



SR 12 Corridor Advisory Committee

April 18, 2011



Purpose

Conduct a comprehensive evaluation of the State Route 12 corridor from SR-29 in Napa County through Solano, Sacramento, and San Joaquin Counties to I-5, building upon previous studies and projects.

Identify improvement strategies that address near- and long-term needs of the SR-12 corridor through an active stakeholder collaboration process.

Inform future county and regional funding and planning processes.

12
Moving Forward
STATE ROUTE 12 CORRIDOR STUDY

SR 12 passes through **4** counties (Napa, Solano, Sacramento, and San Joaquin), **3** Caltrans Districts (3, 4 and 10), developed areas including Suisun City, Fairfield and Rio Vista, rural settlements and undeveloped areas. The route crosses **2** major Interstate routes (I-80 and I-5), **2** railway lines (Union Pacific and Sacramento Northern), navigable water bodies with **3** bridges (most notably the Sacramento River Crossing at Rio Vista) and numerous at-grade and grade separated intersections.

Corridor Overview

SR 12 supports interregional, recreational, commuter, agricultural and military traffic between the Bay Area and the San Joaquin Valley. SR-12 is important for recreational travelers destined for Napa, Solano and Sonoma Counties as well as the Delta. It also serves as a commute corridor and a key interregional goods movement corridor because of its direct access to I-80, I-5 and Travis Air Force Base.

GOAL
The goal of the study process is to develop a multi-jurisdictional corridor management plan that includes stakeholder input and consensus on a set of near-and long-term improvement strategies for SR 12.

This plan will build upon and update existing studies for the SR 12 corridor and incorporate the most recent transportation forecasts based upon current land use plans for each of the counties located along the corridor.

53-Mile, Multi-Jurisdictional Corridor

- 4 Counties -- Napa, Solano, Sacramento & San Joaquin
- 3 Caltrans Districts -- 3, 4 and 10
- Developed areas -- Suisun City, Fairfield & Rio Vista
- Rural communities, farmlands and portions of the Delta
- 2 Major Interstate routes -- I-80 and I-5
- 2 Railway lines -- Union Pacific & Sacramento Northern
- 3 Bridges -- Rio Vista, Mokelumne and Potato Slough



SR12

Existing Conditions Analysis

Major Corridor Issues

- Freight and goods movement
- Future levels of inward commuting to the Bay Area
- Access, mobility and safety
- Future development in Rio Vista
- Increased Shipping to the Port of Sacramento
- Travis AFB as a military installation and as a joint passenger / freight airport
- Preservation of the Delta environment
- Location appropriate design
- Policy Mandates such as SB 375
- Integration of economic, environmental and equity concerns



SR-12 – Rio Vista Bridge

Existing Conditions Analysis

Purpose

- *To set a “baseline” for the evaluation of future conditions*
- *To inform the development and evaluation of improvement strategies and needs along the corridor*

Content

- *Description of the Corridor*
- *Geometric Evaluation*
- *Traffic Analysis*
- *Safety Evaluation*



SR-12 – San Joaquin County

Description of the Corridor

This effort builds upon previous studies in the Corridor...

- *Highway 12 Major Investment Study (2001)*
- *State Route 12 Comprehensive Transportation Corridor Study (2006)*
- *State Route 12 Transit Corridor Study (2006)*
- *Rio Vista Bridge Study (2010)*
- *SR-12 and Church Road Intersection PSR (2010)*
- *Corridor System Management Plan (CSMP) (2011)*

... and near-term safety enhancements...

- *Legislation - AB 122*
- *Enforcement*
- *Education*
- *Engineering (Caltrans short-term enhancements in 2007)*

... and current projects underway

- *SR-12 Roadway Rehabilitation Project (Solano)*
- *SR-12 Bouldin Island Project (San Joaquin)*
- *SR-12 Improvements Project (San Joaquin)*
- *SR-12 Roadway Rehabilitation Project (Solano)*
- *SR-12 Jameson Canyon Project (Napa & Solano)*
- *I-80/I-680/SR-12 Interchange Project (Solano)*



SR-12 – CHP Enforcement

Daily Traffic Volumes

Location	Daily Traffic Volumes
Jameson Canyon	34,500 ^(a)
Between Beck Ave and Pennsylvania Ave	41,691
Between Walters Road & Shiloh Road	9,309
Between Summerset Drive and Main St	13,626
Between Brannan Island Road and W. Terminous Road	16,283
Between W. Terminous Road & I-5 SB Ramps	19,764

Note:
 a. 2005 data from Operational Analysis for the SR-12 Widening Project and Route 12/29 Interchange

Source: PBS&J Traffic Analysis, 2010



Traffic Characteristics

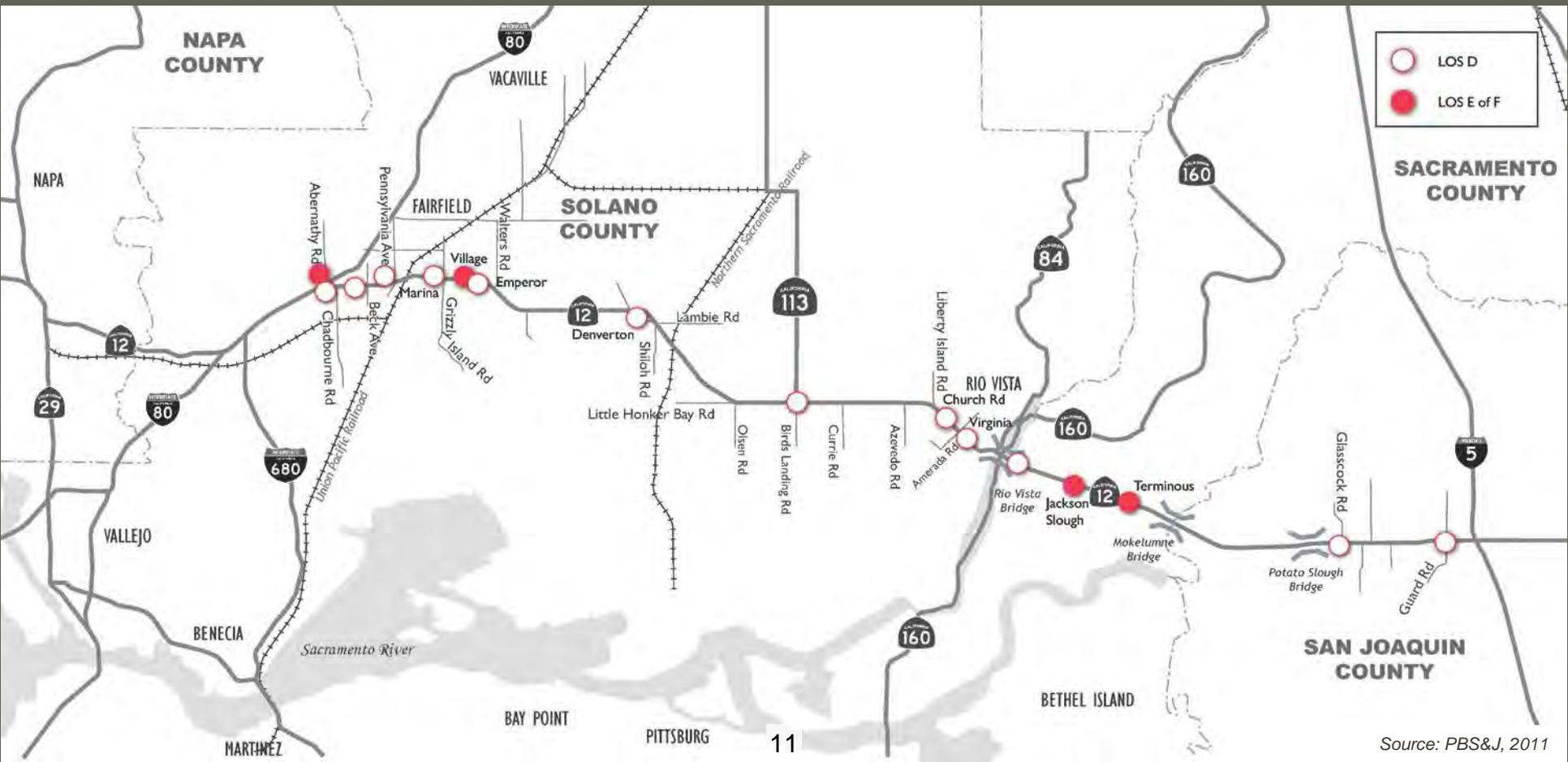


SR-12 – San Joaquin

- Highest volumes are on Fridays
- Peak hours: 6:00 - 8:00 a.m. and 4:00 - 6:00 p.m.
- Peak summer traffic is about 10% higher
- High truck and recreational vehicle traffic
- Presence of agricultural vehicles in Sacramento and San Joaquin Counties
- Traffic volumes are about 15% lower than 2007 traffic

Intersection Level-of-Service

Capacity of the SR-12 Corridor is controlled by signalized intersections.



Truck Volumes and Percentages

Location	Daily Truck Percentage	Daily Truck Traffic
Between SR29 and Red Top Road (Jameson Canyon)	8% ^(a)	2,760 ^(a)
Between Beck Ave and Pennsylvania Ave	9%	3,750
Between Walters Road and Shiloh Road	14%	1,300
Between Summerset Drive and Main St	7%	950
Between Brannan Island Road and W. Terminous Road	12%	1,950
Between W. Terminous Road and I-5 SB Ramps	12%	2,370

Note:
a. 2005 data from Operational Analysis for the SR-12 Widening Project and Route 12/29 Interchange.

Source: PBS&J Traffic Analysis, 2010



Moveable Bridge Operations

- Openings per day
 - *Rio Vista: 2 to 4*
 - *Mokelumne: 2 to 9*
- Bridge cycle times range from 8 to 25 minutes
- Queues can range from 70 to 250 vehicles (up to a mile long)
- Waterborne traffic at both bridges is 50% less than in 2004
- Concentration of accidents within ½-mile of Rio Vista and Mokelumne Bridges



SR-12 – Mokelumne Bridge

Safety Summary

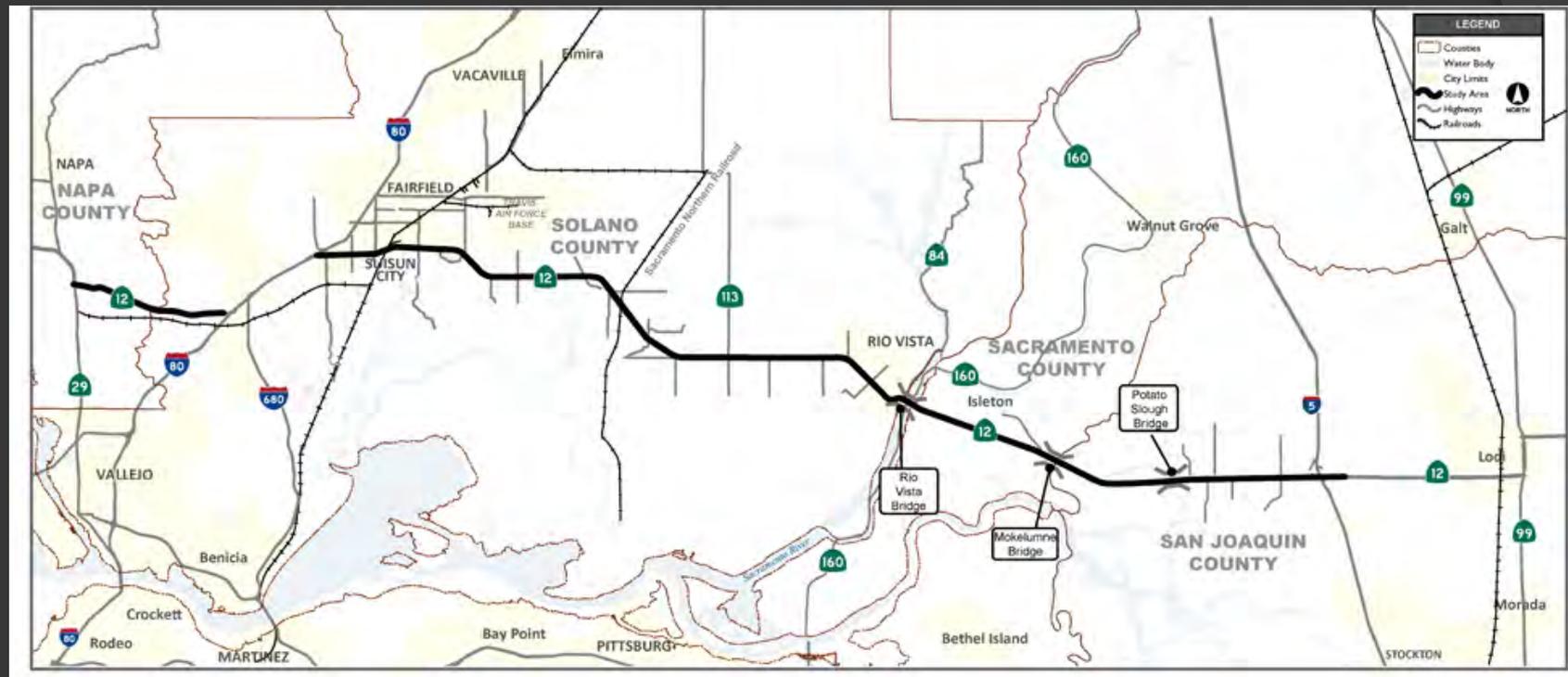
- Safety enhancements are making a difference
 - Downward trend in total accidents
 - Downward trend in severity (including fatal accidents)
 - Reduction in head-on accidents
- No head-on accidents where concrete barrier is installed
 - Total accidents remain the same
 - Higher number of hit object accidents
- Locations with accident concentrations include:
 - Signalized intersections
 - Movable bridges
 - SR 113 & SR 160



SR12

SR-12 Bridge Tour 2010

SR-12 Corridor



Potato Slough Bridge



Potato Slough Bridge (PM: SJ 4.75)



- ⦿ River: Little Potato Slough
- ⦿ Bridge Type: Center Swing
- ⦿ Constructed: 1991
- ⦿ Crossing Distance: 120m (920m)
- ⦿ Average High-Tide Clearance: 35ft

Mokelumne Bridge



Mokelumne Bridge (PM Sac 6.20)



- River: Mokelumne
- Bridge Type: Center Swing
- Constructed: 1942 (widened 1978)
- Crossing Distance: 360m
- Average High-Tide Clearance: 8ft

Rio Vista Bridge



Rio Vista Bridge (PM: Sol 26.41)



- River: Sacramento/Shipping Channel
- Bridge Type: Vertical Lift
- Built: 1944 (widened 1960)
- Crossing Distance: 730m
- Average High-Tide Clearance: 18ft

Bridge Operations

There are 3 elements that effect bridge operations.

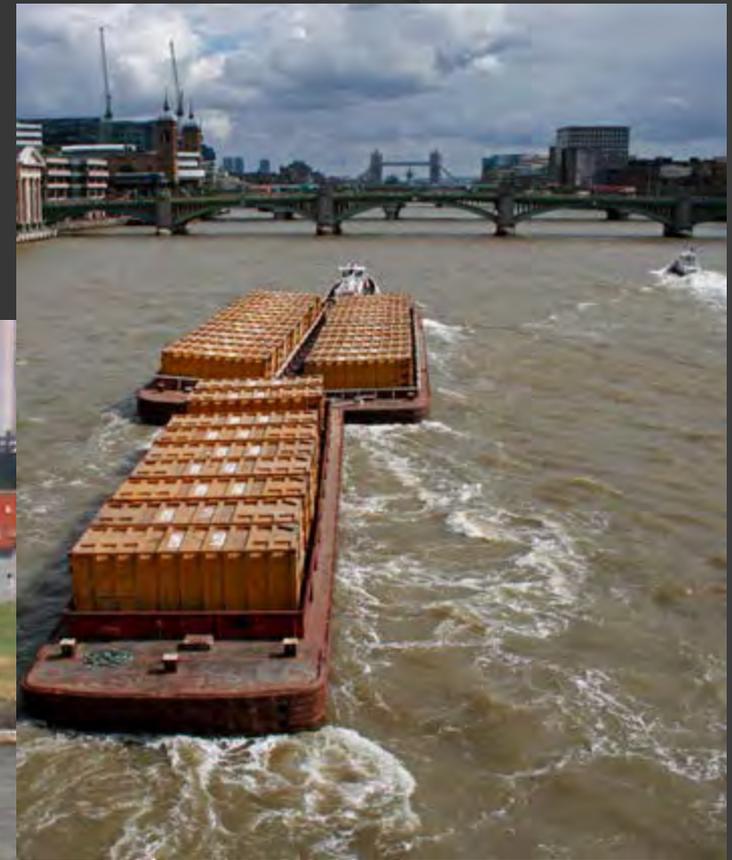
1. River Traffic
2. Opening Procedure
3. Mechanical Reliability

1. River Traffic



House Boat passing through Mokelumne Bridge

Examples of river barges carrying containers



2. Opening Procedure





Control Room Rio Vista Bridge



16 12:28 PM



3. Reliability



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Environmental Scan

Environmental Scan

Purpose

- *To provide an overview of known environmental resources and potential constraints on the development of transportation strategies in the corridor*

Content

- *Resources evaluated*
- *Resources of concern*



Resources Evaluated

Available information gathered on the following resources:

- Wetlands
- Threatened and Endangered Species
- Critical Habitat
- Flood Hazards/Sea Level Rise
- Farmland
- Land Use
- Socioeconomic/Community Impacts
- Visual/Aesthetic
- Historical/Archaeological Resources
- Hydrology/Water Quality
- Geology
- Hazardous Waste

Resources of Special Concern

Resources in the corridor subject to agency coordination:

- Wetlands
- Threatened and Endangered Species
- Critical Habitat
- Flood Hazards/Sea Level Rise
- Farmland
- Historical/Archaeological Resources

Threatened and Endangered Species

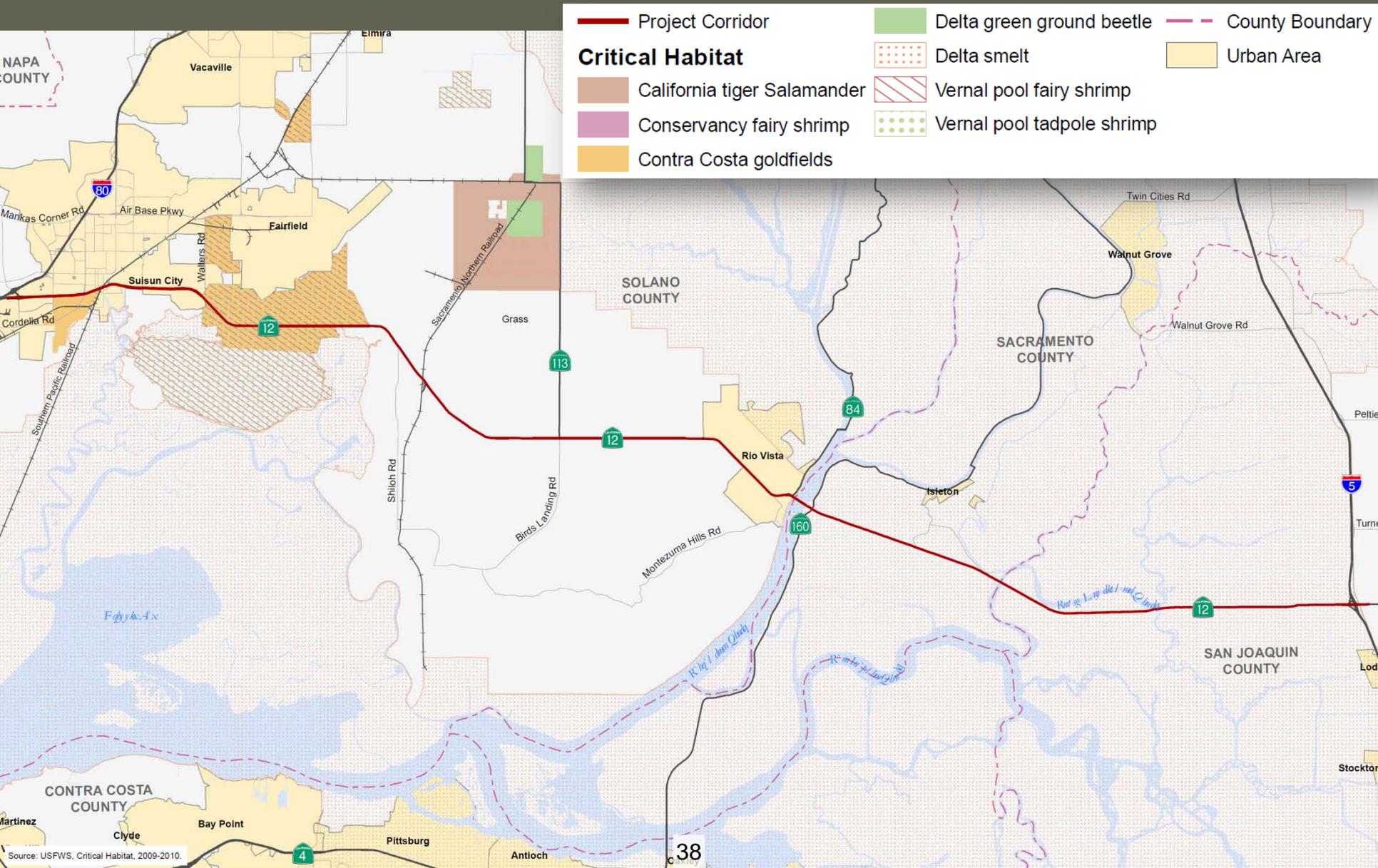
- Plant and Wildlife Species Protected under the California Endangered Species Act and/or the Federal Endangered Species Act
- Requires Coordination with the U.S. Fish and Wildlife Service and the California Department of Fish and Game

Critical Habitat

- Federal Endangered Species Act requires the federal government to designate “critical habitat” for any species it lists under the Act
- Under Section 7, federal agencies must ensure their actions are not likely destroy or adversely modify designated critical habitat

Environmental Scan

Critical Habitat

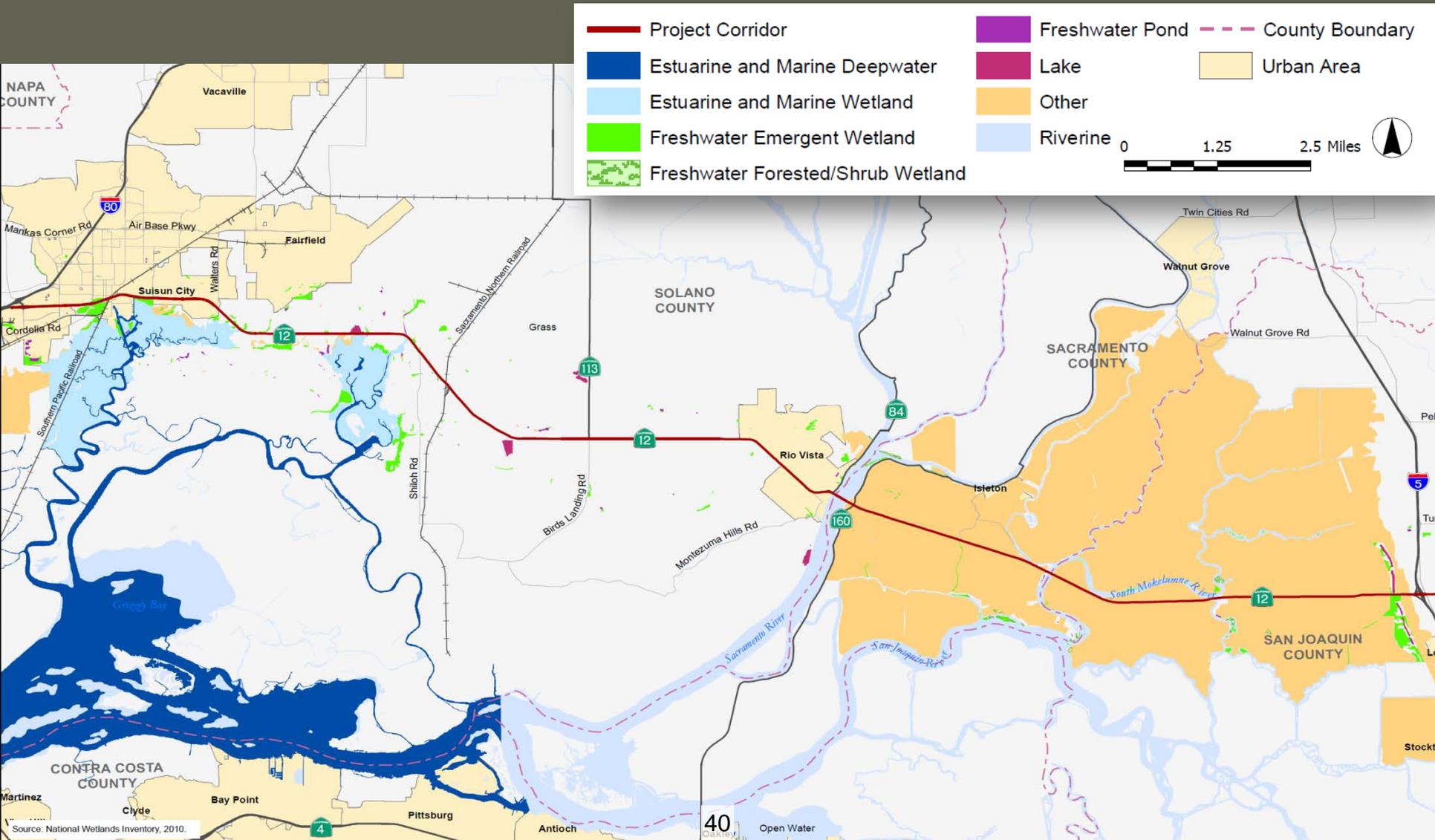


Source: USFWS, Critical Habitat, 2009-2010.

Wetlands Features

- Potentially subject to permits administered by U.S. Army Corps of Engineers (Section 404), Regional Water Quality Control Board (Section 401), and/or California Department of Fish and Games (Section 1600 – 1616)
- May also provide habitat for Threatened and Endangered Species

Wetlands Features

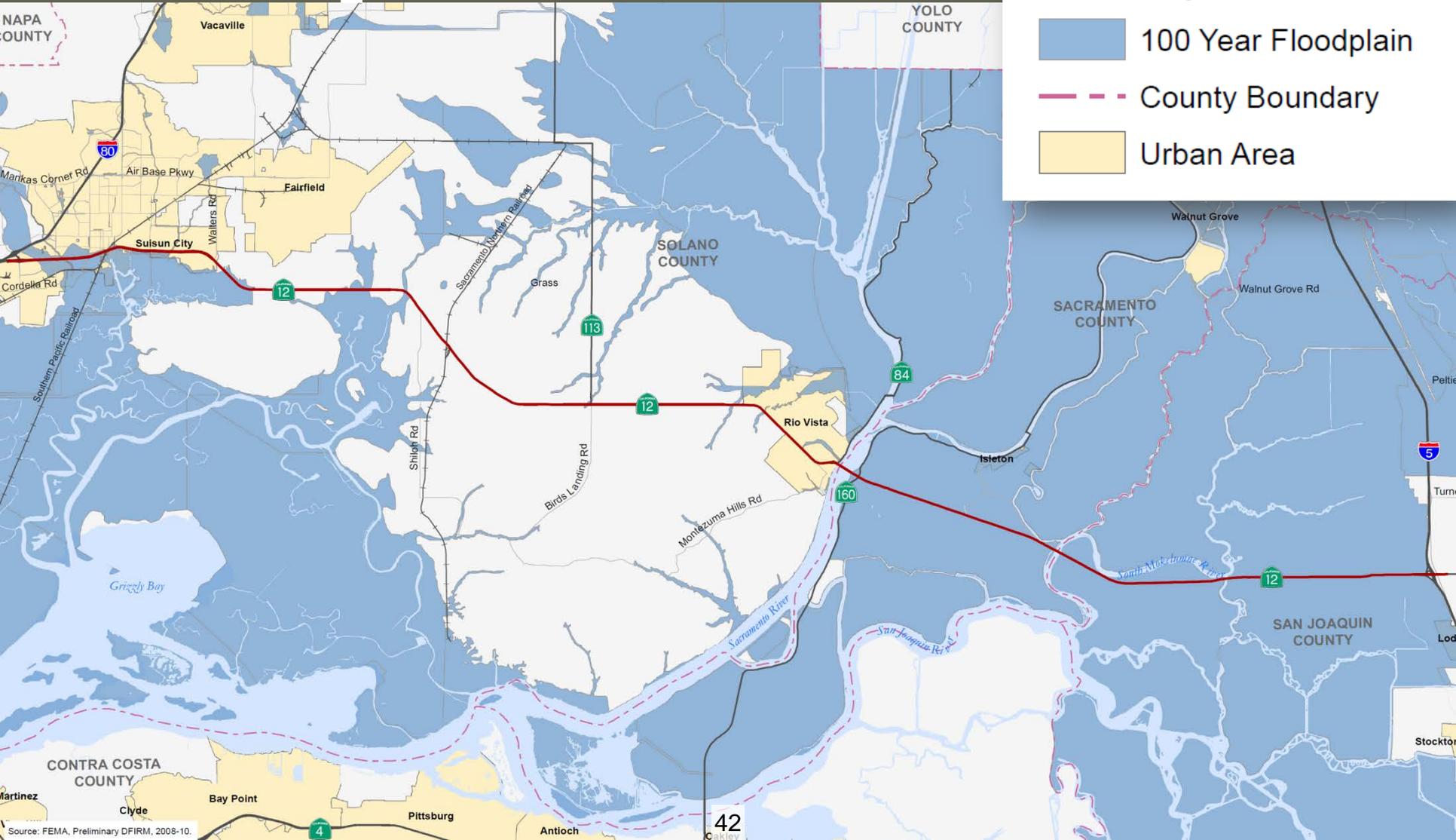


Flood Hazards / Sea Level Rise

- Several areas within corridor are located within 100-year floodplain and subject to inundation due to Sea Level Rise
- Projects would require appropriate hydraulic studies

Environmental Scan

Preliminary Digital Flood Insurance Rate Map

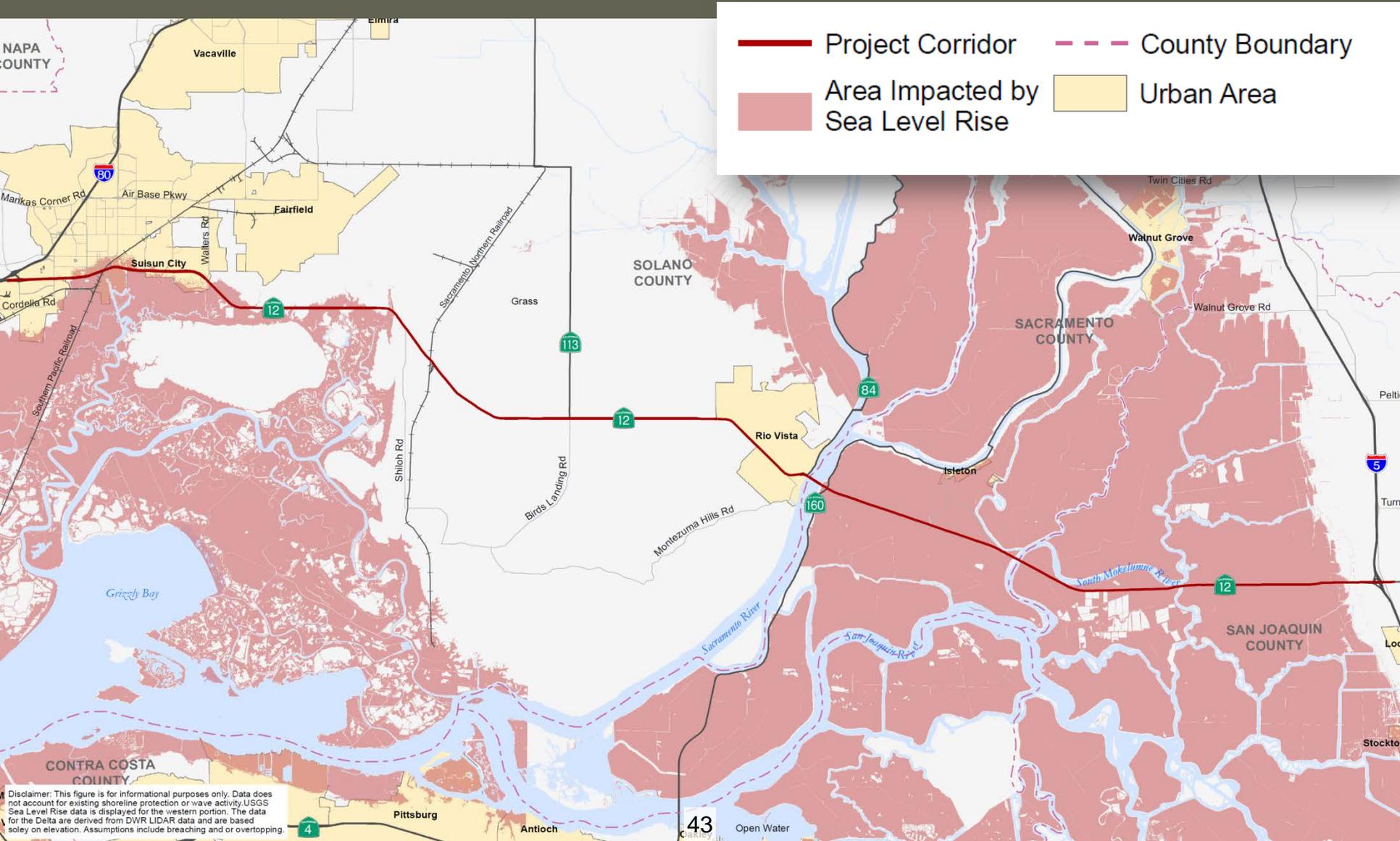


- Project Corridor
- 100 Year Floodplain
- County Boundary
- Urban Area

Source: FEMA, Preliminary DFIRM, 2008-10.

Environmental Scan

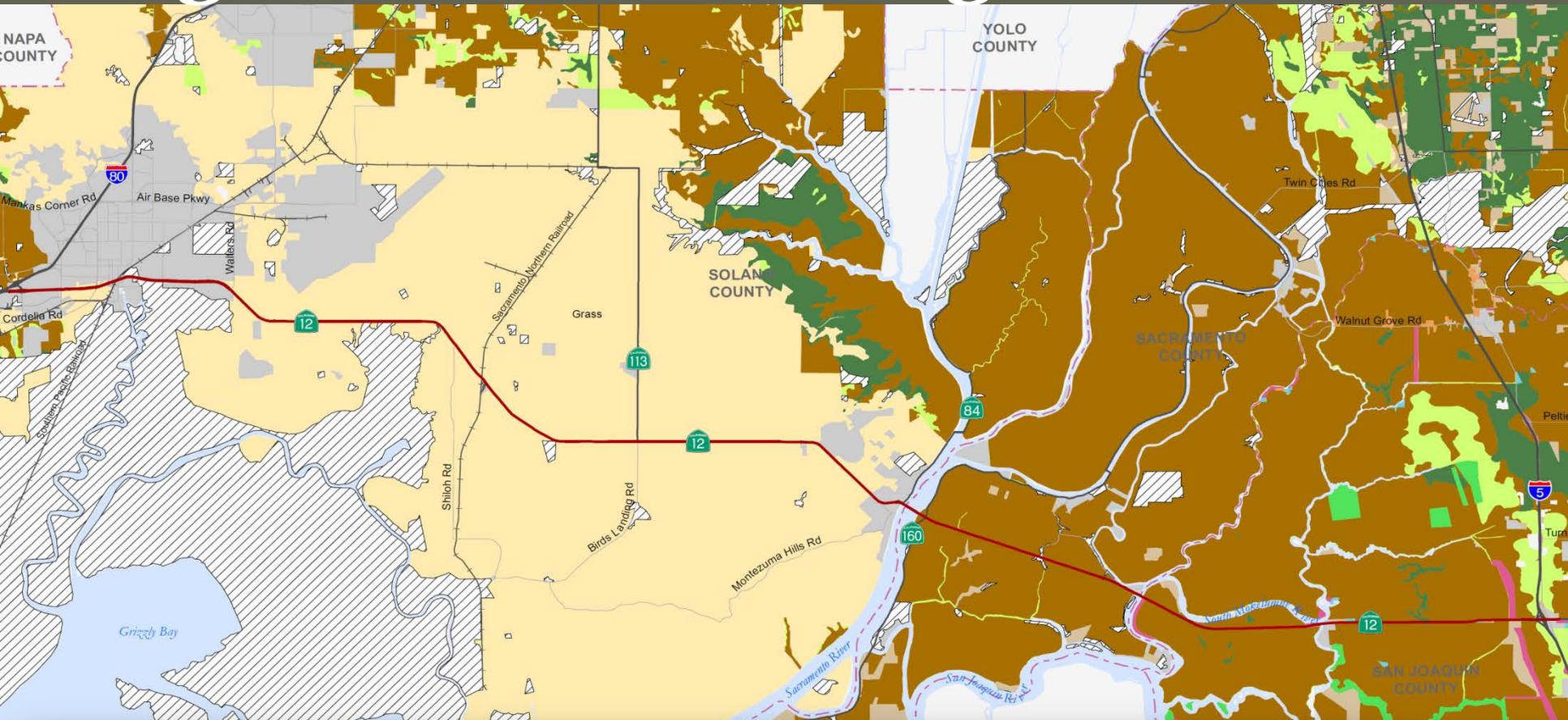
Sea Level Rise (Year 2100)



Farmlands

- Federal Actions are subject to coordination with the Natural Resources Conservation Service under the Farmland Protection Policy Act
- Portions of corridor also pass through farmlands under Williamson Act contracts. Such contracts can only be canceled by the land owner.

Farmland Mapping and Monitoring Program (FMMP) Designations



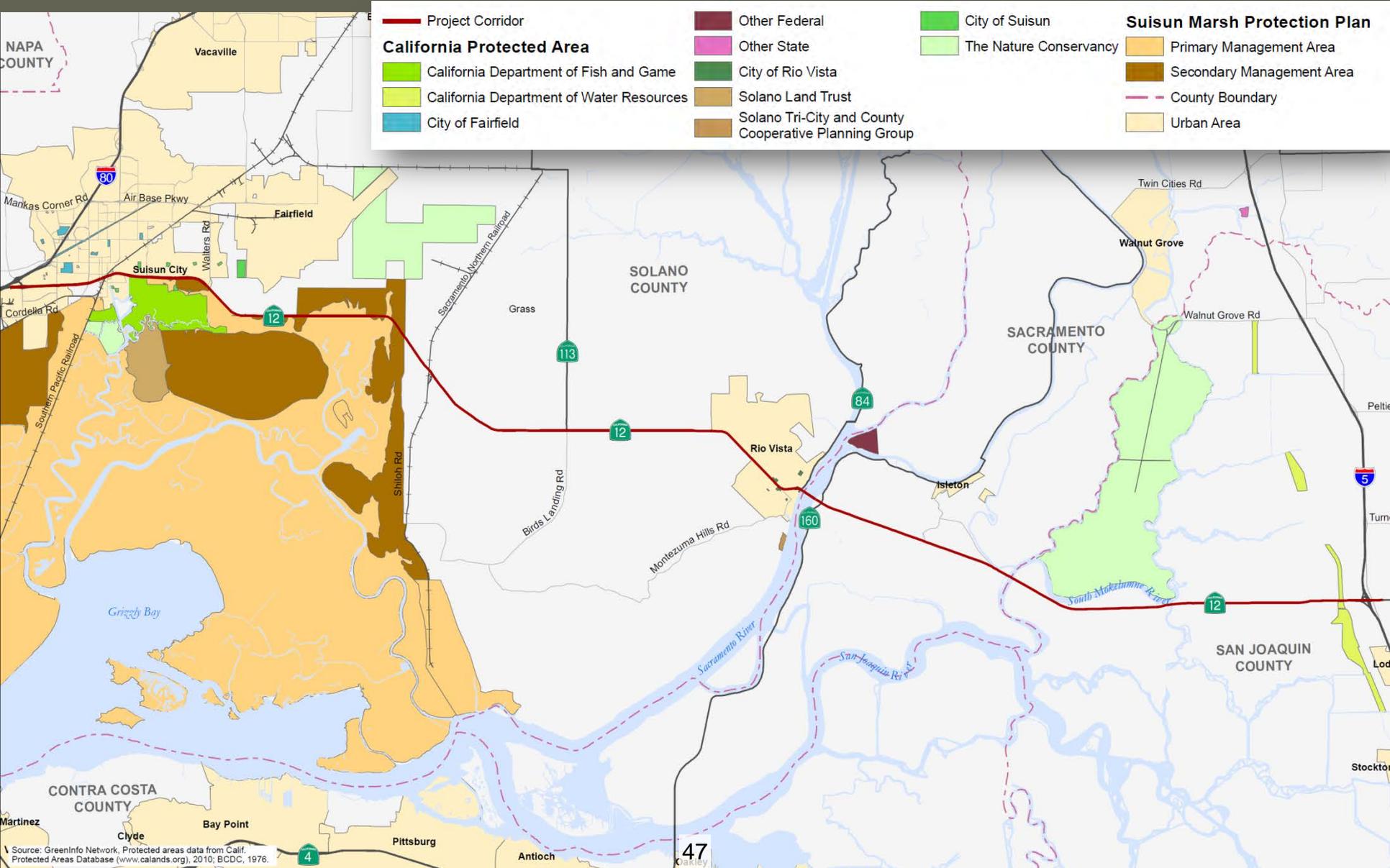
- | | | |
|-----------------------------|------------------------|---|
| Project Corridor | Local Importance | Vacant or Disturbed Land |
| FMMP Designation | Prime Farmland | Other Land* |
| Confined Animal Agriculture | Rural Residential Land | Nonagricultural and Natural Vegetation |
| Urban/Built-Up | Statewide Importance | Semi-Agricultural and Rural Commercial Land |
| Grazing Land | Unique Farmland | County Boundary |

*Other Land is land not included in any other mapping category. Common examples include low density rural developments, brush, timber, wetland and riparian areas not suitable for livestock grazing, confined livestock, poultry, or aquaculture facilities, strip mines, borrow pits, and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

Protected Areas

- Lands dedicated to natural, recreation, and cultural uses, and managed for these purposes through legal or other effective means
- Acquisition of right-of-way from such lands may require coordination with governing body

Protected Areas



Project Corridor

California Protected Area

California Department of Fish and Game

California Department of Water Resources

City of Fairfield

Other Federal

Other State

City of Rio Vista

Solano Land Trust

Solano Tri-City and County
Cooperative Planning Group

City of Suisun

The Nature Conservancy

Suisun Marsh Protection Plan

Primary Management Area

Secondary Management Area

County Boundary

Urban Area

Historical & Archaeological Resources

Sites eligible for the National and/or State Register of Historic Places or not yet evaluated:

- Solano County
 - Archeological Sites – 2
 - Historic Architectural Sites – 8
- Sacramento County
 - Archeological Sites – 0
 - Historic Architectural Sites – 2
- San Joaquin County
 - Archeological Sites – 1
 - Historic Architectural Sites – 1

SR12

Next Steps

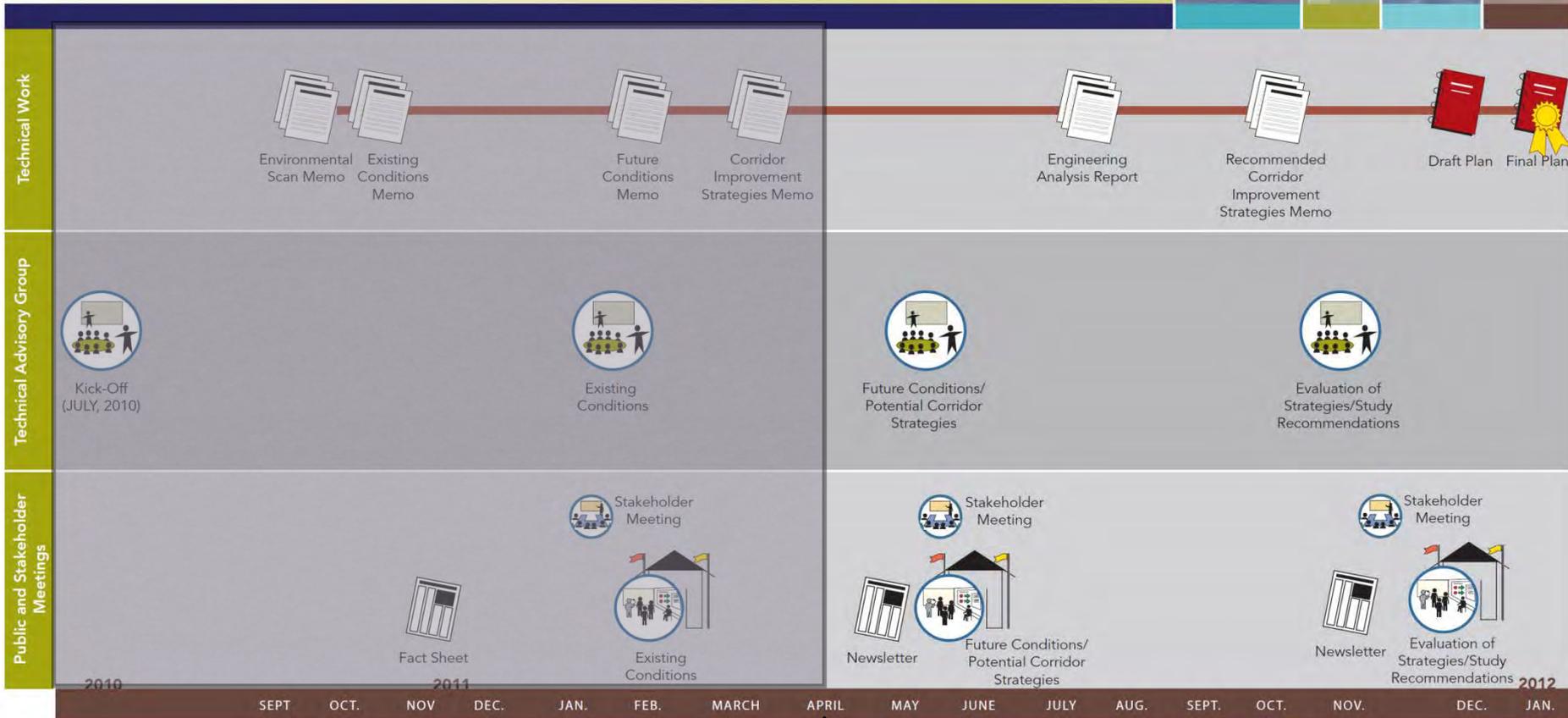
Outreach Structure & Roles

- Project Development Team (PDT)
 - *Staff from Caltrans Districts, MPO's and the consultant team*
 - *Meets monthly to direct and guide the study*
 - *Reviews work plan and work products*
- Technical Advisory Group (TAG)
 - *Executives from transportation agencies and city/county engineers*
 - *Meets at major milestones to provide input and guidance*
- Stakeholders
 - *Organized groups with a special interest in the SR-12 corridor*
 - *Briefed at major milestones and asked to provide input*
- Public at-large
 - *Engaged in advertised open-house forums to review major work products and provide input*

Work Plan & Major Milestones

State Route 12

Comprehensive Corridor Evaluation and Corridor Management Plan



Next Steps

Milestones

- *May - Future Conditions and Potential Corridor Strategies*
- *June - Strategy Evaluations*
- *November - Study Recommendations*

