WATER RESOURCES AGENCY

M E M O R A N D U M

Monterey County

DATE: July 16, 2019

TO: Monterey County Legislative Committee
FROM: Elizabeth Krafft, Acting Deputy General Manager
SUBJECT: Water Resources Funding Needs

Requested Action:
The Water Resources Agency (WRA) Board of Directors request assistance from the Legislative Committee with the acquisition of additional funding.

Interlake Tunnel Project
The Interlake Tunnel Project (ILT) is a 10-foot gravity fed tunnel that will move water from Nacimiento reservoir into San Antonio reservoir. Other components of the project include a fish screen to prevent white bass from moving into San Antonio as well as a potential 7-foot raise for the San Antonio spillway. The ILT is currently being designed and the Legislative Committee has been instrumental in obtaining $27 million dollars of State funding for this project. Current cost projections put the total project at an additional $97 million. The timing of a Proposition 218 vote to fund the project has yet to be determined.

Nacimiento and San Antonio Reservoirs
WRA received a letter (Attachment 1) from Department of Safety of Dams (DSOD) requiring that the spillway at the San Antonio reservoir dam be fully functional by November 1, 2024. WRA has provided DSOD with a schedule and work plan (Attachment 2) to complete this work by the deadline, if funding is secured. It is likely that without the spillway chute being repaired and fully functional, the ILT project would not be permitted for operation by DSOD. The current cost projection for this mandated work is $40 million.

WRA has developed a Multi-Year Maintenance Plan and identified the first three years of necessary repair projects at both reservoirs. A list of these projects was provided in the WRA report to this committee for the March 11, 2019 meeting. On April 26, 2019 WRA held a special Board of Directors workshop to gather stakeholder input on the projects and funding options. Based on the comments from that workshop, WRA has contracted with Wallace Group to provide funding options to pay for the deferred maintenance and the required repairs to both facilities. A follow-up workshop to explain the benefit spread options and the funding options available is tentatively scheduled for September 13, 2019. The current cost projection for the

next three years is $8.75 million. This estimate will be refined going forward. (Other programs and non-dam related project needs are not included in this number.)

Habitat Conservation Plan

In order to obtain an exemption from the take prohibitions of section 9 of the Endangered Species Act, WRA is pursuing a Section 10(a)(1)(B) incidental take permit (Habitat Conservation Plan (HCP)). Current activities include identifying the WRA operations and maintenance activities to include in the HCP and confirming the boundaries of the permit and study areas. The HCP is estimated to cost $4.5 million over three years to develop. Currently there is $100,000 in the WRA FY 2019/20 budget to keep the project moving at a reduced pace.

Project	Projected Cost	Amount Currently Identified	Additional funding needed
Interlake Tunnel	$124 Million	$27 Million	$97 Million
Dams/Reservoirs	$48.75 Million	300,000 (19/20 WRA budget)	48.45 Million
Habitat Conservation Plan	$4.5 Million	$100,000.00 (19/20 WRA budget)	$4.4 Million
		ESTIMATED TOTAL	**$149.85 Million**

Conclusion

WRA's current revenue stream will not support funding projects of this magnitude. A large portion of the dollars needed are one-time monies to bring facilities up to operational standards and ensure compliance with the Endangered Species Act. WRA needs to prioritize the projects and secure funding. WRA has a variety of methods available to raise revenue, but the resources are limited. The WRA Board of Directors has established an alternative funding sub-committee and are requesting the assistance of this committee to help WRA garner support in both Sacramento and Washington, DC for state and federal backing to ensure that both San Antonio and Nacimiento facilities are fully functional.

Attachment 1

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY

GAVIN NEWSOM, *Governor*

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

APR 12 2019

Ms. Shauna Lorance, P.E., Interim General Manager
Monterey County Water Resources Agency
Post Office Box 930
Salinas, California 93902-0930

San Antonio Dam, No. 1008-2
Monterey County

Dear Ms. Lorance:

This is in reply to Monterey County Water Resources Agency's (MCWRA) letter dated May 23, 2018, submitting the Spillway Condition Assessment Report prepared by GEI Consultants, Inc (GEI) for San Antonio Dam. This report was prepared in response to our letter dated May 12, 2017, requiring a condition assessment of the spillway.

In the report, GEI identifies significant foundation and structural deficiencies that could greatly compromise spillway performance during high flow events. Based on our independent evaluation, we agree with the spillway deficiencies identified by GEI and their conclusion that the spillway is in poor condition and unsafe for use under high flow conditions. Therefore, a major rehabilitation or full replacement of the spillway will be needed to ensure the safe performance of the spillway under significant flows up to the maximum design outflow.

By July 1, 2019, please submit a plan and schedule to resolve the spillway deficiencies for our review and approval. Every effort must be made to restore the full function of the spillway by November 1, 2024. In the interim, short-term risk reduction measures need to be implemented and associated maintenance repairs completed by November 1, 2019.

In their Report, GEI includes recommendations for the existing spillway that MCWRA could strategically use as interim risk-reduction measures. Specific recommendations we suggest for consideration include the following:

1. Perform remedial concrete repairs at locations of deterioration; apply joint sealant to floor and wall joints; and repair the broken drain pipe adjacent to Panel 27.
2. Commence a pilot program to evaluate the viability of installing new cleanouts on longitudinal and transverse drains beneath the spillway and verifying the condition of the underdrain system.

In addition, it is important that MCWRA continue to perform regular inspections of the dam's spillway, document any changes in performance, and promptly address any necessary maintenance items to ensure the spillway can safely pass normal inflows during the winter flood season.

Because of the known spillway deficiencies at San Antonio Dam, the Division of Safety of Dams' condition assessment for the dam has been changed from "Satisfactory" to "Fair." Definitions of condition assessments are on our website at www.water.ca.gov/damsafety.

If you have any questions or need additional information, you may contact Design Engineer John Diefenthal at (916) 227-4638 or Project Engineer Wallace Lam at (916) 227-4626.

Sincerely,

Sharon K. Tapia, Chief
Division of Safety of Dams

Attachment 2

MONTEREY COUNTY

WATER RESOURCES AGENCY

PO BOX 930
SALINAS, CA 93902
(831) 755 -4860
FAX (831) 424 -7935

BRENT BUCHE
GENERAL MANAGER

STREET ADDRESS
1441 SCHILLING PLACE, NORTH BUILDING
SALINAS, CA 93901

June 28, 2019

Sharon K. Tapia, Chief
California Dept. of Water Resources
Division of Safety of Dams
PO Box 942836
Sacramento, CA 94236-0001

Re: San Antonio Spillway Project

Dear Ms. Tapia:

The Monterey County Water Resources Agency (MCWRA) presents to you the Plan and Schedule for the San Antonio Spillway Project. As stated in your letter dated April 12, 2019, the MCWRA is to make every effort to restore full function of the San Antonio Dam Spillway by November 1, 2024.

This plan and schedule are the first steps. It shows that the MCWRA has already started the process internally and look forward to hearing back from the Division of Safety of Dams upon the completion of your review.

The MCWRA is fully committed to reaching this hefty goal and are available to provide additional information as needed. Questions can be directed to me at bucheb@co.monterey.ca.us or to Elizabeth Krafft, Deputy General Manager, at krafftea@co.monterey.ca.us. We are both are available by phone at (831) 755-4860.

Sincerely,

Monterey County Water Resources Agency
San Antonio Dam and Reservoir Facility, State Dam No. 1008-2

WORK PLAN FOR SAN ANTONIO SPILLWAY PROJECT
June 28, 2019

San Antonio Project Introduction and Purpose of this Work Plan

Monterey County Water Resources Agency (Agency) owns and operates the San Antonio Dam and Reservoir Facility (State Dam No. 1008-2) on the San Antonio River in southern Monterey County, California. This facility is authorized by the California State Water Board under License ID# 012624.

The dam is located approximately 9-miles southwest of Bradley, California. The dam is a zoned earthfill embankment structure with a maximum height of about 201 feet and a nominal crest elevation of 802 feet NGVD29[1]. The facility construction was completed in 1966 and has a normal full storage capacity of 335,000 acre-feet (AF) and a normal maximum water level of EL 780 feet.

The spillway is a concrete overflow ogee control structure and long rectangular chute conveyance to a terminal flip bucket structure that discharges into an unlined trapezoidal earthen channel which leads to the San Antonio River. The spillway is separated from the earthen dam about 500 feet south of the dam's right abutment. The uncontrolled overflow ogee weir section has a crest that is nominally 8.5 feet above the weir's approach channel and has length of 100 feet without any piers. The chute is 1,390 feet long, and transitions from 100 feet wide at the weir to 50 feet wide over a longitudinal length of 375 feet laid at 19 percent slope. The chute's remaining 1,015 feet length is laid at 6 percent slope. A super elevated horizontal spiral curve begins about 570 feet downstream of the ogee crest. A 28 feet long flip bucket terminal structure completes the chute.

Controlled releases from the dam are made via a low-level outlet controlled by a Howell-Bunger valve.

The Agency received a letter from the California Department of Water Resources, Division of Safety of Dams (DSOD) dated May 12, 2017, mandating a detailed evaluation and assessment of the concrete spillway features at the facility. GEI Consultants conducted this assessment and submitted a report titled *Spillway Condition Assessment Report*, May 2018, that concludes that the spillway is in poor condition and unsafe for use under high flow conditions. DSOD reviewed the report, conducted an independent evaluation, and concurs with GEI's conclusions. DSOD's letter dated April 12, 2019, requests a work plan and schedule to resolve the spillway deficiencies identified in the GEI Consultants report be submitted by the Agency to DSOD no later than July 1, 2019, and that every effort be made to restore the full function of the spillway no later than November 1, 2024.

Work Plan

The existing spillway is over 50-years old, and throughout its life, the Agency has conducted routine inspections and conducted maintenance; nonetheless, the recent assessment has noted significant foundation and structural deficiencies that could greatly compromise spillway performance during high flow events. An extensive capital improvement expenditure for significant rehabilitation or replacement is an unexpected capital project to the Agency and exceeds the normal operation and maintenance budgeting established by the Agency's Board of Directors; thus, a fully organized capital improvement project is being initially planned by the Agency and is presented herein.

The Work Plan is programmed for the classical design-bid-build delivery method for this capital improvement project. The project, in general, involves many components, including but not necessarily limited to: DSOD

[1] All elevations presented within this document have datum of NGVD29 unless otherwise noted.

coordination, governing body approvals, administration and management including several professional services procurements, public and multi-agency outreach, finance planning, identification of funding sources, design engineering, California Environmental Quality Act (CEQA) clearance, environmental permitting, bond financing and underwriting, construction management/quality assurance, construction bidding, general construction, and project closeout.

Attachment A presents a draft work plan schedule for the San Antonio Spillway Project (Project). Currently the Project is open to whether the existing spillway can be rehabilitated, or if the spillway is replaced with a new spillway either at or near the existing location or sited at a different location.

The significant phases of the project are summarized below along with anticipated DSOD interaction milestones.

Secure Development Capital

The Agency's first step is to secure initial Project funding.

DSOD Interaction Anticipated:

- None during this phase of the Work Plan

Deliverables:

- Preliminary funding secured

Design Engineering Procurement

The Work Plan considers a parallel course with securing development capital with the design engineering procurement process. Final professional services agreement execution is contingent on budgeting from the Agency's governing bodies (Board of Directors and Board of Supervisors).

DSOD Interaction Anticipated:

- None during this phase of the Work Plan

Deliverables:

- Agency's Request for Proposals: prepared and advertised
- Proposals from design professional firms: Agency review and interviews
- Selection of design engineering consultant to support entire project (preliminary design, final design, and post-design support during construction)

CEQA

The Agency has internal staff and an environmental planning consultant currently supporting the Work Plan with the development of a strategy to expedite CEQA and adequately support environmental permit(s). The candidate spillway projects include rehabilitating the existing spillway, replacing the spillway at or near the current spillway's location, or constructing a new spillway at an entirely new location, likely near the left abutment of the dam. The latter candidate project is initially judged to be infeasible by Agency staff; however, it will be considered by the design engineering consultant during the preliminary (10 percent) design phase of their work.

The Agency has initiated CEQA strategy discussions assuming the Project is a stand-alone endeavor and will progress independently of the Agency's Interlake Tunnel Project (a project that interconnects Nacimiento and San Antonio reservoirs with a tunnel, and possibly seven feet rise of the normal operating level of San Antonio if judged feasible). Any alternations to the hydraulic capacity of the San Antonio spillway and the subsequent environmental clearances will be the responsibility of the Interlake Tunnel Project. This mandated Project has independent utility and is required by DSOD regardless of the pending Interlake Tunnel Project. It needs to be implemented on a much more rigorous schedule than the voluntarily proposed Interlake Tunnel Project.

The Agency's initial strategy for CEQA compliance is to evaluate the Statutory Exemption under California Code of Regulations (CCR) Title 14, Section 15269 "Emergency Projects", and the Categorical Exemption under CCR Title 14, Section 15302 "Replacement or Reconstruction" for applicability to the Project. Other options could include preparation of an Initial Study leading to either a Mitigated Negative Declaration or a focused Environmental Impact Report. After preliminary evaluation is completed, the Agency will make any necessary revisions to the Work Plan and advise DSOD. Environmental documentation will be needed as a prerequisite to DSOD's Project approval.

DSOD Interaction Anticipated:

- Informal meeting and consultation regarding CEQA and permitting, as needed.

Deliverables:

- Technical memoranda that outline strategies for the Project's environmental compliance
- Appropriate level CEQA document
- Coordination with various agencies

Design and Funding Phases

The Design and Funding are programmed into a combined phase because the detailed design deliverables are contingent on funding being secured for the project.

The Design Phase is programmed to occur over two sub-phases:

- Preliminary Design to include a 10 percent design submittal to support the CEQA process, and a further refined 30 percent design submittal to support the funding process.
- Detailed Design to include a 60 percent, 90 percent, and 100 percent (bid-ready) design submittals. The 60 percent design submittal will support the environmental permit applications to the various jurisdictional agencies. The 90 percent design will support the DSOD regulatory application/review.

A decision point is programmed into the Work Plan to accommodate the Go/No-Go decision from the Interlake Tunnel Project team on whether to raise the spillway crest (maximum raise anticipated at seven feet). This decision milestone is assumed at the end of the 10 percent design, although it could be accommodated into the design at later points in time but likely would have schedule impacts to the Project.

An Engineer's Report will be prepared based on the 30 percent design's opinion of probable construction cost. A successful funding process is programmed as a prerequisite to entering the Detailed Design sub-phase. Funding to support the entire project through the sale of bonds can be accomplished once the method to repay any bonds is secured.

The procurement of the Construction Management consultant is programmed to begin as soon as funding is available. The purpose of this early procurement is to have the consultant provide a constructability review of the 60 percent design documents. The comments from this review will be incorporated into the 90 percent design process. The Construction Management consultant will be on-hold after their constructability review submittal until the project approaches the bidding phase.

The receipt of all environmental permits is a prerequisite to the completion of the 100 percent design documents which are used in the Bidding Phase as the advertised bid documents. All environmental permits are assumed to be reference information within the bidding documents.

DSOD Interaction Anticipated:

- Informational meeting with Agency at the end of the 10 percent design
- Informational meeting with Agency at the end of the 30 percent design
- Informational meeting with Agency at the end of the 60 percent design

- Application and fee submittal for DSOD regulatory review during the 90 percent design level
- Informational submittal of the bidding documents

Deliverables:

- Design submittals to Agency at the 10-, 30-, 60-, 90-, and 100-percent designs
- Engineer's Report
- Agency's Governing Authority action(s) to provide funding
- Professional Construction Management Services procurement
- Constructability Review of 60 percent design by Construction Management consultant
- Informal feedback from DSOD during the informational meetings
- Regulatory review set comments from DSOD (comments incorporated into 100 percent design)
- Bid-ready documents at the end of the 100 percent design

Environmental Permitting

The environmental permitting application process with jurisdictional agencies is programmed to occur at the end of the 60 percent design. The receipt of these permits is anticipated to take one year once the applications are submitted. The receipt of the permits is judged as important reference materials to be included with the bidding documents.

The environmental permitting process is anticipated to have a duration about equal to the 90 percent design progress. The final permits will be incorporated into the 100 percent design documents.

DSOD Interaction Anticipated:

- Coordination with DSOD as necessary

Deliverables:

- Environmental permit applications/fees to jurisdictional agencies
- Permits from jurisdictional agencies
- 100-percent design documents (i.e., bid-ready documents)

Bidding Phase and Construction Phase

The Construction Management consultant will be re-engaged at this point in the Project to support the Agency in managing the bidding of the project. The 100 percent design document will be packaged for bid advertising by the Agency. The support provided is anticipated to include: receive and respond to bidder questions, manage the development and issuance of bid addenda, manage and conduct a pre-bid site meeting, receive and evaluate bids and make recommendations for construction award, and if necessary support the Agency with bid protest(s).

The construction phase will begin following a successful bid phase. The Construction Management consultant will be responsible for overseeing and managing the construction. Duties include, and may not necessarily be limited to, document control, coordination meetings, construction inspection, quality assurance testing and oversight, progress reporting including monthly reporting to DSOD, change management, and project management coordination with the Agency.

Project closeout activities will be the final activities for the Project. This activity is the development of as-built drawings, file close-out, final payment application processing, and management of any claim matters.

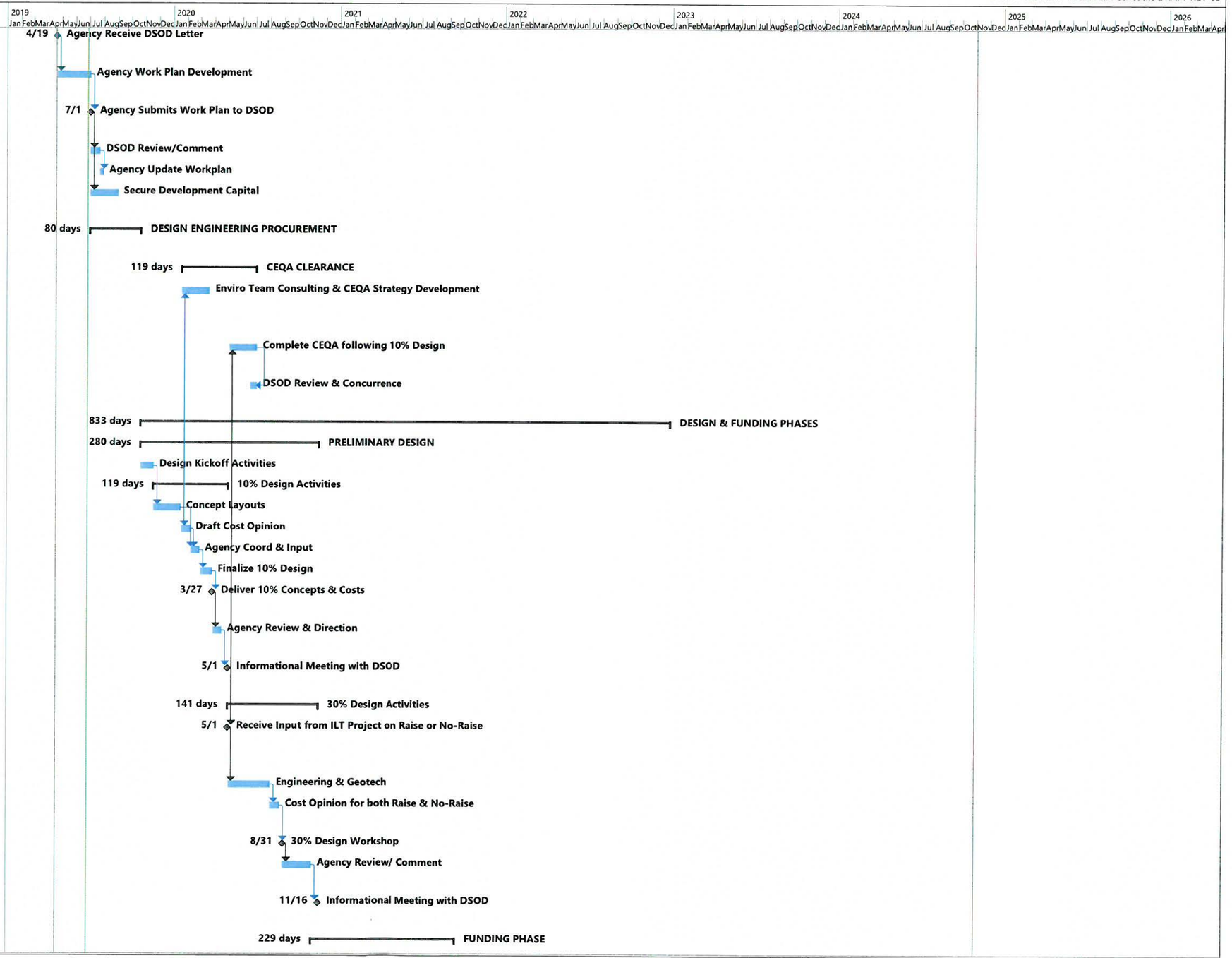
DSOD Interaction Anticipated:

- Monthly progress reporting during construction
- Agency to host DSOD site visitations
- As-built document submittal to DSOD
- Certification of Project Completion
- Notification of Acceptance by DSOD

Deliverables:

- Bidding documents to advertise
- Construction Bids
- Bid Evaluation report by Construction Management consultant
- Agency's Governing Body authorization to award construction
- Construction delivered by General Contractor
- Project closeout documentation

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
1		Agency Receive DSOD Letter	0 days	Fri 4/19/19	Fri 4/19/19	
2		Agency Work Plan Development	52 days	Fri 4/19/19	Mon 7/1/19	1
3		Agency Submits Work Plan to DSOD	0 days	Mon 7/1/19	Mon 7/1/19	2
4		DSOD Review/Comm	15 days	Tue 7/2/19	Mon 7/22/19	3
5		Agency Update Work	5 days	Tue 7/23/19	Mon 7/29/19	4
6		Secure Development Capital	44 days	Tue 7/2/19	Fri 8/30/19	3
7		**DESIGN ENGINEERING PROCUREMENT**	**80 days**	**Tue 7/2/19**	**Mon 10/21/19**	
16		**CEQA CLEARANCE**	**119 days**	**Mon 1/20/20**	**Thu 7/2/20**	
17		Enviro Team Consulting & CEQA Strategy Development	44 days	Mon 1/20/20	Thu 3/19/20	24
18		Complete CEQA following 10% Design	44 days	Mon 5/4/20	Thu 7/2/20	30
19		DSOD Review & Concurrence	10 days	Fri 6/19/20	Thu 7/2/20	18FF
20		**DESIGN & FUNDING I**	**833 days**	**Tue 10/22/19**	**Thu 12/29/22**	
21		**PRELIMINARY DES**	**280 days**	**Tue 10/22/19**	**Mon 11/16/2**	
22		Design Kickoff A	20 days	Tue 10/22/19	Mon 11/18/19	15
23		**10% Design Acti**	**119 days**	**Tue 11/19/19**	**Fri 5/1/20**	
24		Concept Layo	44 days	Tue 11/19/19	Fri 1/17/20	22
25		Draft Cost Op	15 days	Mon 1/20/20	Fri 2/7/20	24
26		Agency Coord	15 days	Mon 2/10/20	Fri 2/28/20	24,25
27		Finalize 10% D	20 days	Mon 3/2/20	Fri 3/27/20	26
28		Deliver 10% Concepts & Costs	0 days	Fri 3/27/20	Fri 3/27/20	27
29		Agency Review & Direction	15 days	Mon 3/30/20	Fri 4/17/20	28
30		Informational Meeting with DSOD	0 days	Fri 5/1/20	Fri 5/1/20	29FS+10 days
31		**30% Design Acti**	**141 days**	**Fri 5/1/20**	**Mon 11/16/2**	
32		Receive Input from ILT Project on Raise or	0 days	Fri 5/1/20	Fri 5/1/20	30
33		Engineering &	66 days	Mon 5/4/20	Mon 8/3/20	32
34		Cost Opinion for both Raise &	15 days	Tue 8/4/20	Mon 8/24/20	33
35		30% Design W	0 days	Mon 8/31/20	Mon 8/31/20	34FS+5 days
36		Agency Review/ Comment	45 days	Tue 9/1/20	Mon 11/2/20	35
37		Informational Meeting with DSOD	0 days	Mon 11/16/20	Mon 11/16/20	36FS+10 days
38		**FUNDING PHASE**	**229 days**	**Tue 11/3/20**	**Fri 9/17/21**	



ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
43		**DETAILED DESIGN**	**464 days**	**Mon 3/22/21**	**Thu 12/29/2**	
44		60% Design Acti	88 days	Mon 3/22/21	Wed 7/21/21	41
45		60% Design Wor	0 days	Wed 7/28/21	Wed 7/28/21	44FS+5 days
46		Agency Review/ Comment	60 days	Thu 7/29/21	Wed 10/20/21	45
47		Informational Meeting with DSOD	0 days	Wed 11/3/21	Wed 11/3/21	46FS+10 days
48		90% Design Acti	44 days	Thu 11/4/21	Tue 1/4/22	47,73
49		Agency Review/ Comment	45 days	Wed 1/5/22	Tue 3/8/22	48
50		Produce Regulatory Review Set for	20 days	Wed 3/9/22	Tue 4/5/22	49
51		DSOD Review Design Application +	88 days	Wed 4/6/22	Fri 8/5/22	50
52		Finalize 100% Design & Package for	44 days	Mon 8/8/22	Thu 10/6/22	51
53		100% Camera Ready Bid Set Submitted	0 days	Thu 10/6/22	Thu 10/6/22	52
54		**Float in Design I**	**60 days**	**Thu 10/6/22**	**Thu 12/29/2**	
57		**ENVIRONMENTAL PE**	**326 days**	**Mon 9/20/21**	**Mon 12/19/2**	
60		**BIDDING PHASE**	**180 days**	**Fri 10/7/22**	**Thu 6/15/23**	
70		**CM PROCUREMENT & REVIEW OF 60% DESIGN**	**113 days**	**Mon 3/22/21**	**Wed 8/25/21**	
71		Prep CM RFP	20 days	Mon 3/22/21	Fri 4/16/21	41
72		CM Procurement P	60 days	Mon 4/19/21	Fri 7/9/21	41,71
73		Constructibility Review of 60% Design	25 days	Thu 7/22/21	Wed 8/25/21	44
74		**CM DURING BIDDING & CONST. PHASES**	**480 days**	**Fri 10/7/22**	**Thu 8/8/24**	
75		CM Kickoff to Manage Bidding	0 days	Fri 10/7/22	Fri 10/7/22	61SS
76		Manage Bidding Pl	110 days	Fri 12/30/22	Thu 6/1/23	75,62
77		Manage Construction Phase & Monthly Reports to DSOD	260 days	Fri 6/16/23	Thu 6/13/24	69,76
78		Project Closeout	40 days	Fri 6/14/24	Thu 8/8/24	77,81
79		**CONSTRUCTION PHA**	**260 days**	**Fri 6/16/23**	**Thu 6/13/24**	
80		Assumed Const. Duration	260 days	Fri 6/16/23	Thu 6/13/24	69
81		Est'd Const. Compl	0 days	Thu 6/13/24	Thu 6/13/24	80
82		**POST DESIGN FLOAT**	**61 days**	**Thu 8/8/24**	**Fri 11/1/24**	
85		DSOD Mandated Completion	0 days	Fri 11/1/24	Fri 11/1/24