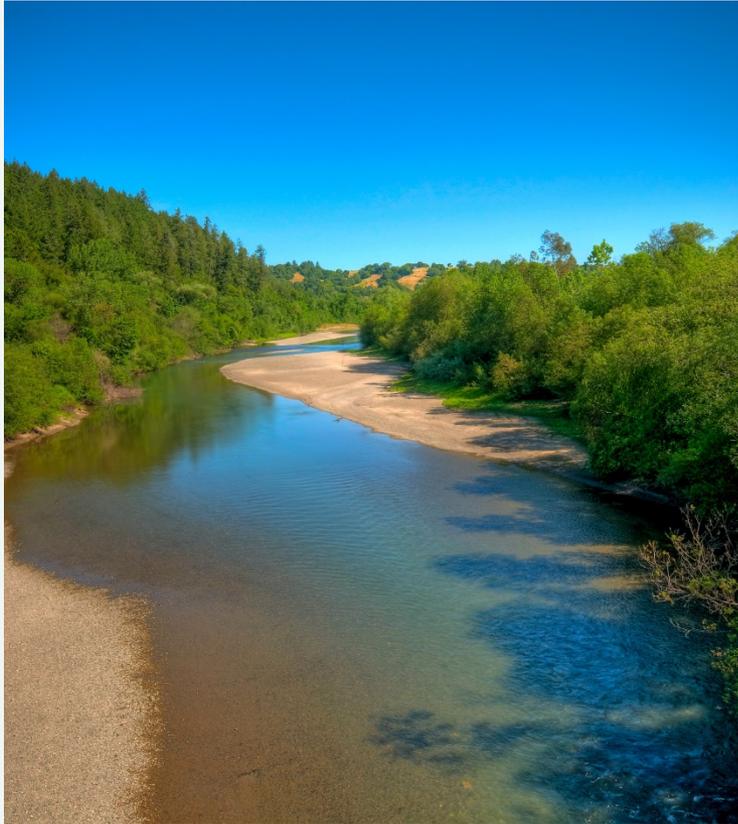


Year 6 Major Focus



Pam Jeane
Asst General Manager
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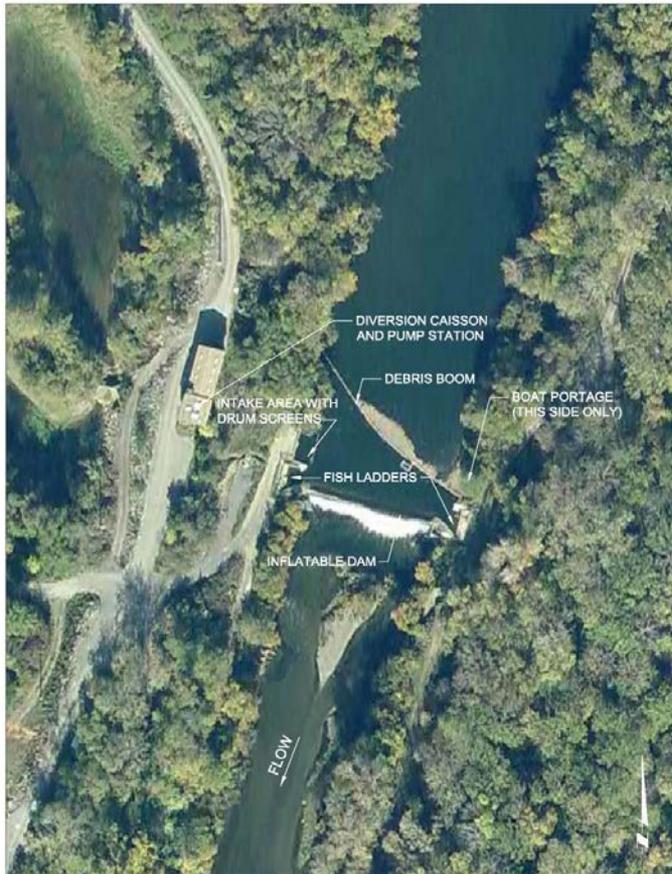


Year 6 Major Focus

- Overview
- Final Dry Creek Tributary Project
- Temporary Urgency Change Petition
- Fish Flow draft Environmental Impact Report
- Fish Screen and Ladder Replacement



Mirabel Fish Screen & Ladder Replacement PPFC Update



Steve Koldis

Water Agency Engineer

Steve.koldis@scwa.ca.gov



- Status
- Background
- Design
- Challenges
- Timing

MIRABEL FISH SCREEN AND FISH LADDER REPLACEMENT
SONOMA COUNTY WATER AGENCY

HDR
ASMEC
DESIGN CENTER

SCHEME 1B



DESIGN FEATURES INCLUDED		SCHEME 1
1	Ground Improvements for seismic and liquefaction	X
2	Fish Screen and Ladder	X
3	Drive for maintenance vehicles	X
4	Pad for code required portable restrooms	X
5	Viewing Chamber	X
6	Handicapped Ramp from top to Viewing Chamber	
7	Handicapped van parking above	
8	Handicapped van parking below	X
9	Stairway from top to Viewing Chamber	X
10	Fabric structure and viewing deck	

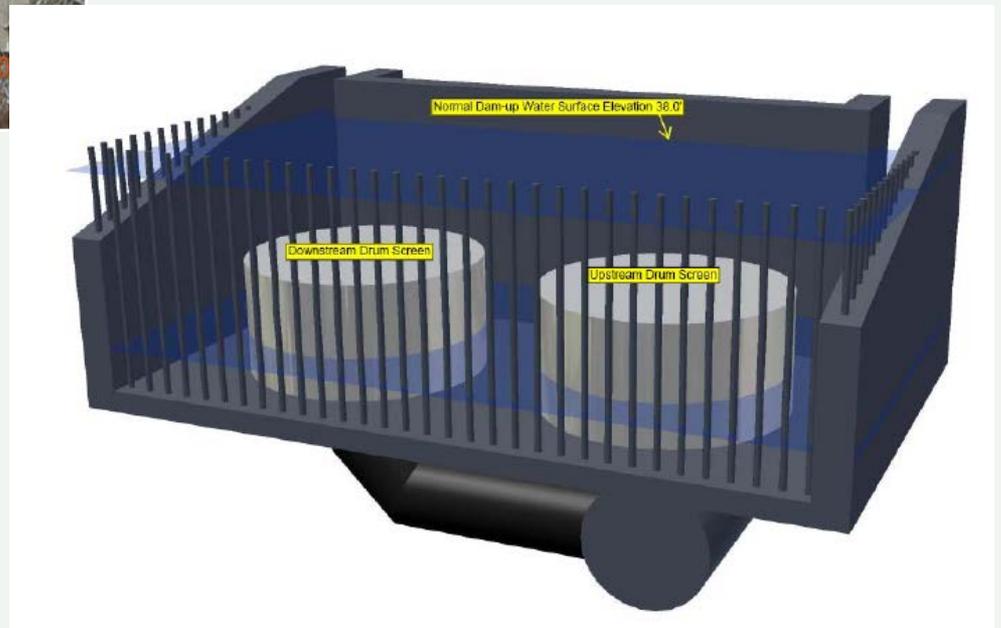


Mirabel Site - Background

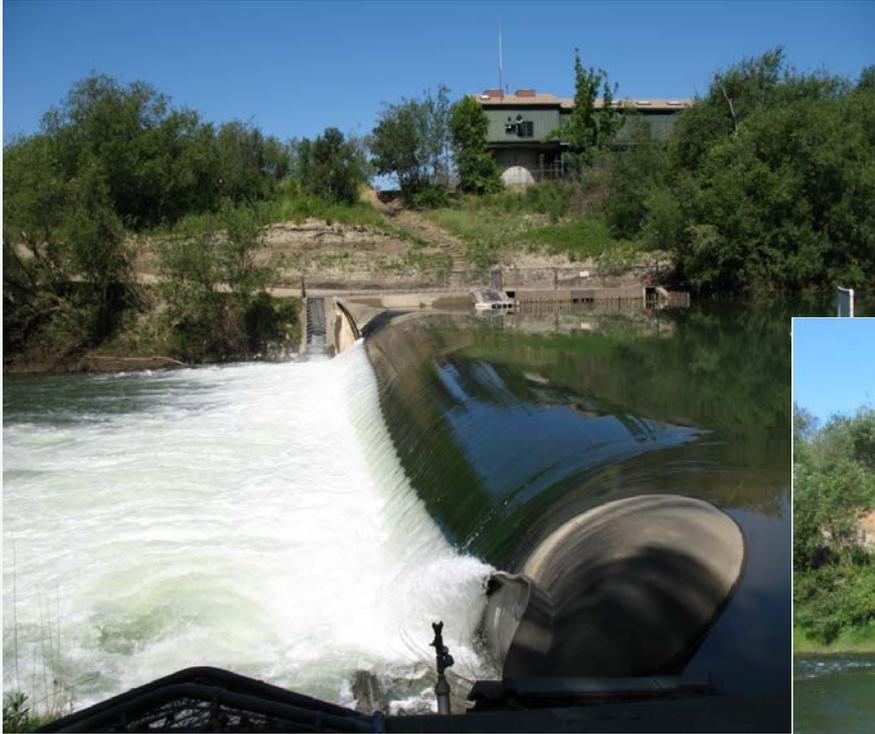
- River Diversion Structure (RDS) and Dam built in 1975
- Vital for Summer Water Supply
- 2008 BO, Fish Screens Do Not Meet Criteria
- Fish Ladders Not Effectively Passing Juvenile Fish Downstream
- Operational Dam Modification “The Notch” not a long term solution
- 2008 Seismic Hazard Assessment



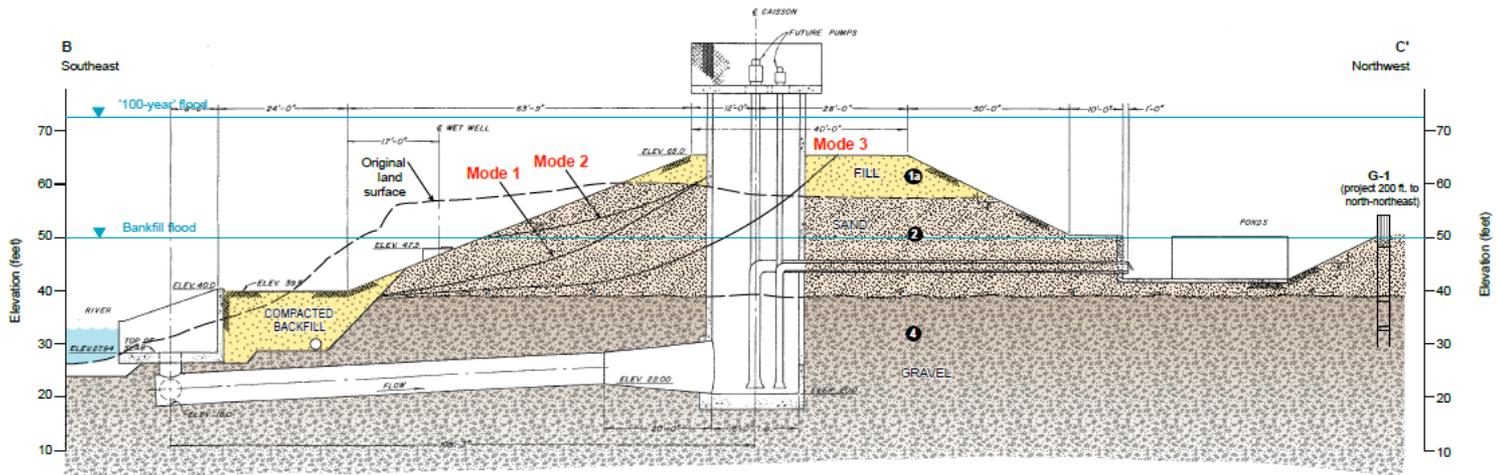
Existing Fish Screens



Notch in Rubber Dam



Earthquake Hazard



Explanation

-  Fill or compacted backfill, SAND (SM)
-  SAND (SP), silty
-  GRAVEL, sandy (GP) to SAND, gravelly (SP)

0 20 feet
Scale
No vertical exaggeration

SONOMA COUNTY WATER AGENCY NATURAL HAZARD RELIABILITY ASSESSMENT	
Profile of Diversion Caisson and Intake Structure showing Potential Failure Modes	
 William Lettis & Associates, Inc.	Figure 18

Design Features

- New Fish Screen
 - Flat Vertical Screen - Integrated with Ladder
- New Fish Ladder
 - Vertical Slot Design
 - More Flow, Better Passage
- Seismic Stability Improvements
 - Vibratory Stone Columns
- Public Education
 - Fish Viewing Gallery
- Fisheries Monitoring
 - Video, Trapping, Tag Detection



Vertical Slot Fish Ladder



Site Plan

MIRABEL FISH SCREEN AND FISH LADDER REPLACEMENT SONOMA COUNTY WATER AGENCY

HDR
ASMEC
DESIGN CENTER

Screen

Ladder

SCHEME 1B

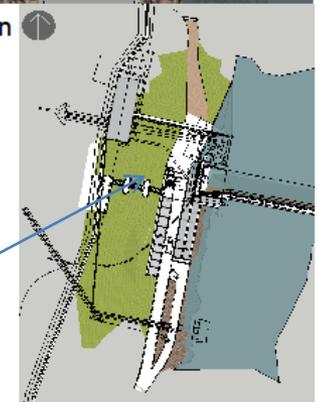


Scheme 1B



DESIGN FEATURES INCLUDED		SCHEME 1
1	Ground Improvements for seismic and liquefaction	X
2	Fish Screen and Ladder	X
3	Drive for maintenance vehicles	X
4	Pad for code required portable restrooms	X
5	Viewing Chamber	X
6	Handicapped Ramp from top to Viewing Chamber	
7	Handicapped van parking above	
8	Handicapped van parking below	X
9	Stairway from top to Viewing Chamber	X
10	Fabric structure and viewing deck	

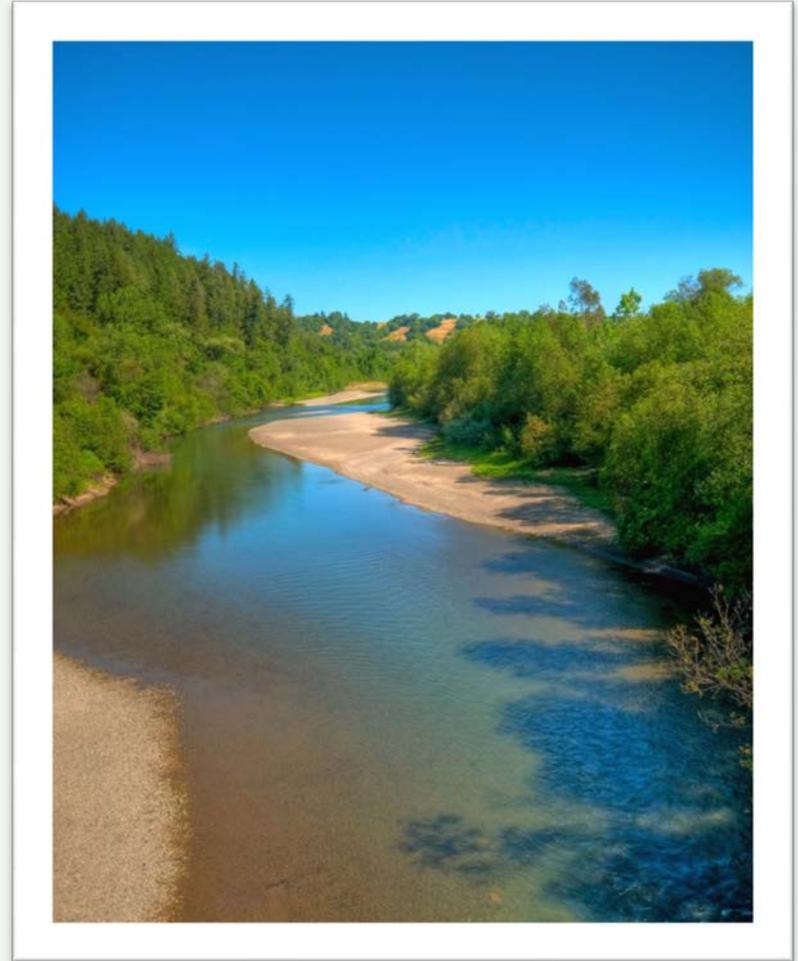
Auxiliary Water Supply



Challenges - Dewatering



Temporary Cofferdam



Schedule

- 5/27/2014 Ground Stabilization Work Complete
- 1/30/2014 Ladder & Screen Advertisement
- 3/4/2014 Bids Due
- 6/2014 Contract Time Starts
- 2 Construction Seasons
- Construction End Date December 2015



Acknowledgments



- CDFW - FRGP
 - \$255k for Design
 - \$1.18 M for Construction of the fish ladder
- HDR, Inc.
- Prunuske Chatham, Inc.
- TAC
 - Marcin Whitman, CDFW
 - Derek Acomb, CDFW
 - Ryan Watanabe, CDFW
 - Steven Thomas, NMFS
 - Rick Rogers, NMFS

