MMX/SP-06-71M) to allow restoration and trail work on an additional approximately 57 acres. The modification to the SP allowed the removal of ten eucalyptus trees, two nonnative pine trees, and seven Monterey cypress trees and shrubs.

In 2015, the FOD applied for modification to the CDP/CUP (CDP-06-49MMXM/CUP-06-49MMXM) to continue dune restoration and trail work on an additional 3.6 acres known as the “Barr” property acquired by FOD. The Barr property abuts the FOD property and MCSD dune lands, and the trails on the Barr property were proposed to tie into existing MCSD and FOD trails. The County prepared an IS/ND for the proposed modification. After a noticed public hearing on October 4, 2018, the PC continued the project to an uncertain date with direction to staff to further engage the public during the process. Per guidance from the PC, on July 16, 2019, County staff held a neighborhood meeting (workshop) to gather comments from the public concerning the potential environmental impacts of the proposal. Public comments expressed some concern over the closure of existing trails, some specific elements of the proposed project (e.g., a proposed staircase, boundary fence), and whether restoration would proceed in conformance with the Manila Long Term Restoration Plan and the requirements of the CDP.

An updated Restoration and Management Plan was prepared by FOD in October 2021 (**Attachment A**) for 93 acres of restoration activities on FOD properties. The current Restoration Plan includes baseline data of invasive and endangered plant species distributions for all lands identified in the Restoration Plan, **including the most recently acquired former Barr parcel**. Project implementation would occur in conformance with the most current version of the Restoration Plan. **Many of the recommended avoidance and minimization or mitigation measures in the Restoration Plan were incorporated into this IS/MND.**

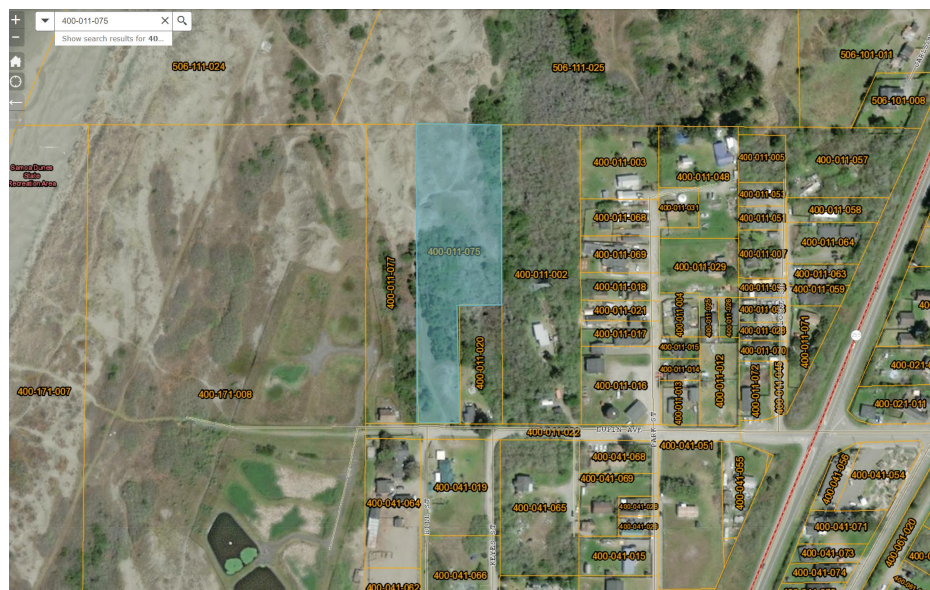
This IS/MND addresses public and staff comments on the previous version, as appropriate, and

will be circulated for public review. Once the IS/MND is published, it will be made available for a 30-day public review period.

ENVIRONMENTAL SETTING

The FOD property is in an area with other properties owned or managed by several different entities that have completed or have ongoing dune restoration activities, including the U.S. Fish and Wildlife Service (USFWS), Bureau of Land Management (BLM), MCSD, and private landowners. The Ma'lel and Landphere Dunes managed by BLM and USFWS are considered National Natural Landmarks as of 2021 (NPS 2021). These areas contain both restored and degraded dune mat plant communities as well as sensitive natural plant communities and wetlands. Restoration activities, including removal of nonnative invasive plants and replanting of native vegetation, have taken place in this area over the last 25 years, and these areas now primarily support the native dune mat species (McDonald 2020; USFWS 2013, 2020). Dune mat plant communities, as well as beach pine forest communities, are considered a sensitive natural community by the California Department of Fish and Wildlife (CDFW) (CDFW 2022).

The former Barr parcel project site abuts other FOD property in a coastal dune community [Figure 2]. The property contains a large area of native dune mat habitat with a substantial population of federally endangered Humboldt Bay wallflowers (*Erysimum menziesii*). The site also contains invasive species including iceplant, European beachgrass, yellow bush lupine, and invasive annual grasses, including rattlesnake grass (*Briza maxima*), barren fescue (*Vulpia bromoides*), and ripgut brome (*Bromus diandrus*). Other invasive plants that have very small occurrences are star mustard (*Coincya monensis*), jubata grass (*Cordateria jubata*), and Himalayan blackberry (*Rubus armeniacus*) [Figure 3]. Invasive plants compete for habitat space and water resources with native plants and have a negative impact on native dune mat species, especially on the Humboldt Bay wallflower and beach layia (*Layia carnosa*), both of which depend on open, sandy environments for survival. Surrounding uses include open space, recreation, natural resources, residential, and municipal infrastructure.



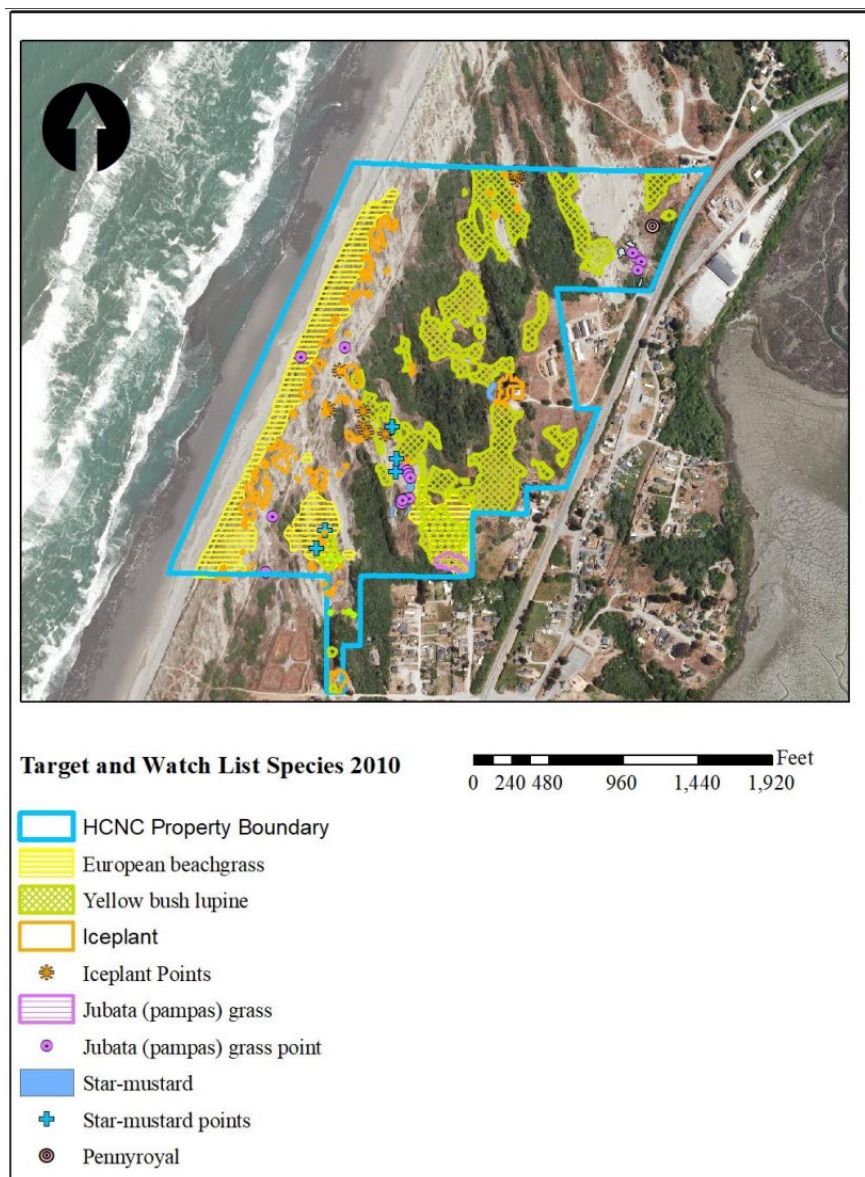


FIGURE 3. INVASIVE NONNATIVE VEGETATION MAPED BY STAFF OF THE HUMBOLDT COUNTY NATURE CENTER IN 2010

The 2019 environmental settings of restored areas on FOD property constitute the baseline physical conditions for determining whether the restoration activities detailed in the HCNC Restoration and Management Plan (**Attachment A**) provide greater diversity than invaded dunes. This includes comparing restored dunes' ability to support native plant and animal species and any measurable responses in dune morphology (slopes, elevations, and profiles) to invasive plant removal.

RESTORATION PLAN

FOD began restoration efforts in 2008 under the guidance of the FOD Board-approved Restoration Plan for the FOD property under the PC-approved CDP-06-49/CUP-06-49/SP-06-71, and subsequent amended modifications. The entirety of the Restoration Plan area is located on the Samoa peninsula (North Spit) in the town of Manila, Humboldt County, California [Figure 4]. The Restoration Plan describes control of invasive vegetation and the restoration of degraded areas on FOD managed lands.



FIGURE 4. PROTECTION PLAN AREA FOR THE RESTORATION MANAGEMENT PLAN. THE “BARR” PARCEL JUTS TO THE SOUTH

The overall goal of the Restoration Plan is to restore the natural diversity of plants, wildlife, and natural dune processes, while taking into consideration physical constraints on and off FOD property. In the past, coastal habitats have been significantly compromised by the spread of invasive plant species. Removal of invasive species helps partially restore dune processes, allowing a range of successional plant communities to recover and thrive. Managing for a range of successional communities helps maintain the natural diversity of these habitats for both plant and animal species. Nonnative iceplant and invasive annual grasses near the proposed trailhead on Lupin Avenue will be targeted for removal to allow restoration of native dune mat habitat on the former Barr parcel [Figure 5].

Minor updates and adjustments to the Restoration Plan occur under an adaptive management framework, meaning that measures are taken to monitor the outcome of treated areas. If invasive species are not responding to treatments, alternative control methods are considered. When FOD pursues future permanent conservation land acquisitions that are outside the Protection Plan area, or any new restoration activities not covered under the adaptive management framework of the Restoration Plan, these new locations and activities will be incorporated into subsequent Restoration Plan revisions or CDP/CUP amendments.

Amendments made to the Restoration Plan must be approved by the FOD Stewardship Committee, FOD's Board of Directors, and the Stamps Family Trust (for work on their 15-acre easement parcel), and submitted to Humboldt County Planning for approval. Every 7 years subsequent to the most recent Restoration Plan revision (conducted in October 2021), FOD will convene a Technical Advisory Committee consisting of qualified restoration professionals, potentially to include staff of CDFW, USFWS, and BLM, to review progress made under the Restoration Plan and to make any recommendations for potential plan updates. FOD will also

share any significant plan revisions with the Tribal Historic Preservation Officers (THPOs) of the Blue Lake Rancheria, the Wiyot Tribe, and the Bear River Band of the Rohnerville Rancheria, and has incorporated avoidance, minimization, and mitigation measures suggested by the THPOs to protect cultural resources. Project implementation would occur in conformance with the most current (i.e., 2021) version of the Restoration Plan.

The Samoa Dunes and Wetlands Conservation Area (former “Dog Ranch”) is temporarily held in conservation ownership by FOD as of the issuance of this IS/MND and is not included in the current Restoration Plan. It is not included in the Restoration Plan because FOD is only serving as the interim landowner of the Samoa Dunes and Wetlands Conservation Area and is not seeking to conduct habitat restoration under a CDP/CUP on this new conservation property, but rather to transfer the property to permanent conservation-based landowners for long-term ownership and management.

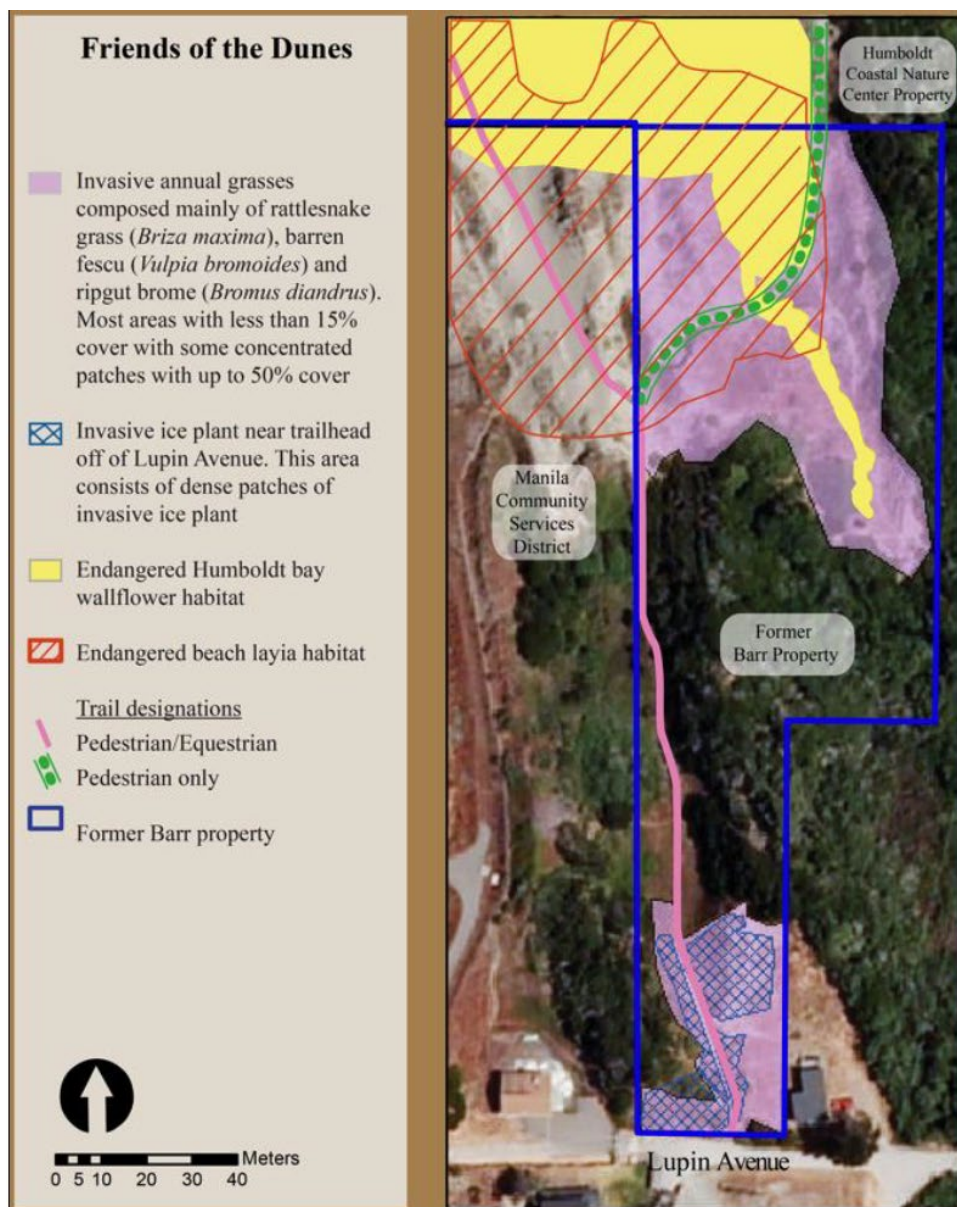


FIGURE 5. ENDANGERED NATIVE AND NONNATIVE INVASIVE PLANT SPECIES OCCURRENCES IN THE PROJECT AREA

Plan Components

The current Restoration Plan includes the treatment of approximately 91.5 acres of invaded

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dune habitats and approximately 1.5 acres of invaded native plant landscaping area around the HCNC. Willow-dominated wetlands and forested dunes have been excluded from the current treatment area. Following removal of the invasive species, areas continue to be monitored for new infestations. Prioritization of restoration areas is based on the relative impact of an invasive species on the population or natural community in question, invasiveness of the species, and feasibility of eradication. Additionally, annual grass seeds have the ability to spread rapidly between seasons, making them highly invasive. Priority is also given to new or limited occurrences of highly invasive species following the concept of early detection and rapid response, and to areas with valuable populations of special-status species including wildlife.

Invasive vegetation control is accomplished through hand removal of nonnative invasive plants and is guided by a Restoration Manager, who manages the overall direction of the restoration activities and provides training and oversight for the restoration interns and other work crews. Access to the site is provided from the main HCNC trailhead at 220 Stamps Lane. If vehicle access is needed, the coastal sites is accessible from Lupin Avenue along the Humboldt Bay Municipal Water District water line road near the western edge of the property.

As described in the 2021 Restoration Plan, there are certain treatments that would not be conducted under the adaptive management framework established in the plan, and FOD would not pursue these treatments without an amended Restoration and Management Plan approved by the Humboldt County Planning Department.

- Use of herbicide treatments to manage nonnative invasive plants
- Use of prescribed fire treatments on standing vegetation on FOD lands
- Use of heavy equipment to remove standing invasive species

Including these treatments in an amended plan would require additional environmental analysis of impacts under the California Environmental Quality Act (CEQA). Additional detail regarding plan development and implementation is included in the 2021 Restoration Plan.

Trail Establishment and Management

Multiple users have created unauthorized trail routes that currently exist on the former Barr property [Figure 6]. The proposed project would consolidate use to maintain the two most commonly used trails: one offering beach access and one offering dune access. The two trails to be designated are the South Beach Access Trail (to provide equestrian and pedestrian access) and the Ridge Connection trail (to provide pedestrian access). The two trails on the former Barr parcel are approximately 0.3 mile in length. These trails would add to the existing trail systems along a 2-mile stretch of coastland incorporating FOD and the BLM properties to the north and the MCSD property to the west and south [Figure 7].

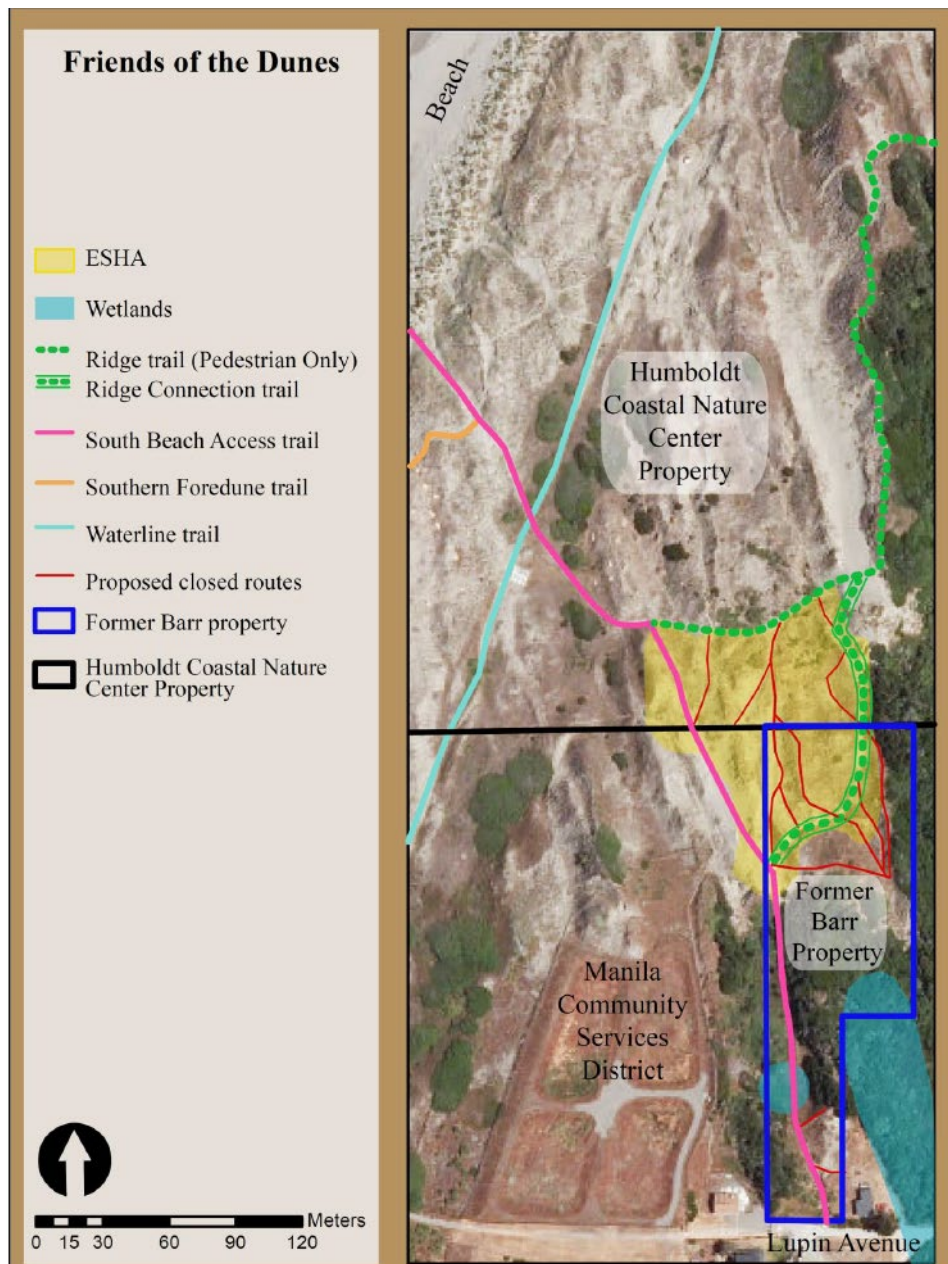


FIGURE 6. PROJECT AREA AND LOCATION OF ENVIRONMENTALLY SENSITIVE HABITAT AREAS

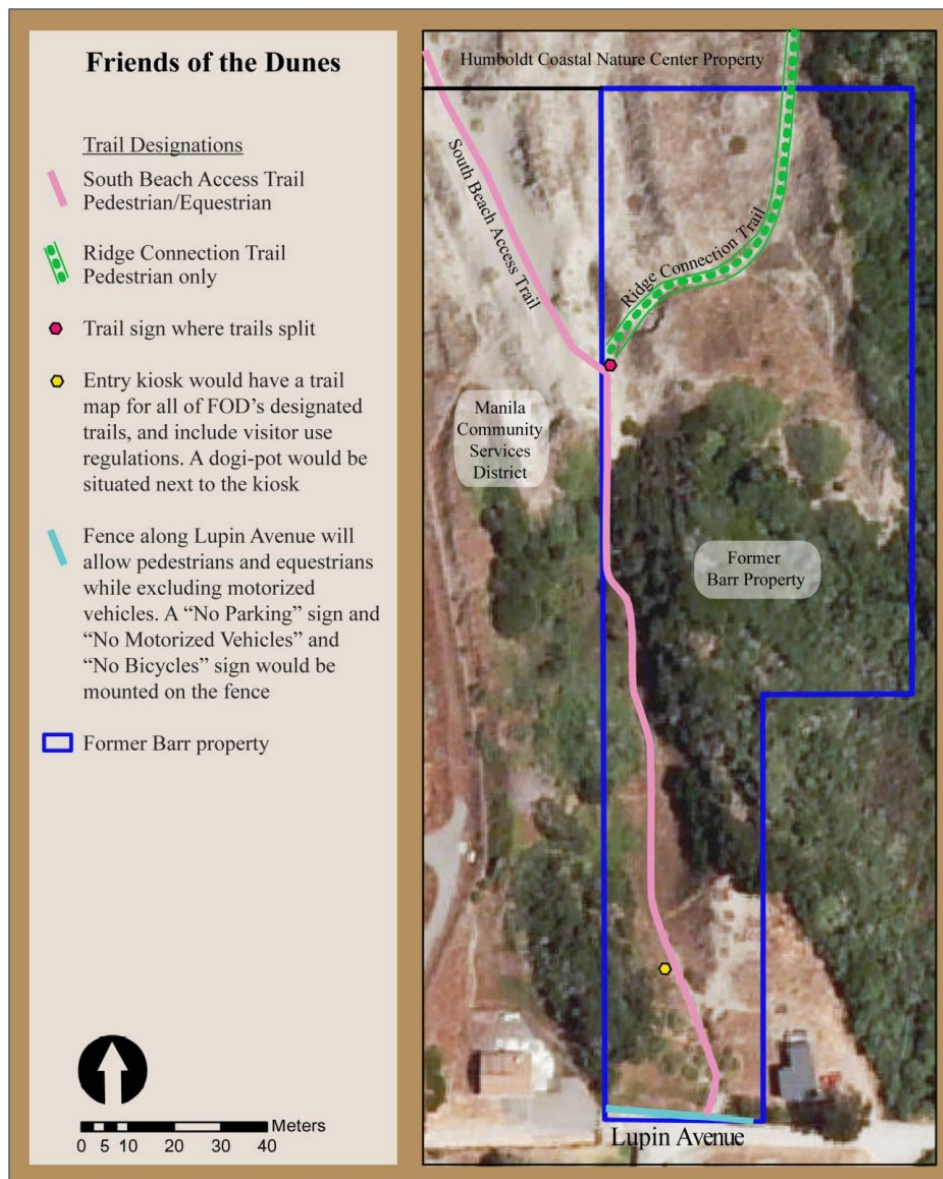


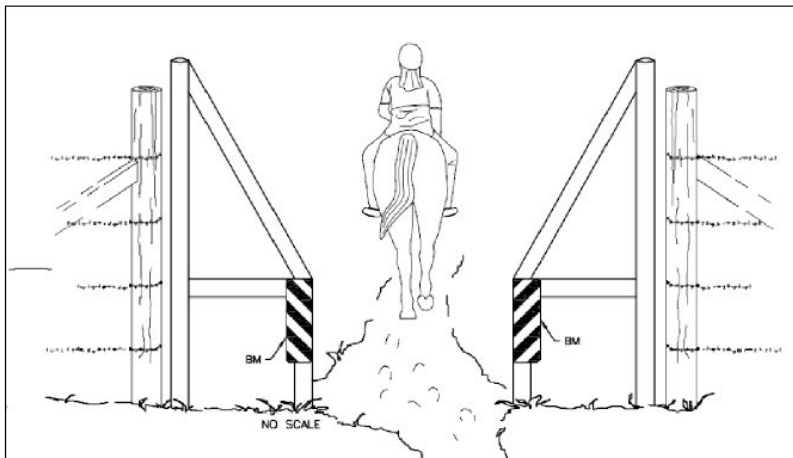
FIGURE 7. FOCAL AREA FOR THE RESTORATION MANAGEMENT PLAN AND TRAIL IMPROVEMENTS ON THE FORMER BARR PROPERTY

Unauthorized user-created trails on the former Barr parcel and the FOD property (APN 506-111-025) are proposed for closure to facilitate: (1) the consolidation of trail use on the designated trail system; and (2) habitat restoration activities for two endangered plants and native dune mat alliance vegetative communities. On these two trails, FOD is proposing to apply the FOD Public Access Trails Policies, and to incorporate the trails into the existing FOD trail system on APNs 506-111-024 and 506-111-025, which are also owned and managed by FOD.

The proposed project would establish a trailhead on the former Barr parcel at 365 Lupin Avenue. No parking would be allowed at the trailhead; a "No Parking" sign would be placed on the Lupin Avenue fence. Public access would allow pedestrians, dog walkers, and horseback riders on designated trails during daylight hours only. The existing "private property sign" and metal gate at the proposed trailhead would be removed and replaced with a new fence designed to allow pedestrian and horse access while blocking access to motorized vehicles. The current metal gate and a conceptual design of the proposed replacement gate are shown in **Figures 8a** and **8b**.



a. Current metal gate, fence and no trespassing sign



b. Conceptual design of the proposed fence along Lupin Avenue would allow for pedestrians and horses while blocking motorized vehicles: the opening would be at least 32" wide to allow for horse passage

FIGURES 8A, 8B. (A) CURRENT (UNIMPROVED TRAIL) ENTRANCE FROM 365 LUPIN AVENUE, MANILA, CALIFORNIA. (B) CONCEPTUAL DESIGN OF THE PROPOSED FENCE

Trail improvements proposed to accommodate public access to the former Barr parcel include: (1) a new entrance fence allowing horse and pedestrian access but excluding motorized vehicles; and (2) an entry sign/kiosk and Dogipot® pet station approximately 100–120 feet from Lupin Avenue alongside the designated trail (see the entry kiosk in **Figure 7**). Directional signs would include arrows with symbols, the word "Trail," or similar wording, to direct people to designated trails. At trail junctions where there is a distinction between horse/pedestrian and pedestrian only trails, symbols would also be included to inform visitors of the designated use(s). Signs would be designed and implemented to minimize visual impacts on the landscape while ensuring management intent is clear to visitors.

Managed Public Access and Private Property Delineations

There will be no parking at the trailhead; however, parking is available at the nearby MCSD Office parking area at 1901 Park Street and across State Route 255 at the Manila Community Park.

Proposed Beach Access Trail

The proposed South Beach Access trail would consist of a total of 280 meters (0.17 mile) of trail, including 150 meters (0.09 mile) on the former Barr parcel, 75 meters (0.05 mile) on MCSD property, and 55 meters (0.03 mile) on FOD property. This trail would be designated for both pedestrian and equestrian use, with dogs off leash and under voice control to accommodate equestrians with dogs.

The trail would start from the Lupin Avenue trailhead and veer northwest across MCSD property before reconnecting to FOD's existing South Beach Access trail. The trail would begin as a single-track trail and as the trail continues onto MCSD property, and then widen as it passes through an area of open sand for approximately 75 meters. A trail map would be provided at the entrance kiosk near the trailhead off Lupin Avenue, set back from the street approximately 100–120 feet [Figure 7], and another directional post would be placed where the trail splits as it continues to the west, while the Ridge Connection trail veers east.

Proposed Ridge Connection Trail

The proposed Ridge Connection trail would be 150 meters (0.09 mile) in length and would be designated for pedestrian use only with dogs on leash. This trail would begin 150 meters north of the Lupin Avenue trailhead where the trail splits from the South Beach Access trail. This trail eventually would connect to FOD's designated pedestrian-only trail on the FOD property. The trail would traverse federally endangered wallflower and beach layia habitat [Figure 5], as well as solitary bee nesting habitat. The entirety of this trail would be single track and would be accessible by pedestrian users only. One approximately 20-foot section of the trail would be steep and may or may not eventually include installation and maintenance of a narrow, sunken/cribbed staircase to assist pedestrians [Figure 9].

This same section may also include a symbolic rope fence, approximately 2–3 feet above the ground surface, to protect a native bee nesting site and to keep the trail from widening. The CDP amendment would allow installation of these features as needed, in an adaptive management approach that would respond to new bee populations and changing trail conditions.



Example of a cribbed staircase



Example of timber steps

FIGURE 9. UPPER PHOTO: EXISTING CONDITIONS OF A STEEP SECTION OF THE RIDGE CONNECTION TRAIL. LOWER PHOTOS: EXAMPLES OF STAIRCASES THAT WOULD BE INSTALLED ON A STEEP SECTION OF THE RIDGE CONNECTION TRAIL

Signage would be installed at the start of the Ridge Connection trail where it splits from the South Beach Access trail on the former Barr property to indicate that the trail is not for equestrian use. Additional signage may indicate that dogs must be on leash and include interpretive components to explain the sensitivity of endangered wallflowers and educate users to be mindful of sensitive habitat and the importance of staying on the trail. If needed, additional signage indicating that equestrian use is prohibited would be placed where the Ridge Connection trail connects to the Ridge trail on the FOD property. These trails would then connect the pedestrian or the equestrian to the greater trail system on lands managed by MCSD, FOD, and BLM [Figure 10].

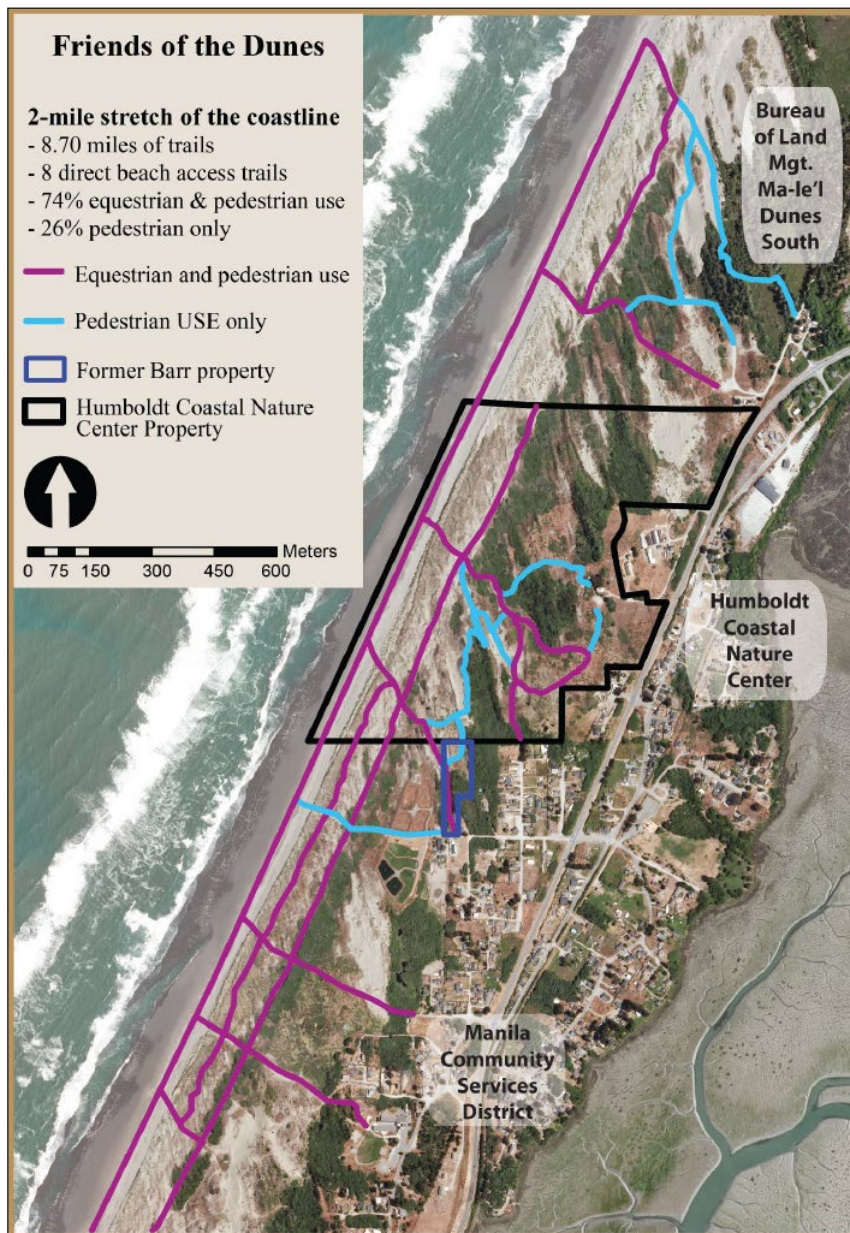


FIGURE 10. EXISTING DESIGNATED TRAIL SYSTEM AND COASTAL ACCESS NORTH AND SOUTH OF THE FORMER BARR PARCEL

Trails Policies for Former Barr Parcel

FOD's public access trails policy would set a framework for trail improvement, maintenance, and operation. In keeping with the Public Access Trails Policy for FOD, the following goals provide the guiding principles associated with the project site.

- Providing trail access that is consistent with FOD's mission to conserve the natural diversity of coastal environments through community-supported education and stewardship programs.
- Providing an enjoyable and safe experience that broadens visitor appreciation of coastal habitats.
- Fostering an appreciation of the different ways visitors enjoy experiencing coastal

environments.

The following outlines the Public Access Trails Policy by user group.

1. **General Trail Use:** All visitor use will be directed to designated trails to minimize degradation of dune environments, facilitate best landscape and resource management practices, and provide for the comfort and safety of visitors.
2. **Pedestrian Use:** Pedestrian-only trails will be established and maintained as narrow, single-use hiking trails, or foot-only trails, developed and managed for resource protection, quiet travel, and the enjoyment of nature.
3. **Dog Walking:** In areas designated for off-leash dog use, the Beach Access trail, dogs must be under voice control, which is defined as: (1) the dog is within view, (2) the dog is within voice range of the owner, (3) the dog must come at the first calling, and (4) the dog cannot approach people in a threatening manner or in any way harass people, wildlife, other dogs, or horses. Owners must pick up and dispose of pet waste in garbage receptacles. These guidelines are meant to promote responsible dog walking that protects the dune environment, while providing enjoyment for all visitors.
4. **Horseback Riding:** Horseback riding will be directed to designated trails only. Multiple use (horse and pedestrian) trails will be designated to minimize resource impacts, maximize safety, facilitate connectivity of multiple-use trails between adjacent properties, provide beach access, and promote visitor enjoyment and education.
5. **Bicycle Use:** Bicycles are not allowed on trails.
6. **Off-Road Motorized Vehicles:** No off-road motorized vehicles are allowed on any trail on FOD property except under emergency health and safety conditions, for property management (including restoration), and as approved by permission from the FOD Executive Director or his or her designated representative and the County of Humboldt. This is consistent with Humboldt County's Beach and Dunes Management Plan.
7. **Off-Trail Use:** Off-trail use is not permitted with the exception of activities pertaining to FOD authorized restoration or monitoring. Off-trail use for all other activities (e.g., research or studies) is authorized only by written permit issued by FOD's Executive Director or his or her designated representative.

FOD reserves the right to refuse access or ask anyone to leave the property who is not abiding by the established policies of the FOD Public Access Trails Policy. FOD also reserves the right to temporarily close access to certain trails, or to temporarily close the property to public use at any time in order to address safety or resource protection concerns. Temporary closures would remain in place until either the safety matter or resource protection concern has been rectified.

Closure of User-Created Routes

FOD proposes to close any user-created routes on the former Barr parcel and in the areas between the Beach Access trail and Ridge trail that are not part of the designated trail system [Figure 6]. The closure of these redundant user-created routes would consolidate access to the designated trail system and protect native habitat by reducing habitat fragmentation and direct trampling impacts. A variety of closure methods may be employed to decommission user-created routes. Closure may include temporary signage to inform visitors the route is closed as well as placing brush on user-created routes, which should further discourage visitors from walking in the area. Restoration of user-created routes may additionally include planting native plants and or distributing native plant seeds along user-created routes, which should further discourage visitors from walking in the area. If these initial measures are not successful in

detering visitor use, then temporary symbolic fencing with closure signs may also close access of user-created routes and notify the public of ongoing restoration efforts to revegetate certain areas.

Restoration Activities

The proposed project involves the removal of invasive nonnative plants and the restoration of native dune habitats and their associated rare plants. The goal is to restore areas to a habitat capable of supporting species indigenous to the coastal dune environment, including endangered plant species, and reduce the risk of spread of invasive plants onto neighboring habitats (and properties), which include a freshwater wetland and intact dune mat vegetative plant communities, vegetation types designated as environmentally sensitive habitat areas (ESHAs) and as rare or threatened habitats required to be considered under CEQA. To restore and enhance habitats on the parcel, FOD proposes to do the following.

1. Manually remove approximately 1.5 acres of invasive, nonnative annual grasses, including rattlesnake grass, barren fescue, and riggut brome. Annual grasses will be removed by hand and the vegetation will immediately be placed in plastic garbage bags for disposal offsite. Control methods to be considered in the future are the removal of duff (i.e., top layer of soil) from areas that have been severely degraded, grass flaming,¹ weed whacking, and using black tarps to smother plants. Flaming is not currently proposed on the former Barr parcel given the invasive grasses are not yet uniformly dominant and treatment would affect native plants or ground-nesting bees.
2. Manually remove approximately 0.2 acre of iceplant in the approximate locations shown on **Figure 5**. Due to neighborhood concerns regarding sand movement on the former Barr parcel, the iceplant currently existing within 100 feet of Lupin Avenue or the adjacent private residential property line to the east will be photo and global positioning system (GPS)-documented, left in place at its current extent, and managed to prevent further spread onto FOD property. Any iceplant growth beyond the documented extent will be removed to protect surrounding habitat. Iceplant removed within 200 feet of Lupin Avenue or neighboring residential property lines would be transported immediately from the property via the Lupin Avenue access point and disposed of offsite rather than left to dry in piles.
3. Manually remove other invasive plants with isolated occurrences that are too small to quantify including yellow bush lupine, star mustard, and Himalayan blackberry.
4. Restore endangered plant communities, primarily by allowing natural recruitment to occur after nonnative plant removal and trail decommissioning.
5. Conduct additional restoration activities, including planting of native dune plants, as needed. Removal of nonnative invasive vegetation is prioritized based on invasive species' proximity to endangered species populations and other sensitive resources, and by the size and robustness of infestations.

Restoration of Endangered Plants and their Habitat

¹ Flaming is a different and distinct treatment from prescribed fire and would be a permissible treatment under this plan. Prescribed fire for the purposes of treating populations of standing invasive species would not be used as a treatment under the Restoration Plan or its adaptive management framework. Using fire to eliminate piles of previously removed and dried nonnative species is not a prescribed fire treatment applied to standing vegetation and would be permissible under the Restoration Plan.

The project proposes to protect and enhance federally listed plant populations by creating suitable habitat for these species through removal of nonnative invasive plant species. Restoration practices will be consistent with those outlined in the 2021 FOD Restoration Plan, and the following mitigation measures (MMs) would be used to avoid and minimize disturbing endangered plant populations:

Mitigation Measure BIO-1: Conduct Biological Surveying and Monitoring. Areas subject to disturbance during implementation of the Restoration Plan will be surveyed by the Restoration Manager or a qualified botanist appointed by the Restoration Manager and any endangered plant populations encountered would be flagged (**MM BIO-2**) before the commencement of any restoration work. Any restoration work in occupied areas would be directly overseen by the Restoration Manager to avoid the disturbance or removal of endangered plant species.

- a. **Beach layia:** Plants are most sensitive during the flowering period (typically March to July) when flowers could be crushed, preventing seed dispersal. During this season, restoration work will avoid areas with dense beach layia populations, and the treatment method will be limited to hand pulling or manual digging of invasive species in these areas. Any beach layia populations present will be clearly identified and flagged (**MM BIO-2**), and the flagging monitored during work days.
- b. **Humboldt Bay wallflower:** Restoration activities will generally avoid areas with individual plants. When wallflowers are present in areas of active restoration, all visible plants will be marked with a pin flag by the Restoration Manager (**MM BIO-2**) to avoid trampling. The treatment method in these areas will be limited to hand pulling or manual digging of invasive species.

Mitigation Measure BIO-2: Delineate Work Limits to Protect Sensitive Biological Resources. Before starting restoration projects, sensitive biological resource areas within and adjacent to restoration work areas will be staked and flagged by the Restoration Manager or biological monitor (**MM BIO-1**). Any demarcated areas will be inspected daily throughout work periods to ensure that they are visible for all restoration personnel. Any piles of removed nonnative plants or other work-related materials will be located outside of all the flagged special-status plant areas in areas of clear sand to avoid native dune mat plant species to the extent feasible.

Mitigation Measure BIO-3: Provide Worker Environmental Awareness Training. Work crews will be trained to identify and avoid special-status plants. The FOD will provide environmental awareness training before starting restoration activities for all technician or volunteer personnel (including new personnel as they are added to the project). This training will be given by the Restoration Manager, or other qualified botanical staff appointed by the Restoration Manager, to help the trainees understand the following.

- Surrounding common and special-status species and their habitats
- Sensitive natural communities and ESHAs
- Applicable regulatory requirements
- MMs designed to avoid or minimize impacts on sensitive resource areas

Mitigation Measure BIO-4: Limit Use of Grass Flaming in Sensitive Areas: Grass flaming and duff removal methods will not be utilized in areas known to be occupied by special-status plants based on seasonally appropriate botanical surveys conducted the season preceding restoration projects (**MM BIO-1**).

Mitigation Measure BIO-5: Yellow Bush Lupine Treatment. Removal of yellow bush lupine in special-status plant areas will take place following seed dispersal for beach layia (after June 30). However, if mature lupine pods are present in these areas, the Restoration Manager could carefully remove them.

Mitigation Measure BIO-6: Delineate Wetlands. Areas subject to disturbance during implementation of the Restoration Plan will be surveyed by the Restoration Manager or a qualified wetland scientist appointed by the Restoration Manager and any wetlands encountered will be flagged. The Restoration Manager will be able to identify wetland traits and vegetation, and restoration technicians, work crews, and volunteers will be trained to identify wetland traits and vegetation to ensure avoidance of wetlands during or on the way to restoration activities. Work crews and volunteers will be overseen by the Restoration Manager or by restoration technicians when working adjacent to an area with wetland vegetation (**MM BIO-1**). Routes to off-trail work sites will avoid wetlands.

Monitoring and Reporting

Photo points would be established to track the restoration of dune mat habitats and impacts of the trail improvements, as well as to document potential sand movement. The project site and any restoration that occurs on it would be included on future annual reports submitted to the FOD Board of Directors and Humboldt Planning and Building Department, as well as the photo-monitoring reports submitted every 2 to 4 years.

Adaptive management practices would be followed as outlined in the FOD Restoration Plan. Recent research has shown that it takes up to 6 years for dunes that have been restored to have natural recruitment of native plant species (Pickart 2013). If native plant cover is not re-established to similar levels found on nearby HCNC lands following the removal of invasive plant species after 6 years, native plantings or seedings would occur in areas where invasive species were removed. A condition of approval has been incorporated requiring the applicant to submit to the Planning and Building Department an annual monitoring and reporting summary describing the results of all monitoring activities, including monitoring methods, an evaluation of restoration areas in terms of performance and success criteria, photodocumentation of restoration areas, and adaptive management needs every year.

CHAPTER 2. ENVIRONMENTAL CHECKLIST

Project Title:	Friends of the Dunes Trail and Habitat Restoration Project on the former “Barr” Property (APN: 400-011-075)
Lead Agency Name and Address:	Humboldt County Planning & Building Department, 3015 H Street, Eureka, CA 95501-4484
Contact Person and Phone Number:	Cliff Johnson, Senior Planner (707) 445-7541
Project Location:	Humboldt County, at 220 Stamps Lane, 365 Lupin Drive, Manila.
Project Sponsor’s Name and Address:	Friends of the Dunes, PO Box 186, Arcata, CA 95518
General Plan Designation:	Residential Low Density (RL)
Zoning:	APN 400-011-075: RS-5-M/A,B: Residential Single Family—Minimum lot size 5,000 square feet (RS-5), Manufactured Home (M)/Archaeological Resource Area Outside Shelter Cove (A), Beach and Dune Areas (B)

- 1. Description of Project:** The proposed FOD Trail and Habitat Restoration Project (project) would further amend the amended and approved 2009 CDP (CDP-06-49MMX) and CUP/SP (CUP-06-14MMX/SP-06-71M), which allows use of an existing residence as the HCNC office/education center, relocation of a parking area, a notice of parcel merger, removal of 19 nonnative trees, and trail establishment and restoration activities on approximately 93 of the total 122 acres of beach and dune habitat in the Manila area of Humboldt County under management by the FOD. The permit amendment based on this subsequent IS/MND prepared for the project, would allow trail work, restoration, and related activities on the 3.6-acre former Barr property on Lupin Avenue in Manila. These improvements are intended to minimize impacts on sensitive habitat while allowing continued access by hikers, equestrians, and dog walkers.
- 2. Surrounding Land Uses and Setting:** The HCNC property is in an area with other properties owned or managed by several different entities that have completed or ongoing dune restoration activities, including USFWS, BLM, MCSD, and private landowners. These areas contain both restored and degraded dune mat plant communities.
- 3. Other Public Agencies Whose Approval is Required:**
Humboldt County Planning and Building Department.
- 4. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?**

A letter offering an opportunity for tribal consultation pursuant to AB52 was sent to all local tribal officials on July 14, 2021. No requests for consultation were received.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts on tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code Section 21083.3.2.) Information may also be available from the California Native American Heritage Commission’s Sacred Lands File per Public Resources Code Section 5097.96 and the California Historical Resources Information

System administered by the California Office of Historic Preservation. Please also note that Public Resources Code Section 21082.3(c) contains provisions specific to confidentiality.

See Section XVIII, *Tribal Cultural Resources*, for more information.

EVALUATION OF ENVIRONMENTAL IMPACTS

- (1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- (2) All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- (3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an environmental impact report (EIR) is required.
- (4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of MMs has reduced an effect from "Potentially Significant Impact" to a "Less-Than-Significant Impact." The lead agency must describe the MMs and briefly explain how they reduce the effect to a less-than-significant level (MMs from Section XVII, "Earlier Analyses," may be cross-referenced).
- (5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or ND (14 California Code of Regulations Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by MMs based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the MMs that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

The evaluation of environmental impacts provided in this document is based in part on the impact questions contained in Appendix G of the CEQA Guidelines. These questions, which are included in an impact assessment matrix for each environmental category (e.g., Aesthetics, Air Quality, Biological Resources), are "intended to encourage thoughtful assessment of impacts." Each question is followed by a check-marked box with column headings that are defined below:

- **Potentially Significant Impact.** This column is checked if there is substantial evidence that

a project-related environmental effect may be significant. If there are one or more potentially significant impacts, a project EIR would be prepared.

- **Less than Significant with Mitigation Incorporated.** This column is checked when the project may result in a significant environmental impact, but the incorporation of identified project revisions or MMs would reduce the identified effect(s) to a less-than-significant level.
- **Less-than-Significant Impact.** This column is checked when the project would not result in any significant effects. The project's impact is less than significant for the category without the incorporation of project-specific MMs.
- **No Impact.** This column is checked when the project would not result in any impact in the category or the category does not apply.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is potentially significant except that the Applicant has agreed to project revisions, including MMs, that would reduce the impact to less than significant with mitigation.


- | | | |
|--|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology/Soils/Paleontological | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards/Hazardous Materials |
| <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Wildfire | <input type="checkbox"/> Mandatory Findings of Significance |

Detailed descriptions and analyses of impacts from project activities and the basis for their significance determinations are provided for each environmental factor on the following pages, beginning with Section I, *Aesthetics*.

AGENCY DETERMINATION

On the basis of this environmental impact analysis provided by this Initial Study:

- ☐ I find that the proposed project **could not** have a significant effect on the environment, and a **Negative Declaration** will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **Mitigated Negative Declaration** will be prepared.
- ☐ I find that the proposed project **may** have a significant effect on the environment, and an **Environmental Impact Report** is required.



Signature

Cliff Johnson, Supervising Planner
Printed Name

6.8.2022

Date

Humboldt County Planning
and Building Department

I. Aesthetics

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

Affected Environment: The project consists of temporary and potentially recurring habitat restoration work on land (terrestrial) that could alter species composition within small patches of herbaceous vegetation in areas of dune habitat on the former Barr parcel. In addition, a replacement "No Parking" sign, replacement gate, and installation of a new trail map are proposed near 365 Lupin Avenue in the community of Manila.

(a, b, d) No Impact: The proposed project site is not in an area designated Scenic Coastal Area in the Humboldt Bay Area Plan of the Humboldt County Local Coastal Program, nor does it contain any vantage points. The site is outside of a designated scenic highway. There is no lighting or sources of glare proposed as part of the project. No scenic resources would be substantially damaged. Therefore, no impact would occur.

Impact Analysis:

(c) Less-Than-Significant Impact: There would be temporary visual impacts (i.e., the presence of one or more pickup trucks) during replacement of the trailhead fence to the three neighboring residences and for others traveling along Lupin Avenue. Construction is anticipated to involve hand tools and to occur for a maximum of 3 days during daylight hours. As a courtesy, work crews will notify the residents of the anticipated work days. The temporary visual impacts of one or more pickup trucks for a maximum of 3 days would be a less-than-significant impact.

No parking would be allowed at the trailhead and "No Parking" sign would be replaced on the newly constructed Lupin Avenue fence. Public access would allow pedestrians, dog walking, and horseback riding on designated trails during daylight hours only. The existing private property sign and metal gate at the proposed trailhead would be removed and replaced with a new fence designed to allow pedestrian and horse access while blocking access to motorized vehicles. The fence design will be visually unobtrusive and replace an existing fence. There are three houses at distances of 50 feet, 80 feet, and 100 feet within the line of sight of the proposed trailhead fence on Lupin Drive and Hill Street; however, the fence will replace an existing fence with a newer and more aesthetically pleasing fence (**Figure 8**) and therefore have a less-than-significant impact on aesthetics.

The South Beach Access trail would begin at the Lupin Avenue trailhead and head north-by-northwest for approximately 550 feet before veering northwest across MCSD property and reconnecting to FOD's existing South Beach Access trail where it joins the Ridge Connection trail from the northeast (**Figure 5**). A trail map post would be provided on an entrance kiosk near the trailhead

off of Lupin Avenue, set back from the street approximately 100–120 feet, out of sight from the nearest houses to the south or southeast, and another directional trail map post may be placed approximately 550 feet from Lupin Avenue where the Ridge Connection trail joins east; this post would not be visible from the nearest houses to the south and southeast. Directional signs would include arrows with symbols, the word “Trail,” or similar wording, to direct people to designated trails. At trail junctions where there is a distinction between horse/pedestrian and pedestrian-only trails, symbols would also be included to inform visitors of the designated use(s). Signs would be designed and implemented in such a way as to minimize visual impacts on the landscape while ensuring management intent is clear to visitors and therefore have a less-than-significant impact. One approximately 20-foot section of the Ridge Connection trail would be steep and may or may not eventually include installation and maintenance of a narrow, sunken/cribbed staircase to assist pedestrians [Figure 9]. The design of these stairs is similar to other nature trails in the area and will be installed to minimize visual impacts on the landscape. The impact would be less than significant.

Mitigation: None required.

II. Agriculture and Forestry Resources.

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

Affected Environment: No agricultural resources are located within the project area.

Impact Analysis:

(a, b, c, d, e) No Impact: No farmland of any kind would be converted and the existing and proposed use is non-agricultural. Neither the subject property nor adjacent lands are in a Williamson Act contract. The areas surrounding the subject parcel are engaged primarily in open space and residential uses and the parcel (APN: 400-011-075) is zoned residential. The restoration work would not result in the loss or conversion of forest land or result in other changes in the existing environment which could result in conversion to non-agricultural or non-forest use. Based on the above, there would be no impact on agriculture and forestry resources.

Mitigation: None required.

III. Air Quality

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

Affected Environment: No heavy equipment use is planned. Occasional grass flaming and duff removal methods could be employed to treat annual invasive grasses in the project area as part of the adaptive implementation of the Restoration Plan, if necessary, due to advancing spread of nonnative grasses. Currently, flaming is not anticipated on the former Barr parcel due to the presence of native dune species and ground nesting bees among the nonnative grasses. Using temporary burn-pile fire to eliminate piles of previously removed and dried nonnative species would not be utilized on the Barr parcel, given its proximity to residential housing as detailed in the Restoration Plan. Rather, removed plant material would be transported offsite immediately following the clearing for stockpiling or burning on FOD property.

Pollutants of Concern:

Criteria pollutants are those contaminants for which ambient air quality standards have been established for the protection of public health and welfare. Criteria pollutants include ozone, carbon monoxide (CO), nitrogen dioxide, sulfur dioxide (SO₂), lead, and particulate matter with diameters of 10 (PM₁₀) and 2.5 (PM_{2.5}) microns or less. These pollutants commonly are used as indicators of ambient air quality conditions.

Criteria pollutants are regulated under the national ambient air quality standards (NAAQS) by the U.S. Environmental Protection Agency and under the California ambient air quality standards (CAAQS) by the California Air Resources Board (CARB 2014). All criteria pollutants can cause human health and environmental effects at certain concentrations. The NAAQS and CAAQS limit criteria pollutant

concentrations to protect human health and prevent environmental and property damage. Epidemiological, controlled human exposure, and toxicology studies evaluate potential health and environmental effects of criteria pollutants; these studies form the scientific basis for new and revised ambient air quality standards.

The primary criteria pollutants of concern that could be generated by the project are CO and particulate matter. Principal characteristics and possible health and environmental effects from exposure to the primary pollutants generated by the project are discussed below.

- **CO.** CO primarily is formed through incomplete combustion of organic fuels. Higher CO values generally are measured during winter, when dispersion is limited by morning surface inversions. Seasonal and diurnal variations in meteorological conditions lead to lower values in summer and in the afternoon. CO is an odorless, colorless gas that affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues. Exposure to CO at high concentrations also can cause fatigue, headaches, confusion, dizziness, and chest pain. There are no ecological or environmental effects of CO at levels at or near ambient (CARB 2022).
- **Particulate Matter.** Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulates now generally are divided into the two categories of respirable particles.
 - PM10. These particles have an aerodynamic diameter of 10 microns or less and are about 1/7th the thickness of a human hair. Major sources of PM10 include motor vehicles; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.
 - PM2.5. These fine particles have an aerodynamic diameter of 2.5 microns or less and are roughly about 1/28th the diameter of a human hair. Major sources of PM2.5 include fuel combustion (from motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves.

Particulate matter also forms when gases emitted from industries and motor vehicles, such as SO₂, nitrogen oxides, and reactive organic gases, undergo chemical reactions in the atmosphere.

Particulate pollution can be transported over long distances and may adversely affect the human respiratory system, especially for people who are naturally sensitive or susceptible to breathing problems. Numerous studies have linked particulate matter exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Depending on its composition, both PM10 and PM2.5 also can affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain.

Sensitive Receptors:

Sensitive land uses are locations where human populations, especially children, seniors, and sick persons, are found and where there is reasonable expectation of continuous human exposure according to the averaging period for the air quality standards (i.e., 24-hour, 8-hour). Typical sensitive receptors are residences, hospitals, schools, and parks. Burn piles, if utilized, would not be placed on the former Barr parcel, given the proximity of adjacent properties on Lupin, Keys, and Park Streets.

Impact Analysis:

(a, b, d) No Impact. The project would not conflict with or obstruct implementation of the applicable air quality plan. The project would not result in a cumulatively considerable net increase of any criteria pollutant for the project region under an applicable NAAQS or CAAQS. The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

(c) Less-than-Significant Impact: Fence installation would be conducted manually with a post-hole digger and hand tools. Invasive iceplant and nonnative grasses on the former Barr parcel would be removed with hand tools and the sand soils would not generate significant amounts of particulate matter. Occasional grass flaming, if utilized on the former Barr parcel, would be temporary and confined to limited areas of dense invasive nonnative grasses. Currently, no such applications are planned for the former Barr parcel because the invasive grasses are not dense enough to warrant such a method. Instead, hand treatment of the invasive grasses and iceplant would be utilized.

The project is not anticipated to generate increased recreational use of the site or other FOD properties because the trails are in existence and no new parking areas are proposed.

During brief restoration activities, including the need for re-treatment of grass removal areas, FOD anticipates approximately 40–50 total vehicle trips generated by volunteer work crews. Vehicle miles traveled would be approximately 11 miles round trip from Humboldt State University in Arcata to the HCNC parking lot, where they will then be dropped off at the Lupin Avenue entrance. Therefore, a total of 440 to 550 miles driven by volunteers to the former Barr parcel would be a less-than-significant impact on air quality.

Mitigation: None required.

IV. Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X		
d) Interfere substantially with the movement of any 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?				X

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Affected Environment:

For the purpose of this MND, special-status species are plants and animals that are legally protected under the federal Endangered Species Act (FESA), California Endangered Species Act (CESA), or other regulations, and species that are considered sufficiently rare by the scientific community to qualify for such listing. Special-status species are defined as follows.

- Species that are listed or proposed for listing as threatened or endangered under FESA (50 Code of Federal Regulations [CFR] 17.11 [listed animals], 50 CFR 17.12 [listed plants], and various notices in the *Federal Register*).
- Species that are candidates for possible future listing as threatened or endangered under FESA (81 Federal Register 87246–87272, December 2, 2016).
- Species that are listed or proposed for listing by the State of California as threatened or endangered under CESA (14 California Code of Regulations Section 670.5).
- Animals listed as California species of special concern on CDFW's Special Animals List.
- Animals listed as California fully protected species as described by California Fish and Game Code Sections 3511 (birds), 4700 (mammals), and 5050 (reptiles and amphibians).
- Plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.).
- Plants with a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, and 2B on CDFW's Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2022), and considered threatened or endangered in California by the scientific community.
- Plants designated as CRPR 3 and 4 that may warrant legal consideration if the population is locally significant and meets the criteria under CEQA Guidelines Section 15380(d).

ICF's biological team reviewed the following existing natural resource information to identify special-status species and other sensitive biological resources that could occur in the biological study area (BSA):

- California Natural Diversity Database records search of the 7.5-minute U.S. Geological Survey quadrangle containing the BSA (Eureka) and the six neighboring quadrangles (Tyee City, Arcata North, Arcata South, Cannibal Island, Fields Landing, and McWhinney) (CDFW 2022).
- California Native Plant Society (CNPS) Rare Plant Inventory records search of the 7.5-minute U.S. Geological Survey quadrangle containing the BSA (Eureka) and the six neighboring quadrangles (Tyee City, Arcata North, Arcata South, Cannibal Island, Fields Landing, and McWhinney) (CNPS 2022).

There are four special-status plant species that can be found on FOD lands, all of which are adapted to open dune mat habitats that could occur on the former Barr parcel. They are:

- Pink sand verbena (*Abronia umbellata* var. *breviflora*)
- Dark-eyed gilia (*Gilia millefoliata*)

- Beach layia
- Humboldt Bay wallflower

Pink sand verbena is a perennial herbaceous plant that is threatened by nonnative plants, vehicles, and development-related habitat loss. It is listed as a CRPR 1B.1 species. Dark-eyed gilia is a small, annual flowering species that is threatened by vehicles, development-related habitat loss, grazing, and nonnative plants, and is listed as a CRPR 1B.2 species. For CEQA purposes, both are considered rare, threatened, or endangered in California. Dark-eyed gilia is known to occur on the former Barr parcel based on recent surveys by Humboldt State University students (Cashen et al. 2020).

As of 2019 mapping efforts, the two federally listed endangered species, beach layia and the Humboldt Bay wallflower, are known from the Barr parcel [Figure 5]. Beach layia is an annual herbaceous species rarely growing more than 2 inches above the ground, while the wallflower is a monocarpic perennial herbaceous plant. Both species are threatened by loss of habitat due to development, trampling, and habitat loss by invasive nonnative plants. The Humboldt Bay wallflower is the most sensitive, also being threatened by deer browsing, sand mining, foot traffic, and poor seed persistence in the soil bank (USFWS 2022). Restoration activities would benefit these species' recovery by directly addressing two of the principal threats to the recovery of these species: habitat loss from trampling and competition with nonnative, invasive species. Monitoring and mapping of Humboldt Bay wallflower was conducted by FOD in 2008, by USFWS in 2015, and during a habitat assessment and management plan for three rare plants on the former Barr parcel (Cashen et al. 2020).

The project area contains several types of sensitive natural communities recognized by CDFW (CDFW 2022) as rare or threatened within the state of California and as ESHAs defined in the California Coastal Act and regulated by the California Coastal Commission (CCC). In addition, any plant community that contains a special-status plant, or any wetland, may also be considered an ESHA by CCC staff analysts. These plant communities include the following communities with a state rarity ranking of S3:

- Beach pine forest and woodland (*Pinus contorta* ssp. *contorta* Alliance)
- Coastal dune willow thickets (*Salix hookeriana*/*Rubus ursinus* Association)
- Dune-mat (*Abronia latifolia*/*Ambrosia chamissonis* Alliance)

The climate is characterized by cool, wet winters and dry (foggy) summers. Annual average temperatures within the project area range from 47 to 59 degrees Fahrenheit (°F), with the coolest temperatures occurring in December and January, and the warmest in August and September (Western Regional Climate Center 2020). Average annual rainfall in the project vicinity is 38 inches, most of which falls between December and March.

Impact Analysis:

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

Less than Significant with Mitigation Incorporated. In the long term, restoration activities would benefit dune-adapted special-status species by directly addressing two of the principal threats to the recovery of these species: habitat loss and competition with nonnative, invasive plant species. Furthermore, the closure of user-created routes on the former Barr parcel and in the areas between the Beach Access trail and Ridge trail that are not part of the designated trail system [Figure 6],

would consolidate access to the designated trail system and protect native habitat by reducing habitat fragmentation and direct trampling impacts by hikers and equestrians.

Restoration activities will be accomplished with no adverse impacts on visible pink sand verbena, dark-eyed gilia, Humboldt Bay wallflower, and beach layia (i.e., non-seedling, juvenile or reproductive individuals), because control activities in and adjacent to mapped special-status plant populations would be carried out with guidance from the Restoration Manager, and under supervision of trained restoration technicians or volunteers. Avoidance, minimization, and mitigation measures for avoiding impacts on special-status plant species include the adoption of **MMs BIO-1 through BIO-5**. These MMs will result in a less-than-significant impact on special-status plant populations.

Humboldt Bay wallflower:

Unintended effects on small, unseen individual seedlings could potentially occur during restoration activities because they are beyond detection. However, the probability of a Humboldt Bay wallflower individual surviving to reproduction is correlated with its size and the probability of any new seedling surviving to reproduction is less than 1% (Pickart and Sawyer 1998). Therefore, any unintended effects on small, non-visible individual Humboldt Bay wallflower seedlings would be negligible (i.e., less than 1%) in terms of reduced reproductive success in this population.

Beach layia:

Effects on beach layia will be minimized to negligible levels by avoiding areas with dense beach layia populations or restricting restoration until the period following seed dispersal, combined with proper restoration techniques when plants are not flowering or dispersing seed. Populations will be surveyed, flagged for avoidance, and population responses monitored as part of the **MM BIO-1a**.

Dark-eyed gilia and pink sand verbena:

Effects on dark-eyed gilia and pink sand verbena will be minimized to negligible levels by the Restoration Manager surveying restoration work sites in advance for occurrences of these species and identifying any occurrences (**MM BIO-1**), avoidance of restoration in areas of occurrence, when possible (**MM BIO-2**), and plant identification training conducted by the Restoration Manager for restoration technicians and restoration volunteers to aid in impact avoidance (**MM BIO-3**).

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

Less than Significant with Mitigation Incorporated.

Sensitive Natural Communities

Much of the former Barr parcel that has not yet been invaded by nonnative plants could be considered a sensitive natural community (i.e., dune mat, beach pine, willow thicket) or a wetland ESHA. Both the northern and southern portions of the former Barr parcel are invaded by invasive annual grasses or iceplant [**Figure 5**]. Restoration and maintenance of degraded dune mat habitat would increase the amount of high-quality dune mat ESHA on the parcel and **MMs BIO-2 and BIO-6** would result in a less-than-significant impact on special-status plant habitat by defining sensitive natural communities and wetland habitats through identification, flagging, education, avoidance, and monitoring.

Wetlands

Wetlands are present throughout the FOD property and the former Barr parcel [**Figure 6**], and require special consideration to protect their ecological services. Wetlands will be defined as, if under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to

cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation (SWRCB 2018).

Wetland Restoration

Wetlands will be delineated by the Restoration Manager prior to the staging and stockpiling of any restoration activities or workers passing through wetland areas on or off trail as part of **MM BIO-6**. Restoration of wetlands on FOD property could include removal of invasive plant species from wetland habitats, including the invasive Himalayan blackberry mapped in and adjacent to a wetland on the South Beach Access trail on the former Barr parcel (Cashen et al. 2020), or other existing or future invasive plants discovered while managing FOD lands. Correspondence with the North Coast Regional Water Quality Control Board (RWQCB) (Bargsten pers. comm.[a]), has clarified that invasive species removal would not normally rise to the need for a dredge and fill 401 Water Quality Certificate permit unless it permanently and adversely affects waters and wetlands of the state. Similarly, following a site visit to FOD properties in 2018, it was noted that the RWQCB Restoration Policy recognizes "that there may be short term impacts to waters of the state that may be necessary in order to remedy issues like invasive species that will bring about better functions and conditions in the future and improvement of the entire ecosystem." (Bargsten pers. comm.[b]). As a result, the direct effects of wetland restoration would have a less-than-significant impact on wetlands with mitigation.

c. Have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means?

Less than Significant with Mitigation Incorporated.

As discussed under (b) above, wetlands will be delineated by the Restoration Manager prior to the staging and stockpiling of any restoration activities or workers passing through wetland areas on or off trail as part of **MM BIO-6** and staff will be trained to avoid mapped sensitive habitats (**MM BIO-2 and MM BIO-3**) so that no direct impacts on wetlands would occur.

The coast around Humboldt Bay in the Eureka Littoral Cell supports a vast dune system that stretches nearly continuously for 34 miles (Pickart and Sawyer 1998) and dune restoration around Humboldt Bay has generally been received favorably by the public (Tam 2011). However, a few individuals have expressed concerns that the removal of invasive grasses could be destabilizing and result in a lowering of the foredune, increasing vulnerability to storm-caused erosion (Walters 2011). Qualitative and quantitative observations at the Lanphere Dunes restoration area indicated that immediately following eradication of European beachgrass, foredune elevation decreased, but recovered as native species, including American dune grass (*Elymus mollis*), recolonized the area (Pickart and Sawyer 1998; Pickart 2014). Further, despite public concern that removal of invasive European beachgrass could alter foredune height, it was found that 30 years of restored and invaded foredune areas had no significant difference in height, suggesting that other factors besides restoration control foredune height (McDonald 2020).

Interior dunes tend to have less dynamic sand movement than the large dune lenses seen in the nearby Ma-le'l and Lanphere Dunes north of the project. Field analysis of the existing deflation plain at the FOD property compared against historic aerial imagery appears to indicate there is no noticeable encroachment of sand into wetlands on the FOD property (Pickart pers. comm.). The FOD Restoration Plan posits that this could be a result of the slow pace of restoration necessitated by engaging community volunteers to conduct the restoration work and the longstanding practices of conducting restoration in a checkerboard pattern and leaving a strip of European beachgrass on the seaward side of each foredune restored area until colonization by native plants has occurred (FOD 2021).

Furthermore, at large scales, restoration and vegetation type were not found to drive sand mobility in

the region of the project. A chronological series of historic aerial photographs, in addition to an 1870 U.S. Coast Survey map, were used to document the evolution of the coastal barrier and transgressive dunefield system at the Lanphere-Ma-le'l Dunes between 1870 and 2016 (Pickart and Hesp 2019). The authors mapped distinct dune morphological units (i.e., shorelines, foredunes, blowouts, parabolic dunes, deflation basins, and dunefields) at decadal intervals and compared among three areas with contrasting biological invasion and land management histories. Biological invasions of bush lupine in the north and European beachgrass in the south contributed to stabilization after 1965, but parallel increases of native vegetation in other areas suggest a larger-scale driving force shaping dune morphology and mobilization. In fact, the stability of the dune system reached its maximum extent in 2000, despite erosional effects of the 1998–2000 La Niña event, and multiple invasive plant removal projects in the 1990s. Instead, the authors argue that the absence of relict foredunes in the study area and elsewhere on the North Spit barrier, suggests that the foredune-blowout-parabolic dune complex may build to quite large proportions for some time, and then be destroyed or destabilized to such a degree that the sediments comprising the complex are released to form a new dunefield phase, at large-scale and irregular intervals, often associated with catastrophic events (i.e., climate forcing, the 1963 flood, historic earthquakes) (Pickart and Hesp 2019).

Therefore, there is not a strong argument that significant impacts on wetlands could occur, either directly or indirectly, as a result of the project.

(d, e, f) No Impact: The site contains no known native resident or migratory fish or wildlife corridors or native nursery areas and if corridors were present, the project would not affect them because there would be no tree removal as part of the project. Local policies promote dune restoration and the protection of ESHAs and wetlands. There are no habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans for the project location; thus, the project does not conflict with any such plans.

The project is consistent with the Humboldt Bay National Wildlife Refuge Complex Comprehensive Conservation Plan/Final Environmental Assessment (CCP/EA) that was prepared for the northern dune additions to Humboldt Bay National Wildlife Refuge (USFWS 2009). The proposed project is consistent with Goal 2 of the CCP/EA, which is to “Conserve and restore globally rare dune and dune forest habitats, and support recovery of threatened, endangered and endemic species.” The proposed project is also consistent with Goal 3 of the CCP/EA, which is to “Conserve and restore all refuge habitats through prevention and control of invasive plants and animals.”

The proposed project is consistent with the Recovery Plan for the Humboldt Bay wallflower and beach layia (USFWS 1998), which calls for additional restoration through removal of European beachgrass. The proposed project is also consistent with the development policies detailed in Section 3.27, *RECREATION*, and Section 3.30, *NATURAL RESOURCES PROTECTION POLICIES AND STANDARDS* of the Humboldt Bay Area Plan of the Humboldt County Local Coastal Program (LCP) (Humboldt County 2014). The Humboldt County LCP was effectively certified by the California Coastal Commission in 1986 and has policies to protect ESHAs including dune habitats. The LCP was amended in 1993 to incorporate the Beach and Dunes Management Plan (Humboldt County 1993). The Humboldt County LCP is found in Appendix E of the Humboldt County General Plan (Humboldt County 2017).

Mitigation:

Mitigation Measure BIO-1: Conduct Biological Survey, Establish Avoidance Measures, and Monitor Populations. Areas subject to disturbance during implementation of the Restoration Plan will be surveyed by the Restoration Manager or a qualified botanist appointed by the Restoration Manager before the commencement of any restoration work. The botanical surveys will occur during seasonally appropriate periods of time in accordance with CDFW-recommended

protocols for surveying and evaluating impacts on special-status plants (CDFW 2018). The botanical surveys will recommend avoidance measures and the FOD plans to monitor populations following restoration activities. Any restoration work in occupied areas will be directly overseen by the Restoration Manager to avoid the disturbance or removal of endangered plant species. Further, the following species-specific measures have incorporated the USFWS comment pertaining to their approval of the CDP application amendment (Tharratt 2017; Watkins 2015).

- a. **Beach layia:** Plants are most sensitive during the flowering period (typically March to July) when flowers could be crushed preventing seed dispersal. During this season, restoration work will avoid areas with dense beach layia populations, particularly prior to their going to seed in July, and the treatment method will be limited to hand pulling or manual digging of invasive species after they have gone to seed. Any beach layia population boundaries present will be clearly identified and flagged (**MM BIO-2**), and the flagging monitored during work days.
- b. **Humboldt Bay wallflower:** Restoration activities will generally avoid areas with individual plants. When wallflowers are present in areas of active restoration, all visible plants will be marked with an adjacent pin flag by the Restoration Manager to avoid trampling through careful avoidance of the species locations. The treatment method in these areas will be limited to hand pulling or manual digging of invasive species.
- c. **Other special-status plants:** The Restoration Manager or a qualified botanist appointed by the Restoration Manager will survey and map any other special-status plant populations during seasonally appropriate periods prior to implementation of any restoration plan.

Mitigation Measure BIO-2: Delineate Work Limits to Avoid Sensitive Biological Resources. Before starting restoration projects, sensitive biological resource areas within and adjacent to restoration work areas will be staked and flagged by the Restoration Manager or biological monitor (**MM BIO-1**) so that any potential impacts on the plant populations or sensitive resources may be avoided. Any demarcated areas will be inspected daily throughout work periods to ensure that they are visible for all restoration personnel. Any piles of removed nonnative plants or other work-related materials will be located outside of all the flagged special-status plant or other sensitive biological resource areas, preferably in areas of clear sand to avoid native dune mat plant species to the extent feasible.

Mitigation Measure BIO-3: Provide Worker Environmental Awareness Training. Work crews will be trained to identify and avoid sensitive biological resource areas. The FOD will provide environmental awareness training before starting restoration activities for all technician or volunteer personnel (including new personnel as they are added to the project). This training will be given by the Restoration Manager, or other qualified botanist appointed by the Restoration Manager, to help the trainees understand the following:

- Surrounding common and special-status species and their habitats
- Sensitive natural communities and ESHAs
- Applicable regulatory requirements
- Specific avoidance measures prescribed by the Restoration Manager or appointed botanist to minimize impacts on sensitive resource areas

Mitigation Measure BIO-4: Limit Use of Grass Flaming in Sensitive Areas: Grass flaming and duff removal methods will not be utilized in areas known to be occupied by special-status plants based on seasonally appropriate botanical surveys conducted the season proceeding restoration projects (**MM BIO-1**).

Mitigation Measure BIO-5: Yellow Bush Lupine Treatment. Removal of yellow bush lupine in special-status plant areas will take place following seed dispersal for beach layia (after June 30). However, if mature lupine pods are present in these areas, the Restoration Manager could carefully remove them.

Mitigation Measure BIO-6: Delineate Wetlands. Areas subject to disturbance during implementation of the Restoration Plan will be surveyed by the Restoration Manager or a qualified wetland scientist appointed by the Restoration Manager and any wetlands encountered will be flagged. The Restoration Manager will be able to identify wetland traits and vegetation, and restoration technicians, work crews, and volunteers will be trained to identify wetland traits and vegetation to ensure avoidance of wetlands during or on the way to restoration activities. Work crews and volunteers will be overseen by the Restoration Manager or by restoration technicians when working adjacent to an area with wetland vegetation (**MM BIO-1**). Routes to off-trail work sites will avoid wetlands.

V. Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

Affected Environment:

The California Historical Resources Information System (CHRIS) Northwest Information Center (NWIC) in Rohnert Park maintains the California Office of Historic Preservation cultural resource records for Humboldt County. On June 2, 2015, the NWIC provided record search results for the project area. The records noted that an archaeological study was conducted over the entire former Barr parcel and found no cultural resources (study #866, Benson et al. 1977). THPOs from the Bear River Band of the Rohnerville Rancheria, Blue Lake Rancheria, and Wiyot Tribe were also referred to the project. The Wiyot Tribe stated that since the restoration work would create a minimum of ground disturbance and would not disturb any known cultural resources that the project could be conditioned with only an inadvertent discovery protocol. The Blue Lake Rancheria and Bear River Band of the Rohnerville Rancheria THPOs noted that a field visit was conducted in 2014, recommended approval with no further study, and recommended the project also be conditioned with an inadvertent discovery protocol.

Impact Analysis:

(a, b, c) Less than Significant with Mitigation Incorporated. As described in the Restoration Plan (Attachment A), cultural resources management will be integrated into this plan by the following:

- As funding allows, the Executive Director will coordinate with the Wiyot area THPOs to obtain the services of a qualified professional archaeologist with local experience to design a research plan and supervise a complete, systematic survey of the property included in this Restoration Plan. Work will be performed in accordance with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 *Federal Register* 44716), and guidance on formal site recordation per the CHRIS survey coverage may be completed in blocks of land, based on priorities for restoration activities and on predictive models of archaeological

sensitivity.

- The Restoration Manager will provide volunteers, as part of the orientation before every restoration event, a Wiyot Land Acknowledgement, and the inadvertent discovery protocol (**MM CUL-1**).

The Wiyot Tribe stated that since the restoration work would create a minimum of ground disturbance and would not disturb any known cultural resources that the project could be conditioned with only an inadvertent discovery protocol. The impact is less than significant with implementation of **MM CUL-1**.

Mitigation:

Mitigation Measure CUL-1: Inadvertent Discovery Protocol. If cultural resources are encountered during construction activities, the contractor onsite will cease all work in the immediate area and within a 50-foot buffer of the discovery location. A qualified archaeologist and the appropriate THPOs will be contacted to evaluate the discovery and, in consultation with the applicant and the lead agency, develop a treatment plan in any instance where significant impacts cannot be avoided.

Prehistoric materials may include obsidian or chert flakes, tools, locally darkened midden soils, groundstone artifacts, shellfish or faunal remains, and human burials. If human remains are found, California Health and Safety Code Section 7050.5 requires that the County Coroner be contacted immediately at 707-445-7242. If the Coroner determines the remains to be Native American, the Native American Heritage Commission (NAHC) will then be contacted by the coroner to determine appropriate treatment of the remains pursuant to Public Resources Code (PRC) Section 5097.98. Violators will be prosecuted in accordance with PRC Section 5097.99.

VI. Energy

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

Affected Environment:

No energy-demanding development is planned.

Impact Analysis:

(a, b) No Impact: Habitat restoration work would be completed by hand using no mechanized equipment. Volunteers and FOD staff trips to restore the parcel or repair, replace, or install fences, trail signs, and a staircase were determined to not be excessive, wasteful, or to conflict with local plans. Therefore, no impacts related to energy resources would occur.

Mitigation: None required.

VII. Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
<p>Affected Environment:</p> <p>Humboldt County is a relatively hazardous area in terms of land sliding and soil erosion, and an extremely hazardous area in terms of ground shaking and fault rupture. Humboldt County is located within two of the highest of five seismic risk zones specified by the Uniform Building Code. The subducting Gorda and Juan de Fuca Plates form the Cascadia Subduction Zone, which runs north offshore of Humboldt County, Del Norte County, Oregon, and Washington. Research shows that this system produced a series of great earthquakes (magnitude 8 to 9) over the last 20,000 years at intervals of 300–500 years. The last great earthquake occurred about 300 years ago (Humboldt County 2017).</p> <p>The coastal topography of the Samoa Peninsula is predominantly flat to gently rolling, with dunes on the landward side of the beach. The Samoa Peninsula is made up of typically well-drained soils (coarse sands) and topographic features that do not require addressing runoff issues.</p> <p>Impact Analysis:</p> <p>(a.i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?</p>				

No Impact: The project site is outside an Alquist-Priolo Earthquake Fault Zone. The subject parcel is in an area mapped on the County's Geologic Hazard Map as having low to moderate instability (Humboldt County 2022). Proposed restoration activities that increase diversity and enhance natural dune processes would not produce substantial erosion. All activities associated with the project would not expose people or structures to potential substantial adverse effects from rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure. The project is not within an area subject to landslides (Humboldt County 2022); therefore, the project would not expose people or structures to risk of lost, injury, or death involving known earthquake faults.

(a ii, iii) Strong seismic ground shaking? Seismic-related ground failure, including liquefaction? Landslides?

Less-than-Significant Impact: The project site is partially located in the tsunami evacuation zone. In the Manila area, restoration has focused primarily on the foredune and the relatively low dune ridges east of it. To the west, north and south of the site are parabolic dunes that have been partially or wholly stabilized. Local geomorphologists agree that any protection the foredune would provide, especially in the case of a major Cascadia earthquake event, would be minimal. The current potential tsunami inundation mapping from the California Geologic Survey (CGS) suggests the worst-case tsunami scenario would completely overtop the foredunes on the entire North Spit regardless of whether or not restoration is done on the foredune, or interior dunes. According to the CGS, the large parabolic dunes inland from the coastline (for example, the dunes west of the community of Manila) are what provide the community of Manila refuge from direct oceanic tsunami surges, although most of the peninsula would subsequently be inundated. Inundation of Manila, when and if it occurs during the largest of tsunamis, would most likely occur due to surges transmitted into the Humboldt Bay (eastern) side of the community, not from the side protected by the large coastal dunes. Restoration does not increase the community's vulnerability to tsunamis and continues to be important in helping to restore ecological resiliency to a rare habitat (Cal Poly Humboldt 2022; Hart and Knight 2009). Additionally, the nearby tsunami evacuation site is well marked and visitors would be directed to go there in the case of a large earthquake or tsunami siren.

The subject site is in an area mapped as potential liquefaction (Humboldt County 2022). The proposed project is not expected to place people at an increased additional risk as the potential liquefaction is not confined the FOD property and would generally affect the broader region.

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

Less-Than-Significant Impact: The Humboldt County Beach and Dune Management Plan states "restoration activities which remove exotic species could potentially trigger erosional effects, and such effects may in turn impact adjacent habitats and uses." Vegetation restoration activities would address potential erosional impacts in their design and implementation (Humboldt County 1993).

The Samoa dunes complex (Lanphere, Ma-le'I, FOD, MCSD, Samoa) generally consist of a younger system of active or recently stabilized dunes, and an older system of stabilized paleodunes (Pickart and Hesp 2019). Within this dune complex, several alternating and dynamically changing dune ecosystems can be found, including foredunes nearest the ocean and alternating or recurring series of dry sandy ridges, wetlands within deflation basins, and dune forest (Green 1999). Dune systems are naturally dynamic and sculpted by the interaction of sand deposition rates, predominant wind directions, and wind-breaks such as younger dunes and woody vegetation. At large scales, parabolic dune lenses can be seen to overrun forested dunes (Alpert and Kagan 2019). Dune systems offer important advantages and protection in the face of climate change, increased coastal erosion and flooding, and longer-term sea-level rise (Davidson-Arnott 2005; Pickart 2013). Because dunes are dynamic systems, dune migration and maintenance often involve foredune erosion and scarping and blowout formations that help the system maintain resilience in the face of large wave events

that move landward. Occasional storm-related erosion and overwash may occur locally but are generally infrequent events (Martínez and Psuty 2007; Nordstrom et al. 1997; Walker et al. 2013).

The former Barr parcel is in an area of back dune comprised in approximately equal proportions of bare open back dune and coastal forest [Figure 2]. Removal of invasive nonnative grasses or iceplant is not anticipated to measurably increase sand erosion rates within multi-decadal time scales given the following:

- (1) The low-disturbance hand removal methods where populations of these species occur [Figure 5].
- (2) The geomorphological position and slow mobility of the sand dune migration in the area.
- (3) The Restoration Plan's (Attachment A) voluntary agreement to preserve the iceplant currently existing within 100 feet of Lupin Avenue or the adjacent private residential property line to the east due to neighbor perceptions of sand mobility. This population will be photo- and GPS-documented at its current extent, after clearing to the 100-foot boundary. Any iceplant growth beyond the documented 100-foot border will be removed to protect surrounding habitat and immediately transported off the property via the Lupin Avenue access point.

Therefore, the project would not affect soil erosion on the former Barr parcel.

(c, d, e, f) No Impact: The project is not on geologic units or soils that are unstable or that would become unstable as a result of the project (Humboldt County 2022). The project would not result in the creation of new unstable areas either onsite or offsite due to physical changes in a hill slope affecting mass balance or material strength. The project site is not on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994); therefore, the project will not create substantial risks to life or property. There are no septic tanks or alternative wastewater disposal systems proposed as part of the project. There are no known paleontological resources in the area. The project would have no impact on the above-mentioned resources.

Mitigation: None required.

VIII. Greenhouse Gas Emissions

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

Affected Environment: A greenhouse gas (GHG) is defined as any gas that absorbs infrared radiation in the atmosphere. These gases include, but are not limited to, carbon dioxide (CO₂), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. These GHGs lead to the trapping and buildup of heat in the atmosphere near the earth's surface, commonly known as the *greenhouse effect*. There is overwhelming scientific consensus that human-related emissions of GHGs above natural levels have contributed significantly to global climate change by increasing the concentrations of the gases responsible for the greenhouse effect, which causes atmospheric warming above natural conditions. Because GHG emissions are known to increase atmospheric

concentrations of GHGs, and increased GHG concentrations in the atmosphere exacerbate global warming, a project that adds to the atmospheric load of GHGs adds to the problem.

In 2002 the California legislature declared that global climate change was a matter of increasing concern for the state's public health and environment, and enacted law requiring the California Air Resources Board to control GHG emissions from motor vehicles (Health and Safety Code Section 32018.5 et seq.). In 2006, the California Global Warming Solutions Act (Assembly Bill 32) definitively established the state's climate change policy and set GHG reduction targets (Health and Safety Code Section 38500 et seq.). While methodologies to inventory and quantify local GHG emissions are still being developed, recommendations to reduce GHG emissions will be accomplished from a combination of policies, planning, direct regulations, market approaches, incentives, and voluntary efforts.

Impact Analysis:

(a) Less-than-Significant Impact: The proposed restoration work would generate very minimal GHG emissions because all work would be conducted by hand using hand tools for brief periods a year and not occur every year. The project is not anticipated to generate increased recreational traffic to FOD properties. According to FOD (pers. comm.), many of the FOD volunteer staff that would be conducting the work live in Manila, are students in Arcata, or are located in the Humboldt Bay area. Based on past comparable restoration projects, FOD anticipates approximately 40–50 total vehicle cumulative trips generated by volunteer work crews. Vehicle miles traveled would be approximately 11 miles round-trip from Humboldt State University in Arcata to the HCNC parking lot, where they will then be dropped off at the Lupin Avenue entrance. Therefore, a cumulative total of 440 to 550 miles driven by volunteers to the former Barr parcel would be a less-than-significant impact on GHG emissions because this would represent approximately 222 kilograms of CO₂ and a typical passenger vehicle emits about 4.6 metric tons (4,600 kilograms) of CO₂ per year (EPA 2022).

Mitigation: None required.

IX. Hazards and Hazardous Materials

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

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?				X

Affected Environment:

The term *hazardous material* is defined by the State of California, Health and Safety Code, Chapter 6.95, Section 25501(o) as "any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment."

Impact Analysis:

(a, b, c, d, e, g) No Impact: The project would not store, transport, or use hazardous materials. The project site is not included on a list of hazardous material sites (DTSC 2018). The project site is not in an airport land use plan and there are no private airstrips in the vicinity of the project site (Humboldt County 2017, 2022). The project site has a fire hazard severity rating of nil (Humboldt County 2022). Therefore, the proposed project would have no impact related to hazards and hazardous materials.

(f) Less-than-Significant Impact: The project site is partially located in the tsunami evacuation zone. The nearby tsunami evacuation site is well marked and visitors would be directed to go there in the case of a tsunami siren. The proposed project is not expected to exacerbate this existing hazard and would not interfere with emergency response plans.

Mitigation: None required.

X. Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?				X
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner, which would:				X
(i) result in substantial erosion or siltation on- or off-site;				X
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;				X

(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or				X
(iv) impede or redirect flood flows?				X
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X

Affected Environment:

The surface water resources near the project site include the Pacific Ocean to the west and Humboldt Bay to the east. The entire project area is within the Eureka Plain watershed. The watershed encompasses Humboldt Bay and the watersheds that drain into Humboldt Bay—primary among them, Jacoby Creek, Freshwater Creek, Salmon Creek, and Elk River. Wetlands are present throughout the FOD property and the former Barr parcel [Figure 6] and require special consideration to protect their ecological services. As discussed in Section IV, *Biological Resources*, recent correspondence with the North Coast RWQCB (Bargsten pers. comm.[a],[b]), has clarified that invasive species removal would not normally rise to the need for a dredge and fill 401 Water Quality Certificate permit unless it permanently and adversely affects waters and wetlands of the state.

Impact Analysis:

(a, b, c, d, e) No Impact: The project would not discharge any substances, waste, or pollutants onto the ground. The project would not utilize any groundwater supplies. The project site is not in a water quality control plan area or sustainable groundwater plan, nor in a groundwater basin. There are no streams or other watercourses on the project site, nor does the project include the addition of impervious surfaces. The project would have no impact on hydrology or water quality. As noted above, the project site is in a tsunami evacuation zone; however, there is no risk of release of pollutants associated with the proposed project.

Mitigation: None required.

XI. Land Use and Planning

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

Affected Environment:

The Samoa Peninsula is a sparsely populated, narrow coastal landform known as a spit that forms a barrier between the Pacific Ocean to the west and Humboldt Bay to the east. Connected to the mainland on the northern end, it is accessible from the city of Arcata, which is at the north end of Humboldt Bay. Existing land uses in the project vicinity are undeveloped dune systems to the north, MCSD holding ponds to the west, and residential uses generally concentrated in the unincorporated community of Manila to the south and east, which predominantly have single-family residences with some multifamily developments.

Impact Analysis:

(a and b) No Impact: The project would provide habitat restoration and trail work on undeveloped land. No aspect of the project would physically divide an established community. The land uses would not change and there would be no land use impact.

Mitigation: None required.

XII. Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
Affected Environment: No mineral resource areas of value to the region or residents of the state, or of local importance are present near the project (Division of Mine Reclamation 2016). The closest active quarry (stone) is the Halvorsen Quarry northeast of the city of Eureka.				
Impact Analysis: (a, b) No Impact: The project does not involve extraction of mineral resources. The project site is not adjacent to a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Therefore, the proposed project would have no impact on mineral resources.				
Mitigation: None required.				

XIII. Noise

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive groundborne vibration or ground borne noise levels?				X
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
Affected Environment: Noise-sensitive land uses generally are defined as locations where people reside or where the presence of unwanted sound could adversely affect use of the land. Noise-sensitive land uses typically include single-family and multifamily residential areas, health care facilities, lodging facilities, and schools. Recreational areas where quiet is an important part of the				

environment also can be considered sensitive to noise. There are three residences within 100 feet of Lupin Drive access gate replacement project.

The ambient noise environment in the project area and in the vicinity is characteristic of a rural environment (e.g., minimal local traffic and aircraft overflights, industrial noise sources). Vehicle traffic on local roadways such as New Navy Base Road and Lupin Avenue, all-terrain vehicles on the beach, and aircraft overflight noise are the dominant noise sources in the area. Natural noise sources, such as bird vocalizations, leaves rustling in the wind, and waves breaking at the shoreline, are also audible in the project area.

Impact Analysis:

(a) Less-than-Significant Impact: The project would create short-term noise associated with removal of the existing gate and installation of the new entry gate. These would be noises normally associated with small house-improvement type construction. Construction is anticipated to involve hand tools and to occur for a maximum of 3 days during daylight hours only. Work crews would notify the residents of work days as a courtesy. Therefore, the temporary noise impacts of construction would be a less-than-significant impact.

(b and c) No Impact. No aspect of the proposed project would create excessive groundborne vibration or groundborne noise levels. The project site is out of the vicinity of any private airstrip or airport use plan, and more than 2 miles from any airport. There is no evidence that project activities would generate substantial noise exceeding that which is normal for the area and allowable by Humboldt County Code.

Mitigation: None required.

XIV. Population and Housing

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

Affected Environment: The former Barr parcel site is in Census Tract 13, Census County Division Manila 45414 in Humboldt County, which covers the Manila area on the Samoa Peninsula, has an estimated population of 1,320 (US Census 2022). No federal or state laws relevant to population and housing apply to the project. The project would not involve acquisition of any property or relocation of any existing residents, businesses, or other uses. No housing goals or policies are applicable to the project area or project activities.

Impact Analysis:

(a, b) No Impact: There is no housing proposed as part of the project; therefore, there would be no impact on population and housing.

Mitigation: None required.

XV. Public Services

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Fire protection?				X
b) Police protection?				X
c) Schools?				X
d) Parks?				X
e) Other public facilities?				X
<p>Affected Environment: Because the restoration site is in an unincorporated area known as Manila, the city of Arcata would provide most of the fire, police, and school services.</p> <p>Impact Analysis:</p> <p>(a, b, c, d, e) No Impact: The project would demarcate existing trails and restore habitat and would support the existing population. There is no evidence that it would generate a need for new public service buildings or additional services. Therefore, the project would have no impact on public services.</p> <p>Mitigation: None required.</p>				

XVI. Recreation

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	
<p>Affected Environment: The project focuses on developing managed public access through designating two of several existing user-created (informal) routes to establish a pedestrian/equestrian trail that provides access to the beach and connection to other trails, and a narrow, carefully managed pedestrian-only trail through rare and sensitive plant habitat that is being negatively affected by foot traffic. To promote responsible public access on the parcel, FOD proposes to do the following.</p> <p>(1) Create a trailhead allowing equestrian and pedestrian access at 365 Lupin Avenue in Manila by replacing the existing gate with an equestrian-friendly gate that prevent off-highway vehicle access, with a "No Parking" sign [Figure 8].</p> <p>(2) Establish two designated trails on a trail map post directing hikers and equestrians from the trailhead of the South Beach Access trail (equestrian and pedestrian) and the Ridge</p>				

Connection trail (pedestrian only), both of which will connect to existing trails leading to and from HCNC or the beach [Figures 7 and 10].

- (3) Close unauthorized user-created routes [Figure 6] to consolidate use onto the designated trail system and facilitate restoration activities for two endangered plants and native dune mat communities considered a rare or sensitive habitat by CDFW and an ESHA under the California Coastal Act.
- (4) Install a crib staircase [Figure 9] and symbolic rope fence as needed on the pedestrian-only Ridge Connection trail to reduce erosion and demarcate a clear trail through the dune mat sensitive natural community. If these measures are not sufficient to protect sensitive habitat, the trail will be rerouted to mitigate for impacts at a future date.

Within the vicinity of the project are the Manila Dunes park to the west which cross public lands managed by MCSD and which are also accessed from Lupin Drive. The Manila Community Park and the Manila Bay Community Disc Golf course are east on Lupin Drive until it turns into Manila Drive, approximately 0.25 mile east of the project's access gate.

Impact Analysis:

(a, b) Less-than-Significant Impact: The project includes managing access to a neighborhood trailhead by replacing a fence with one that more easily permits equestrian traffic. Access to the trailhead would only be restricted during the maximum of 3 days of construction that is anticipated. User-created trails would be consolidated to two existing trails, which would be more clearly demarcated with trail signs. The closure of user-created routes in the areas between the Beach Access trail and Ridge trail are required to balance the needs of the sensitive plant community with the neighborhood hiking and equestrian traffic. The existing trails are actively maintained by the FOD and their consolidation to fewer trails is not anticipated to significantly degrade the habitat or recreation ability on the remaining trails in existence. It is not anticipated that it would substantially increase the use of the trail such that substantial physical deterioration would occur. Therefore, the trail improvements/consolidation and habitat restoration will result in a less-than-significant impact on recreation use on lands managed by MCSD, FOD, or BLM.

Mitigation: None required.

XVII. Transportation

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?				X
b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?				X
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
d) Result in inadequate emergency access?				X
Affected Environment: The project trailhead on Lupin Drive is accessed from State Route 255 (Samoa Boulevard) south and west from Arcata. Lupin Drive is not part of the County circulation system. Lupin Road may be partially encroached upon as part of the gate replacement effort that is				

estimated to take a maximum of 3 days. The managed access and dune invasive plant removal efforts are not anticipated to increase traffic to the FOD-managed lands, given the majority of visitors access FOD property from the HCNC parking lot on Stamps Road and there is no parking on Lupin Avenue. Instead, it is anticipated that the majority of users of the Lupin Avenue trailhead will be local pedestrians, cyclists, and equestrians.

Impact Analysis:

(a, b, c, d) No Impact: The project would not block any roads or change traffic volume on area roadways including Lupin Avenue and State Route 255; therefore, the project would not conflict with established measures of effectiveness stated in a plan, ordinance, or policy.

CEQA requires analysis of a project's potential growth-inducing impacts (PRC Section 21100, subd. (b)(5); CEQA Guidelines Section 15126.2, subd. (d)). CEQA Guidelines Section 15064.3(b) indicates that vehicle miles traveled is the most appropriate measure for transportation impacts. In December 2018, the Governor's Office of Planning and Research provided an updated Technical Advisory to evaluate transportation impacts in CEQA. In particular, the advisory suggests that a project generating or attracting fewer than 110 one-way trips per day generally may be assumed to cause a less-than-significant transportation impact (OPR 2018).

Given the trail improvements and restoration is not anticipated to generate additional recreation traffic, the only traffic generated would be that used during construction of the replacement gate, installation of trail signs, and volunteer and FOD staff trips to conduct restoration work. All construction and restoration activities, including the need for re-treatment of grass removal areas, would generate approximately 40–50 total vehicle trips by volunteer work crews. Vehicle miles traveled would be approximately 11 miles round-trip from Humboldt State University in Arcata to the HCNC parking lot, where they would then be dropped off at the Lupin Avenue entrance. Therefore, a cumulative total of 440 to 550 miles driven (over next 10 years) by volunteers to the former Barr parcel would be a less-than-significant impact on vehicle miles traveled at a rate less than generating one new one-way trip per day.

The trailhead gate would be designed to accommodate neighborhood access and emergency vehicles, and no additional parking would be provided as a part of the project. There would be no anticipated impacts on emergency access. There is no evidence that the proposed project would affect transportation infrastructure.

Mitigation: None required.

XVIII. Tribal Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resource Code section 5020.1(k), or		X		

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

X

Affected Environment: Under Assembly Bill 52, lead agencies must avoid damaging effects on tribal cultural resources, when feasible, whether consultation occurred or is required. Humboldt County Planning contacted the NAHC, which maintains two databases to assist specialists in identifying cultural resources of concern to California Native Americans (Sacred Lands File and Native American Contacts). A request was sent to the NAHC for a Sacred Lands File search of the project area and a list of Native American representatives who may be able to provide information about resources of concern within or adjacent to the project area.

On June 2, 2015, the NWIC provided record search results for the project area. The records noted that an archaeological study was conducted over the entire former Barr parcel which found no cultural resources (study #866; Benson 1977). The THPOs from the Blue Lake Rancheria, Bear River Band of the Rohnerville Rancheria, and Wiyot Tribe were also referred to the project. Dr. Thomas Torma, Cultural Director of the Wiyot Tribe responded on June 5, 2015. Erika Cooper, THPO for the Bear River Band of Rohnerville Rancheria and Janet Eidsness, THPO for the Blue Lake Rancheria responded on June 16, 2015.

Impact Analysis:

(a i, ii) Less than Significant with Mitigation Incorporated: The three responding tribes noted that since the restoration work would create a minimum of ground disturbance and would not disturb any known cultural resources that the project could be conditioned with only the inadvertent discovery protocol (**MM CUL-1**). Further, as described in Section V, *Cultural Resources*, the Restoration Plan (Attachment A) has integrated respect and concern for cultural resources into their restoration planning by implementing the following:

- As funding allows, the Executive Director will coordinate with the Wiyot area THPOs to obtain the services of a qualified professional archaeologist with local experience to design a research plan and supervise a complete, systematic survey of the property included in this Restoration Plan. Work will be performed in accordance with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 *Federal Register* 44716), and guidance on formal site recordation per the CHRIS survey coverage may be completed in blocks of land, based on priorities for restoration activities and on predictive models of archaeological sensitivity.
- The Restoration Manager will provide volunteers, as part of the orientation before every restoration event, a Wiyot Land Acknowledgement, and the inadvertent discovery protocol (**MM CUL-1**).
- For any archaeological sites recorded on the property, the Executive Director and Restoration Manager will coordinate with THPOs and avoid ground-disturbing restoration activities in these areas in order to protect cultural resources.

Mitigation:

Mitigation Measure CUL-1: Inadvertent Discovery Protocol. If cultural resources are encountered during construction activities, the contractor onsite will cease all work in the immediate area and within a 50-foot buffer of the discovery location. A qualified archaeologist and the appropriate THPOs will be contacted to evaluate the discovery and, in consultation with the applicant and the

lead agency, develop a treatment plan in any instance where significant impacts cannot be avoided.

Prehistoric materials may include obsidian or chert flakes, tools, locally darkened midden soils, groundstone artifacts, shellfish or faunal remains, and human burials. If human remains are found, California Health and Safety Code Section 7050.5 requires that the County Coroner be contacted immediately at 707-445-7242. If the Coroner determines the remains to be Native American, the NAHC will then be contacted by the coroner to determine appropriate treatment of the remains pursuant to PRC Section 5097.98. Violators will be prosecuted in accordance with PRC Section 5097.99.

XIX. Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?				X
b) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?				X
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?				X
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X

Affected Environment: The MCSD provides wholesale and retail water services to the Manila community. The water services district maintains two separate pipeline systems delivering treated drinking water and untreated raw water (for irrigation purposes) to its customers in the area. The project would not use any water for operations.

Impact Analysis:

(a, b, c, d, e) No Impact: The proposed project is for habitat restoration and demarcation of existing trails. The project does not involve construction of new water or wastewater treatment facilities. The project would not create any new stormwater sources or require construction of new stormwater drainage, electric power, telecommunication, or natural gas facilities. Water required for personal consumption and sanitary purposes would be minimal. Supplies would be portable and brought onsite for the duration of project activities. After the project is complete, no additional water usage would be necessary. The project would not generate wastewater that would require treatment by the central sewer treatment system in the town of Manila.

Mitigation: None required.

XX. Wildfire

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

Affected Environment:

The project site is on the Samoa Peninsula in the unincorporated community of Manila, which is in a Local Responsibility Area for fire suppression. Fire suppression services in the project vicinity are provided by facilities in the Arcata Fire Protection District.

Impact Analysis:

(a, b, c, d) No Impact: The project site has a combined wildfire hazard severity rating of moderate and high (Humboldt County 2022). The project would not exacerbate the existing hazard ratings as the restoration would remove more flammable nonnative grasses to allow more dispersed native dune mat plants to colonize. Ignition sources could include flaming of invasive nonnative plants at some time in the future, were they to become considerably more densely packed. For the foreseeable future, no flaming techniques are anticipated in order to protect native plants and ground-nesting bees that may occur on the former Barr parcel. If flaming were to be employed, the effort would be conducted by the Restoration Manager, trained staff, and with adequate and seasonably appropriate fire protection measures. There would be no impact on wildfire suppression infrastructure and project access gate construction would not hinder any potential emergency response (Section XV, *Public Services*) or impair an adopted emergency response plan or emergency evacuation plan.

Mitigation: None required.

XXI. Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).			X	
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?				X

Impact Analysis:

(a) Less than Significant with Mitigation Incorporated: Long-term goals of the restoration activities would benefit dune-adapted special-status species by directly addressing two of the principal threats to the recovery of these species: habitat loss and competition with nonnative, invasive species. Furthermore, the closure of user-created routes on the former Barr parcel and in the areas between the Beach Access trail and Ridge trail that are not part of the designated trail system [Figure 6] would consolidate access to the designated trail system and protect native habitat by reducing habitat fragmentation and potential direct trampling impacts by hikers and equestrians.

Restoration activities would be accomplished with no adverse impacts on visible pink sand verbena, dark-eyed gilia, Humboldt Bay wallflower, and beach layia (i.e., non-seedling, juvenile or reproductive individuals), because controlled activities in and adjacent to mapped special-status plant populations will be carried out with guidance from the Restoration Manager, and under supervision of trained restoration technicians or volunteers. Avoidance, minimization, and mitigation measures for avoiding impacts on special-status plant species include **MMs BIO-1** through **BIO-5**. These MMs will result in a less-than-significant impact on special-status plant populations.

(b) Less-than-Significant Impact: The FOD property is in an area with other properties owned or managed by several different entities that have completed or ongoing dune restoration activities, including USFWS, BLM, MCSD, and private landowners. These areas contain both restored and degraded dune mat plant communities. Restoration activities including removal of nonnative, invasive plants and replanting of native vegetation have taken place in this area over the last 25 years, and these areas now primarily support the native dune mat species (McDonald 2015; USFWS 2013). Dune mat plant communities, as well as beach pine forest communities, are considered a sensitive natural community by CDFW (CDFW 2022).

The Restoration Plan used throughout the FOD-managed properties has evolved and continues to evolve with minor updates formed under an adaptive management framework, meaning that the outcome of treated areas is monitored, and adjustments made to invasive plant removal techniques (Attachment A). If site conditions change rapidly (e.g., newly discovered populations of invasive

species, rapid spread of established populations) and funding or other issues require a change in priority of restoration areas, FOD will document the rationale for changes of policy. Prioritization of invasive species removal is based on the relative impact of an invasive species on the population or natural community in question, invasiveness of the species, and feasibility of eradication as plant populations change. All changes in priorities must be submitted to and approved by the FOD Stewardship Committee, the FOD Board and the Stamps Family Trust as it pertains to their property. All adaptive management policies would follow appropriate measures to protect all special-status species and avoid wetlands, as outlined in the Restoration Plan (Attachment A).

Photo-monitoring plots have been established in former European beachgrass, iceplant, and yellow bush lupine areas, and are photographed every 3 years. Photo point documentation is digitally recorded using GPS with designated points and collated into monitoring reports that can inform methods of removal and re-prioritization of target species. For instance, on the foredune (not project parcel), current methods of beachgrass removal will occur in a checkerboard pattern by removing patches no larger than 200 feet long (north to south), and leaving untreated alternating patches of approximately the same size intact along the foredune, in order to monitor how this method could reduce wind-blown erosion potential, consistent with the Humboldt County Beach and Dunes Plan (Humboldt County 1993).

Based on the project as described in the administrative record, comments from reviewing agencies, a review of the applicable regulations, and discussed herein, the Planning Department finds there is no significant evidence to indicate the project would cause substantial adverse environmental effects, either directly or indirectly.

(c) No Impact: Staff finds no evidence that the project would significantly degrade the quality of the environment, which would cause substantial adverse effects on human beings, nor would it have impacts that are individually limited but cumulatively considerable. The enhanced human access, restored native dune mat ecosystem and resulting native diversity, and better connectivity to the greater trail network are all beneficial outcomes of the project. Based on the project as described in the administrative record, comments from reviewing agencies, a review of the applicable regulations, and discussed herein, the Humboldt County Planning Department finds there is no significant evidence to indicate the project would have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

CHAPTER 3. REFERENCES

The following documents were used in the preparation of this Initial Study/Mitigated Negative Declaration.

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- 14) Cashen, J., Dodge, A., and Grub, S. 2020. Habitat Assessment of Suitable Areas for Three Rare Plant Species (*Layia carnosa*, *Erysimum menziesii*, and *Gilia millefoliata*) in the Barr Parcel on Friends of the Dunes Property. Applied Ecological Restoration Capstone (ESM 455), Department of Environmental Science & Management, Humboldt State University, May, 2020.
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