Los Peñasquitos Lagoon Restoration – Phase 1

RESILIENCY ADVISORY BOARD
MARCH 19, 2026

The City of SAN DIEGO

AGENDA

- Introductions
- Project Background
- Project Goals & Key Project Components
- Work completed and future activities
- Project Schedule
- Questions/Discussion

Project Background

- Priority in 2018 Los Peñasquitos Lagoon Enhancement Plan and Program EIR.
- Regulatory Driver: Lagoon Sediment Total Maximum Daily Load
  - Joint project between TMDL responsible parties, in partnership with LPLF and CA State Parks
- Compliance Targets:
  - Sediment Load Reduction.
  - Lagoon Compliance Target (Salt Marsh Restoration).
- Project Components:
  - Salt Marsh Restoration
  - Riparian Corridor Enhancement
  - Floodway Improvements & Storm Water Infrastructure Improvements

Historical Salt Marsh

- Historical salt marsh lost due to sediment & persistent freshwater flows
- Total Maximum Daily Load (TMDL) developed to address this loss

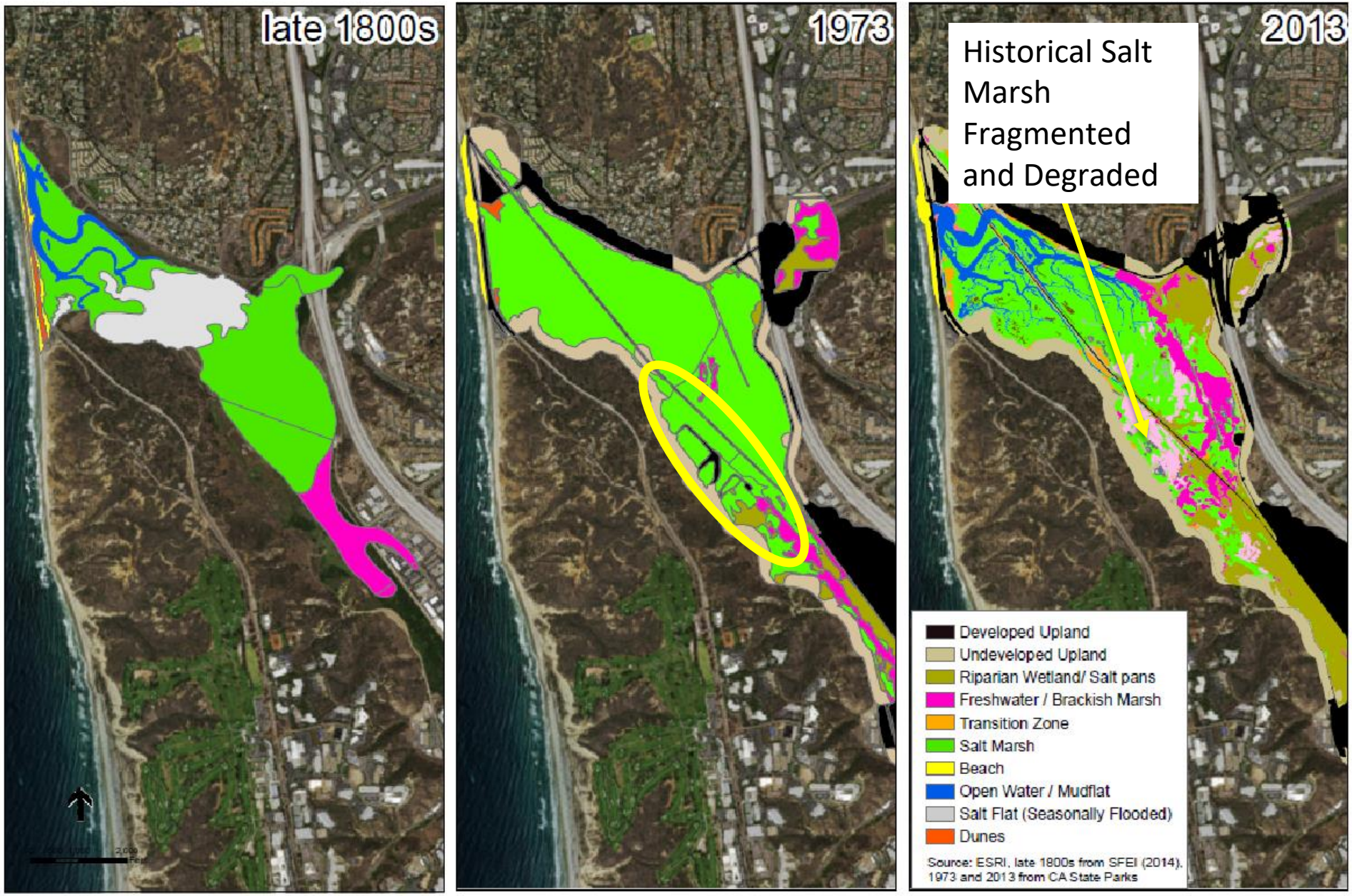


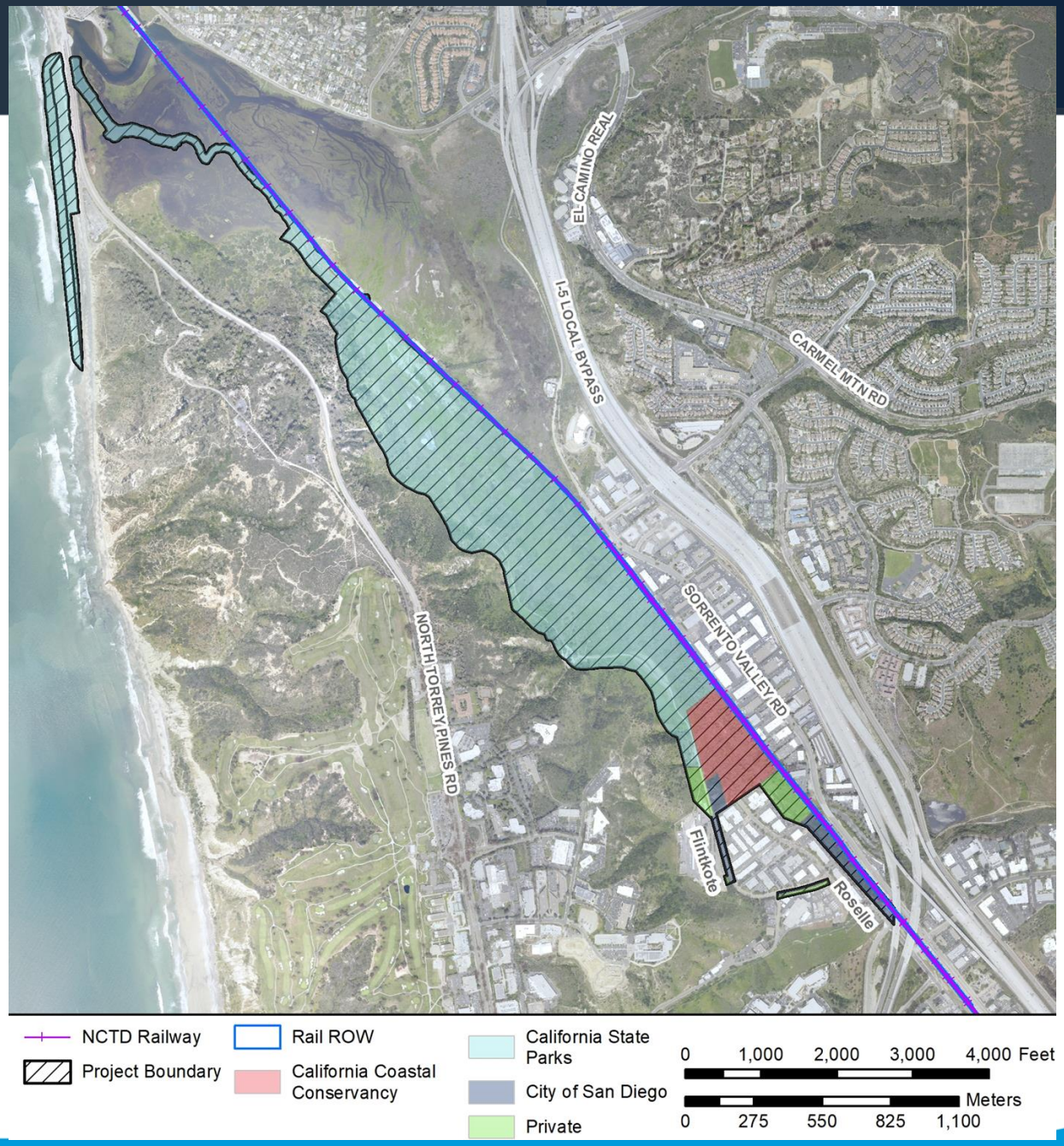
Figure from Updated LPL Enhancement Plan (LPLF, 2016)

Los Peñasquitos Lagoon Restoration Phase 1 & 2

- Phase 1 – Floodplain Improvements, Riparian Enhancements, Salt Marsh Restoration/Recovery
- Project Area – Sorrento Valley and Torrey Pines State Natural Reserve
- Phase 2 – TBD later with approach and design informed by Phase 1
- Phase 1 is focus of presentation

Figure from 2018 Watershed Master Plan (Phase 1 boundary has expanded during current design effort)

Phase 1 Project Boundary – Ownership

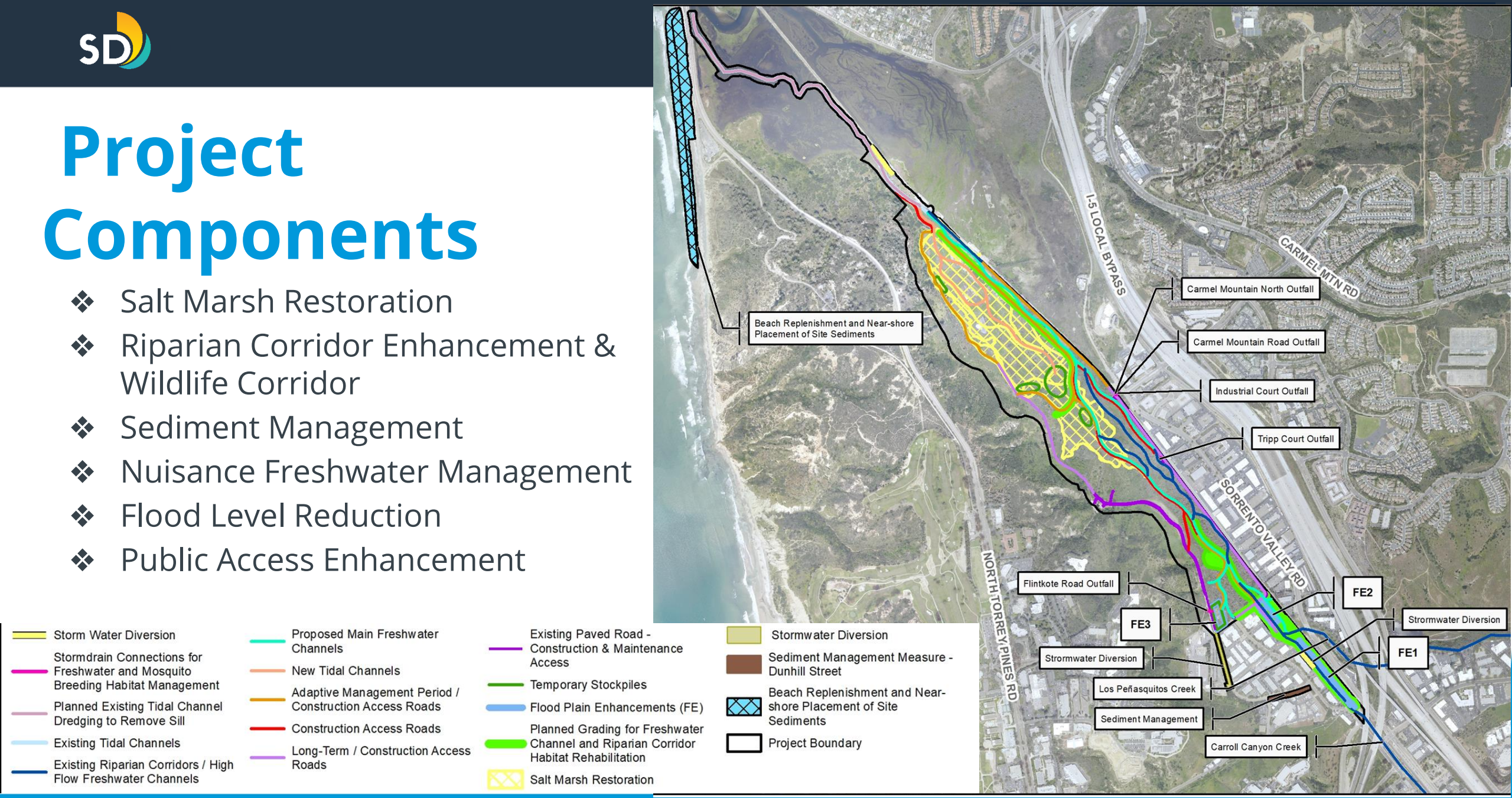


Project Benefits to the Community

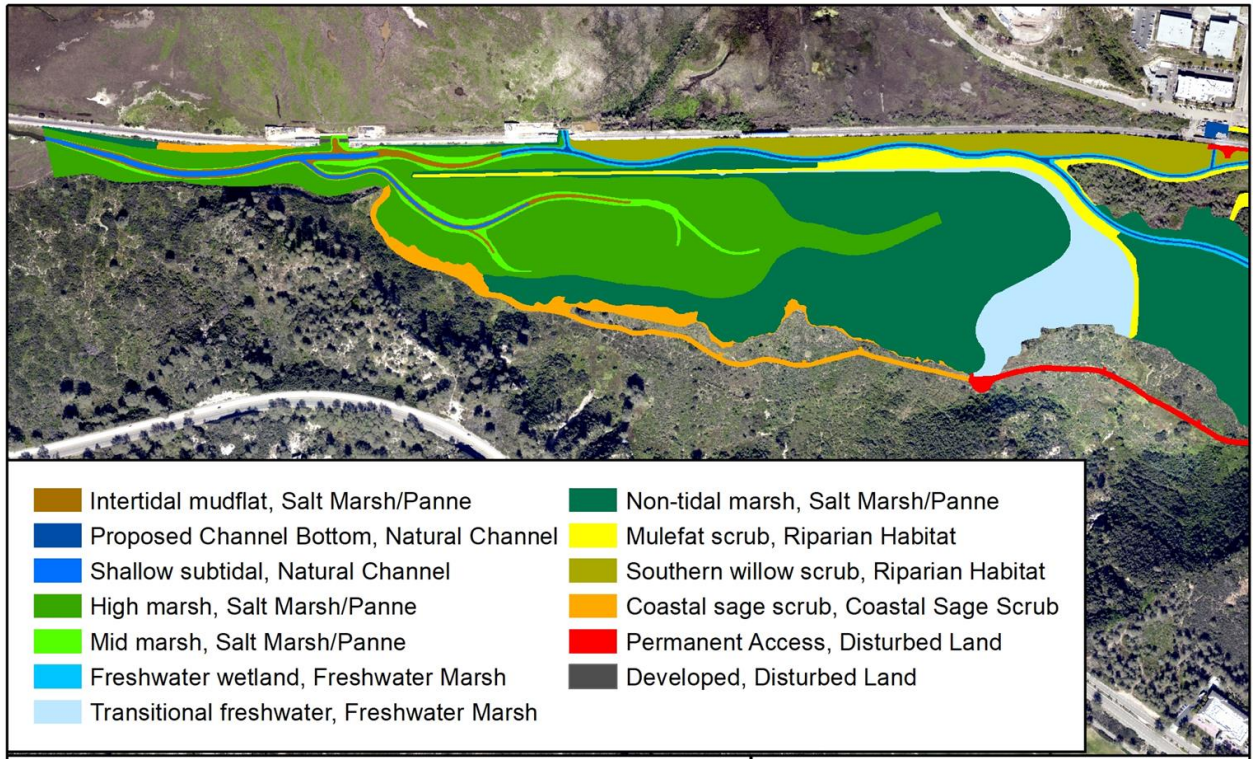
- Restores and preserves open space that contains rare and sensitive habitats native to Los Peñasquitos Lagoon.
- Improved protection for businesses and roadways in Sorrento Valley from flooding and mud flows following frequent rain events.
- Enhanced public access along the Marsh Trail.
- Stormwater outfall improvements to reduce trash and debris as well as eliminating areas of ponded water (mosquito breeding habitat).

Project Components

- Salt Marsh Restoration
- Riparian Corridor Enhancement & Wildlife Corridor
- Sediment Management
- Nuisance Freshwater Management
- Flood Level Reduction
- Public Access Enhancement



Salt Marsh Restoration – Phase 1



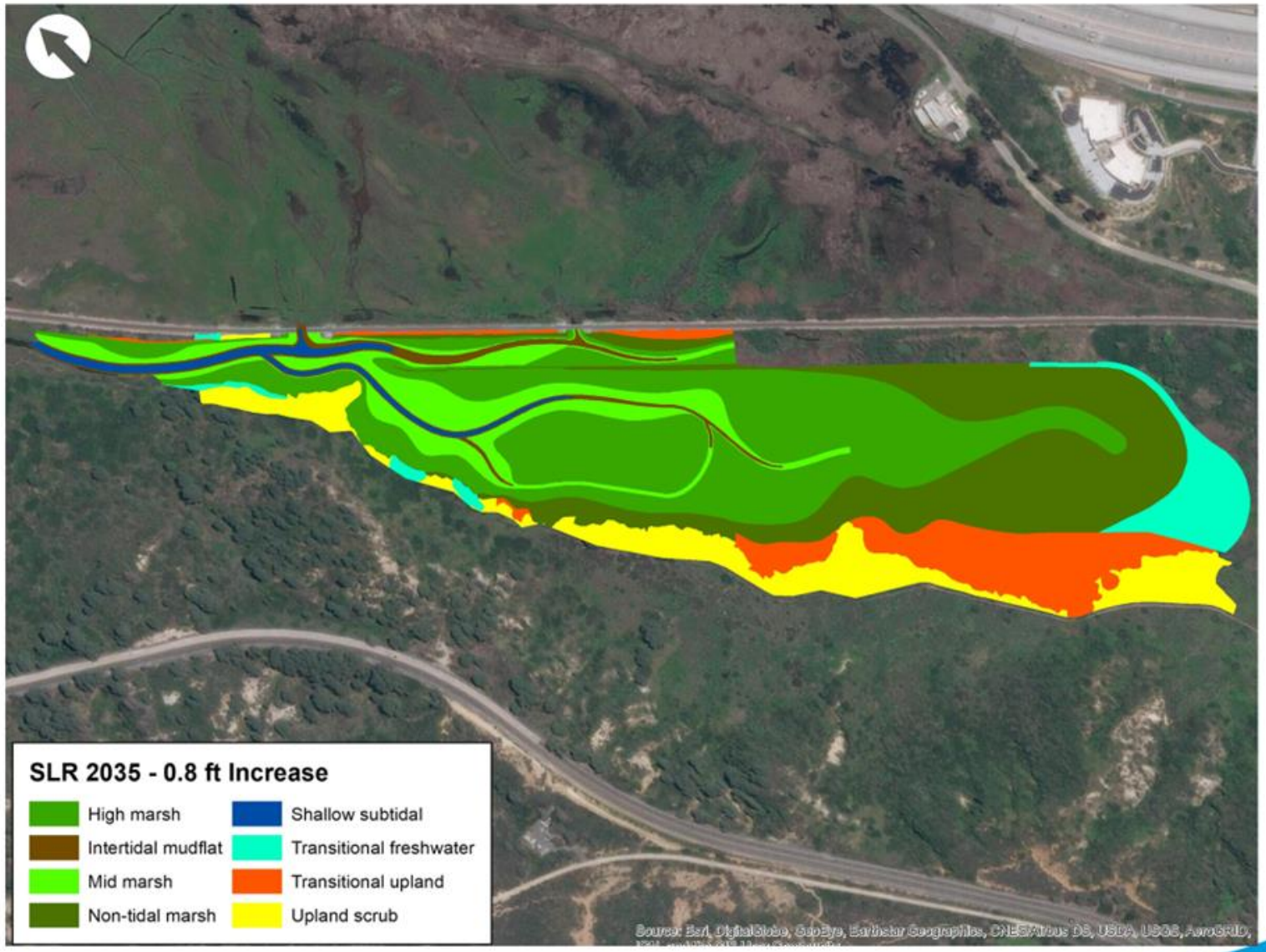
Key Goals

- Restore 45-55 acres toward 84 acres of salt marsh habitat by 2035 (TMDL).+
- Remove existing non-native rye grass and replace with salt marsh vegetation.
- Consider future sea level rise

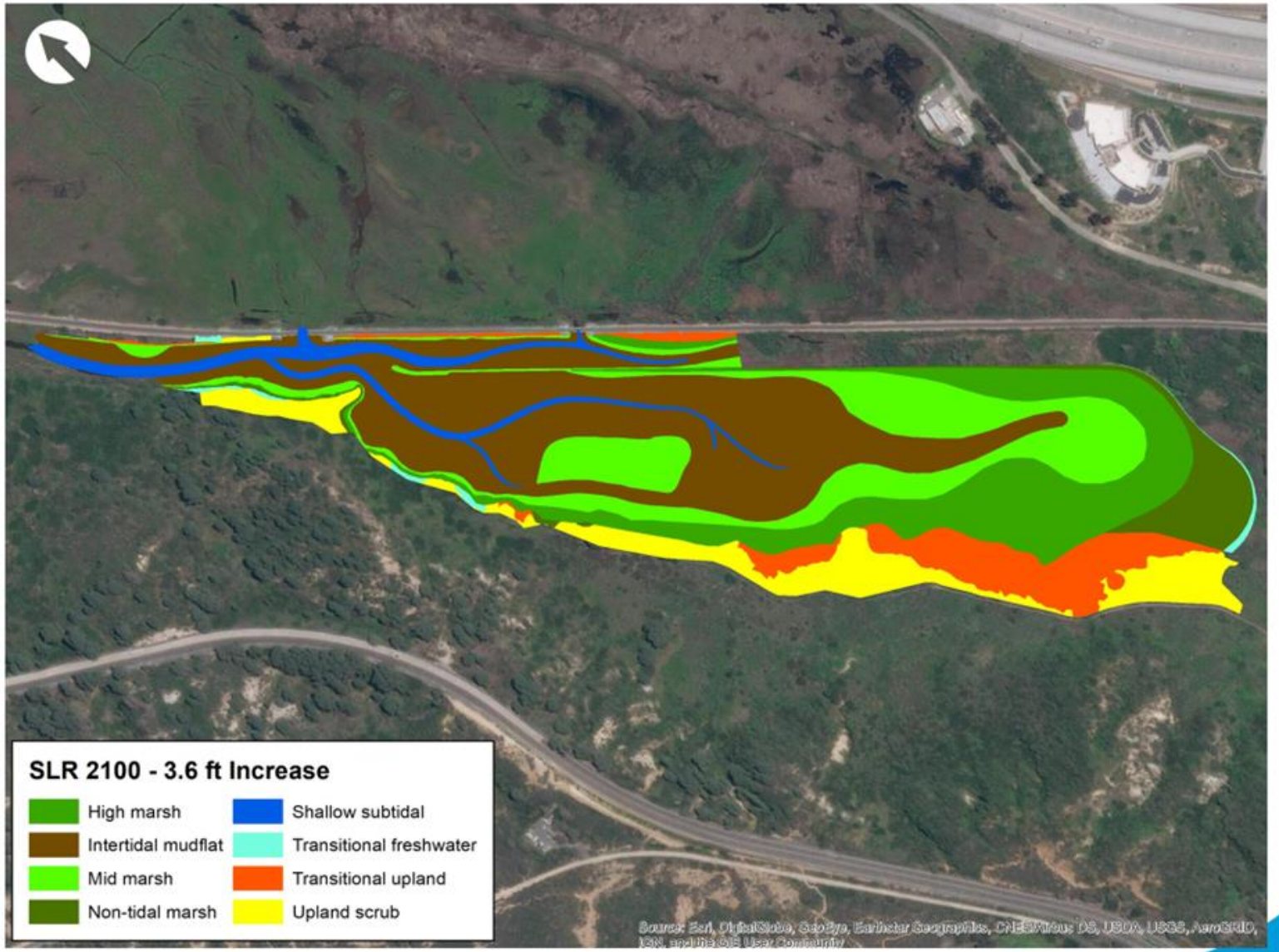
Los Penasquitos Lagoon Restoration Project – Designed for Adaptive Resiliency - Sea Level Rise (SLR) Considerations

- Design included Adaptive Management for Future SLR
- Design Team used Hydrodynamic Modeling of SLR at 2035 and 2100
- Modeling results used to provide for Transition Zones to allow for restored areas to adapt to future SLR
- Transition zones allow for expanded tidal wetlands while not creating less valuable sub-tidal habitat per TMDL

Salt Marsh Restoration – Vegetation Communities – 2035 – SLR (0.8 ft.)



Salt Marsh Restoration – Vegetation Communities – 2100 – SLR (3.6 ft.)



Mitigation

Wetlands Re-establishment (4.1 acres)

- Salt marsh (4.1 acres)

Wetlands Rehabilitation (47.9 acres)

- Salt marsh (29.8 acres)
- Riparian habitat (11.6 acres)
- Freshwater marsh (5.1 acres)
- Natural channels (2.3 acres)

Wetlands Enhancement (18.6 acres)

- Salt marsh (16.1 acres)
- Riparian habitat (2.5 acres)

- Additional Wetlands Restoration Following Temporary Construction Impact (12.2 acres)

- Additional Upland (coastal sage scrub) Restoration (6.6 acres)

Impact Analysis

Type Conversion - Loss

- 4.3 acres Riparian Habitat
- 1.4 acres Coastal Sage Scrub
- 2.9 acres Non-Native Grassland

Type Conversion – Gain (8.9 acres net)

- 6.7 acres of Salt Marsh/Panne
- 4.4 acres of Freshwater Marsh
- 2.2 acres of Natural Channel

Upland Restoration (2.5 acres onsite)

- 3.63 acres Coastal Sage Scrub deficit
- 0.59 acre Non-Native Grassland deficit
- Additional onsite upland restoration, bank credits, or HAF

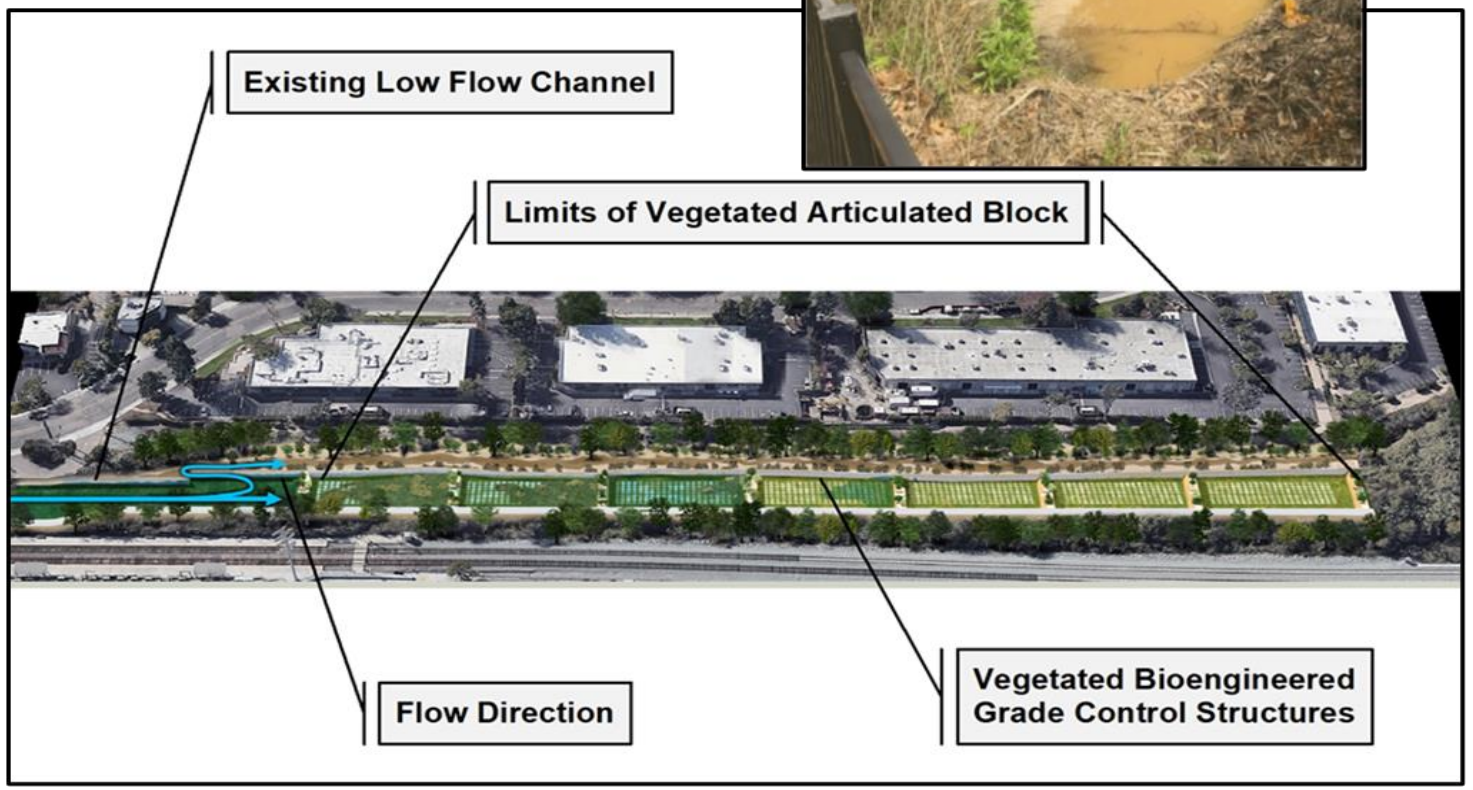
Wetlands Mitigation

- To support Phase 1 with excess applied to Phase 2

Sediment Management:

Key Goals

- Remove coarse sediment before impacting Riparian and Lagoon Habitats
- Address sediment, trash & vector issues at storm drains



Riparian Corridor Enhancement

Key Goals

- Remove invasive plants
- Improve and preserve a key wildlife corridors

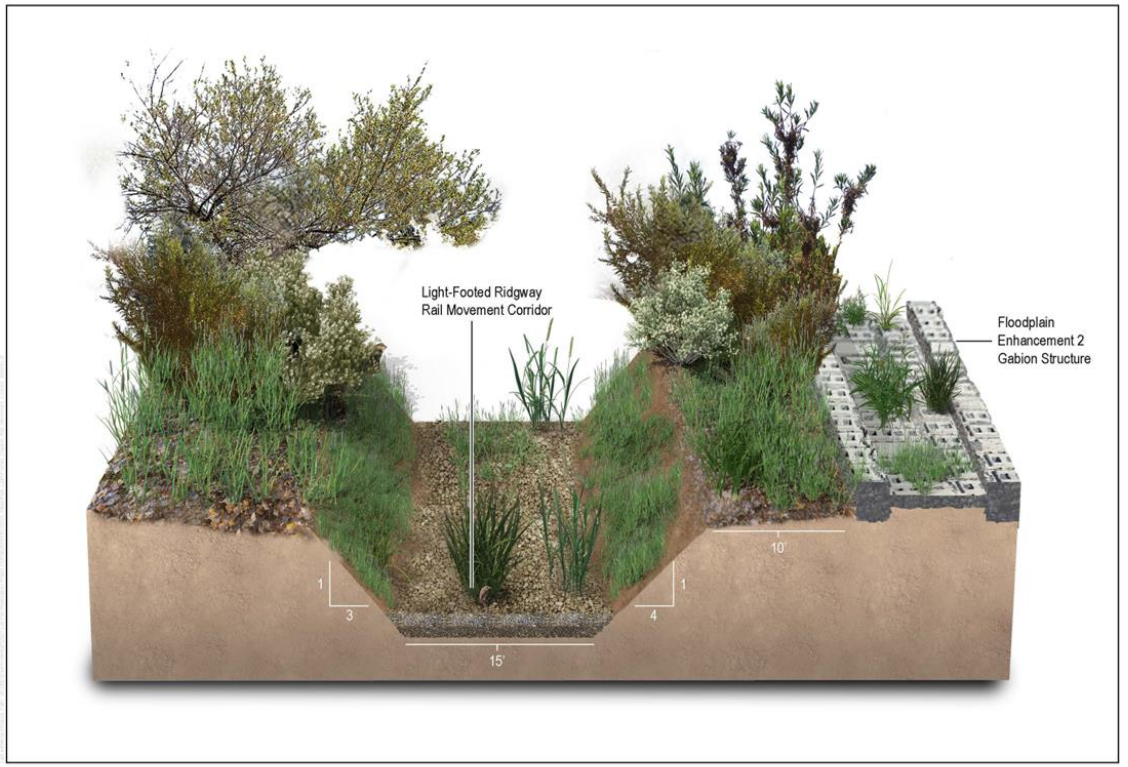


FIGURE 4
Light-Footed Clapper Rail Movement Corridor Section
Light-footed Ridgway's Rail Report-Los Peñasquitos Lagoon Restoration - Phase1

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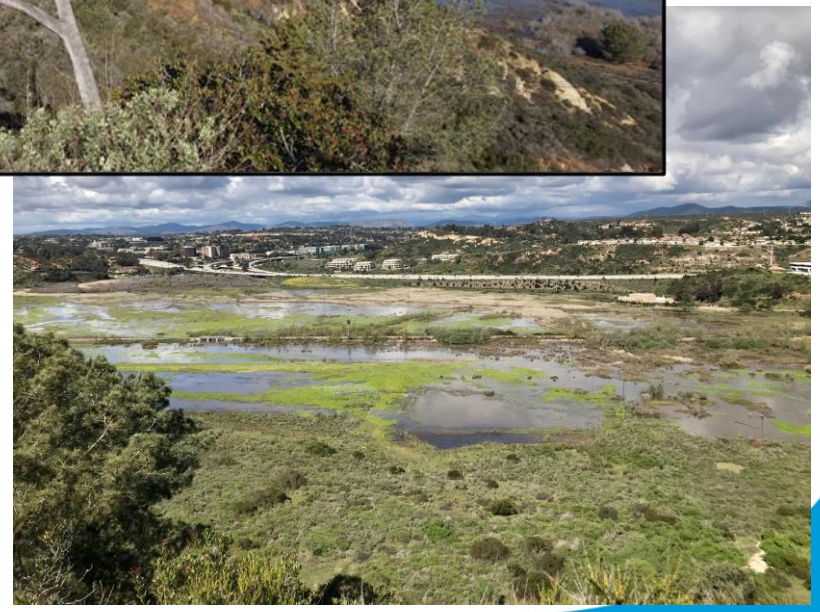
Nuisance Freshwater Management:

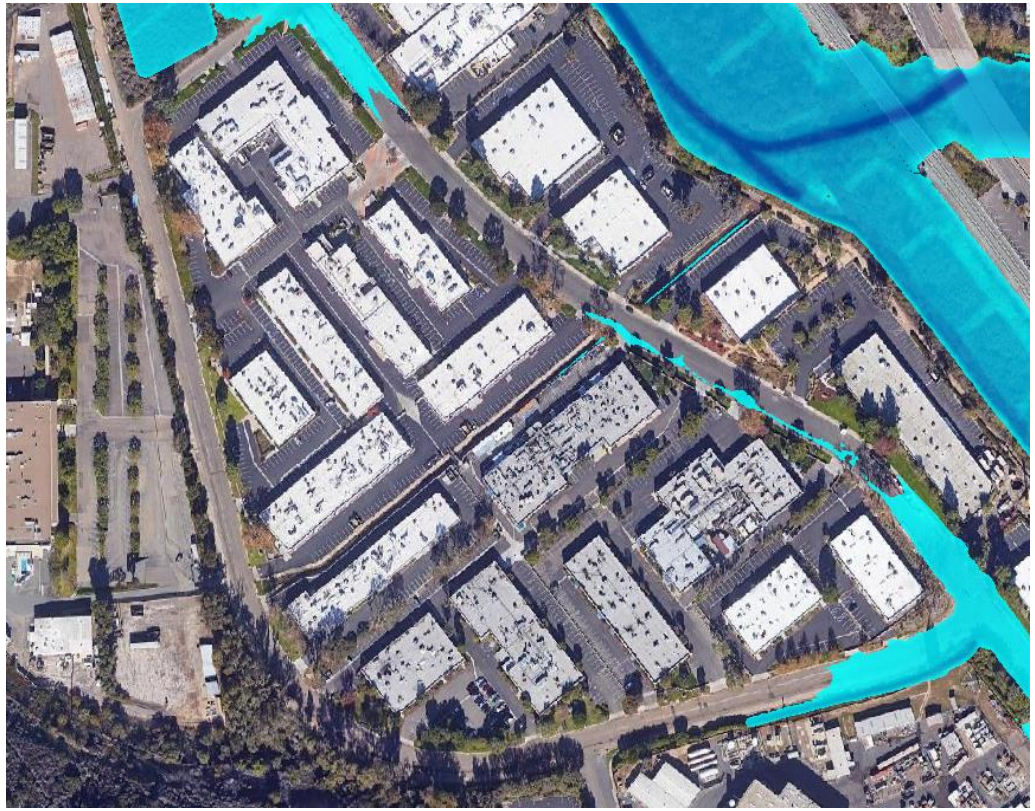
Key Goals

- Convey nuisance freshwater flows away from salt marsh habitat
- Reduce retention time of storm runoff to levels that support salt marsh health



Flood Extent & Level Reductions – Frequent Events

Existing Conditions (10-Year Storm Event)



Improved Conditions (10-Year Storm Event)

Public Access Enhancement – Marsh Trail

- Improvements similar to the Broken Hill Trail in Torrey Pines State Natural Preserve.
- Design to be coordinated with LPLF project for upslope realignment of the Marsh Trail's western segment.

Project Maintenance

- 5-Yr. Project Adaptive Management Period –informs Phase 2 design and maintenance for Phase 1
- City is working with State Parks on Access Agreement for Construction & Maintenance
- Maintenance includes sediment management

Work completed and future activities

- Habitat Mitigation and Monitoring plan completed – Nov 2024
  - Hydrodynamic and hydraulic modeling coordinated with TAC in 2022 & 2023
- 100% Design Plans completed – Dec 2023
- Site Development Permit completed – Oct 2025
- Environmental permitting:
  - CEQA Addendum adopted by City Council – Mar 2025
  - Streambed Alteration Agreement with CDFW signed – Feb 2026
  - Remaining/ongoing permitting activities:
    - Coastal Development permit with CA Coastal Commission
    - 404/10 Permit with US Army Corps of Engineer
    - 401 Water Quality Certification with Regional Water Quality Control Board

Anticipated Schedule

- 100% Design Plans Completed – December 2023
- Permits – Notice of Approvals and Final Design completion – Targeting 4rth Quarter of 2027
- Construction-related activities for Phase 1 are dependent on securing the funds:
  - Plant procurement contract – start anticipated at the beginning of 3nd Quarter 2028
  - Construction contract – start anticipated at the beginning of 3rd Quarter 2029
  - Construction to be in subphases (1a, 1b, 1c) and last 2029-2033
- Adaptive Management Period –5-year period – begins as each subphase is completed

Discussion/Questions