Operations & Engineering Workgroup

September 13, 2023



Agenda Item 1.1 Optimization of Project Schedule

JP Robinette



Current Work Plan Status

- Project is on schedule for 30% design and Project Cost update in mid 2024
- Benefits and Obligations Contracts are pushing out our Amendment 3 period by 1 year
- Developing plan to stretch our revenue and expenses through 2025
- Continue to meet obligations of Environmental requirements to start Construction
- Optimization of Initial Phase 3/4 Project Schedule is continuing from July Board information presentation

Project Schedule Objectives

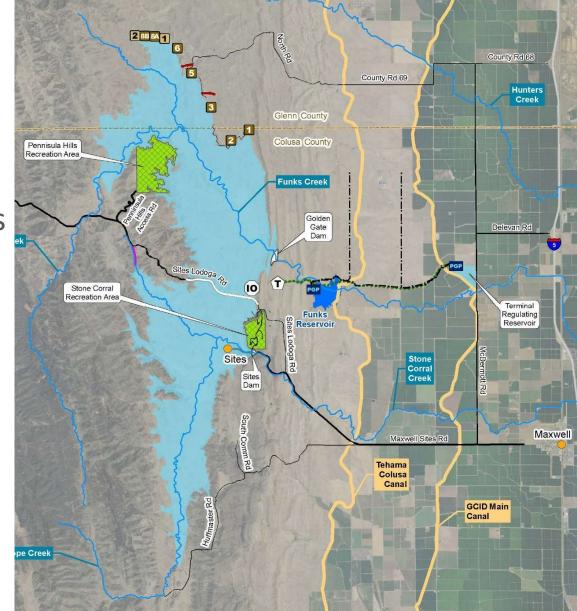


Why Develop Optimized Phase 3/4 Schedule?

- Previous workplans were to establish the planning and scope of the project
 - This is currently being completed
- Moving from planning focus to execution
 - Cost and schedule optimization
 - Organization growth and resource scaling
 - Critical Path Management
 - Sites Reservoir is made of many Projects
 - Risk Management
 - Building institutional knowledge as scale up to full execution

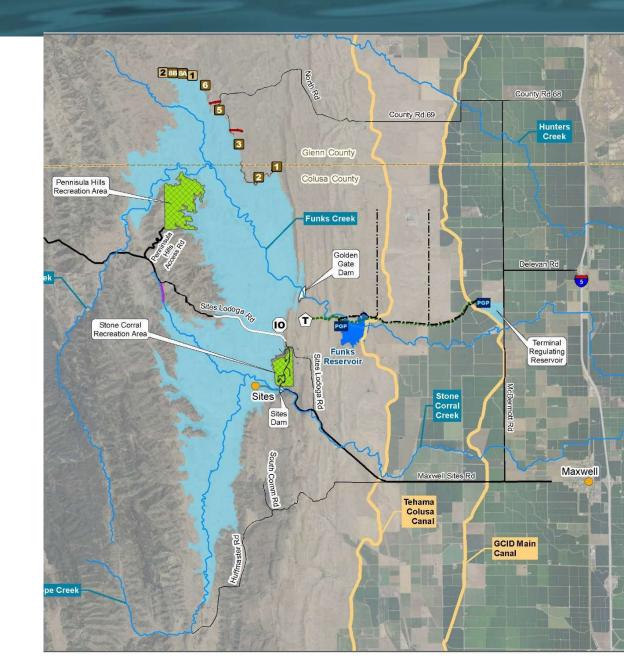
Steps to Construction

- Project is really a program made up of multiple projects and sub-projects
- Currently 9 construction packages and 18 major locations within the project
- •For each Project need to execute in a step function
 - •Land Purchase
 - Environmental Clearance
 - Design Completion
 - Construction
 - Commissioning



Anticipated Construction Critical Path

- #1 Golden Gate Dam
- #2 Sites Lodoga Rd Detour
- #3 Sites Dam
- #4 Transmission Powerlines
- #5 Inlet/Outlet Facilities
- #6 TRR Complex
- **#7** Funks Complex
- #8-14 Saddle Dams
- #15 Dunnigan Pipeline
- #16 Sites Lodoga Rd and Bridge
- #17-18 Recreation Areas



2024-2025 Critical Path Items

- In developing 2024 2025 optimized schedule investigated top 5 critical items
 - Programmatic Environmental plans and compliance
 - Required to achieve clearance for Geotech and Construction activities to commence
 - Critical Land Acquisition
 - Land required to construct first three projects
 - Golden Gate Dam
 - Longest design and construction activity
 - Sites Lodoga Rd Reroute
 - Required to keep traffic access while constructing Sites Dam
 - Sites Dam
 - Next longest design and construction activity

Reprioritize Amendment 3 Work

- Focus activity on higher priority work for advancing critical features
- Continue progress on activities that continue defining Level 3 cost estimate

Benefits:

- ✓ Full geotechnical investigation on Sites and Golden Gate Dam (cost certainty)
- ✓ Development of Sites Lodoga Bypass road design (early start construction)
- ✓ Advance 60 % Foundation design for Sites and Golden Gate Dams (cost certainty and early start construction)

Early Land Acquisition

- Implementation of Early Fee Title Acquisition
- Full access to critical path features
 - Golden Gate Dam
 - Sites Dam
 - Sites Lodoga Road Detour

Benefits:

- Allows earlier access for full geotechnical investigation and commencement of foundation prep and stream rerouting (cost certainty and early start construction)
- ✓ Investigation of Value Engineering Option at Golden Gate Dam (cost savings)

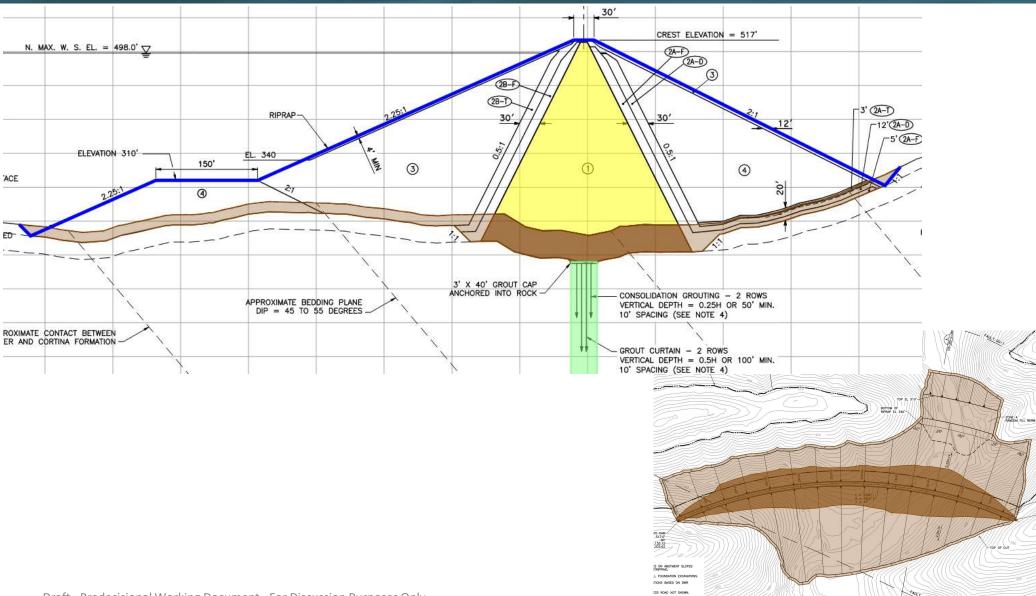
Golden Gate Dam Schedule

	20	23		20	24		1	20	25			20	26		1	20	27			20	28	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
GOLDEN GATE DAM																						
Land Access Golden Gate Dam																						
Geotech for Critical Areas (Phase 1 approved)																					
Environmental Clearance for P2 Geotech																						
P2 Geotech											- Dro	ious 6	0% Des	rign								
Geotech Mitigation Implemented											Pre	vious 6	0% De:	SIGII								
Environmental Clearance for Construction																						
GG Foundation Design					30%	A			60%	A			90%A	100	96A							
GG Fond ExCav (Early Start)																						
GG Grouting Design					30%A				60%A		909	6A 100%A										
GG Grouting Const (Early Start)																						
GG Dam Design					30%	A				60%	A		90%	6A	100%A							
GG Dam Const (Early Start)																						

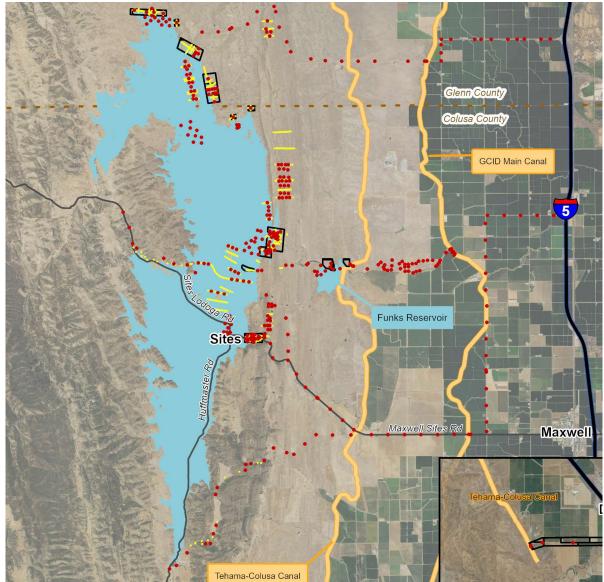




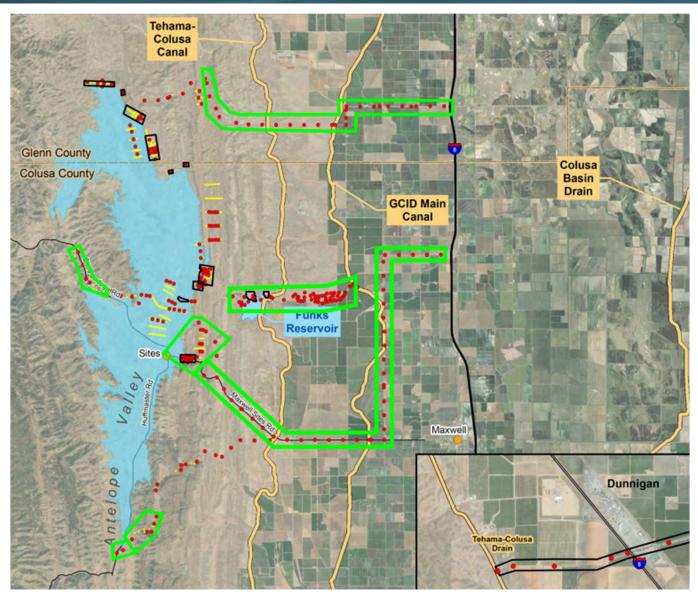
Foundation Work



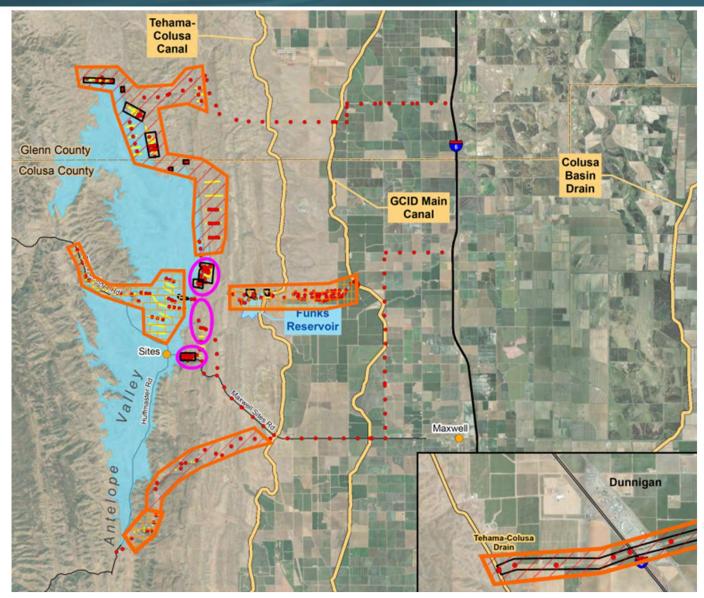
Current Work Plan - Geotech Investigation Locations



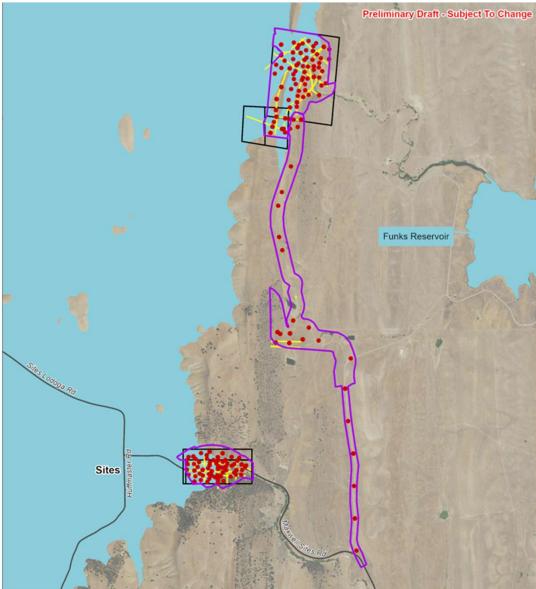
Where Geotech Investigation Have Started



Geotech Investigation Locations to be Deferred



Proposed Work Plan - Geotech Investigation Locations



Proposed Work Plan – Opportunities & Risk

- Early acquisition of land before investor commitment
- Value Engineering of Golden Gate Dam
- Prioritization of activities to be construction ready for critical path items once Investor Commitment obtained
- Cost Certainty of Project
 - Still have 30% design cost in 2024
 - Opportunity to develop and apply lessons learned
 - Opportunity to better understand foundation work
 - Opportunity for input from CMAR starting early 2025

Cost of Plan

- Staff scrubbed work plan to determine needs for 2024 - 2025
- Stopping and slowing down non-critical activities remaining in 2023
- Estimated expenses for proposed work plan revision ≈ \$96M
 - Programmatic Environmental plans and compliance
 - Critical Land Acquisition
 - Golden Gate Dam
 - Sites Lodoga Rd Reroute
 - Sites Dam

What can we afford?

- Estimated. funds available for 2024 & 2025 ≈ \$75M
 - Includes:
 - current cash on hand
 - projected 2023 underrun
 - A 2024 & 2025 cash call (\$160/AF & \$40/AF respectively)
 - Continued Federal WIIN Act and IIJA reimbursement
- Adjusted plan to fit within expected revenue
 - Programmatic Environmental plans and compliance
 - Critical Land Acquisition (Includes Sites Dam and Ladoga Rd)
 - Golden Gate Dam
- Delay start of Sites Dam and Sites Lodoga Rd Reroute Geotechnical and Design work until funds available
 - Check back in mid-2024

Golden Gate Dam Foundation Sub-Project Scope (example)

Through 2025:

- Property Acquisition
- All Geotech exploration
- Environmental Clearance
- Design Advancement beyond 30% (begin 60%, CMAR input)

2026 and beyond:

- Design Completion
- Construction
- Commissioning

Draft recommendation of budget principles based on schedule optimization efforts

- Complete required permits, agreements, and cost estimates to support signing Benefits and Obligations Contracts and financing by the end of 2025 (Highest Priority)
- Hire Reservoir Package CMAR and Mitigation Contractor early 2025
- Acquire property for Golden Gate Dam Foundation, Sites Dam Foundation, and Sites Lodoga Detour sub-projects
- Complete programmatic pre-construction requirements
- Execute Golden Gate Dam Foundation sub-project starting Jan 2024. Check-in to see if Sites Dam Foundation and Lodoga Detour can be started mid-2024 based on budget forecasts.

Current Work Plan Status

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Activity Name	23	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034 5 4 Q1 Q2 Q3 Q4 1
Sites Reservoir Project: September 2023	03 04		01 02 03 04						<u>u1 u2 u3 u4</u>			4 01 02 03 04
Final EIR CEQA Adoption	• F	inal EIR CEQA	Adoption									
Final EIS NEPA ROD		♦ Final EIS	NEPA ROD									
Water Right Permit Issued			 Water Righ 	t Permit Issued	d							
Investor Commitment			 Investor C 	ommitment								
30% Design			30% Design									
60% Design						60% Design						
DSOD Final Approval						1 1 1 1	DSOD Final	Approval			unity for Delivery	
Land Acquisition	1					Land Acquisi	tion					
Permitting (Biological/Cultural/Mitigation)	1							💻 Permitting	g (Biological/C	ultural/Mitiga	tion)	
Construction										mmm	mmm	Construction

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
ctivity Name	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	20
Sites Reservoir Construction Package	Q1 Q2 Q3 Q4	01 02 03 04	01 02 03 04	01 02 03 04	Q1 Q2 Q3 Q4	01 02 03 04	01 02 03 04	01020304	01 02 03 04	01 02 03 04	01 02 03 04	01 02 03 04	01 02 03 0	14 01 02
Final EIR (Environmental Impact Report) CEQAAdoption	♦ Final	EIR (Envir	onmental l	npact Repo	ort) CEQAA	doption								
Final EIS (Environmental Impact Statement) NEPA ROD	•	Final EIS	(Environme	ental Impac	t Statement) NEPA RO	D							
NTP for Final Design Data Acquisition		• NTP for F	inal Desig	n Data Acq	uisition									
Land Access for Final Design Data Acquisition		ا 🚞	and Acces	s for Final	Design Dat	a Acquisitic	in							
Water Right Permit Issued		♦ V	Vater Right	Permit Issu	Jed									
Investor Commitment		•	nvestor Co	mmitment										
30% Design		•	30% Desig	'n										
Final Design						Fi	nal Design							
60% Design					♦ 60% Des	lign								
DSOD Approval of 100% Design						• DSC	D Approva	al of 100% I	Design					
Land Acquisition					+++	Land Acqu	uisition							
Permitting (Biological/Cultural/Mitigation)									Pe	ermitting (B	iological/C	ultural/Mitig	ation)	
Construction												Construc	tion	
Substantial Completion												 Substanti 	ial Comple	etion

Questions?



Engineering and Construction Manager's Report

JP Robinette



Future Topics

- Project Schedule (concurrent with budget adoption)
- Dunnigan Pipeline design and Lower CBD System considerations
- Emergency drawdown duration and flow allocation
- Construction access road options

Thank you!

Next Meeting: Wednesday, October 11, 2023 (1:30 pm – 3:30 pm)

