

# TRACY FISH FACILITY IMPROVEMENT PROGRAM (TFFIP)

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PROGRAM MANAGER  
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BUREAU OF RECLAMATION  
TRACY OFFICE

# PUBLIC LAW 102-575

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## CENTRAL VALLEY PROJECT IMPROVEMENT ACT (CVPIA)

### SECTION 3406 (b) (4)

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“Requires the development and implementation of a program to mitigate for fishery impacts associated with operation of the Tracy Pumping Plant (TPP). Such program shall include, but is not limited to improvement or replacement of the fish screens and fish recovery facilities and practices associated with the TPP.”

# BACKGROUND ON EXISTING TRACY FISH COLLECTION FACILITY (TFCF)

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Constructed in mid-1950's, the TFCF does not meet current fish screen criteria. Changes since construction in pumping activities (i.e. “all year” vs. “part year”), debris loading, and additional species concerns all render the TFCF less effective for fish protection than originally designed.



# EXISTING TFCF FEATURES

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- ❖ Louver screens with approximately 1-inch spacing between slats
- ❖ Pump flow bypass to recessed holding tanks
- ❖ Haul fish all together in trucks to sites around Delta
- ❖ Overall approximately 50 to 70 percent efficiency screening fish

# EXISTING SITE



# TFCF IMPROVEMENTS UNDER TFFIP

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- ❖ Newer / better fish haul trucks
- ❖ New louver cleaner system (raking vs. lifting)
- ❖ Predator removal program implemented
- ❖ Installed instrumentation to improve efficiency of operation
- ❖ Coated collect tanks with smooth epoxy coating to reduce harm to fish

# TFFIP RESEARCH EFFORTS TO DATE

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Twenty reports published related to:

- Predation at TFCF
- Louver efficiencies
- Holding tank stress tests
- Biology and movement of entrained fish
- Egg / Larvae density studies
- Water quality monitoring

# TFFIP RESEARCH EFFORTS TO DATE (cont'd)

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- Mitten Crab impacts
  - Fish friendly pump test (some species)
- \* NOTE: Website available as of the 2<sup>nd</sup> quarter in 2003.

# CURRENT TFFIP RESEARCH EFFORTS

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- ❖ Fish friendly pump tests (additional species)
- ❖ Fish sorting and holding (Denver)
- ❖ Collecting tank swirl tests
- ❖ Debris handling
- ❖ Dual frequency sonar applications
- ❖ Bypass entry modifications (Denver)

# FUTURE TFFIP RESEARCH EFFORTS

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- ❖ Continue fish friendly pump experiments
- ❖ Continue debris management studies
- ❖ Recapture fish past secondary louver screens
- ❖ Modeling of Tracy Fish Test Facility (TFTF) (Denver)
- ❖ TFTF

# TFTF

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- ❖ Multi-Agency research facility to test new technologies for screening and salvaging fish, primarily in the south Delta
- ❖ CALFED Funded
- ❖ Bureau of Reclamation – Lead Agency
- ❖ Will be located adjacent to the TFCF on the north side of the Delta-Mendota Canal (Site A)

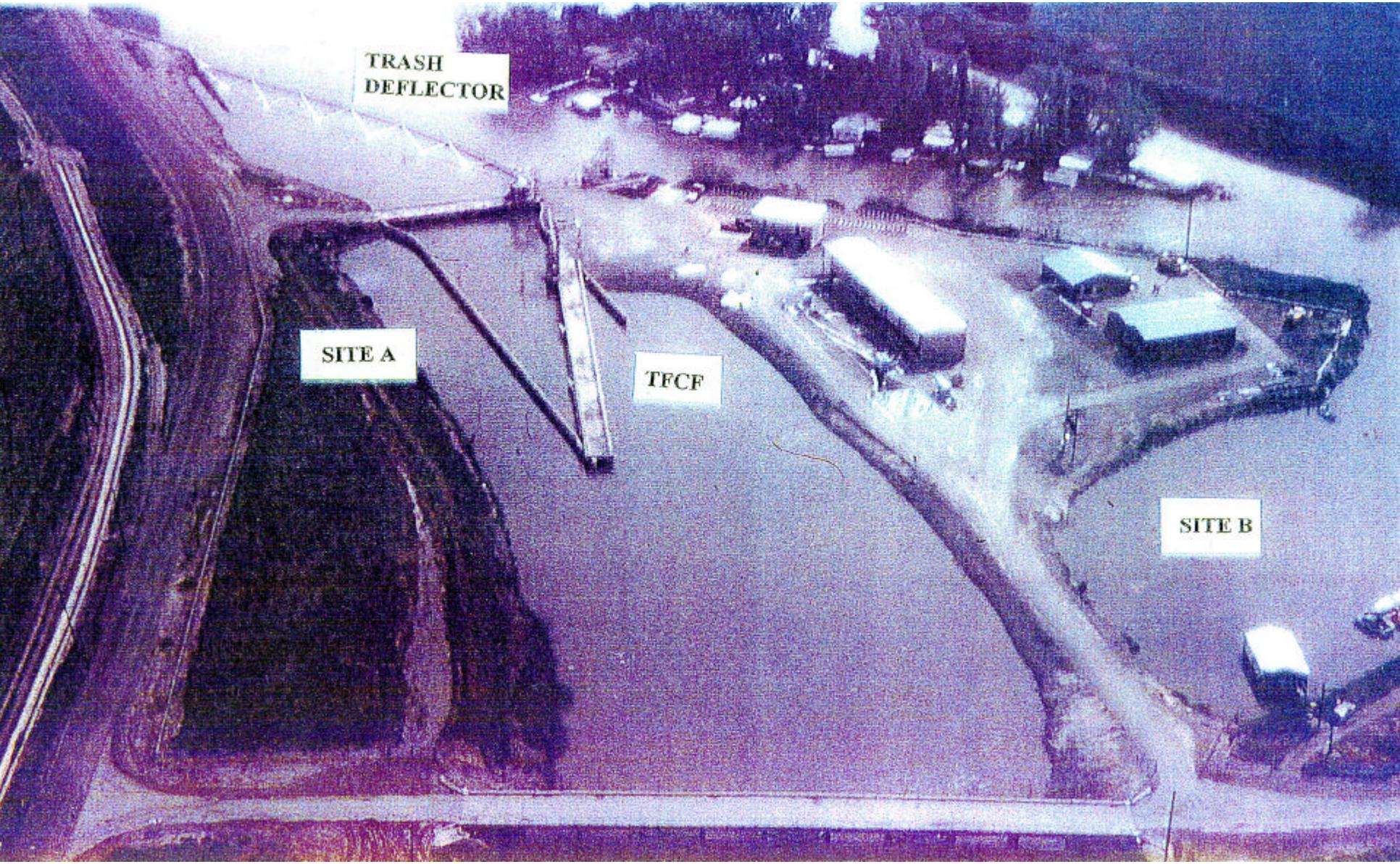
\*NOTE: Web page is [www.mp.usbr.gov/tftf](http://www.mp.usbr.gov/tftf)

# AGENCIES INVOLVED IN TFTF EFFORT

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- ❖ Bureau of Reclamation (BOR) - Lead
- ❖ California Department Of Fish And Game (DFG)
- ❖ California Department Of Water Resources (DWR)
- ❖ National Marine Fishery Service (NMFS)
- ❖ Fish And Wildlife Service (FWS)
- ❖ San Luis & Delta-Mendota Water Authority (SLDMWA)
- ❖ CALFED

# AERIAL VIEW



TRASH  
DEFLECTOR

SITE A

TFCF

SITE B

# OVERALL PROJECT APPROACH (IN GENERAL)

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- ❖ Complete model studies in Denver prior to final design
- ❖ Test as a complete system.
- ❖ Use project information towards replacement/construction of fish screens at both TFCE and Clifton Court Forebay.

# WHAT WE EXPECT TO LEARN

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- ❖ How to separate debris from water and fish effectively
- ❖ How to separate fish, in bypass flow, from main diversion flow more effectively and efficiently (i.e. better screening techniques)
- ❖ How to separate large predator fish from smaller prey fish effectively

# WHAT WE EXPECT TO LEARN (cont'd)

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- ❖ Effectiveness of fish friendly lift pumps for different species of fish
- ❖ How to keep fish moving through system
- ❖ How to improve fish transportation and release methods

# SCHEDULE (Tentative)

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- ❖ Award contract - 2004
- ❖ Complete construction - 2006
- ❖ One year shakedown and two year initial test plan addressing more sensitive species (i.e. Delta Smelt, Salmon, etc.)
- ❖ 7-8 years of continuous testing after initial three years

# TFTF ESTIMATED COSTS

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(Unknown at this time.)

# COSTS TO DATE

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- ❖ Approximately \$17 million has been spent on TFTF to date, with the bulk of the expenditures applied to the following:
- ❖ Design and review
- ❖ Program management and implementation
- ❖ Environmental Documentation
- ❖ Research
- ❖ Construction Management and support
- ❖ Preliminary Contracts (Traffic Study, etc.)