



Advance Mitigation Efforts

Recent Success and Future Possibilities

for the Delta Levees Program

Jennifer Hogan

Outline

- Background of Delta Levees Program
- Program Mitigation Issues
- Mitigation Options
- Next Steps

Delta Levees Program

- Flood control improvement projects
- Mitigation and habitat improvement projects

(Water Code 12310)

Primary Purpose of Program

“**Protect** discrete and identifiable public benefits, including the protection of public highways and roads, utility lines and conduits, and other public facilities, and the protection of urbanized areas, water quality, recreation, navigation, and **fish and wildlife habitats**, and other public benefits.”

(Water Code 12311)

Mandates from Water Code

- **No “net long-term loss of riparian, fisheries, or wildlife habitat”**
Section 12314(c) (SB34 1988)
- **“Net long-term habitat improvement...”**
Section 12987(d) (AB360 1996)

Program Mitigation Issues

- Onsite creation
- Mitigation Plans often vague
- Rare cases of endowments
- Current need for weed management

Lake Berryessa

Sacramento

Stockton

San Francisco

Angel Island

San Francisco Bay

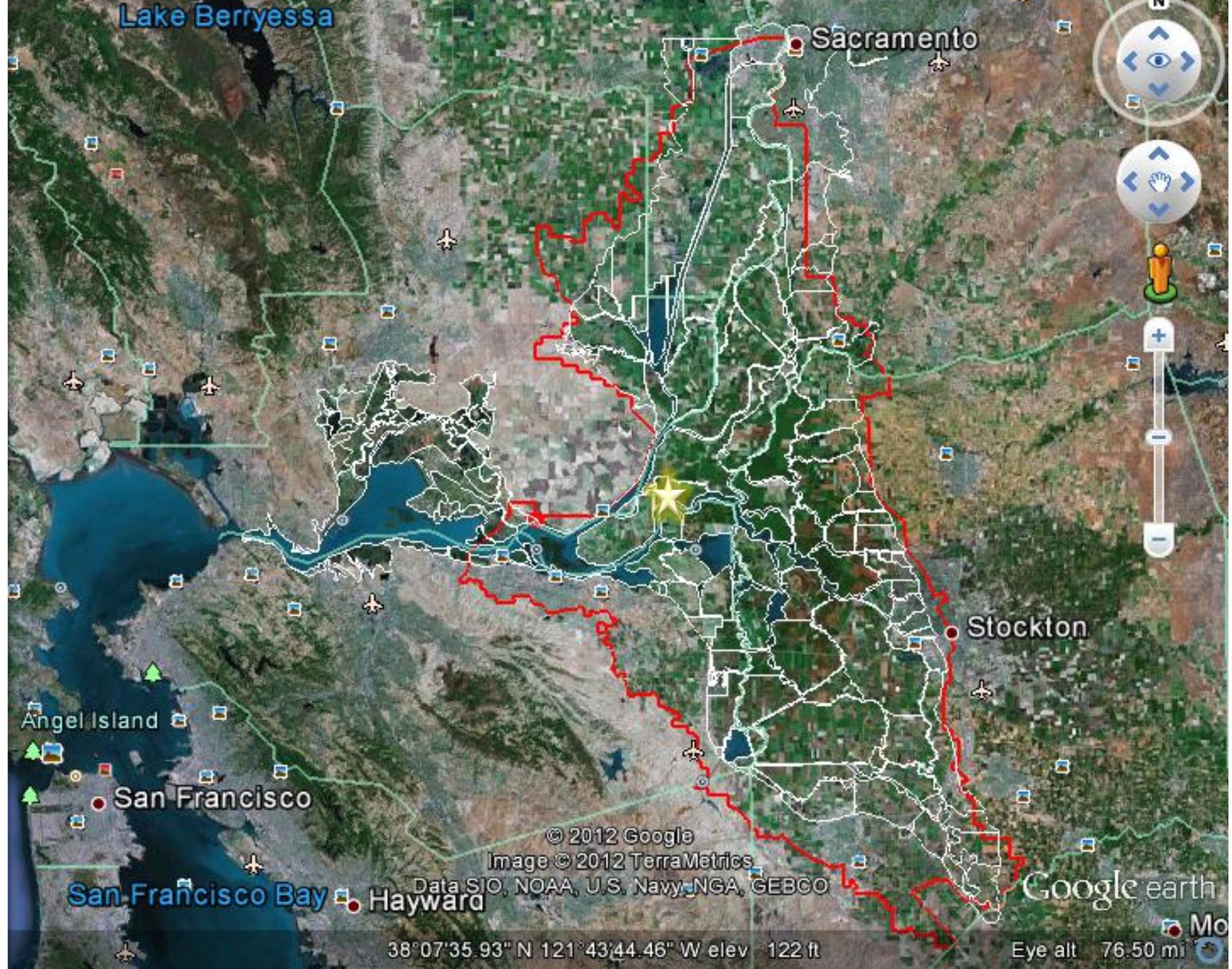
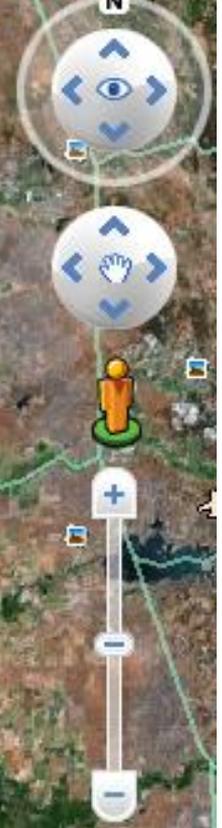
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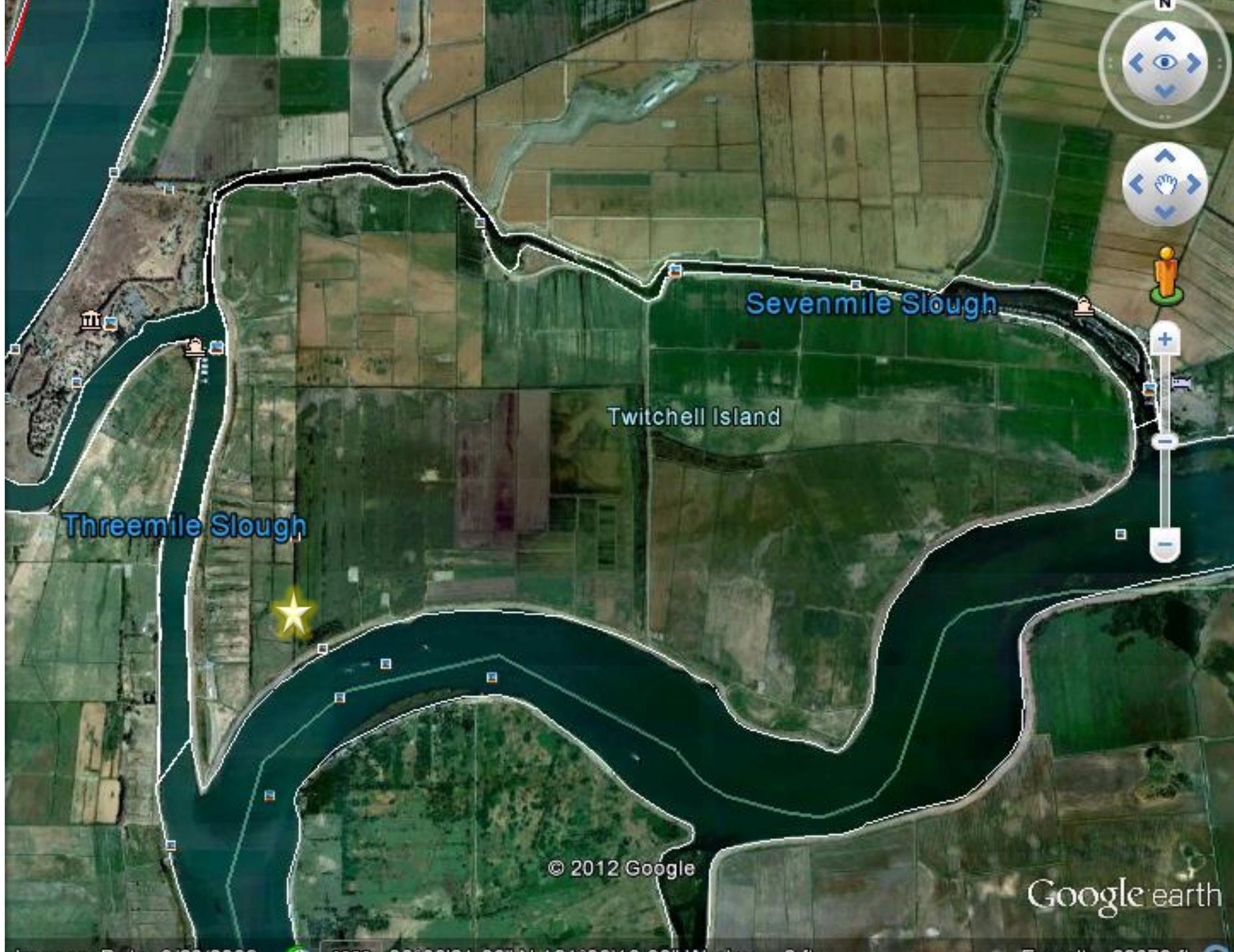
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Google earth

38°07'35.93" N 121°43'44.46" W elev 122 ft

Eye alt 76.50 mi





Sevenmile Slough

Twitchell Island

Threemile Slough

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Proposition 84 and 1E Bond Funding

- Already approved \$260 million
- Anticipate spending \$300 million

Total expected investment \$560 million

Estimated Mitigation Needs

- Shaded Riverine Aquatic (SRA) ~123,500 linear feet
- Freshwater Marsh ~38 acres
- Scrub-Shrub ~440 acres
- Riparian Forest ~950 acres

Mitigation Options

- Purchase existing mitigation bank credits
- Design and construct a mitigation (bank) site
- Work through a reclamation district

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Bulk Mitigation Credits

- SRA - 4000 lf (123,500 lf)
- Freshwater Marsh - 2.5 acres (38 acres)
- Scrub-Shrub - 38 acres (440 acres)
- Riparian Forest - 50 acres (950 acres)

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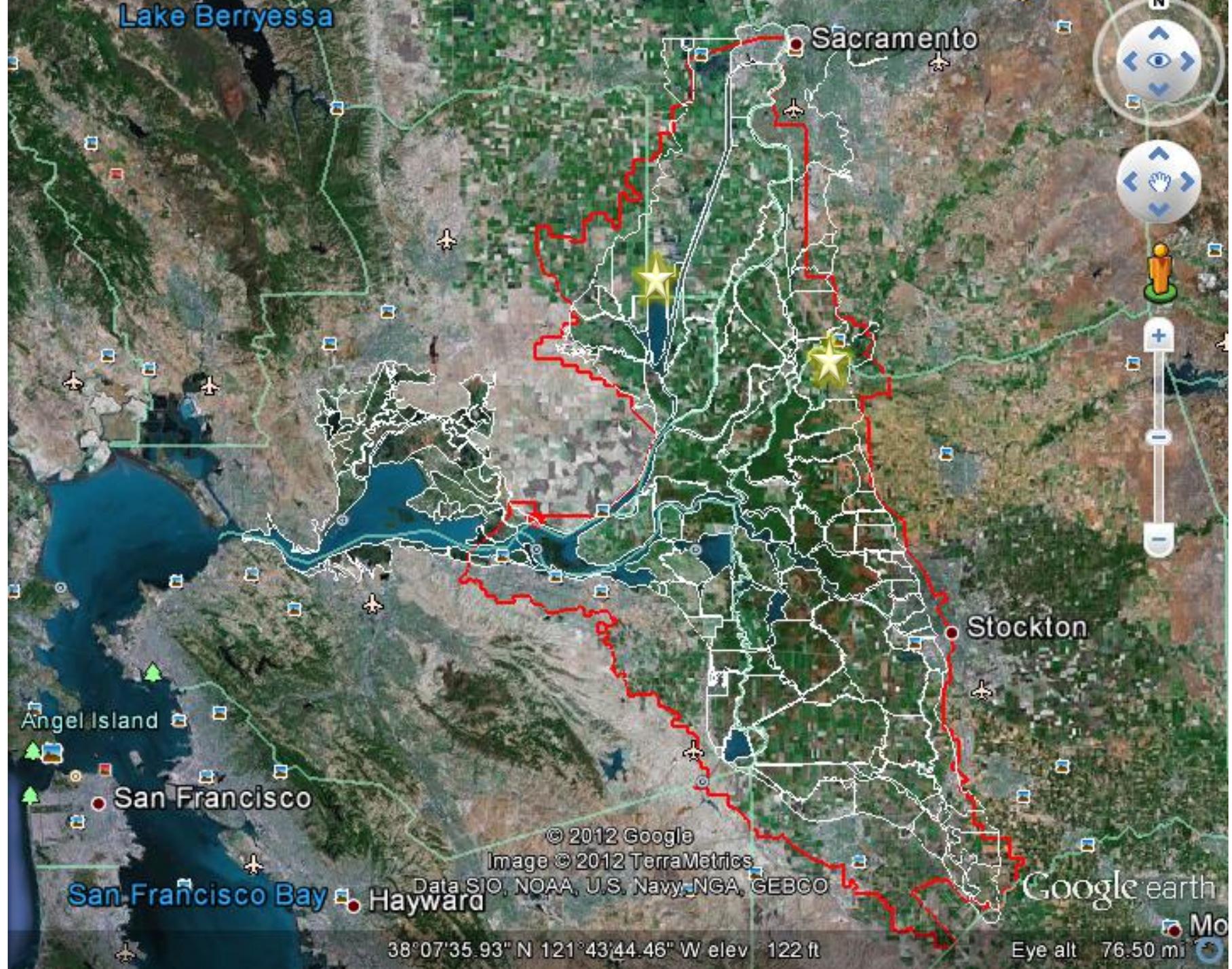
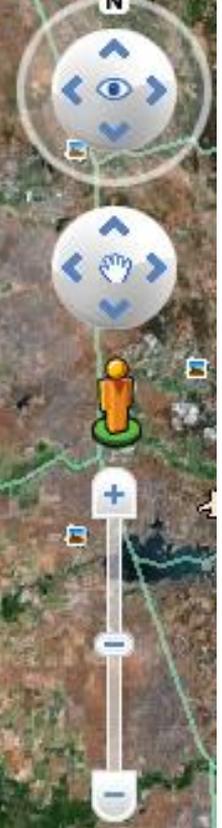
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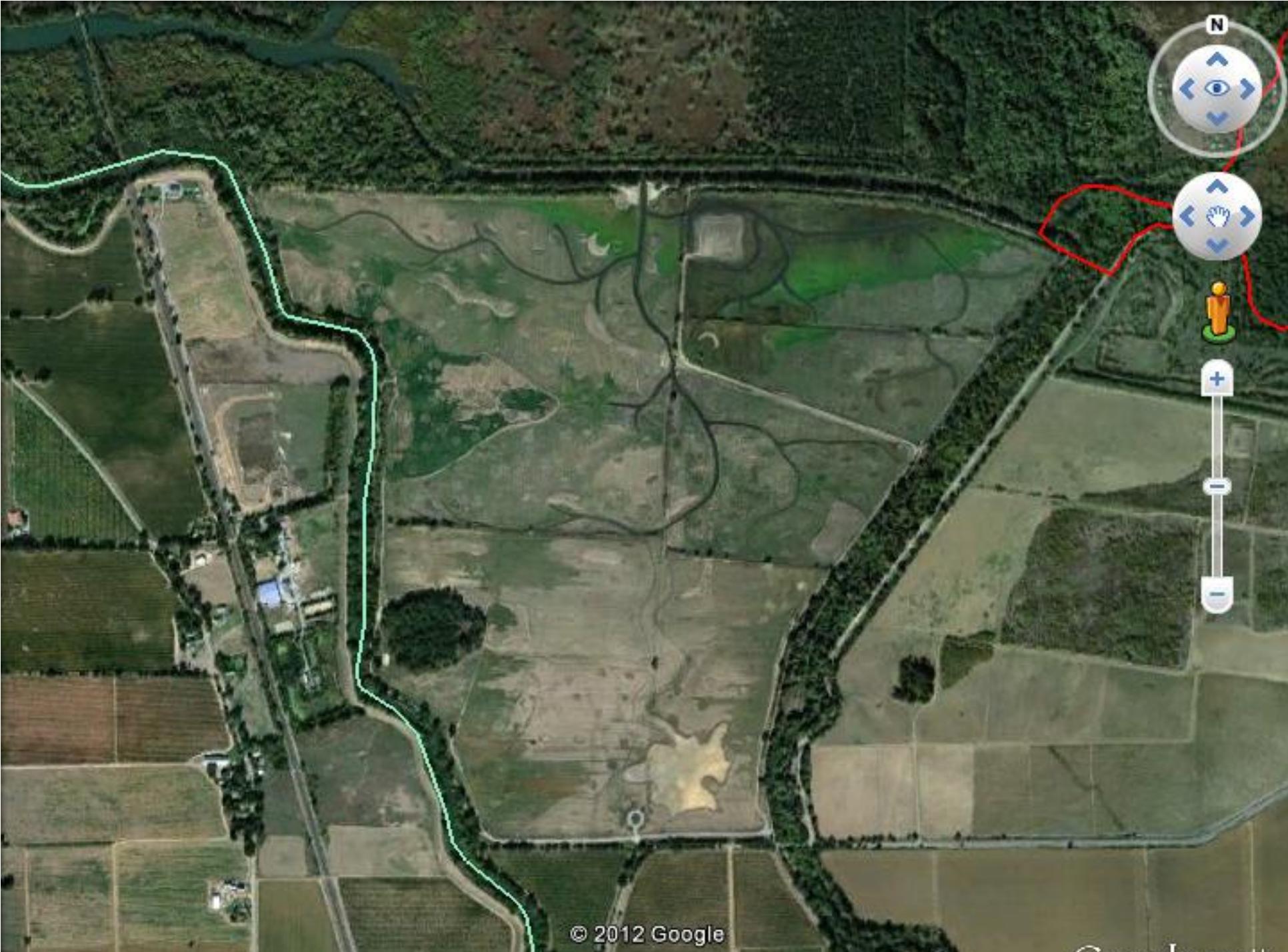
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THE BACK OF THIS DOCUMENT CONTAINS AN ARTIFICIAL WATERMARK - VIEW AT AN ANGLE



STATE OF CALIFORNIA

WARRANT NUMBER

08-131715

H THE TREASURER OF THE STATE WILL PAY OUT OF THE
IDENTIFICATION NO.

FUND NO. FUND NAME
6052 DISASTR & FLOOD BND FD

3860 MO. DAY YR.
07 23 2012

90-1342/1211
08131715

TO: 131715
--- RECLAMATION DIST 830

DOLLARS	CENTS
\$*5839000	.00

John Chiang
JOHN CHIANG
 CALIFORNIA STATE CONTROLLER



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FORM 04-08 (2-97) CONTROLLERS WARRANT



PUBLIC SAFETY

ENVIRONMENTAL STEWARDSHIP

ECONOMIC STABILITY



Mitigation Options

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- **Design and construct a mitigation (bank) site**
- Work through a reclamation district

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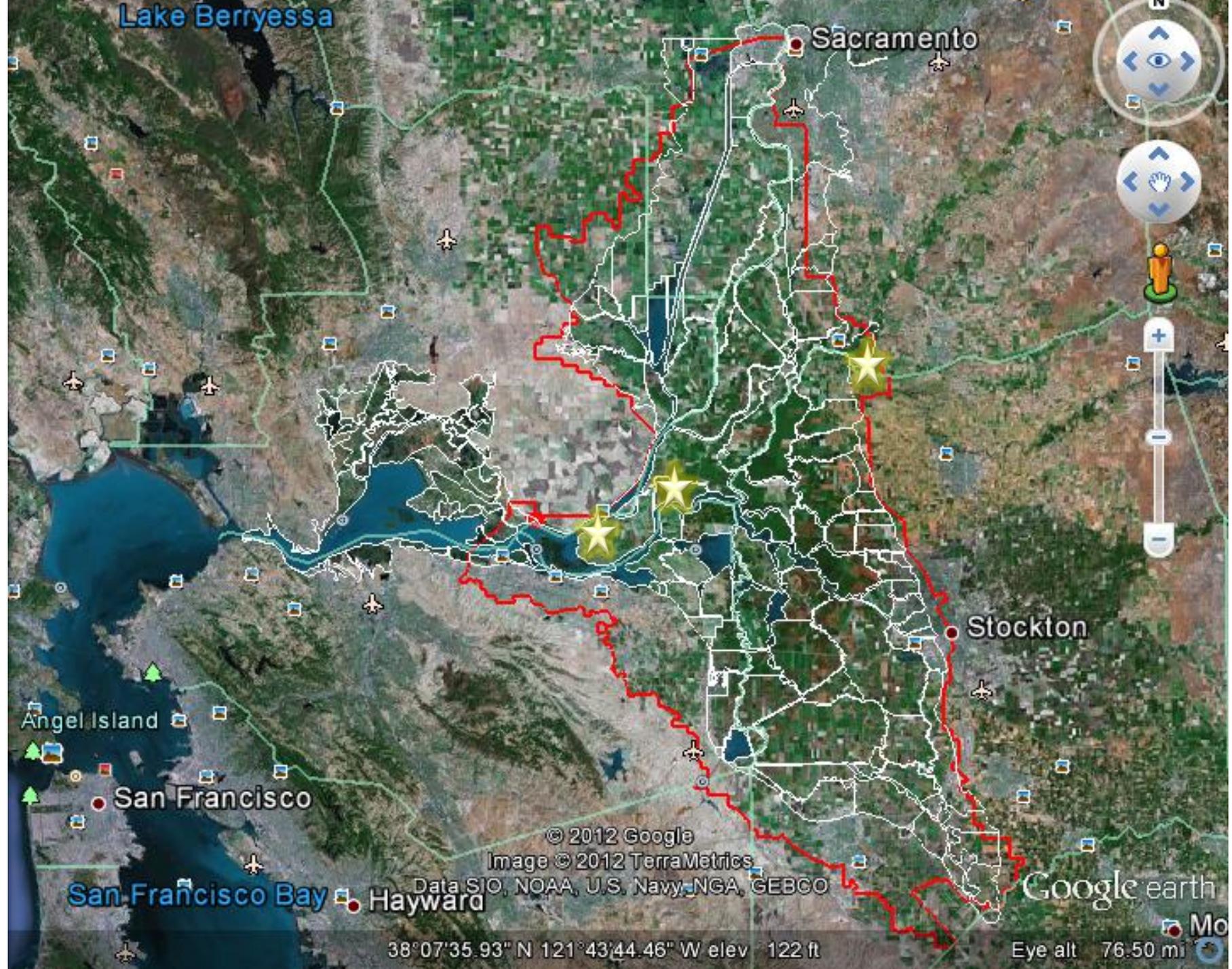
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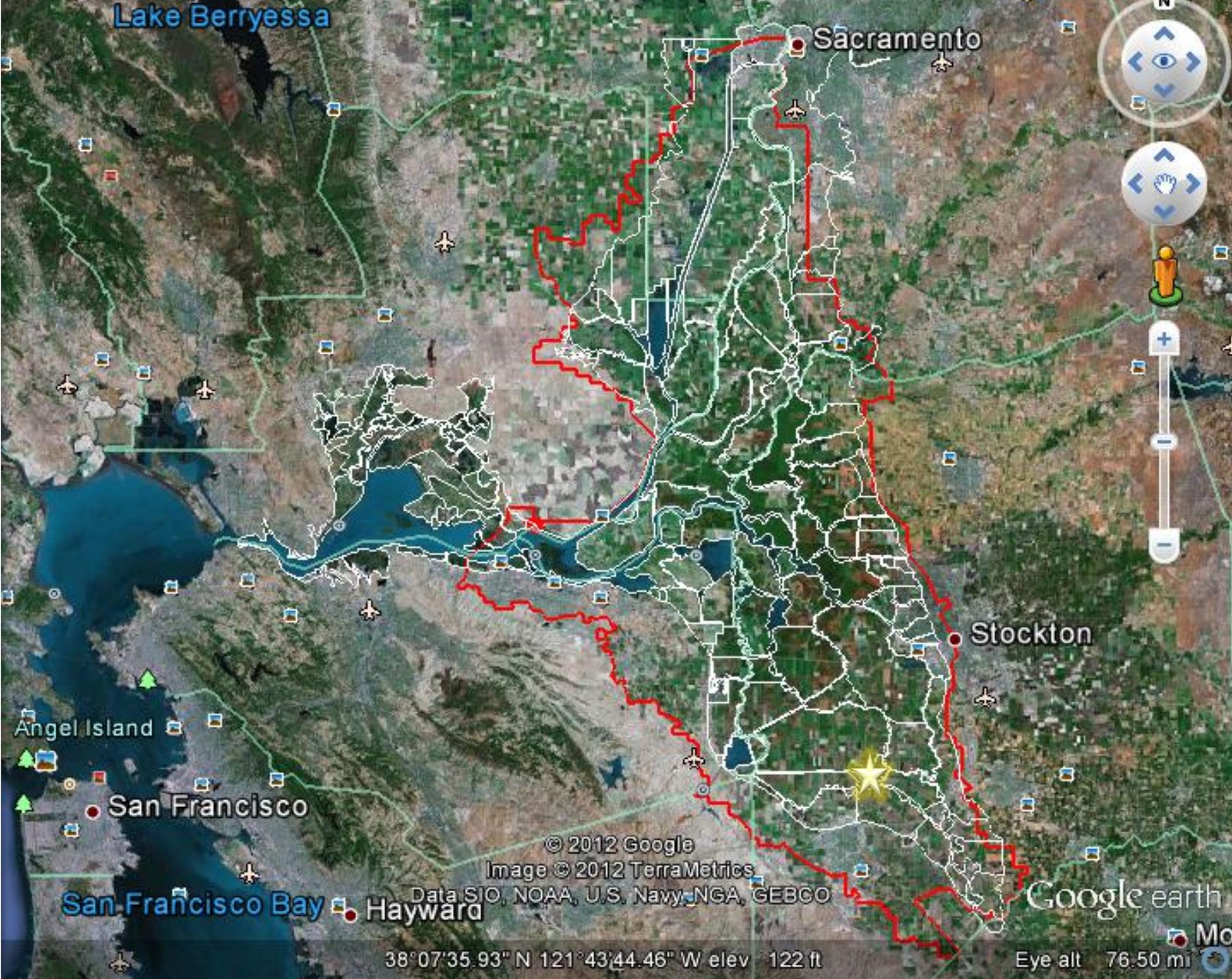
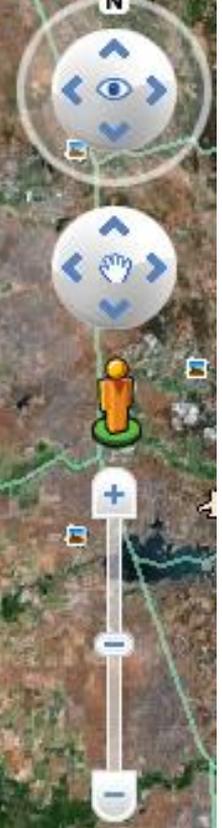
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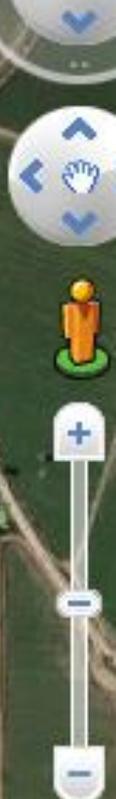
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Next Steps

- Purchase existing mitigation credits
- Design and construct a mitigation (bank) site
- Work through a reclamation district
- Prioritize potential sites

Special thanks to our DFG counterparts and past and present Delta Ecosystem Enhancement staff

Jennifer Hogan, Staff Environmental Scientist
Delta Ecosystem Enhancement Section

jhogan@water.ca.gov

916-651-7005