

Elkhorn Slough Early Mitigation Partnership (ESEMP): Watershed/Conservation Approach to Mitigation for Transportation Projects.



Photo Greg Hoffman

**ICOET Conference August 21-25, 2011
Seattle, Washington**

Where is the Elkhorn Slough Watershed?



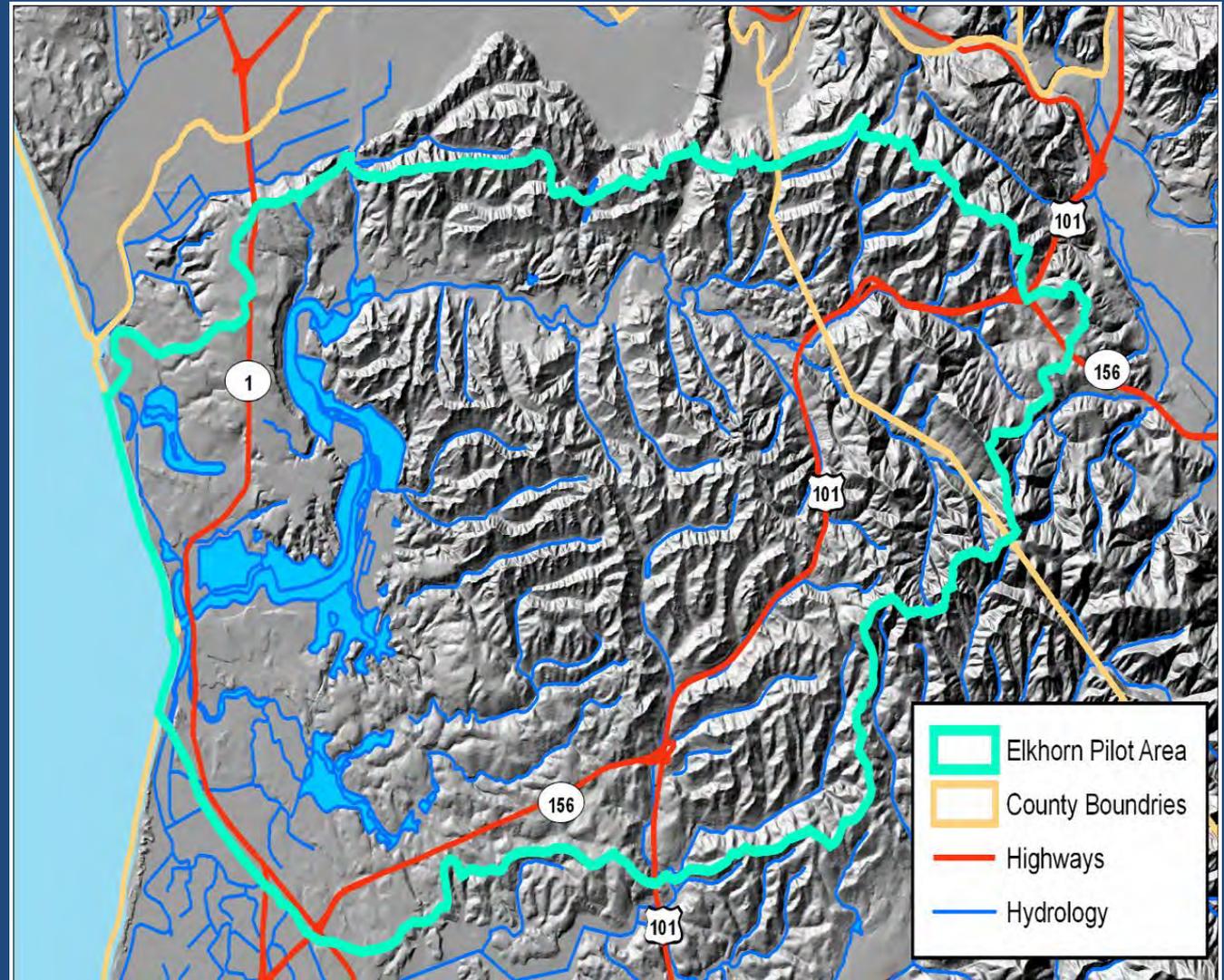
Location Map

And Why is the Elkhorn Slough Important?



Development Potential in the Watershed

- State Highway Improvements
- County Highway Improvements
- Local Road Improvements
- Urbanization
- Intensive Farming Activities



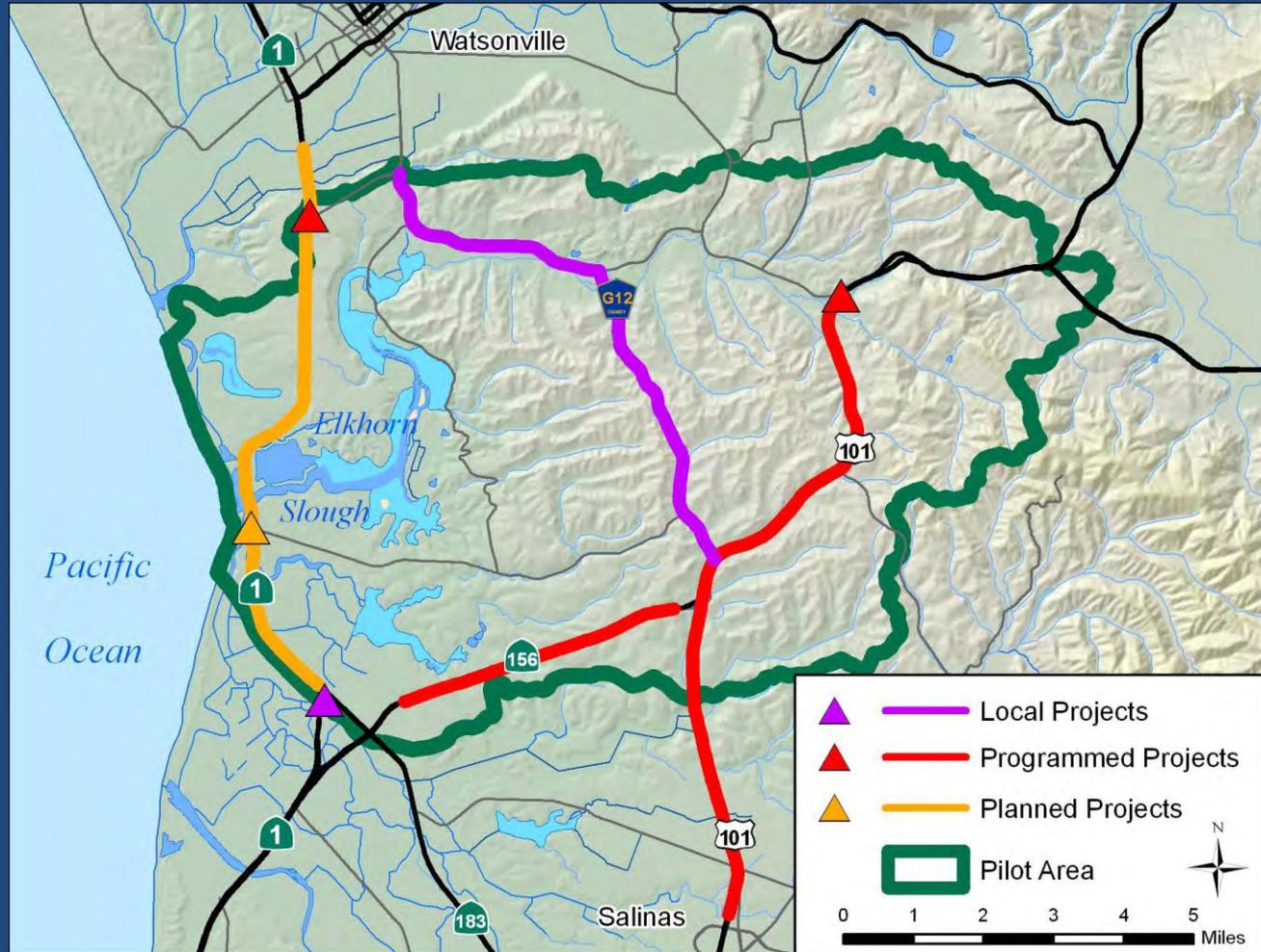
Identify Stakeholders

- California Coastal Commission
- California Department of Fish and Game
- California Department of Transportation
- Central Coast Regional Water Quality Control Board
- Elkhorn Slough Foundation
- Monterey County Planning Department
- National Oceanic and Atmospheric Administration
NOAA Fisheries Service, National Marine Fisheries Service
- Transportation Agency of Monterey County
- U.S. Department of Transportation
Federal Highway Administration, California Division
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service



Transportation Corridors in the Watershed

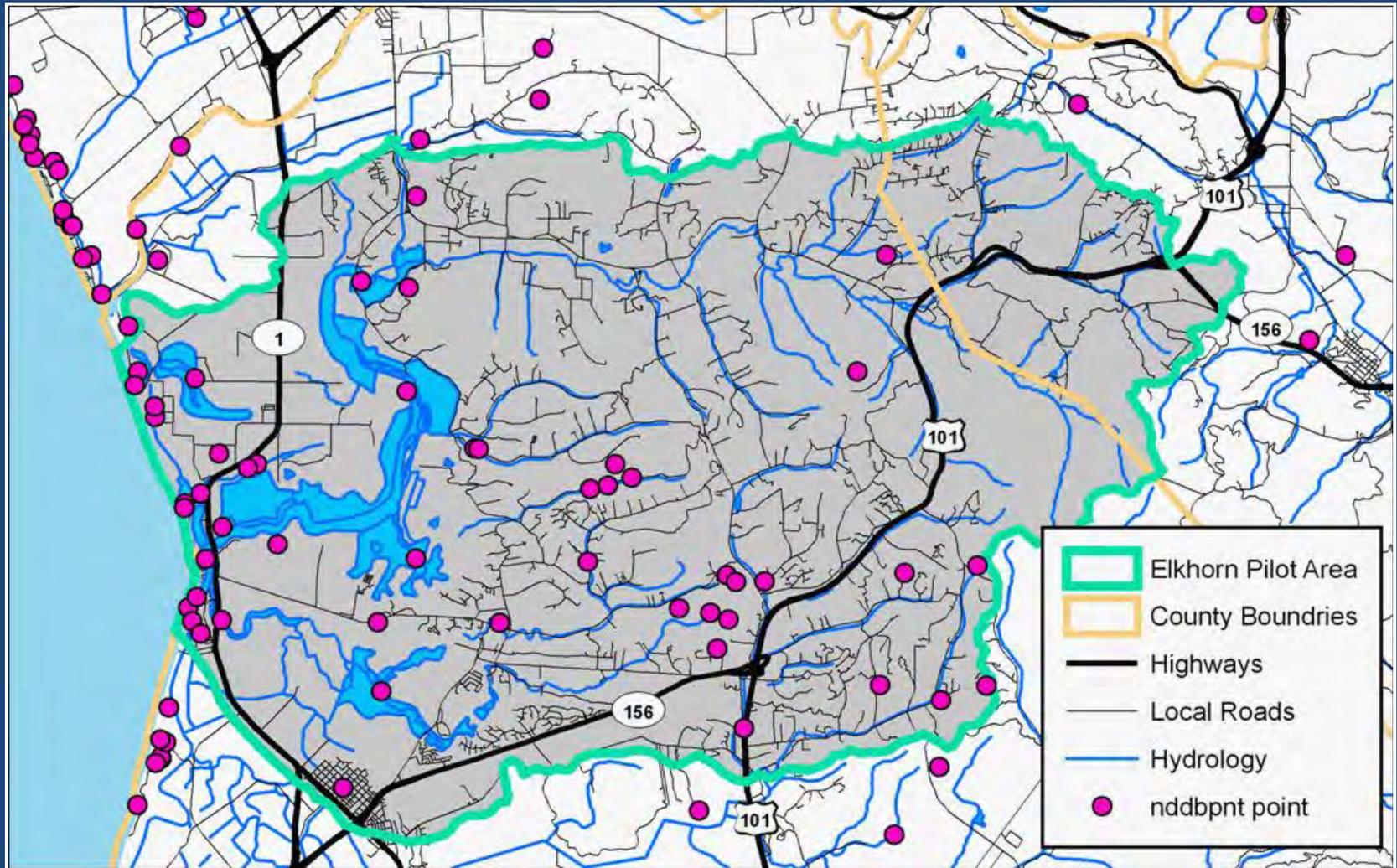
- State Routes 1 & 156 widen from 2 to 4-lanes
- State Route 101 Freeway Corridor Improvements
- County Road G12 widening
- Railroad



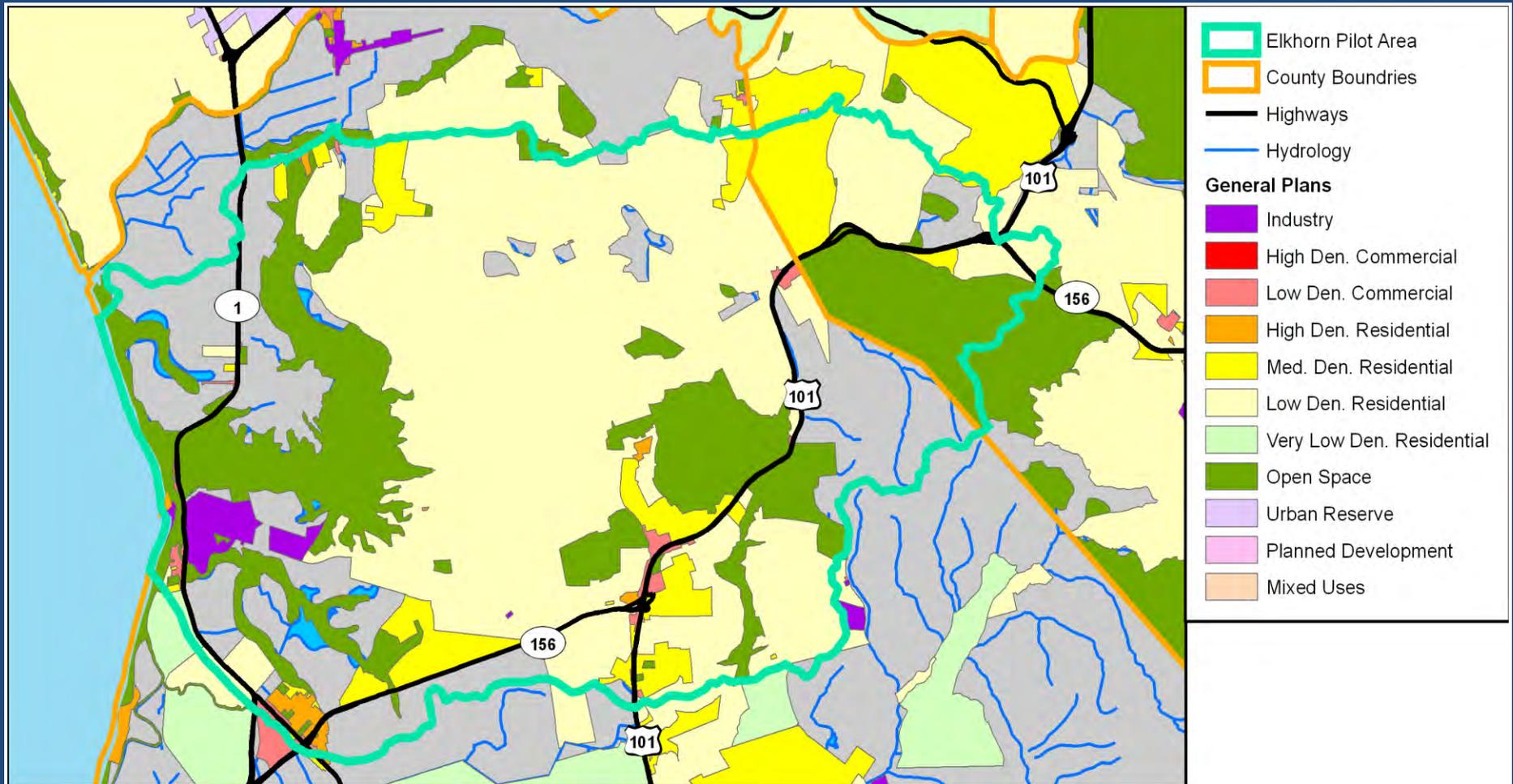
Transportation Facilities in the Watershed



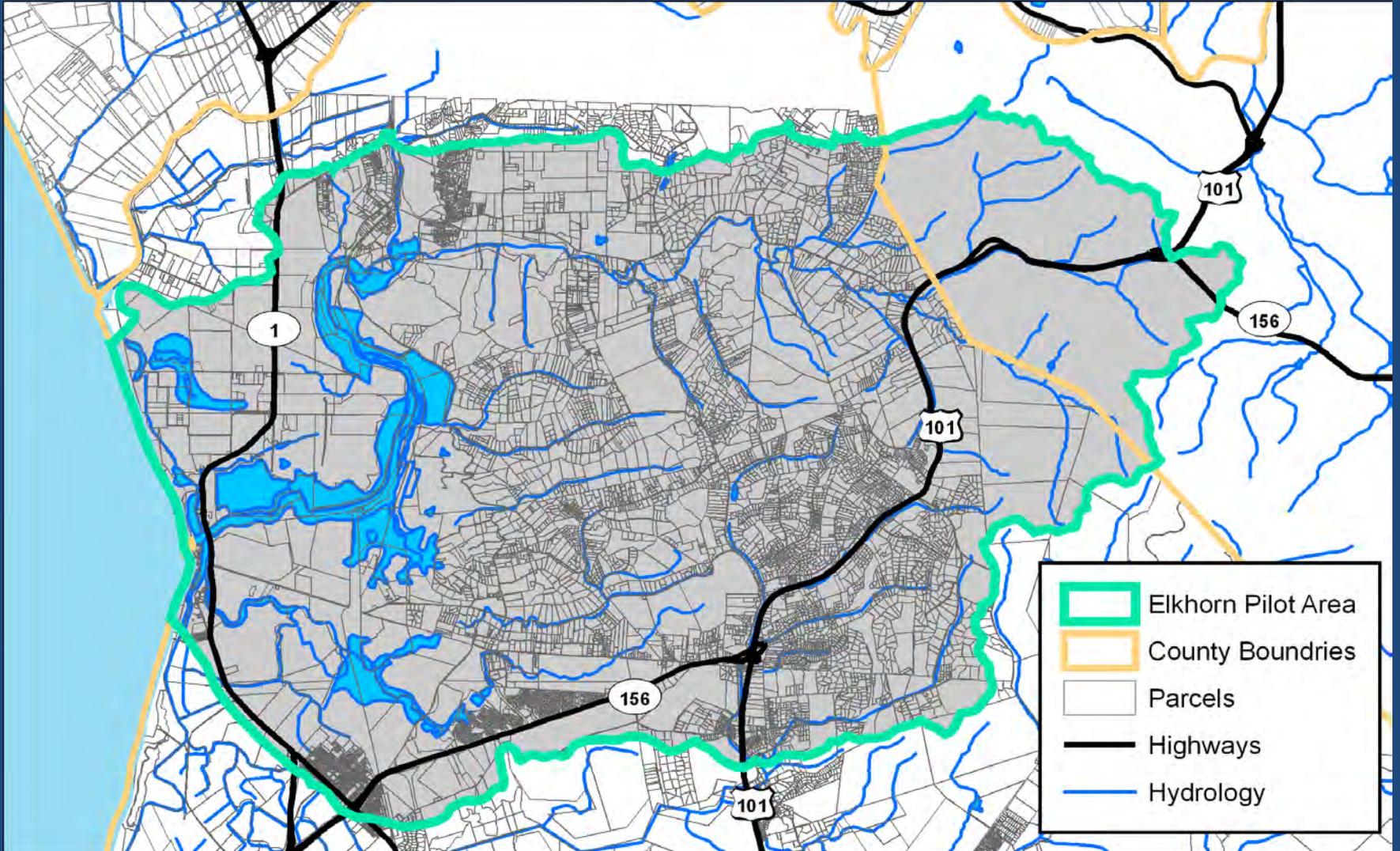
Known Locations of Sensitive Resources Overlaid on Local Roads



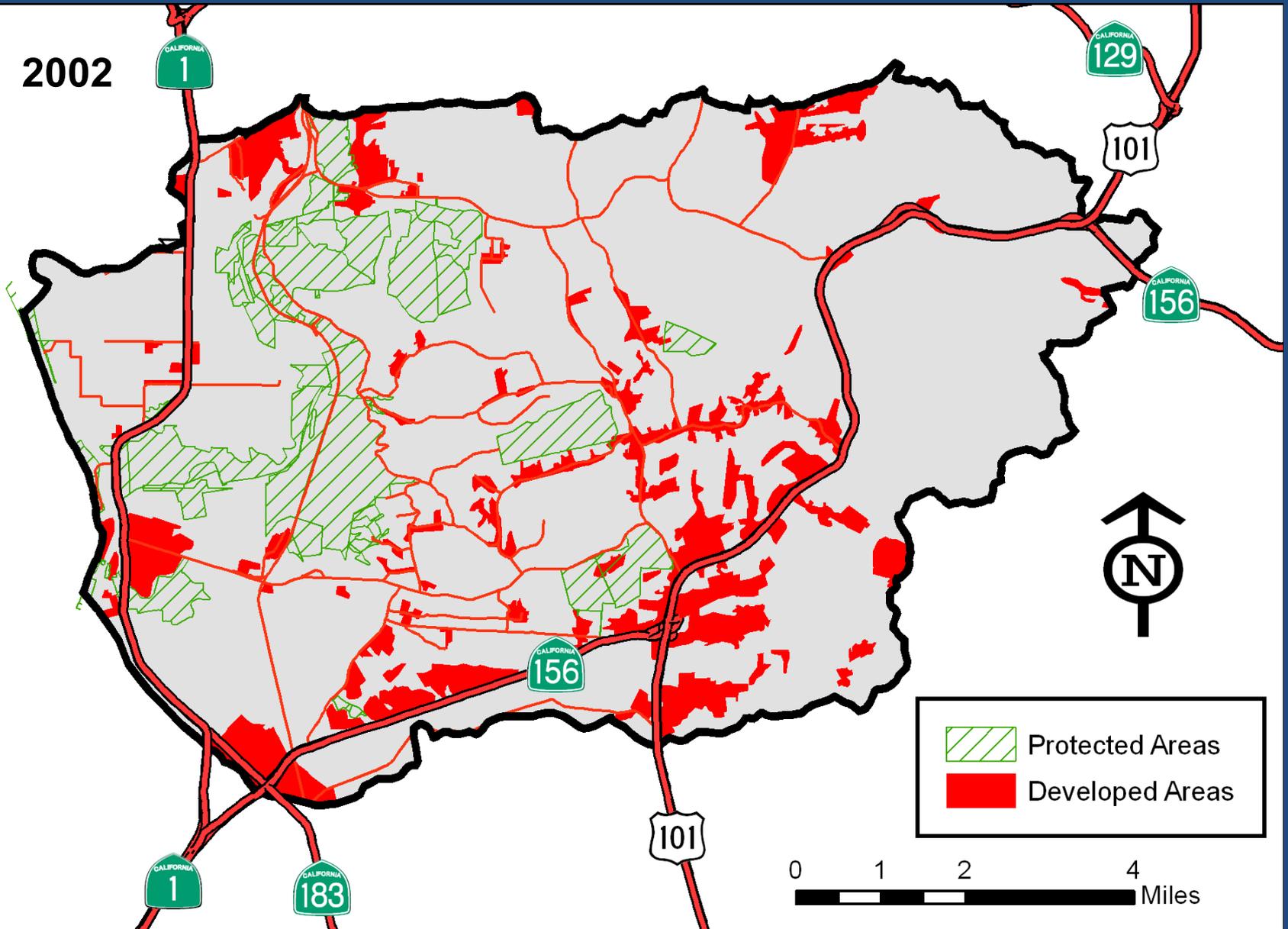
Land Use Designations Across the Watershed



Parcel Map



2002



Rural Development in the Watershed

Farming



-Adjacent to Slough

Residential



-Rural Residential



-Upland Area



-Residential Neighborhood

Industrial Development in the Watershed



-Power plant adjacent to Slough

Identifying Mitigation Needs in the Watershed

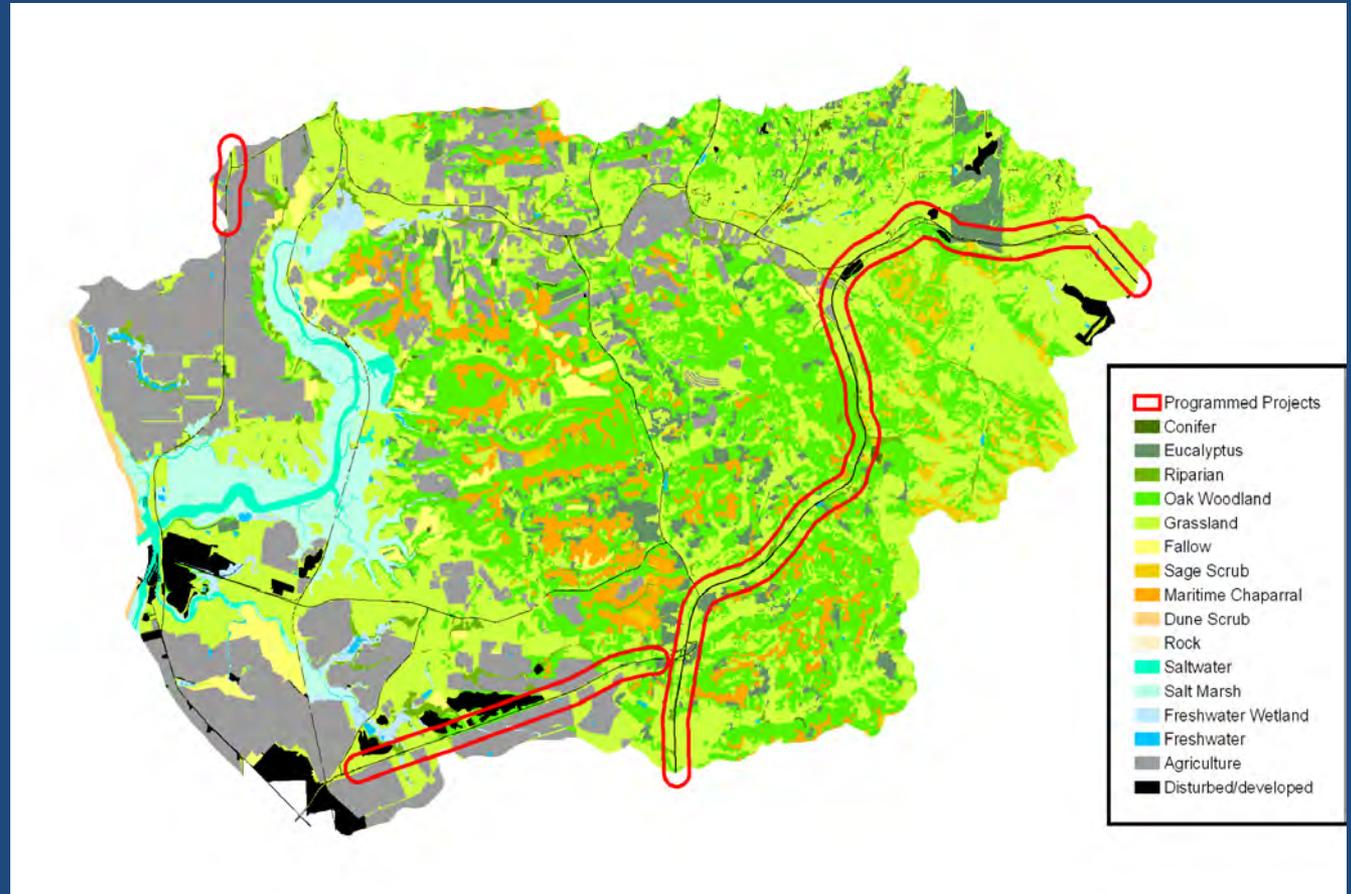
Focus Habitats

Wetlands

- Tidal
- Streams
 - Carneros Creek
70% of the
freshwater

Upland Habitat

- Oak Woodland
- Sage Scrub
- Grassland
- Maritime Chaparral



Caltrans Projects Overlaid on Vegetation Map

State and Federal Protected Species

Focus Species

Listed Animal Species:

- CA red-legged frog (FT)
- CA tiger salamander (FT/ST)
- Santa Cruz long-toed salamander (FE)
- Southern sea otter (FT)
- Tidewater goby (FE)

Listed Plant Species:

- Monterey spineflower (FT)
- Santa Cruz tarplant (FE)
- Yadon's rein orchid (FE)

Tidal Slough



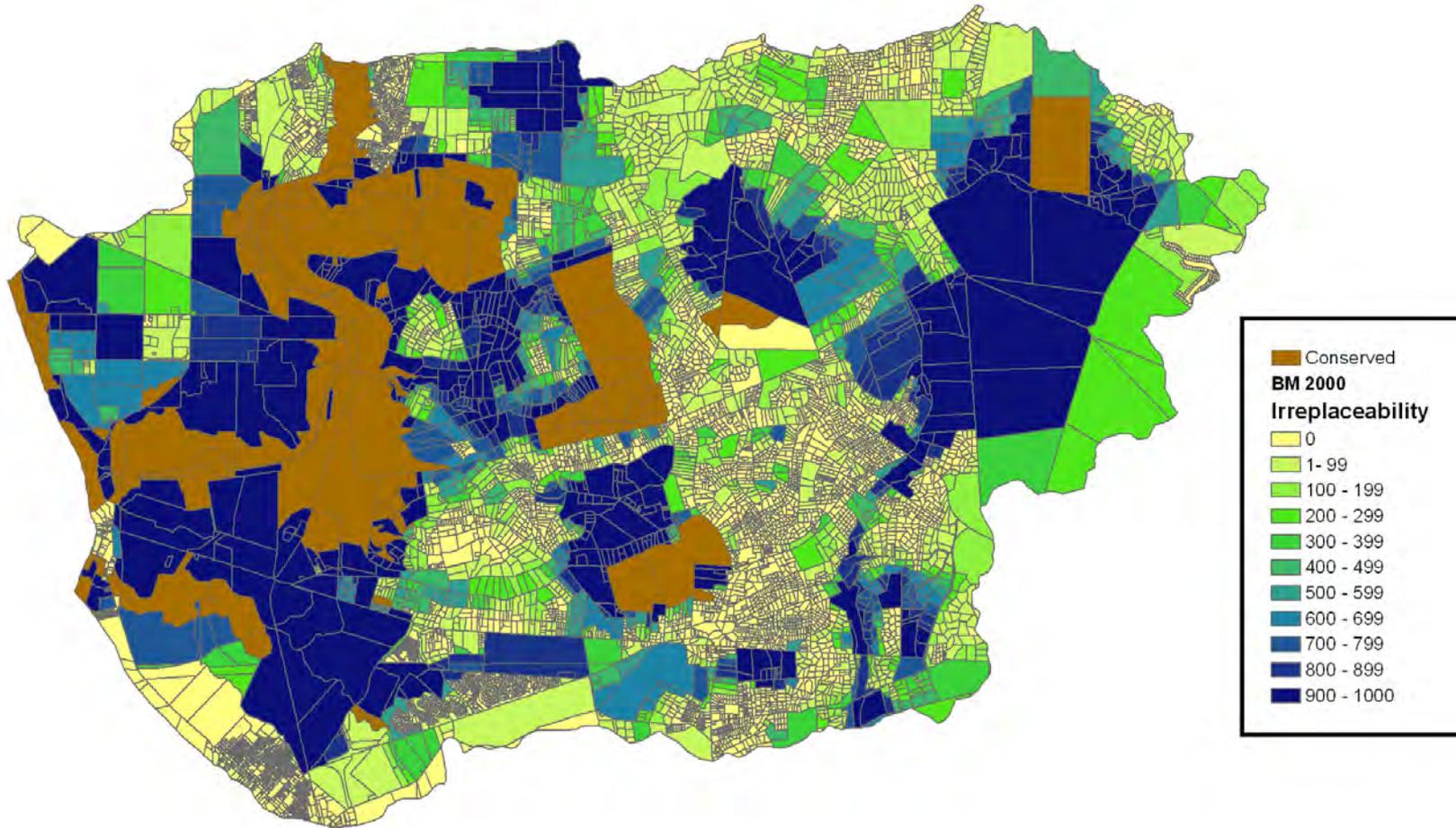
Wetlands & Creeks



Wetlands and Grasslands

Maritime Chaparral Oak Woodland

Identifying Mitigation Sites and Conservation Targets in the Watershed



Conservation Areas and Caltrans' Mitigation Site

Elkhorn Slough Foundation:

Owens 2,538 Acres

Manages 1,057 acres

California Department of Fish and Game:

Owens 722 acres

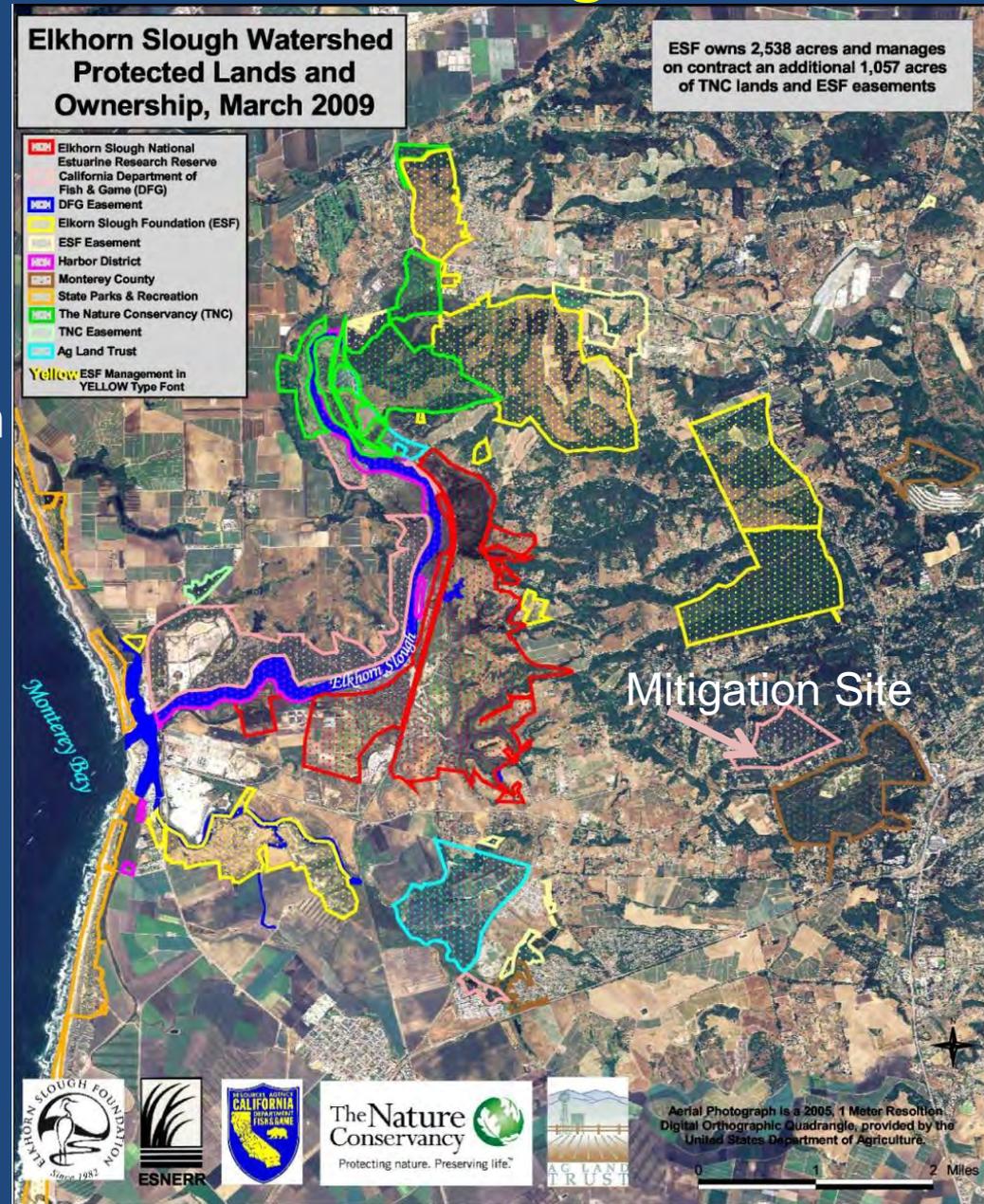
Elkhorn Slough National Estuarine Research Reserve:

1507 Acres

Tidal habitats

Caltrans Mitigation Site:

167 Acres



Results and Accomplishments

- Memorandum of Understanding (MOU)
- Specific Criteria for Advanced Mitigation
- GIS Tool for Early Evaluation of Transportation Project Impacts
- Identification of specific mitigation/conservation areas
- Development of Wetland/Conservation Bank for Elkhorn Slough Watershed
- Model being used in other watersheds
- Received 2008 TAMC Transportation Excellence Award and 2009 FHWA Exemplary Ecosystem Initiative Award
- An article about the ESEMP was included in the July 2010 issue of the Reporter published by The American Public Works Association

Advanced Mitigation Elkhorn Slough Watershed

The Keys to Success:

- GIS Tool incorporating data from all stakeholders
- Consensus-Based; All decisions relating to language in in the MOU vetted through each agencies legal staff
- Excellent facilitation by UCD staff
- Excellent meeting facilities provided by Elkhorn Slough Foundation; lunch provided to all participants
- Caltrans funded Transportation Liaison positions at many of the participating agencies.
- Dedicated participation by all stakeholders throughout the process.

Acknowledgments



Steering Committee:

Front Row Left to Right: Tami Grove- CCC, Kevin Ward- UCD, Nancy Siepel- Caltrans, Mary Madison- UCD, Gary Ruggerone- Caltrans, and Liz Gonzales- MON Co.

Back Row Left to Right: Joyce Ambrosius-NMFS, Mike Zeller- TAMC, Kevin Contreras- ESF, Steve Kirkland- USFWS, Mark Silberstein- ESF, Larry Vinzandt- FHWA, Dominic Roques- RWQCB, Susan Sturges- EPA

Elkhorn Slough Early Mitigation Partnership

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