Riparian Sanctuary
Sacramento River
RM 178-179

SRCAF PARC Meeting, March 12, 2015
Michael Rogner, River Partners
John Garner, PCGID-PID

PRINCETON-CODORA-GLENN IRRIGATION DISTRICT

PID

U.S. FISH & WILDLIFE SERVICE

RIVER PARTNERS

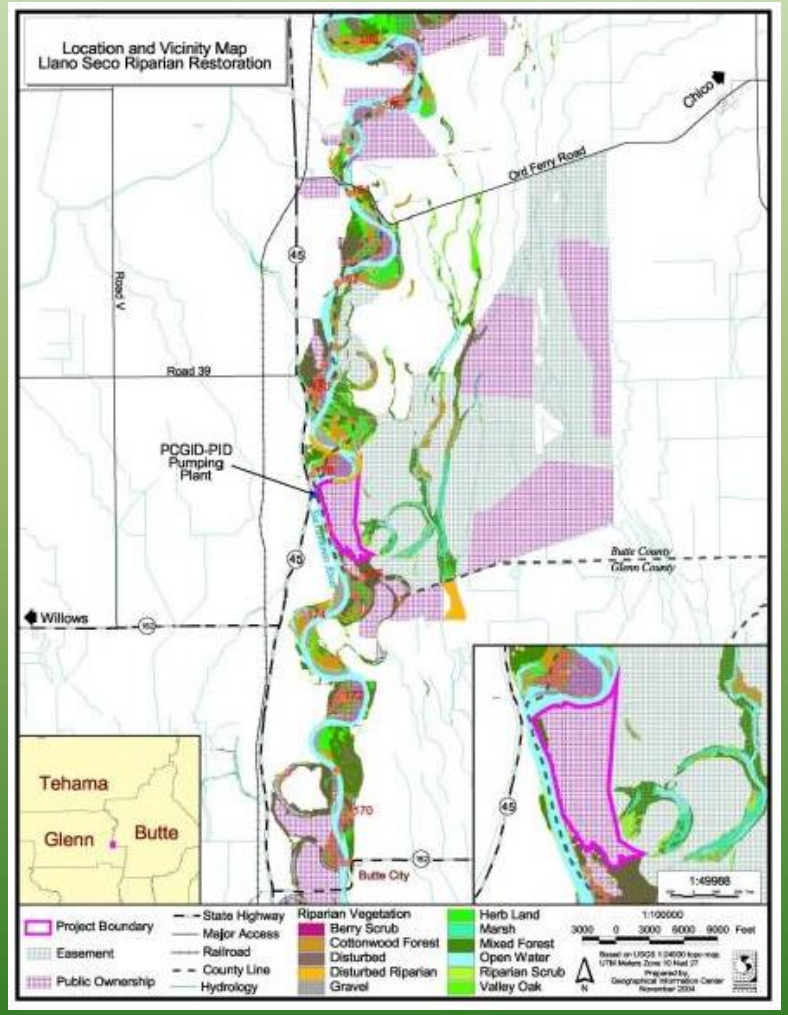
CALFED Bay-Delta Program

CALIFORNIA DEPARTMENT OF FISH & WILDLIFE

Project Support

- Assemblyman LaMalfa
- Butte County Board of Supervisors
- Butte County Farm Bureau
- California Waterfowl Association
- Colusa County Farm Bureau
- Congressman Herger
- Duck Unlimited
- Glenn County Board of Supervisors
- Glenn County Farm Bureau
- Sacramento River Preservation Trust
- Senator Aanestad
- The Nature Conservancy
- Sacramento River Conservation Area Forum

Location


Location and Vicinity Map
Llano Seco Riparian Restoration
Chico
Ord Ferry Road
Road V
Road 39
PCGID-PID Pumping Plant
Butte County
Glenn County
Willows
Butte City
Tehama
Glenn
Butte
1:49988
Project Boundary
Easement
Public Ownership
State Highway
Major Access
Railroad
County Line
Hydrology
Riparian Vegetation
Berry Scrub
Cottonwood Forest
Disturbed
Disturbed Riparian
Gravel
Herb Land
Marsh
Mixed Forest
Open Water
Riparian Scrub
Valley Oak
1:100000
3000 0 3000 6000 9000 Feet

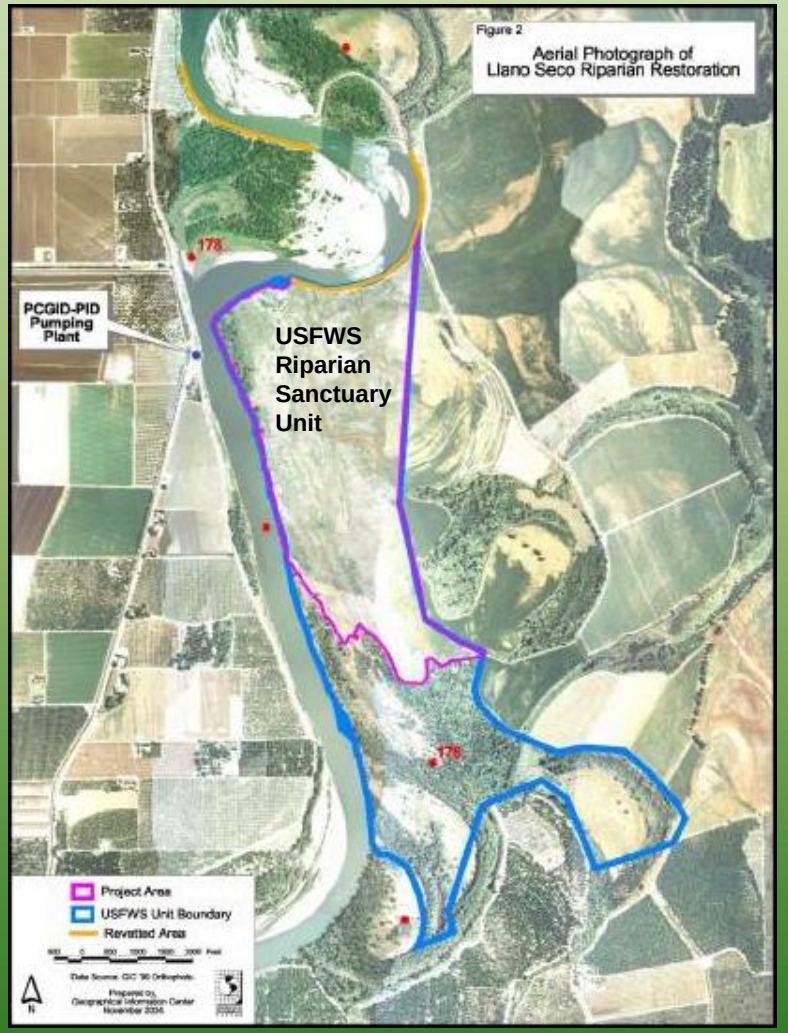
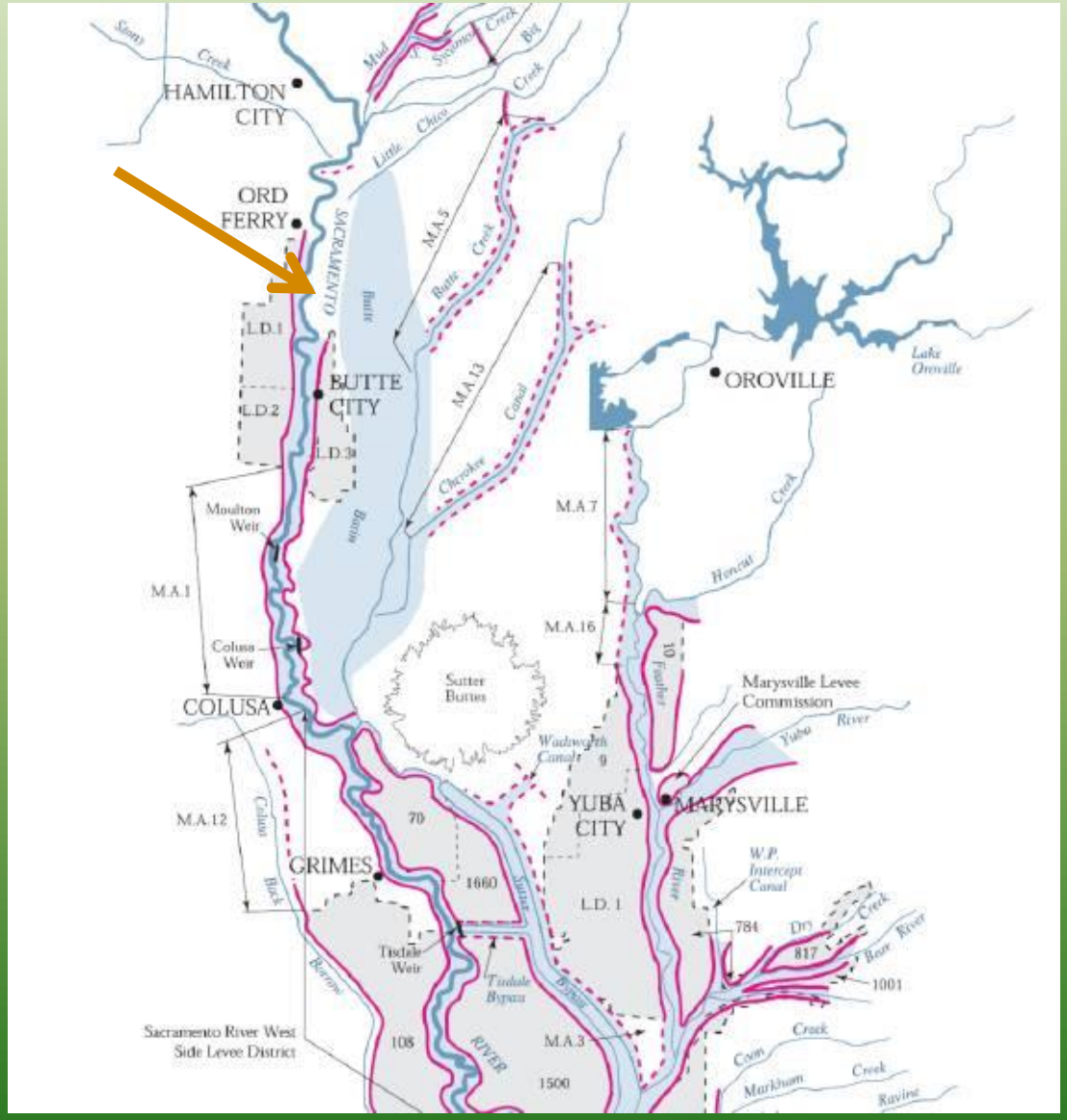
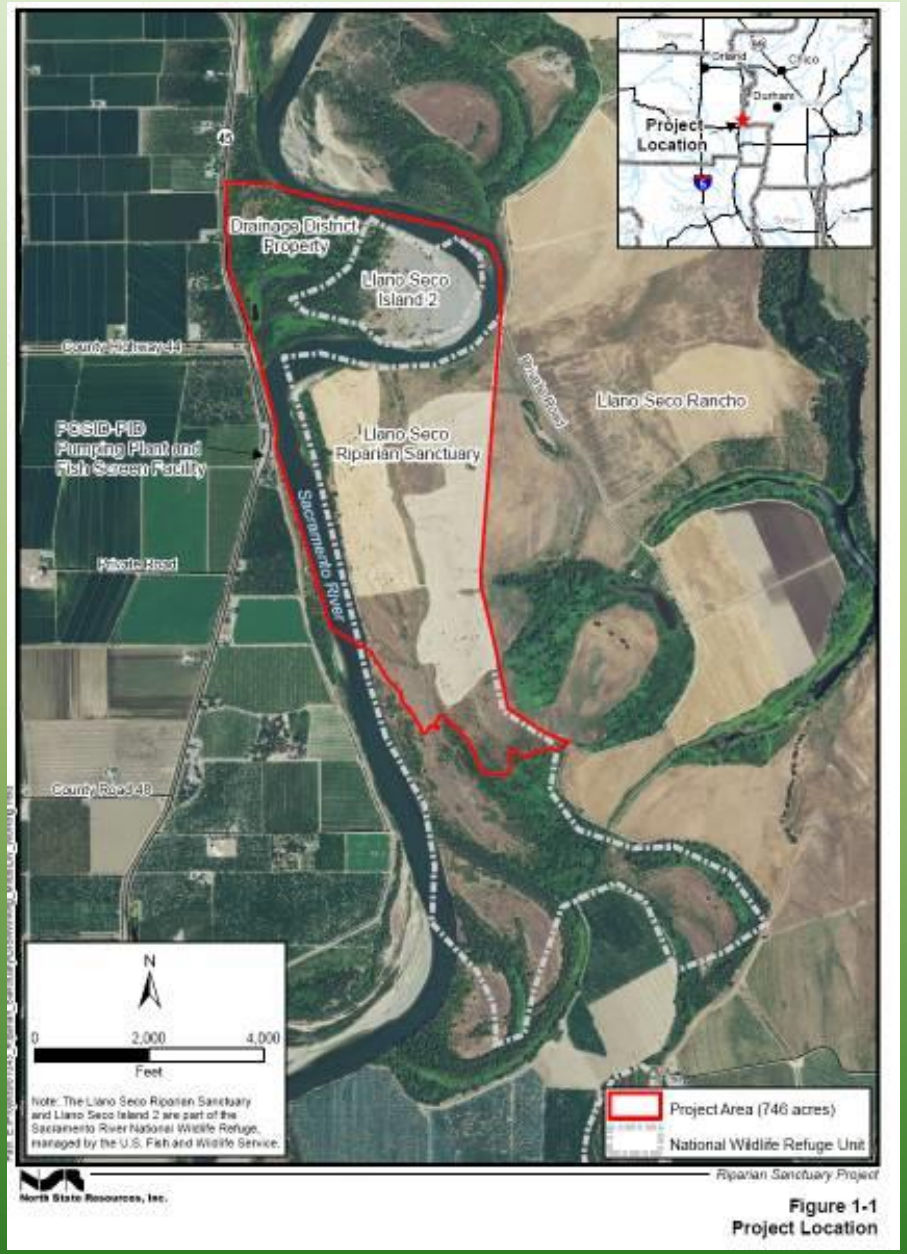


Figure 2
Aerial Photograph of
Llano Seco Riparian Restoration
PCGID-PID Pumping Plant
USFWS Riparian Sanctuary Unit
Project Area
USFWS Unit Boundary
Revetted Area

Butte Basin Overflow Area

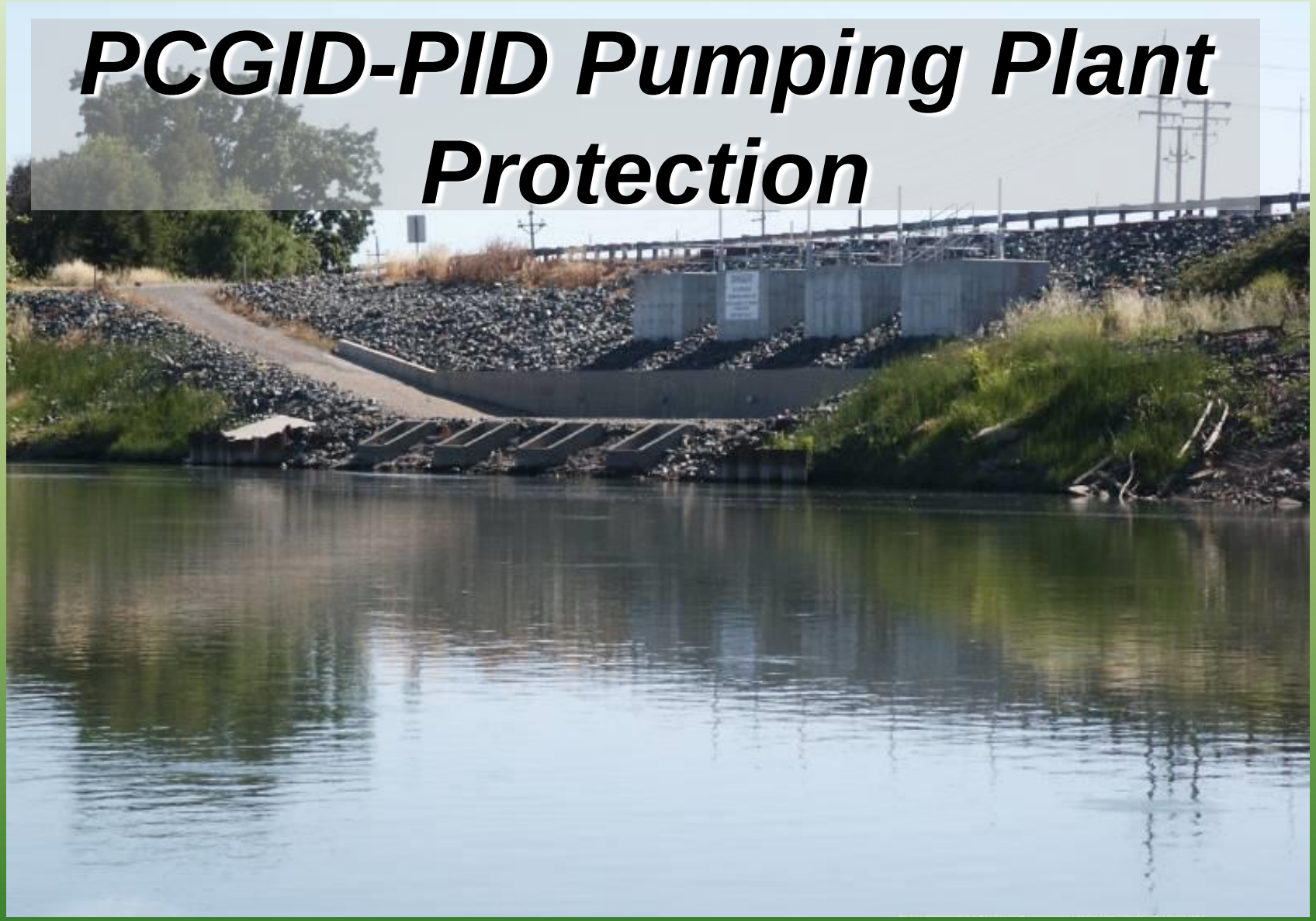




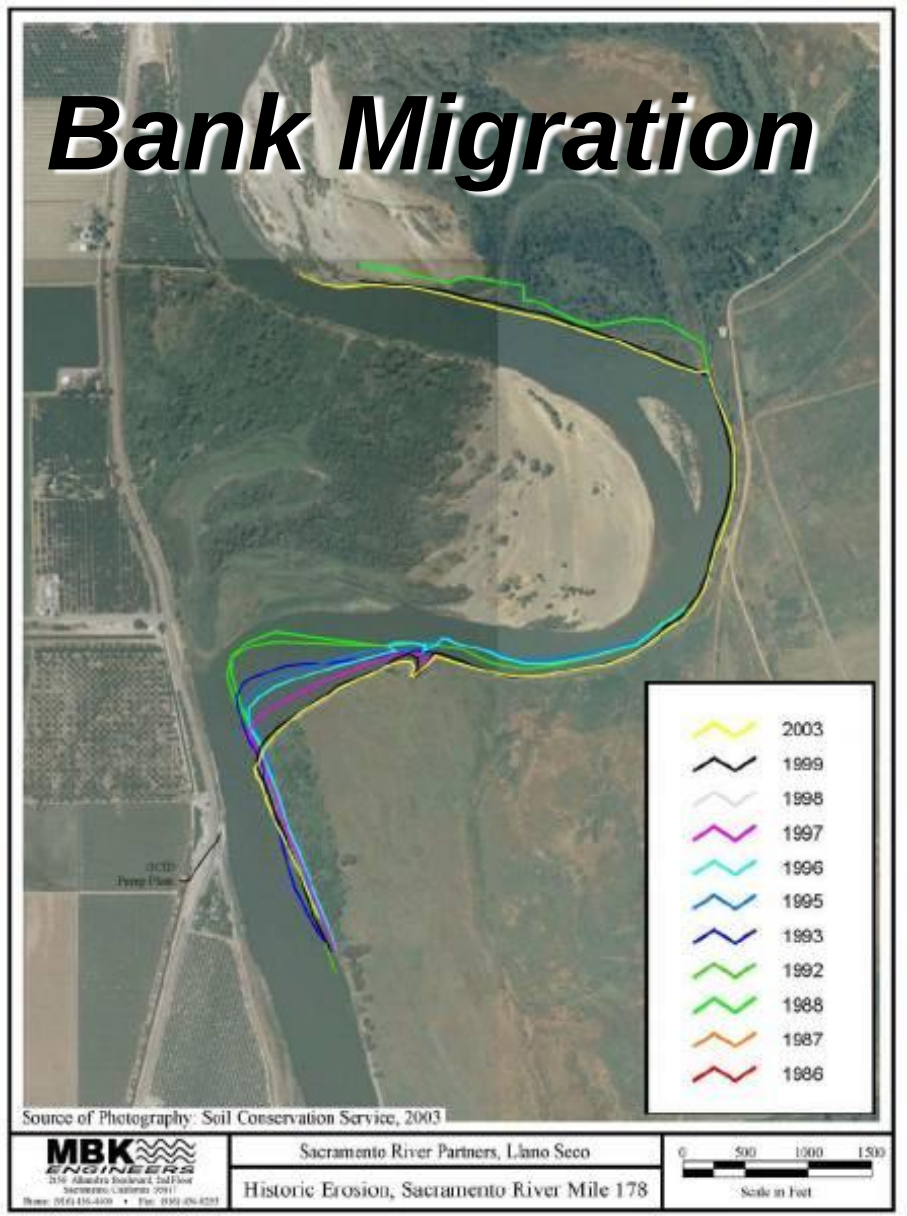
Land Ownership

Project lies within a 10-mile corridor that is mostly in public ownership.

PCGID-PID Pumping Plant Protection



Bank Migration



Riparian Sanctuary Habitat Quality

Project Objectives

Protect Pumping Plant and Fish Screen Efficiencies

- Maintain the angle of flow and velocity of the water passing across the pumping plant fish screen

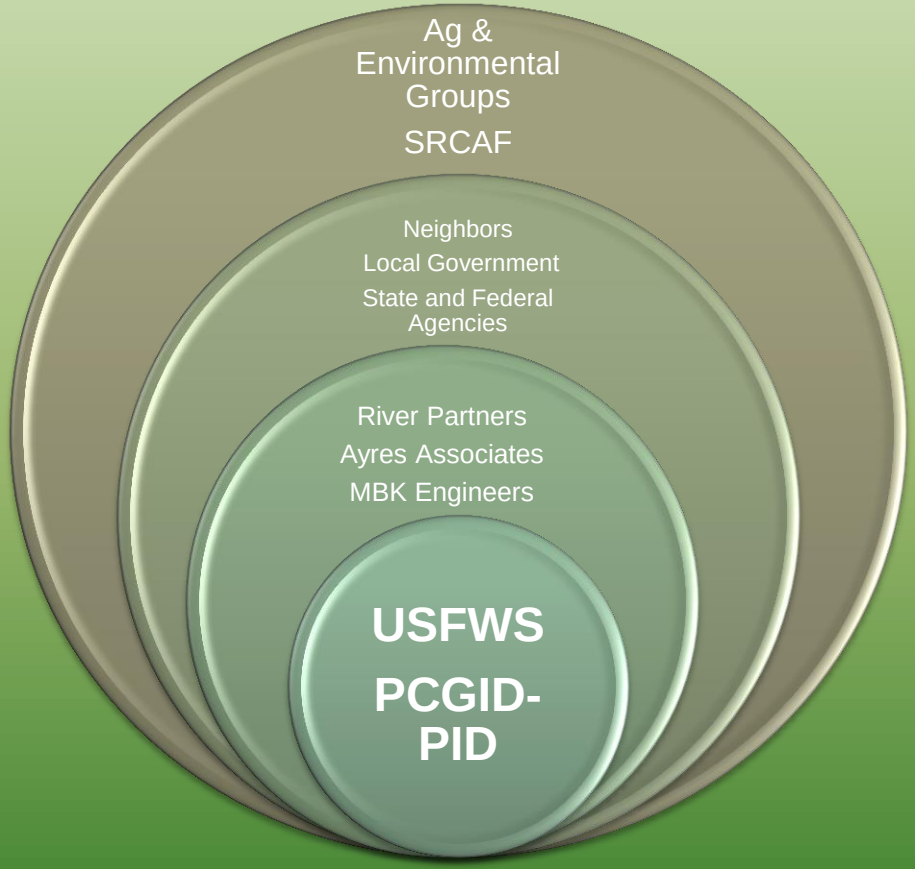
Allow Riparian Sanctuary to Meet Ecological Potential

- Contribute to species recovery
- Meet natural river processes objectives

Provide Data for Sound Floodplain Management Decisions

- Open, inclusive process

Partnerships



Importance to Communities

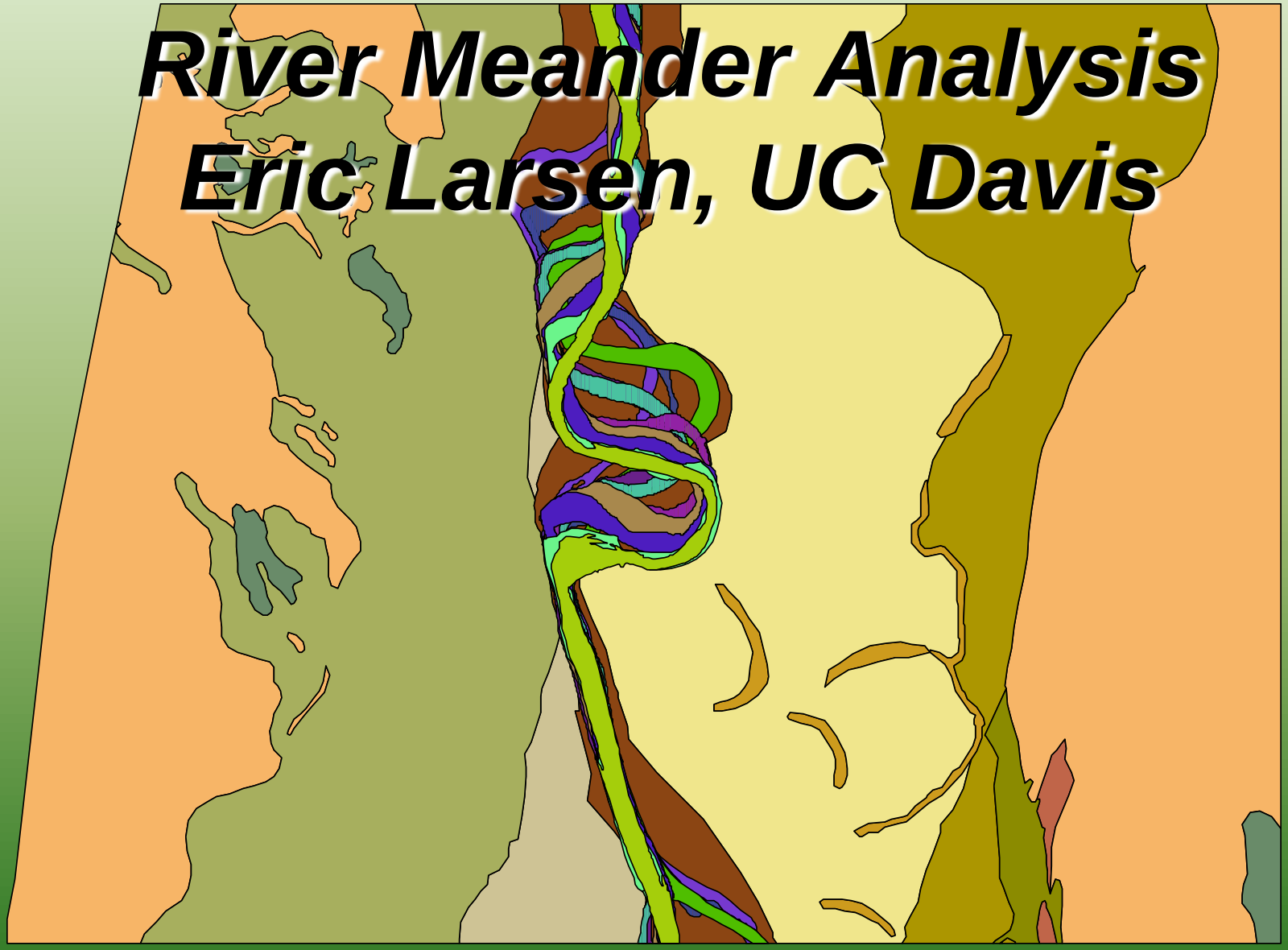
Maintain Flood Management Objectives

- Butte Basin serves as a significant flood relief to downstream communities.
- Ensure the flow split above the leveed sections, which direct flows in excess of 150,000 cfs into the Butte Basin.

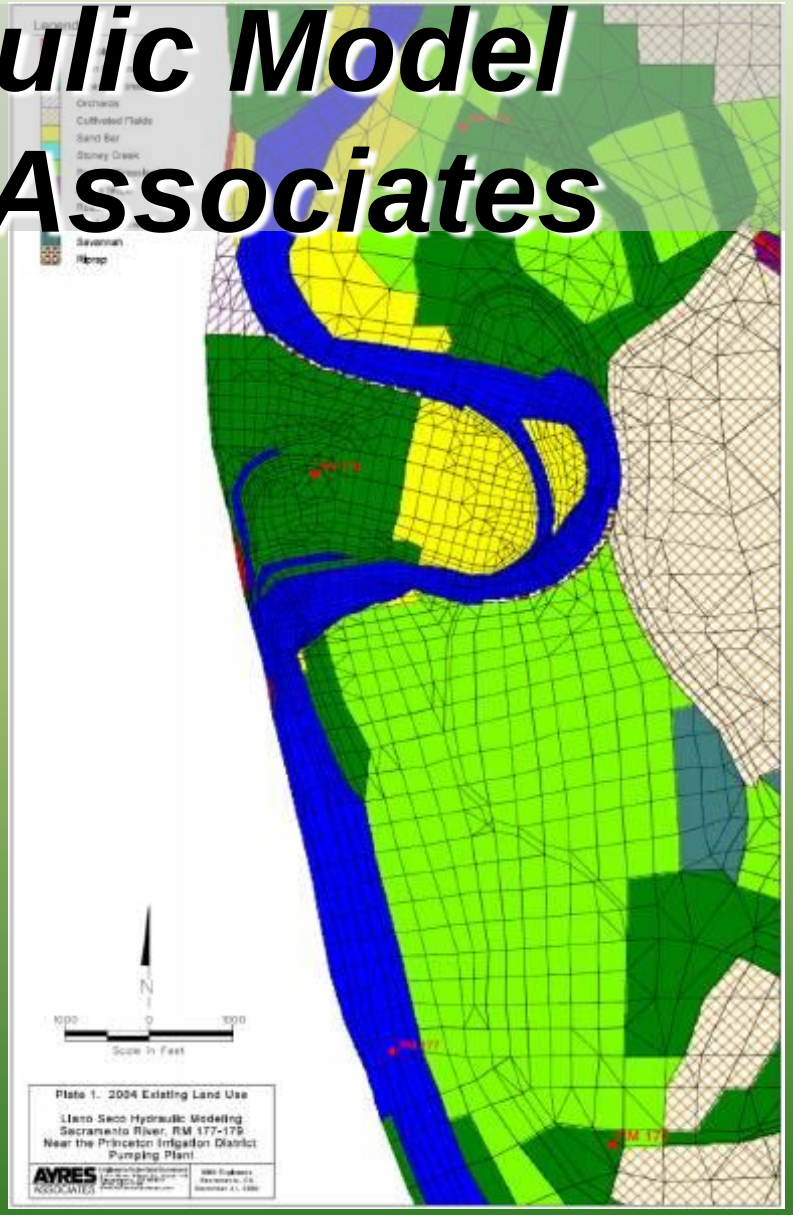
Continue Pumping Plant Operation

- PCGID-PID supplies water to 30,000 acres.
- Contributes to the economies of Butte and Glenn Counties.

River Meander Analysis
Eric Larsen, UC Davis



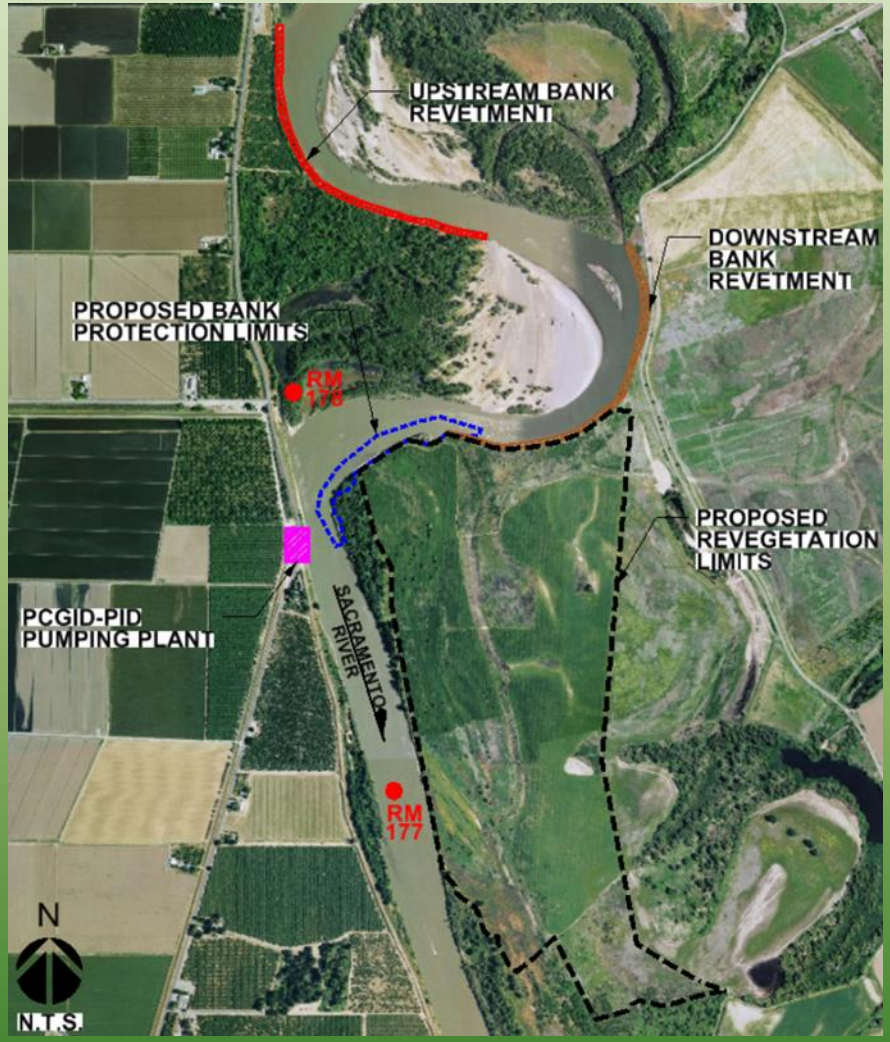
Hydraulic Model
Ayres Associates



Restoration Feasibility Study
River Partners

Creating Wildlife Habitat for the Benefit of People and the Environment

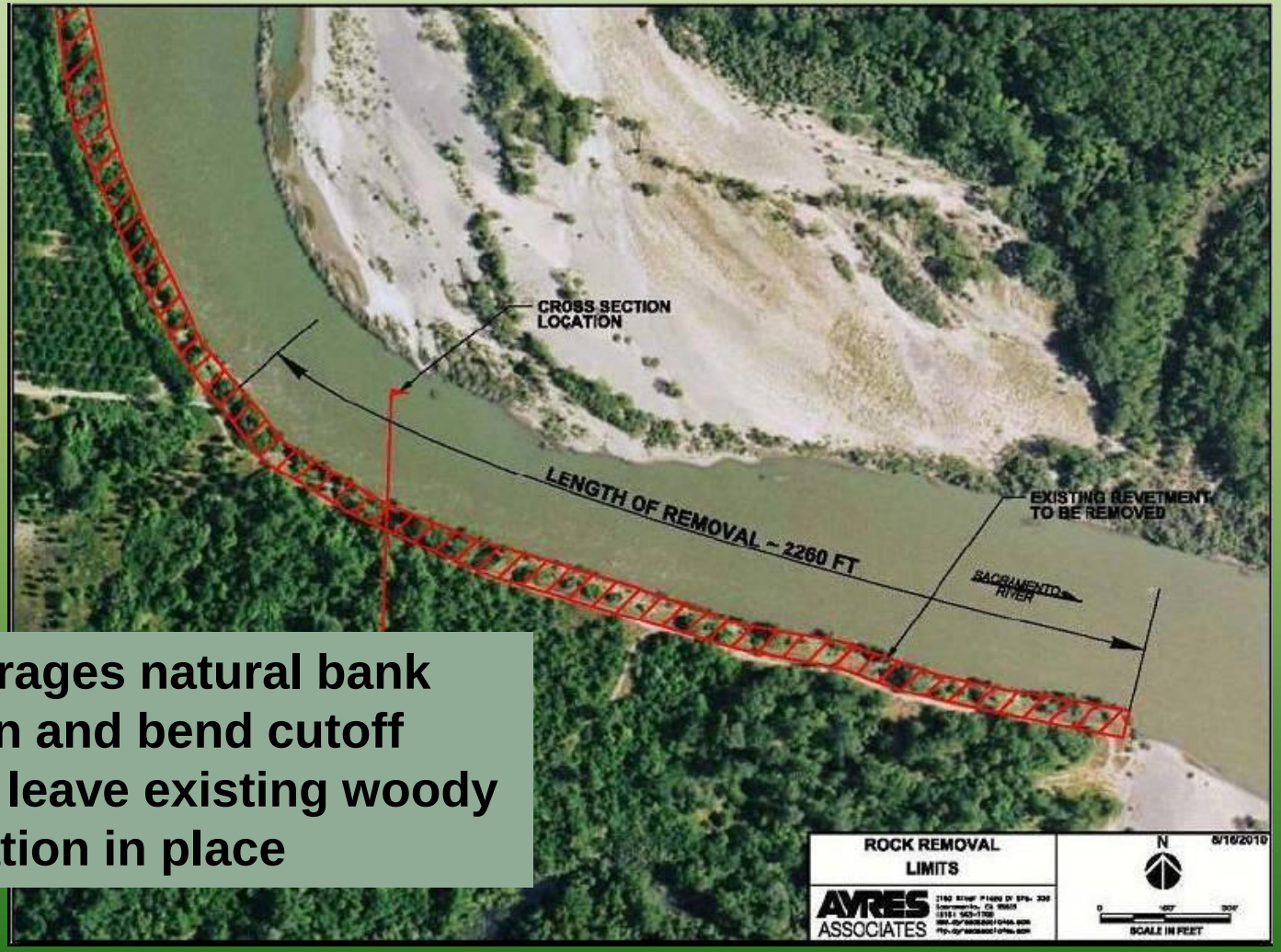
RIVER PARTNERS



Potential Solution

- Remove 2,260 feet of rock upstream
- Extend revetment 2,500 feet along bend
- Restore 400 acres of riparian habitat
- Allow river to cutoff

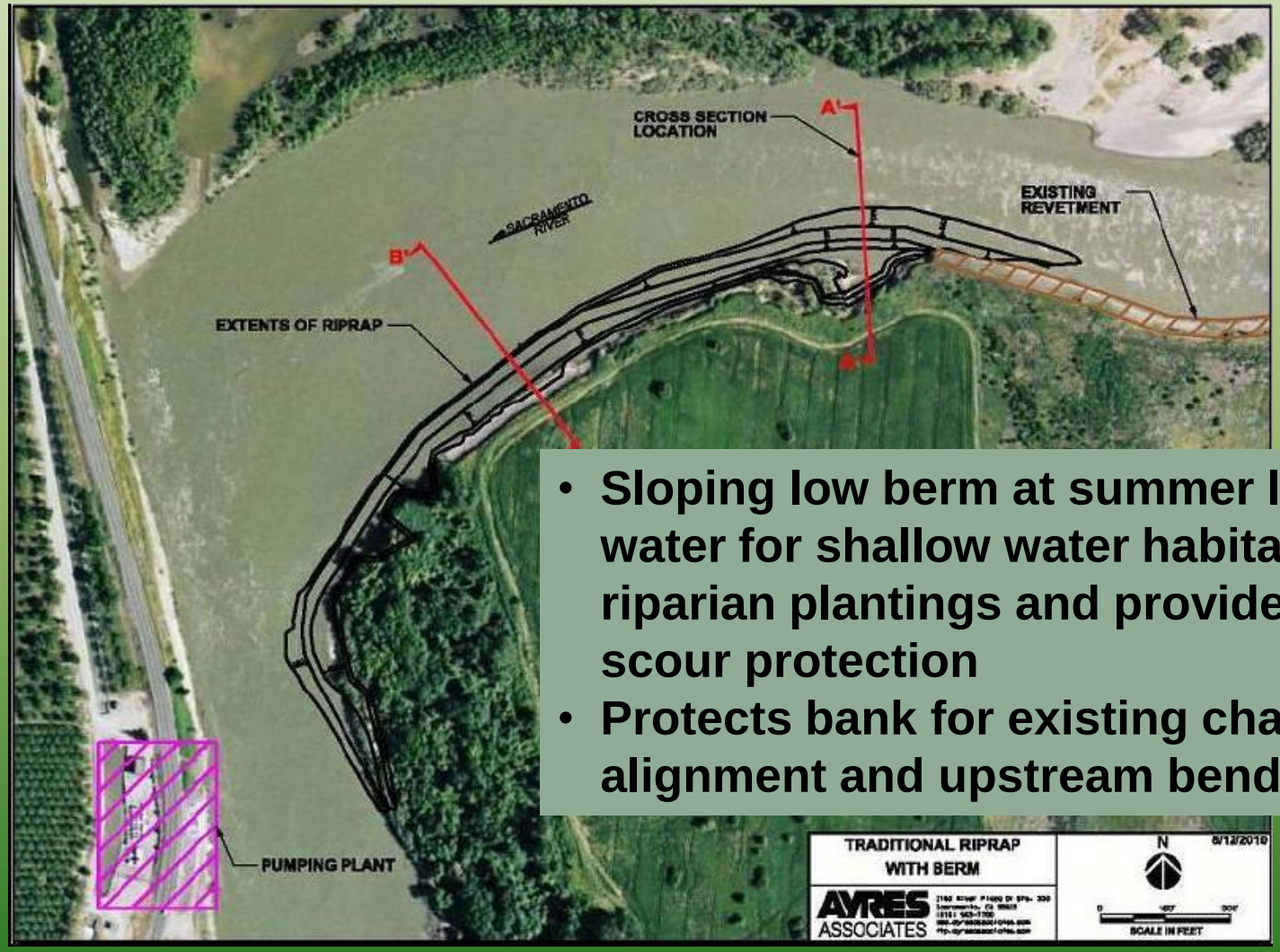
Riprap and Upstream Rock Removal



- **Encourages natural bank erosion and bend cutoff**
- **Would leave existing woody vegetation in place**

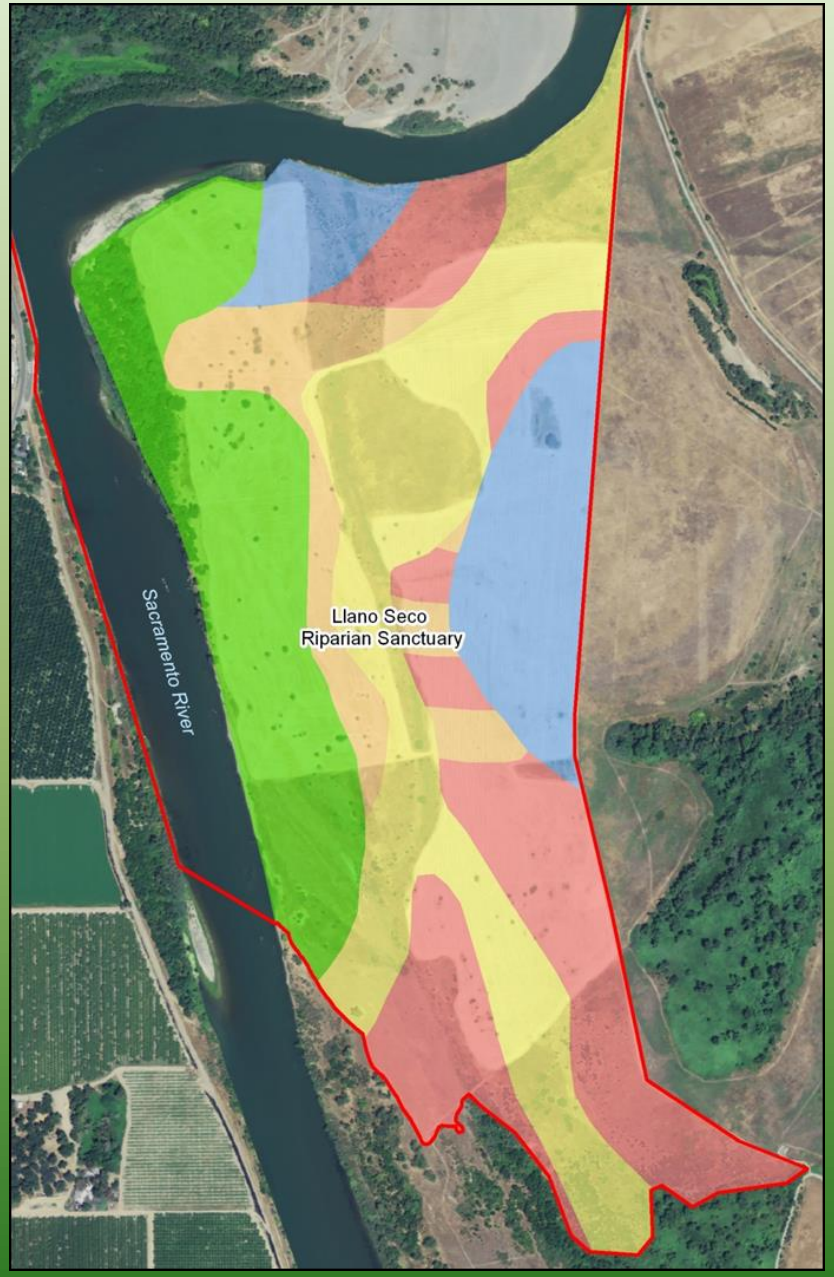

5.31.2004

Riprap Revetment with Low Berm



- **Sloping low berm at summer low water for shallow water habitat and riparian plantings and provides scour protection**
- **Protects bank for existing channel alignment and upstream bend cutoff**

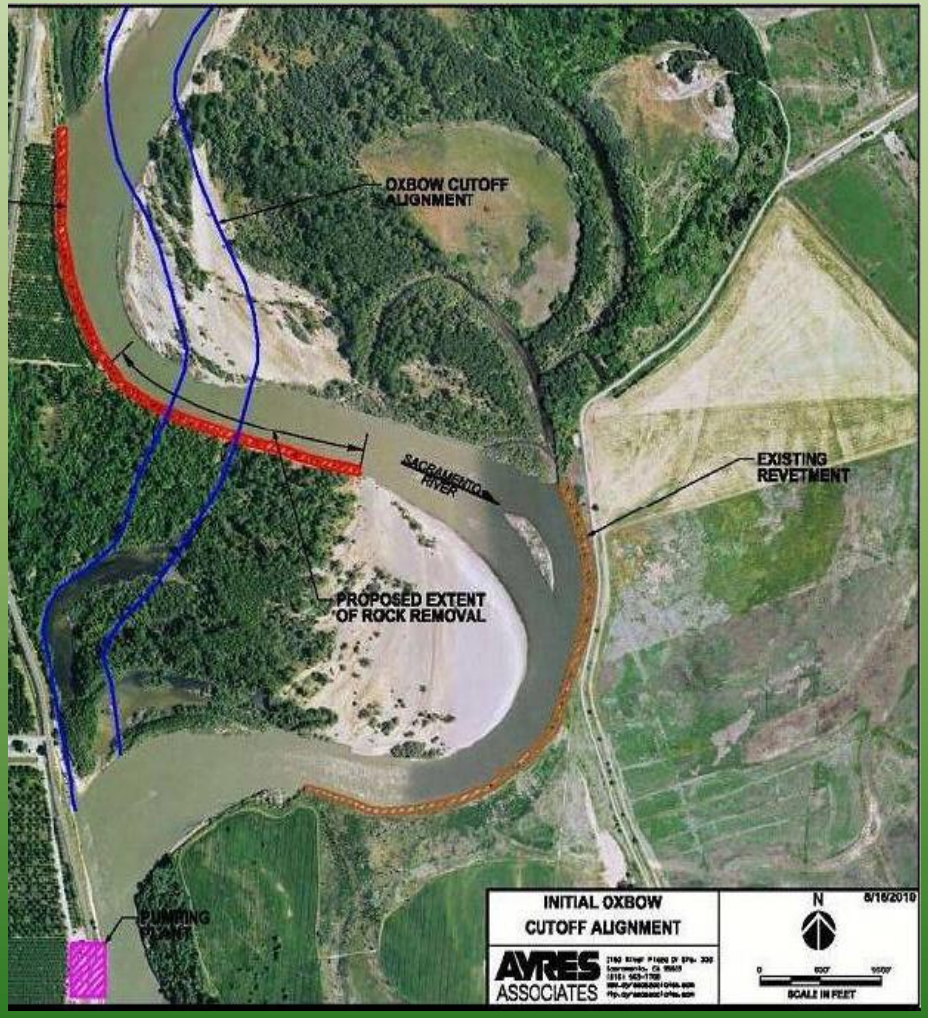
Site Specific Habitat Restoration



Restoration Design

- Great Valley Grassland
- Elderberry Savanna
- Valley Oak Savanna
- Mixed Riparian Forest
- Valley Oak Woodland

Potential Alignment of Oxbow Cutoff



Project Benefits

- Protect $11 Million investment
- Continue irrigation supply to 30,000 acres

Protect Pumping Plant Operations

- Cutoff channel
- River meander
- Oxbow formation

Restore Natural River Processes

- Oxbow habitat development
- Natural recruitment of riparian forests

Floodplain Building

- VELB
- Swainson's hawk
- Yellow-billed cuckoo
- Neo-tropical migratory birds

Species Recovery


Thank you!