3. Environmental Setting, Impacts, and Mitigation Measures

Scope of Analysis

This Draft EIR analyzes the potential effects of the Ocean Ranch Restoration Project (Project) on the environment under the applicable environmental resource categories listed in the CEQA Initial Study Checklist (Appendix G of the 2019 CEQA Guidelines).

Each environmental resource area potentially impacted by the Project is addressed in the following sections numbered as follows:

- 3.1 Aesthetics
- 3.2 Agriculture and Forestry Resources
- 3.3 Air Quality
- 3.4 Biological Resources
- 3.5 Cultural Resources
- 3.6 Geology and Soils
- 3.7 Greenhouse Gas Emissions
- 3.8 Hazards and Hazardous Materials
- 3.9 Hydrology and Water Quality
- 3.10 Land Use and Planning
- 3.11 Noise
- 3.12 Public Services and Utilities
- 3.13 Recreation
- 3.14 Transportation
- 3.15 Tribal Cultural Resources
- 3.16 Energy
- 3.17 Wildfire

Each section of Chapter 3 contains the following elements:

Study Area

This subsection identifies the study area used to describe the environmental setting and to complete the impact analysis (i.e., the geographic scope of the analysis used to consider direct and indirect impacts). In some instances, the study area has the same footprint as the Project Area – i.e., the 850-acre (344 hectare) restoration area where estuarine and dune restoration activities are proposed under the Project, as well as areas proposed for construction access and staging. For some resource

areas, the study area has been expanded to allow for consideration of impacts that may occur outside the Project Area boundary. For example, the study area for Section 3.14 (Transportation), considers transportation conditions of roadways that provide access to the Project Area from the nearest state highway.

Setting

This subsection presents a description of the existing physical environmental conditions within the study area for the specific resource area evaluated (see above). The setting describes existing conditions at an appropriate level of detail to provide a baseline by which to evaluate the potential impacts of the proposed Project.

Regulatory Framework

This subsection provides a brief discussion of applicable federal, state, and local regulations and policies that are relevant to the resource category. For many resource areas, local regulations do not apply because the entirety of the Project Area is state-owned or leased. In instances where local regulations do apply, such as regulations specific to the use of County roads to access the Project Area, they are described in this subsection.

Evaluation Criteria and Significance Thresholds

This subsection provides the significance thresholds for evaluation of environmental impacts. The significance thresholds are based on the 2019 CEQA Guidelines Appendix G.

Methodology

The methodology subsection discusses the approach to the impact analysis.

Impacts and Mitigation Measures

This subsection evaluates the potential for the Project to significantly affect the physical environment described in the setting. Potential impacts are identified and characterized, and where feasible, mitigation measures are identified to avoid or reduce significant impacts to a less-than-significant level.

Impacts

As described above, significance thresholds for each environmental resource category are presented in each section of Chapter 3. For the impact analyses, the following categories are used to identify impact significance:

No Impact. This determination is made if a resource is absent or if a resource exists within the study area, but there is no potential that the Project could affect the resource.

Less-than-Significant Impact. This determination applies if there is a potential for some limited impact on a resource, but the impact is not significant under the significance threshold.

Less-than-Significant Impact after Mitigation Incorporated. This determination applies if there is the potential for a substantial adverse effect in accordance with the significance threshold, but mitigation is available to reduce the impact to a less-than-significant level.

Significant and Unavoidable Impact. This determination applies to impacts that are significant, even after mitigation has been included to reduce the impact. Under this determination, no additional feasible mitigation is available to reduce the impact to a less-than-significant level.

Mitigation Measures

Environmental impacts are numbered in this Draft EIR using the section number followed by sequentially numbered impacts. Mitigation measures are numbered to correspond to the impact numbers; for example, Mitigation Measure AES-1 would address Aesthetics Impact AES-1. Where more than one mitigation measure is included to mitigate one impact the sequence of "a", "b," etc. is added (for example: Mitigation Measure AES-1a and Mitigation Measure AES-1b would both apply to Impact AES-1). In instances where mitigation measures have been brought forward from the Programmatic Final EIR for the Humboldt Bay Regional Spartina Eradication Plan (H.T. Harvey 2013 and GHD 2013), the mitigation measure number from that document has been utilized.

Cumulative Impacts

Cumulative impacts are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines Section 15355). Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time.

Cumulative impacts are discussed in each environmental resource section following the description of the Project-level impacts and mitigation measures. The cumulative impact analysis is based on the same setting, regulatory framework, and significance thresholds presented in each resource category section. Additional mitigation measures are identified if the analysis determines that the Project's contribution to an adverse cumulative impact would be cumulatively considerable and, therefore, significant.

Approach to Cumulative Impact Analysis

Two approaches to cumulative impact analyses are discussed in CEQA Guidelines Section 15130(b). The first approach is a list of past, present, and probable future projects producing related or cumulative impacts. The second approach is a summary of projections contained in an adopted local, regional or state-wide plan, such as a general plan or related planning document, or in an adopted or certified environmental document, which describes or evaluates conditions contributing to cumulative effects.

For this Draft EIR, the cumulative impact analysis utilizes the list approach. In addition, the analysis of cumulative impacts uses relevant planning documents,

where they provide an appropriate evaluation. Table 3-1 lists relevant projects used in the cumulative impact analysis for each environmental resource topic.

List of Relevant Projects

Table 3-1 provides a list of past, present, and reasonably foreseeable future projects within and near the Project Area, including a brief description of the projects and their anticipated construction schedules (if known). Single-family homes and other similar small-scale uses were not included because of their negligible cumulative effects. See Figure 3.0 – Location of Cumulative Projects, for a map of the project locations listed below.

Table 3-1 Projects Considered for Cumulative Impacts

Project Name	Project Description	Estimated Construction Schedule	Project Location
Salt River Ecosystem Restoration Project	This project is comprised of four major components: tidal wetland restoration on the 444-acre (180 hectare) Riverside Ranch property owned by the CDFW; erosion-reduction projects on private lands in the Wildcat Hills; excavation of a new Salt River channel and installation of large wood, mostly on private lands; and long-term adaptive management/maintenance.	Partially constructed and under construction (summer months), estimated completion by 2020.	Humboldt County near the City of Ferndale, California, approximately 2.5 miles (4 kilometers) south of the Project Area. The Salt River project area extends from approximately 1,800 linear feet (589 meters) upstream of the Salt River's confluence with Williams Creek downstream to the Salt River's confluence with Cut-Off Slough.
Cannibal Island Restoration Study	CDFW and private landowners have grant funding to explore future wetlands restoration and habitat enhancement potential.	Project is in the planning phase.	Humboldt County; southerly and adjacent to Project Area.
Ongoing maintenance in vicinity of southern spit of Eel River mouth within the shared dike basin	Specific activities are currently unknown but could include existing berm and tide gate/culvert repairs or replacement.	Ongoing	Humboldt County, located within the southern estuary of the Eel River. Activities are located outside of the dormant Eel River Estuary and Centerville Slough

Project Name	Project Description	Estimated Construction Schedule	Project Location
			Enhancement project area but within the shared diked sub-basin, approximately 2.5 miles (4 kilometers) south of the Project Area.
Russ Property Levee Stabilization	Project to include stabilization of existing earthen levee on the east side of McNulty Slough.	The project is designed and awaiting completion of necessary permits.	On the east side of McNulty Slough, adjacent to the Project Area.
Wetland Reserve Program or Floodplain Easement Projects	Future project activities on Wetland Reserve Program (WRP) or Floodplain Easement properties include improved flood management, wetlands restoration, fish and wildlife habitat improvements and general agricultural property enhancements.	Projects expected to take place over the next three years (2021-2023).	Projects are located throughout the Eel River estuary. The closest WRP project is located approximately 0.8 mile (1.3 kilometers) east of the Project Area.
Smith Creek Tide Gate Improvement Project	The project includes the removal of an existing failed tide gate structure with a new improved structure funded through the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Environmental Quality Incentives Program.	The project is planned to be constructed in 2020 or 2021.	Humboldt County, located northwest of Ferndale, approximately 4 miles (6.4 kilometers) south of the Project Area.
Upslope Sediment Reduction Projects & Implementation of Best Management Practices (BMP)	Sediment reduction/erosion control actions in the upper Salt River watershed. These actions primarily include improving road drainage as well as channel restoration, riparian planting, bank stabilization, livestock fencing, and modification and removal of fish barriers. These efforts are primarily	Ongoing	Humboldt County, specifically located in the Ferndale area, approximately 6 miles (9.6 kilometers) south of the Project Area. Not shown on Figure 3.0.

Project Name	Project Description	Estimated Construction Schedule	Project Location
	intended to improve water quality in the lower Eel River, while enhancing hydrologic function (i.e., reduced turbidity/sediment load and decreased sediment deposition) in the lower watersheds. Most projects are landowner led with technical and cost share assistance from the NRCS.		
Lower Eel River Gravel Extraction Area	Includes seasonal extraction of various volumes of aggregate from six gravel bars between Fernbridge and the lower Van Duzen for five years by Eureka Ready Mix, Humboldt County, Mercer Fraser, Hansen, and Leland Rock.	2015-2020	Humboldt County, located between Fernbridge and the lower Van Duzen River, located east of the Project Area.
Williams Creek Restoration Study	Data is being gathered on environmental conditions within William Creek watershed including geomorphic assessments, stream gaging, and biological conditions. The restoration study may lead to a project to improve drainage and improve habitat connectivity.	The project is in the data collection phase.	Humboldt County, approximately 5 miles (8 kilometers) south of the Project Area.
Francis Creek Bridge Installation	Project led by Humboldt County which replaced an undersized culvert with a bottomless arch culvert to restore fish passage and improve hydrologic function. Funded through CDFW's Fisheries Restoration Grant Program.	Completed in 2015.	South of the Project Area, located in Port Kenyon.
Table Bluff Road Erosion Control BMPs	Future project led by Humboldt County and the Bureau of Land Management (BLM) to	Expected to be completed by 2022.	North of the Project Area, along Table Bluff Road and South

Project Name	Project Description	Estimated Construction Schedule	Project Location
	reduce erosion along Table Bluff Road.		Jetty Road. Not shown on Figure 3.0.
Gate Installation Project	Potential project led by CDFW to manage access to Ocean Ranch and the BLM's South Spit Recreation Area. Project could include the installation of a gate, small parking area and kiosk on Table Bluff Road approximately 0.25 miles west of the Indianola Reservation Road intersection. Access hours are anticipated to be two hours before sunrise, to two hours after sunset.	The potential project is in the planning stage.	Approximately 0.25 mile (4 kilometers) west of the intersection between Table Bluff Road and Indianola Reservation Road. Not shown on Figure 3.0.
Potter Valley Project Modifications	Potential decommissioning or modification of the Potter Valley Project, which may result in fisheries and water quality benefits to the downstream Eel River, including the estuary.	Major project modifications or decommissioning unlikely to occur before 2030 or later.	Upper Eel River basin, inclusive of Van Arsdale Dam, Scott Dam, and the Potter Valley Diversion to Sonoma County, California.

Sources: California State Coastal Conservancy 2016
Shortridge pers. comm. 2018
Blodgett pers. comm. 2018
Heppe pers. comm. 2018
Bartolotta pers. comm. 2018

References

Bartolotta, C. 2018. Wildlife Habitat Supervisor II, California Department of Fish and Wildlife (CDFW).Email and phone communication regarding gate at Table Bluff County Park. October 8.

Blodgett. V. 2018. Planwest Partners for the City of Ferndale. Email communication inquiring about potential projects in the Ferndale vicinity to be considered in cumulative impact analysis. September 28.

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Heppe, C. 2018. Assistant Field Manager, Bureau of Land Management (BLM). Email communication regarding gate at Table Bluff County Park. October 4.

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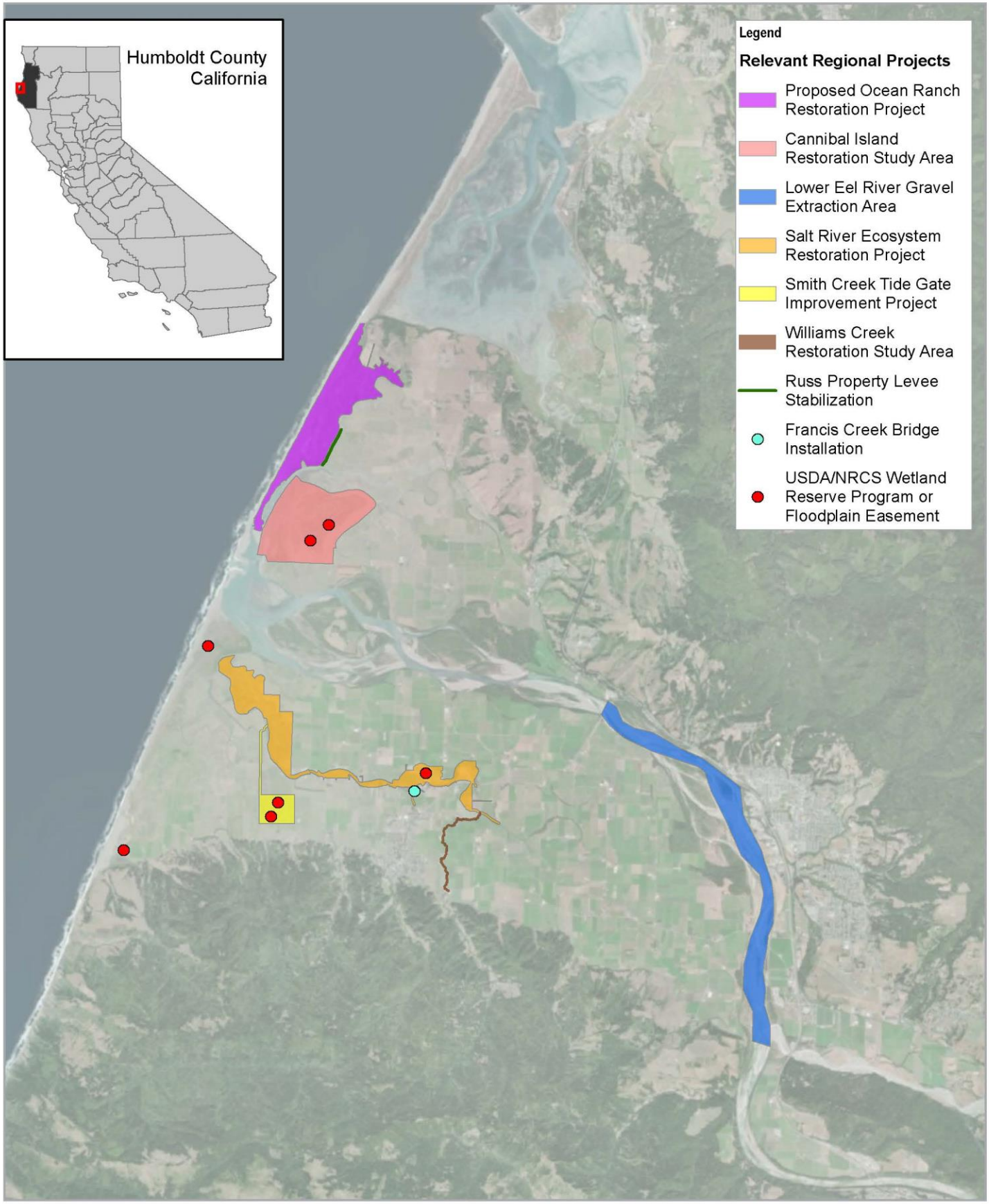

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Ducks Unlimited
Ocean Ranch Restoration Project

Project No. **11152100**
Revision No. **-**
Date **June 2020**

Location of Cumulative Projects

FIGURE 3.0

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Data source: ORRP project bounday, 10/17/2018;
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Created by: jclark2