ORMOND BEACH RESTORATION AND PUBLIC ACCESS PROJECT PLAN

Preferred Alternative and Preliminary Design Plan

Prepared for
California State Coastal Conservancy
The Nature Conservancy
City of Oxnard

May 2021

EXECUTIVE SUMMARY

Background

Ormond Beach, located in southern Ventura County in the city of Oxnard (**Figure ES-1**), is the most important coastal wetland restoration opportunity in Southern California (State Coastal Conservancy (SCC) 2016). It has long been targeted for ecological enhancement and improved public access owing to its proximity to the large population centers in Los Angeles, Ventura, and Santa Barbara Counties and to the relatively rare opportunity to protect and restore a large area of dune/wetland/upland habitat in Southern California.

The California State Coastal Conservancy, the City of Oxnard, and The Nature Conservancy (collectively "Project Partners") own a total of 630 acres that comprise the Project Area (**Figures ES-1 and ES-2**).[1] The Project Area extends along the Pacific Ocean shore from the residential and commercial areas of South Oxnard on the west to the Naval Base Ventura County (NVBC) Point Mugu on the east. The Project Partners are leading the Ormond Beach Restoration and Public Access Project (OBRAP), with the vision of a resilient coastal environment that inspires the enjoyment, use, and support of the local community and beyond. The OBRAP goals are:

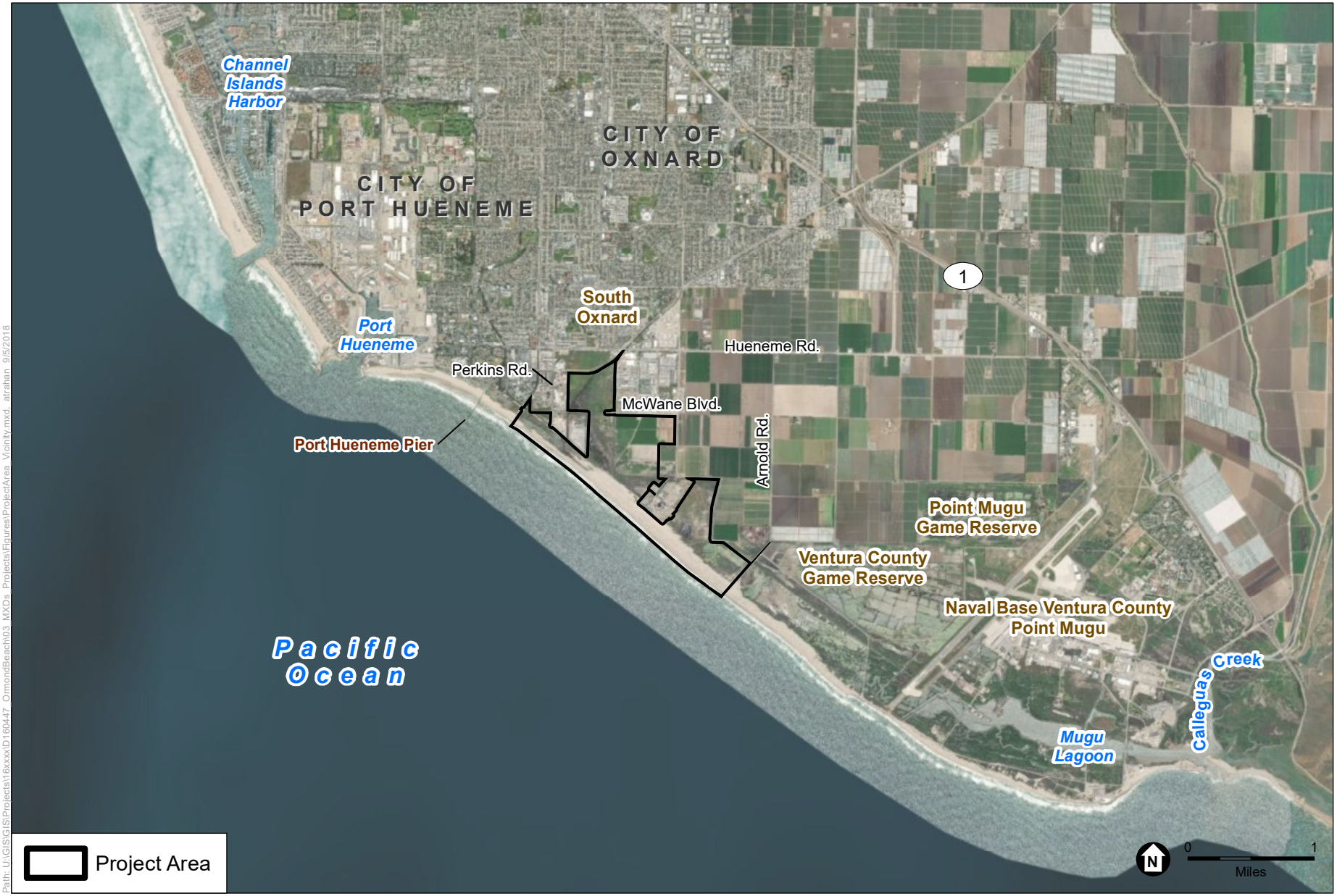
1. Preserve, enhance, and restore natural habitats and processes that support a dynamic and self-sustaining ecosystem at Ormond Beach.
2. Enhance opportunities for people to easily and safely visit Ormond Beach and enjoy the nature, educational opportunities, and recreation that are compatible with the restored Ormond Beach ecosystem.

The OBRAP Preferred Alternative and Preliminary Design Plan ("Plan") presents a preferred alternative and preliminary design for the Project Area, which will be the basis for the next phase of environmental review, final engineering design, regulatory approvals, and construction.

Plan Development Process

This phase of the planning process, which commenced in March 2017, included a review of prior work, public and stakeholder outreach, additional data collection and analyses, modeling of future conditions, and technical review. The Plan builds upon and supersedes the 2009 Ormond Beach Wetland Restoration Feasibility Study (Feasibility Study) developed by the SCC (Aspen 2009).

[1] In late 2020 TNC acquired another adjoining 20-acre parcel from Metropolitan Water District (MWD) (Section 2.6.1). This parcel is not included in the OBRAP Plan due to the timing of acquisition but will be incorporated in future planning phases.



SOURCE: ESRI 7/19/2016, City of Oxnard, Ventura County

Ormond Beach Restoration and Public Access Plan

Figure ES-1
Project Area and Vicinity

ESA

SOURCE: ESRI 7/19/2016, City of Oxnard, Ventura County

Ormond Beach Restoration and Public Access Plan

Figure ES-2
Site Map

ESA

A Scientific Advisory Committee (SAC) of technical experts was convened to review Plan goals, priorities, data gaps, alternatives, and adaptive management approaches (Section 6.3.3).

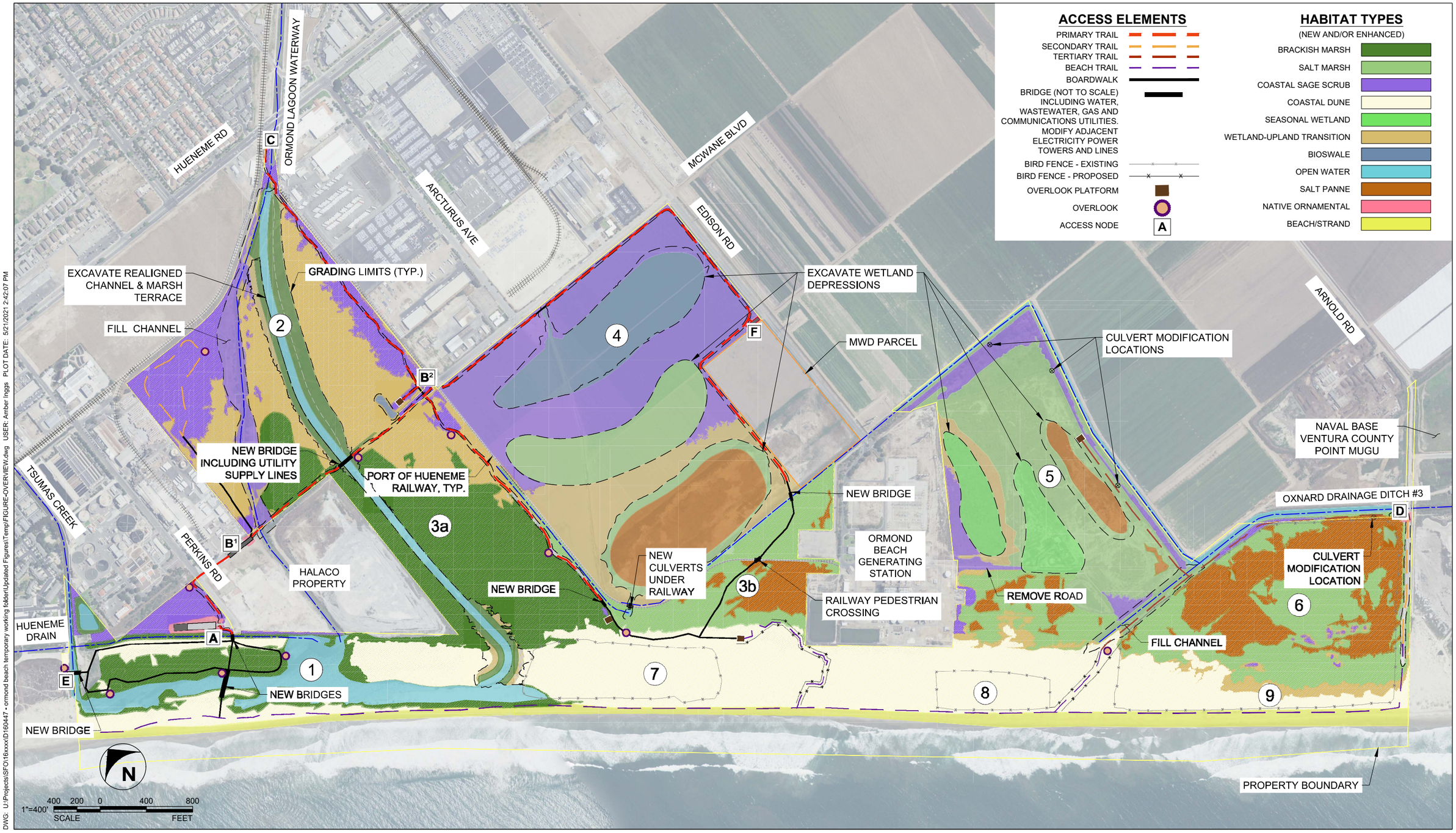
The Plan was informed by input from the local community and other stakeholders. The first round included a public workshop (June 21, 2017) to obtain input about the area, public access, visitor activities, and ideas for improvements. Door-to-door surveys were also conducted to obtain this information by the Central Coast Alliance United for a Sustainable Economy (CAUSE), in Spanish, English, and Mixteco, in several residential neighborhoods near Ormond Beach (Section 6.1.2). The Project Partners also met with neighboring landowners and potentially affected agencies to discuss opportunities and constraints (Section 4). Following release of the Preliminary Plan (May 2019) for public review and comment, the Project Partners held a second public workshop (July 31, 2019) and focus groups were held in South Oxnard for English, Spanish, and Mixteco speakers. This Plan has been prepared with consideration of public comments and it includes refinements to the preliminary Preferred Alternative (Section 6.5) and discusses the preparation of a preliminary design.

Preferred Alternative

The Preferred Alternative is designed to enhance and restore existing habitat, increase public access to the Project Area and adjacent beach in an ecologically sensitive manner, and allow for habitat changes in response to projected sea-level rise and landward shore migration (**Figure ES-3**). The Plan includes actions (**Table ES-1**) to restore a range of wetland habitats (freshwater, brackish, saltmarsh, and salt flats ["pannes"]) between the shoreline strand (sandy beach and dunes) and the uplands. Existing habitats will be enhanced and new habitats developed via earth moving to change topography and modify water flow and ponding, and vegetation management. The type and location of proposed restored habitats is based on historic and existing wetlands, topography, and special status plant and animal species. Public access features envisioned include pedestrian trails that provide views of habitats and access to the beach, trail links to existing roads, updated parking and a potential visitor center. The design alternative takes into consideration opportunities and constraints such as existing infrastructure, adjacent land uses, sea-level rise, flood potential, and protections for existing sensitive habitats and special-status species.

Organization of Plan

The Introduction (Section 1) provides background on the Project area, Project goals, planning process, and purpose and scope of the Plan. The Site Setting (Section 2) reviews past, present, and predicted future conditions without a Project. Historical Setting (Section 2.2) reviews natural conditions prior to development and changes over the last 250 years. Existing Conditions (Section 2.3) summarizes existing physical, hydrological, and biological conditions. Special-status species include salt marsh bird's beak, tidewater goby, California least tern, western snowy plover, tidewater goby, Belding's savannah sparrow and Ridgway's rail.



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SOURCE: ESRI 7/19/2016, City of Oxnard, Ventura County

Ormond Beach Restoration and Public Access Plan

Figure ES-3
Preferred Alternative and Preliminary Design of the Ormond Beach Restoration and Public Access Project

ESA

TABLE ES-1
PREFERRED ALTERNATIVE RESTORATION AND PUBLIC ACCESS ELEMENTS BY AREA

Area	Design Element	Preferred Alternative
1	Restoration	• Weeding and planting in upland areas • Lagoon connection to Ormond Lagoon Waterway (OLW) moved to the east of Halaco properties • Lagoon connection to marsh in Area 3a increases capacity and leads to less frequent manual breaching
	Public Access	• All Primary trails at 12.0 elevation, Rustic trails at 11.0 -12.0 elevation where feasible, boardwalks at 13.0, Bridge/Pier at 15.0 • Bridge over tšumaš Creek • Bridge or boardwalk over Ormond Lagoon from island to beach • Boardwalk to overlook at Ormond Lagoon • Rustic trail to overlook • New bridge between Perkins and Ormond Lagoon • Expand Perkins Parking Lot footprint, adding 24 spaces • Restrooms, interpretive kiosk and docent station (±1,000 SF for school group focus), which can be relocated to accommodate sea level rise (SLR) • Bike racks and bike lockers (rental) • Primary trail in wetlands north of Perkins Road parking leading to West McWane Blvd.
2	Restoration	• Re-align OLW and grade to allow engagement with floodplain and brackish marsh • Minor grading to create gently sloping brackish marsh plain along new channel • Balance cut-fill within the area by filling old channel and adding flood protection around edges of property • Create smooth transition between Areas 2 and 3a • Create bioswale to capture nutrients in runoff from East McWane Blvd.
	Public Access	• New Major trailhead with 25+ parking spaces at West McWane Blvd. • Interpretive signage • New primary developed CA Coastal Trail heading east • Elevated wetland boardwalk to rustic loop trail • Bridge over OLW with birding overlook • Elevated overlook near East McWane Blvd. • Minor pedestrian and bike trailhead at Hueneme Road • Primary multi-modal trail at Hueneme Road (at-grade railroad crossing) to East McWane Blvd., CA Coastal Trail

TABLE ES-1 (CONTINUED)
PREFERRED ALTERNATIVE RESTORATION AND PUBLIC ACCESS ELEMENTS BY AREA

Area	Design Element	Preferred Alternative
3	Restoration	• Re-align OLW and grade to allow engagement with floodplain and brackish marsh • Minor grading to create gently sloping brackish marsh plain along new channel • Let habitat naturally convert from salt marsh to brackish marsh • Establish additional Coulter's goldfield populations in other areas the Project Area by collecting seed and distributing in appropriate areas • Weeding and planting in upland areas • Water control structure (culvert) under the railroad
	Public Access	• Primary multi-modal trail, CA Coastal Trail in north 3a • Overlook platforms • Bridge over OLW/agricultural ditch creek • Wetland boardwalks • Birding overlook platform with bird blinds • Wetland and dune boardwalks through Areas 3a and 3b • At-grade railroad crossing
4	Restoration	• Cease farming and excavate a series of shallow basins at increasing elevations from south to north • Water control structure (culvert) under the railroad • Basins will undergo type changes as sea level rises • Lower basin expected to support salt panne habitat at about 5 feet NAVD88[1] in the short term and evolve in to open water with moderate SLR • Middle basin(s) expected to support seasonal saline-affected wetlands at about 7 feet NAVD88 and evolve in to salt marsh and salt panne with moderate sea-level rise • Upper basin(s) expected to support seasonal wetlands and act as a bioswale at about 9 feet NAVD88 and evolve in to salt marsh and salt panne with greater sea-level rise • Establish salt marsh (below about 9 feet NAVD88) and transition zone vegetation (above about 9 feet) around basins
	Public Access	• Major trailhead and ±50 stall parking lot at East McWane Blvd. and Edison Drive intersection (Future, high point of Project Area) (could be moved south on Edison to former Metropolitan Water District parcel recently acquired by TNC). • Bike services for CA coastal trail riders, including racks, lockers, and minor repair station. • Visitor Center • Multi-modal primary elevated trail at 12 feet NAVD88, CA Coastal Trail

TABLE ES-1 (CONTINUED)
PREFERRED ALTERNATIVE RESTORATION AND PUBLIC ACCESS ELEMENTS BY AREA

Area	Design Element	Preferred Alternative
5	Restoration	• Block or reduce drainage through culverts between Area 5 and Oxnard Drainage Ditch (ODD) #3 • Remove levees and fill the ditch of ODD #3 between Areas 5 and 6 (the dead end channel) to create continuous marsh plain • Remove all old roads and building pads • Create series of shallow basins at increasing elevation • Lowest basin expected to support salt panne in the near term at about 5 feet NAVD88 and open water habitats with moderate sea-level rise • Middle basin expected to support seasonal saline-affected wetlands at about 6 feet NAVD88 and evolve into salt marsh and salt panne with moderate sea-level rise • Upper basin expected to support seasonal wetlands at about 8 feet NAVD88 and evolve in to salt marsh and salt panne with greater sea-level rise • Establish salt marsh (below about 7.5 feet NAVD88) and transition zone vegetation (above about 7.5 feet NAVD88) around basins
	Public Access	• Rustic trail to birding platform with wetland overlook • Opportunity for future connection to Edison Drive for loop trail
6	Restoration	• Maintain salt panne and salt marsh habitats with some weeding and revegetation as needed on higher spots • Restore upland habitats along ODD #3 levee • Remove levees and fill the ditch of ODD #3 between Areas 5 and 6 (the dead end channel) to create continuous marsh plain (in coordination with Oxnard Drainage District 2)
	Public Access	• CA Coastal Trail Class II bike trail on Arnold Road (per County of Ventura Local Coastal Plan) • Reconfigure Arnold Road parking for drop-off/turnaround only and Americans with Disabilities Act (ADA) parking • Bike-focused trailhead with bike lockers and bike racks • Elevated wetland overlook • Primitive trail along ODD #3 to Area 5 and beach, or along rustic trail to Area 6 and beach • Birding overlook in back dunes • Rustic seasonal trail from trailhead to beach (closed during nesting season or if inundated in winter)
7, 8, 9	Restoration	• Weeding and planting to restore back dune scrub habitat and expand foredune scrub habitat • Add sand fencing and seed native dune species to facilitate wind-driven sand capture and dune building
	Public Access	• Area 7: New and existing bird fencing • Area 7-9: Continue to maintain CA Coastal Trail along beach strand (includes Area 1) • Area 7: Primitive beach strand trail connects to backdune boardwalks in Area 3a and Area 3b • Area 8: Beach strand trail connects to Arnold primitive trail, dune overlook area • Area 9: Beach strand trail connects to Rustic trail at Arnold Road

NOTE:
[1] All elevations are in North American Vertical Datum of 1988 (NAVD88)

Future Conditions (Section 2.4) focuses on how the Project Area could evolve in response to sea-level rise. Predictions of future shore locations, condition of Ormond Lagoon and wetlands habitats are presented. Section 2.5 synthesizes the site's evolution for "No Project" as part of the baseline. Future conditions are forecast to include substantial narrowing of the beach, flooding of existing back-dune wetlands and conversion to open water lagoons, with potential landward migration of wetlands to higher elevations. Existing agricultural and industrial land uses in the Project Area and vicinity are likely to be impacted by higher sea levels.

Section 3 presents Project goals and objectives for restoration and public access, as well as implementation guidelines. Section 4 lays out opportunities and constraints for ecological restoration and public access, including the regulations that the Project would need to comply with (Section 4.3). Section 5 identifies habitat elements and public action features (trail types and site amenities) to be included in the Project design.

Based on the alternatives in the 2009 restoration feasibility study, three alternatives were developed to represent a range of ecological outcomes resulting from possible landscape modification and management (Section 6.2):

> *Alternative 1* was designed to enhance existing habitats through limited intervention, with an emphasis on preservation of salt marsh and salt panne habitats ("salt marsh theme").
>
> *Alternative 2* had a "habitat diversity theme" with moderate intervention to expand a wide diversity of wetland habitats, including realignment of Ormond Lagoon Waterway (OLW) to avoid the former Halaco site and increase brackish wetlands.
>
> *Alternative 3* emphasized connectivity of fragmented habitat and restoration of historical processes ("habitat connectivity theme"). This alternative proposed the most earthwork and greatest modification, including excavating a realigned OLW channel connecting to a new lagoon with its own mouth to the ocean.

Public access elements were chosen to be most compatible with each alternative, while also covering a range of amenities that could be substituted across alternatives. Access features are integrated into the Project Area so that multiple habitat types can be experienced and natural processes can be observed by visitors. Simultaneously, sensitive species protection requires controlled access in certain areas so that natural processes are not degraded nor are species such as nesting birds disturbed. Connectivity to roads and other trails and parking is provided along with access amenities (such as trails, staging areas, interpretive signs, viewing areas, and parking) for community members and visitors.

Each alternative was evaluated (Section 6.3) based on its evolution with projected sea-level rise, contribution to Project objectives, and review by the SAC. A Preferred Alterative (Section 6.4) was refined from the best elements of Alterative 2 for the western and central areas (TNC and City properties, Areas 1-4), and Alternative 3 for the eastern area (SCC property, Areas 5-6).

The Preferred Alternative concept design was presented in the Preliminary Plan (May 2019) for public review and input (summer-fall 2019). Based on consideration of public and other

stakeholder input, the Preferred Alternative was refined (Section 6) and a preliminary design completed (Section 7).

This Plan addresses several of the data gaps and uncertainties identified in the prior Feasibility Study (Aspen 2009), and outlines actions to address remaining data gaps (Section 7) as the Project progresses through design refinement and environmental review. For example, surface water and groundwater levels and salinity vary substantially across the Project Area, and data collection is needed to quantify variability and discern trends of net changes. Additional information is needed to understand local soil and water conditions that affect plant establishment. Nevertheless, uncertainties in the responses to restoration actions are expected to remain. Therefore, an adaptive restoration approach is recommended, using a phased process to learn about habitat responses through implementation and monitoring of incremental restoration actions (Section 8.4).

Next Steps

This Plan presents a Preferred Alternative and preliminary design of the alternative. The next phases of design will further develop the restoration and public access elements in the OBRAP, including responses to environmental review, additional technical analysis, regulatory review and public comment. Additional technical studies are envisioned and these may refine the Project description, in compliance with the California Environmental Quality Act.

Next steps will include: 1) completing additional technical studies to inform environmental review, which are described in Section 8; 2) progressing design development (during environmental review and permitting) ; 3) initiating environmental review Plan; 4) proceeding with regulatory approvals and permitting; 5) preparation of construction documents (for Plan implementation after permits attained); and, 6) Plan implementation via construction and adaptive management (if approved). Opportunities for public review and comment will occur at each stage of design development and during environmental review and regulatory approvals.

In addition, identifying an entity to manage the Ormond Beach for the long term is a high priority of the Project Partners.