

RECLAMATION

Managing Water in the West

2-Gates Fish Protection Demonstration Project

Informational Meeting



U.S. Department of the Interior
Bureau of Reclamation

Agenda

- **Welcome/Introduction** – Michelle Denning
 - 6:30-6:45 p.m.
- **Project Overview** – Mario Manzo & Fred Feyrer
 - 6:45-7:15 p.m.
- **Questions** – Michael Jackson & Michelle Denning
 - 7:15-8:25 p.m.
- **Closing**
 - 8:25-8:30 p.m.

RECLAMATION

2-Gates Fish Protection Demonstration Project Presentation Outline

Who

Why

What

Where

When

How

RECLAMATION

Why Reclamation?

- Reclamation manages, develops, and protects water and related resources in an environmentally and economically sound manner in the interest of the American public.
- Delta smelt populations are indicative of Delta health
- Factors contributing to population decline:
 - Environmental contaminants
 - Changes in food supply
 - Competition
 - Predation, and
 - Entrainment

RECLAMATION

Why Reclamation? (cont.)

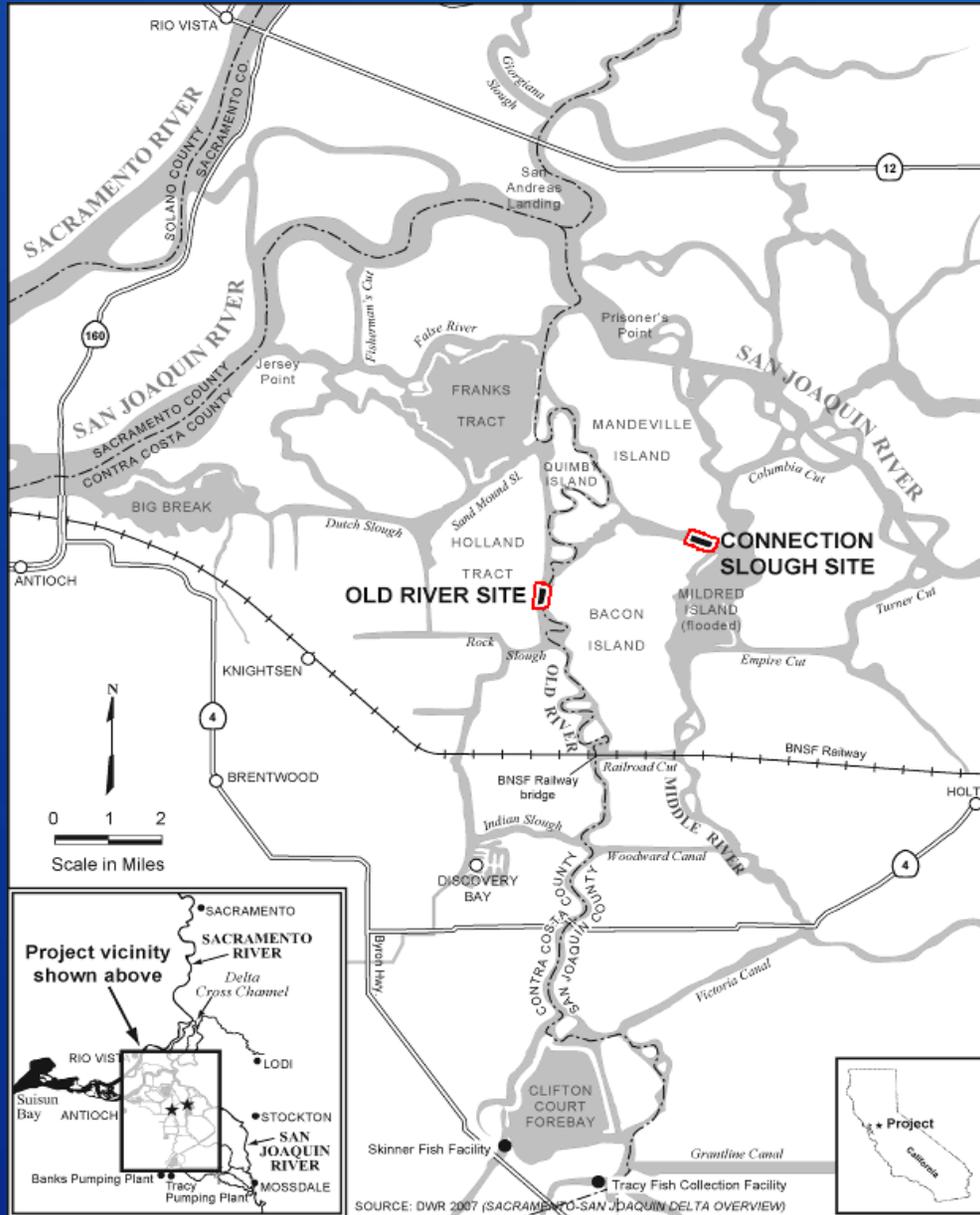
- Only one tool currently available to reduce delta smelt entrainment in the delta pumps
- Reclamation needs to find alternatives to protect the environment and meet contractual commitments

RECLAMATION

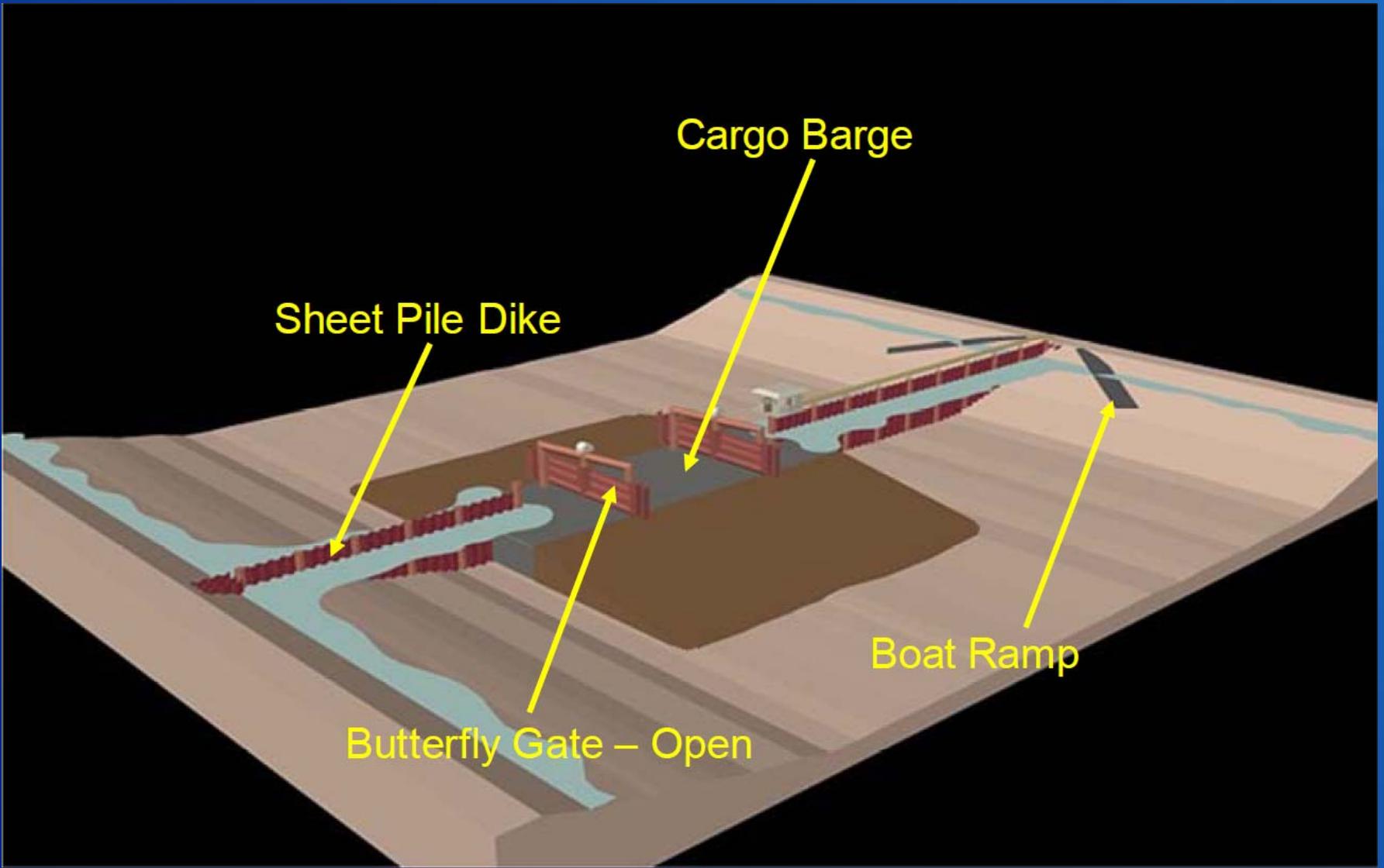
Who Proposed the Project?

- **A unique concept submitted to Reclamation by:**
 - San Luis & Delta-Mendota Water Authority
 - Metropolitan Water District of Southern California
- **Reclamation proposes a 5-year study of the concept**
- **Questions Reclamation proposes to answer include:**
 - What drives delta smelt migration?
 - Can we predict where delta smelt will migrate to?
 - Can we manage the factors affecting delta smelt entrainment?
 - Do the temporary gates protect delta smelt from entrainment?

RECLAMATION



RECLAMATION



Sheet Pile Dike

Cargo Barge

Boat Ramp

Butterfly Gate – Open

RECLAMATION

Two Gate Operations

- Winter operation to protect adult delta smelt
- Spring operation to protect juvenile delta smelt



RECLAMATION

Operation to Protect Adult Smelt

- **Modeling suggests that gate operations can effectively control turbidity.**
- **New delta smelt behavior model simulates adult delta smelt migration triggered by first flush in fall/winter.**
- **Gate operations intended to control turbidity and keep adult delta smelt north and west of the gates.**

Operation to Protect Juvenile Smelt

- **Modeling suggests juvenile smelt are likely to be entrained in the pumps if they enter the south delta.**
- **Modeling suggests gate operations could change hydrodynamics that affect juvenile smelt dispersal.**
- **Gate operations intended to transport juvenile delta smelt to areas less affected by pumping operations.**

Science Investigation and Monitoring Programs

- Extensive pre-project modeling
- Developing operation triggers
- Understanding effects on other species
- Adaptive management
- Live monitoring and data integration website
 - www.baydeltalive.com
- Interagency Ecological Program
- CALFED Science Program

RECLAMATION

Gate Operations

- December-Early March
 - Initiates when turbidity at Jersey Point reaches 12 NTU
 - Ceases when temperature at Jersey Point exceeds 12°C
 - Both gates closed 0.5 to 2.5 hours daily
- Early March-March 31
 - Initiates when temperature at Jersey Point exceeds 12°C or “spent” female delta smelt detected in fish sampling or salvage.
 - Old River Gate
 - Closed on flood tides (10 hours daily)
 - Open 15-20 minutes every 2 hours for boating, during daylight hours
 - Open on ebb and slack tides
 - Connection Slough Gate
 - Closed on flood and ebb tides (20 hours daily)
 - Open on slack tides

Gates Operations (cont.)

- April 1-May 31
 - Both gates open
- June
 - Old River Gate
 - Closed on flood tides (10 hours daily)
 - Open 15-20 minutes every 2 hours for boating, during daylight hours
 - Open on ebb and slack tides
 - Connection Slough Gate
 - Closed on flood and ebb tides (20 hours daily)
 - Open on slack tides
- July-November
 - Both gates open

Gate Design

Dimensions

Vessel Opening

Old River Gates: 75 feet

Connection Slough Gates: 60 feet

Depth

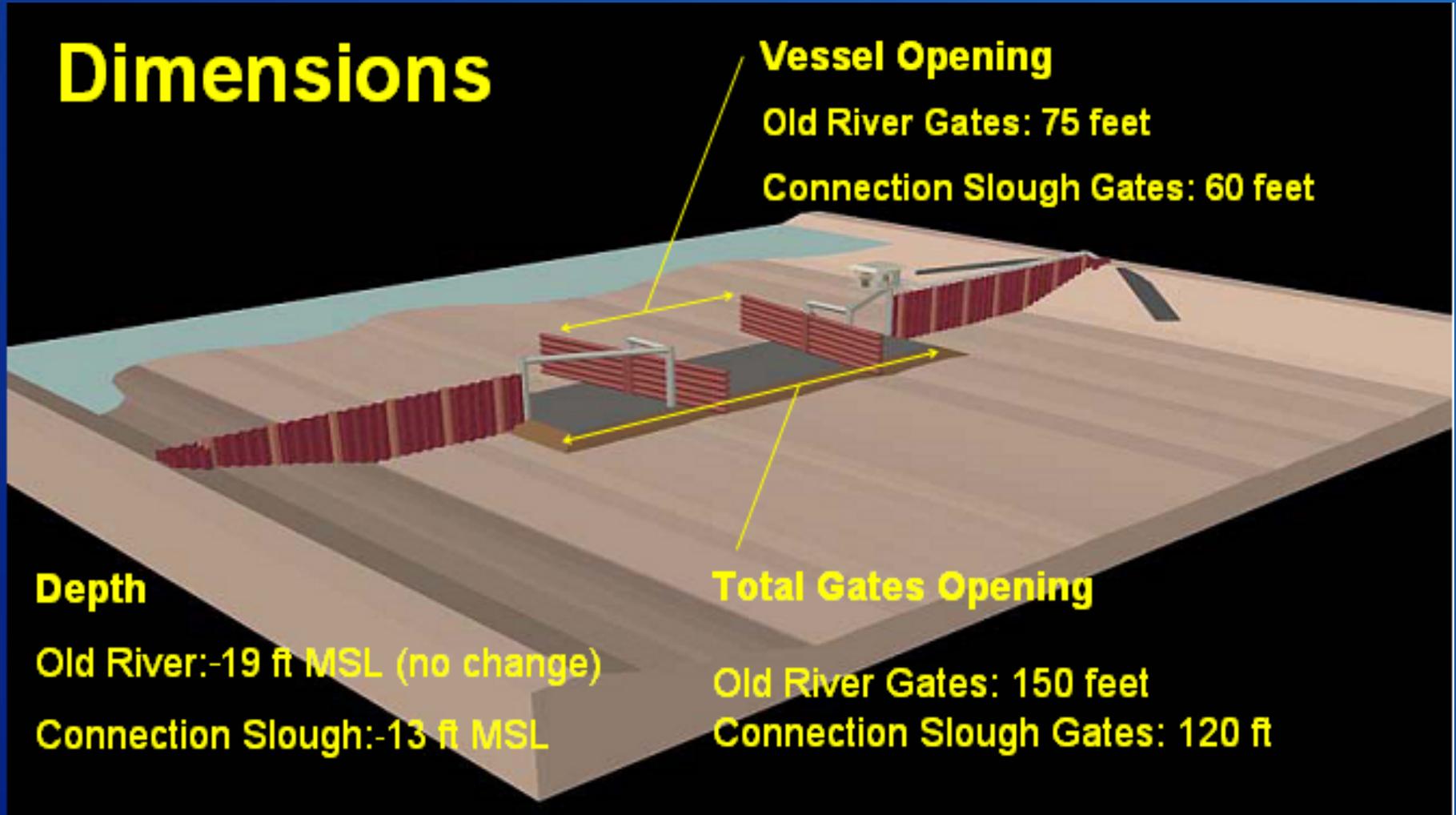
Old River: -19 ft MSL (no change)

Connection Slough: -13 ft MSL

Total Gates Opening

Old River Gates: 150 feet

Connection Slough Gates: 120 ft



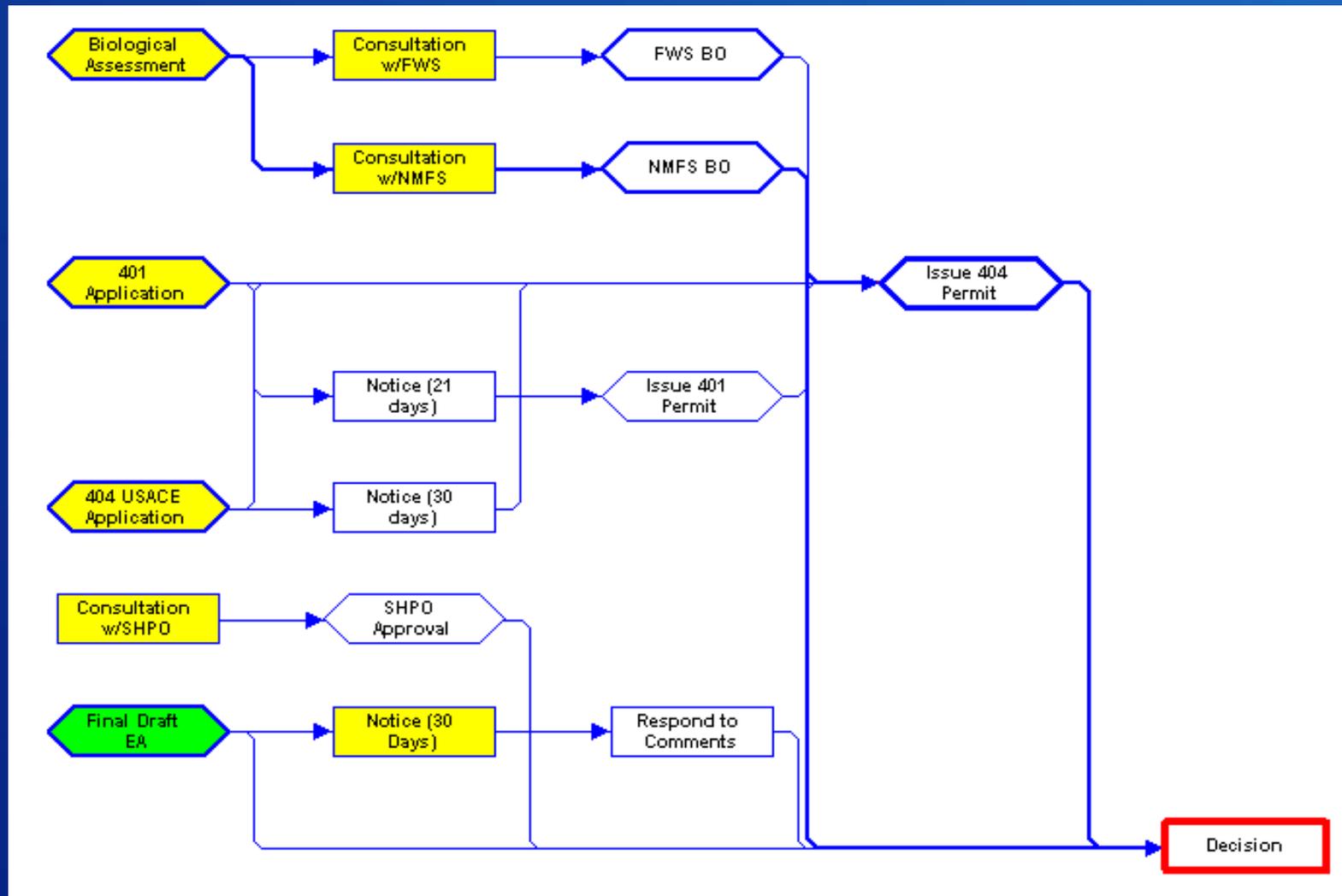
RECLAMATION

Addressing Boating Concerns

- **Boater Notification and Awareness:**
 - **Boater Outreach Program, Notices to Boaters, Signage, Toll-free number, Website, Gate operator with telephone and marine radio**
 - **Portage around gates available**
 - **Vessels less than 24 ft/10,000 pounds (excluding sailboats)**
 - **Gate operators with on-site trailer and 4x4 vehicle**
 - **The gates opened for emergency and commercial vessels**
 - **Old River**
 - **March/June: Gate open 15-20 minutes every 2 hours of closure, during daylight hours**
 - **Alternative Routes**

RECLAMATION

Compliance & Permitting Process



RECLAMATION

Proposed Construction Schedule

- **Offsite Fabrication**
 - December 2009 to August 2010 if all approvals received
 - Modify the barges to add gates
 - Sheet piles
- **In-Water Construction**
 - September 2010 to November 2010 if all approvals received
 - Install at Old River site (Sep-Oct. 2010)
 - Install at Connection Slough Site (Oct.-Nov. 2010)
- **Deconstruction & Restoration**
 - July 2015 removal
 - July 2016 complete site restoration

RECLAMATION

Project Cost Estimate

- **Construction** ~ 49 Million*
- **Additional Gages** ~ 1 million*
- **Operation & Maintenance** ~ 10 million*
- **Science Investigation Program** ~ 15 million
- **Deconstruction** ~ 5 million

- **Total** ~ 80 million

*Oct 2009 SLDMWA cost estimate

RECLAMATION

More Information Available

1. Website: www.usbr.gov/mp/2gates
2. To be added to the mailing list please sign in on the sign in sheet or contact:

Ms. Janet Sierzputowski
jsierzputowski@usbr.gov
916-978-5112

3. Mario Manzo, Project Manager
mmanzo@usbr.gov
916-978-5060

RECLAMATION

Environmental Assessment

- **Draft Released for comment October 19**
 - 30-day comment period closes November 17
 - **Mail comments to:**
 - Mario Manzo
 - 2800 Cottage Way, MP-730
 - Sacramento, CA 95825
 - **Email comments to:**
 - mmanzo@usbr.gov
 - **Fax comments to:**
 - 916-978-5094

RECLAMATION