

3.17 Wildfire

This section evaluates the potential impacts of the Project related to wildfire during construction, invasive plant management, and maintenance of the Project. Construction activities include the earthwork involved in the estuarine restoration and infrastructure improvement portions of the Project. Invasive plant management activities include the removal of dense-flowered cordgrass (*Spartina densiflora*), European beachgrass (*Ammophila arenaria*), and dwarf eelgrass (*Zostera japonica*) using any one or a combination of the methods described in Section 2.5 (Proposed Invasive Plant Management). Maintenance activities include periodic repairs and improvements to the non-motorized boat put-in, trails, parking lots and road within the Project Area, and also include monitoring activities. The study area for this section includes the Project Area and adjoining properties that could potentially be impacted should a wildfire occur within the Project Area.

3.17.1 Setting

Wildfire

A wildfire is a non-structural fire that occurs in vegetative fuels, excluding prescribed or controlled fire. Wildfires can occur in undeveloped areas and spread to urban areas where the landscape and structures are not designed to be fire resistant. A wildland-urban interface is an area where development is located in proximity to areas prone to wildfire. More specifically, the National Fire Protection Agency states that the wildland-urban interface exists when certain conditions are present, including but not limited to, the amount, type, and distribution of vegetation; the flammability of structures in the area, and their proximity to fire-prone vegetation and other combustible structures; weather patterns and general climate conditions; topography; hydrology; and average lot size (NFPA 2009).

Vegetation is the main source of fuel for wildfires. Therefore, areas near open vegetated spaces have an increased wildfire risk. Weather conditions such as wind, temperature, and humidity are all factors generally used to predict fire behavior. Wind increases flammability of fuels by removing moisture through evaporation. During a wildfire, wind can also carry embers, increasing the fire's range. Higher temperatures and low humidity are indicative of higher fire risk, increasing flammability of vegetation. Topographic features such as slope, as well as the overall form of the land, effects fire behavior, including its intensity, direction, and rate of spread. Fires in flat or gently sloping areas tend to burn slower. Existing hydrology can also have an impact, as streams and rivers tend to channel winds, which can accelerate the fire's speed and direction. The presence of large hydrological features tends to increase humidity and can make it more resistant to the effects of fire (Humboldt County 2019).

The California Department of Forestry and Fire Protection (CAL FIRE) maps areas of significant fire hazard throughout the state of California. The fire hazard areas are divided into different levels of Fire Hazard Severity Zones (FHSZ). The zones are based on a hazard scoring system that reflect several criteria, such as availability of fuels, historical data, terrain, proximity to urbanized areas, and weather. Each of the fire hazard areas are categorized into areas of moderate, high, or very high fire

hazard zones. These maps include both areas protected by CAL FIRE as well as areas protected by local entities. Lands that are protected by CAL FIRE are classified as State Responsibility Areas (SRA). Alternatively, lands that are protected by a local entity are classified as a Local Responsibility Area (LRA).

The Project Area is located within the service area of the Loleta Fire Protection District (see Figure 3.17-1). However, it is located immediately adjacent to both a moderate and high fire hazard SRA. The areas adjacent to the Project Area are located within the service boundaries of the CAL FIRE and the Loleta Fire Protection District. The primary fire hazard severity zone applied to the study area is LRA Unzoned, with segments of the north and central portions of the study area designated as LRA Moderate (CAL FIRE 2007b).

Wildfire Occurrences

Between 2012 and 2017, 12 wildfires occurred within the south spit (the area spanning the southern mouth of Humboldt Bay to the northern mouth of Eel River). One of these fires was located within the proposed dune restoration area, which encompasses a portion of the south spit. This fire grew rapidly due to the flammability of European beachgrass. This wildfire produced flames up to 12-feet (3.6 meters) high, and ultimately burned 33 acres (13 hectares) of the Project Area (R. McLaughlin pers. comm. 2019).

Existing Conditions

The Project Area is generally undeveloped and heavily vegetated with a mix of invasive and native plant species typically found in marsh and dune habitats (Refer to Section 3.4 for a more comprehensive discussion of the existing biological conditions). Development in the vicinity of the Project Area is typical of agriculture, consisting of barns and residences spaced far apart to provide room for agricultural fields and pasture. The only structure located within the Project Area is an abandoned barn. The nearest cluster of structures outside of the Project Area, but in the study area, is located approximately 350 feet (107 meters) east of the Project Area, with the next closest structures being several thousand feet away. Topography in the study area is generally flat, though the area gradually slopes upward to the north and east, at the foot of Table Bluff.

3.17.2 Regulatory Framework

Federal

There are no federal regulations that apply to the Project related to wildfire risks.

State

California Department of Forestry and Fire Protection

CAL FIRE protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. As of June 17, 2020, CAL FIRE has responded to 2,767 wildfire incidents in 2020, which burned 15,163 acres (6,136 hectares) (CAL FIRE 2020). In 2019 CAL FIRE responded to 7,860 wildfire incidents, which burned a total of 259,823 acres (105,147 hectares);

in 2018 CAL FIRE responded to 7,639 wildfire incidents which burned a total of 1,963,101 acres (794,439 hectares); and in 2017, CAL FIRE responded to 9,270 wildfire incidents, which burned a total of 1,548,429 acres (626,630 hectares) (CAL FIRE 2020).

The Office of the State Fire Marshal supports CAL FIRE's mission by focusing on fire prevention. It provides support through a wide variety of fire safety responsibilities including regulating buildings in which people live, congregate, or are confined; controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; providing statewide direction for fire prevention in wildland areas; regulating hazardous liquid pipelines; reviewing regulations and building standards; and providing training and education in fire protection methods and responsibilities.

State of California Emergency Response Plan

California has developed the State of California Emergency Response Plan to coordinate emergency services provided by federal, state, and local government agencies. The plan is administered by the State Office of Emergency Services, which coordinates the responses of other agencies such as local fire and police agencies, emergency medical providers, California Highway Patrol, CDFW and Caltrans (California 2019).

California Public Resources Code

The California Public Resources Code (PRC) sets forth fire safety regulations that include the following:

- Earthmoving and portable equipment with internal combustion engines must be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (PRC Section 4442).
- On days when a burning permit is required, flammable materials must be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor must maintain the appropriate fire suppression equipment (PRC Section 4427).
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines must not be used within 25 feet of any flammable materials (PRC Section 4431).

CAL FIRE also provides oversight for all prescribed burns in the study area and would assist with prescribed burns of non-native plants under the invasive plant management phase of the Project.

Regional and Local

Lands within the Project Area are owned by CDFW or are under the jurisdiction of the State Lands Commission, and therefore will not require a Conditional Use Permit from Humboldt County nor adherence to the Humboldt County General Plan or the Local Coastal Program Eel River Area Plan. The portions of the study area that extend beyond the Project Area boundary, including adjacent properties, would be subject to local regulation, including the following Humboldt County plans.

Humboldt County Operational Area Hazard Mitigation Plan

The 2014 Humboldt County Operational Area Hazard Mitigation Plan Update is the county's plan to identify and reduce hazards before any type of hazard event occurs (Humboldt County 2014). The Hazard Mitigation Plan aims to reduce losses from future disasters such as dam failure, drought, earthquake, fish losses, flooding, landslide, severe weather, tsunami, and wildfire. The Hazard Mitigation Plan also includes a vulnerability analysis and proposed initiatives designed to minimize future hazard-related damage. The plan mentions several actions that could reduce or mitigate wildfire risk, including clearing fuels on property, creating and implementing fire plans, and identifying evacuation routes.

Humboldt County Emergency Operations Plan

The 2015 Humboldt County Emergency Operations Plan (EOP) for the Humboldt Operation Area addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in or affecting Humboldt County (Humboldt County 2015). The Federal Emergency Management Agency approved the Humboldt Operational Area Hazard Mitigation Plan on March 20, 2014. The EOP addresses integration and coordination with other governmental levels when required. The EOP accomplishes the following:

- Establishes the emergency management organization required to mitigate any significant emergency or disaster affecting Humboldt County.
- Identifies the policies, responsibilities, and procedures required to protect the health and safety of Humboldt County communities, public and private property, and the environmental effects of natural and technological emergencies and disasters.
- Establishes the operational concepts and procedures associated with field response to emergencies, County Emergency Operations Center activities, and the recovery process.

Humboldt County General Plan Goals and Policies

The following policy from the Humboldt County General Plan is relevant to the proposed Project:

- **S-P23: Hazardous Fuel Reduction.** Encourage land management activities that result in the reduction of hazardous fuels and also support timber management, livestock production, and the enhancement of wildlife habitat, through the use of prescribed burning, hand or mechanical methods, firewise plants, biomass utilization, and animal grazing.

3.17.3 Evaluation Criteria and Significance Thresholds

Under criteria based on Appendix G of the CEQA Guidelines, the Project would result in a significant impact if it was located in or near an SRA or lands classified as very high fire hazard severity zones, and would result in any of the following:

- Substantially impair an adopted emergency response plan or emergency evacuation plan;

- Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- 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 the temporary or ongoing impacts to the environment; or
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire instability, or drainage changes.

The following sections describe the anticipated environmental impacts due to wildfire risks from the Project.

Areas of No Project Impact

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

- **Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?** The Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The Project Area is undeveloped, with the exception of unpaved roads. A vacant wooden barn and associated remnant corrals exist immediately adjacent to the Project Area. The Project Area is uninhabited, and the Project does not propose to construct habitable structures. The Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan should a wildfire occur within or in the vicinity of the study area. In fact, the proposed road improvement, and parking area and trail establishment could aid in emergency response access to and evacuation from the Project Area. There are no designated evacuation routes within the vicinity of the Project Area. Therefore, no impact would occur and this significance criterion is not discussed further in this Draft EIR. Please refer to Section 3.8.3 of the Draft EIR for further discussion of emergency response adequacy.
- **Would the Project 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 may result in temporary or ongoing impacts to the environment?** The Project would improve an existing unpaved road and parking area by resurfacing the road with asphalt concrete pavement and the existing parking area with gravel. A new pervious concrete parking area would be established near the south end of the access road, and would include an American with Disabilities Act (ADA)-accessible parking space. Other recreational amenities would also be installed including a gravel trail system, kiosks, a non-motorized boat put-in, and interpretive signage. Little to no maintenance is anticipated to be required for any of the above-listed Project components, and any increase in fire risk as a

result of maintenance would be minimal. No other infrastructure is proposed as part of the Project. Therefore, this criterion is not applicable and is not further evaluated in this Draft EIR. Please refer to Impact WF-1 for an evaluation of wildfire risk associated with proposed invasive plant management and fire treatment methods.

- **Would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire instability, or drainage changes?** The topography within the Project Area and surrounding vicinity is generally flat, sloping gradually upward the further inland from the coast. The Project Area consists of undeveloped land, a large portion of which is tidally-influenced and/or regularly inundated by water. The Project Area does not contain any residential structures and the Project would not include development of any structures for human occupancy. Due to the above conditions, it is not anticipated that post-wildfire conditions would increase landslide risks or other post-fire instability. Therefore, the Project would have no impact related to exposing people to significant risks, including downslope or downstream flooding or landslides as a result of post-fire instabilities. Please refer to Impact WF-1 for an evaluation of wildfire risk associated with proposed invasive plant management and fire treatment methods.

3.17.4 Methodology

The impact analysis included in this section is based on information taken from CAL FIRE resources, existing conditions, and other information collected from the County of Humboldt. This analysis considers the range and nature of fire treatment methods proposed by the Project and evaluates the primary ways that fire treatment methods could exacerbate wildfire risks.

3.17.5 Impacts and Mitigation Measures

Impact WF-1: Would the Project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The primary fire hazard severity zone applied to the Project Area is LRA Unzoned, with segments of the north and central portions of the Project Area designated as LRA Moderate (CAL FIRE 2008). The Project Area is not located in or near lands classified as a very high fire hazard severity zone, however it is located adjacent to an SRA.

The Project vicinity is rural and generally characterized by open pastures and scattered barns and residences. The Project Area consists of undeveloped land, a large portion of which is tidally-influenced and/or regularly inundated by water. The Project Area does not contain any residential structures and the Project does not include development of any structures for human occupancy. Adjacent land generally consists of open agricultural pasture and farmland. The nearest residential community to the Project Area is on Indianola Reservation Road and the

Wiyot Table Bluff Reservation, approximately 350 feet (107 meters) northeast of the Project Area.

As described in Section 3.17.1, there are several criteria that determine the severity of fire risk associated with a particular site, including climate, topography, vegetation, and proximity to open space. The climate in the study area is classified as Mediterranean, which is characterized as having dry summers and mild, wet winters. The topography within the study area is generally flat, sloping gradually upward the further inland from the coast. The Project Area is predominately vegetated with a mix of invasive and native plants characteristic of marsh habitat within the estuarine restoration portion and partially vegetated with European beachgrass and dune mat within the dune restoration area. These conditions – mild climate, flat/gradually sloping topography, and large areas regularly inundated with water – reduce fire risk. However, the Project Area is densely vegetated and may provide fuel in the event of a wildfire. In particular, the dune restoration area is dominated by highly flammable European beachgrass, which has previously exacerbated wildfires within the study area. As mentioned previously, 12 fires located along the south spit occurred between 2012 and 2017. One of these fires burned 33 acres (13 hectares) within the dune restoration portion of the Project Area. The CAL FIRE Battalion Chief stated that the presence of European beachgrass aided in the spread and severity of the fires along the south spit (R. McLaughlin pers. comm. 2019).

The Project would utilize prescribed burning as one method for controlling and eradicating invasive plants that currently dominate the landscape, including dense-flowered cordgrass and European beachgrass. The use of prescribed burns mimics natural processes, reduces biomass, and provides fire hazard reduction benefits that enhance public and firefighter safety. Removing the excess fuel via prescribed burning would also reduce the intensity, frequency, and hazard associated with future potential uncontrolled grassland fires within the Project Area.

However, the use of prescribed burning treatments represents a potential risk to people or structures if the fire is not properly controlled and spreads beyond the boundary of the proposed burn area. Under this scenario, an improperly managed prescribed burn has the potential to expose people in the vicinity to an uncontrolled wildfire or pollutant concentrations. Accordingly, CDFW would coordinate with CAL FIRE to plan and implement the prescribed burns in accordance with an approved Burn Plan, as described in Chapter 2, Project Description.

When undertaking a prescribed burn project in coordination with CAL FIRE, the liability for conducting the prescribed burn is presumed to be CAL FIRE (CAL FIRE 2018). It is anticipated that CAL FIRE would utilize fire engines and hand crews to create and manage fire operations. Fire breaks would be utilized to divide the Project Area into manageable plots (likely 400 meters by 400 meters). Prescribed burning treatment of both dense-flowered cordgrass and European beachgrass would occur in compliance with applicable regulations and would be implemented in collaboration with CAL FIRE, which would reduce the risk of wildfires during Project implementation to a less-than-significant level.

Please refer to Section 3.8 (Hazards and Hazardous Materials), Impact HAZ-3 for additional discussion of wildfire risk.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than significant.

3.17.6 Cumulative Impacts

Impact WF-C-1: Would the Project contribute to a cumulatively significant impact related to wildfire risk?

As discussed in Impact WF-1, the Project would have a less-than-significant impact associated with the exacerbation of wildfire risks. Similar to the Project, construction and maintenance of other restoration based cumulative projects identified in Table 3-1 could potentially utilize similar fire treatment methods for invasive plant management. Cumulative projects would be subject to compliance with applicable regulations, including federal, state, and local regulations that require implementation of approved burn plans. The Project's contribution to cumulative impacts related to the exacerbation of wildfire risks would not be cumulatively considerable, and therefore less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than significant.

3.17.7 References

- California Department of Forestry and Fire Protection (CAL FIRE). 2007a. Fire Hazard Severity Zones in State Responsibility Areas. Accessed on May 30, 2019, via: http://frap.fire.ca.gov/webdata/maps/statewide/fhszs_map.pdf
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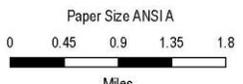
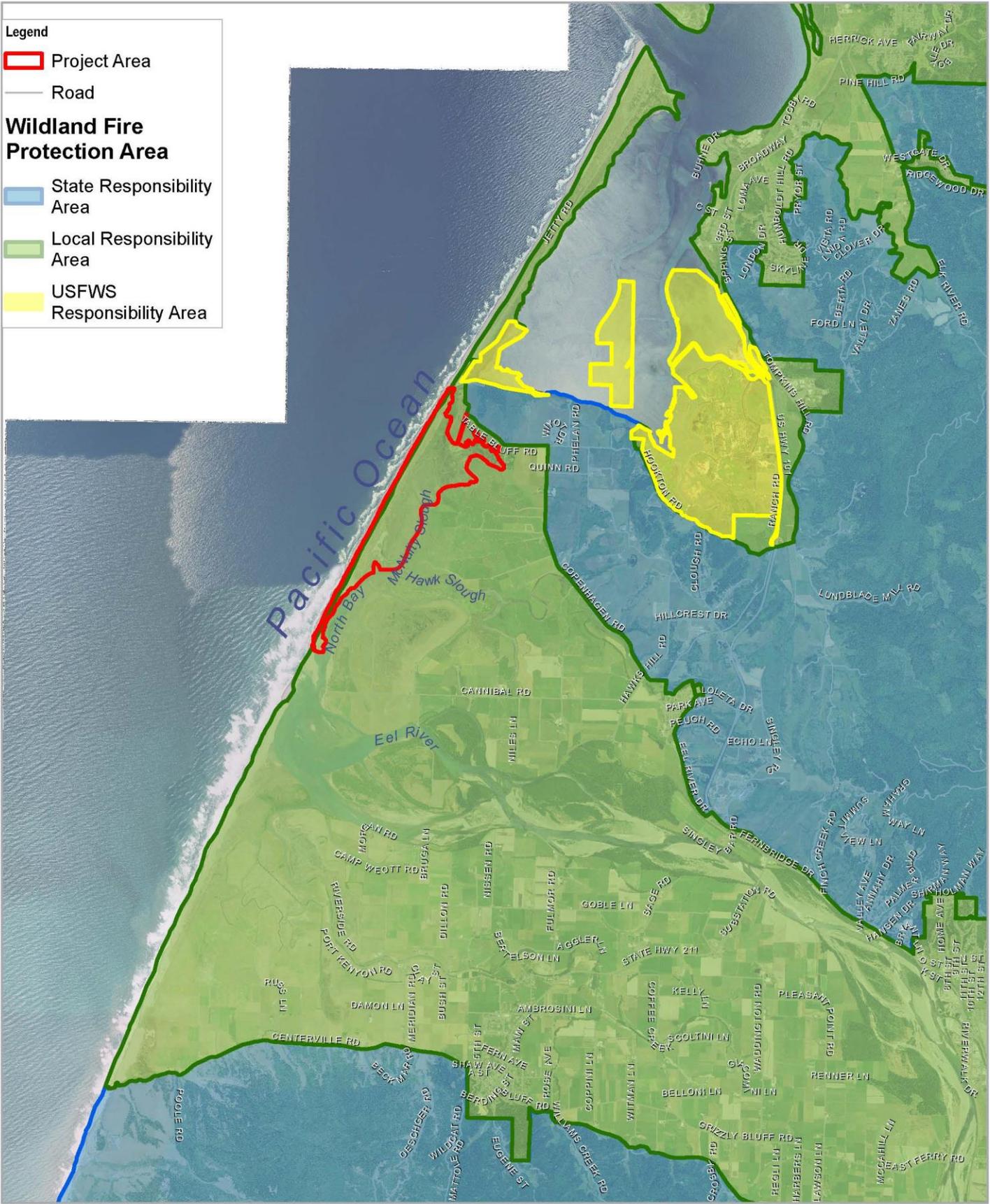
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Legend

- Project Area
- Road

Wildland Fire Protection Area

- State Responsibility Area
- Local Responsibility Area
- USFWS Responsibility Area



California Department of Fish and Wildlife
Ocean Ranch Restoration Project

Project No. 11152100
Revision No. -
Date 6/24/2020

Map Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Grid: NAD 1983 StatePlane California 1 FIPS 0401 Feet

Fire Protection Responsibility Areas

FIGURE 3.17-1