



# Los Cerritos Wetlands Restoration Plan Public Meeting

Via Zoom

March 18, 2021

## ● Presenters:

Eric Zahn, Restoration Ecologist, Tidal Influence

Sally Gee, Project Analyst, Rivers and Mountains Conservancy



We appreciate you being courteous!

This meeting is being moderated  
and inappropriate behavior will lead  
to being removed.

# Meeting Format

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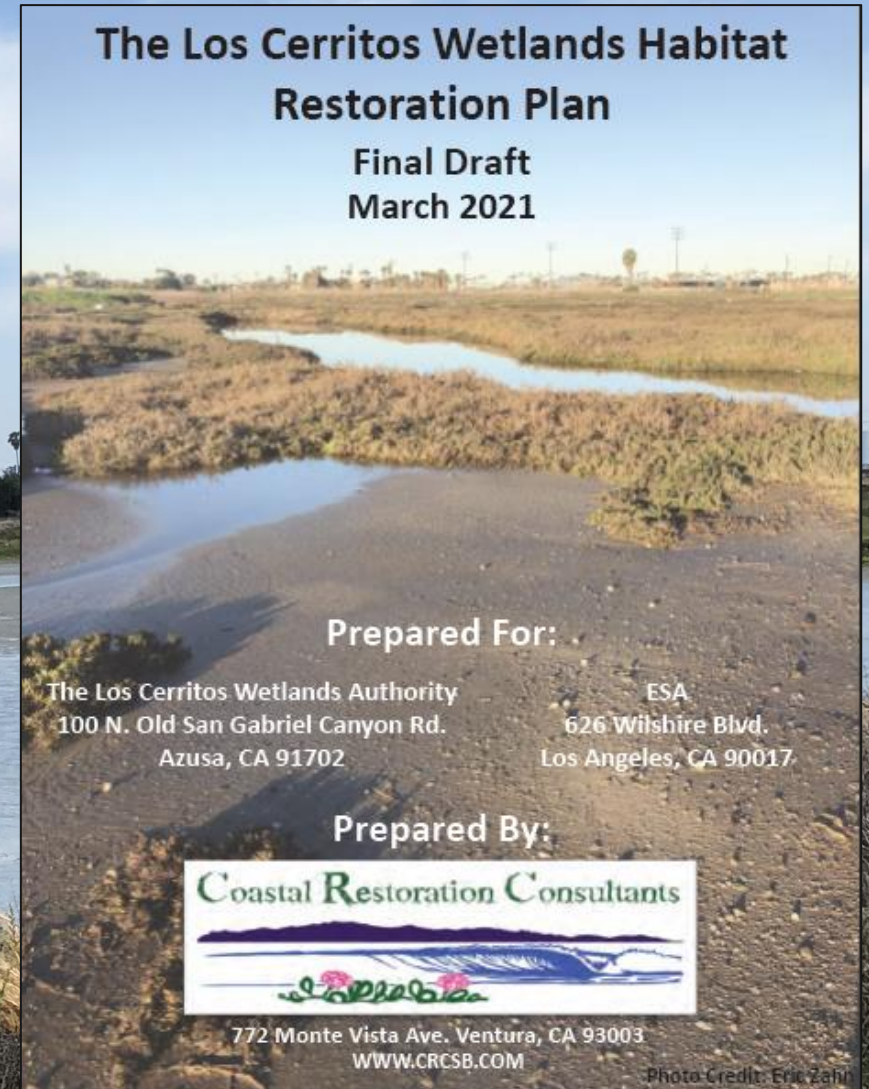
- During the presentation, all participants will be muted
- After the presentation there will be an opportunity to unmute and ask questions
- Ask questions at any time in chatroom!
  - This meeting is being recorded



# Agenda

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- Los Cerritos Wetlands Authority Restoration Planning Process
- Review of Draft Restoration Plan
  - Next Steps
  - Questions & Answers





# Los Cerritos Wetlands Authority (LCWA)

- Formed in 2006
- Comprised of the State Coastal Conservancy, Rivers and Mountains Conservancy, City of Long Beach, and City of Seal Beach
- Promotes acquisition, restoration, conservation and management of the Los Cerritos Wetlands
- Landowner and Lead Agency for CEQA

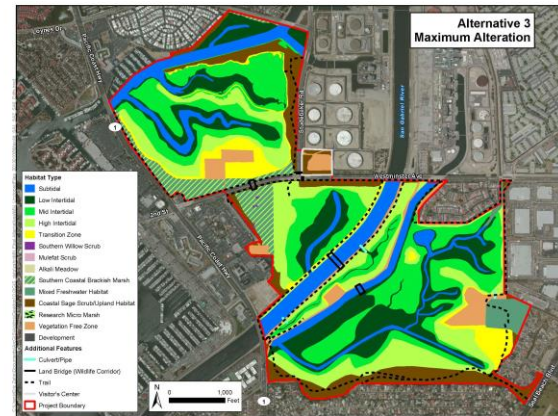
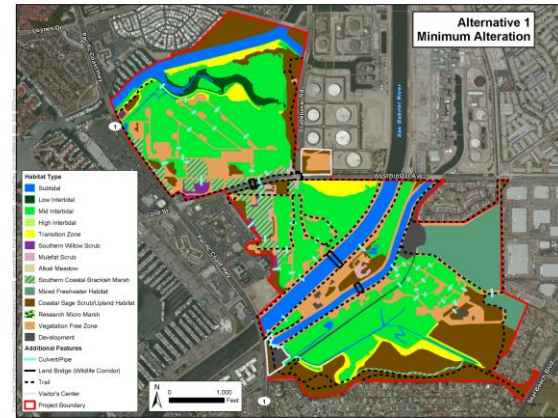


*Los Cerritos Wetlands Authority*



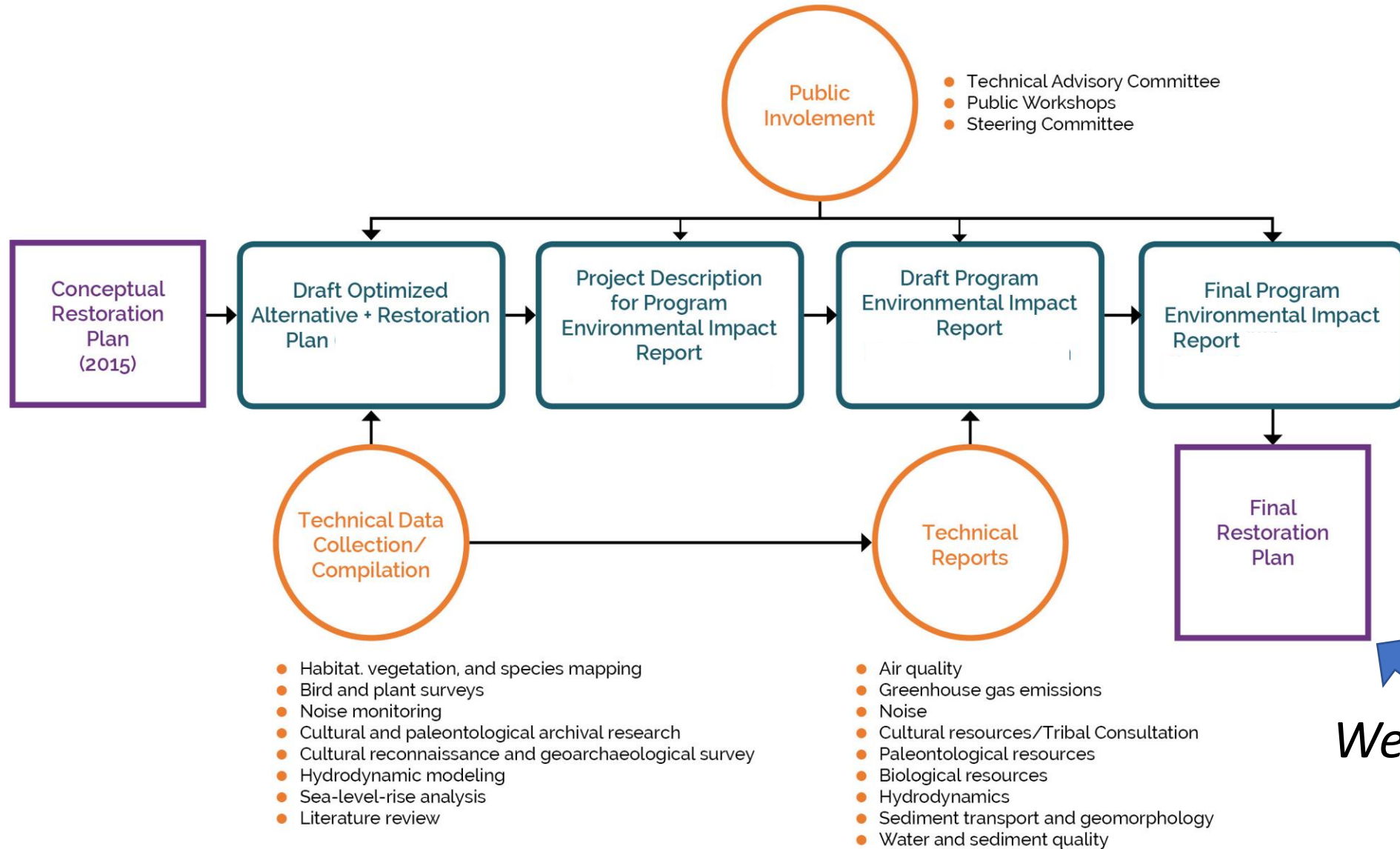
# LCWA Restoration Planning History

- LCWA Board approved the Los Cerritos Wetlands Conceptual Restoration Plan in August 2015
- Conceptual Plan Included 3 Restoration Alternatives: Minimum Alteration, Moderate Alteration, Maximum Alteration
- Funding received in 2017 to initiate next steps: prepare Program Environmental Impact Report (PEIR) and Final Restoration Plan
- LCWA Board Certified the Final Program EIR in January 2021





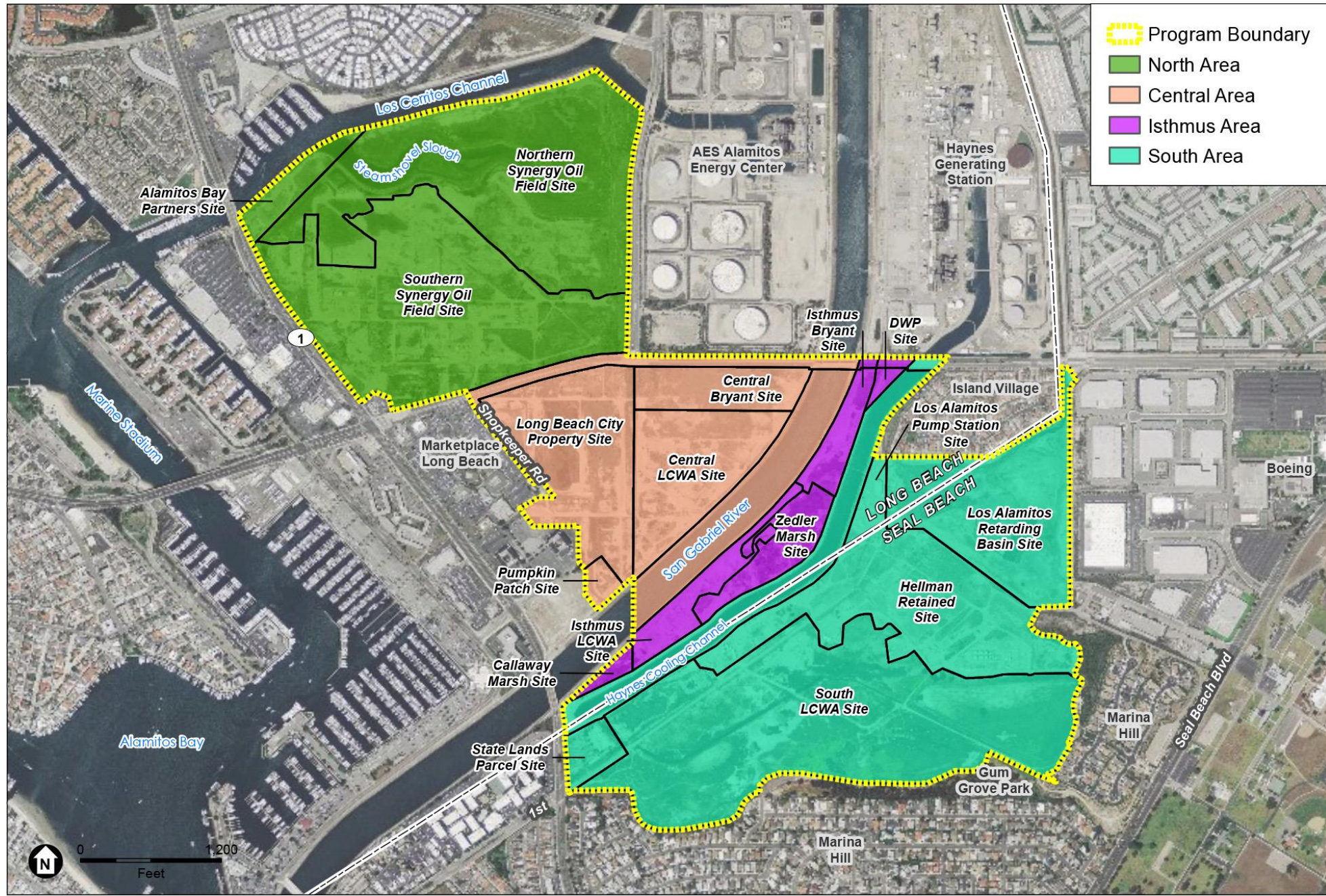
# Current LCWA Restoration Planning Process



*We are here*

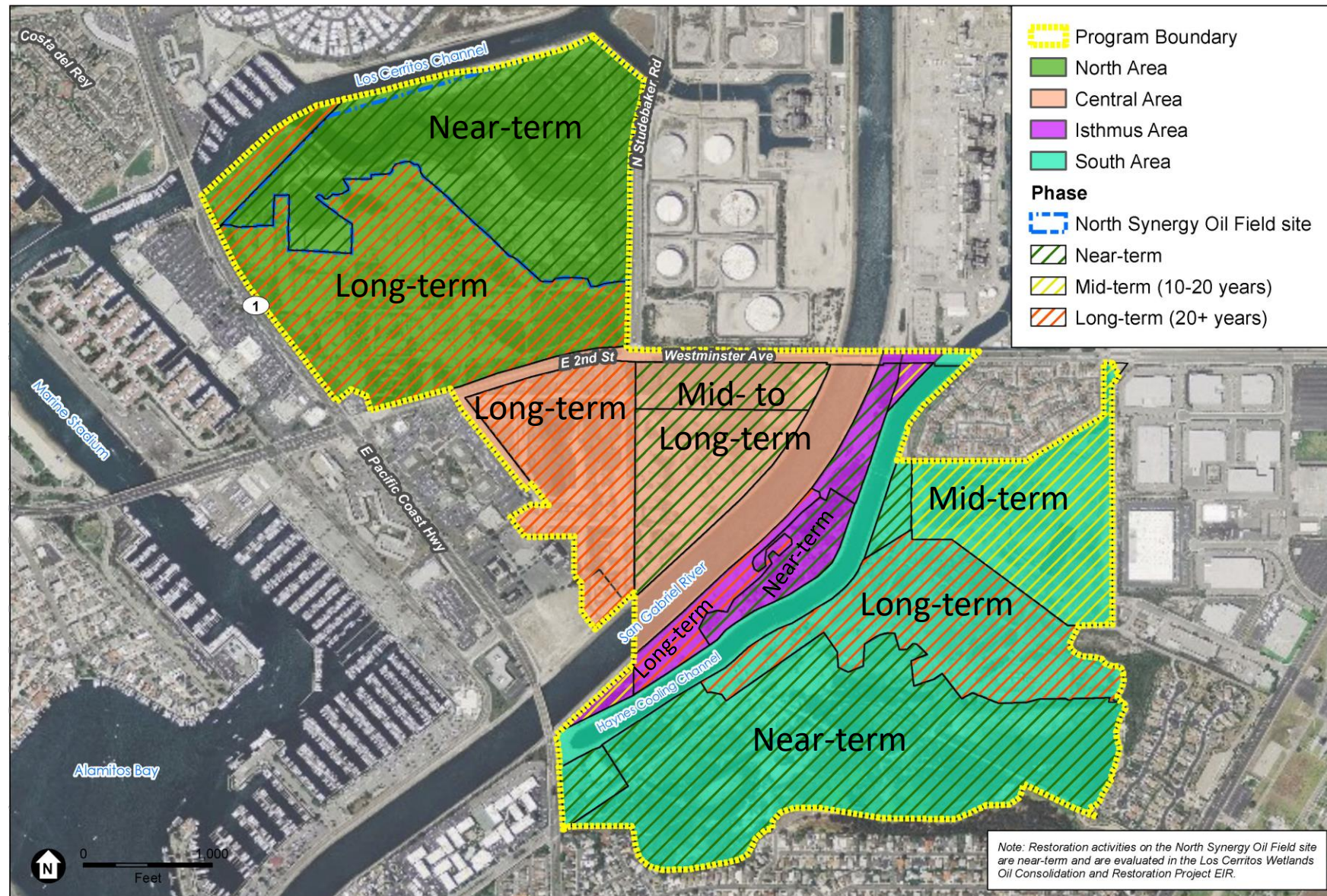


# Program Area Boundary



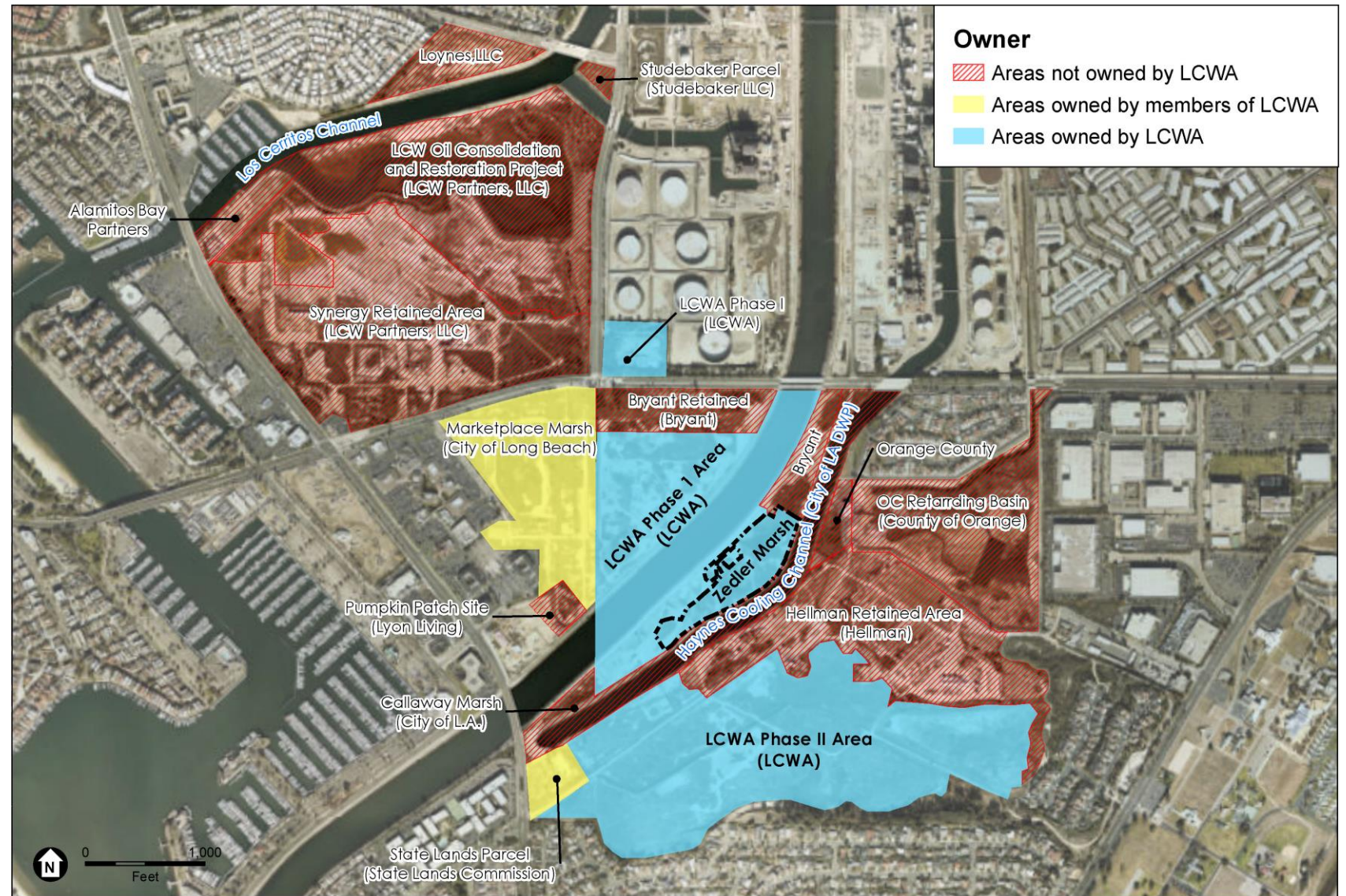


# Proposed Program Phasing



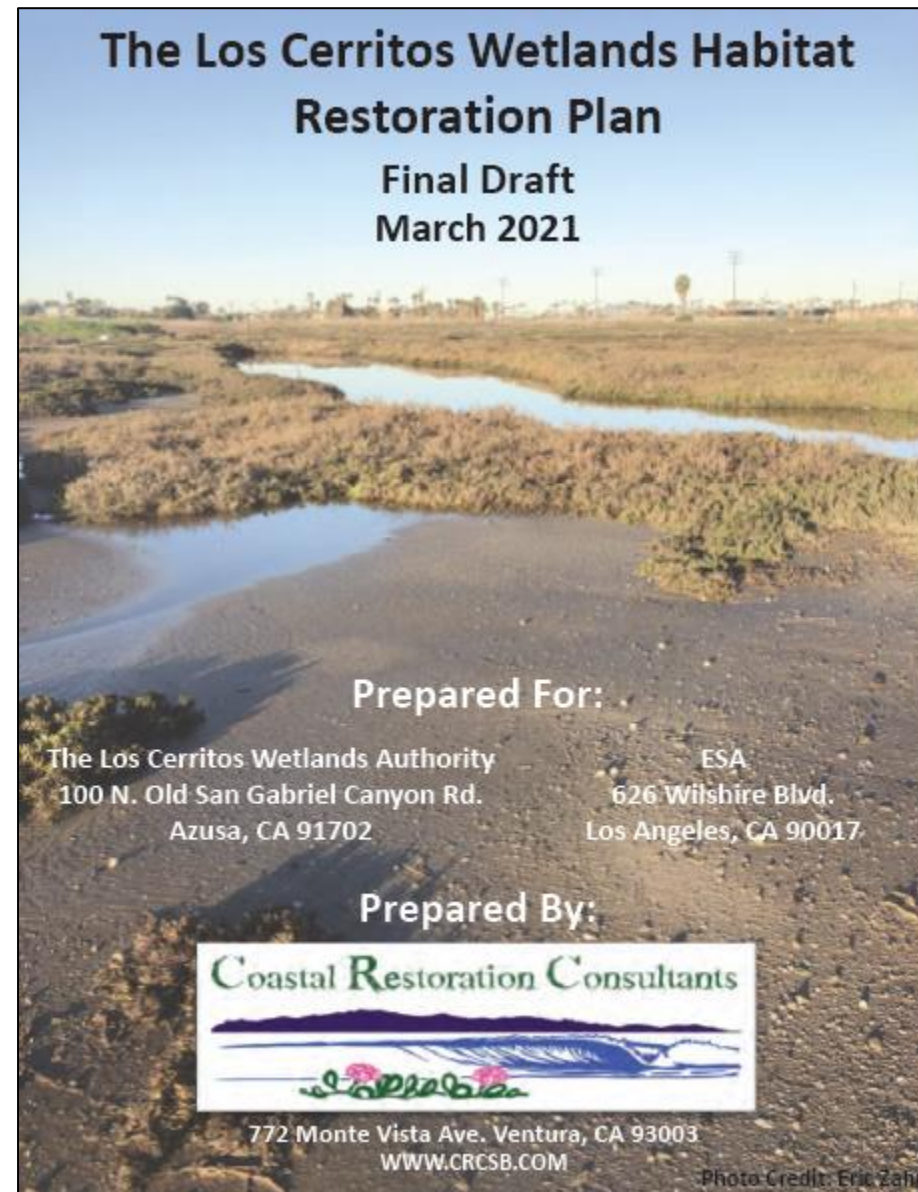


# Los Cerritos Wetlands Complex Land Ownership





# Review of LCW Restoration Plan

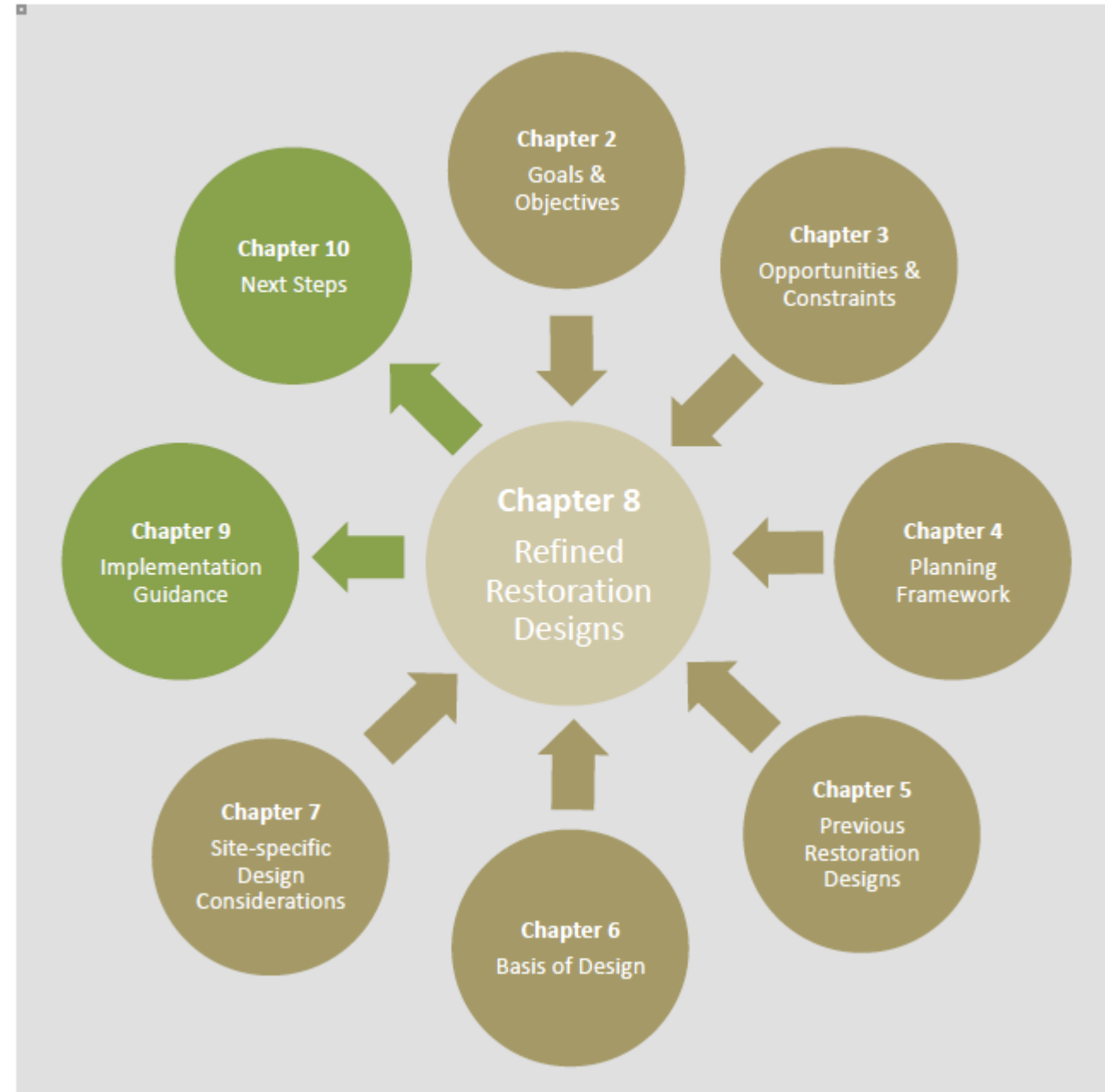




**Figure 1-3.** Readers guide to this restoration plan

# 1. INTRODUCTION

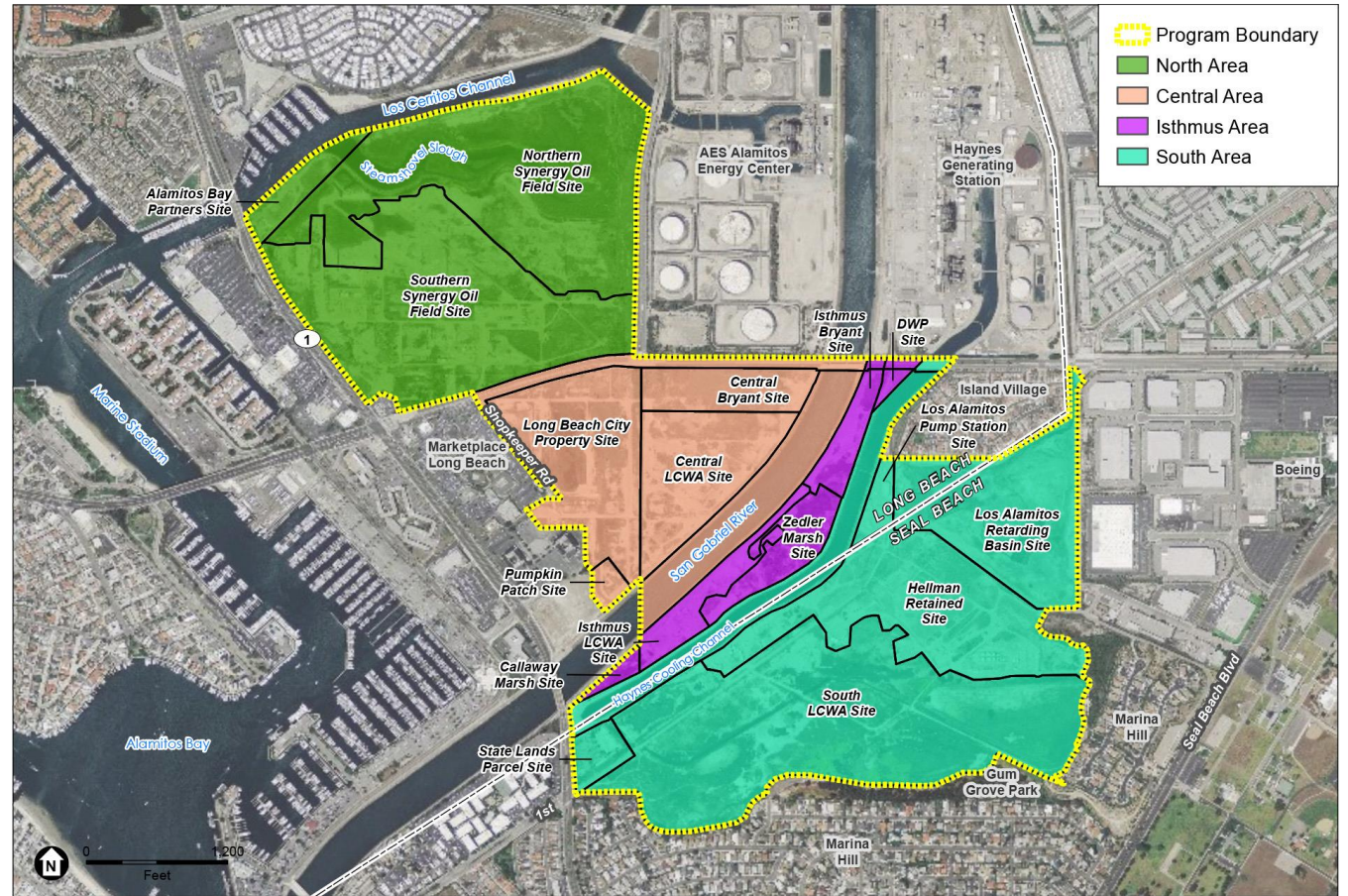
- This plan includes considerable technical details providing the basis for refining the restoration designs presented in the PEIR.
- Readers can navigate the document by following **Figure 1-3**
- **Chapters 2-7** contain technical details that informed the development of the refined restoration designs
- **Chapter 8** present the refined restoration designs
- **Chapters 9 and 10** present guidance for successful implementation and further refinement of those restoration designs





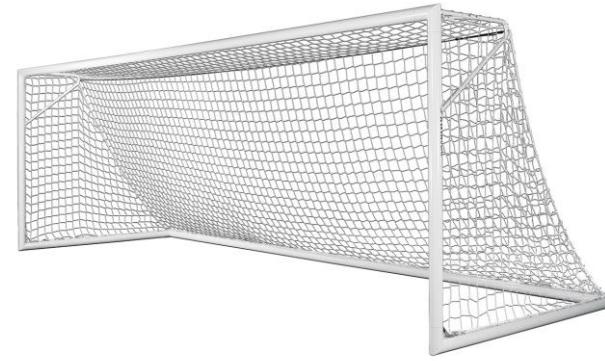
# 1. INTRODUCTION

- The Restoration Plan covers the entire Program EIR area
- Refinements are provided for near-term projects
- Other planning efforts or the PEIR are referenced for certain mid- or long-term projects
- Table 1-1 summarizes how the plan discusses restoration on all sites





## 2. GOALS AND OBJECTIVES

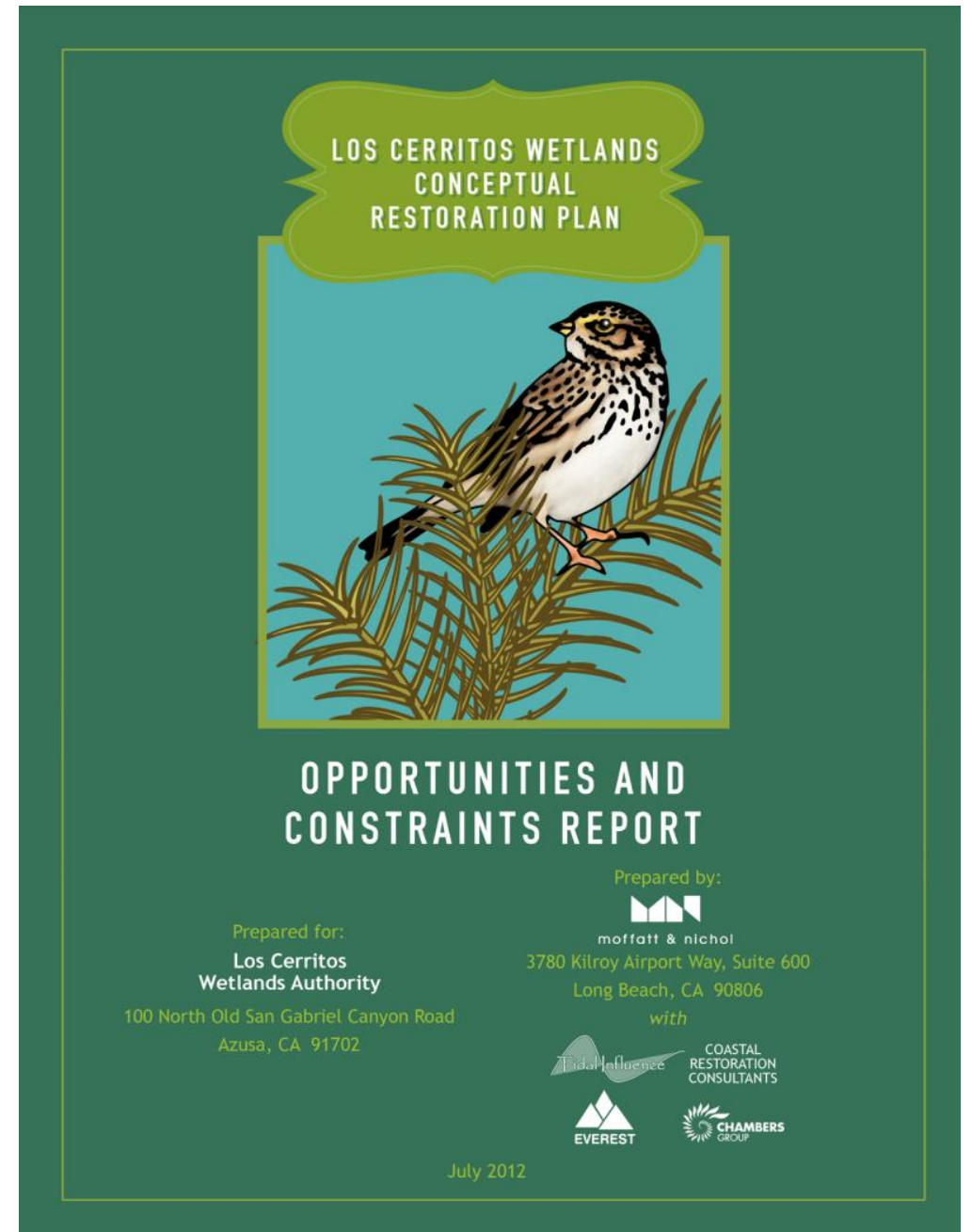


1. Restore tidal **wetland process and functions** to the maximum extent possible
2. Maximize **contiguous habitat** areas and maximize the **buffer** between habitat and sources of human disturbance.
3. Create a **public access and interpretive program** that is practical, protective of sensitive habitat and ongoing oil operations, economically feasible, and will ensure a memorable visitor experience.
4. Incorporate **phasing of implementation** to accommodate existing and future potential changes in land ownership and usage, and as funding becomes available.
5. Strive for **long-term** restoration success.
6. Integrate experimental actions and research into the project, where appropriate, to inform restoration and management actions for this project.



# 3. OPPORTUNITIES AND CONSTRAINTS

- This section summarizes the opportunities and constraints related to restoration at the LCW
- They are detailed in an Opportunities and Constraints Report prepared by Moffatt & Nichol (2012) as part of the Conceptual Restoration Plan
- Most Opportunities are also Constraints
  - *Topography / Landforms / Soils*
  - *Tidal Exchange / Local Watersheds / Hydrology*
  - *Ecology*
  - *Climate Change*
  - *Infrastructure*
  - *Human Interaction*
  - *Regulatory / Implementation*





# 4. PLANNING FRAMEWORK

- This chapter covers the following topics:
  - HISTORIC CONDITIONS
  - RESTORING ECOSYSTEM PROCESSES
  - REGIONAL AND LOCAL NEEDS ANALYSIS
  - ECOLOGICAL RESILIENCE AND RESTORATION
  - CURRENT CONDITIONS



Contaminated Soils Mapping From the PEIR

Los Cerritos Wetlands Habitat Restoration Plan

Figure 4-15

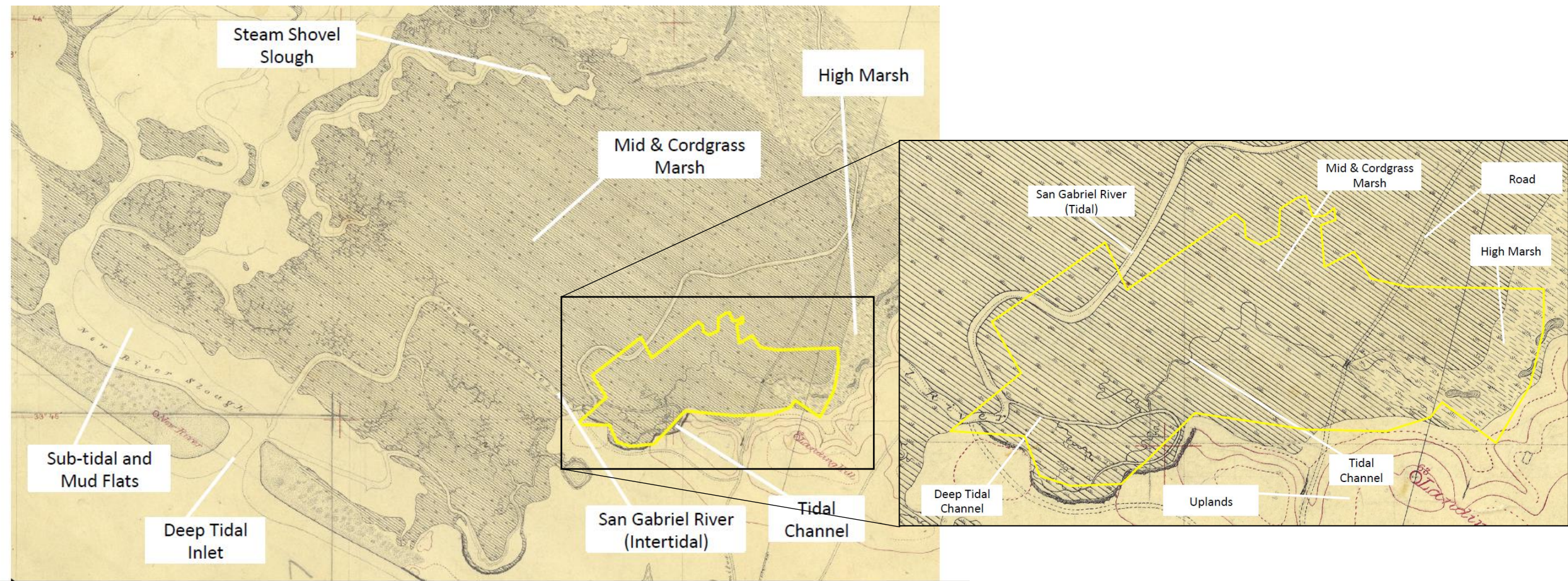


Los Cerritos Wetlands Restoration Plan Program EIR


Potential ESHA From the PEIR



# T-sheet Analysis



**Legend**

 Approximate Outline of LCWA South Site


**1873 Coast Survey Map**

Los Cerritos Wetlands Habitat Restoration Plan

**Figure 4-1**

No Scale

Map Source: NOAA

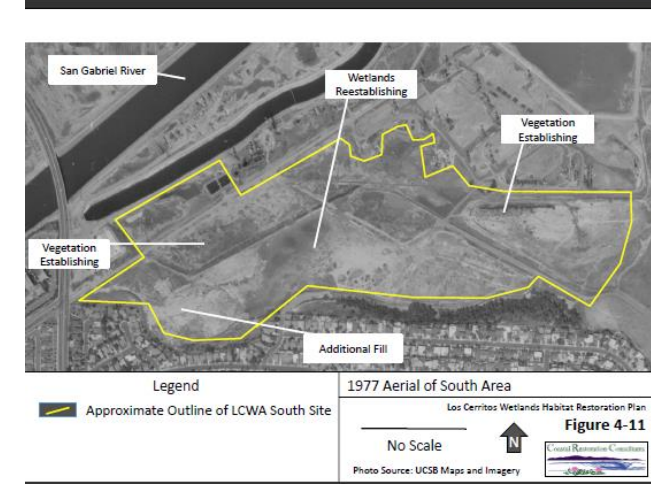
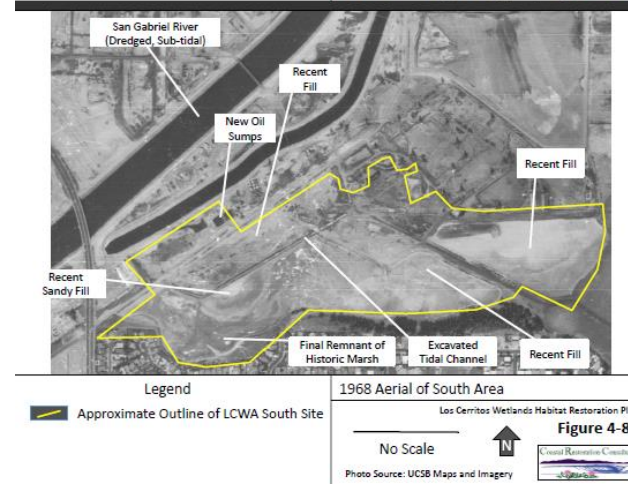
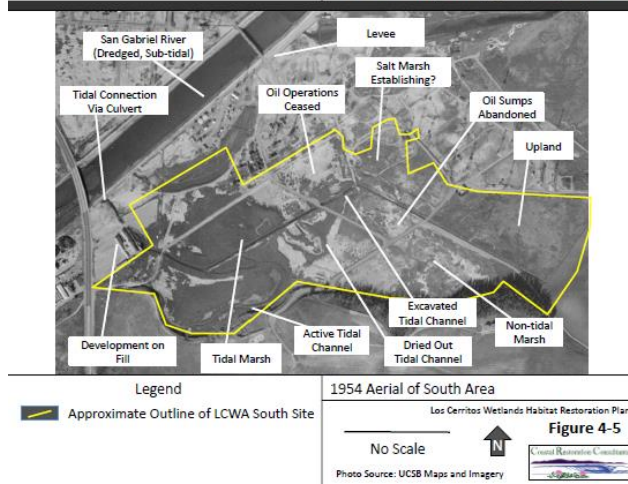
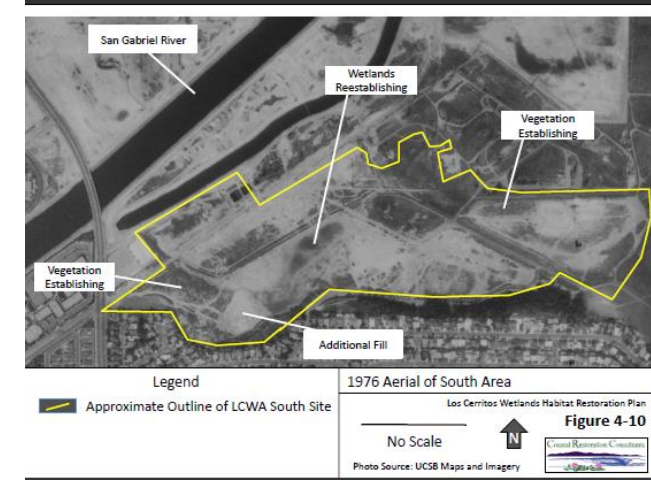
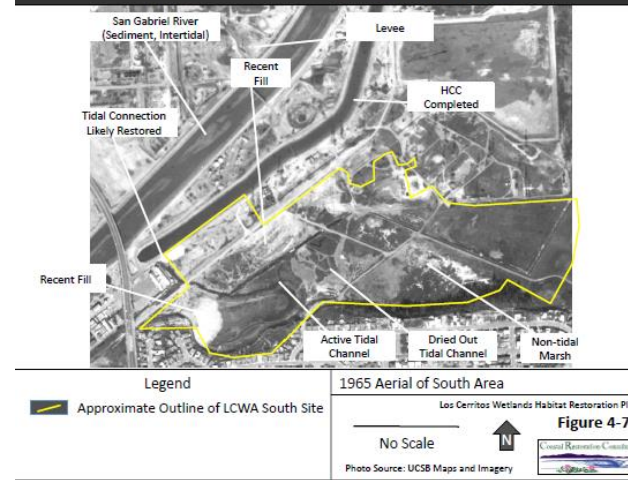
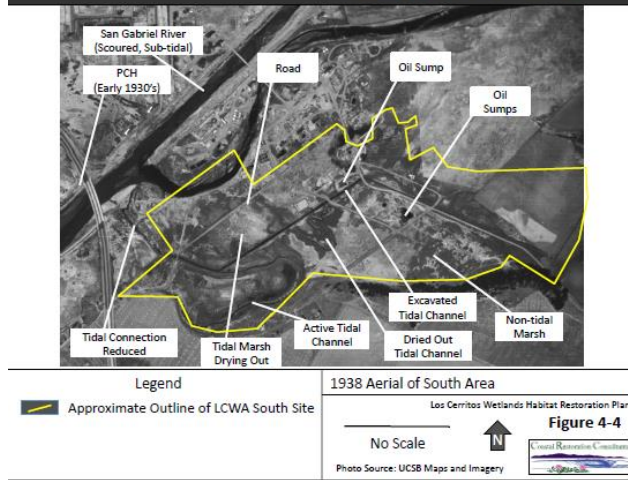
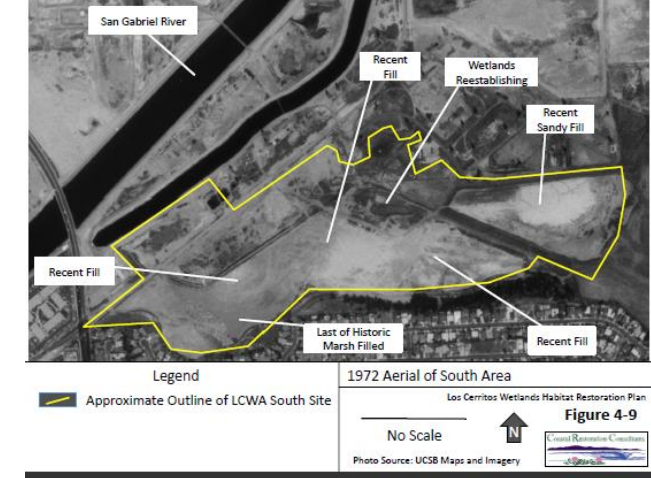
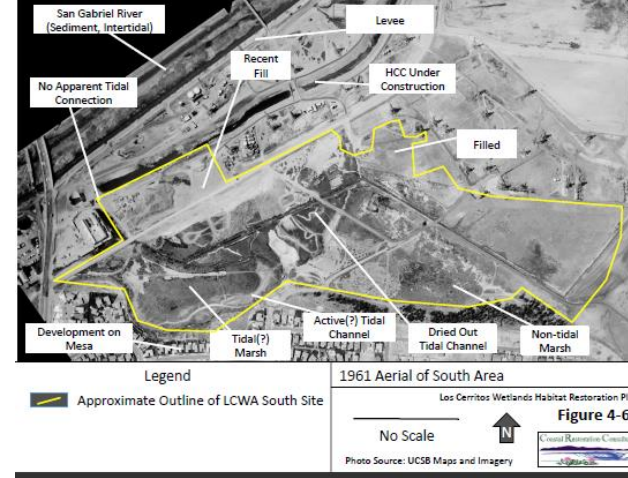
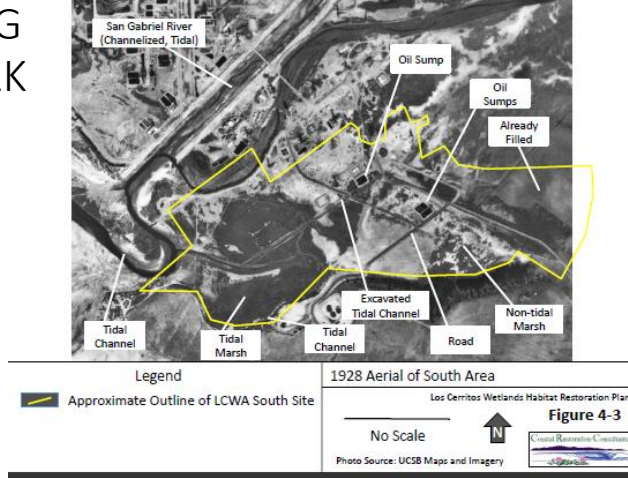






# 4. PLANNING FRAMEWORK

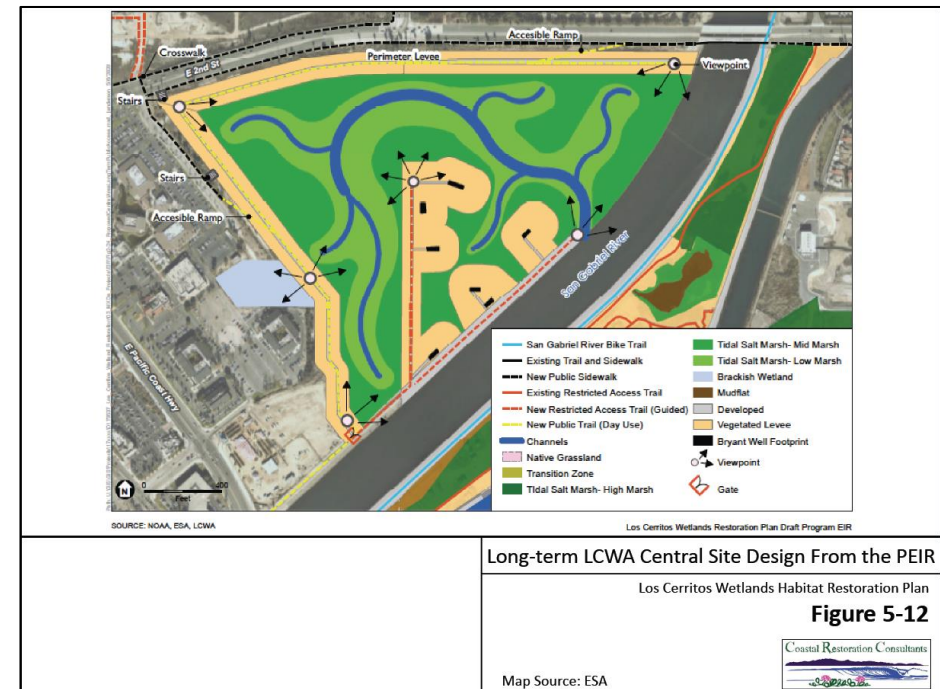
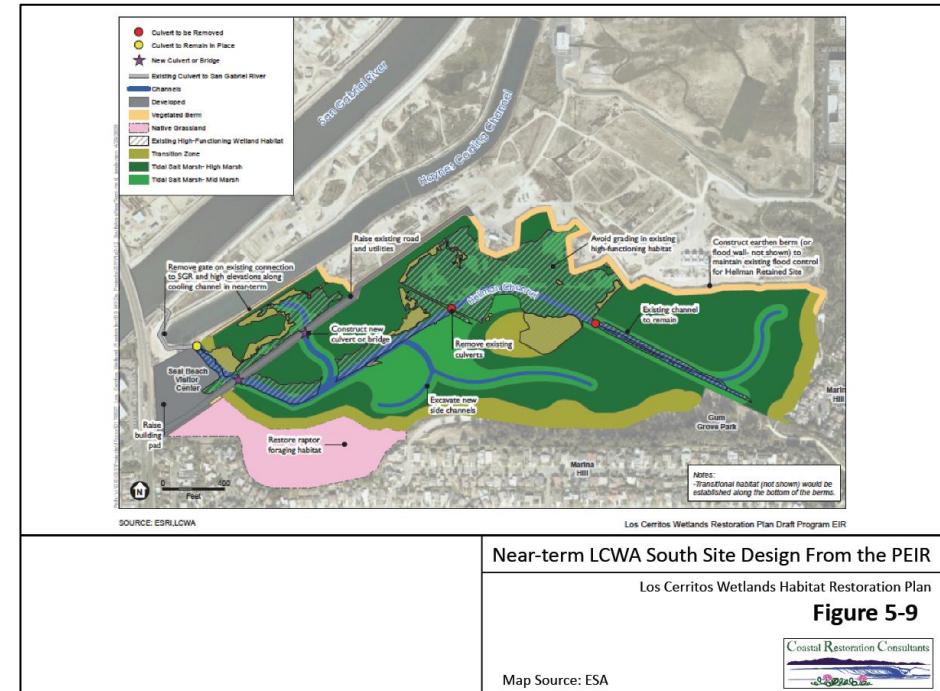
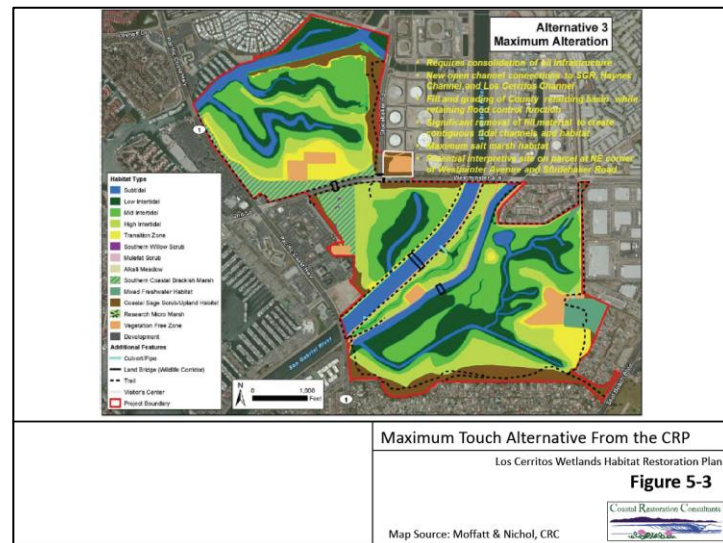
## Historic Aerials





# 5. PREVIOUS RESTORATION DESIGNS

- This chapter summarizes the LCWA's previous restoration design iterations including the
  - Conceptual Restoration Plan
  - Program EIR
- Graphics from each of these documents are provided

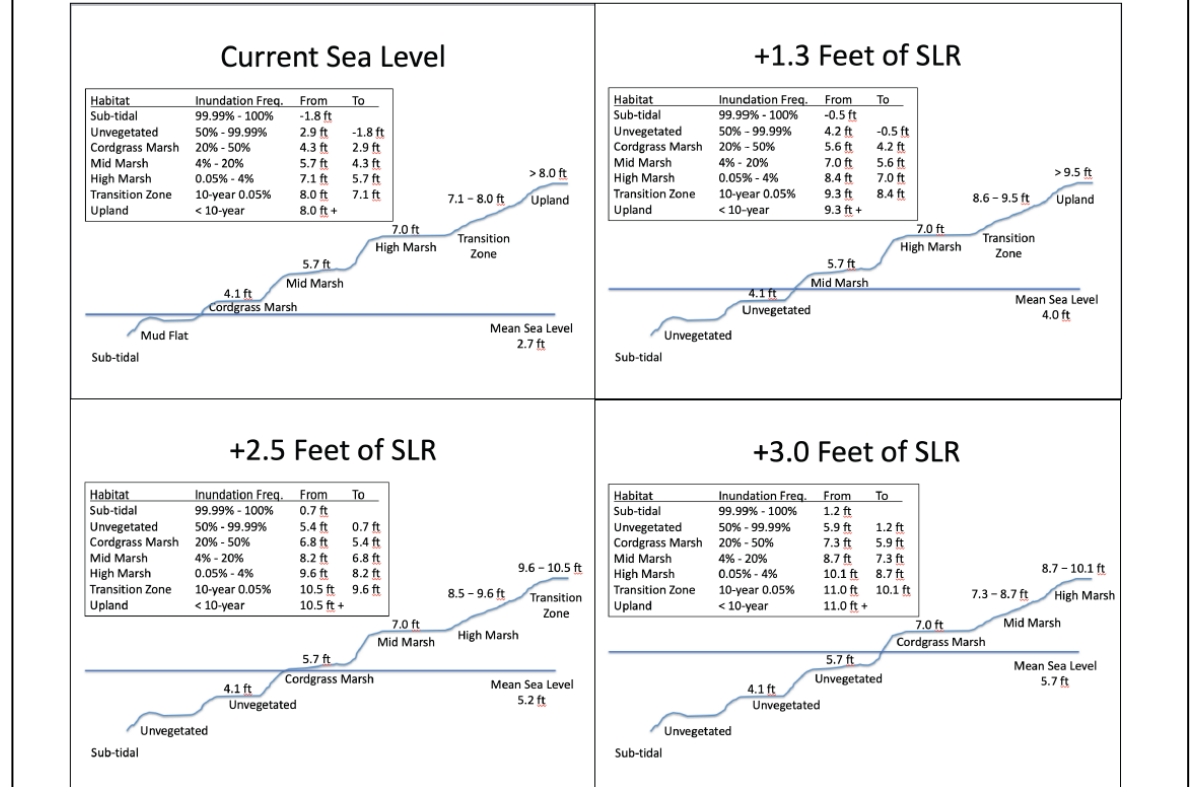




# 6. BASIS OF DESIGN FOR RESTORATION IN THE LCW

- This chapter outlines the basis of design that supported the development of the Refined Restoration Plan for the South LCWA Site (Chapter 8).
- The principles laid out in this basis of design should be applicable to other projects that tier off within LCW as planning progresses
- This chapter covers the following topics:
  - HABITATS TO BE RESTORED
  - HYDROLOGY AND HYDRAULICS
  - SEA LEVEL RISE RESILIENCE
  - LANDFORM
- Table 6-1 describe each potential habitat type to be restored

**Figure 6-6.** Conceptual design for SLR resilience in restored marshes using tiered wetland terraces.



Ridgway's Rail



Salt Marsh Bird's Beak



S-banded Tiger Beetle

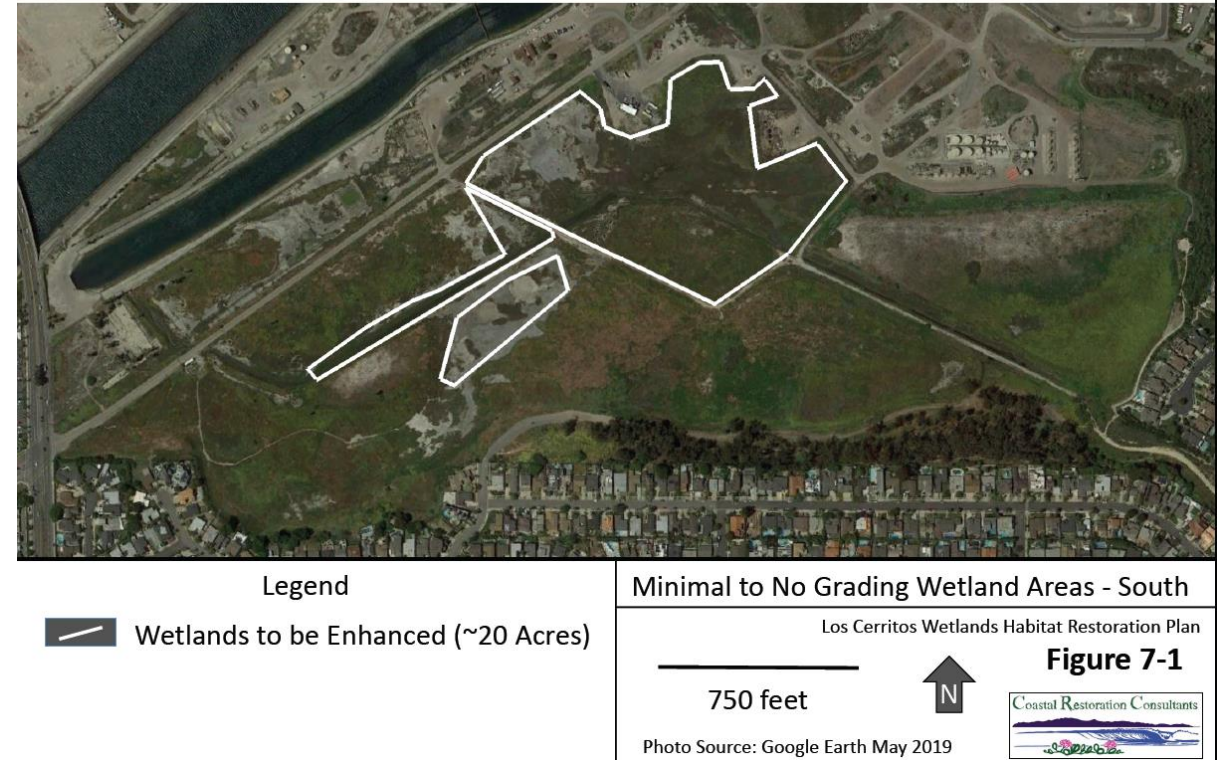


California Boxthorn



# 7. SITE-SPECIFIC DESIGN CONSIDERATIONS

- This chapter describes project-specific and site-specific design considerations that were used to inform the development of the Refined Restoration Plan
- This chapter covers the following topics:
  - SETTING TARGETS FOR DIFFERENT HABITATS
  - RESTORATION ACTIONS WITH MULTIPLE BENEFITS
  - PHASING WITHIN AND BETWEEN AREAS
  - KNOWN SOIL CONTAMINATION
  - REGULATORY AND PERMITTING CONSIDERATIONS
  - WATER QUALITY
  - PUBLIC ACCESS





# 8. REFINED RESTORATION DESIGNS

- This chapter provides details regarding potential near-term restoration projects
- Refined restoration designs are provided for:
  - South LCWA Site
  - Central LCWA Site
- Description of existing restoration designs are provided for:
  - Isthmus Area
  - North Area
- Table 8-1 describes the rare species that exist in the South LCWA Site
- Table 8-2 describes the rare species that could be introduced to the South LCWA Site



Belding's Savannah Sparrow establish 20-30 breeding territories each year in the South LCWA Site



Least Bell's Vireo exists nearby South LCWA site and could be introduced to the site with restoration of willow woodland habitat





## Refined Restoration Plan for the LCWA South Site

Los Cerritos Wetlands Habitat Restoration Plan

**Figure 8-1**

750 feet



Photo Source: Google Earth May 2019







### Legend

- |   |  |
|---|--|
| <span style="color: blue;">■</span> Sub-tidal         | <span style="color: green;">■</span> High Marsh      |
| <span style="color: blue;">■</span> Tidal Channel     | <span style="color: brown;">■</span> Transition Zone |
| <span style="color: yellow;">■</span> Cordgrass Marsh | <span style="color: orange;">■</span> Upland         |
| <span style="color: green;">■</span> Mid Marsh        | <span style="color: grey;">■</span> Infrastructure   |

### Phase 1 Short-Term LCWA South Site

Los Cerritos Wetlands Habitat Restoration Plan

**Figure 8-2**

750 feet



Photo Source: Google Earth May 2019







## Phase 1&2 Mid-Term LCWA South Site

Los Cerritos Wetlands Habitat Restoration Plan

**Figure 8-3**

750 feet



Photo Source: Google Earth May 2019







## Habitats at Current Sea Level

Los Cerritos Wetlands Habitat Restoration Plan

**Figure 8-8**

750 feet



Photo Source: Google Earth May 2019







## Habitats with 1.5 Feet of SLR

Los Cerritos Wetlands Habitat Restoration Plan

**Figure 8-9**

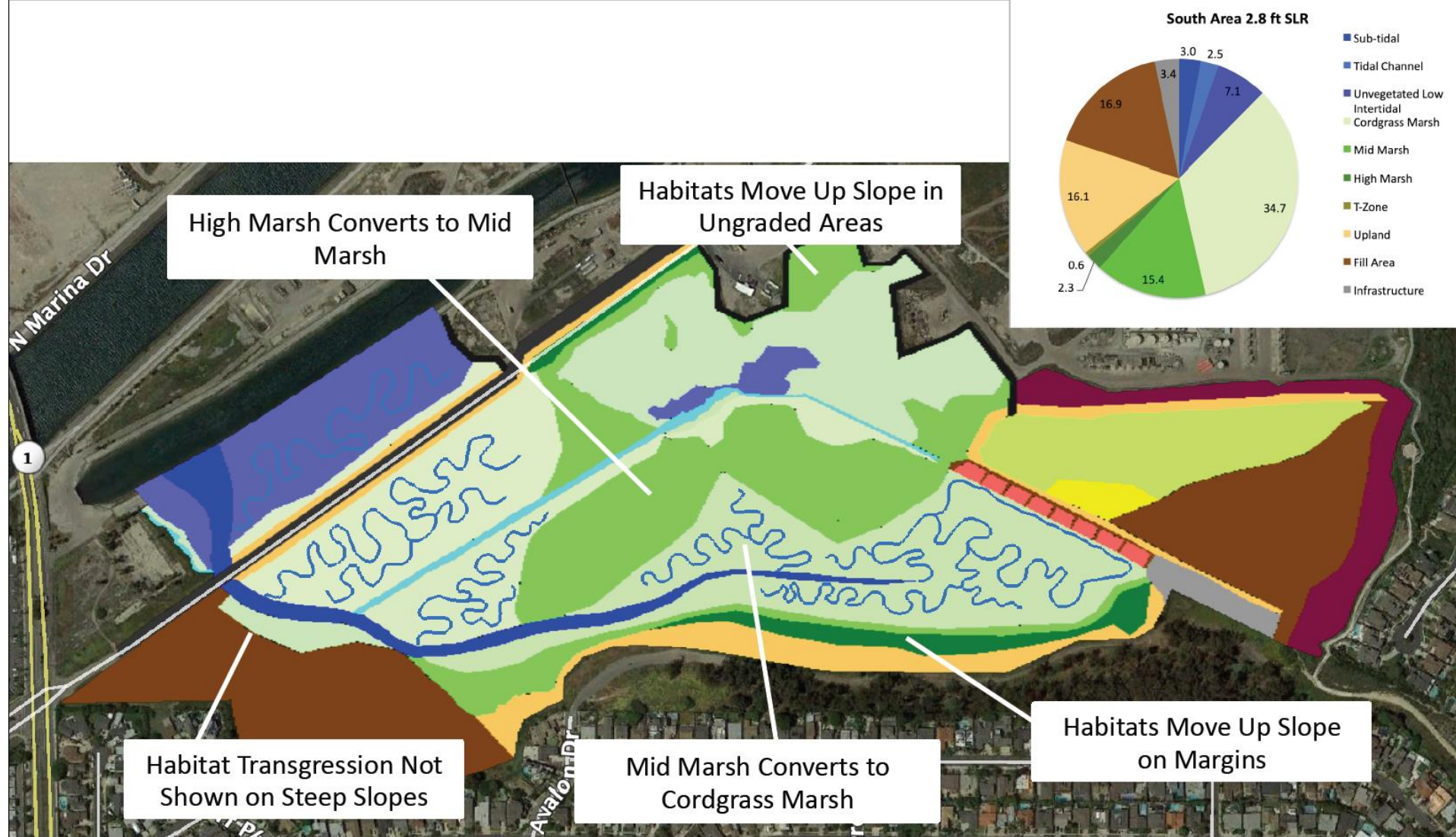
750 feet



Photo Source: Google Earth May 2019







## Habitats with 2.8 Feet of SLR

Los Cerritos Wetlands Habitat Restoration Plan

**Figure 8-10**

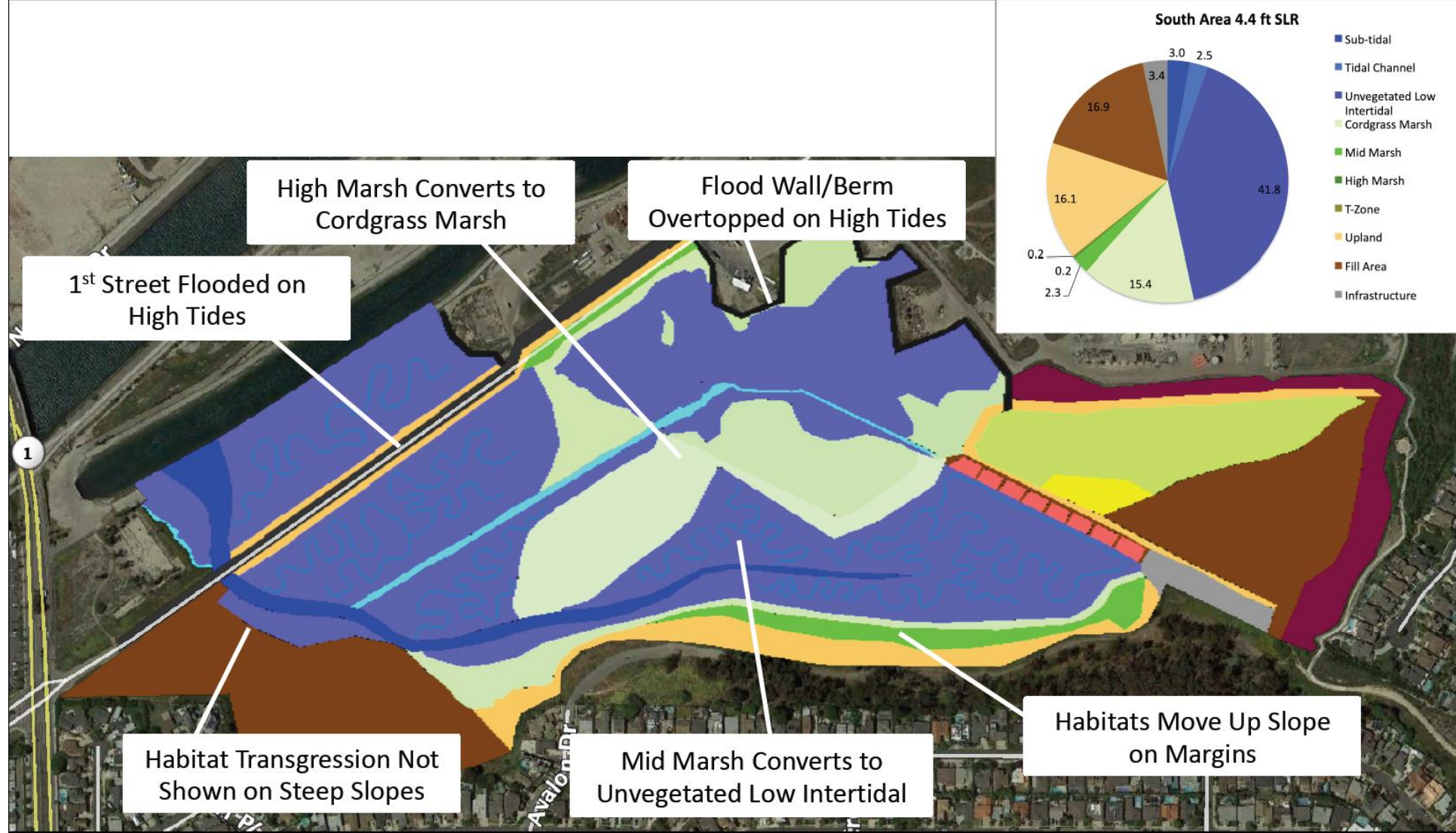
750 feet



Photo Source: Google Earth May 2019







## Habitats with 4.4 Feet of SLR

Los Cerritos Wetlands Habitat Restoration Plan

**Figure 8-11**

750 feet

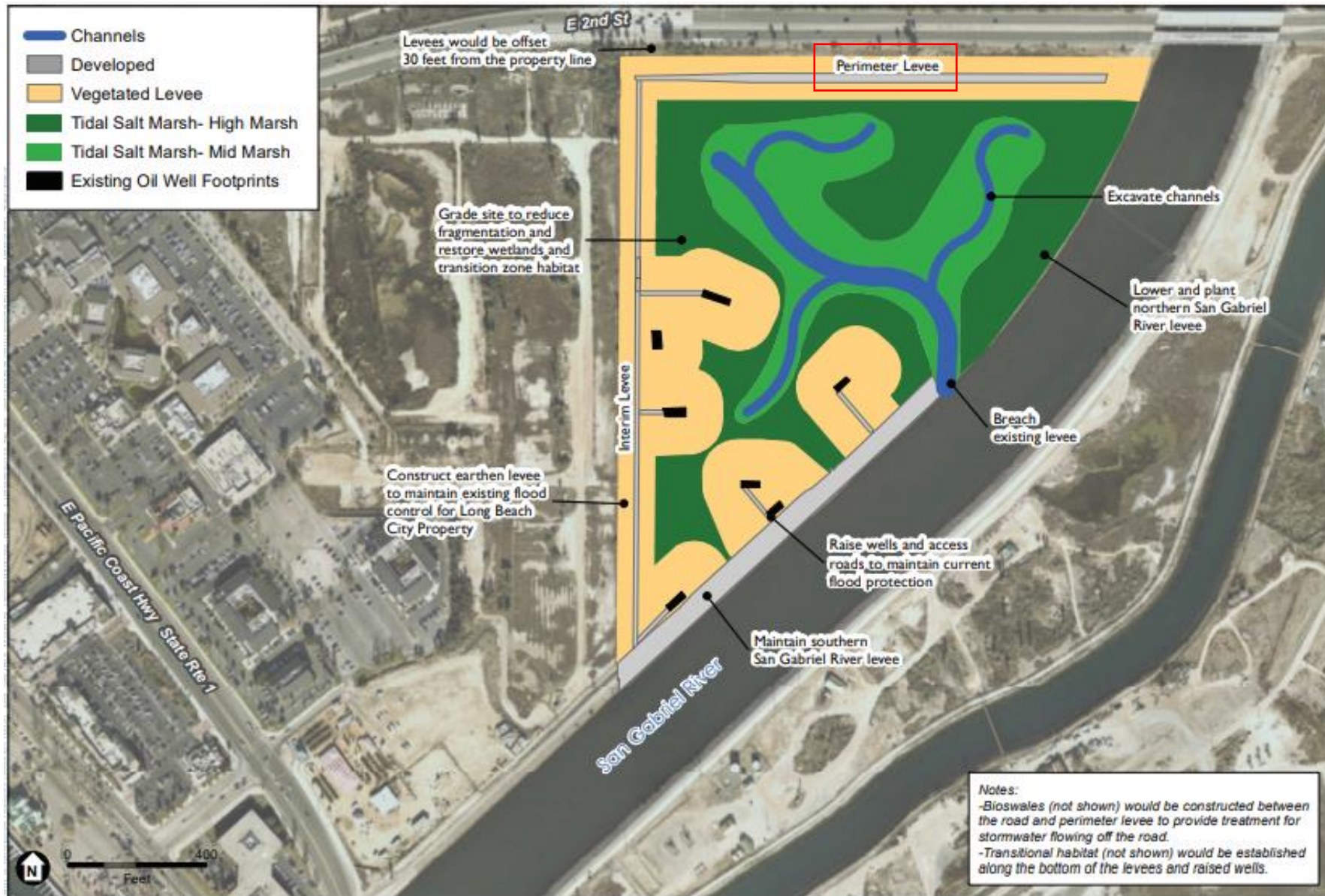


Photo Source: Google Earth May 2019



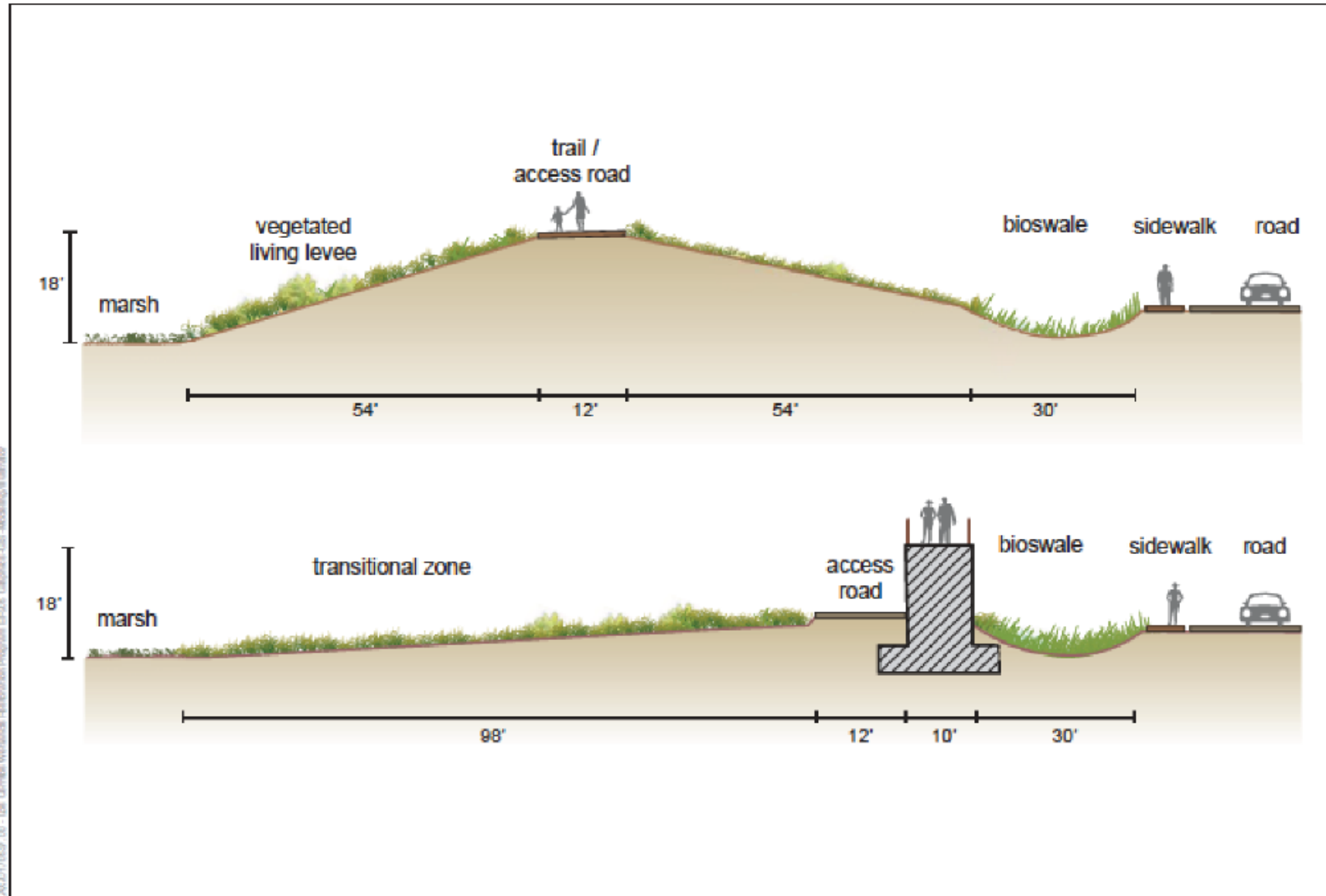


# Central Area: Restoration Concept Mid-Term

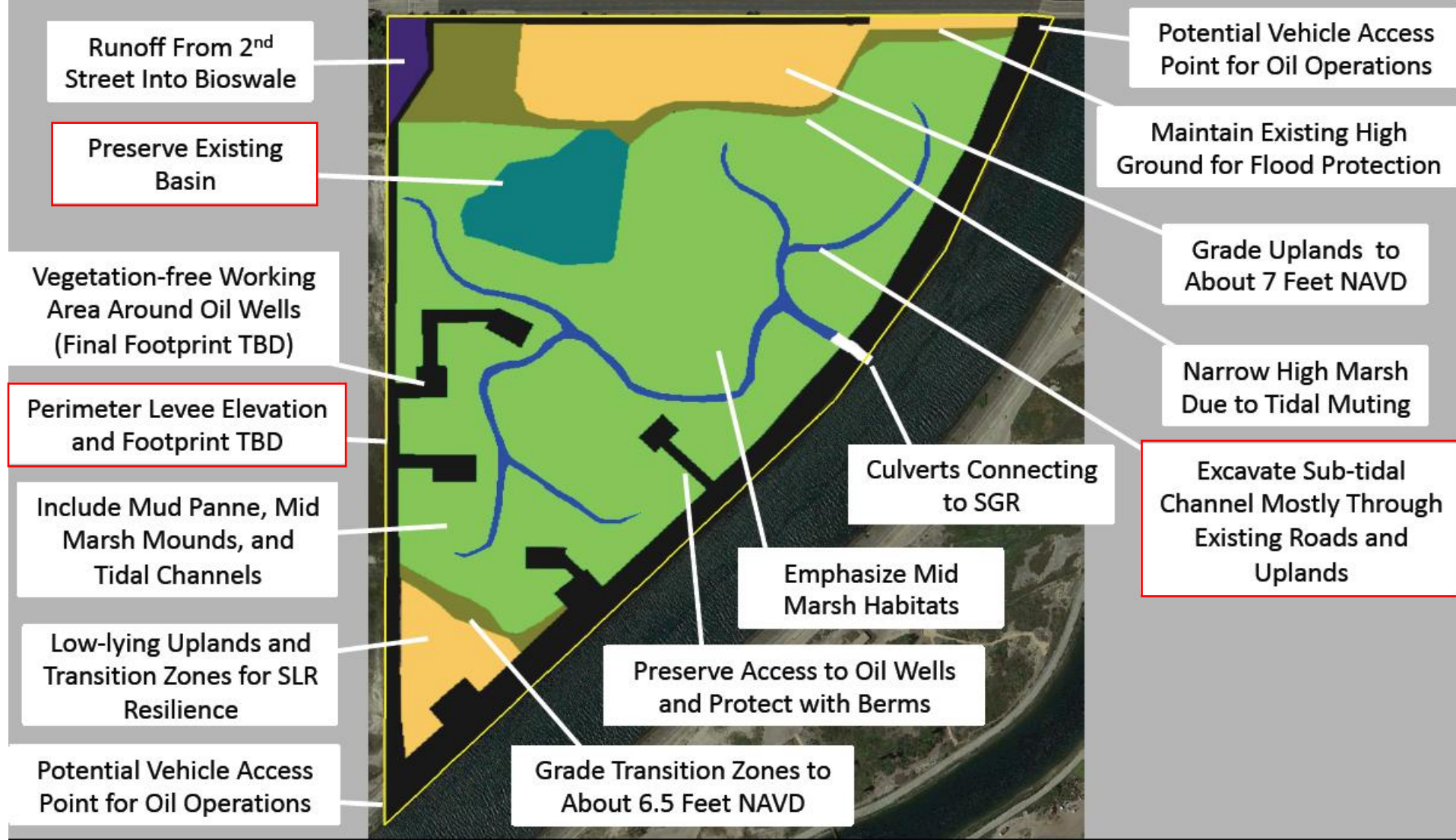




**Figure 8-13.** Conceptual designs for new LCWA Central site flood protection with full breach to SGR.







### Legend

- |                 |                   |
|-----------------|-------------------|
| Sub-tidal       | Upland            |
| Mid Marsh       | Infrastructure    |
| Transition Zone | Bioswale/Riparian |
| Salt Panne      | Project Boundary  |

### Culvert Alternative – LCWA Central Site

Los Cerritos Wetlands Habitat Restoration Plan

**Figure 8-15**

750 feet



Photo Source: Google Earth May 2019





# 9. IMPLEMENTATION GUIDANCE

- This chapter covers the following topics:
  - ADAPTIVE MANAGEMENT AND ADAPTIVE RESTORATION
  - SOILS
  - REVEGETATION STRATEGIES
  - FINAL GRADING
  - ECOSYSTEM MONITORING
  - ON-SITE MITIGATION



**Table 9-1.** Revegetation strategies for different habitats. Guidance for vegetating levees can be found in the PEIR.

	Considerations for Restoration
Sub-tidal	- Establishing <i>Zostera marina</i> from turion transplants - Shown to be successful at other sites
Low Intertidal Unvegetated	- No planting
Cordgrass Marsh	- Plant <i>Spartina foliosa</i> from container stock or plugs - Establishing tall robust plants requires fine soils with organic matter and good tidal flushing
Mud Panne	- Plant <i>Salicornia bigelovii</i> from seed - Plant <i>Batis maritima</i> on margins
Mid Marsh	- Plant high diversity of marsh species from container stock - Irrigation may aid establishment - Do not plant or seed <i>Salicornia pacifica</i>
	- Plant <i>Suaeda esteroa</i> from seed
Salt Panne	- Seed <i>Lasthenia glabrata</i> ssp. <i>coulteri</i> around edges
High Marsh	- Plant high diversity of marsh species from container stock and seed - Use irrigation to control soil salinity and aid establishment - Do not plant or seed <i>Salicornia pacifica</i>
Transition Zone	- Plant high diversity of species from container stock and seed - Use irrigation to control soil salinity and aid establishment - Plant more wetland species at lower elevations and more upland species higher
Upland	- Use direct seeding and container plants - Plant grassland species on heavy soils - Plant coastal prairie species on sandy soils - Plant coastal sage scrub on slopes and better-drained soils - Use irrigation only in the rainy season to aid establishment - Will require extensive weeding
Riparian/Bioswale	- Plant cuttings/stakes and container stock - Use irrigation until roots reach groundwater - Will require weeding



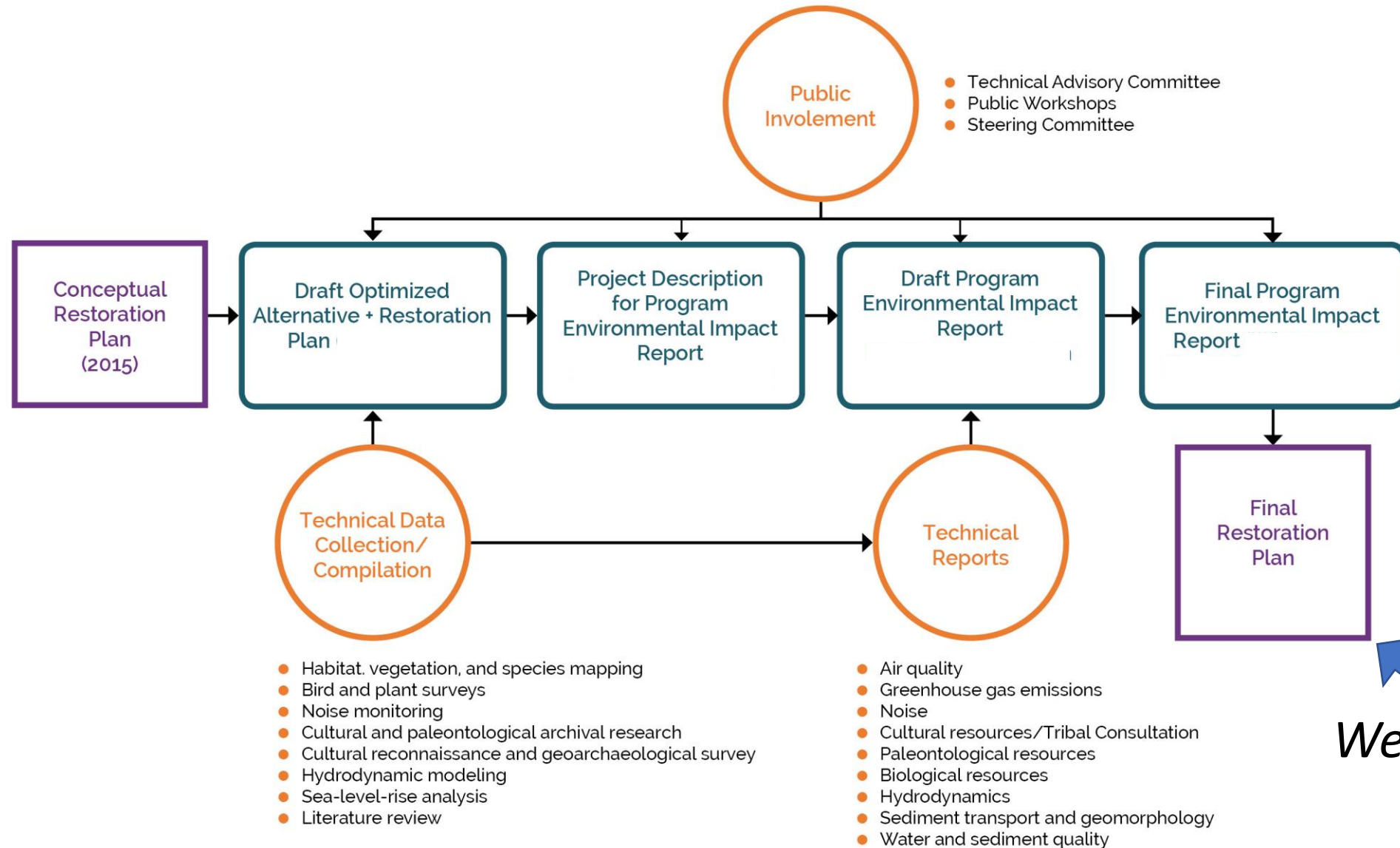
# 10. NEXT STEPS

- This chapter covers the following topics:
  - THE NEXT PHASE OF PLANNING – SOUTH LCWA SITE
  - DATA GAPS – SOUTH LCWA SITE
  - PUBLIC ACCESS AND VISITOR EXPERIENCE
  - PERMITTING AND APPROVALS
  - TIMELINE
- Table 10-1 provides a summary of all possible permits/approval
- Table 10-2 provides an estimated general timeline for the next phase of planning





# Next Steps for the LCWA Restoration Planning Process





# Next Steps for the LCWA Restoration Planning Process

- Public Comments on Restoration Plan Due **March 25, 2021**
- Technical Advisory Committee Meeting **April 12, 2021**
- Tribal Advisory Groups Meetings **Spring 2021**
- LCW Restoration Plan Presented to LCWA Board **May 2021**
- LCWA South Area Restoration Project
  - Moffatt and Nichol Consulting Team Under Contract
  - Technical Studies **Spring-Summer 2021**
  - Project Level CEQA Analysis **Summer-Winter 2021\***
  - 30%-65% Construction Design Complete in **2022\***
  - Permit Applications Submitted in **2022\***
  - **Public Engagement Throughout**



**\*= anticipated dates**



The image shows two Sooty Terns standing on a grassy, slightly muddy shore. They have white bodies, black caps, and long, straight red bills. The bird on the left is facing right, and the bird on the right is facing left. In the background, there is a calm body of water reflecting the sky, and a dense stand of tall, green grasses behind the water.

**THANK YOU FOR LISTENTING**  
**Now it is your TERN!**

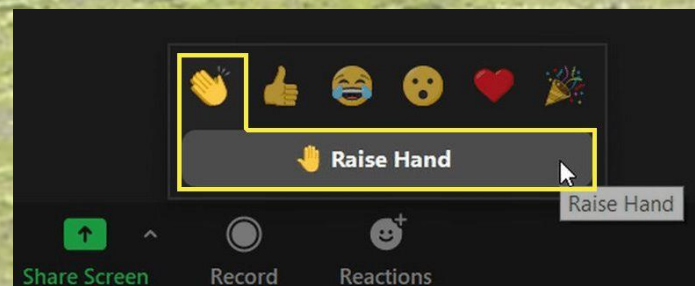
Questions and Answers



# Questions and Answers

## How to ask a question

1. Press “Reactions” to “Raise Hand”
2. Moderator will unmute you
3. Speak when called upon
4. Mute yourself after question
5. Lower Hand





For More Information  
Visit [intoloscerritoswetlands.org](https://intoloscerritoswetlands.org)  
or  
Contact [lcwa@tidalinfluence.com](mailto:lcwa@tidalinfluence.com)



## Links

Program EIR - <https://intoloscerritoswetlands.org/the-lcws-eir/>  
Restoration Plan - <https://intoloscerritoswetlands.org/wp-content/uploads/2021/03/LCW-Restoration-Plan-Final-Draft.pdf>