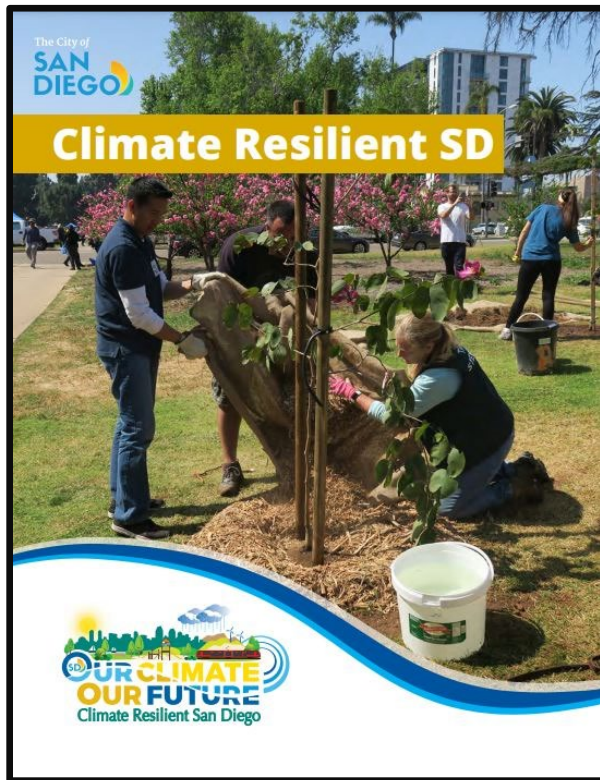


Coastal Resilience Master Plan

Community Workshops
June 2024



Climate Resilient SD



- City's comprehensive climate adaptation and resilience plan
- Further City's climate goals and meet legislative requirements
- Adopted December 2021
- Commitment to update every 5 years

Planning Overview

2015
CLIMATE
ACTION
PLAN



VULNERABILITY ASSESSMENTS

- State Lands SLR Vulnerability Assessment
- SLR Vulnerability Assessment
- Citywide Climate Change Vulnerability Assessment

CLIMATE RESILIENT SAN DIEGO

COASTAL RESILIENCE MASTER PLAN

Stakeholder and Community Engagement

Coastal Resilience Master Plan: purpose

- Mitigate risk from sea level rise
- Protect and enhance habitat
- Support access to the coast and recreational opportunities



Coastal Resilience Master Plan: project components

- Nature-based solution concept designs
- Pilot project designs
- Environmental Analysis
- Community outreach & engagement
 - Project webpage & newsletter
 - Pop-up engagement events
 - Online survey
 - Community workshops
- Internal working group
- Stakeholder Advisory Committee



Why nature-based solutions?

- Climate Resilient SD and the Coastal Resilience Master Plan prioritizes nature-based solutions (NbS) to for sea level rise protection and coastal resilience
- NbS provide **multiple benefits** to communities beyond risk reduction, such as water quality improvement, recreation opportunities, provision of habitat, and greenhouse gas emissions sequestration.
- NbS were the **preferred approach by community members**. When developing Climate Resilient SD, 89% of survey participants favored NbS for coastal protection.
- Align with State and Federal funding opportunities

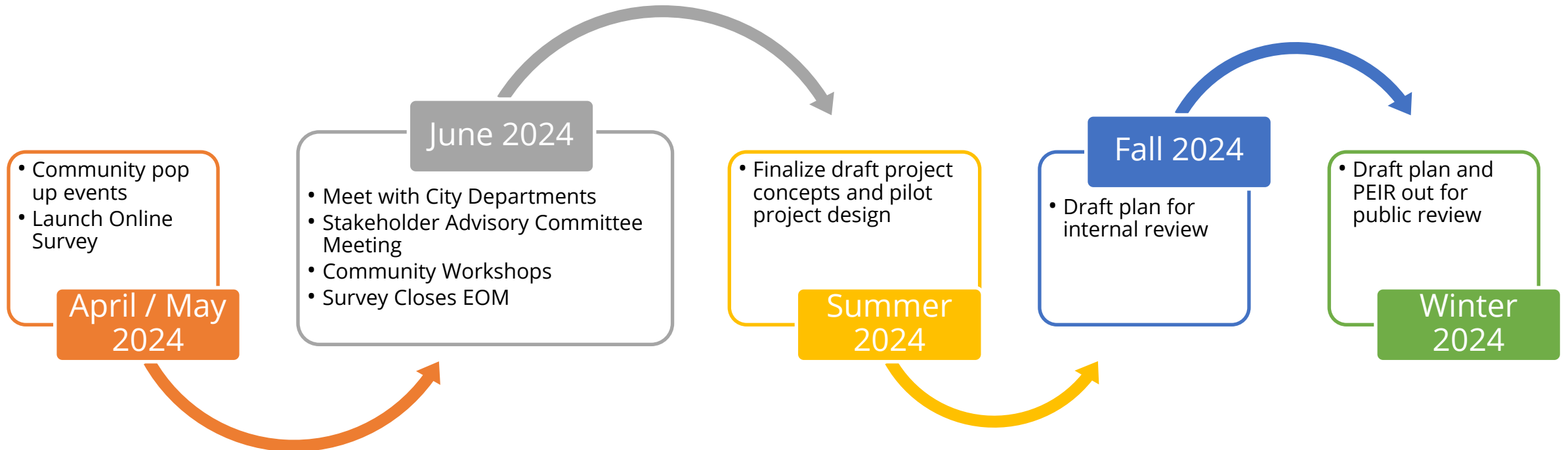


Scope and Funding

- Phase 1: National Fish and Wildlife Foundation
 - Concept designs (6), pilot project 15% design (1), PEIR, community engagement
- Phase 2: State Coastal Conservancy
 - 15% design (3 sites), technical studies, community education & engagement, stakeholder & tribal engagement, EIR addendum, support for drafting of CRMP

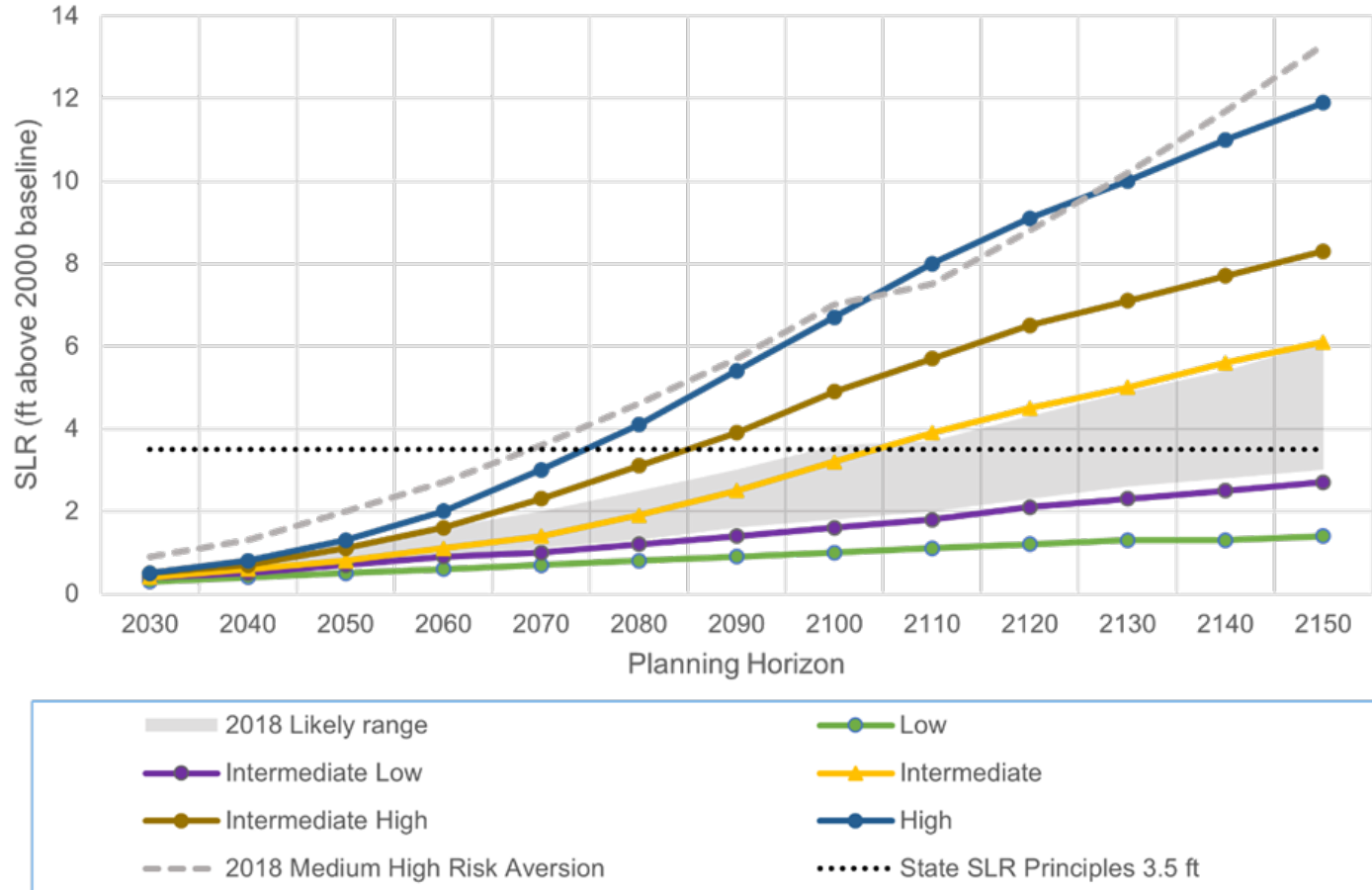


Coastal Resilience Master Plan: draft schedule



Sea Level Rise Overview

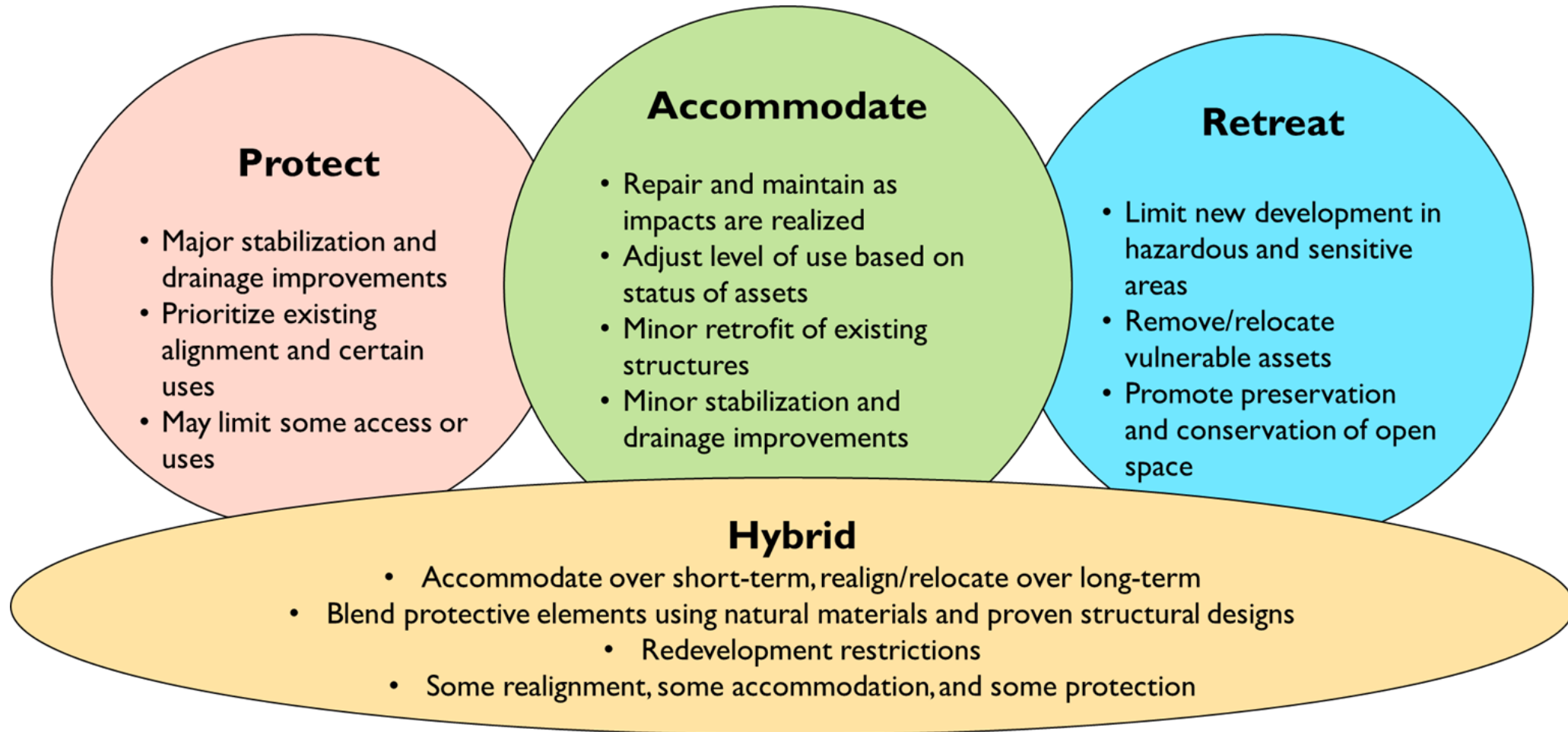
SLR Projections (OPC 2024, 2018)



Key Updates:

- **SLR until 2050 more certain than previous report:** statewide SLR by 2050 is 0.8 ft (intermediate scenario)
- **SLR range from 2050-2100 expands** due to higher uncertainty with emissions scenarios and physical processes
- **2100 and beyond range expands further** due to uncertainties with physical processes
- **H++ scenario (2017) removed** – much higher than new updates suggest

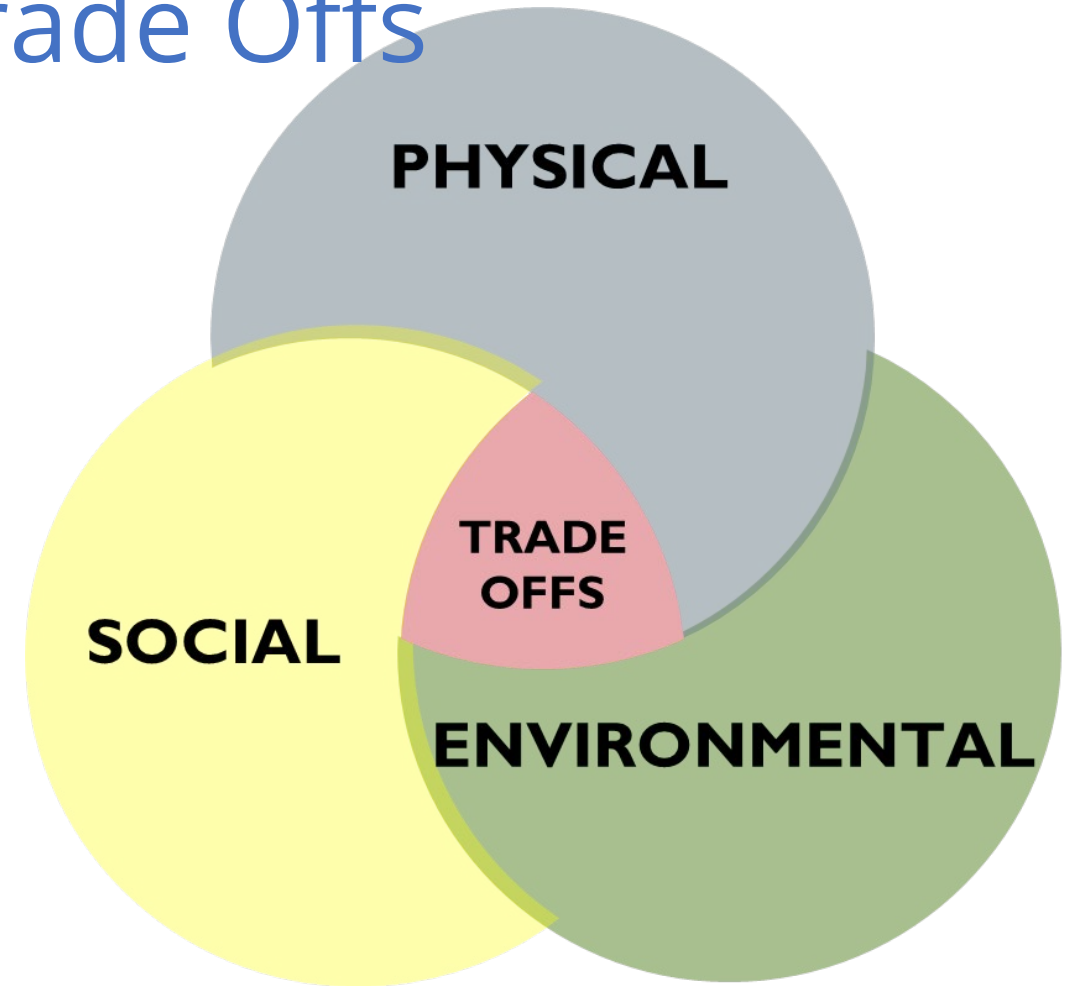
Sea level rise projections for the San Diego tide gauge (modified from OPC 2024, 2018).



Adaptation Alternatives & Trade Offs

There are trade offs associated with every adaptation alternative.

- Strategies with more physical protection often also provide some social benefits and preserved use but may compromise environmental aspects.
- Strategies that prioritize environmental features may not provide precise physical protection but can offer natural aesthetics and can represent community values.



Site Selection

11 → 6 sites

Prioritization factors:

- City ownership
- Disadvantaged communities
- Multi-Habitat Planning Area
- SLR vulnerability
- Site feasibility



Ocean Beach – Dog Beach

Recreation Use	★★★★★
Emergency Access Constraints	★★★
Parking Demand	★★★★★
Available Space for NbS	★★★★★
Vulnerability	★★★★★
Existing Habitat	★★★★★

★low—high★★★★★



3.3 ft SLR scenario with 100-yr storm

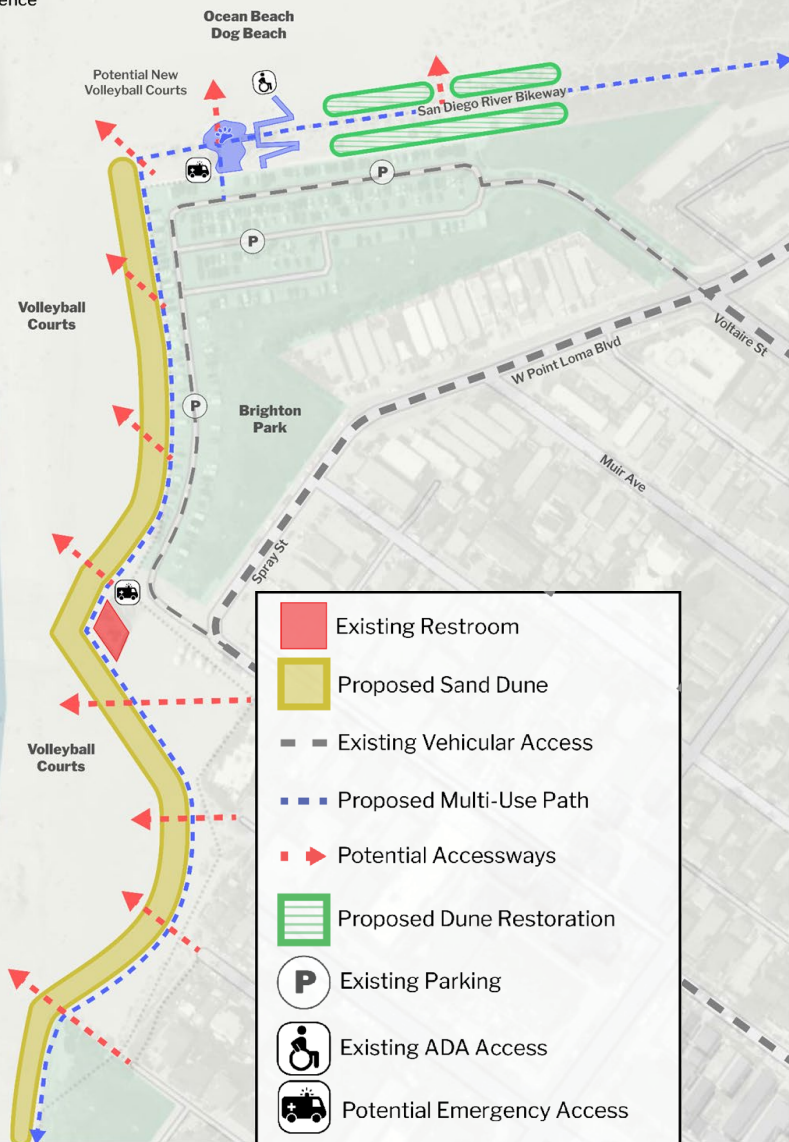
Ocean Beach - Dog Beach

Menu of Potential Options

- Vegetated dune
 - Removal of K rail
 - Integration with San Diego River Trail
- Parking and recreation area realignment
- Restroom realignment
- Repair, rehabilitation, or modification of groin and/or jetty

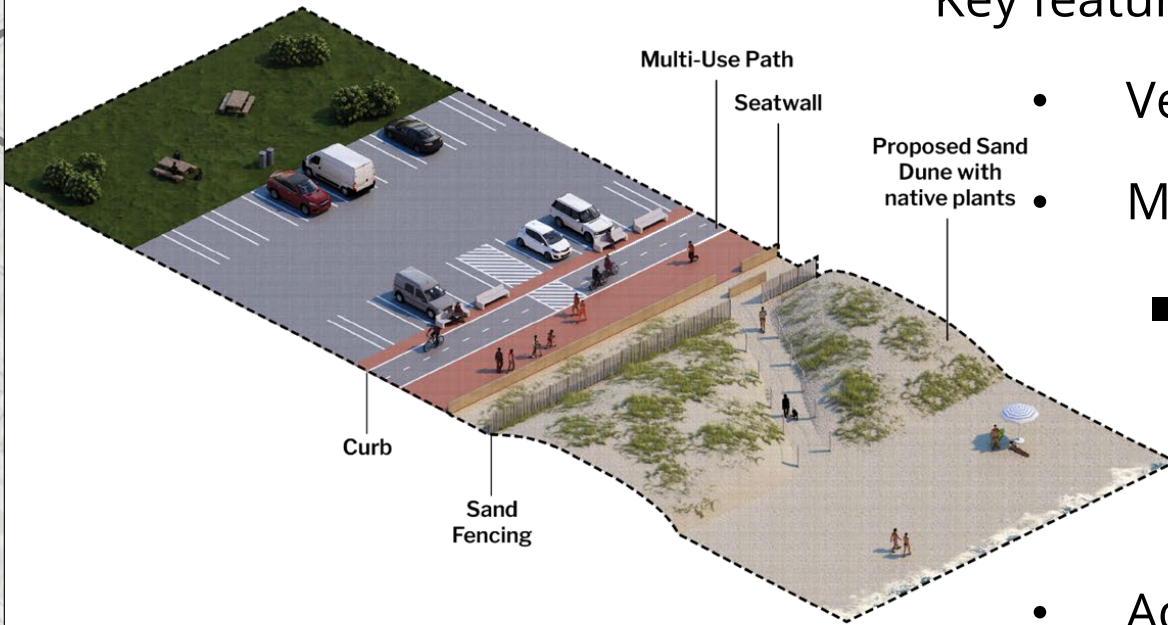


Draft Conceptual Plan

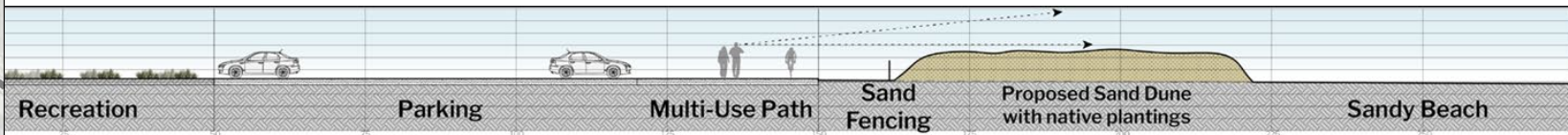


Ocean Beach - Dog Beach

Key features:



- Vegetated dune
- Multi-use path
- Connect San Diego River Trail, Dog Beach, and Pier
- Accessways
- No change to parking



Ocean Beach - Beachfront

Recreation Use	★★★★★
Emergency Access Constraints	★★★★★
Parking Demand	★★★★★
Available Space for NbS	★★
Vulnerability	★★★★★
Existing Habitat	★★★

★low—high★★★★★



3.3 ft SLR scenario with 100-yr storm

Ocean Beach - Beachfront

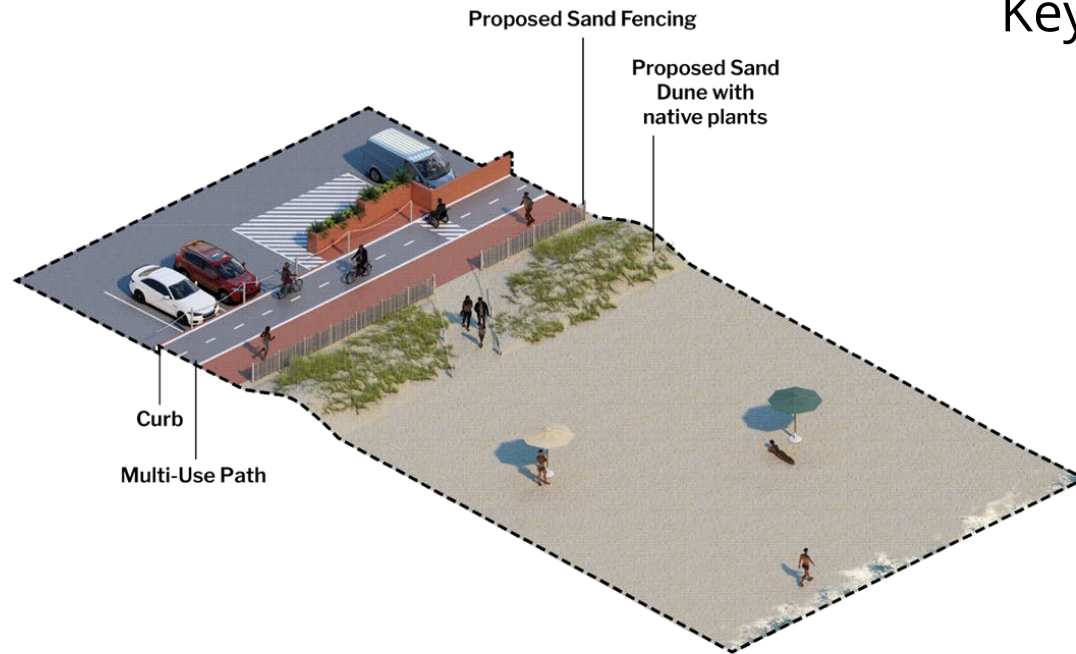
Menu of Potential Options

- Vegetated dune
 - Connection between Dog Beach and OB Pier
- Parking and recreation area realignment
- Repair, rehabilitation, or modification of groin and/or jetty
- Seawall modification



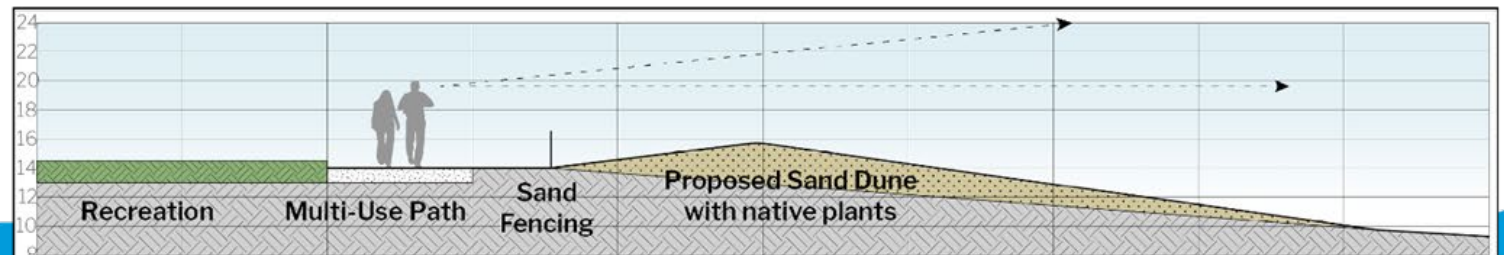


Ocean Beach - Beachfront



Key features:

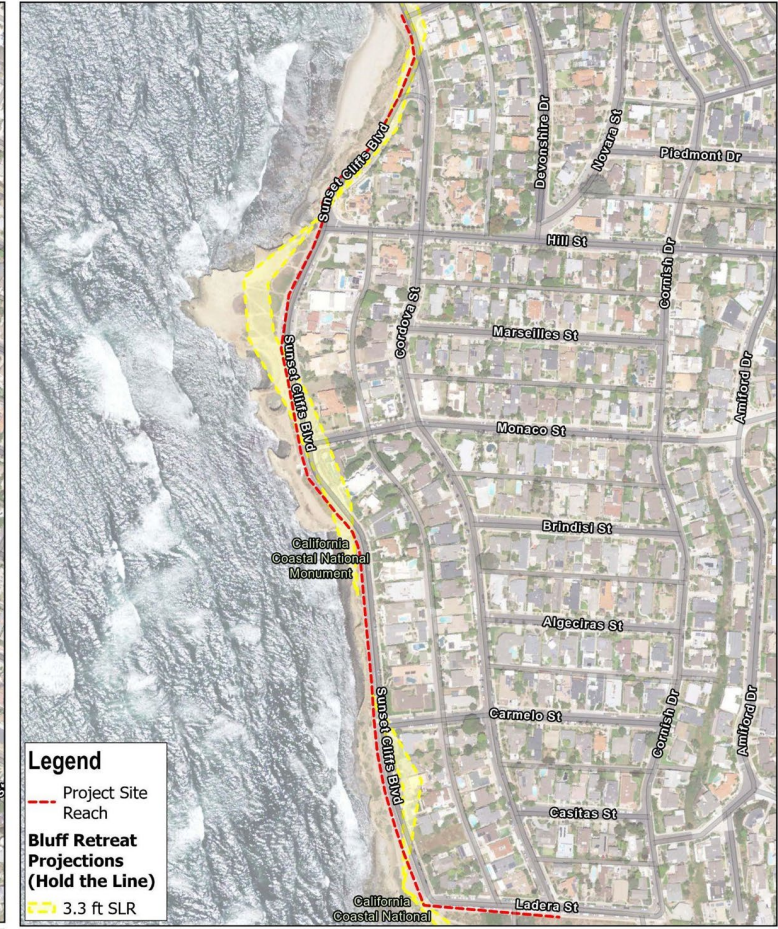
- Vegetated dune
- Multi-use path
 - Connect San Diego River Trail, Dog Beach, and Pier
- Accessways
- No change to parking



Sunset Cliffs

Recreation Use	★★★★★
Emergency Access Constraints	★★★★★★
Parking Demand	★★★★★
Available Space for NbS	★★
Vulnerability	★★★★★
Existing Habitat	★★

★low—high★★★★★



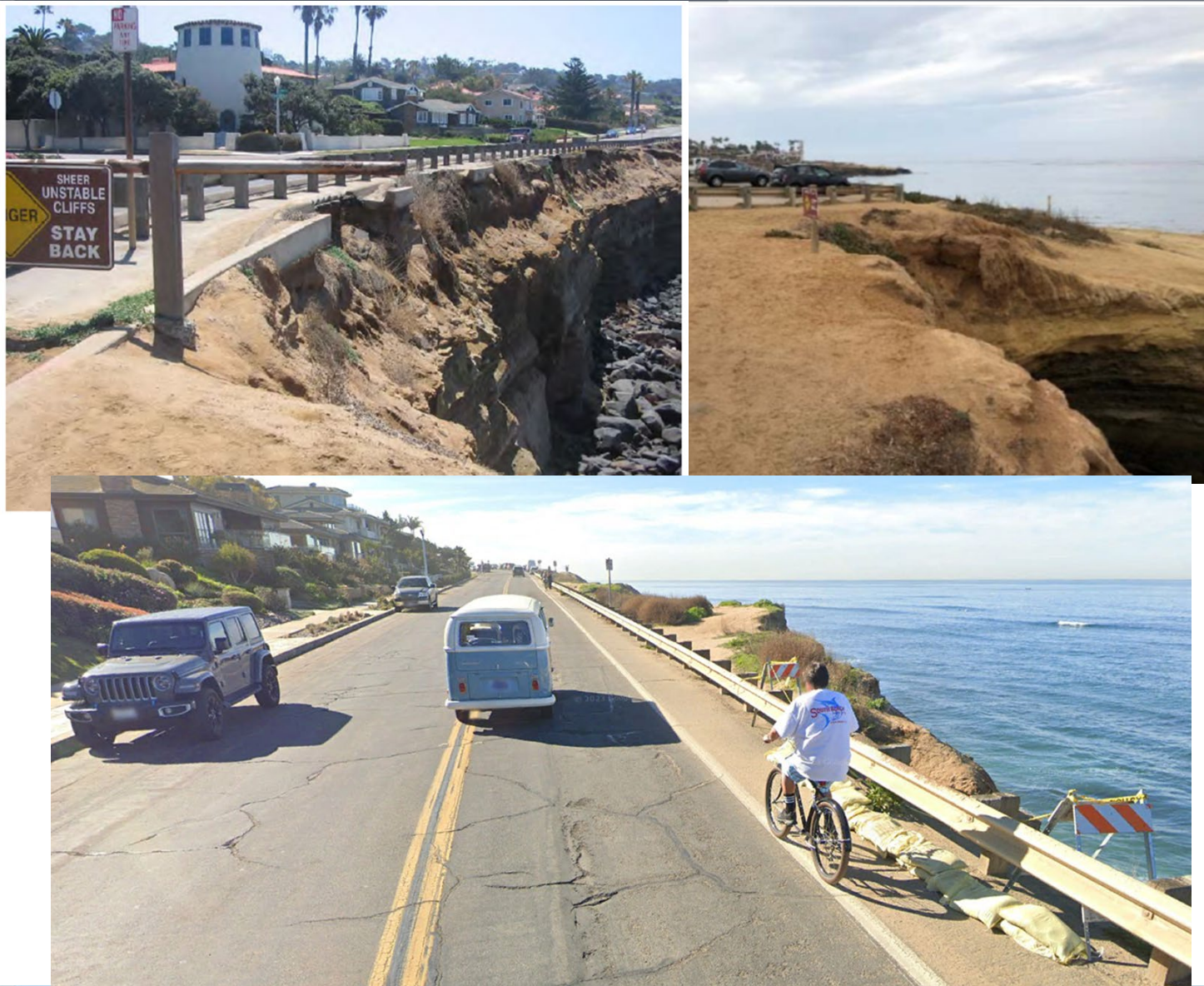
3.3 ft SLR scenario erosion band

Sunset Cliffs

Menu of Potential Options

- Roadway modification, diet, and/or realignment
- Trail formalization and enhancement
- Parking lot retrofit and layout optimization
- Stormwater and drainage improvements
- Bluff stabilization
- Vegetation management





Considerations:

- Safety improvements
- Desire for no impact on emergency response or total parking
- Shift perspective from reactive to proactive
- Drainage improvements
- Invasive removal and native plant installation
- Access and recreation enhancement

Sunset Cliffs

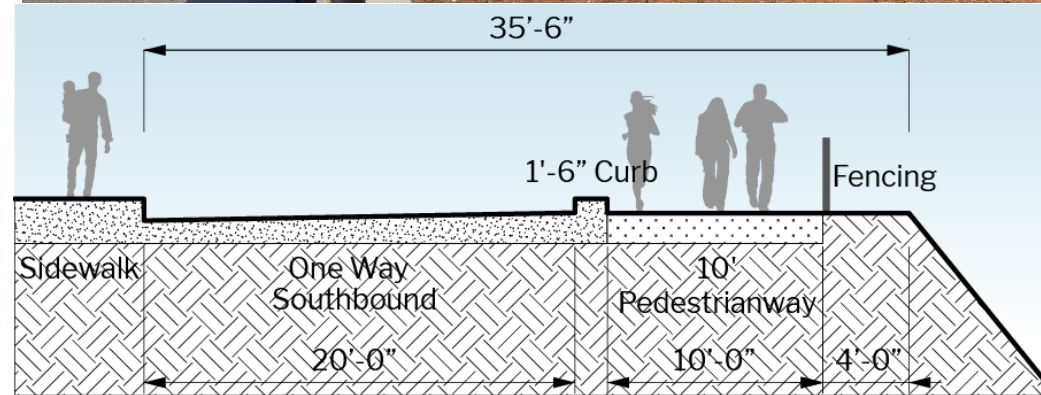
Sunset Cliffs Natural Park Master Plan -2005



FIGURE 24 - Existing Conditions:
Excess parking pavement, compacted soils and lack of accessible pedestrian access.



FIGURE 25 - Computer Simulation of Potential Improvements:
Parking redesigned, coastal trail created and park revegetated.



Looking Forward

- First step of many
- Additional technical studies
- Additional engineering
- Continued community & stakeholder engagement
- Implementation triggers



Thank you!



To learn more about the Coastal Resilience Master Plan:

