

Sea Level Rise Adaptation for State Route 37: The Flyway Highway

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Coastal Resilience Network: Adaptation Strategies for Coastal Highways
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Coastal
Conservancy

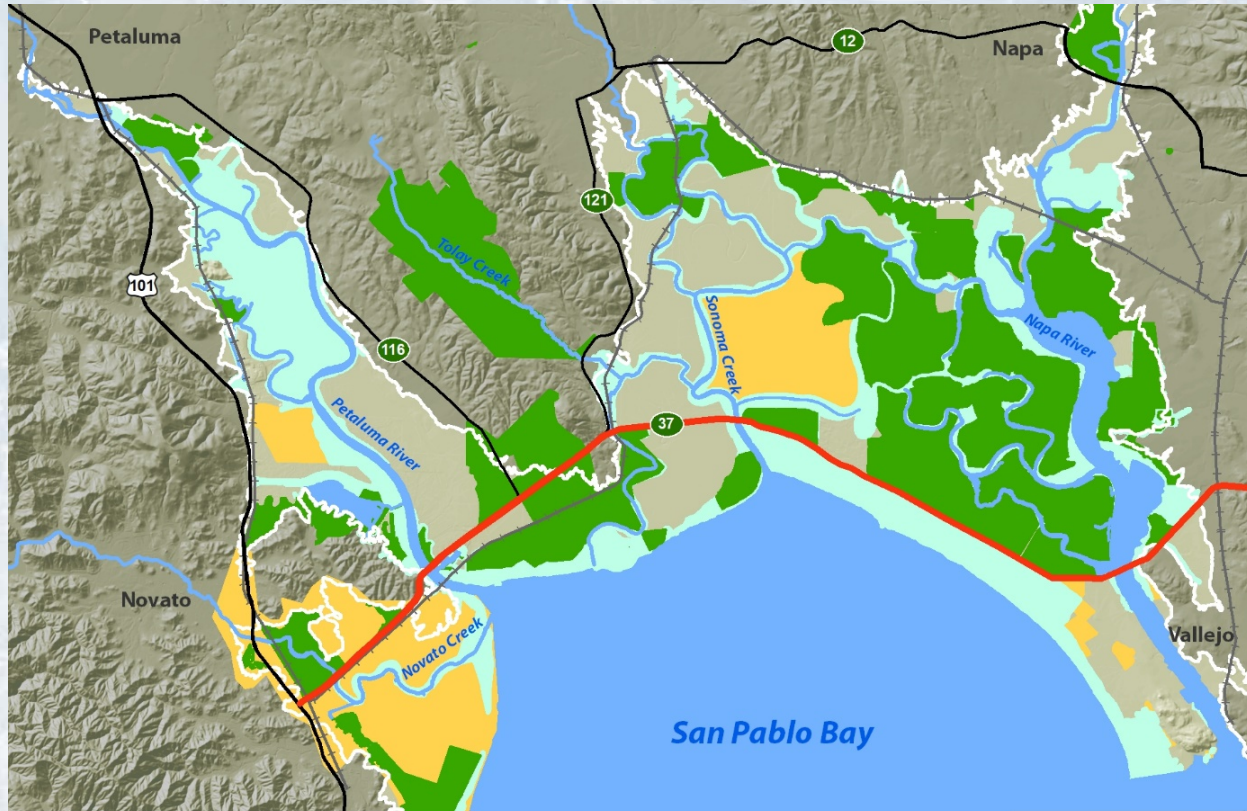
STATE of CALIFORNIA

The Flyway Highway



Photo courtesy of USGS

Restoration to Date and Planned



State Route 37 Policy Committee

- Elected Officials from North Bay Counties
- Goal: Reconstruct SR 37 to withstand flooding while improving mobility and safety.



Photo courtesy of
The Press Democrat

The Fear: A Dam Across the North Bay?



The restoration community said “No!”



State Route (SR) 37-Baylands Group

Formed in June 2017 in response to accelerated action by the
SR 37 Policy Committee



Photo
courtesy of
Ducks
Unlimited



Novato

Marin Audubon

San Pablo Bay NWR

CDFW Napa Sonoma Marshes

Sonoma Land Trust

Coastal Conservancy

Vallejo

Google Earth

101

Image Landsat / Copernicus
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4 mi

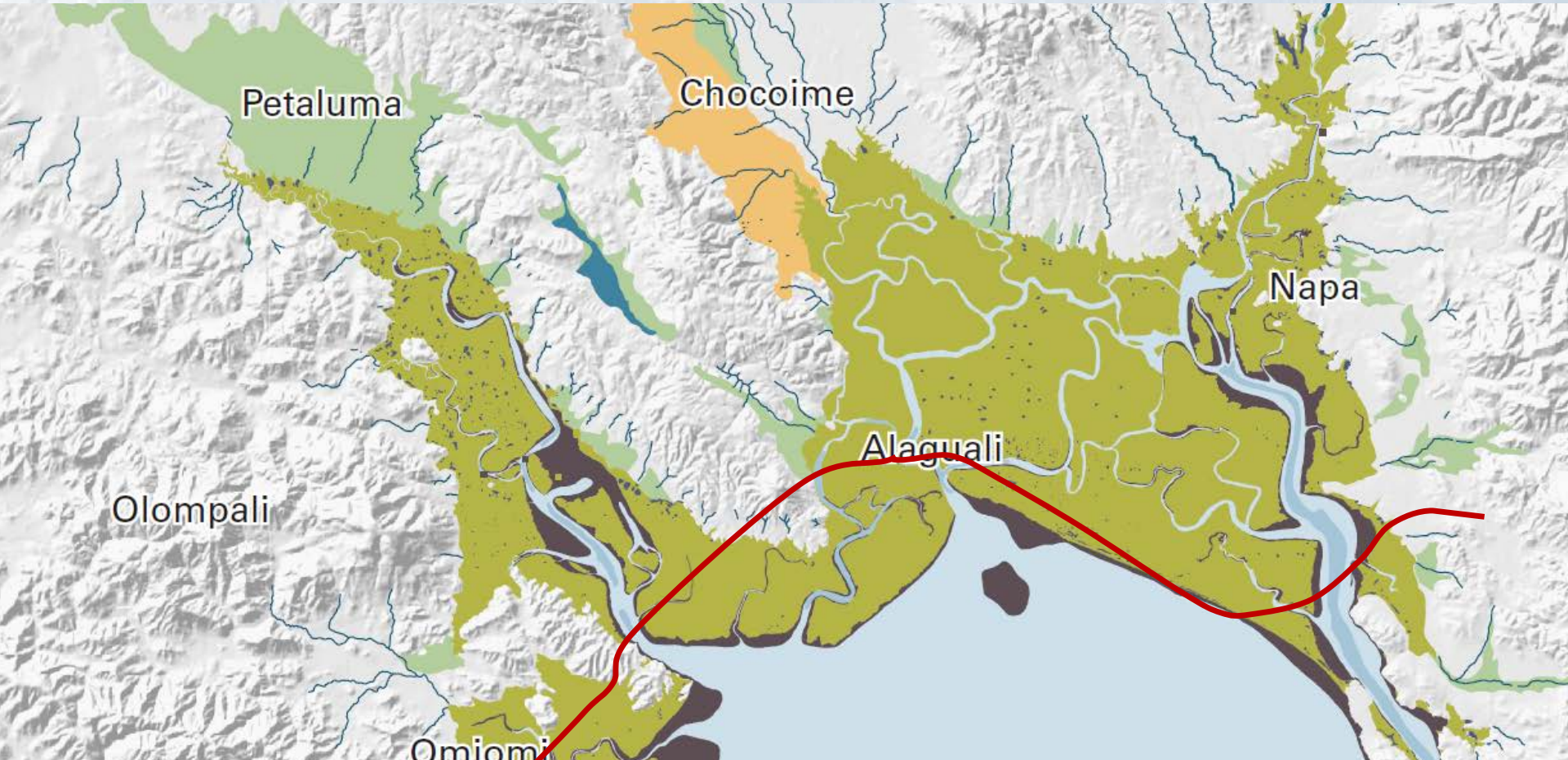


Message: Integrate, Don't Mitigate

Integrate **infrastructure improvements** for SR 37 with existing and future **habitat** planning, conservation and restoration to ensure **healthy ecosystem function** and **resilience** to landscape scale change of the San Pablo Bay.



Baylands Goals Report is the Blueprint



Baylands Ecosystem Habitat Goals Report: Science Update, 2015:

“Elevate Highway 37... to allow the full passage of sediment, water and wildlife.”



SR 37-Baylands Group Goals

- Create and Promote Adoption of Our Guiding Principles
- Influence Transportation and Public Access Planning
- Develop an Ecological Landscape Vision



Photo courtesy of Sonoma Land Trust

Guiding Principles

- **Integrate** improvements to SR 37 with habitat goals
- Improve **ecological connectivity** when reconstructing SR 37
- Develop design solutions **appropriate to the landscape** of the Baylands, considering historical ecology and sea level rise
- Planning should be **corridor-wide**, not in segments
- **SLR projections** should be based on the most recent OPC report
- Near-term solutions must protect wetland resources and **leave options open for future restoration**
- **Minimize financial impacts** to low-income commuters
- Include **multi-modal transportation** options and **recreation** opportunities

Influencing Transportation Planning



SR 37 Transportation and Sea Level Rise Corridor Improvement Plan

- Plan was prepared for MTC, Caltrans and county transportation agencies, completed in Feb. 2018
- Includes SR 37-Baylands Group's Guiding Principles

Evolution of the SR 37 Project/Program Purpose



PROGRAM PURPOSE

DELIVER A CORRIDOR PROGRAM THAT RESULTS IN COMMUNITY BENEFITS FOR ALL



Sea Level Rise
Adaptation

Improve resiliency
of transportation
infrastructure to
sea level rise and
flooding



Transportation

Improve traffic flow
and peak travel times
by relieving congestion
and increasing person
throughput



Equity

Enhance the
quality of life for
residents and
build stronger
local and regional
economy for all



Ecology

Restore ecological and
hydrologic flows to
enhance productivity of
wetlands and Baylands



Public Access

Provide accommodation
for multimodal use and
facilitate public access
to natural resources

RESILIENTSR37

Source: State Route 37 Resilient Corridor Program, Metropolitan
Transportation Commission-Led Team, November 8, 2018

Identifying Environmentally Preferred Alternative

State Route 37 Alternatives Assessment Report for the Ultimate Project

State Route 37 from SR 121 to the Mare Island Interchange

Metropolitan Transportation Commission

Segment B DAA,
Completed in
February 2019

Table 3. Alternatives Matrix Summary

Resource Area	A1 Existing Alignment Hybrid	A2 Existing Alignment Causeway	A3 Northern Alignment	A4 Southern Alignment 1 (Shoreline)	A5 Southern Alignment 2 (San Pablo Bay)
Purpose and Need	Green	Green	Orange	Yellow	Yellow
Traffic	Green	Green	Red	Green	Yellow
Right of Way	Yellow	Yellow	Red	Yellow	Orange
GHGs	Green	Green	Red	Green	Red
Biology	Orange	Yellow	Orange	Yellow	Yellow
Hydrology	Orange	Green	Orange	Green	Green
Cultural	Yellow	Yellow	Red	Yellow	Yellow
Community/Public Access	Green	Green	Red	Yellow	Yellow
Land Use/Growth	Green	Green	Red	Light Green	Yellow
Public Acceptability	Green	Green	Red	Yellow	Yellow

Legend:

Net benefit or minimal impact	Minimal to moderate impact	Moderate but mitigatable/avoidable impact	Moderate to significant impact	Notable or significant impact
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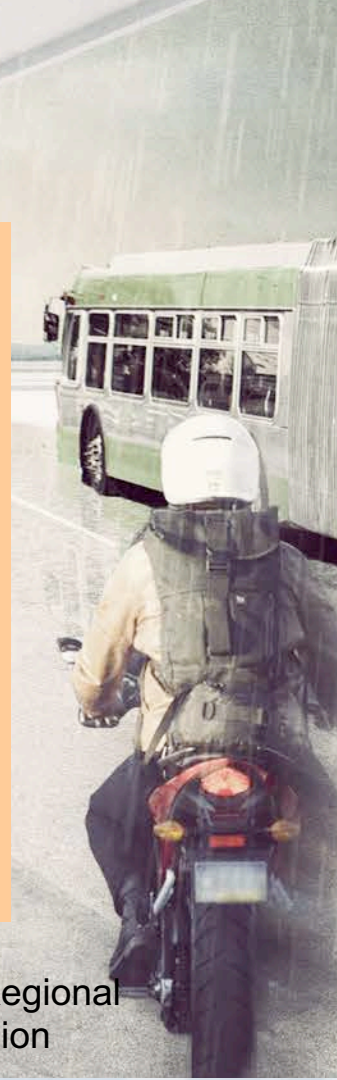
Influencing Public Access Planning

SR 37 Public Access Scoping Report (June 2020)

Acknowledges need to protect “Core Wildlife Areas” and proposes only public access that is compatible with wildlife in those areas.

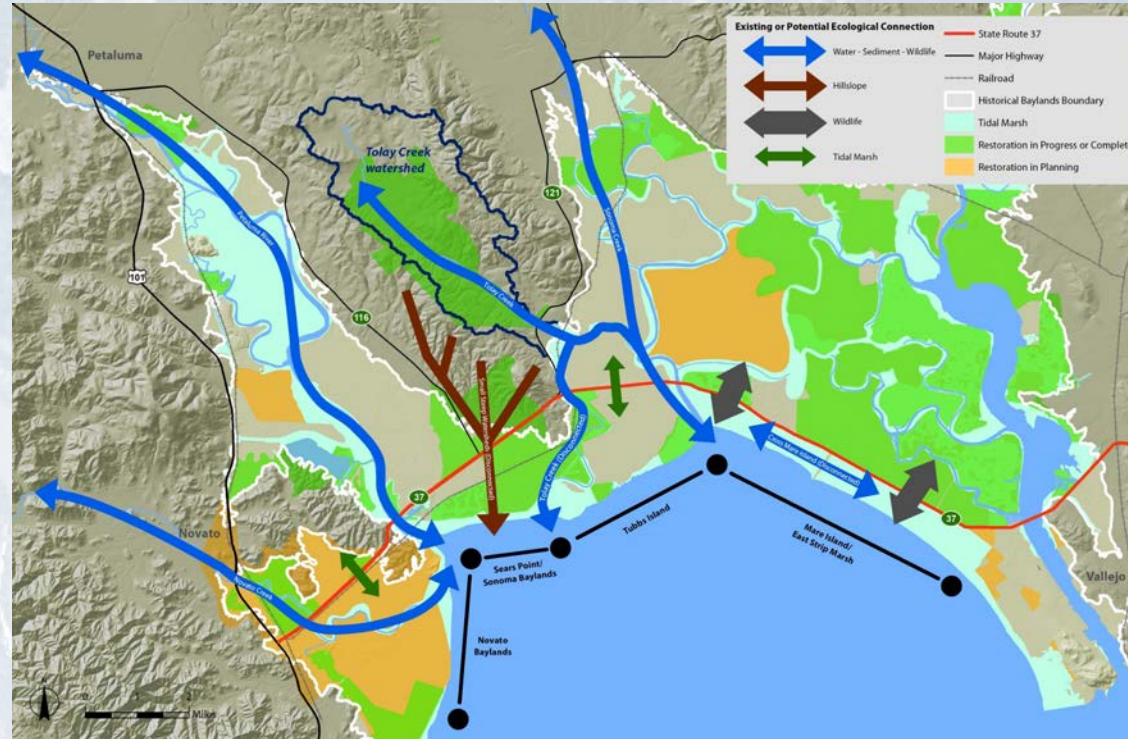
- Recognizes legal limitations to public access on federal wildlife refuges and state wildlife areas.
- Focuses on connecting urban centers (e.g., Petaluma, Novato, Vallejo, American Canyon, Napa) to the Baylands and surrounding overlooks by improving existing roads, trails, and crossings to better serve bicyclists and pedestrians.
- Supports adding Water Trail sites.

Prepared by Team Common Ground for the Bay Area Regional Collaborative and Metropolitan Transportation Commission



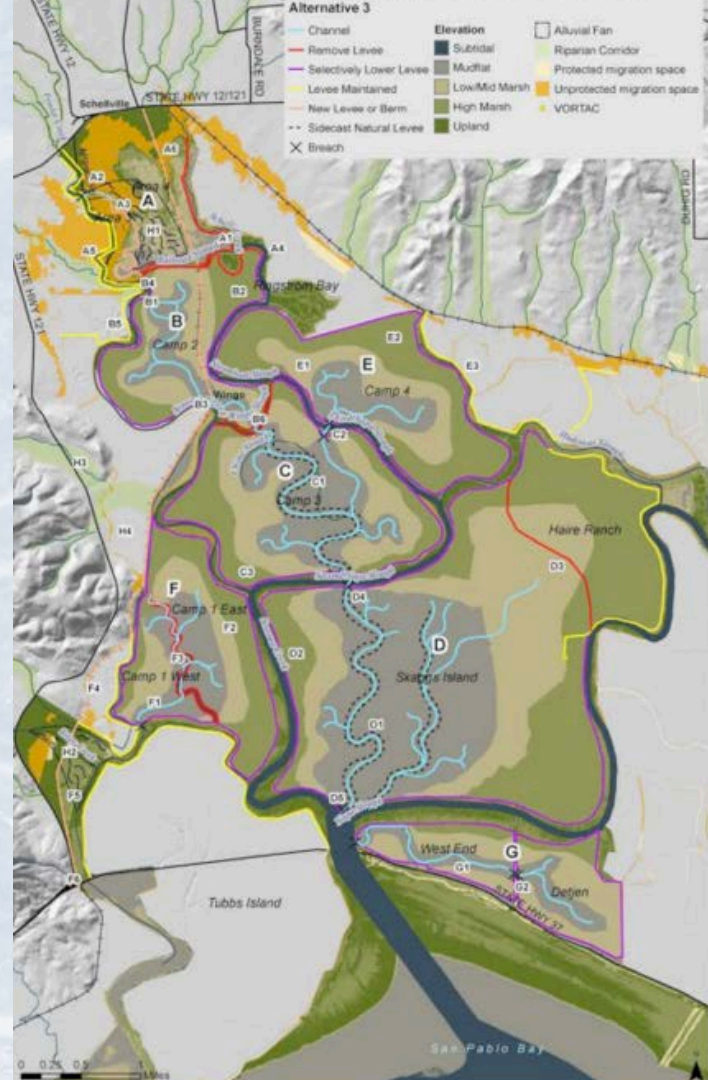
Developing an Ecological Landscape Vision

- **Conceptual maps** created for Baylands Group White Paper in 2017
- **Sonoma Creek Baylands Strategy**, completed in May 2020
- **Petaluma River Baylands Strategy** now underway



Sonoma Creek Baylands Strategy

- Habitat Restoration
- Climate Resilience
- Public Access Guidelines
- Recommendations for SR 37 and SMART Rail Line



HOW To Achieve Goal of “Integrate, Don’t Mitigate?”

Promoting Highway Design That Enables Restoration: Participation in Design Alternatives Assessments

Created Enhancements List: Wetland Land Managers (subset of Baylands Group) provided MTC and Caltrans with list of near-term and long-term ecological enhancement and restoration opportunities in San Pablo Baylands (created in 2019, updated in 2020)

Participating in Planning and Environmental Linkages (PEL) Study: Participation in Caltrans initiated a PEL study to develop a purpose and need statement, identify alternatives, conduct stakeholder engagement and interagency coordination, and address overall corridor mitigation needs

***** Regional Conservation Investment Strategy next?*****

RESILIENT SR 37 PROGRAM — PHASED IMPLEMENTATION

CONCURRENT PROJECT DEVELOPMENT. DELIVER EARLY COMMUNITY BENEFITS.

Environmental - Design - Construction

- Flood Protection Project (US 101 — Lakeville Hwy)
- Congestion Relief Project (SR 121 — Mare Island)
- Early Ecological Enhancements
- Transit With Emerging Technology

Early Benefits



Transition

- SR 37 Corridor SLR Adaptation Project (I-80 — US 101)
- Bike/Pedestrian/Public Access
- Transit With Tomorrow's Technology

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Today

2025

2040

2050

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Source: State Route 37 Resilient Corridor Program,
Metropolitan Transportation Commission, State of the
Estuary Conference, October 22, 2019

Unanswered Questions

- Where will the money come from? (Estimated cost is \$4 Billion)
- Could the highway be moved inland?
- Could a passenger rail line be co-located with the highway on a pile-supported causeway?

Lessons Learned

- Engage with transportation decision makers at all levels, from planners to elected officials, and look for opportunities to “Integrate, not Mitigate”
- Build a broad environmental constituency, including land managers, scientists, advocacy groups and regulators
- Be proactive: Develop an ecological landscape vision to guide recommendations for transportation infrastructure

Thank You!



Photo courtesy of Ducks Unlimited