Interlake Tunnel and Spillway Modification

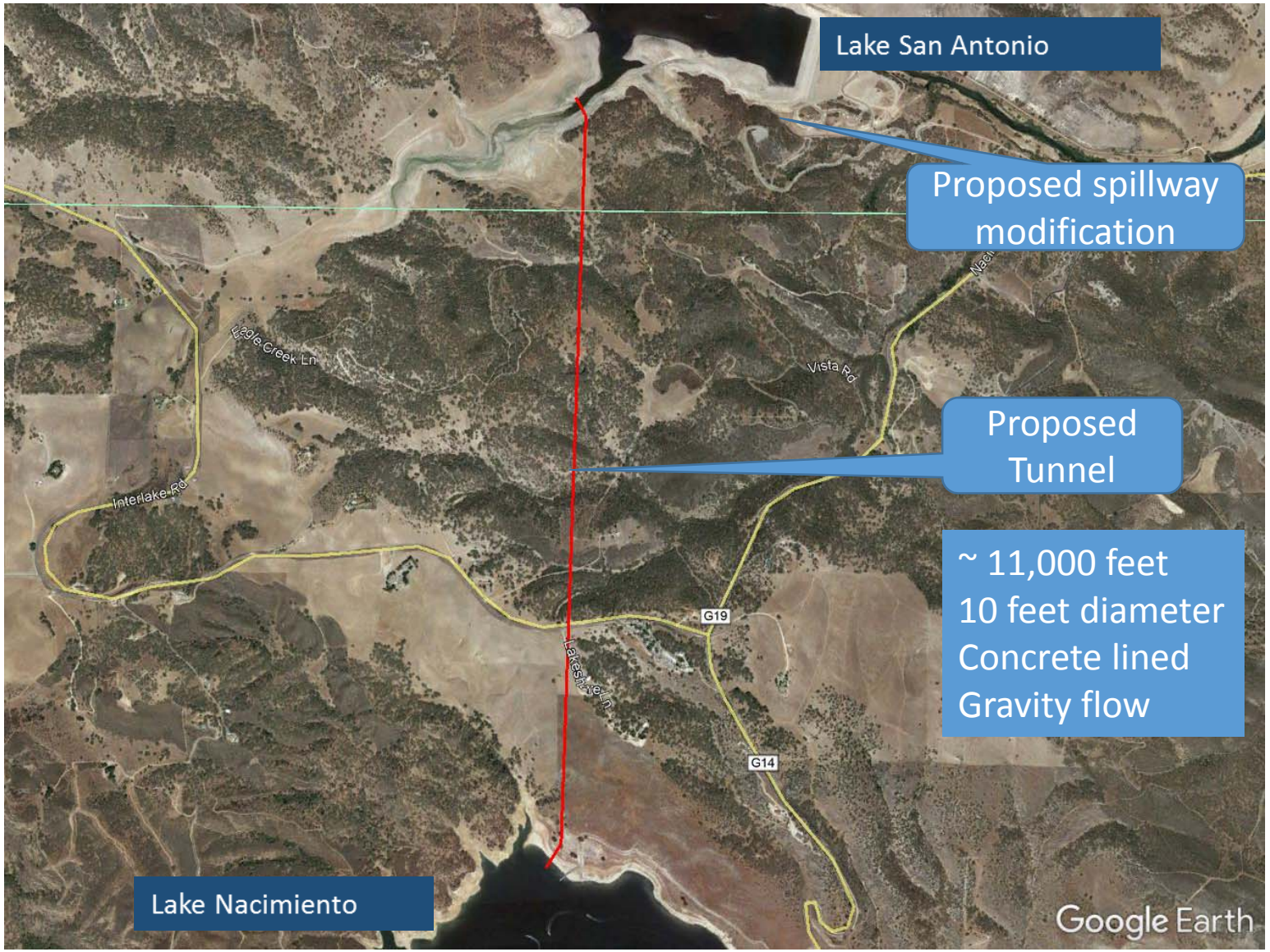
Project Status Report

May 10, 2018

Agenda

1. Introduction – project orientation
2. Project Hydraulics
3. Design progress
4. Accomplishments to date
5. Schedule Slippage
6. Development schedule
7. Capital budget update
8. Four month look ahead activities

Project Orientation

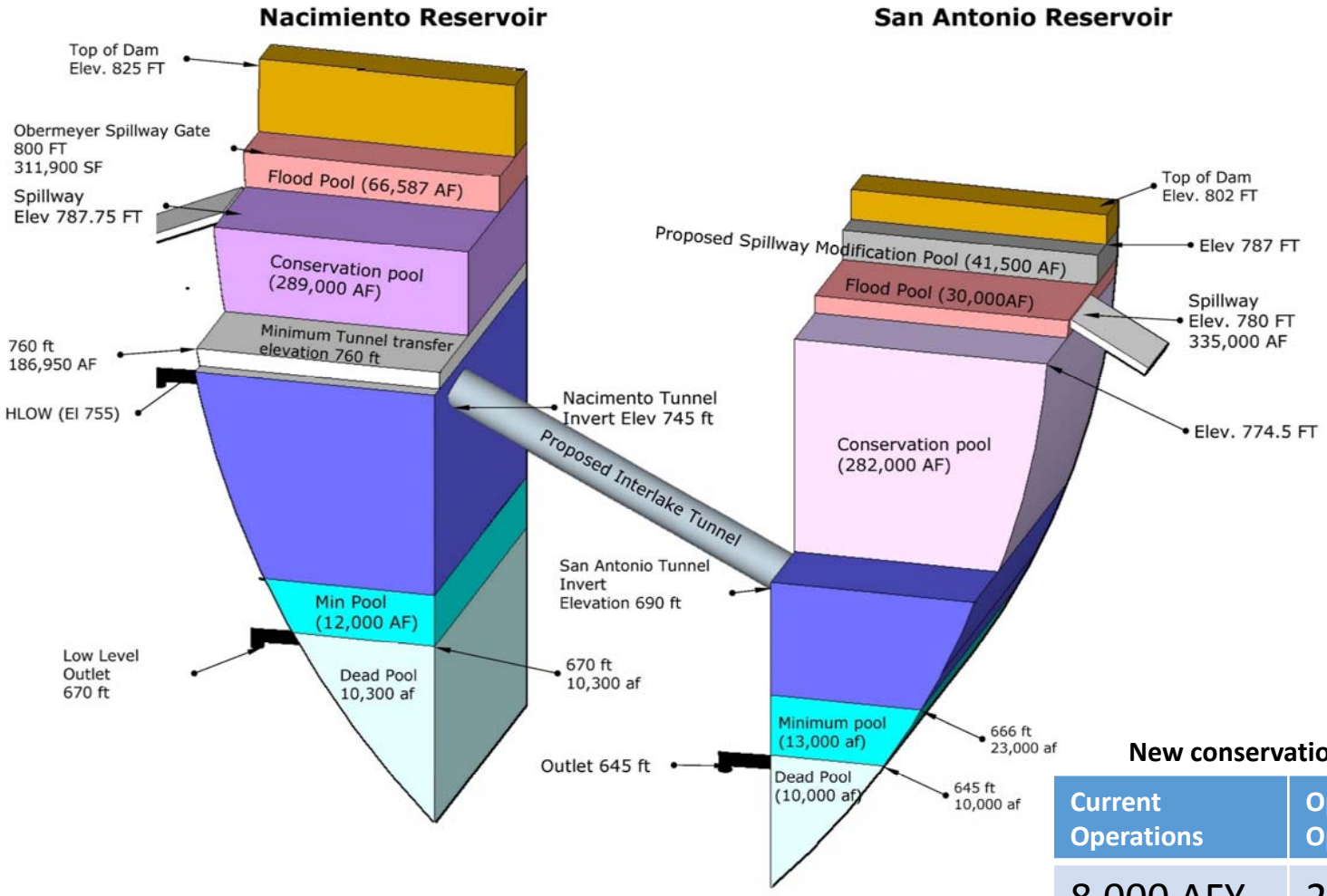


Project hydrology

1. Creates "new" water
   - Provides means to divert flood control releases to San Antonio reservoir – Average diversion ~ 50,000 AFY
   - Without changing reservoir operating rules, creates an average of 8,000* AF per year of new conservation releases
   - By optimizing reservoir operations, creates an average total of 20,000* AF per year of new conservation releases
2. Creates new additional storage of 41,500 AF in San Antonio Reservoir
3. Reduces potential flood release volume by 52%

* - From preliminary hydrologic modeling - 2015

Project hydraulics



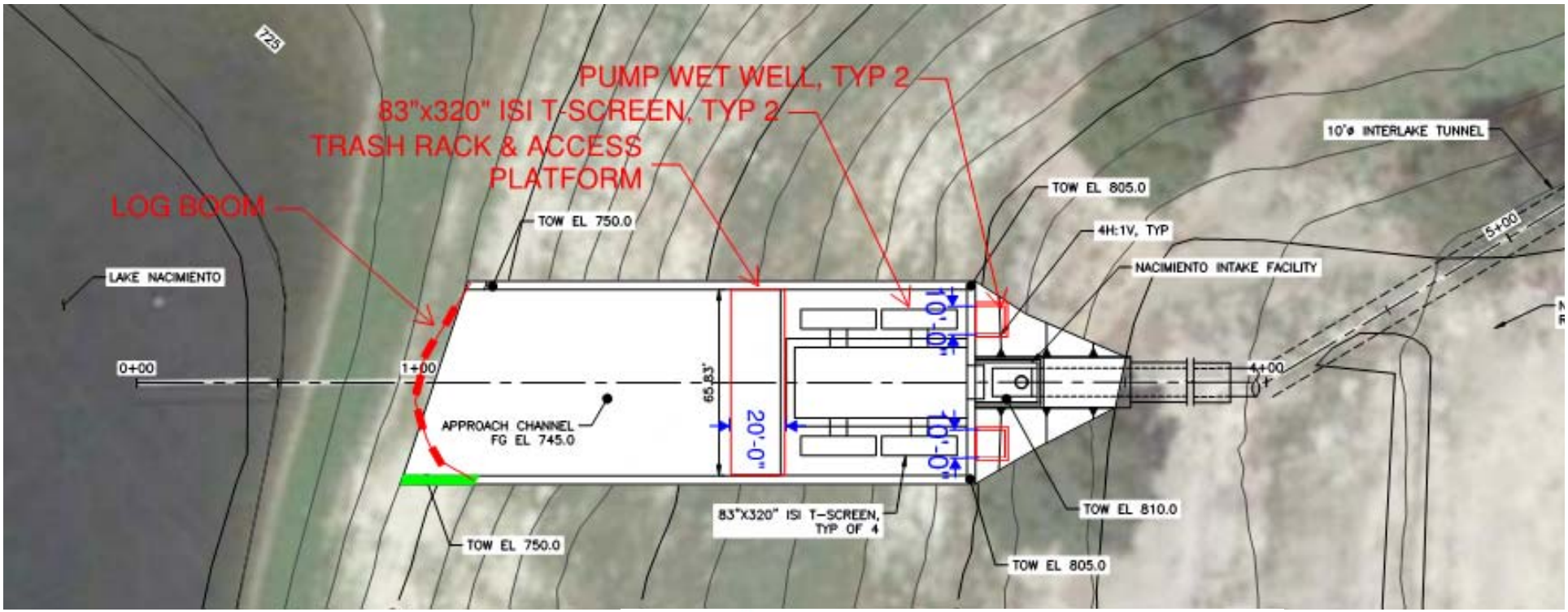
New conservation releases *

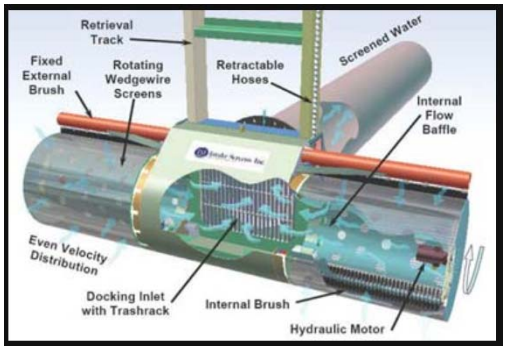
Current Operations	Optimized Operations
8,000 AFY	20,000 AFY

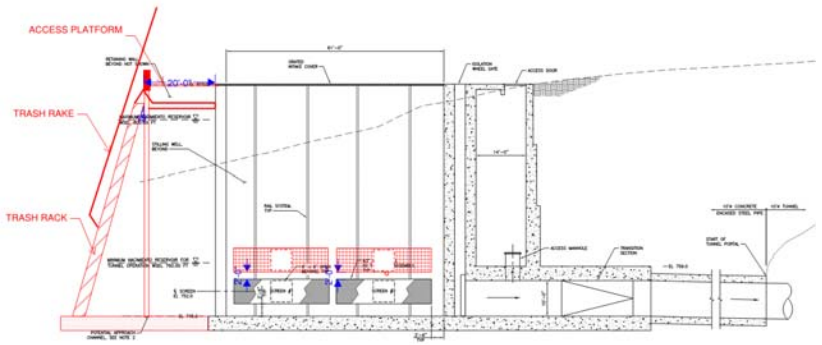
In 2017 the tunnel could have moved 88,000 ACFT from Nacimiento to San Antonio of the 192,000 ACFT that was spilled from Nacimiento.

* Based on 2015 modeling results

Fish screens at Nacimiento intake







Geotechnical exploration

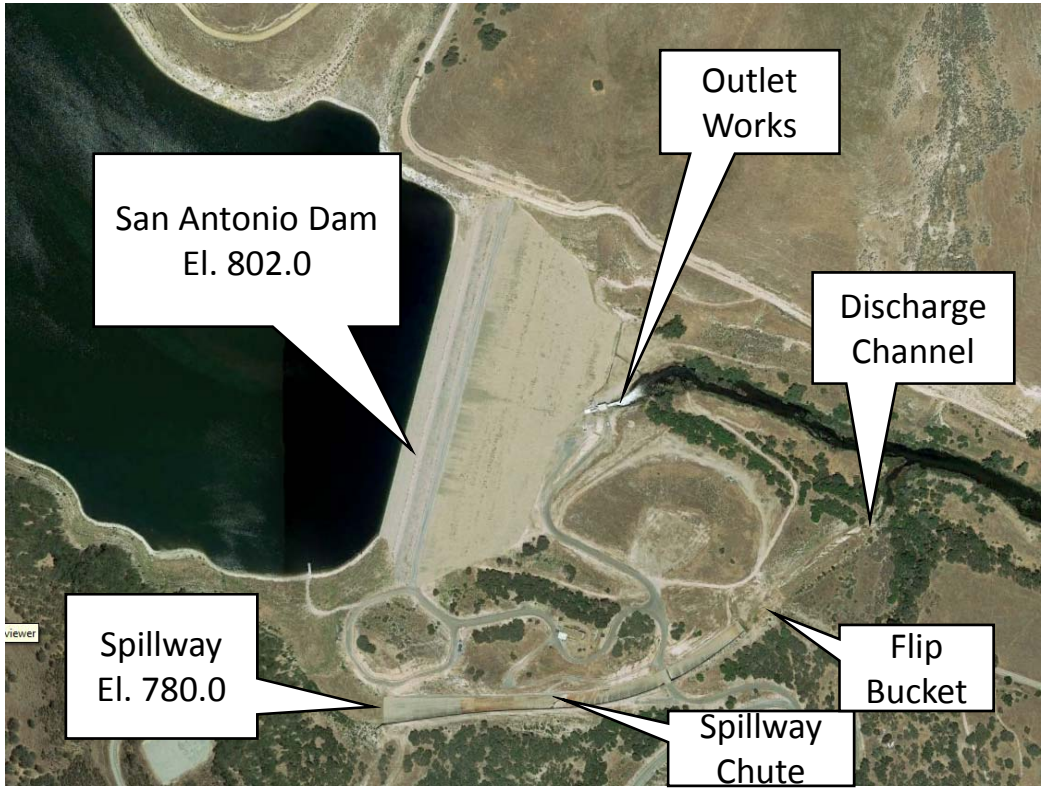
Geotechnical exploration borings:

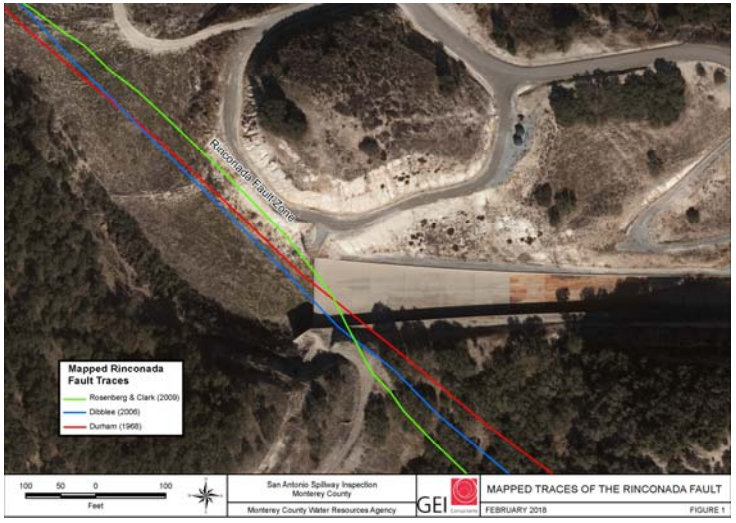
Tunnel – 6 borings (4 completed)

Spillway – 4 borings completed

San Antonio Spillway Modification

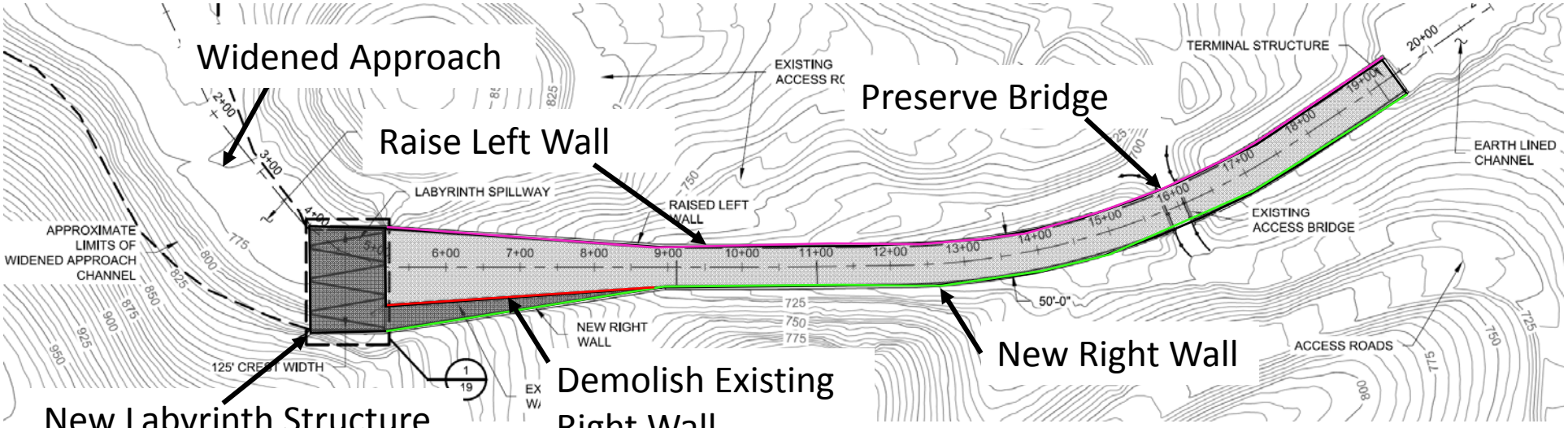
Raises spillway 7 feet

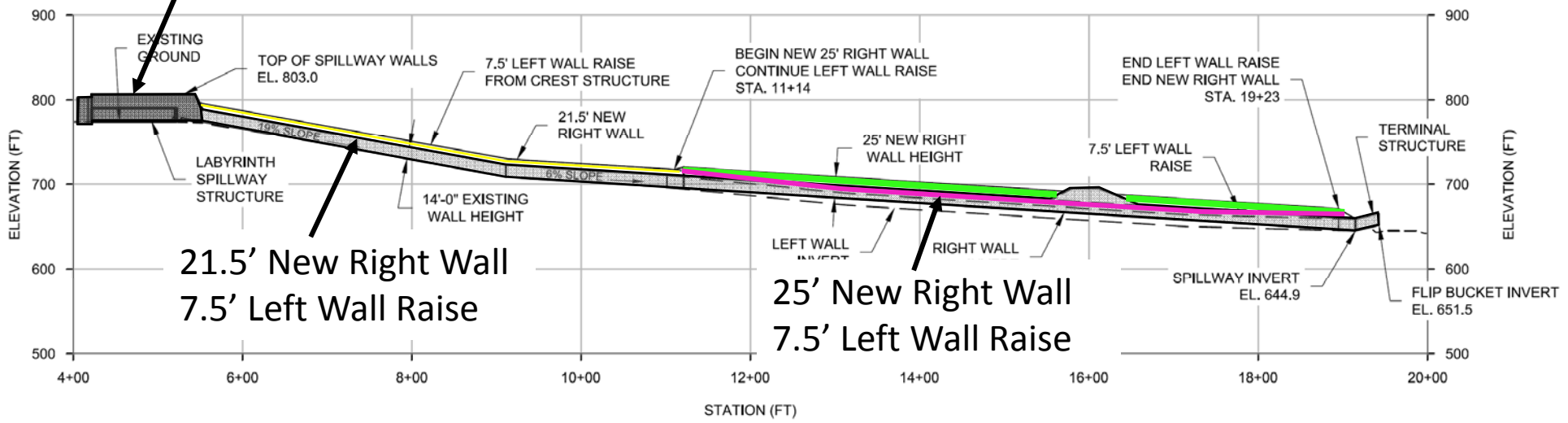




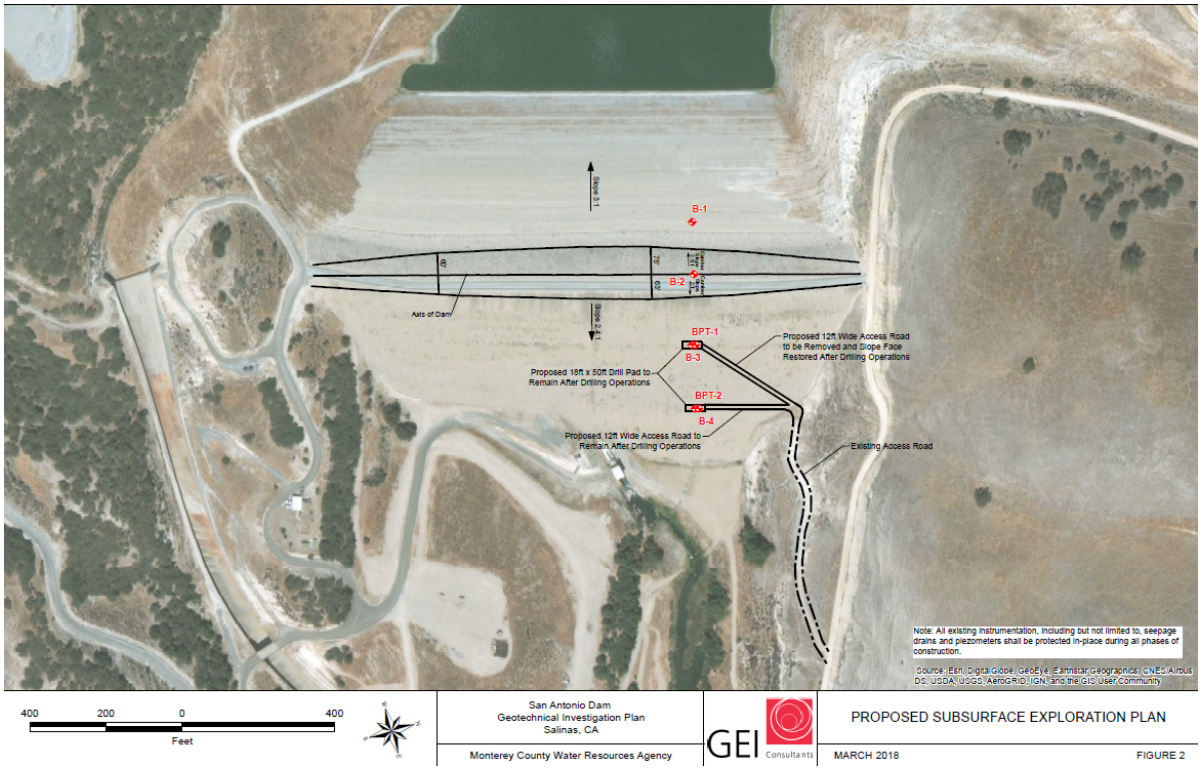
- Adds 41,500 AF increased storage to San Antonio Reservoir
- Need to correct deficiencies in spillway

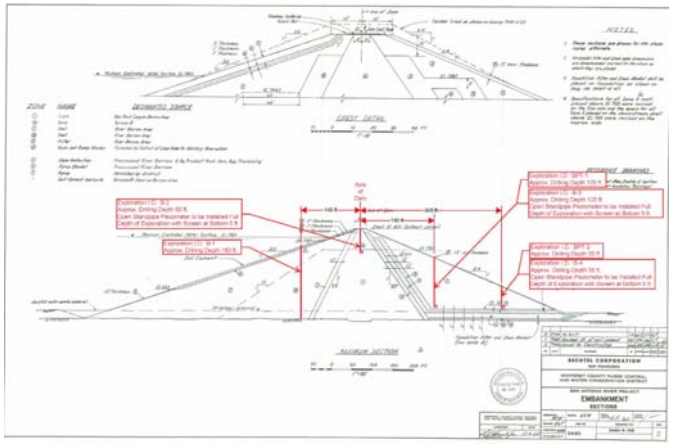
Preferred spillway modification concept





San Antonio Dam Stability Analysis





- Geotechnical drilling of San Antonio dam required to confirm soil strengths for calculation of dam stability.
- $382,000 estimated cost.
- Drilling scheduled – September 2018

Work Accomplished to Date

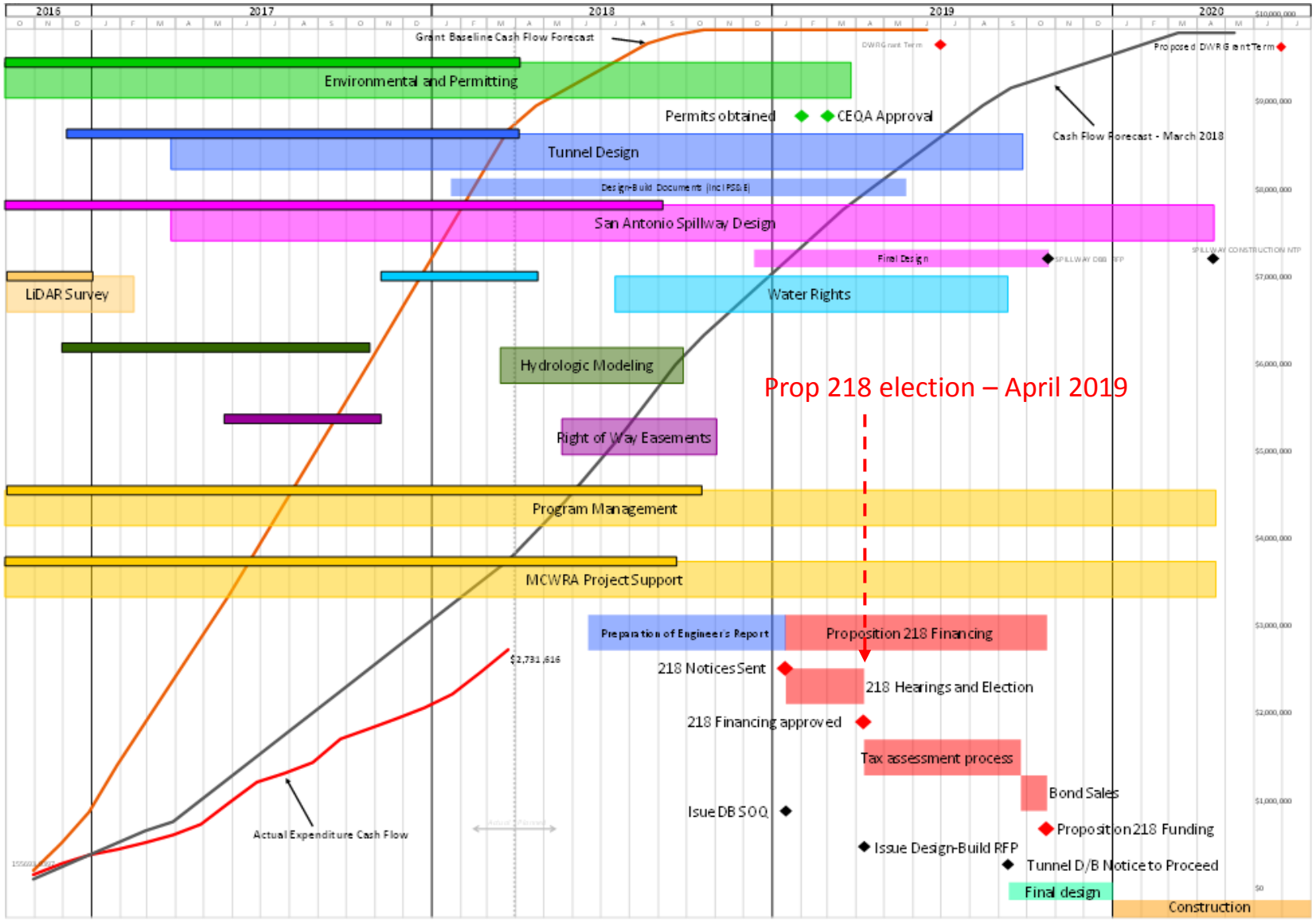
1. Environmental clearance work and preparing of Draft EIR.
   - Completed environmental field studies.
   - Completed environmental clearance for field activities.
   - Initial meetings with State and Federal regulatory permitting agencies
2. Initiated geotechnical exploration for tunnel and spillway modification.
   - Coordinated land owner consent and access for geotechnical drilling.
3. Commenced tunnel design – expect 30% complete by June 2018
   - Coordinated with CDFW on fish screen design criteria and preparation of an MOA
4. Conducted alternatives analysis for spillway modification project
   - Coordinated with DSOD for stability analysis
5. Completed USGS hydrologic model and began initial baseline model runs
6. Coordination with DWR regarding grant administration and request for time extension.

Schedule Slippage

1. Delays in the U.S. Geological Survey's development of an operation baseline model.
2. Delays to reach a Memorandum of Understanding with California Department of Fish and Wildlife regarding white bass containment.
3. Delays to geotechnical exploration from landowners resistance to grant access and consent for geotechnical boreholes.
4. Delays in the award of engineering contracts.
5. Delays to design of spillway modification pending confirmation of soil strengths for dam stability analysis.

Development schedule to Prop 218

Baseline + Forecast



DWR Grant – Use of Funds

Task #	Task Name	Baseline Cost	Costs to date	Budget remaining	% Complete based n $
	Phase 1 - Pre Proposition 218 financing	**$10,000,000.00**	**$2,731,615.92**	**$7,268,384.08**	**27%**
A	**Project Administration**	**$2,374,858.01**	**$1,218,409.94**	**$1,156,448.07**	**51%**
A.1	Grant Administration	$0.00	$0.00	**$0.00**	
A.2	Reporting	$5,281.02	$0.00	**$5,281.02**	**0%**
A.6	MCWRA Project Support	$939,525.78	$337,044.54	**$602,481.24**	**36%**
A.6.7	MCWRA Project Administration	$939,525.78	$337,044.54		
A.7	Program Management	$1,430,051.21	$881,365.40	**$548,685.81**	**62%**
B	**Land Purchase Easements**	**$244,000.00**	**$0.00**	**$244,000.00**	**0%**
C	**Planning / Design / Engineering and Environmental Documentation**	**$7,381,142.00**	**$1,513,205.98**	**$5,867,936.02**	**21%**
C.1	Hydrologic Modeling	$532,721.00	$0.00	**$532,721.00**	**0%**
C.2	Environmental and Permitting	$1,527,632.00	$382,662.35	**$1,144,969.65**	**25%**
C.3	Water Rights	$550,000.00	$0.00	**$550,000.00**	**0%**
C.4	LiDAR Survey	$170,000.00	$69,800.00	**$100,200.00**	**41%**
C.5	San Antonio Spillway Design	$1,766,692.00	$718,730.06	**$1,047,961.94**	**41%**
C.6	Tunnel Design	$2,834,097.00	$342,013.57	**$2,492,083.43**	**12%**

Capital Budget / 218 Financing

Budget	Subtotals	Current Budget
Administration and Management		$6,158,585
Program Management	$2,866,919	
Construction Management	$1,200,000	
PLA Negotiations (EPC only)	$36,860	
Conceptual Engineering	$1,110,000	
MCWRA Adminstration & Reporting	$944,807	
Engineering and Design		$5,303,510
Tunnel design and geotechnical investigations	$2,834,097	
Spillway engineering and final design	$1,766,692	
LiDAR Survey	$170,000	
Hydrologic Modeling	$532,721	
Environmental clearance and permits		$1,834,598
Construction		$62,796,000
Tunnel construction	$32,506,000	
Fish Screen	$5,000,000	
San Antonio Spillway Modification	$15,000,000	
Contingency	$10,290,000	
Legal and ROW		$794,000
ROW acquisition and water rights permit application	$244,000	
Water Rights	$550,000	
Financing		$5,262,000
Prop 218	$462,000	
Broker / Financing fees	$1,400,000	
Capitalized interest during construction	$3,400,000	
Total		**$82,148,693**

Preliminary Financial Analysis	$ mil
Project Capital Costs	$82
DWR Grant Funding	($10)
Financed Amount	$72
Annual Bond Debt Service	$4.68
Annual O&M	$1.50
Total Annual Costs (30 years)	**$6.18**

Preliminary Unit Cost Analysis	$	Unit
Flat Tax Cost (264,425 acres)	**$23.39**	**per Acre**
Cost of water (20,000 AFY)	**$309.19**	**per AF**

4 Month Look Ahead

1. Perform hydrologic modeling to complete project description and impact analysis for Draft EIR
2. Complete geotechnical investigations
3. Advance preliminary engineering on tunnel and spillway modification
4. Complete San Antonio Dam stability analysis
5. Initiate water rights analysis for revised points of diversion and added storage
6. Complete MOU with CDFW regarding white bass solution

Questions