

# Red Bluff Fish Passage Improvement Project

## Construction Progress Update



# Project Overview

- The prime objective of the construction is to construct a Pumping Plant that will initially provide 2,000 cfs flow to the Tehama Colusa Canal and the Corning Canal no later than May, 2012.
- The Pumping Plant will be able to be expanded to a full 11 pumps and 2,500 cfs flow in the future.
- Primary Components of the project include:
  - Pumping Plant with 11 bays,
  - 9 Pumps and Motors
  - Excavation of the Forebay
  - A Fish Screen (1,118 ft in length)
  - Canals and a Siphon under nearby Red Bank Creek
  - Bridge over Red Bank Creek for service access
  - Closure of a Landfill

# West Bay Builders

- West Bay Builders were awarded a \$21 M contract on December 19<sup>th</sup>, 2009 to construct the Bridge, Canals and Siphon.
- Their project also includes the clean closure of Parcel 'A' of the Pactiv Landfill.
- Current Status:
  - Downstream Canal 40% complete
  - Bridge 25-30% complete
  - Siphon 50% complete
  - Landfill excavated and partially backfilled
  - Upstream canal not yet started
  - Slightly behind schedule

# West Bay Builders continued

- Challenges:
  - Late arrival of Clean Closure Plan
    - Forced Contractor to reschedule their order of work
  - Construction of Siphon
    - Heavy rains in November/December flooded work area
    - Fish removal & disregard by onsite crews for permit requirements
- End Summary
  - West Bay will likely complete the project on time or close enough to not effect water delivery in May, 2012

# Before Construction Began – West Bay Construction Area



# Construction Progress by West Bay in April 2010



# Construction Progress by West Bay in May 2010



# Construction Progress by West Bay in June 2010



# Construction Progress by West Bay in July 2010



# West Bay Canal & Siphon in August 2010



## West Bay Landfill in August 2010



# West Bay Siphon & Canal in September 2010



## West Bay Landfill in September 2010



# West Bay Pumping Concrete for Siphon, Oct 2010



## West Bay Siphon & Canal October 2010



## West Bay Landfill in October 2010



## West Bay Landfill in November 2010



# West Bay pouring concrete for Siphon, Nov 2010



## West Bay Siphon flooded & Landfill, Dec 2010



# West Bay Canal in December 2010



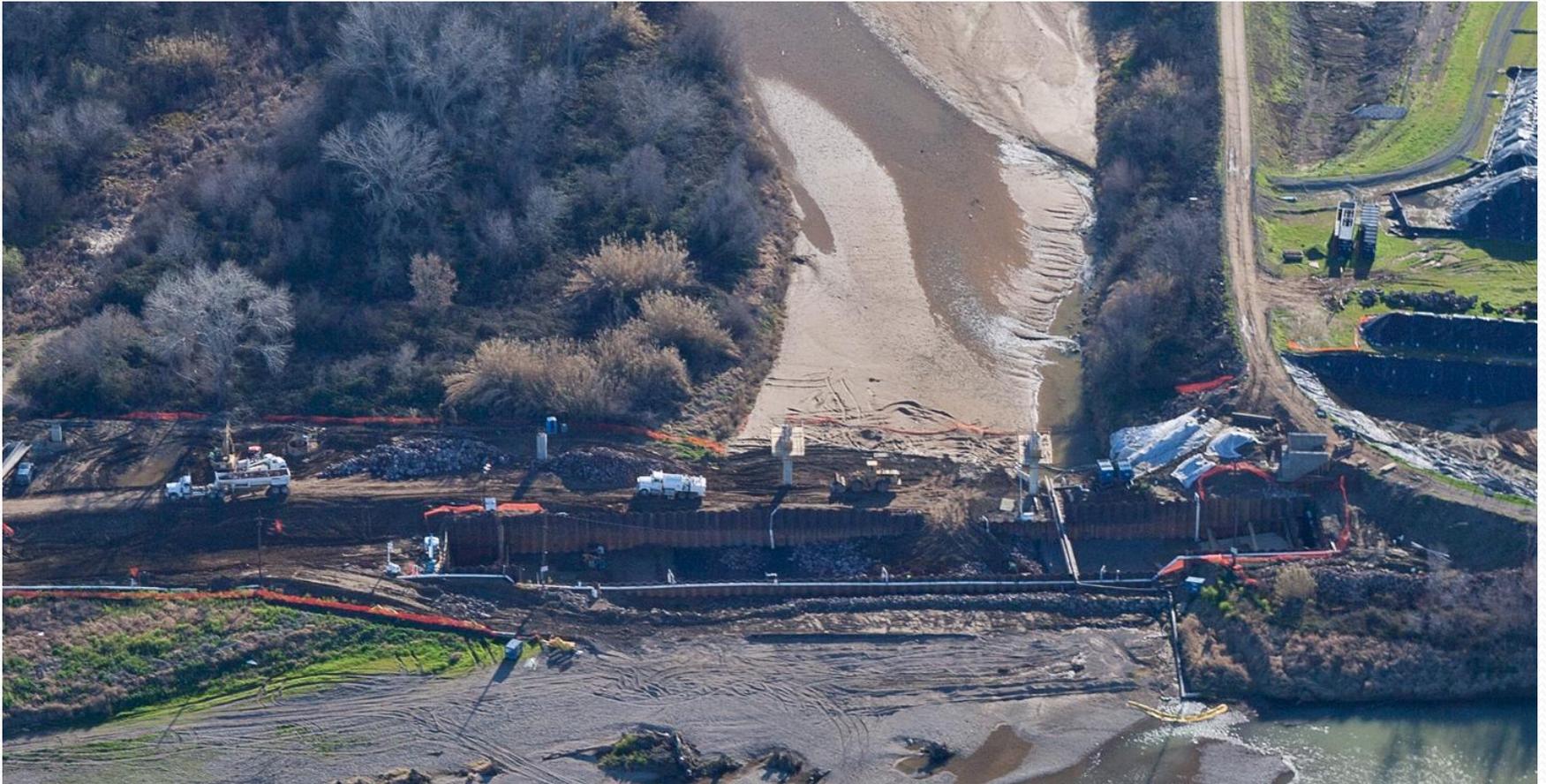
## West Bay Bridge Piers in December 2010



# West Bay Canal in January 2011



# West Bay Siphon in January 2011



# West Bay Landfill in January 2011



# Moving Waters Industries

- Moving Waters Industries (MWI) were awarded a \$6.9 M contract to supply the pumps and motors for this project on January 16<sup>th</sup>, 2010.
- Primary Components of MWI Contract:
  - 2 x 131.25 cfs pumps and associated motors
  - 7 x 262.5 cfs pumps and associated motors
  - Installation assistance
- Status:
  - Initial testing March 25<sup>th</sup>, is slightly behind schedule but not on critical path for water delivery in May, 2012.

# Balfour-Beatty Inc.

- Balfour-Beatty was awarded a \$67 M contract on May 11<sup>th</sup>, 2010 to construct the Fish Screen and Pumping Plant.
- Their project also includes excavation of the Forebay, installation of the Switchyard, clean closure of Parcel 'B' of the Pactiv Landfill and now clean closure of the former GENIII property.
- Current Status:
  - Cofferdam for Fish Screen completed, Fish Screen foundation in progress
  - Forebay excavation 50% complete
  - Pumping Plant foundation excavation 60%
  - Switchyard excavation 90%

# Balfour-Beatty Inc. continued

- Challenges:
  - Changed Conditions
    - RWQCB dictating a clean closure of the former GENIII property based on materials found there.
  - Minor weather delays
  - Fish removal
    - Between the West Bay contract and Balfour Beatty contract over 2700 fish were removed from the various structures.
- End Summary
  - Balfour-Beatty is on track to deliver water in May, 2012.

# Balfour-Beatty Construction Area



## Balfour-Beatty before Construction



## Balfour-Beatty Mobilizing in June 2011



# Balfour-Beatty Construction Site in July 2011



# Balfour-Beatty Stockpiles in August 2011



# Balfour-Beatty Switchyard & Pumping Plant, Aug 2011



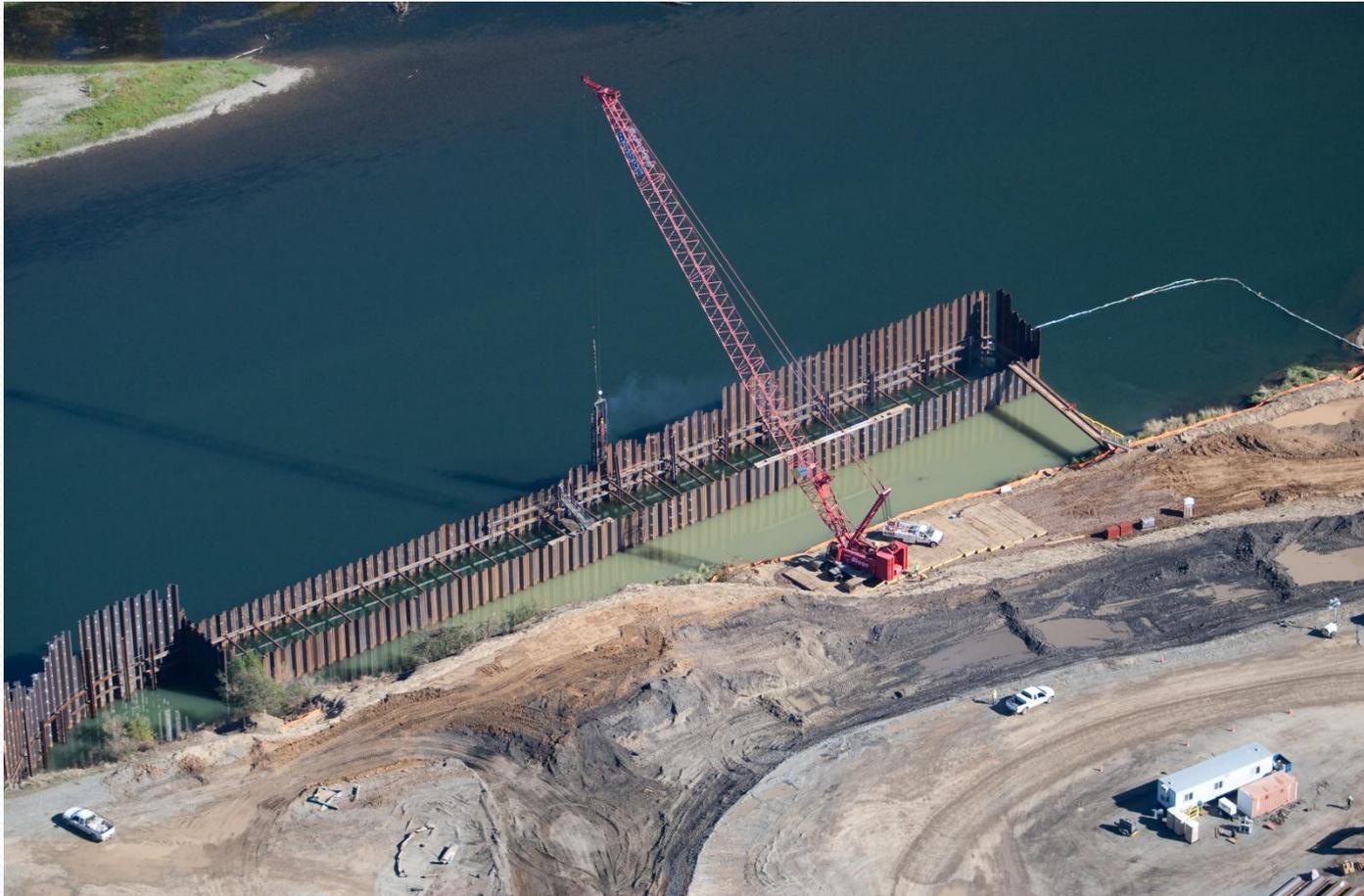
# Balfour-Beatty driving piles for Fish Screen Cofferddam, Sept 2010



# Balfour-Beatty Construction Site in September 2010



## Balfour-Beatty Upstream Cofferdam, Oct 2010



# Balfour-Beatty Pumping Plant & Switchyard Excavation, October 2010



# Balfour-Beatty downstream Cofferdam and Pumping Plant, Forebay & Switchyard excavation, Nov 2010



# Balfour-Beatty Construction Site in November 2010



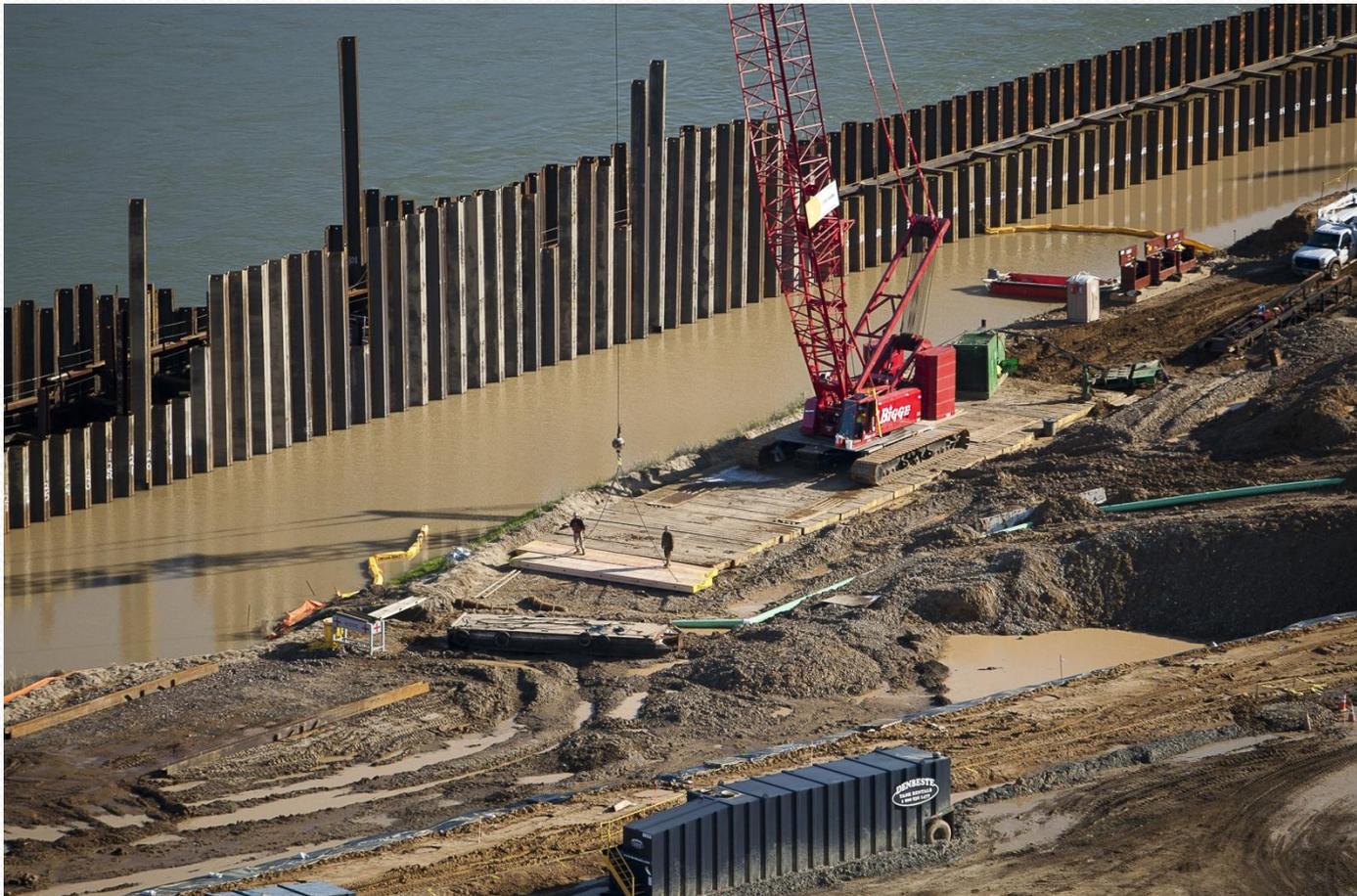
# Balfour-Beatty Construction Site in December 2010



# Balfour-Beatty Pumping Plant excavation, Dec 2010



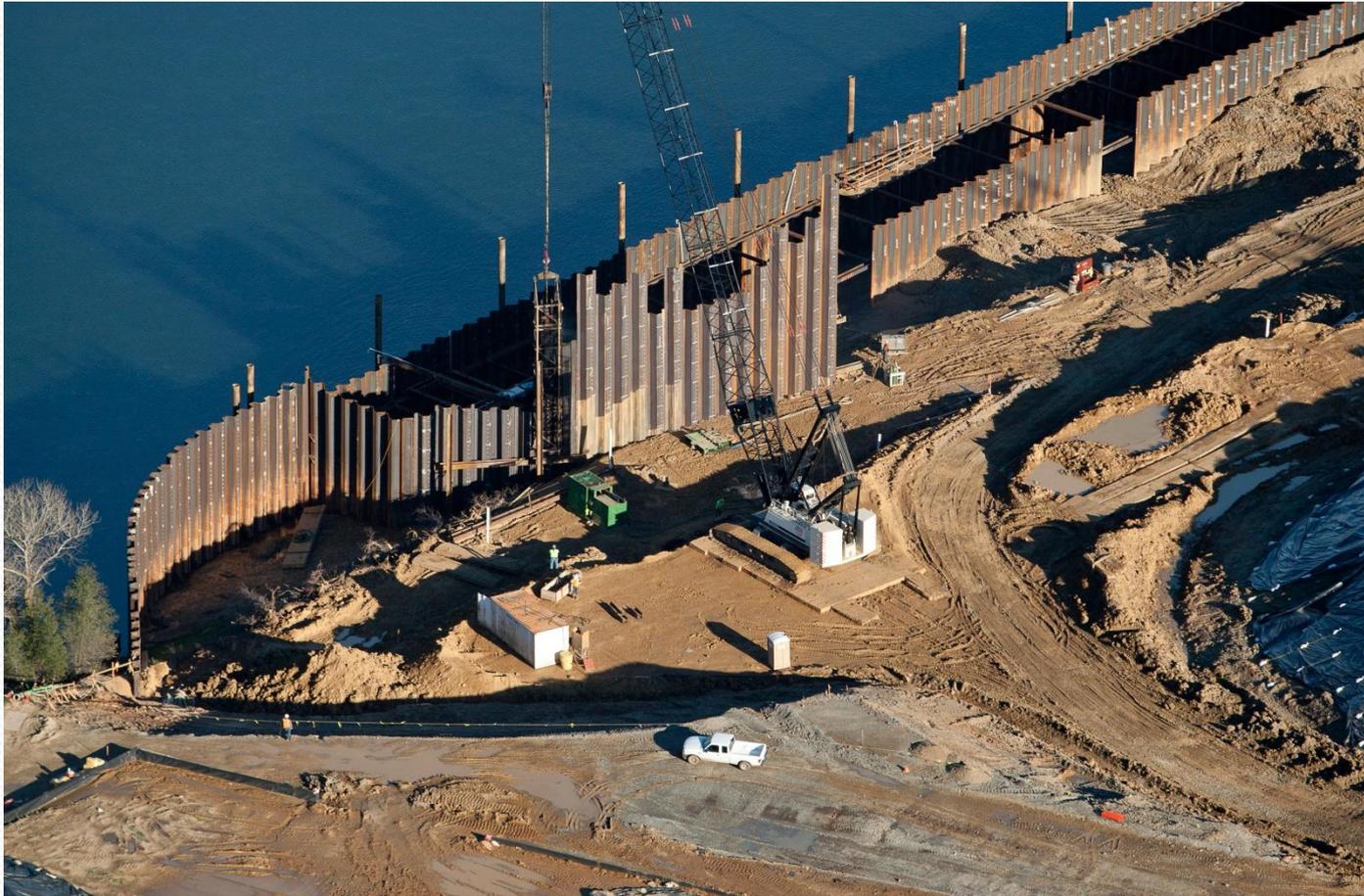
# Balfour-Beatty Forebay & Cofferdam for Fish Screen in December 2010



# Balfour-Beatty Pumping Plant excavation, Jan 2011



# Balfour-Beatty upstream end of Fish Screen, Jan 2011



# Balfour-Beatty Fish Screen & Forebay, Jan 2011



# Final Product

