Sent: 7/1/2021 7:22:08 AM
To: Jerry Brown [jbrown@sitesproject.org]
Subject: FW: Leg Outreach July Cmte Mtg
Attachments: Water Board Members.docx

From: Marcia Kivett
Sent: Wednesday, June 30, 2021 4:57 PM
To: Jerry Brown <jbrown@sitesproject.org>; Kevin Spesert <kspesert@sitesproject.org>
Cc: Alicia Forsythe <aforsythe@sitesproject.org>
Subject: RE: Leg Outreach July Cmte Mtg

Let me know if you want 1 page per person. Their bios are fairly short.

From: Jerry Brown <jbrown@sitesproject.org>
Sent: Wednesday, June 30, 2021 7:39 AM
To: Kevin Spesert <kspesert@sitesproject.org>; Marcia Kivett <MKivett@sitesproject.org>
Cc: Alicia Forsythe <aforsythe@sitesproject.org>
Subject: Leg Outreach July Cmte Mtg

As part of this meeting I'd like to send the group a bio sheet containing a brief bio for each of the State Board members.

Marcia – Can you assist with putting this together. Pull from their website?

Kevin – Can you make sure this gets included in the packet? Also, the agenda for this item needs to cover:
1. The bios, any questions or comments
2. The fact that we are scheduling briefings with each member prior to the August release of the EIR. Our attendees for these meetings will include the chairs, me and Ali. The content will be update on project status and preview of water rights application. We are seeking to learn any concerns or issues they might have as individual state board members.

Thanks

From: Spranza, John [John.Spranza@hdrinc.com]
Sent: 7/1/2021 11:04:03 AM
To: Twardochleb, Laura@DWR [Laura.Twardochleb@water.ca.gov]
CC: Alicia Forsythe [aforsythe@sitesproject.org]
Subject: Sites Project WSIP/Yolo Flow Question

Hi Laura,
The Sites Authority is working on our finishing up our Draft EIR and as you are likely aware of, we have been funded under WSIP to provide flows through the Yolo Bypass, similar to those under the NDFA. One item that has come up was whether or not the NDFA identified any negative effects of the pulses on the floodplain landcover. Specifically, any potential flooding effects to agriculture, sensitive vegetation communities (wetlands and such) or increased methylation of mercury. Have you had to deal with any of these issues?

Any help is much appreciated.

John

John Spranza, MS, CCN
Senior Ecologist / Regulatory Specialist
Sites Project Permitting and Agreements Integration Lead.

HDR
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From: Spranza, John [John.Spranza@hdrinc.com]
Sent: 7/1/2021 11:11:55 AM
To: Brittany.E.Davis@water.ca.gov; Mallory Bedwell [Mallory.Bedwell@water.ca.gov]
CC: Alicia Forsythe [aforsythe@sitesproject.org]
Subject: Sites Project WSIP/Yolo Flow Question on NDFA

Hi Brittany and Mallory,
Laura is out of office so I'm reaching out to you two hoping you can help with a question. The Sites Project Authority is working on our finishing up our Draft EIR and as you are likely aware of, we have been funded under WSIP to provide flows through the Yolo Bypass, similar to those under the NDFA. One item that has come up was whether or not the NDFA identified any negative effects of the pulses on the floodplain landcover. Specifically, any potential flooding effects to agriculture, sensitive vegetation communities (wetlands and such) or increased methylation of mercury. Have you had to deal with any of these issues?

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From: Gehrts, Karen@DWR [Karen.Gehrts@water.ca.gov]
Sent: 7/1/2021 1:28:11 PM
To: Spranza, John [john.spranza@hdrinc.com]
CC: Alicia Forsythe [aforsythe@sitesproject.org]; Bedwell, Mallory@DWR [Mallory.Bedwell@water.ca.gov]; Davis, Brittany E.@DWR [Brittany.E.Davis@water.ca.gov]; Twardochleb, Laura@DWR [Laura.Twardochleb@water.ca.gov]
Subject: RE: Sites Project WSIP/Yolo Flow Question on NDFA

Hello John
I'm the manager of the unit that runs the NDFA project. Brittany and Laura are out of the office, but will get back to you on Tuesday.
I hope you have a great Fourth of July Holiday.
Karen

From: Bedwell, Mallory@DWR <Mallory.Bedwell@water.ca.gov>
Sent: Thursday, July 1, 2021 1:16 PM
To: Gehrts, Karen@DWR <Karen.Gehrts@water.ca.gov>
Subject: FW: Sites Project WSIP/Yolo Flow Question on NDFA

Hi Karen,
I have received a couple of inquires today about NDFS results and conclusions (I'll forward the second one to you after this) and since both Britt and Laura are out, I wanted to coordinated with you on a response, in case they are sensitive in nature. See below for the first inquiry about NDFS findings. I am aware that sometimes we have had some flooding in fields during the flow action (just word of mouth from the irrigation districts. Hasn't really been quantified or formally complained about). I am uncertain about the other questions. Let me know how we should respond! Thanks!

Cheers,
Mallory

From: Spranza, John <John.Spranza@hdrinc.com>
Sent: Thursday, July 1, 2021 11:12 AM
To: Davis, Brittany E.@DWR <Brittany.E.Davis@water.ca.gov>; Bedwell, Mallory@DWR <Mallory.Bedwell@water.ca.gov>
Cc: Alicia Forsythe <
Subject: Sites Project WSIP/Yolo Flow Question on NDFA

Hi Brittany and Mallory,
Laura is out of office so I'm reaching out to you two hoping you can help with a question. The Sites Project Authority is working on our finishing up our Draft EIR and as you are likely aware of, we have been funded under WSIP to provide flows through the Yolo Bypass, similar to those under the NDFA. One item that has come up was whether or not the NDFA identified any negative effects of the pulses on the floodplain landcover. Specifically, any potential flooding effects to agriculture, sensitive vegetation communities (wetlands and such) or increased methylation of mercury. Have you had to deal with any of these issues?

Any help is much appreciated.

John

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Final HC Constructability Technical Memorandum

To:	Sites Project Authority
CC:	Henry Luu, P.E. (HDR)
Date:	April 19, 2021
From:	Jeff Smith, P.E. (Jacobs), Isabell Barrios (Jacobs), Brian Martinez, P.E (Geosyntec), Derek Morly, P.E. (Geosyntec), Larry Fishman, P.E. (Vanderweil)
Quality Review by:	Peter Rude, P.E.(Jacobs)
Authority Agent Review by:	Henry Luu, P.E. (HDR)
Subject:	Constructability Analysis for Conveyance Facilities Task Order No. 2

1.0 Executive Summary

The purpose of this exercise was to investigate and confirm the Sites Conveyance Facilities (HC facilities) can be constructed given the complexity, schedule, as well as the availability of materials and labor.

1.1 Schedule

The construction schedule to have the HC facilities complete by end of 2028 is reasonable, but will require careful planning to ensure long-lead time equipment is specified and ordered early. This equipment includes the pumps, generator turbines, and switchgear for substations. The timing of completing work at existing facilities such as installing new pumps at the Red Bluff Pumping Plant, dredging of the Funks Reservoir and tying into the GCID Main Canal will be performed over several seasons given the short duration when these facilities may be taken out of service.

1.2 Construction materials

Construction materials are primarily composed of earthwork and concrete, both of which are readily available in the timeframe allowed for the quantity required. Earthwork may require moving excavated spoils for reuse on other project features such as the large reservoirs and for construction of the TRR East. However, there should be sufficient spoils material available given the large volume generated from the pipelines construction.

1.3 Workforce

Providing for a sufficient labor force for this project poses a challenge, but is manageable. It is anticipated that much of the labor force would come from the surrounding region, with contractors also bringing some skilled work force from other areas. The surrounding counties, including Placer, Sacramento and Yolo Counties, have a regional population of over two million. It may be advantageous to consider project labor agreements with trade unions as a means of accommodating the project labor requirements, as well as avoiding labor disputes. This strategy has been used successfully on other large civil works projects in California.

1.4 Equipment Availability

The required equipment consists of standard heavy earthmoving and excavation equipment. Although the quantity of equipment may be large, especially for reservoir construction, this type of equipment is commonly found in the region and elsewhere. Large contractors would use their own equipment, lease or purchase new equipment.

1.5 Summary

In summary, although there are risks to the scheduled four-year completion of construction, the HC facilities of the Sites Reservoir Project can be constructed with existing technology and available construction materials, work force and equipment.

2.0 Introduction

The Sites Reservoir Project (Project) consists of a large reservoir, ancillary roads, and conveyance facilities near Maxwell, California. The Site Joint Power Authority (Authority) decided to segregate the design of these facilities into two segments. The first, Segment H Reservoir (HR), includes design of the reservoir features (including several dams and inlet/outlet (I/O) tunnels at Golden Gate Dam) and relocation of roads displaced by the reservoir. The second segment, Segment H Conveyance (HC), includes improvements to: the two existing diversion canals from the Sacramento River to the project area (Tehama-Colusa Canal [TCC] and Glenn-Colusa Irrigation District [GCID] Main Canal); regulating reservoirs (existing Funks Reservoir and a new Terminal Regulating Reservoir); two pumping generating plants (PGP) and their respective substations; electrical interconnection transmission lines; large-diameter pipelines from each PGP to Sites Reservoir; and a large-diameter pipeline to convey water from the TCC to the Colusa Basin Drain (CBD) or Sacramento River near Dunnigan, California.

This technical memorandum addresses the constructability of the Conveyance HC segment. Detailed descriptions of each facility are provided in the next section. An overall site plan of the project area is provided on Figure 1.

2.1 General Description of Facilities

Following is a list of the individual new facilities and existing facilities associated with only the Conveyance portion of the Sites Project that require improvements:

- Improvements to the Tehama-Colusa Canal Authority (TCCA) Red Bluff Pumping Plant on the Sacramento River
- GCID canal improvements upstream of the Terminal Regulating Reservoir (TRR)
- TRR-East Alternative
- TRR-West Alternative
- TRR PGP with respective substation
- TRR pipelines
- Funks Reservoir – sediment removal
- Funks PGP with respective substation
- Funks pipelines
- Western Area Power Administration (WAPA) or Pacific Gas and Electric (PG&E) substation/switchyard
- Power transmission lines
- Dunnigan Pipeline (Alternatives 1 and 2)

- Administration and operations building
- Maintenance and storage building
- Access roads

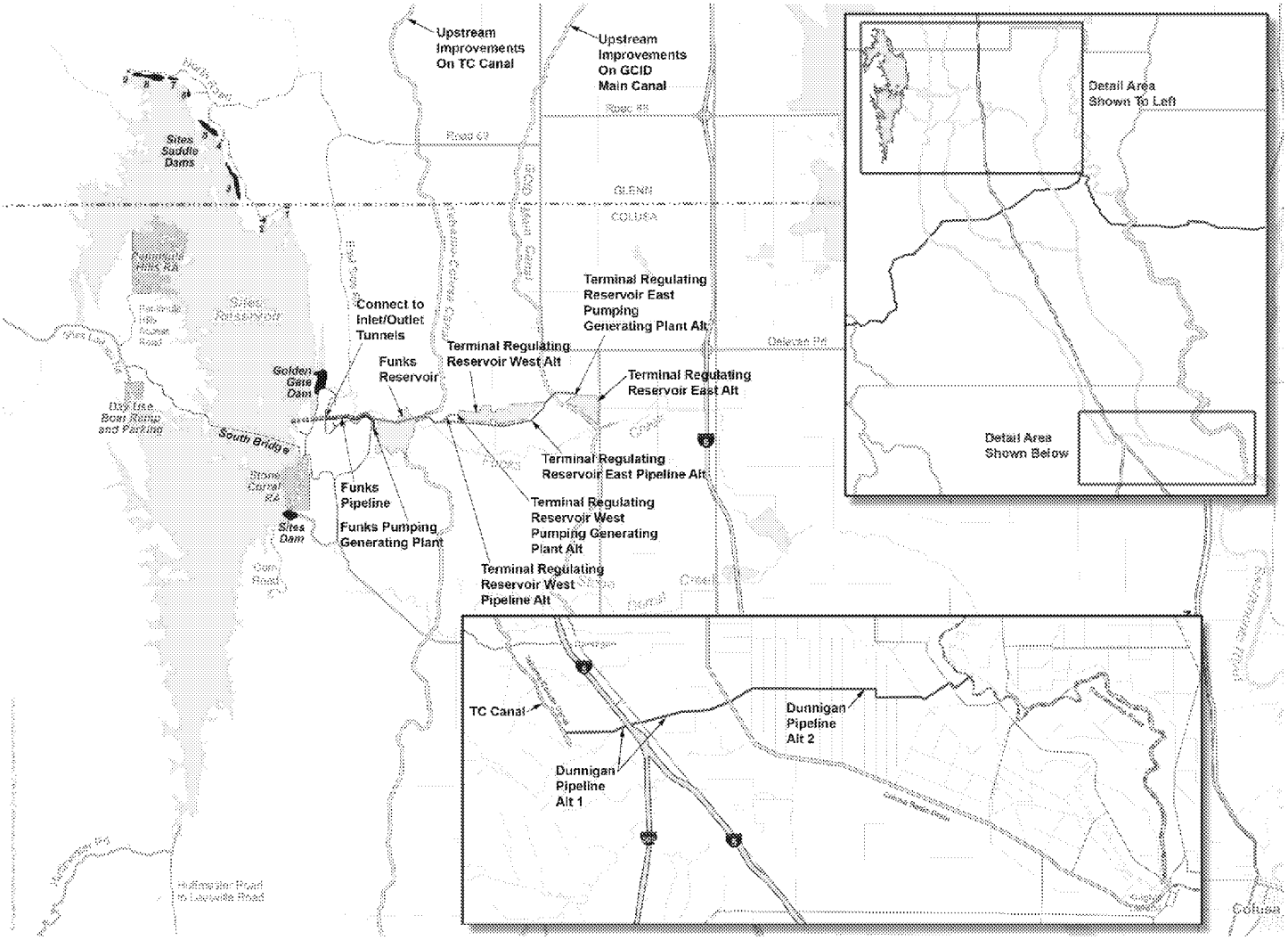


Figure 1: Project Area Site Plan

2.1.1 Improvements to the TCCA Red Bluff Pumping Plant

The Red Bluff Diversion is located on the Sacramento River in Red Bluff, California. The facility includes a 2,500 cubic feet per second (cfs) capacity, 1,180-foot-long fish screen structure, forebay, pumping plant (current capacity 2,000 cfs), electrical switchyard, and a 660-foot-long access bridge, canal, and siphon under Red Bank Creek, to deliver water from the Sacramento River into the TCC and Corning Canal. This facility was constructed and put into operation in October 2012. The pumping plant was designed to accommodate the Sites Project. The plant includes space to add two additional 250 cfs 600-horsepower pumping units, bringing the total pumping capacity to 2,500 cfs.

2.1.2 GCID Main Canal Improvements

The GCID Main Canal delivers water from the Sacramento River to water users along its route, from its diversion point approximately 5 miles northwest of Hamilton City to southeast of the City of Williams. The canal is a 65-mile-long, unlined, earthen channel, with capacity varying from 3,000 cfs at the upstream end to 300 cfs

at the southern terminus. Water conveyed by the canal is pumped by the Hamilton City Main Pump Station into the GCID Main Canal.

Improvements to the GCID Main Canal will include a new 3,000 cfs headworks structure just downstream of the Hamilton City Diversion, two new siphon structures (Willow Creek and Walker Creek), modifications to a railroad siphon at Willows, canal earthwork, and some canal bank gravel road improvements. The need for replacing the siphons and railroad crossing will be determined after a canal hydraulic model and condition assessment are completed, which is anticipated to be in Spring 2021.

2.1.3 TRR

This is a new reservoir that will be hydraulically connected to the GCID Main Canal, about 3 miles east of Funks Reservoir and just upstream of the Funks Creek Siphon at milepost 41.3 on the GCID Main Canal. The footprint of the TRR will be approximately 130 acres, with a storage volume of approximately 600 acre-feet. The TRR will also include gates to control water flow in and out of the GCID Main Canal. There are two alternative locations for the TRR: one on the eastern side of the GCID Main Canal (TRR-East) and one on the western side of the GCID Main Canal (TRR-West).

2.1.4 TRR PGP

This is a PGP that will be used to pump water from the TRR to the Sites Reservoir. This facility will also include hydroelectric turbines to generate electricity when flow is released from Sites Reservoir to the TRR and GCID Main Canal. As part of this PGP facility, there will also be an energy-dissipation facility to allow releases back to the TRR as backup to the hydroelectric turbine facilities. The pumping plant will have a capacity of 1,800 cfs; the generating plant will have a capacity of 1,000 cfs.

2.1.5 TRR Pipelines

These are two, parallel, 12-foot-diameter pipelines used to convey water between the TRR PGP and the Sites Reservoir. These pipelines will connect from the piping manifold at TRR PGP to the downstream side of the two proposed 23-foot-diameter tunnels connected to the Site Reservoir I/O structure. The approximate length of these pipelines for TRR-East is 4.4 miles (23,200 feet) each. The approximate length of these pipelines for TRR-West is 2.5 miles(13,000 feet) each. Just downstream of the piping manifold that connects the TRR pipelines with the two I/O tunnels, there is a 24-inch-diameter Environmental Water Pipeline that is approximately 2,550 feet long and discharges into Funks Creek. This pipeline is not to be used for construction purposes, but is a long-term solution to provide water to Funks Creek just downstream of the proposed Golden Gate Dam.

2.1.6 Funks Reservoir

The U.S. Bureau of Reclamation (Reclamation) constructed the Funks Reservoir in the mid-1970s, with the intent of providing operational flexibility for the TCC. There are check structures on the TCC just upstream and downstream of the reservoir. The TCC is located about 1 mile east of the proposed Sites Reservoir. At the time of construction, the reservoir had a useable capacity of 1,170 acre-feet between operating levels of 199.5 and 205.2 feet elevation, and 1,080 acre-feet of inactive storage below elevation 199.5 feet, for a total capacity of 2,250 acre-feet. However, the addition of sediment from Funks Creek and the TCC have likely reduced the total storage volume. Additionally, a cofferdam will be constructed within Funks Reservoir to facilitate construction of the TRR pipelines. The resulting storage volume reductions will be offset by sediment removal and excavation where storage capacity can be regained. The spillway has a capacity of 2,500 cfs. The Project will remove accumulated sediment to recapture the design storage volume.

2.1.7 Funks PGP

This is a PGP that will be used to pump water from Funks Reservoir to the Sites Reservoir. This facility will also include hydroelectric turbines to generate electricity when flow is released from Sites Reservoir to Funks Reservoir and, ultimately, to the TCC. Part of this PGP facility will be an energy-dissipation facility that will

allow releases back to Funks Reservoir as backup to the hydroelectric turbine facilities. The pumping plant will have a capacity of 2,100 cfs; the generating plant will have a capacity of 2,000 cfs.

2.1.8 Funks Pipelines

These are 2 parallel, 12-foot-diameter pipelines used to convey water between the Funks PGP and the Sites Reservoir. These pipelines will connect from the piping manifold at Funks PGP to the downstream side of the 2 proposed, 23-foot-diameter, tunnels connected to the Site Reservoir I/O structure. The approximate lengths of these pipelines are 1 mile (5,200 feet) each.

2.1.9 Dunnigan Pipeline

The Dunnigan pipeline consists of either a 9-foot-diameter or 10.5-foot-diameter pipeline that will be used to release water from the TCC to the Sacramento River. The concept is to release flow from Sites Reservoir to Funks Reservoir, where the flow will then go south about 40 miles to near the end of the TCC. At this point, flow will be diverted into the Dunnigan pipeline, where flow will head either to the CBD, which flows to Sacramento River, or directly to the Sacramento River. If the pipeline discharges directly into the Sacramento River, then a portion of the water will also be diverted and discharged in the CBD. Alternative 1 consists of a 9-foot-diameter pipeline that is about 4 miles (20,900 feet) long and discharges into the CBD. Alternative 2 consists of a 10.5-foot-diameter pipeline that is about 9.4 miles (49,500 feet) long and discharges directly into the Sacramento River.

2.1.10 Electrical Transmission Lines and Substations

Electrical transmission lines will be required to connect the existing WAPA or PG&E 230 kV transmission lines to the TRR PGP and the Funks PGP. There are 230 kilovolt (kV) electrical transmission lines running near the proposed project area. Specifically, the WAPA transmission lines run very close to Funks Reservoir in a north-south direction, with a parallel 230 kV line owned by PG&E a few miles east of the WAPA transmission lines. It is anticipated that one of these transmission lines will be connected to provide power for the Project, and receive generated electrical power from the hydroelectric turbines. Substations will be needed to provide power to and receive power from both the TRR and Funks PGP's.

2.1.11 Administration and Operations Building

At this time, staffing requirements for operating and maintaining the Sites facilities have not been defined, but an administration and operations building is provided, based on a drawing obtained from Reclamation. This building is anticipated to be next to the Funks PGP.

2.1.12 Maintenance and Storage Building

A building will be required to provide maintenance and storage associated with the Project. A drawing from Reclamation of the building was used in the feasibility design. This building is anticipated to be next to the Funks PGP.

2.1.13 Access Roads

Access to the proposed TRR-East site would likely be from McDermott Road, which lies adjacent to the proposed reservoir. Access to the Funks complex (PGP and reservoir) is currently accomplished using the operations and maintenance road, along the TCC. Access to the proposed TRR-West site would come off the Access to the Funks complex. A new access road will be required that allows larger equipment and year-round access. It is also anticipated that roads will be constructed within the TRR-East or TRR-West and Funks Pipeline easements, not only to provide access to the pipelines and electrical power transmission lines, but also to act as a secondary access road to the project facilities. Access roads are more fully described in Section 4 and in Appendix A.

2.2 Purpose and Scope

The purpose of this task is to demonstrate that the HC portion of the Project can be constructed with existing technology and availability of construction materials, work force, and equipment. This task includes the following:

- General construction conditions on conveyance activities, including site access, weather and environmental considerations, and staging use
- Characterization of material balance for TRR-East and TRR-West, considering borrow material sources, locations of placement within the TRR and their required volumes, and disposal
- Equipment use tables (including schedule and durations of use)
- Construction sequencing plan, risks, and construction schedule for the facilities within the HC contract (The constructability analysis will demonstrate the ability to provide public benefits by 2030.)
- Work force staff and equipment needs estimated over the construction period, for facilities within the HC contract

2.3 Limitations

The scope of work for this technical memorandum (TM) is restricted to the development of the constructability activities for the Sites Reservoir under the HC contract. Constructability activities for the reservoir facilities are separately considered in a companion TM for the HR contract.

Jacobs represents that our services have been conducted in a manner that is consistent with the standards of care ordinarily applied as the state of practice in the profession, within the limits prescribed by our client.

This TM is intended for the sole use of the Sites Project Authority. The scope of services performed may not be appropriate to satisfy the needs of other users. Any use or reuse of this document or of the findings, conclusions, or recommendations presented herein is at the sole risk of said user.

3.0 Public Interface and Site Safety

3.1 Public Interface and Traffic Routing

Construction of conveyance facilities will involve approximately 4 years of regularly transporting construction equipment and materials on public roadways leading to the site. The anticipated increase in traffic in the rural area of the Project warrants special planning. The Authority is taking measures for the appropriate conveyance of construction traffic, considering the safety and convenience of the traveling public. Construction access routes to the site have been defined to avoid the Town of Maxwell.

Objectives of the traffic handling strategy will be: avoiding the comingling the traveling public with construction activities, avoiding public interface with heavy off-road equipment, and minimizing public interface with other construction equipment required on public roadways.

Construction access figures are provided in Appendix A.

3.2 Site Safety

The contractor is responsible for means and methods to complete the work safely. The contractor also is required to provide for public safety and safe access for inspection and to Authority employees.

California Code of Regulations (CCR), Title 8 and California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) will have overall jurisdiction regarding project safety, including tunneling. Additionally, the interconnected utility (WAPA or PG&E) Health and Safety Standards and Protocols will be included in the works for the contractor to follow and implement.

Work around construction equipment requires special precautions and the contractor will be required to provide and maintain equipment in accordance with CCR Title 8.

4.0 General Considerations

4.1 Procurement and Work Packages

Procurement packages should divide the work in a manner that considers market conditions, resource availability, and bonding, and is conducive to concurrent construction of conveyance facilities. The construction procurement strategy and program should also recognize the need for participation from large, national, and international contractors with adequate resources to complete the anticipated work. The procurement strategy should consider contractor prequalification and proposals, as necessary, to provide for contracting with constructors who are qualified for the work involved; the strategy should anticipate adequate time in the procurement schedule.

For this constructability analysis, and considering the site arrangement, contractor resources, and work type, potential contract packages are anticipated as follows:

- Design-bid-build (traditional) contracts:
  - TCCA Red Bluff Pumping Plant improvements
  - GCID Main Canal improvements
  - TRR Alternatives
    - TRR-East
      - Contract 1: Ground improvement (cement deep soil mixing [CDSM]), also includes haul roads, GCID Canal bridge, material handling, stockpile
      - Contract 2: PGP and reservoir earthwork, also includes base liner, spillway, I/O works, GCID Canal plug
    - TRR-West
      - Contract 1: Earthwork (reservoir excavations), also includes haul roads, surface water diversion, stockpile (Note: Because this earthwork does not have to be done all at one time or any particular time, this contract can be broken into multiple contracts and/or can be part of HR Reservoir contract[s] to optimize material usage)
      - Contract 2: PGP and I/O works, also includes reservoir base liners, tunnels between main and extension reservoirs, existing canal lateral relocation, GCID Canal plug
  - Funks Reservoir
    - Contract 1: Dredging, also includes haul roads, surface water diversion (including Funks Creek), material handling, dewatering, stockpile
    - Contract 2: PGP and reservoir earthwork, includes Funks Creek diversion, approach channel excavation, temporary cofferdams
- Design-Build Contracts:
  - TRR/Funks pipelines
  - Dunnigan pipeline Alternative 1 or 2
  - Transmission power lines
  - Electrical substations
  - Interconnection substation for WAPA or PG&E

4.2 Site Access

4.2.1 Improvements to the TCCA Red Bluff Pumping Plant

Site access plan and details for the GCID Main Canal upgrade locations are provided on the figures in Appendix A.

4.2.2 GCID Main Canal Improvements Area

Site access plan and details for the GCID Main Canal improvement locations are provided on the figures in Appendix A.

4.2.3 Funks and TRR Area

The proposed Funks PGP and TRR PGP sites are located in Colusa County, about 7 miles west of Maxwell, California. Access is shown on the figures in Appendix A.

Some roadway improvements will be required within the Funks area. The Funks PGP site will be accessed via a 30-foot-wide all weather gravel road from Maxwell Sites Road to the south. Paved parking will be provided at the PGP. Existing gravel roads will be improved to be 30 feet wide; these roads will be relocated through the PGP site. A 30-foot-wide all weather gravel bypass road may be provided to the west of the site. On the northern side of the site, the existing dirt road will be improved to be a 30-foot-wide all weather gravel road that will follow the existing road alignment until it reaches the TRR pipeline. At that location, a new 30-foot-wide all weather gravel access road will be built alongside the Funks and TRR pipelines to the connection with the Sites tunnels.

Most of the proposed Funks PGP site is in a Federal Emergency Management Agency (FEMA) Area of Minimal Flood Hazard, Zone X, but a portion of the existing gravel road to the northwest of the PGP site and adjacent to the existing creek is located within a FEMA Special Hazard Flood Area without Base Flood Elevation, Zone A. This portion may need to be raised, if all-season access from that direction will be required.

The proposed TRR-East is located in Colusa County, east of the GCID Main Canal, north of Funks Creek, and just West of McDermott Road. The site will be accessed via a maximum 30-foot-wide all weather gravel road from McDermott Road. Paved parking will be provided near the pumping generating plant.

The proposed TRR-East site is located within a designated FEMA Special Flood Hazard Areas, Zone A, Without Based Flood Elevation. A base flood elevation will need to be determined prior to project approval.

The proposed TRR-West is located in Colusa County, west of the GCID Main Canal, east of Funks Reservoir, and north of Funks Creek. The site will be accessed via an all-weather gravel road off Funks Reservoir. Paved parking will be provided near the PGP.

The proposed TRR-West site is not located within a flood zone.

4.2.4 Dunnigan Pipeline Area

Site access plans and details for the Dunnigan pipeline Alternatives 1 and 2 are on the figures in Appendix A.

4.3 Weather Considerations

Wet weather may affect construction activities, although not significantly. Potential impacts may occur for a few specific work components, as detailed in the following paragraphs.

Wet weather has potential to delay the placement of the welded geomembrane liner on the cofferdams at Funks Reservoir. This activity is to be performed during the drawdown of the reservoir during the TCC Canal non-operational period, from December to March. The liner needs to be heat-welded together and will not seal if it is wet. In rainy weather, time-consuming drying could delay completion. Alternatively, rain shelters can be used to avoid such delays.

Both the TRR-East and TRR-West reservoir options involve I/O connections to the GCID Main Canal, with this construction to be performed within the GCID Main Canal non-operational window (January through February). Moving heavy equipment around during times that are too wet can cause delays and other construction challenges.

Stormwater control and stream diversions (particularly Funks Creek) will need to be handled in accordance with the Project's stormwater pollution prevention plan during construction activities.

Wet weather will have an impact on the construction of the Dunnigan pipeline, Alternatives 1 and 2, once the pipelines are east of the Highway (Hwy) 99 and railroad crossing. This area has silty/clay soils that make it very difficult for pipeline construction during extended wet weather.

4.4 Environmental Impacts and Impacts on Construction

It is beyond the scope of work for this TM to provide a detailed evaluation of environmental impacts resulting from construction; these impacts are addressed by others. Project planning will need to consider protection of species, such as nesting birds. A strategy of brush and tree clearing or netting of trees prior to nesting season could be employed to deter nesting birds, which otherwise could impact construction. Giant garter snake habitat is present along the Dunnigan pipeline; work adjacent to creeks and drains will need to be considered as well.

Dust control measures, similar to those employed on similar civil construction works, will be implemented. These will include gravel plating of haul roads, use of dust suppressants or surfactants on haul roads, water applied to haul roads, spray bars and dust catchment systems on aggregate processing equipment and batch plants, and other measures. Stockpiles and other open sources of fugitive dust will likely require temporary seeding. Air monitoring stations will be used.

4.5 Geotechnical Considerations

All of the planned conveyance facilities are considered constructable, using standard construction procedures and current geotechnical engineering practices.

4.5.1 TRR Alternatives

4.5.1.1 TRR-East

TRR-East features include embankment berms, canal I/O works, and a bridge over the GCID Main Canal. An important geotechnical consideration prior to the construction of TRR-East embankments involves ground improvement activities. Previous explorations within the footprint of the reservoir indicate adverse subsurface conditions that may be susceptible to liquefaction, lateral spreading, and ground settlement. To address these concerns, ground improvement will be performed and is anticipated to consist of CDSM methods.

Prior to mobilizing equipment for bridge construction, current site conditions along the eastern and western edges of the GCID Main Canal and available access routes should be considered. Limited available workspace for construction activities (such as pile driving and pile cap construction) and permissible access roads crossing the GCID Main Canal may limit mobilization or delay construction. Equipment mobilization should be initiated based on anticipated construction sequencing to the extent feasible.

Because of shallow or seasonal perched groundwater conditions, temporary dewatering may be required during excavation across the base of the reservoir. Groundwater removed during TRR-East construction activities would be managed and stored in accordance with state and local regulations.

Embankment berms associated with TRR-East will be under Division of Safety of Dams' (DSOD's) jurisdictional oversight. Anticipated turnaround times for required DSOD permitting and inspections must be accounted for to facilitate appropriate construction scheduling and help avoid delays in construction.

4.5.1.2 TRR-West

TRR-West features include two reservoir excavations (main and extension), the canal I/O works, and the extension reservoir connecting tunnel.

One of the geotechnical considerations includes high-cut slopes that could experience groundwater seepage, seasonal surface water erosion, and sediment transport. These considerations are routine and can be managed by implementing best management practices, as described in the Project's stormwater pollution prevention plan.

Excavations for each reservoir and the I/O works will produce topographically low areas that will concentrate groundwater, surface water, and construction water during construction activities. This concentration of water is considered routine and can be managed by a site-specific pumping plan to prevent conflicts with construction activities.

TRR-West features also cross existing corridor facilities (including overhead electrical transmission, underground gas lines, the GCID Main Canal, and a local landowner canal lateral). These crossings should be considered during construction to facilitate appropriate scheduling time for permitting, depth and distance to associated feature, and operating closure constraints (for the GCID Main Canal). In particular, the tunnel connecting the reservoirs crosses below the gas lines and considerations must be made to ensure tunnel roof stability and ground control (see Section 3.9 for more details).

Unlike TRR-East, TRR-West does not fall within DSOD's jurisdiction (because no dam will be constructed), which will remove the time associated with DSOD permitting and inspections.

4.5.2 Funks

Funks Reservoir features include sediment removal by dredging, temporary cofferdams construction and removal, and PGP approach channel excavation. Geotechnical considerations include soil characteristics of the dredge material to be reused as a material for construction.

For the dredged sediments to be used throughout the Project, they will need to be dewatered. Some soils from dredging are anticipated to be predominantly finer material and, therefore, likely to require more time to dry enough to be used for construction. Suitable materials for the temporary cofferdams are proposed to come from both the dredging and other areas of excavation. The cofferdam material will need to be sourced prior to the cofferdam construction, which would occur in the December through February non-operational period of Funk/TCC.

4.5.3 Other Conveyance Features

Other conveyance features that involve earthwork and geotechnical considerations, and for which limited geotechnical information is currently available include:

- The GCID Main Canal improvements. Geotechnical considerations include structural stability and uplift for the main head gate and siphon structures, and dewatering at those locations so the structures can be built in the dry.
- The TRR-East pipelines. Geotechnical considerations include dewatering the pipe trench near the GCID Main Canal, crossing the GCID Main Canal, pipe trench stability, tunneling/crossing the TCC and crossing the northern portion of Funks Reservoir.
- The TRR-West pipelines. Geotechnical considerations include pipe trench stability, tunneling/crossing the TCC, and crossing the northern portion of Funks Reservoir.
- The Funks pipelines. Geotechnical consideration include pipe trench stability and dewatering the trench along Funks Creek.

- The Dunnigan pipeline Alternative 1. Geotechnical considerations include pipe trench stability, tunneling under Interstate 5, Hwy 99, and the railroad; and dewatering the pipe trench as it heads east of the Hwy 99.
- The Dunnigan pipeline Alternative 2. Geotechnical considerations include the same as Dunnigan pipeline Alternative 1 and tunneling under the CBD and associated east levee (State Levee), crossing State Hwy 45, and going over the Sacramento River Levee.

The TCCA Red Bluff Pumping Plant improvements do not require any geotechnical considerations because the improvements are to an existing facility that involves no earthwork.

All of these features may be in close proximity of existing features near each location. Schedules should be planned and coordinated accordingly to protect existing features, and allow for operating windows, permitting, and associated approvals to avoid schedule delays.

4.6 Existing Utilities

4.6.1 Red Bluff Pumping Plant and TCC

The Red Bluff Pumping Plant and the TCC, which is a concrete-lined canal, needs to remain in service year round except for a 6- to 8-week period in December through early February. The dual TRR-West or the TRR-East pipelines will cross the canal at one location close to the entrance of the TCC to Funks Reservoir. Depending on time of year and further design, the dual 12-foot-diameter pipelines could be installed either by tunneling underneath the TCC or open-cutting the TCC.

Since the TCC and the Red Bluff Pumping Plan are Bureau of Reclamation owned facilities, work associated with the Red Bluff Pumping Plant, the TCC and Funks Reservoir will need to be coordinated with the Bureau of Reclamation and the Tehama-Colusa Canal Authority (TCCA).

4.6.2 GCID Main Canal

The GCID Main Canal is an earthen canal without any liner. It needs to remain in service year round, except for a 6- to 8-week period in December through early February. The dual TRR-East pipelines will cross the canal just west of TRR-East. It is expected that the dual 12-foot-diameter pipelines could be installed by open-cutting the canal. The connection of the GCID Main Canal to either TRR-East or TRR-West would be one of the last construction items for either reservoir project.

Since the GCID Main canal is a GCID owned facility, work associated with the GCID Main Canal will need to be coordinated with GCID.

4.6.3 PG&E

PG&E has two 230 kV transmission lines, running north to south, through the project site between Funks Reservoir and the GCID Main Canal. In PG&E's same right-of-way corridor, they also have two high-pressure gas lines. Coordination with PG&E will have to occur during design to be able to cross their facilities with the TRR-East pipelines, or the TRR-West reservoir.

In addition, coordination will need to occur with PG& E if the decision is made to connect to their 230 kV transmission lines for obtaining electricity for the PGPs and for transmitting power generated by the PGPs back to the electrical grid. This coordination would include: establishing the point of interconnection (POI); designing the modification of existing structures and conductors for crossing transmission lines; designing, constructing, and starting up and commissioning the substation prior to energization; and sequencing with the pumping station power energizing and startup schedule with the utility.

4.6.4 WAPA

WAPA has one 230 kV and one 500 kV transmission line running north to south through the project site, between Funks Reservoir and the GCID Main Canal. Coordination with WAPA will have to occur during design to be able to cross under their facilities with the TRR-East or TRR-West pipelines.

In addition, coordination will need to occur with WAPA if the decision is made to connect to their 230 kV transmission lines to obtain electricity for the PGPs and transmit power generated by the PGPs back to the electrical grid. This coordination would include: establishing the POI; designing the modification of existing structures and conductors for crossing transmission lines; designing, constructing, and starting up and commissioning of the substation prior to energization; and sequencing with the pumping station power energizing and startup schedule with the utility.

4.6.5 CBD

The CBD is an existing earth drainage feature that is unlined that has a state levee on its eastern bank. The CBD in general and at the location of project facilities (River Mile 10.0) is full of water all year. The levee is maintained by numerous entities. The CBD itself is not maintained by anyone. The CBD water surface elevation is controlled by the Department of Water Resources at the Knights Landing Outfall Gates structure near the town of Knights Landing.

Design and construction of the CBD outlet structure for Dunnigan pipeline Alternatives 1 and 2, and tunneling under the CBD and east levee for Alternative 2 will need to be coordinated with local landowners, Reclamation District No. 108, and the Department of Water Resources.

4.7 Site Staging and Use

Staging areas will be required near each of the conveyance facilities being constructed. The staging areas will be developed by the construction contractors for various activities, including: construction office facilities, material laydown areas, and equipment storage and maintenance. Each of the facilities has one or more proposed staging areas identified.

4.7.1 Red Bluff Pumping Plant Improvements

There are two staging areas that can be used at the existing pumping plant, as shown on the figures in Appendix A.

4.7.2 GCID Main Canal Improvements

Staging areas are located at the main headgate structure, the Willows siphon, the Walker Creek siphon, and the railroad siphon.

4.7.3 TRR

4.7.3.1 TRR-East

Equipment laydown and staging areas for TRR-East will be primarily situated inside the footprint of the reservoir and I/O works areas. One temporary (approximately 21-acre) stockpile area will be located west of TRR-East and the GCID Canal and can be used for staging during construction activities. Relatively limited staging areas and site access routes should be considered as construction progresses to facilitate availability of adequate storage and laydown capacity and to avoid potential schedule delays.

4.7.3.2 TRR-West

Staging for TRR-West construction of the main reservoir, extension reservoir, and I/O works will be within the footprint of these same features. Because staging will occur in the same areas as construction, site access routes and laydown areas should be considered as construction progresses to avoid potential schedule delays.

One temporary (approximately 20-acre) stockpile area will be located north of TRR-West extension reservoir and can be used for staging during construction activities. The staging area for the extension reservoir connecting tunnel will be within the footprint of the main and extension reservoirs because this tunnel will be constructed after the reservoirs are excavated.

4.7.4 Funks

Staging areas at Funks Reservoir will be needed for the dredging equipment, the materials needed to build the PGP, and the liner material for the cofferdams. The PGP footprint and areas identified nearby will be used for staging of heavy equipment and construction materials used for dredging and during the cofferdam construction. Once the PGP construction begins, the staging area will be moved slightly up the Funks Creek valley. Many of the stockpile areas identified for Funks Reservoir materials would have dual purposes as staging and laydown areas throughout the life of the Project.

4.7.5 Remaining Conveyance Facilities

For the TRR-East pipelines, TRR-West pipelines, Funks pipelines, Dunnigan pipelines Alternatives 1 and 2, staging areas will be developed along the length of pipelines within the designated construction easements, at the contractor's discretion. The electrical transmission lines will be installed after the TRR pipeline.

4.8 Construction Water

Average construction water use is expected to be approximately 350,000 to 400,000 gallons per day, primarily related to the pipelines for trench compaction, work at TRR East or TRR West, dust control, and lost water due to dredging of Funks Reservoir. Total water use for the Project associated with the HC facilities is roughly calculated to be approximately 175 to 200 million gallons.

Water used for construction would be transferred to the facility footprints from either the TC Canal or the GCID Main Canal by trucks and/or pipes. The pipes are not expected to be buried, except at crossings of heavily trafficked areas, where they may be installed several feet below ground surface. We have assumed water will be conveyed mostly by 4,000 gallon water trucks.

The Dunnigan pipeline Alternative 1 and 2 would obtain water from wells or dewatering efforts required during pipeline construction or from the TC Canal.

4.9 Tunneling

Between the TRR pipeline, Funks pipeline, and Dunnigan pipeline, seven tunnels will be constructed across the Project. Four proposed, 12-foot-diameter, tunnels (two for TRR-East and two for Funks) will be used to cross the GCID Main Canal and the TCC Canal. The remaining three tunnels are for the Dunnigan pipeline: for Alternative 1, 10.5-foot casings will be required, first under Interstate 5 and then Hwy 99 and railroad; and for Alternative 2 the tunnel locations and size will be the same at Alternative 1, with an additional tunnel of the same size to cross under the CBD.

For TRR-West there are four proposed, 12-foot-diameter tunnels, to connect the two reservoirs (main and extension) that make up the TRR-West reservoir. The tunnels will go under the PG&E transmission towers and two PG&E high-pressure gas pipelines.

All tunneling features will follow standard guidelines.

5.0 Site Materials and Use

The primary objective for materials will be to use excavated materials for fill, as a direct or single haul-and-place activity. The potential for double handling exists because the timing and suitability of materials will vary, as well as the coordination of where and when materials are needed as fill. Most excavation and materials processing activities can be sequenced early in the overall Project to maintain flexibility for efficient reuse of earthen materials (for example, as random fill). A less preferred option would be permanent disposal on site.

The least preferred option would be off-haul of materials for disposal. Disposal quantities should be small if more beneficial project site areas are identified for reuse. The project team will further develop the ultimate dispositions of these materials to optimize the reuse of material for the overall Sites project, as discussed in the following subsections for each TRR option or Funks Reservoir modification.

Haul roads are needed to perform the construction activities in and around the reservoirs. Haul routes will be designated to accommodate construction traffic and avoid public use. Within the project limits, the routes may be separated between light traffic use and heavy equipment hauling for site safety.

5.1 TRR

5.1.1 TRR-East

Construction of the TRR-East reservoir embankments will require that fill be obtained from borrow sources located elsewhere within the Sites project (that is, not from within the TRR-East footprint). Construction of TRR-East also will produce excess material that is unsuitable as embankment fill and must be hauled away from the TRR-East site.

The CDSM ground improvement under the reservoir embankments will consist of a large, treated, volume of in-place material mixing, which also will generate a significant volume of fluid spoils (soil, cement, and water). These CDSM spoils are unlikely to be acceptable as reservoir embankment fill and, therefore, will be hauled away from the TRR-East site. CDSM spoils may be acceptable after dewatering for non-engineered fill uses, such as for pipeline trench backfill in certain zones above the pipelines (zones not exposed). CDSM spoils to be reused will be hauled to a stockpile location for dewatering prior to reuse. Some CDSM spoils may be unsuitable for reuse and have to be disposed of either on site (elsewhere within the Sites project) or hauled offsite for disposal.

Development of the TRR-East reservoir will require excavation of surficial soils and underlying soils to a depth of 2 feet across the TRR-East reservoir footprint. These soils are anticipated to be unsuitable for use as reservoir embankment fill and, therefore, will be hauled away from the TRR-East site. As for the CDSM spoils, some of the soils excavated across the TR- East reservoir footprint may be acceptable for non-engineered fill uses, and some may need to be disposed of on site or hauled offsite for disposal.

To construct the TRR-East reservoir embankments, fill will need to be obtained from borrow sources located elsewhere within the Sites project. The primary source of fill for the embankments will be the excavations for the TRR pipelines trenches. The pipeline trenches will produce significant quantities of materials that will be suitable as embankment fill; these materials will be hauled from the pipeline trench excavations to the TRR-East site.

5.1.2 TRR-West

The TRR-West option (if selected) will produce very large quantities of materials from the excavations that are needed to create the reservoir. As much as 8 to 9 million cubic yards of material may be produced from these excavations. Very little of this material will be needed as fill at the TRR-West location. Therefore, these large quantities of material will be hauled from the TRR-West site to other locations on the Sites project for use as fill. Other locations for depositing this excess material include HR reservoir dams, road construction, fill for the Sites Ladoga Road bridge abutments, quarry restoration, or disposed in the Sites Reservoir Deadpool.

The vast majority of the material that would be excavated for development of the TRR-West option will be suitable for beneficial reuse as general fill on the overall Project. This reuse will include placement as Zone 4 random fill at the dams, as fill for the large embankments of Sites-Lodoga Road, as fill for quarry restoration, or as other general fill. Topsoil stripped from the TRR-West footprint will not be suitable as general fill; a stockpile area is located adjacent to TRR-West to allow temporary storage of topsoil strippings.

5.2 Funks

Funks Reservoir modifications will involve predominantly excavations by dredging in over-water areas or conventional earthmoving when the reservoir pool is lowered. These activities will produce large quantities of materials that will not be used as fill at Funks and will be used elsewhere on the Sites project. Approximately 740,000 bank cubic yards of materials will be excavated by hydraulic dredging and conventional excavation from Funk Reservoir. These materials will be placed in stockpile areas for dewatering, to prepare these materials for later beneficial reuse on the Project. Likely, some quantity of dredged material will be unsuitable for reuse as engineered fill and may need to be disposed of onsite or offsite. At least 80 percent of materials are estimated to be suitable for reuse on the Project after dewatering. After dewatering, potential uses of these materials may include pipeline backfill, Zone 4 random fill (the stockpiles will be close to Golden Gate Dam), Sites-Lodoga Road embankment fill, quarry restoration, or other general fill.

5.3 General Concrete

It is anticipated that there will be a concrete batch plant onsite to supply concrete for the PGPs and other facilities. At this point, it is unknown if excavated site materials will be available or if aggregate will be hauled in from offsite. This will be verified through future geotechnical investigations. It is anticipated that concrete low strength material will be used as backfill for the large-diameter pipes. This material can potentially made from onsite materials mixed with hauled-in cement. This will be verified with future geotechnical investigations.

6.0 Equipment and Workforce

6.1 Labor Force, Project Labor Agreements

Providing for a sufficient labor force for a project of this magnitude poses challenges but is manageable. Much of the labor force is anticipated to come from the surrounding region, with contractors also bringing some skilled work force from other areas. While Colusa County is rural, with a population of about 20,000, the surrounding counties, including Placer, Sacramento and Yolo counties, have a regional population of over 2 million. It may be advantageous to consider project labor agreements with trade unions as a means of accommodating the project labor requirements, as well as avoiding labor disputes. A project labor agreement, well in advance of the need for craft labor, would provide for established labor rates, benefits, and work rules, as well as stability of the workforce. Unions and contractors will have advance notice in identifying required craft labor and training programs. Further, project labor agreements will minimize the risk of labor disputes during the course of the work. This strategy has been used successfully on other major civil works projects in California.

6.2 Equipment Needs

The required equipment consists of standard heavy earthmoving and excavation equipment, typical for large civil projects. Although the quantity of equipment may be large, especially for TRR West construction, this type of equipment is commonly found in the region and elsewhere. Large contractors would use their own equipment, lease or purchase new equipment.

The approach to estimating the equipment use and limitations for the construction cost estimates, includes the following:

- The equipment use tables are intended to inform the project team of expected equipment type, hours and horsepower, as well as expected labor needed.
- At this point in the Project, the design is at feasibility level. Further design development will determine final quantities, with other factors influencing final equipment use.
- Various contractors will approach the work differently from each other, and likely differently from the design engineer's interpretation of equipment use and staffing.

- The equipment used for construction cost estimating are an approximation of the equipment, crews, and production needed to complete the Project. This is somewhat dictated by a lack of design details, although some details and quantities have been extrapolated based on best industry practices and expectations.
- Site geologic study and interpretation is incomplete. Future geotechnical work will affect final design and quantities.
- Procurement strategies and outcomes, including contract packages, will have some impact on the use and timing of equipment and crews.
- Travel speeds for vehicles within the Project site: The average speed for pickup trucks and supervisory vehicles will be about 20 miles per hour (mph), but will vary with individual duties and activities.
- Travel speeds for offsite hauling vehicles: For offsite hauling vehicles (such as those making deliveries to the job), an average of 40 mph was used from points of origination to delivery sites and returns to points of origin.
- Travel speeds for onsite hauling vehicles: The team used average speeds for hauling calculations. For onsite hauling vehicles, such as those used to haul excavated or processed material, speeds averaged 15 mph.
- Travel speeds for support equipment: Equipment such as water trucks and graders have travel speeds of about 15 mph. Operational speeds while performing work will be about 3 to 5 mph.
- No off-road, mobile, electric-powered equipment is anticipated at this time.
- Workforce and staff will vary during the course of the Project, as work activities ramp-up, peak, and taper off toward completion.
- Regarding staff and workforce commute, it is anticipated that much of the workforce will come from the surrounding area, including the greater Sacramento area. The average daily commute is expected to be approximately 70 miles, or about 1.5 hours, each way.
- Start and end dates reflect the preliminary construction schedule as provided in Appendix B.

The actual daily equipment and workforce use will vary based on what activities are being performed across the Project at any given time.

6.3 Equipment on Roads

Daily construction traffic will consist of trucks hauling equipment and materials to and from the worksites and the daily arrival and departure of construction workers. Construction traffic on local roadways will include dump trucks, bottom-dump trucks, concrete trucks, flatbed trucks for delivering construction equipment and permanent project equipment, pickups, water trucks, equipment maintenance vehicles, and other delivery trucks. Dump trucks would be used for earth moving and clearing, removal of excavated material, and import of other structural and paving materials. Other delivery trucks would deliver construction equipment, job trailer items, concrete-forming materials, reinforcing steel and structural steel, piping materials, foundation piles and sheet piling, sand and gravel from offsite sources, new facility equipment, and other construction-related deliveries. Construction equipment/materials would not be permitted to pass through the community of Maxwell on the Maxwell Sites Road.

7.0 Construction Sequencing Plan and Construction Schedule

7.1 General Plan and Approach

The first activities for project construction will include permitting and obtaining access on roads and real estate. Initial access will also allow for setup of staging, stockpile, office, and shop facilities, as well as mobilization of workforce and resources.

The general sequence of nonroad construction will begin with the Dunnigan Pipeline Alt 1 or Alt 2 and follow with the rest of the conveyance facilities. These facilities will be constructed in parallel over two to three years. Construction of the electrical transmission lines (after the TRR pipeline) and electrical substations will be initiated last in the sequence.

Note that construction within 1,000 feet of occupied residences will be restricted between 10:00 p.m. and 7:00 a.m. to eliminate potential noise concerns. Construction in areas beyond 1,000 feet of occupied residents may occur 24 hours a day, 7 days a week.

7.2 Construction Schedule

See Table 1 for the estimated construction schedule on conveyance facilities, including dates for permitting, engineering, and geotechnical investigations. The construction schedule is provided in Appendix C.

Table 1. Estimate Construction Schedule for Conveyance Facilities

Task Name	Duration (days)	Start Date	Finish Date
California Water Commission Award of Funds	0	12/1/23	12/1/23
Determine Engineering Procurement & Delivery Method	120	1/1/22	6/16/22
Sites Board Approval/Notice to Proceed for Phase 3	23	6/1/22	7/1/22
Real Estate Access & Permitting (Geotech & Surveying)	260	7/5/21	7/1/22
Initial Geotech & Surveying	130	7/4/22	12/30/22
Final Geotech Investigation	130	1/2/23	6/30/23
Engineering	867	9/1/22	1/15/25
Conveyance to Sacramento River Construction			
Dunnigan Pipeline – Alternative 1	355	9/26/24	2/4/26
Dunnigan Pipeline – Alternative 2	505	2/13/25	1/20/27
Regulating Reservoirs and Conveyance Construction			
Funks/TRR Pipelines	505	2/13/25	1/20/27
Transmission Powerlines	765	5/22/25	4/26/28
Funks Reservoir	680	5/22/25	12/29/27
Funks Pumping Generating Plant	880	5/22/25	10/4/28
TRR-East or TRR-West Reservoir	780	5/22/25	5/17/28
TRR Pumping Generating Plant	880	5/22/25	10/4/28
Substations	645	3/12/26	8/30/28
Sacramento River Diversion and Conveyance Construction			
Red Bluff Pumping Plan Improvements	560	2/3/25	3/26/27
GCID Improvements	680	5/22/25	12/29/27

7.3 Schedule and Work Hours

A more detailed schedule can be found in Appendix B. Note the following assumptions:

- The construction schedule is calculated on 20 working days per month to account for holidays and weather delays.
- Durations of construction are based on production rates associated with the anticipated equipment types needed for construction.

- Productions and durations are calculated on 10-hour work shifts, accounting for breaks.
- Crews would likely work 6 days per week on critical functions.

7.4 Procurement and Contract Packaging

The construction schedule includes assumptions on procurement and contract packaging on the conveyance facilities listed in Section 3.1.

7.5 Commissioning and Interface with HR Facilities

Most of the HC facilities can be commissioned without the HR facilities. However there are some HC facilities that will require HR facilities prior to final commission. These facilities include the tie-in of the TRR and Funks pipelines to the Golden Gate Dam Inlet/outlet tunnels (HR) so that full testing of the PGP's pumps and hydropower generators can occur. Also power from PGE & WAPA from their point of connection to the PGP switch yards will be required for full testing of the PGP equipment.

The most recent schedule including HC and HR facilities is provided in Appendix B.

8.0 Conclusions

The objective of this TM is to show that the Project can be constructed with existing technology and availability of construction materials, work force, and equipment. This study shows that the HC facilities can be constructed by the end of 2028, for a construction duration of about 4 years, with full commissioning in 2029 and 2030 (together with the HR facilities).

The construction schedule to have the HC facilities complete by end of 2028 is reasonable, but will require careful planning to ensure long-lead time equipment is specified and ordered early. This equipment includes the pumps, generator turbines, and switchgear for substations. The timing of completing work at existing facilities such as installing new pumps at the Red Bluff Pumping Plant, dredging of the Funks Reservoir and tying into the GCID Main Canal will be performed over several seasons given the short duration when these facilities may be taken out of service.

Construction materials are primarily composed of earthwork and concrete, both of which are readily available in the timeframe allowed for the quantity required. Earthwork may require moving excavated spoils for reuse on other project features such as the large reservoirs and for construction of the TRR East. However, there should be sufficient spoils material available given the large volume generated from the pipelines construction.

Providing for a sufficient labor force for this project poses a challenge, but is manageable. It is anticipated that much of the labor force would come from the surrounding region, with contractors also bringing some skilled work force from other areas. The surrounding counties, including Placer, Sacramento and Yolo Counties, have a regional population of over two million. It may be advantageous to consider project labor agreements with trade unions as a means of accommodating the project labor requirements, as well as avoiding labor disputes. This strategy has been used successfully on other large civil works projects in California.

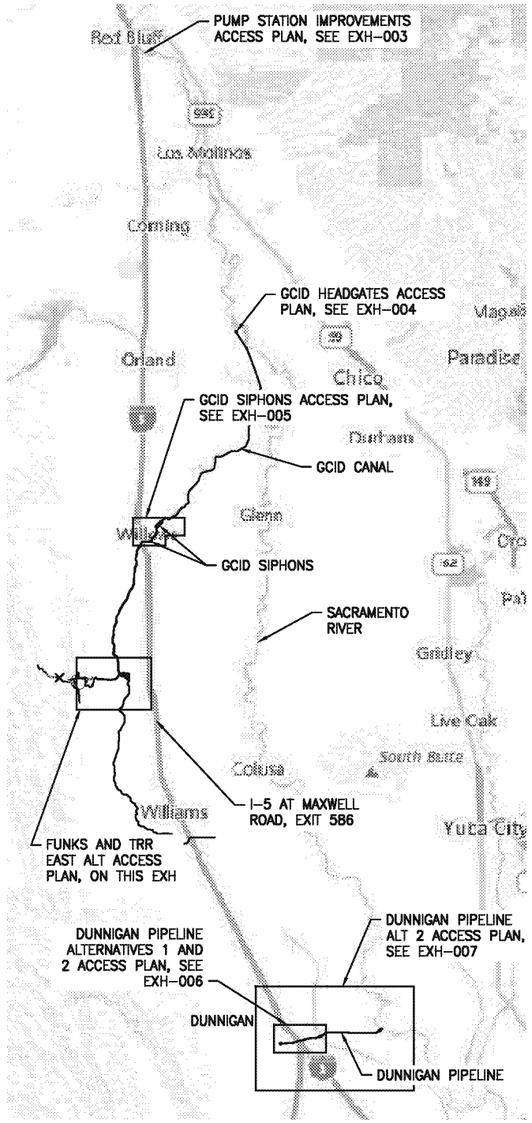
The required equipment consists of standard heavy earthmoving and excavation equipment. Although the quantity of equipment may be large, especially for reservoir construction, this type of equipment is commonly found in the region and elsewhere. Large contractors would use their own equipment, lease or purchase new equipment.

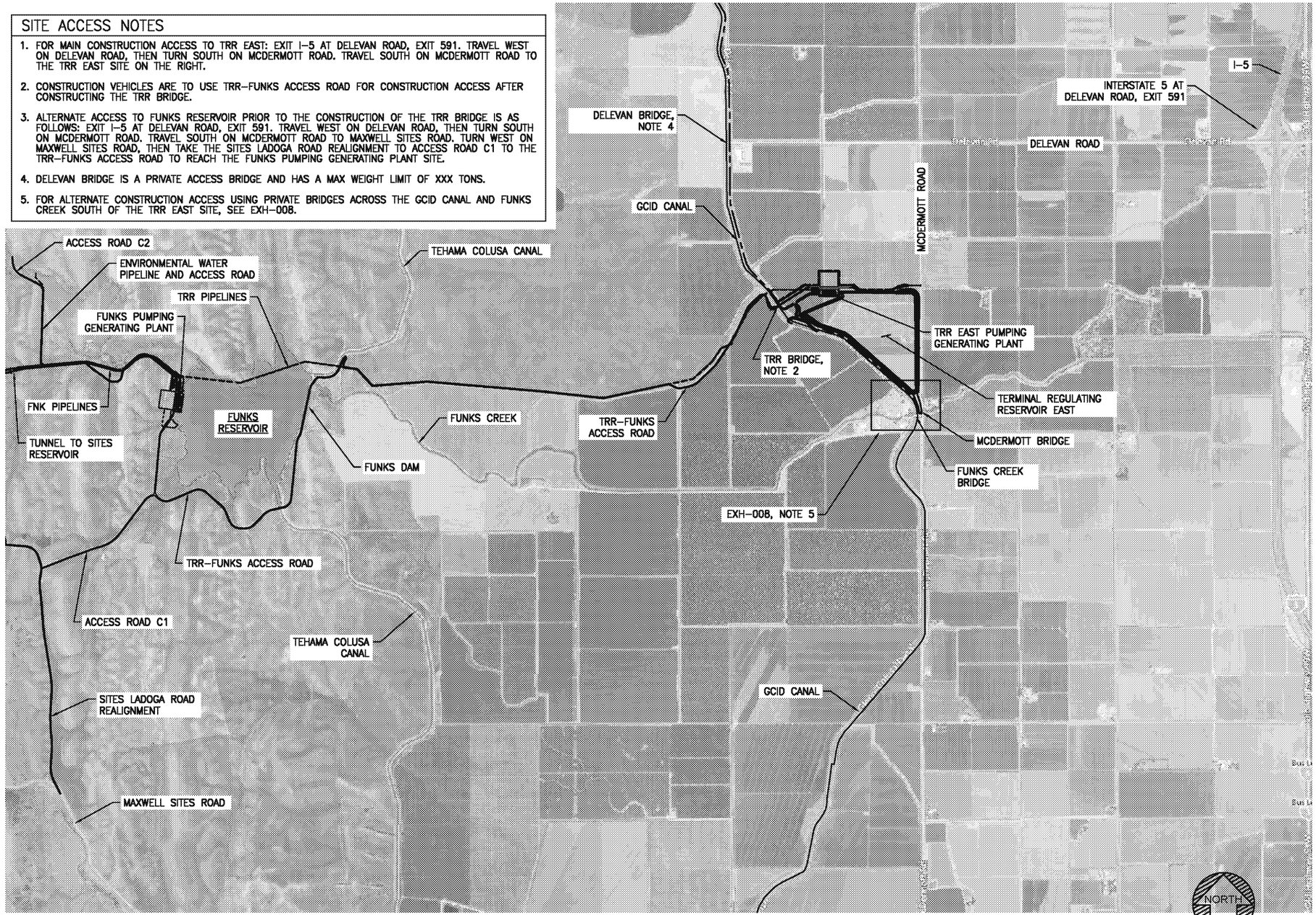
In summary, although there are risks to the scheduled four-year completion of construction, the HC facilities of the Sites Reservoir Project can be constructed with existing technology and available construction materials, work force and equipment.

Appendix A
Site Access Plans

SITE ACCESS NOTES

1. FOR MAIN CONSTRUCTION ACCESS TO TRR EAST: EXIT I-5 AT DELEVAN ROAD, EXIT 591. TRAVEL WEST ON DELEVAN ROAD, THEN TURN SOUTH ON MCDERMOTT ROAD. TRAVEL SOUTH ON MCDERMOTT ROAD TO THE TRR EAST SITE ON THE RIGHT.
2. CONSTRUCTION VEHICLES ARE TO USE TRR-FUNKS ACCESS ROAD FOR CONSTRUCTION ACCESS AFTER CONSTRUCTING THE TRR BRIDGE.
3. ALTERNATE ACCESS TO FUNKS RESERVOIR PRIOR TO THE CONSTRUCTION OF THE TRR BRIDGE IS AS FOLLOWS: EXIT I-5 AT DELEVAN ROAD, EXIT 591. TRAVEL WEST ON DELEVAN ROAD, THEN TURN SOUTH ON MCDERMOTT ROAD. TRAVEL SOUTH ON MCDERMOTT ROAD TO MAXWELL SITES ROAD. TURN WEST ON MAXWELL SITES ROAD, THEN TAKE THE SITES LADOGA ROAD REALIGNMENT TO ACCESS ROAD C1 TO THE TRR-FUNKS ACCESS ROAD TO REACH THE FUNKS PUMPING GENERATING PLANT SITE.
4. DELEVAN BRIDGE IS A PRIVATE ACCESS BRIDGE AND HAS A MAX WEIGHT LIMIT OF XXX TONS.
5. FOR ALTERNATE CONSTRUCTION ACCESS USING PRIVATE BRIDGES ACROSS THE GCID CANAL AND FUNKS CREEK SOUTH OF THE TRR EAST SITE, SEE EXH-008.





NORTH

OVERALL LOCATION PLAN
NTS

DRAFT – PREDECISIONAL WORKING DOCUMENT – FOR DISCUSSION PURPOSES ONLY

FUNKS AND TRR EAST ALT ACCESS PLAN
SCALE: 1" = 1500'

I/R	DATE	BY	CHK	APPR	DESCRIPTION

DESIGNED BY: B CHELONIS
DRAWN BY: B CHELONIS
CHECKED BY: J SMITH
IN CHARGE: P RUDE
DATE: APRIL 2021

JACOBS
2525 AIRPARK DR
REDDING CA, 96001
PHONE: (530) 243-5831

REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

Sites

SITES RESERVOIR TO 2
OVERALL LOCATION AND ACCESS PLAN TERMINAL REGULATING RESERVOIR EAST ALT

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE FOR REDUCED PLOTS
0 1"

DRAWING NO.
EXH-001

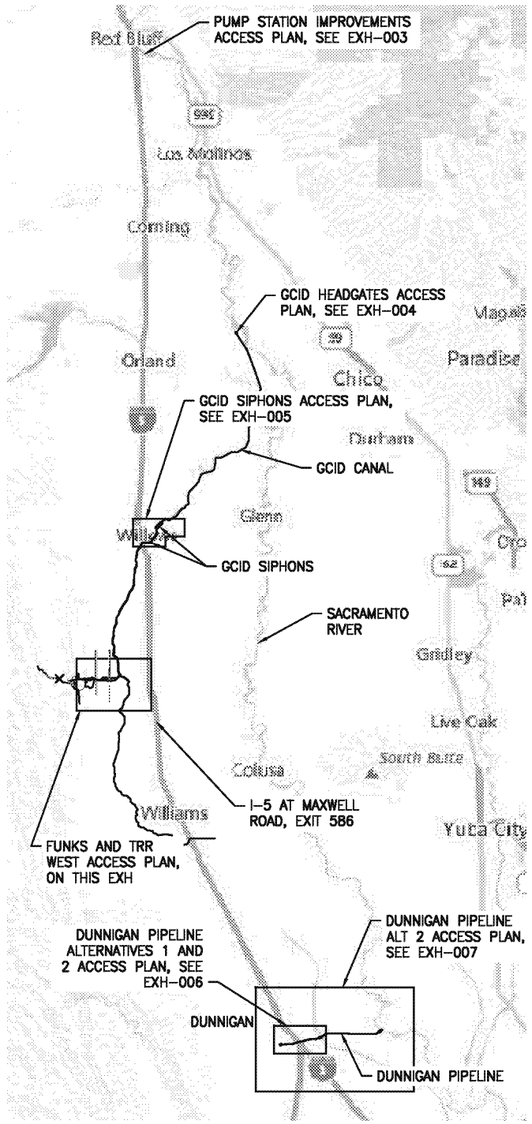
PROJECT FEASIBILITY STUDY – NOT FOR CONSTRUCTION

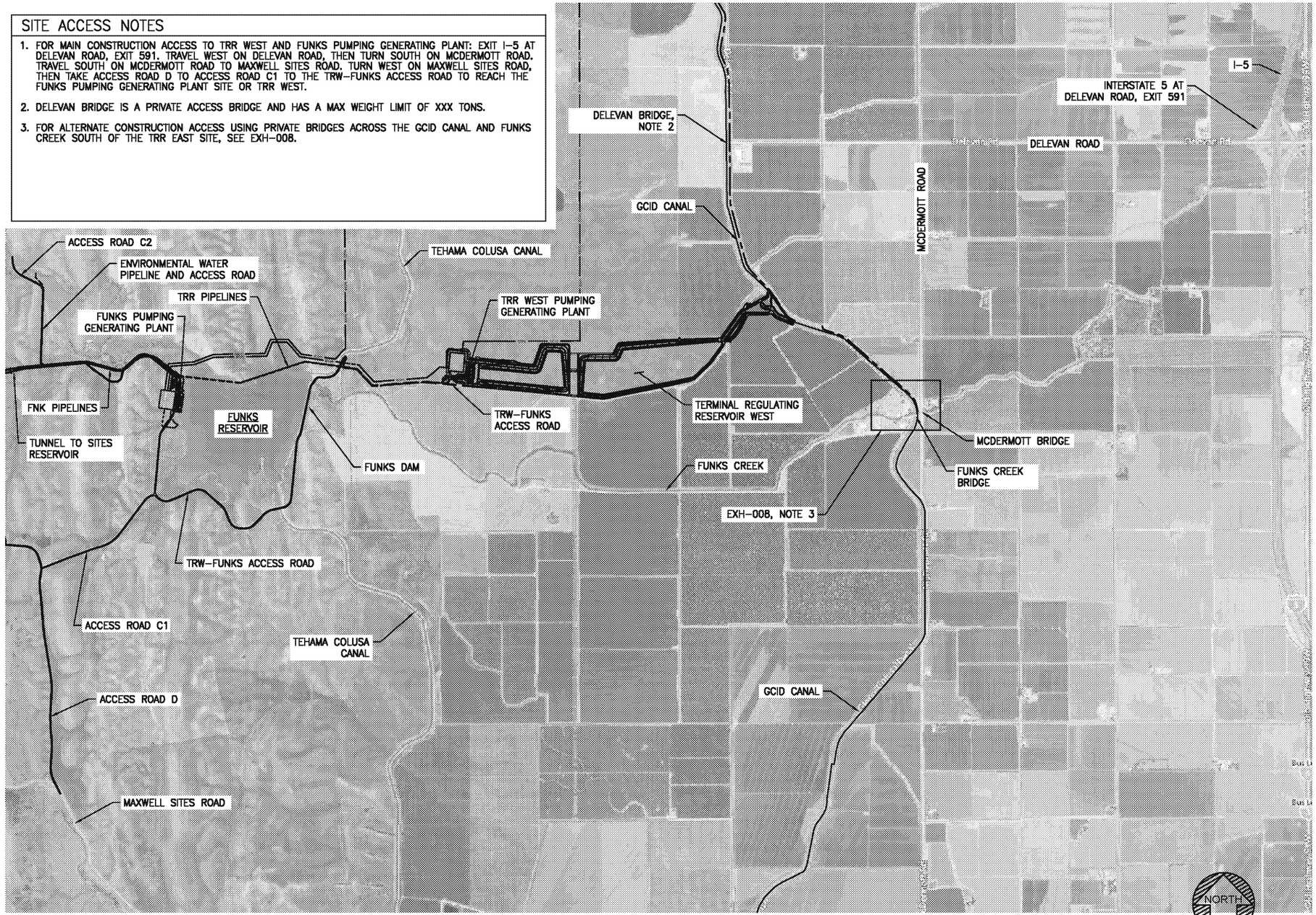
PLOTTED BY:CHELONIS, BECKY/RDD -April 15, 2021-3:44:42 PM
DRAWING: GEN-EXH-001_D3380600.dwg
JACOBS PROJECT # D3880600

Draft_0011063

SITE ACCESS NOTES

1. FOR MAIN CONSTRUCTION ACCESS TO TRR WEST AND FUNKS PUMPING GENERATING PLANT: EXIT I-5 AT DELEVAN ROAD, EXIT 591. TRAVEL WEST ON DELEVAN ROAD, THEN TURN SOUTH ON MCDERMOTT ROAD. TRAVEL SOUTH ON MCDERMOTT ROAD TO MAXWELL SITES ROAD. TURN WEST ON MAXWELL SITES ROAD, THEN TAKE ACCESS ROAD D TO ACCESS ROAD C1 TO THE TRW-FUNKS ACCESS ROAD TO REACH THE FUNKS PUMPING GENERATING PLANT SITE OR TRR WEST.
2. DELEVAN BRIDGE IS A PRIVATE ACCESS BRIDGE AND HAS A MAX WEIGHT LIMIT OF XXX TONS.
3. FOR ALTERNATE CONSTRUCTION ACCESS USING PRIVATE BRIDGES ACROSS THE GCID CANAL AND FUNKS CREEK SOUTH OF THE TRR EAST SITE, SEE EXH-008.





NORTH

OVERALL LOCATION PLAN
NTS

DRAFT – PREDECISIONAL WORKING DOCUMENT – FOR DISCUSSION PURPOSES ONLY

FUNKS AND TRR WEST ALT ACCESS PLAN
SCALE: 1" = 1500'

0 1500' 3000'

I/R	DATE	BY	CHK	APPR	DESCRIPTION

DESIGNED BY: B CHELONIS
DRAWN BY: B CHELONIS
CHECKED BY: J SMITH
IN CHARGE: P RUDE
DATE: APRIL 2021

JACOBS
2525 AIRPARK DR
REDDING CA, 96001
PHONE: (530) 243-5831

REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

Sites

SITES RESERVOIR TO 2
OVERALL LOCATION AND ACCESS PLAN TERMINAL REGULATING RESERVOIR WEST ALT

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE FOR REDUCED PLOTS
0 1"

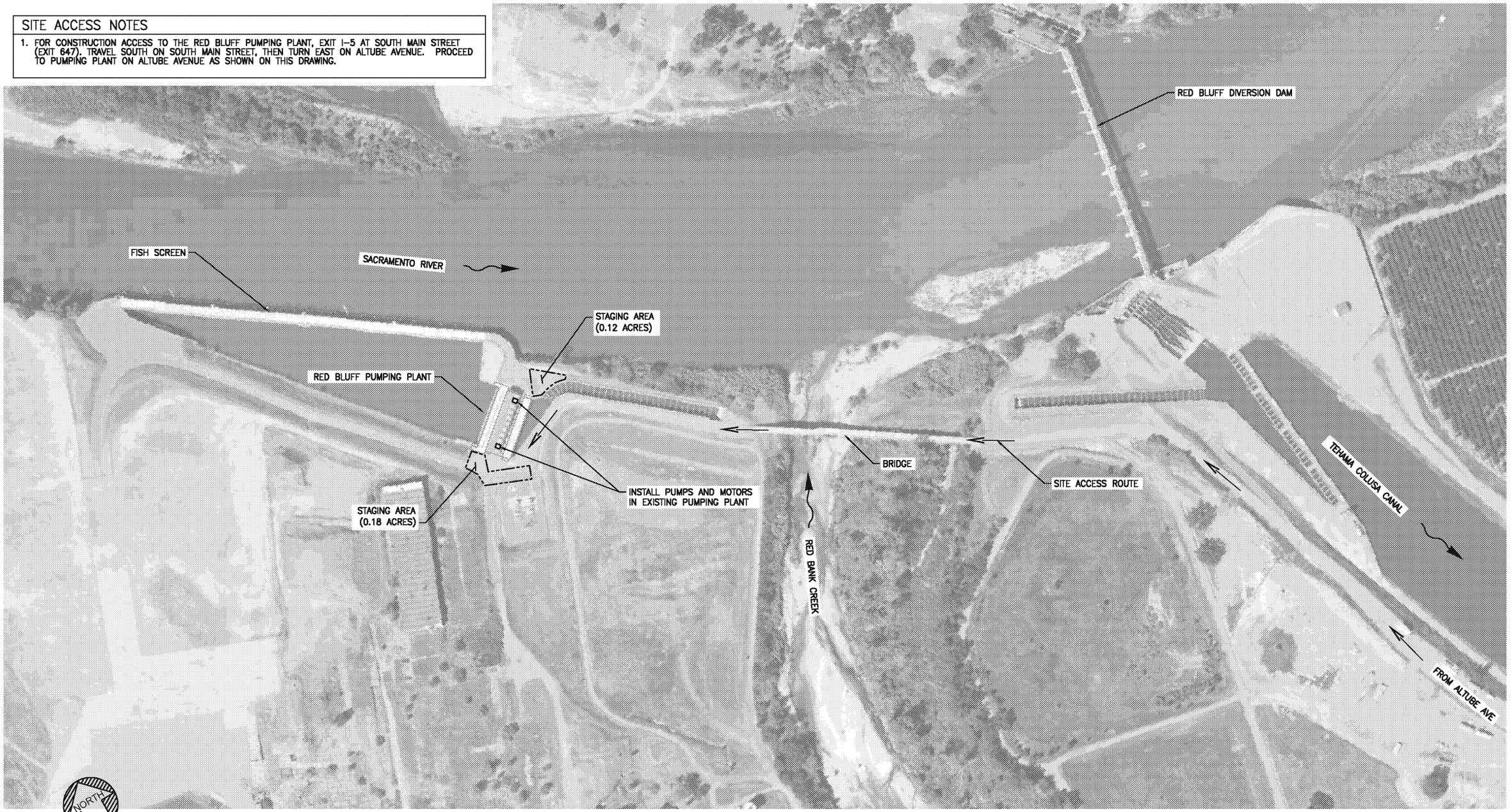
DRAWING NO.
EXH-002

PROJECT FEASIBILITY STUDY – NOT FOR CONSTRUCTION

PLOTTED BY:CHELONIS, BECKY/RDD -April 15, 2021-3:44:42 PM
DRAWING: GEN-EXH-002_D3380600.dwg
JACOBS PROJECT # D3880600

SITE ACCESS NOTES

1. FOR CONSTRUCTION ACCESS TO THE RED BLUFF PUMPING PLANT, EXIT I-5 AT SOUTH MAIN STREET (EXIT 647). TRAVEL SOUTH ON SOUTH MAIN STREET, THEN TURN EAST ON ALTUBE AVENUE. PROCEED TO PUMPING PLANT ON ALTUBE AVENUE AS SHOWN ON THIS DRAWING.



DRAFT – PREDECISIONAL WORKING DOCUMENT – FOR DISCUSSION PURPOSES ONLY

ACCESS PLAN
SCALE: 1" = 150'

I/R	DATE	BY	CHK	APPR	DESCRIPTION

DESIGNED BY: B CHELONIS
DRAWN BY: B CHELONIS
CHECKED BY: J SMITH
IN CHARGE: P PRUDE
DATE: MARCH 2021

JACOBS
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REGISTERED PROFESSIONAL ENGINEER – STATE OF CALIFORNIA

Sites

SITES RESERVOIR TO 2
RED BLUFF PUMPING PLANT
ACCESS PLAN

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE FOR REDUCED PLOTS
0 1"

DRAWING NO.
EXH-003

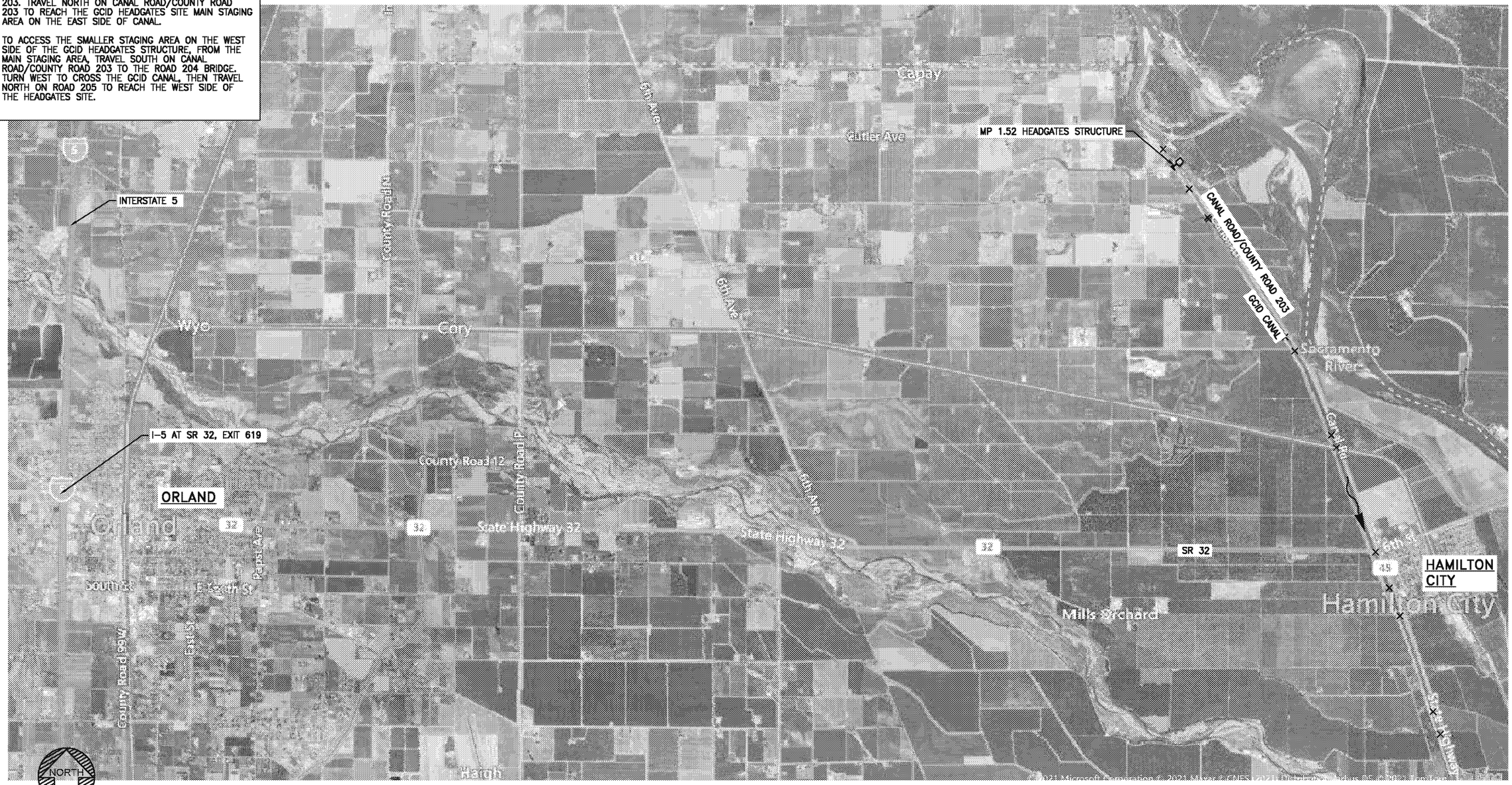
PROJECT FEASIBILITY STUDY – NOT FOR CONSTRUCTION

PLOTTED BY:CHELONIS, BECKY/RDD -March 19, 2021 -3:44:42 PM
DRAWING: GEN-EXH-003_D3380600.dwg
JACOBS PROJECT # D3880600

Draft_0011065

SITE ACCESS NOTES

1. GCID HEADGATES SITE ACCESS ROUTE: EXIT INTERSTATE 5 AT ORLAND, CALIFORNIA STATE HIGHWAY 32 (SR 32), EXIT 619. CONTINUE EAST ON SR 32 TO HAMILTON CITY, THEN TURN NORTH ON CANAL ROAD/COUNTY ROAD 203. TRAVEL NORTH ON CANAL ROAD/COUNTY ROAD 203 TO REACH THE GCID HEADGATES SITE MAIN STAGING AREA ON THE EAST SIDE OF CANAL.
2. TO ACCESS THE SMALLER STAGING AREA ON THE WEST SIDE OF THE GCID HEADGATES STRUCTURE, FROM THE MAIN STAGING AREA, TRAVEL SOUTH ON CANAL ROAD/COUNTY ROAD 203 TO THE ROAD 204 BRIDGE. TURN WEST TO CROSS THE GCID CANAL, THEN TRAVEL NORTH ON ROAD 205 TO REACH THE WEST SIDE OF THE HEADGATES SITE.



DRAFT – PREDECISIONAL WORKING DOCUMENT – FOR DISCUSSION PURPOSES ONLY

GCID HEADGATES ACCESS PLAN
SCALE: 1" = 30'

I/R	DATE	BY	CHK	APPR	DESCRIPTION

DESIGNED BY: B CHELONIS
DRAWN BY: B CHELONIS
CHECKED BY: J SMITH
IN CHARGE: P PRUDE
DATE: MARCH 2021

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REGISTERED PROFESSIONAL ENGINEER – STATE OF CALIFORNIA

Sites

SITES RESERVOIR TO 2
GCID MAIN CANAL
HEADGATES ACCESS PLAN

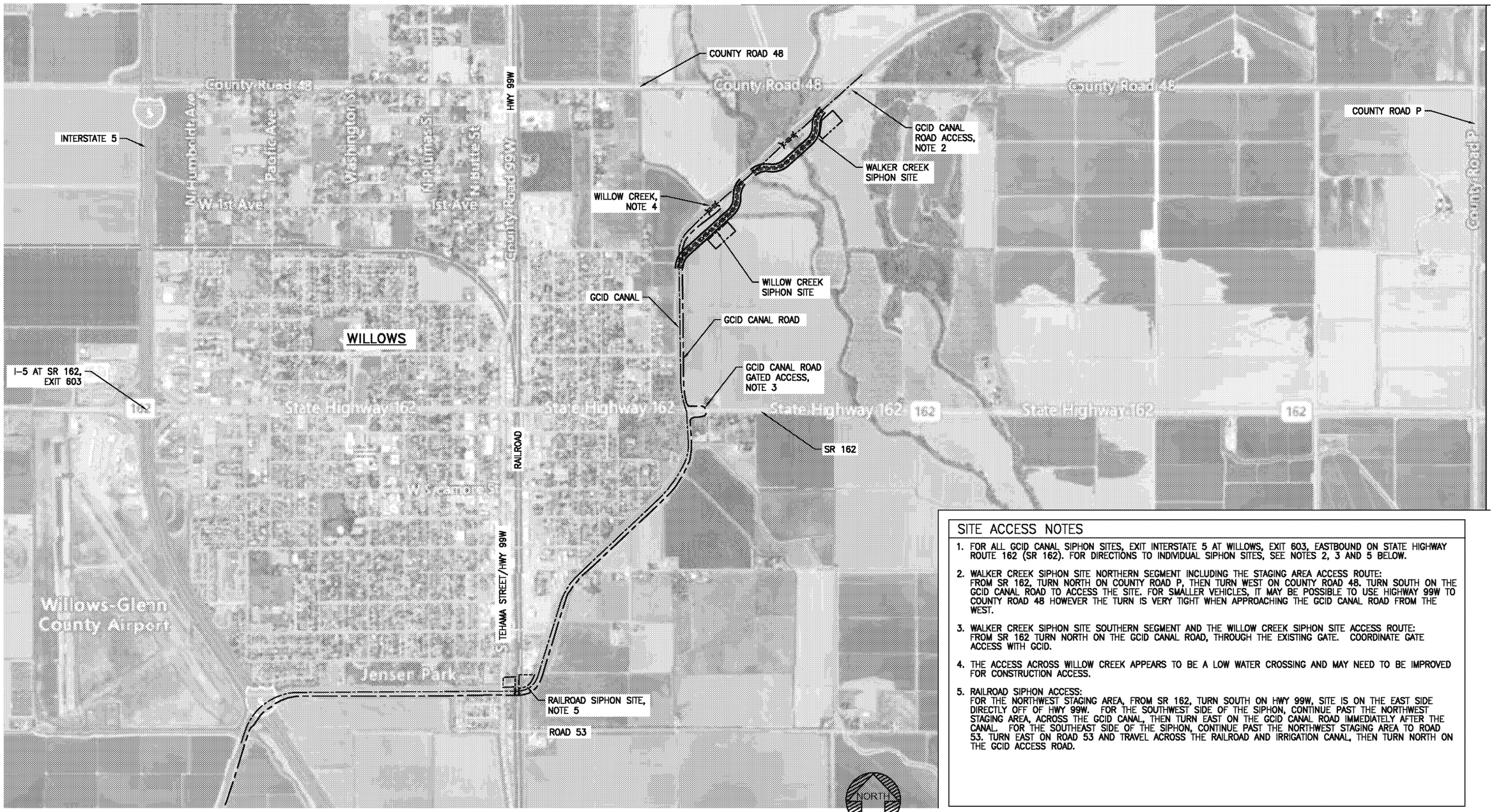
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE FOR REDUCED PLOTS
0 1"

DRAWING NO.
EXH-004

PROJECT FEASIBILITY STUDY – NOT FOR CONSTRUCTION

PLOTTED BY:CHELONIS, BECKY/RDD –March 19, 2021–3:44:42 PM
DRAWING: GEN–EXH–004_D3380600.dwg
JACOBS PROJECT # D3880600

Draft_0011066



SITE ACCESS NOTES

1. FOR ALL GCID CANAL SIPHON SITES, EXIT INTERSTATE 5 AT WILLOWS, EXIT 603, EASTBOUND ON STATE HIGHWAY ROUTE 162 (SR 162). FOR DIRECTIONS TO INDIVIDUAL SIPHON SITES, SEE NOTES 2, 3 AND 5 BELOW.
2. WALKER CREEK SIPHON SITE NORTHERN SEGMENT INCLUDING THE STAGING AREA ACCESS ROUTE: FROM SR 162, TURN NORTH ON COUNTY ROAD P, THEN TURN WEST ON COUNTY ROAD 48. TURN SOUTH ON THE GCID CANAL ROAD TO ACCESS THE SITE. FOR SMALLER VEHICLES, IT MAY BE POSSIBLE TO USE HIGHWAY 99W TO COUNTY ROAD 48 HOWEVER THE TURN IS VERY TIGHT WHEN APPROACHING THE GCID CANAL ROAD FROM THE WEST.
3. WALKER CREEK SIPHON SITE SOUTHERN SEGMENT AND THE WILLOW CREEK SIPHON SITE ACCESS ROUTE: FROM SR 162 TURN NORTH ON THE GCID CANAL ROAD, THROUGH THE EXISTING GATE. COORDINATE GATE ACCESS WITH GCID.
4. THE ACCESS ACROSS WILLOW CREEK APPEARS TO BE A LOW WATER CROSSING AND MAY NEED TO BE IMPROVED FOR CONSTRUCTION ACCESS.
5. RAILROAD SIPHON ACCESS: FOR THE NORTHWEST STAGING AREA, FROM SR 162, TURN SOUTH ON HWY 99W, SITE IS ON THE EAST SIDE DIRECTLY OFF OF HWY 99W. FOR THE SOUTHWEST SIDE OF THE SIPHON, CONTINUE PAST THE NORTHWEST STAGING AREA, ACROSS THE GCID CANAL, THEN TURN EAST ON THE GCID CANAL ROAD IMMEDIATELY AFTER THE CANAL. FOR THE SOUTHEAST SIDE OF THE SIPHON, CONTINUE PAST THE NORTHWEST STAGING AREA TO ROAD 53. TURN EAST ON ROAD 53 AND TRAVEL ACROSS THE RAILROAD AND IRRIGATION CANAL, THEN TURN NORTH ON THE GCID ACCESS ROAD.

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GCID SIPHONS ACCESS PLAN
SCALE: 1" = 800'

I/R	DATE	BY	CHK	APPR	DESCRIPTION

DESIGNED BY: B CHELONIS
DRAWN BY: B CHELONIS
CHECKED BY: J SMITH
IN CHARGE: P RUDE
DATE: MARCH 2021

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REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

Sites

SITES RESERVOIR TO 2

GCID SIPHONS ACCESS PLAN

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE FOR REDUCED PLOTS
0 1"

DRAWING NO.
EXH–005

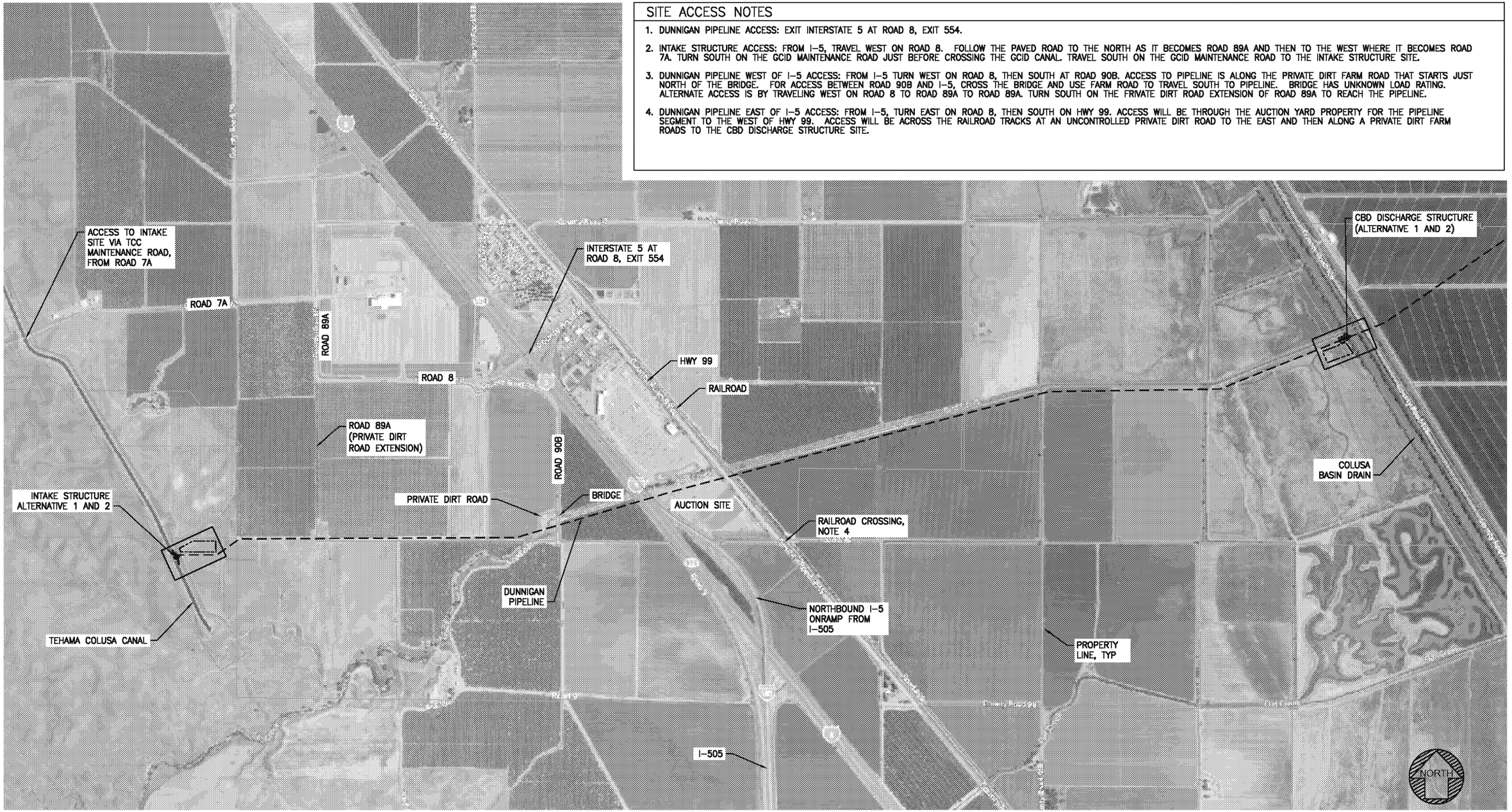
PROJECT FEASIBILITY STUDY – NOT FOR CONSTRUCTION

PLOTTED BY:CHELONIS, BECKY/RDD –March 19, 2021–3:44:42 PM
DRAWING: GEN–EXH–005_D3380600.dwg
JACOBS PROJECT # D3880600

Draft_0011067

SITE ACCESS NOTES

1. DUNNIGAN PIPELINE ACCESS: EXIT INTERSTATE 5 AT ROAD 8, EXIT 554.
2. INTAKE STRUCTURE ACCESS: FROM I-5, TRAVEL WEST ON ROAD 8. FOLLOW THE PAVED ROAD TO THE NORTH AS IT BECOMES ROAD 89A AND THEN TO THE WEST WHERE IT BECOMES ROAD 7A. TURN SOUTH ON THE GCID MAINTENANCE ROAD JUST BEFORE CROSSING THE GCID CANAL. TRAVEL SOUTH ON THE GCID MAINTENANCE ROAD TO THE INTAKE STRUCTURE SITE.
3. DUNNIGAN PIPELINE WEST OF I-5 ACCESS: FROM I-5 TURN WEST ON ROAD 8, THEN SOUTH AT ROAD 90B. ACCESS TO PIPELINE IS ALONG THE PRIVATE DIRT FARM ROAD THAT STARTS JUST NORTH OF THE BRIDGE. FOR ACCESS BETWEEN ROAD 90B AND I-5, CROSS THE BRIDGE AND USE FARM ROAD TO TRAVEL SOUTH TO PIPELINE. BRIDGE HAS UNKNOWN LOAD RATING. ALTERNATE ACCESS IS BY TRAVELING WEST ON ROAD 8 TO ROAD 89A TO ROAD 89A. TURN SOUTH ON THE FRIVATE DIRT ROAD EXTENSION OF ROAD 89A TO REACH THE PIPELINE.
4. DUNNIGAN PIPELINE EAST OF I-5 ACCESS: FROM I-5, TURN EAST ON ROAD 8, THEN SOUTH ON HWY 99. ACCESS WILL BE THROUGH THE AUCTION YARD PROPERTY FOR THE PIPELINE SEGMENT TO THE WEST OF HWY 99. ACCESS WILL BE ACROSS THE RAILROAD TRACKS AT AN UNCONTROLLED PRIVATE DIRT ROAD TO THE EAST AND THEN ALONG A PRIVATE DIRT FARM ROADS TO THE CBD DISCHARGE STRUCTURE SITE.



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DUNNIGAN PIPELINE ACCESS PLAN
SCALE: 1" = 800'

I/R	DATE	BY	CHK	APPR	DESCRIPTION

DESIGNED BY: B CHELONIS
DRAWN BY: B CHELONIS
CHECKED BY: J SMITH
IN CHARGE: P RUDE
DATE: MARCH 2021

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REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

Sites

SITES RESERVOIR TO 2
DUNNIGAN PIPELINE
ALTS 1 AND 2 ACCESS PLAN

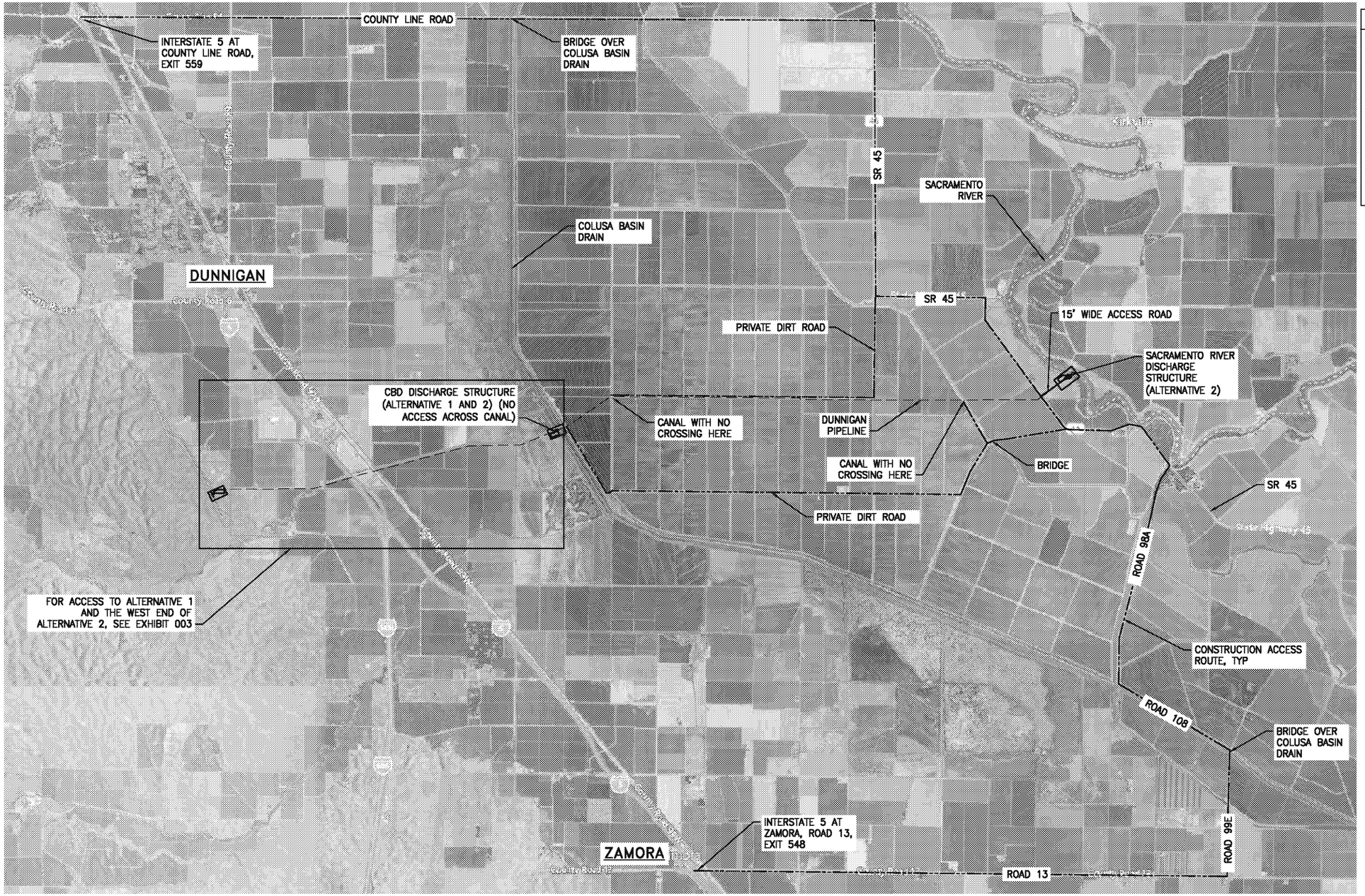
VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE FOR REDUCED PLOTS
0 1"

DRAWING NO.
EXH-006

PROJECT FEASIBILITY STUDY – NOT FOR CONSTRUCTION

PLOTTED BY:CHELONIS, BECKY/RDD -March 19, 2021-3:44:42 PM
DRAWING: GEN-EXH-006_D3380600.dwg
JACOBS PROJECT # D3380600

Draft_0011068



SITE ACCESS NOTES

1. DUNNIGAN PIPELINE ACCESS FROM NORTH: EXIT INTERSTATE 5 AT COUNTY LINE ROAD, EXIT 559. CONTINUE EAST ON COUNTY ROAD, THEN TURN SOUTH ON SR 45. TRAVEL SOUTH ON SR 45 AND THEN PROCEED SOUTH ON PRIVATE DIRT ROAD TO ACCESS THE CENTRAL PORTION OF DUNNIGAN PIPELINE.
2. DUNNIGAN PIPELINE ACCESS FROM THE SOUTH: EXIT INTERSTATE 5 AT ZAMORA, ROAD 13, EXIT 548. CONTINUE EAST ON ROAD 13, THEN TURN NORTH ON ROAD 99E. CROSS THE GCID CANAL BRIDGE, THEN TURN NORTHWEST ON ROAD 108. TURN NORTH ON ROAD 98A AND CONTINUE ON THAT ROAD UNTIL IT INTERSECTS WITH SR 45. TURN NORTH ON SR 45 AND CONTINUE TO ACCESS ROUTES ALONG PRIVATE DIRT ROADS AS SHOWN IN PLAN.

DRAFT – PREDECISIONAL WORKING DOCUMENT – FOR DISCUSSION PURPOSES ONLY

DUNNIGAN PIPELINE ACCESS PLAN
SCALE: 1" = 3000'

I/R	DATE	BY	CHK	APPR	DESCRIPTION

DESIGNED BY: B CHELONIS
DRAWN BY: B CHELONIS
CHECKED BY: J SMITH
IN CHARGE: P RUDE
DATE: MARCH 2021

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REGISTERED PROFESSIONAL ENGINEER – STATE OF CALIFORNIA

Sites

SITES RESERVOIR TO 2
DUNNIGAN PIPELINE
ALT 2 ACCESS PLAN

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE FOR REDUCED PLOTS
0 1"

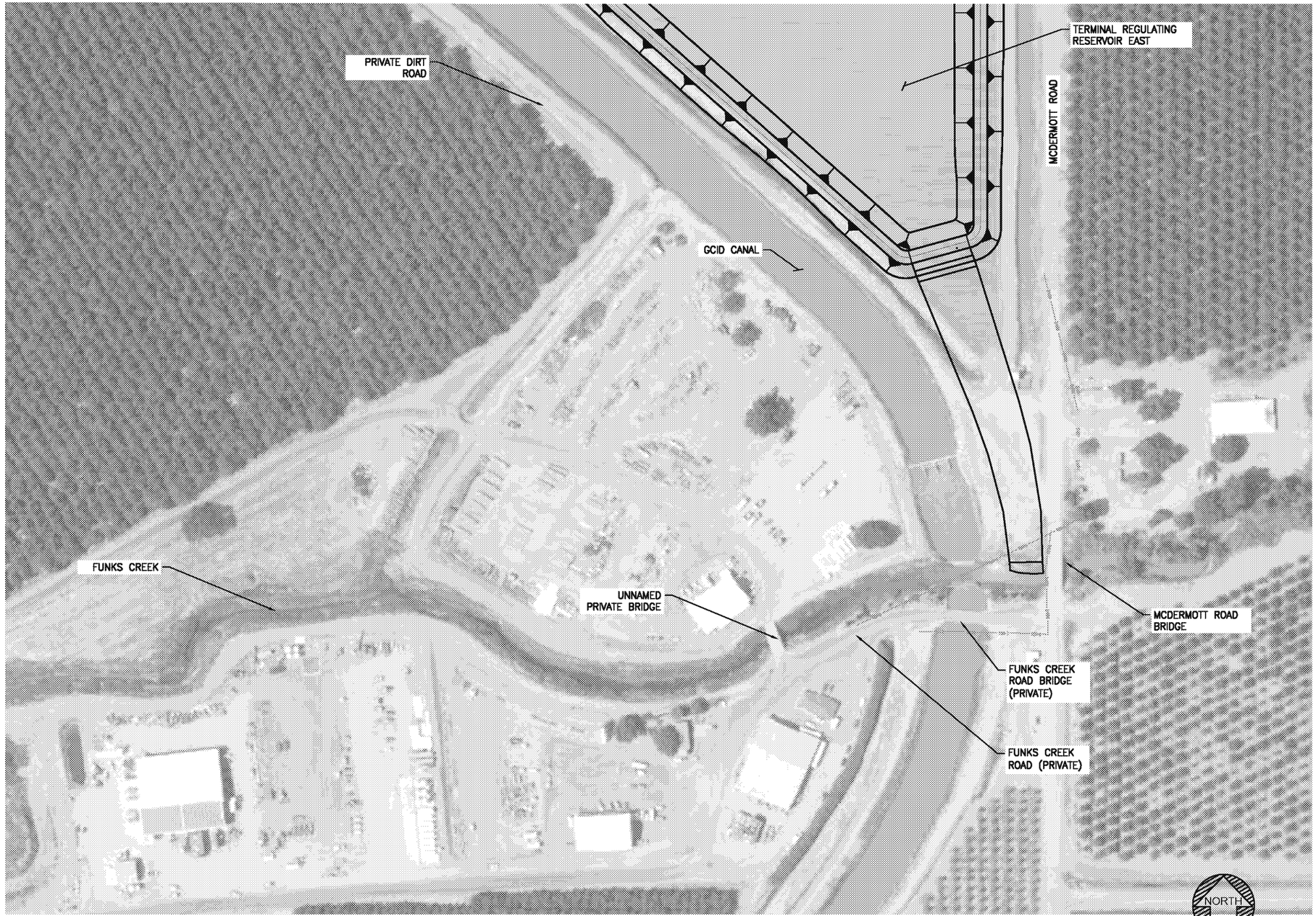
DRAWING NO.
EXH–007

PROJECT FEASIBILITY STUDY – NOT FOR CONSTRUCTION

PLOTTED BY:CHELONIS, BECKY/RDD –March 19, 2021–3:44:42 PM
DRAWING: GEN–EXH–007_D3380600.dwg
JACOBS PROJECT # D3880600

SITE ACCESS NOTES

1. MCDERMOTT ROAD BRIDGE HAS A MAX WEIGHT LIMIT OF XXX TONS.
2. FUNKS CREEK ROAD BRIDGE IS A PRIVATE ACCESS BRIDGE AND HAS A MAX WEIGHT LIMIT OF XXX TONS.
3. UNNAMED PRIVATE BRIDGE IS A PRIVATE ACCESS BRIDGE AND HAS A MAX WEIGHT LIMIT OF XXX TONS.
4. ALTERNATE CONSTRUCTION ACCESS PRIOR TO TRR BRIDGE CONSTRUCTION USING THE PRIVATE ACCESS BRIDGES IS BY AGREEMENT WITH THE OWNER ONLY. COORDINATE DETAILS WITH OWNER, INCLUDING ACCEPTABLE WEIGHT LIMITS FOR BRIDGES.



PRIVATE BRIDGE ACCESS PLAN
SCALE: 1" =100'

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PROJECT FEASIBILITY STUDY – NOT FOR CONSTRUCTION

I/R	DATE	BY	CHK	APPR	DESCRIPTION

DESIGNED BY: B CHELONIS
DRAWN BY: B CHELONIS
CHECKED BY:
IN CHARGE: P RUDE
DATE: MARCH 2021

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REGISTERED PROFESSIONAL ENGINEER – STATE OF CALIFORNIA

Sites

SITES RESERVOIR TO 2

PRIVATE BRIDGE ACCESS PLAN

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE FOR REDUCED PLOTS
0 1"

DRAWING NO.
EXH–008

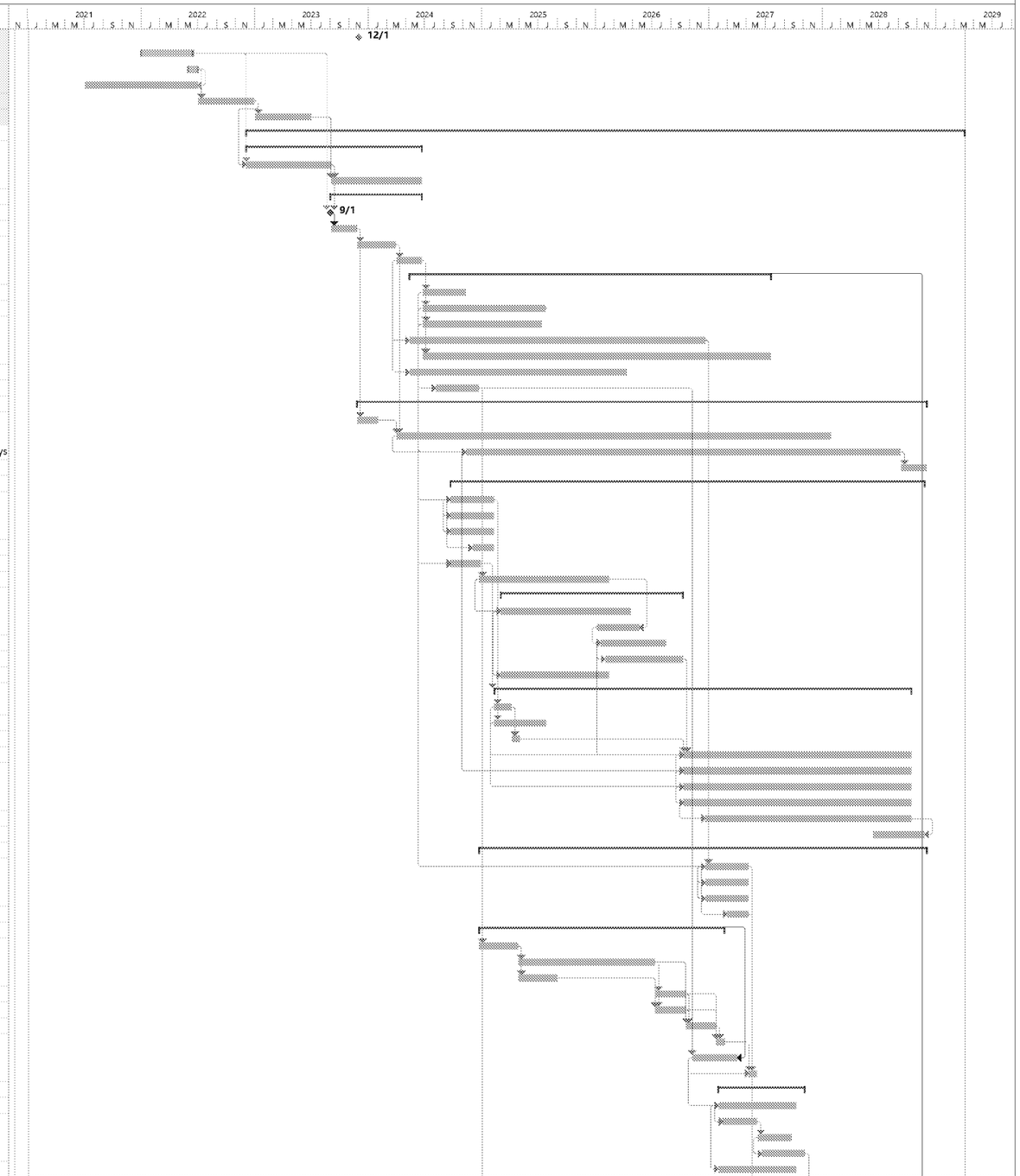
PLOTTED BY:CHELONIS, BECKY/ROD -March 19, 2021-3:44:42 PM
DRAWING: GEN-EXH-008_D3380600.dwg
JACOBS PROJECT # D3880600

Draft_0011070

Appendix B
Construction Schedule

Sites Reservoir
Preliminary Construction Schedule
Roads, Dams, and I/O Facilities
November 2020

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Successors
1		CWC Award of Funds	0 days	Fri 12/1/23	Fri 12/1/23		
2		Determine Engineering Procurement & Delivery Method	120 days	Sat 1/1/22	Thu 6/16/22		9,12
3		Sites Board Approval/NTP for Phase 3	23 days	Wed 6/1/22	Fri 7/1/22		4FF,5
4		Real Estate Access & Permitting (Geotech & Surveying)	260 days	Mon 7/5/21	Fri 7/1/22	3FF	5
5		Initial Geotech & Surveying	130 days	Mon 7/4/22	Fri 12/30/22	3,4	6,9FS-20 days
6		Final Geotech Investigation	130 days	Mon 1/2/23	Fri 6/30/23	5	10
7		**Reservoir Facilities**	**1652 days**	**Mon 12/5/22**	**Tue 4/3/29**		
8		**Engineering**	**405 days**	**Mon 12/5/22**	**Fri 6/21/24**		
9		Preliminary Engineering	195 days	Mon 12/5/22	Fri 9/1/23	2,5FS-20 days	10,12
10		Final Engineering	210 days	Mon 9/4/23	Fri 6/21/24	6,9	
11		**Administrative and General**	**210 days**	**Fri 9/1/23**	**Fri 6/21/24**		
12		Contract Award	0 days	Fri 9/1/23	Fri 9/1/23	2,9	13
13		Notice To Proceed	60 days	Mon 9/4/23	Fri 11/24/23	12	14,25
14		Early Submittals And Approvals	90 days	Mon 11/27/23	Fri 3/29/24	13	15,26
15		Mobilization	60 days	Mon 4/1/24	Fri 6/21/24	14	17,18,20SS+30 days,22SS+30 days,19,21
16		**Roads, Bridges, Access, and Site Development**	**831 days**	**Mon 5/13/24**	**Mon 7/19/27**		**198**
17		Site Access and Staging Development	100 days	Mon 6/24/24	Fri 11/8/24	15	23SS+30 days,180SS+50 days,184SS+50 days,34SS+65 days
18		Northern Construction Access Roads	284 days	Mon 6/24/24	Thu 7/24/25	15	53SS+100 days,84,27SS+100 days
19		Southern Construction Access Roads	274 days	Mon 6/24/24	Thu 7/10/25	15	30SS+65 days,180SS+50 days,184SS+50 days
20		Sites Lodoga Road Realignment and Bridge	680 days	Mon 5/13/24	Fri 12/18/26	15SS+30 days	53
21		Huffmaster Road Realignment	801 days	Mon 6/24/24	Mon 7/19/27	15	
22		Reservoir Footprint Mitigation Actions	500 days	Mon 5/13/24	Fri 4/10/26	15SS+30 days	
23		Demolition and Clearing	100 days	Mon 8/5/24	Fri 12/20/24	17SS+30 days	35,182,65,58,88
24		**Process and Haul Filter Materials to Project**	**1310 days**	**Mon 11/27/23**	**Fri 12/1/28**		
25		Offsite Quarry Development	50 days	Mon 11/27/23	Fri 2/2/24	13	26
26		Process Filter Materials	1000 days	Mon 4/1/24	Fri 1/28/28	14,25	27SS+30 days
27		Filter Material Haul to Stockpile	1000 days	Mon 11/11/24	Fri 9/8/28	26SS+30 days,18SS+100 days	28,47SS+30 days,77SS+30 days,98SS+30 days,118SS+30 days,138SS+30 days
28		Quarry Reclamation and Restoration	60 days	Mon 9/11/28	Fri 12/1/28	27	
29		**Golden Gate Dam Construction**	**1090 days**	**Mon 9/23/24**	**Fri 11/24/28**		
30		Golden Gate Access and Staging	100 days	Mon 9/23/24	Fri 2/7/25	19SS+65 days	31SS,33SS+50 days,32SS,43,44
31		Erosion and Sediment Control	100 days	Mon 9/23/24	Fri 2/7/25	30SS	
32		Clearing / Grubbing Topsoil Salvage from Work Areas	100 days	Mon 9/23/24	Fri 2/7/25	30SS	
33		Demolition	50 days	Mon 12/2/24	Fri 2/7/25	30SS+50 days	
34		GG Dam - Bypass Pipeline and U/S Cofferdam	70 days	Mon 9/23/24	Fri 12/27/24	17SS+65 days	42
35		GG Dam - Foundation Excavation	300 days	Mon 12/23/24	Fri 2/13/26	23	37SS+50 days,38FF+70 days
36		**GG Dam - Foundation Preparation and Grouting**	**420 days**	**Mon 3/3/25**	**Fri 10/9/26**		
37		Foundation Cleaning	300 days	Mon 3/3/25	Fri 4/24/26	35SS+50 days	41SS
38		Grout Cap	100 days	Mon 1/5/26	Fri 5/22/26	35FF+70 days	39SS+10 days
39		Consolidation Grouting	150 days	Mon 1/19/26	Fri 8/14/26	38SS+10 days	40SS+10 days,46SS+100 days
40		Curtain Grouting	180 days	Mon 2/2/26	Fri 10/9/26	39SS+10 days	46
41		Dental Excavation and Concrete	250 days	Mon 3/3/25	Fri 2/13/26	37SS	
42		**GG Dam - Embankment**	**960 days**	**Mon 2/10/25**	**Fri 10/13/28**	**34**	
43		Initial Borrow Development (Core Material)	40 days	Mon 2/10/25	Fri 4/4/25	30	46SS+20 days,45
44		Initial Quarry Development for Zones 3 and 4	120 days	Mon 2/10/25	Fri 7/25/25	30	48SS+40 days
45		Borrow Overburden and Waste to Disposal Site	20 days	Mon 4/7/25	Fri 5/2/25	43	46
46		Place Zone 1 - Core	525 days	Mon 10/12/26	Fri 10/13/28	43SS+20 days,45,39SS+100 days,4	47SS
47		Place Zone 2A & 2B - Filters, Drains and Transitions	525 days	Mon 10/12/26	Fri 10/13/28	46SS,27SS+30 days	48SS
48		Place Zone 3 - Rockfill	525 days	Mon 10/12/26	Fri 10/13/28	47SS,44SS+40 days	49SS
49		Place Zone 4 - Random	525 days	Mon 10/12/26	Fri 10/13/28	48SS	50SS+50 days
50		Place Rip Rap	475 days	Mon 12/21/26	Fri 10/13/28	49SS+50 days	51FF+30 days
51		Site Reclamation and Topsoil Replacement	120 days	Mon 6/12/28	Fri 11/24/28	50FF+30 days	
52		**Sites Dam Construction**	**1030 days**	**Mon 12/23/24**	**Fri 12/1/28**		
53		Sites Dam Access and Staging	100 days	Mon 12/21/26	Fri 5/7/27	18SS+100 days,20	54SS,56SS+50 days,55SS,74,75
54		Erosion and Sediment Control	100 days	Mon 12/21/26	Fri 5/7/27	53SS	
55		Clearing / Grubbing Topsoil Salvage from Work Areas	100 days	Mon 12/21/26	Fri 5/7/27	53SS	
56		Demolition	50 days	Mon 3/1/27	Fri 5/7/27	53SS+50 days	66
57		**Sites Diversion Outlet Facility**	**565 days**	**Mon 12/23/24**	**Fri 2/19/27**		**65FF+30 days**
58		Develop Downstream Portal	90 days	Mon 12/23/24	Fri 4/25/25	23	59,60
59		Tunnel Excavation and Lining	315 days	Mon 4/28/25	Fri 7/10/26	58	62,61,63
60		Develop Upstream Portal	90 days	Mon 4/28/25	Fri 8/29/25	58	62
61		Outlet Structure Concrete	70 days	Mon 7/13/26	Fri 10/16/26	59	64,63
62		Inlet Structure Concrete	70 days	Mon 7/13/26	Fri 10/16/26	59,60	64,63
63		Mechanical	70 days	Mon 10/19/26	Fri 1/22/27	59,61,62	64
64		Sites Diversion Completion and Restoration	20 days	Mon 1/25/27	Fri 2/19/27	61,62,63	66
65		Sites Dam - Foundation Excavation	105 days	Mon 11/9/26	Fri 4/2/27	23,57FF+30 days	68SS+60 days,66SS+50 days
66		Construct Cofferdam to El. 310	20 days	Mon 5/10/27	Fri 6/4/27	56,65SS+50 days,64	
67		**Sites Dam - Foundation Preparation and Grouting**	**200 days**	**Mon 2/1/27**	**Fri 11/5/27**		
68		Foundation Cleaning	180 days	Mon 2/1/27	Fri 10/8/27	65SS+60 days	72SS,69SS+10 days
69		Grout Cap	80 days	Mon 2/15/27	Fri 6/4/27	68SS+10 days	70
70		Consolidation Grouting	80 days	Mon 6/7/27	Fri 9/24/27	69	71SS+10 days,76SS+100 days
71		Curtain Grouting	100 days	Mon 6/21/27	Fri 11/5/27	70SS+10 days	76
72		Dental Excavation and Concrete	180 days	Mon 2/1/27	Fri 10/8/27	68SS	



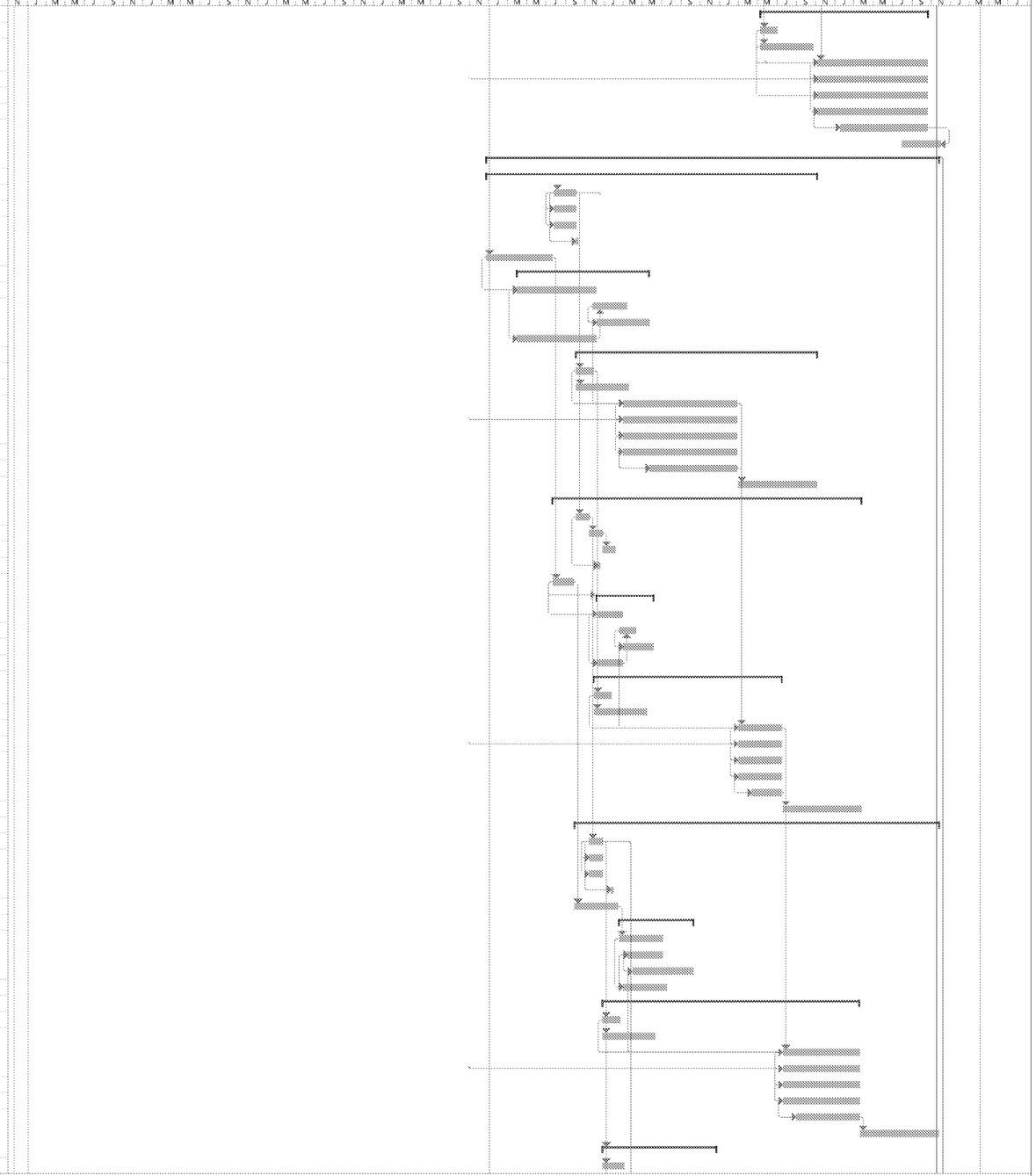
Project: Sites Reservoir
Date: Fri 11/20/20

Task | Milestone | Project Summary | Inactive Milestone | Manual Task | Manual Summary Rollup | Start-only | External Tasks | Deadline | Manual Progress
Split | Summary | Inactive Task | Inactive Summary | Duration-only | Manual Summary | Finish-only | External Milestone | Progress

Draft_0011072

Sites Reservoir
Preliminary Construction Schedule
Roads, Dams, and I/O Facilities
November 2020

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Successors
73		**Sites Dam - Embankment**	**380 days**	**Mon 5/10/27**	**Fri 10/20/28**		
74		Initial Borrow Development (Core Material)	40 days	Mon 5/10/27	Fri 7/2/27	53	76SS+20 days
75		Initial Quarry Development for Zones 3 and 4	120 days	Mon 5/10/27	Fri 10/22/27	53	78SS+40 days
76		Place Zone 1 - Core	250 days	Mon 11/8/27	Fri 10/20/28	70SS+100 days,74SS+20 days,71	77SS
77		Place Zone 2A & 2B - Filters, Drains and Transitions	250 days	Mon 11/8/27	Fri 10/20/28	76SS,27SS+30 days	78SS
78		Place Zone 3 - Rockfill	250 days	Mon 11/8/27	Fri 10/20/28	77SS,75SS+40 days	79SS
79		Place Zone 4 - Random	250 days	Mon 11/8/27	Fri 10/20/28	78SS	80SS+50 days
80		Place Rip Rap	200 days	Mon 1/17/28	Fri 10/20/28	79SS+50 days	81FF+30 days
81		Site Reclamation and Topsoil Replacement	90 days	Mon 7/31/28	Fri 12/1/28	80FF+30 days	
82		**Saddle Dams**	**1025 days**	**Mon 12/23/24**	**Fri 11/24/28**		**198**
83		**Saddle Dam 3**	**750 days**	**Mon 12/23/24**	**Fri 11/5/27**		
84		Saddle Dam 3 - Access and Staging	50 days	Fri 7/25/25	Thu 10/2/25	18	85SS,87SS+50 days,86SS,95,96,155,104
85		Erosion and Sediment Control	50 days	Fri 7/25/25	Thu 10/2/25	84SS	
86		Clearing / Grubbing Topsoil Salvage from Work Areas	50 days	Fri 7/25/25	Thu 10/2/25	84SS	
87		Demolition	5 days	Fri 10/3/25	Thu 10/9/25	84SS+50 days	
88		Saddle Dam 3 - Foundation Excavation	150 days	Mon 12/23/24	Fri 7/18/25	23	90SS+70 days,108
89		**Saddle Dam 3 - Foundation Preparation and Grouting**	**300 days**	**Mon 3/31/25**	**Fri 5/22/26**		
90		Foundation Cleaning	180 days	Mon 3/31/25	Fri 12/5/25	88SS+70 days	93SS
91		Grout Cap	80 days	Mon 11/24/25	Fri 3/13/26	93FS-10 days	92SS+10 days
92		Curtain Grouting	120 days	Mon 12/8/25	Fri 5/22/26	91SS+10 days	97SS+60 days
93		Dental Excavation and Concrete	180 days	Mon 3/31/25	Fri 12/5/25	90SS	91FS-10 days
94		**Saddle Dam 3 - Embankment**	**546 days**	**Fri 10/3/25**	**Fri 11/5/27**		
95		Initial Borrow Development (Core Material)	40 days	Fri 10/3/25	Thu 11/27/25	84	97SS+20 days,115,116
96		Initial Quarry Development for Zones 3 and 4	120 days	Fri 10/3/25	Thu 3/19/26	84	
97		Place Zone 1 - Core	260 days	Mon 3/2/26	Fri 2/26/27	95SS+20 days,92SS+60 days	98SS,117
98		Place Zone 2A & 2B - Filters, Drains and Transitions	260 days	Mon 3/2/26	Fri 2/26/27	97SS,27SS+30 days	99SS
99		Place Zone 3 - Rockfill	260 days	Mon 3/2/26	Fri 2/26/27	98SS	100SS
100		Place Zone 4 - Random	260 days	Mon 3/2/26	Fri 2/26/27	99SS	101SS+60 days
101		Place Rip Rap	200 days	Mon 5/25/26	Fri 2/26/27	100SS+60 days	102
102		Site Reclamation and Topsoil Replacement	180 days	Mon 3/1/27	Fri 11/5/27	101	
103		**Saddle Dam 5**	**700 days**	**Mon 7/21/25**	**Fri 3/24/28**		
104		Saddle Dam 5 - Access and Staging	30 days	Fri 10/3/25	Thu 11/13/25	84	107SS+50 days,105,124
105		Erosion and Sediment Control	30 days	Fri 11/14/25	Thu 12/25/25	104	106
106		Clearing / Grubbing Topsoil Salvage from Work Areas	30 days	Fri 12/26/25	Thu 2/5/26	105	
107		Demolition	5 days	Fri 12/12/25	Thu 12/18/25	104SS+50 days	
108		Saddle Dam 5 - Foundation Excavation	50 days	Mon 7/21/25	Fri 9/26/25	88	109SS+100 days,110SS+20 days,128
109		**Saddle Dam 5 - Foundation Preparation and Grouting**	**130 days**	**Mon 12/8/25**	**Fri 6/5/26**	**108SS+100 days**	
110		Foundation Cleaning	60 days	Mon 12/8/25	Fri 2/27/26	108SS+20 days	113SS
111		Grout Cap	40 days	Mon 2/16/26	Fri 4/10/26	113FS-10 days	112SS+10 days
112		Curtain Grouting	70 days	Mon 3/2/26	Fri 6/5/26	111SS+10 days	117SS+60 days
113		Dental Excavation and Concrete	60 days	Mon 12/8/25	Fri 2/27/26	110SS	111FS-10 days
114		**Saddle Dam 5 - Embankment**	**426 days**	**Fri 11/28/25**	**Fri 7/16/27**		
115		Initial Borrow Development (Core Material)	40 days	Fri 11/28/25	Thu 1/22/26	95	117SS+20 days
116		Initial Quarry Development for Zones 3 and 4	120 days	Fri 11/28/25	Thu 5/14/26	95	
117		Place Zone 1 - Core	100 days	Mon 3/1/27	Fri 7/16/27	112SS+60 days,115SS+20 days,97	118SS,137
118		Place Zone 2A & 2B - Filters, Drains and Transitions	100 days	Mon 3/1/27	Fri 7/16/27	117SS,27SS+30 days	119SS
119		Place Zone 3 - Rockfill	100 days	Mon 3/1/27	Fri 7/16/27	118SS	120SS
120		Place Zone 4 - Random	100 days	Mon 3/1/27	Fri 7/16/27	119SS	121SS+30 days
121		Place Rip Rap	70 days	Mon 4/12/27	Fri 7/16/27	120SS+30 days	122
122		Site Reclamation and Topsoil Replacement	180 days	Mon 7/19/27	Fri 3/24/28	121	
123		**Minor Saddle Dams (1,2,6,8A)**	**825 days**	**Mon 9/29/25**	**Fri 11/24/28**		
124		Minor Saddle Dams - Access and Staging	30 days	Fri 11/14/25	Thu 12/25/25	104	125SS,127SS+50 days,126SS,135,136,143,144,145,156,168
125		Erosion and Sediment Control	30 days	Fri 11/14/25	Thu 12/25/25	124SS	
126		Clearing / Grubbing Topsoil Salvage from Work Areas	30 days	Fri 11/14/25	Thu 12/25/25	124SS	
127		Demolition	5 days	Fri 1/23/26	Thu 1/29/26	124SS+50 days	
128		Minor Saddle Dams - Foundation Excavation	100 days	Mon 9/29/25	Fri 2/13/26	108	130
129		**Minor Saddle Dams - Foundation Preparation and Grout**	**170 days**	**Mon 2/16/26**	**Fri 10/9/26**		
130		Foundation Cleaning	100 days	Mon 2/16/26	Fri 7/3/26	128	133SS+10 days
131		Grout Cap	80 days	Mon 3/16/26	Fri 7/3/26	133SS+10 days	132SS+10 days
132		Curtain Grouting	140 days	Mon 3/30/26	Fri 10/9/26	131SS+10 days	137SS+60 days
133		Dental Excavation and Concrete	100 days	Mon 3/2/26	Fri 7/17/26	130SS+10 days	131SS+10 days
134		**Minor Saddle Dams - Embankment**	**581 days**	**Fri 12/26/25**	**Fri 3/17/28**		
135		Initial Borrow Development (Core Material)	40 days	Fri 12/26/25	Thu 2/19/26	124	137SS+20 days
136		Initial Quarry Development for Zones 3 and 4	120 days	Fri 12/26/25	Thu 6/11/26	124	
137		Place Zone 1 - Core	175 days	Mon 7/19/27	Fri 3/17/28	132SS+60 days,135SS+20 days,117	138SS
138		Place Zone 2A & 2B - Filters, Drains and Transitions	175 days	Mon 7/19/27	Fri 3/17/28	137SS,27SS+30 days	139SS
139		Place Zone 3 - Rockfill	175 days	Mon 7/19/27	Fri 3/17/28	138SS	140SS
140		Place Zone 4 - Random	175 days	Mon 7/19/27	Fri 3/17/28	139SS	141SS+30 days
141		Place Rip Rap	145 days	Mon 8/30/27	Fri 3/17/28	140SS+30 days	142
142		Site Reclamation and Topsoil Replacement	180 days	Mon 3/20/28	Fri 11/24/28	141	
143		**Saddle Dam 8B - Spillway**	**257 days**	**Fri 12/26/25**	**Mon 12/21/26**	**124**	
144		Batch Plant Setup and Operational	50 days	Fri 12/26/25	Thu 3/5/26	124	



Project: Sites Reservoir
Date: Fri 11/20/20

Task | Milestone | Project Summary | Inactive Milestone | Manual Task | Manual Summary Rollup | Start-only | External Tasks | Deadline | Manual Progress
Split | Summary | Inactive Task | Inactive Summary | Duration-only | Manual Summary | Finish-only | External Milestone | Progress

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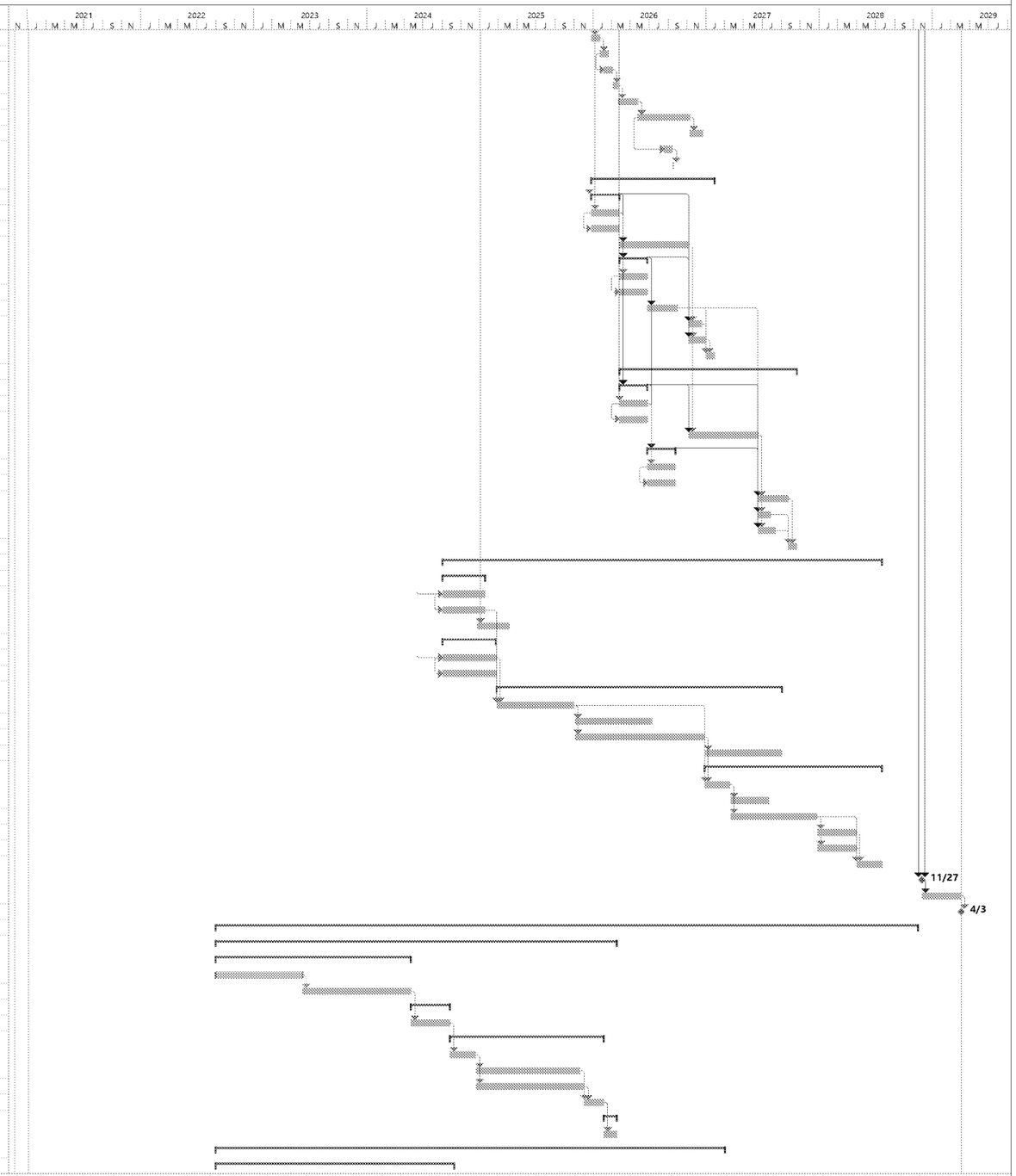
Sites Reservoir
Preliminary Construction Schedule
Roads, Dams, and I/O Facilities
November 2020

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Successors
145		SD8 - Foundation Excavation	20 days	Fri 12/26/25	Thu 1/22/26	124	146
146		SD8 - Foundation Cleaning	20 days	Fri 1/23/26	Thu 2/19/26	145	147SS+10 days
147		SD8 - Dental Excavation and Concrete	20 days	Fri 2/6/26	Thu 3/5/26	146SS+10 days	148
148		SD8 - Grout Cap	12 days	Fri 3/6/26	Mon 3/23/26	147	149
149		SD 8 - Foundation Grouting	45 days	Tue 3/24/26	Mon 5/25/26	148	150
150		SD 8 - Mass Concrete	120 days	Tue 5/26/26	Mon 11/9/26	149	151,152SS+60 days
151		SD 8 - Bridge	30 days	Tue 11/10/26	Mon 12/21/26	150	
152		SD 8 - Clay Backfill	20 days	Tue 8/18/26	Mon 9/14/26	150SS+60 days	153
153		SD 8 - Riprap and Drain Gravel	3 days	Tue 9/15/26	Thu 9/17/26	152	
154		**Emergency Release Structure No. 1**	**285 days**	**Fri 12/26/25**	**Thu 1/28/27**		
155		**Develop Downstream Portal**	**65 days**	**Fri 12/26/25**	**Thu 3/26/26**	**84**	**158,159,163,167**
156		Portal Excavation	65 days	Fri 12/26/25	Thu 3/26/26	124	157SS,160
157		Rock Bolting	65 days	Fri 12/26/25	Thu 3/26/26	156SS	
158		Tunnel Excavation and Lining (12 ft)	160 days	Fri 3/27/26	Thu 11/5/26	155	164,163,170
159		**Develop Upstream Portal**	**65 days**	**Fri 3/27/26**	**Thu 6/25/26**	**155**	**171,164,162**
160		Portal Excavation	65 days	Fri 3/27/26	Thu 6/25/26	156	161SS
161		Rock Bolting	65 days	Fri 3/27/26	Thu 6/25/26	160SS	
162		Outlet Structure Concrete	70 days	Fri 6/26/26	Thu 10/1/26	159	165,174
163		Install 10-Ft Cut and Cover Pipe	30 days	Fri 11/6/26	Thu 12/17/26	155,158	165
164		Inlet Structure Concrete	40 days	Fri 11/6/26	Thu 12/31/26	158,159	165
165		ERS - 1 Completion and Restoration	20 days	Fri 1/1/27	Thu 1/28/27	162,163,164	
166		**Emergency Release Structure No. 2**	**410 days**	**Fri 3/27/26**	**Thu 10/21/27**		
167		**Develop Downstream Portal**	**65 days**	**Fri 3/27/26**	**Thu 6/25/26**	**155**	**170,171,175,174**
168		Portal Excavation	65 days	Fri 3/27/26	Thu 6/25/26	124	169SS,172
169		Rock Bolting	65 days	Fri 3/27/26	Thu 6/25/26	168SS	
170		Tunnel Excavation and Lining	160 days	Fri 11/6/26	Thu 6/17/27	167,158	176,175,174
171		**Develop Upstream Portal**	**65 days**	**Fri 6/26/26**	**Thu 9/24/26**	**167,159**	**176**
172		Portal Excavation	65 days	Fri 6/26/26	Thu 9/24/26	168	173SS
173		Rock Bolting	65 days	Fri 6/26/26	Thu 9/24/26	172SS	
174		Outlet Structure Concrete	70 days	Fri 6/18/27	Thu 9/23/27	162,167,170	177
175		Install 10-Ft Cut and Cover Pipe	30 days	Fri 6/18/27	Thu 7/29/27	167,170	177
176		Inlet Structure Concrete	40 days	Fri 6/18/27	Thu 8/12/27	170,171	177
177		ERS - 2 Completion and Restoration	20 days	Fri 9/24/27	Thu 10/21/27	174,175,176	
178		**Inlet Outlet Facilities**	**1015 days**	**Mon 9/2/24**	**Fri 7/21/28**		
179		**Develop Downstream Portal**	**100 days**	**Mon 9/2/24**	**Fri 1/17/25**		
180		Portal Excavation	100 days	Mon 9/2/24	Fri 1/17/25	17SS+50 days,19SS+50 days	181SS
181		Rock Bolting	100 days	Mon 9/2/24	Fri 1/17/25	180SS	187
182		Intake Channel Excavation	75 days	Mon 12/23/24	Fri 4/4/25	23	
183		**Develop Upstream Portal**	**125 days**	**Mon 9/2/24**	**Fri 2/21/25**		
184		Portal Excavation	125 days	Mon 9/2/24	Fri 2/21/25	17SS+50 days,19SS+50 days	185SS,187
185		Rock Bolting	125 days	Mon 9/2/24	Fri 2/21/25	184SS	
186		**Tunnels Excavation and Lining (Double Shift)**	**660 days**	**Mon 2/24/25**	**Fri 9/3/27**		
187		North Tunnel Excavation - Two Headings, Double Shift	180 days	Mon 2/24/25	Fri 10/31/25	181,184	188,189,192
188		North Tunnel Lining	180 days	Mon 11/3/25	Fri 7/10/26	187	
189		South Tunnel Excvation - Double Shift	300 days	Mon 11/3/25	Fri 12/25/26	187	190,192
190		South Tunnel Lining	180 days	Mon 12/28/26	Fri 9/3/27	189	
191		**Intake and Outlet Structures**	**410 days**	**Mon 12/28/26**	**Fri 7/21/28**		
192		Intake Structure Foundation	60 days	Mon 12/28/26	Fri 3/19/27	187,189	193,194
193		Tunnel Bifurcation	90 days	Mon 3/22/27	Fri 7/23/27	192	
194		Intake Structure Concrete	200 days	Mon 3/22/27	Fri 12/24/27	192	197,195,196
195		Intake Structure Gates and Mechanical	90 days	Mon 12/27/27	Fri 4/28/28	194	197
196		Tower Access Bridge	90 days	Mon 12/27/27	Fri 4/28/28	194	197
197		I/O Completion and Restoration	60 days	Mon 5/1/28	Fri 7/21/28	194,195,196	
198		Dams and I/O Ready for Commissioning	1 day	Mon 11/27/28	Mon 11/27/28	16,82	199
199		Dams and I/O Startup and Commissioning	90 days	Tue 11/28/28	Mon 4/2/29	198	200
200		Dams and I/O Substantial Completion	1 day	Tue 4/3/29	Tue 4/3/29	199	
201		**Conveyance Facilities**	**1620 days**	**Thu 9/1/22**	**Wed 11/15/28**		
202		**Dunnigan Pipeline - Alt 1**	**925 days**	**Thu 9/1/22**	**Wed 3/18/26**		
203		**Engineering**	**450 days**	**Thu 9/1/22**	**Wed 5/22/24**		
204		Preliminary	200 days	Thu 9/1/22	Wed 6/7/23		205
205		Final	250 days	Thu 6/8/23	Wed 5/22/24	204	207
206		**Bid and Award**	**90 days**	**Thu 5/23/24**	**Wed 9/25/24**		
207		Bid and Award	90 days	Thu 5/23/24	Wed 9/25/24	205	209
208		**Construction**	**355 days**	**Thu 9/26/24**	**Wed 2/4/26**		
209		Submittals	60 days	Thu 9/26/24	Wed 12/18/24	207	210,211
210		Structures	240 days	Thu 12/19/24	Wed 11/19/25	209	212
211		Pipeline	250 days	Thu 12/19/24	Wed 12/3/25	209	212
212		Testing	45 days	Thu 12/4/25	Wed 2/4/26	210,211	214
213		**Commissioning**	**30 days**	**Thu 2/5/26**	**Wed 3/18/26**		
214		Commission	30 days	Thu 2/5/26	Wed 3/18/26	212	
215		**Dunnigan Pipeline - Alt 2**	**1175 days**	**Thu 9/1/22**	**Wed 3/3/27**		
216		**Engineering**	**550 days**	**Thu 9/1/22**	**Wed 10/9/24**		



Project: Sites Reservoir
Date: Fri 11/20/20

Task | Milestone | Project Summary | Inactive Milestone | Manual Task | Manual Summary Rollup | Start-only | External Tasks | Deadline | Manual Progress
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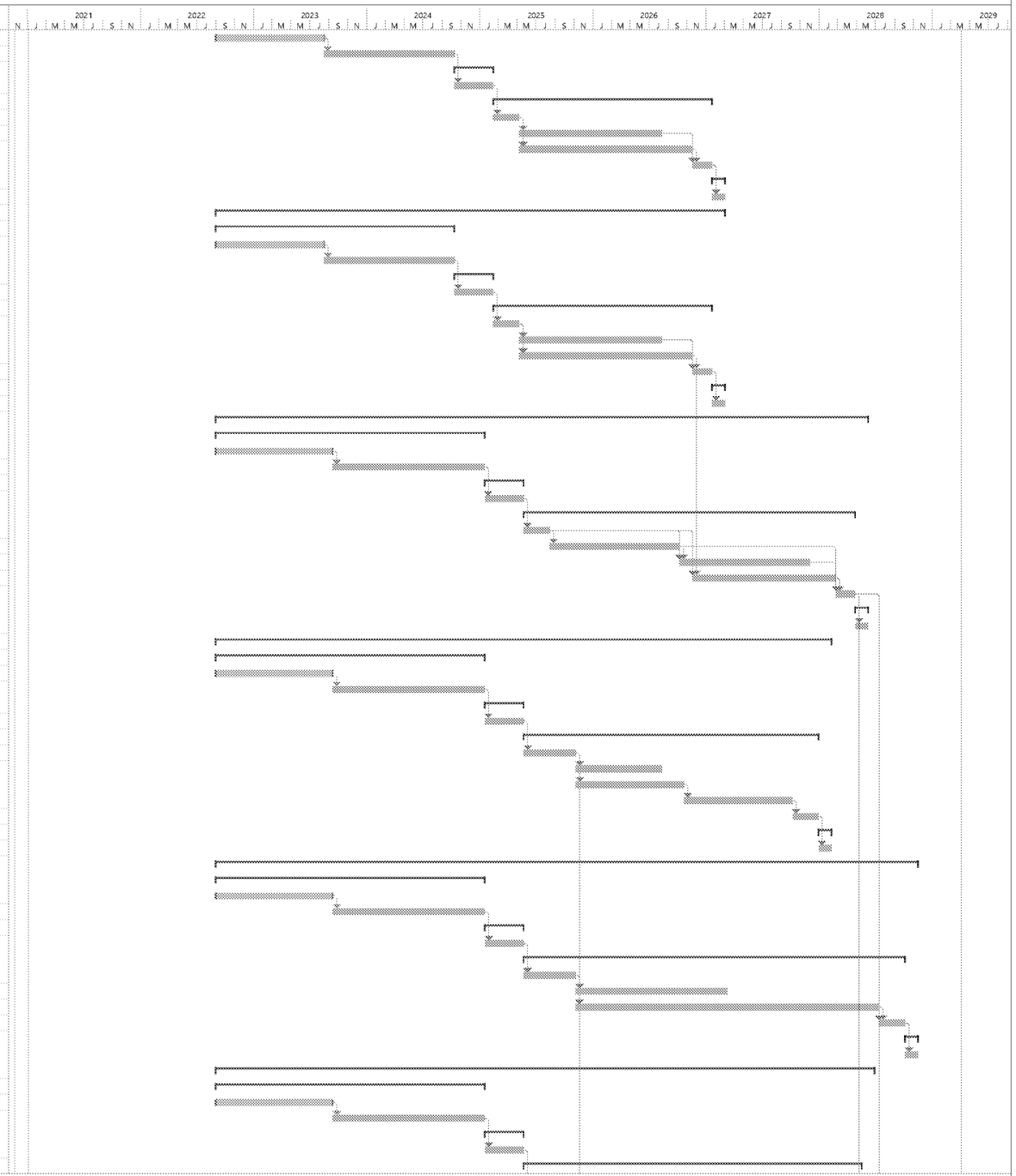
Draft_0011074

Sites Reservoir
Preliminary Construction Schedule
Roads, Dams, and I/O Facilities
November 2020

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Successors
217		Preliminary	250 days	Thu 9/1/22	Wed 8/16/23		218
218		Final	300 days	Thu 8/17/23	Wed 10/9/24	217	220
219		**Bid and Award**	**90 days**	**Thu 10/10/24**	**Wed 2/12/25**		
220		Bid and Award	90 days	Thu 10/10/24	Wed 2/12/25	218	222
221		**Construction**	**505 days**	**Thu 2/13/25**	**Wed 1/20/27**		
222		Submittals	60 days	Thu 2/13/25	Wed 5/7/25	220	223,224
223		Structures	330 days	Thu 5/8/25	Wed 8/12/26	222	225
224		Pipeline	400 days	Thu 5/8/25	Wed 11/18/26	222	225
225		Testing	45 days	Thu 11/19/26	Wed 1/20/27	223,224	227
226		**Commissioning**	**30 days**	**Thu 1/21/27**	**Wed 3/3/27**		
227		Commission	30 days	Thu 1/21/27	Wed 3/3/27	225	
228		**Funks/TRR Pipelines**	**1175 days**	**Thu 9/1/22**	**Wed 3/3/27**		
229		**Engineering**	**550 days**	**Thu 9/1/22**	**Wed 10/9/24**		
230		Preliminary	250 days	Thu 9/1/22	Wed 8/16/23		231
231		Final	300 days	Thu 8/17/23	Wed 10/9/24	230	233
232		**Bid and Award**	**90 days**	**Thu 10/10/24**	**Wed 2/12/25**		
233		Bid and Award	90 days	Thu 10/10/24	Wed 2/12/25	231	235
234		**Construction**	**505 days**	**Thu 2/13/25**	**Wed 1/20/27**		
235		Submittals	60 days	Thu 2/13/25	Wed 5/7/25	233	236,237
236		Structures	330 days	Thu 5/8/25	Wed 8/12/26	235	238
237		Pipeline	400 days	Thu 5/8/25	Wed 11/18/26	235	238,251
238		Testing	45 days	Thu 11/19/26	Wed 1/20/27	236,237	240
239		**Commissioning**	**30 days**	**Thu 1/21/27**	**Wed 3/3/27**		
240		Commission	30 days	Thu 1/21/27	Wed 3/3/27	238	
241		**Transmission Powerlines**	**1505 days**	**Thu 9/1/22**	**Wed 6/7/28**		
242		**Engineering**	**620 days**	**Thu 9/1/22**	**Wed 1/15/25**		
243		Preliminary	270 days	Thu 9/1/22	Wed 9/13/23		244
244		Final	350 days	Thu 9/14/23	Wed 1/15/25	243	246
245		**Bid and Award**	**90 days**	**Thu 1/16/25**	**Wed 5/21/25**		
246		Bid and Award	90 days	Thu 1/16/25	Wed 5/21/25	244	248
247		**Construction**	**765 days**	**Thu 5/22/25**	**Wed 4/26/28**		
248		Submittals	60 days	Thu 5/22/25	Wed 8/13/25	246	249,250,251
249		Procurement	300 days	Thu 8/14/25	Wed 10/7/26	248	250,252
250		Towers/Powerlines to POI	300 days	Thu 10/8/26	Wed 12/1/27	248,249	252
251		Towers/Powerlines Funks/TRR	330 days	Thu 11/19/26	Wed 2/23/28	237,248	252
252		Testing	45 days	Thu 2/24/28	Wed 4/26/28	249,250,251	254,279,307,320
253		**Commissioning**	**30 days**	**Thu 4/27/28**	**Wed 6/7/28**		
254		Commission	30 days	Thu 4/27/28	Wed 6/7/28	252	
255		**Funks Reservoir**	**1420 days**	**Thu 9/1/22**	**Wed 2/9/28**		
256		**Engineering**	**620 days**	**Thu 9/1/22**	**Wed 1/15/25**		
257		Preliminary	270 days	Thu 9/1/22	Wed 9/13/23		258
258		Final	350 days	Thu 9/14/23	Wed 1/15/25	257	260
259		**Bid and Award**	**90 days**	**Thu 1/16/25**	**Wed 5/21/25**		
260		Bid and Award	90 days	Thu 1/16/25	Wed 5/21/25	258	262
261		**Construction**	**680 days**	**Thu 5/22/25**	**Wed 12/29/27**		
262		Submittals	120 days	Thu 5/22/25	Wed 11/5/25	260	263,264,315
263		Haulroads	200 days	Thu 11/6/25	Wed 8/12/26	262	
264		Sediment Removal	250 days	Thu 11/6/25	Wed 10/21/26	262	265
265		Cofferdams (build/remove)	250 days	Thu 10/22/26	Wed 10/6/27	264	266
266		Testing	60 days	Thu 10/7/27	Wed 12/29/27	265	268
267		**Commissioning**	**30 days**	**Thu 12/30/27**	**Wed 2/9/28**		
268		Commission	30 days	Thu 12/30/27	Wed 2/9/28	266	
269		**Funks Pumping Generating Plant**	**1620 days**	**Thu 9/1/22**	**Wed 11/15/28**		
270		**Engineering**	**620 days**	**Thu 9/1/22**	**Wed 1/15/25**		
271		Preliminary	270 days	Thu 9/1/22	Wed 9/13/23		272
272		Final	350 days	Thu 9/14/23	Wed 1/15/25	271	274
273		**Bid and Award**	**90 days**	**Thu 1/16/25**	**Wed 5/21/25**		
274		Bid and Award	90 days	Thu 1/16/25	Wed 5/21/25	272	276
275		**Construction**	**880 days**	**Thu 5/22/25**	**Wed 10/4/28**		
276		Submittals	120 days	Thu 5/22/25	Wed 11/5/25	274	277,278
277		Large Equipment Procurement	350 days	Thu 11/6/25	Wed 3/10/27	276	
278		Structures	700 days	Thu 11/6/25	Wed 7/12/28	276	279
279		Testing	60 days	Thu 7/13/28	Wed 10/4/28	252,278	281
280		**Commissioning**	**30 days**	**Thu 10/5/28**	**Wed 11/15/28**		
281		Commission	30 days	Thu 10/5/28	Wed 11/15/28	279	
282		**TRR East Reservoir**	**1520 days**	**Thu 9/1/22**	**Wed 6/28/28**		
283		**Engineering**	**620 days**	**Thu 9/1/22**	**Wed 1/15/25**		
284		Preliminary	270 days	Thu 9/1/22	Wed 9/13/23		285
285		Final	350 days	Thu 9/14/23	Wed 1/15/25	284	287
286		**Bid and Award**	**90 days**	**Thu 1/16/25**	**Wed 5/21/25**		
287		Bid and Award	90 days	Thu 1/16/25	Wed 5/21/25	285	289
288		**Construction**	**780 days**	**Thu 5/22/25**	**Wed 5/17/28**		



Project: Sites Reservoir
Date: Fri 11/20/20

Task | Milestone | Project Summary | Inactive Milestone | Manual Task | Manual Summary Rollup | Start-only | External Tasks | Deadline | Manual Progress
Split | Summary | Inactive Task | Inactive Summary | Duration-only | Manual Summary | Finish-only | External Milestone | Progress

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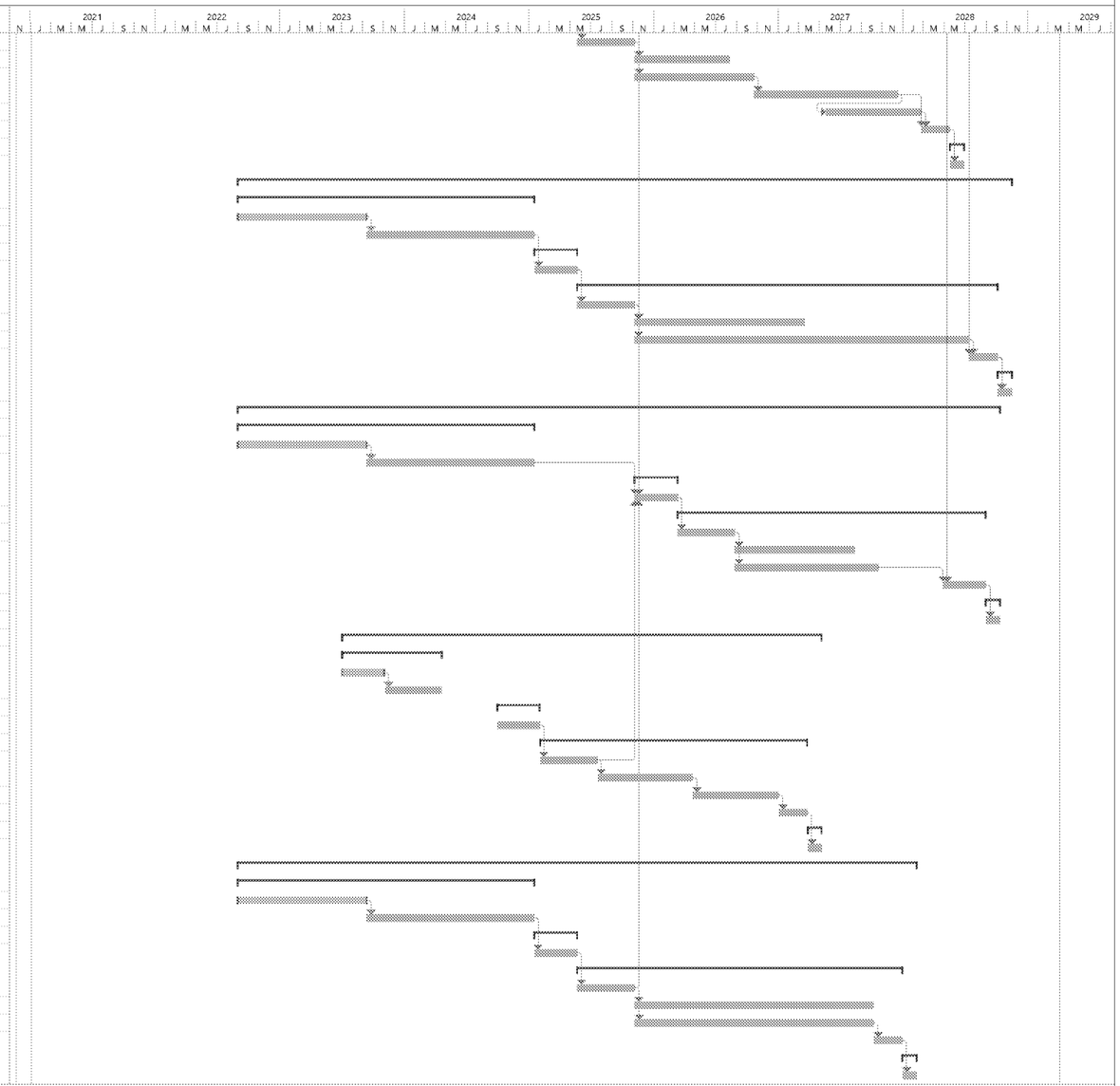
Sites Reservoir
Preliminary Construction Schedule
Roads, Dams, and I/O Facilities
November 2020

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Successors
289		Submittals	120 days	Thu 5/22/25	Wed 11/5/25	287	290,291,315
290		Haulroads	200 days	Thu 11/6/25	Wed 8/12/26	289	
291		Ground Improvement	250 days	Thu 11/6/25	Wed 10/21/26	289	292
292		Earthwork/Structures	300 days	Thu 10/22/26	Wed 12/15/27	291	293FS-1200 hrs,294
293		Subgrade and Liner	200 days	Thu 5/20/27	Wed 2/23/28	292FS-1200 hrs	294
294		Testing	60 days	Thu 2/24/28	Wed 5/17/28	292,293	296
295		**Commissioning**	**30 days**	**Thu 5/18/28**	**Wed 6/28/28**		
296		Commission	30 days	Thu 5/18/28	Wed 6/28/28	294	
297		**TRR Pumping Generating Plant**	**1620 days**	**Thu 9/1/22**	**Wed 11/15/28**		
298		**Engineering**	**620 days**	**Thu 9/1/22**	**Wed 1/15/25**		
299		Preliminary	270 days	Thu 9/1/22	Wed 9/13/23		300
300		Final	350 days	Thu 9/14/23	Wed 1/15/25	299	302
301		**Bid and Award**	**90 days**	**Thu 1/16/25**	**Wed 5/21/25**		
302		Bid and Award	90 days	Thu 1/16/25	Wed 5/21/25	300	304
303		**Construction**	**880 days**	**Thu 5/22/25**	**Wed 10/4/28**		
304		Submittals	120 days	Thu 5/22/25	Wed 11/5/25	302	305,306
305		Large Equipment Procurement	355 days	Thu 11/6/25	Wed 3/17/27	304	
306		Structures	700 days	Thu 11/6/25	Wed 7/12/28	304	307
307		Testing	60 days	Thu 7/13/28	Wed 10/4/28	252,306	309
308		**Commissioning**	**30 days**	**Thu 10/5/28**	**Wed 11/15/28**		
309		Commission	30 days	Thu 10/5/28	Wed 11/15/28	307	
310		**Substations**	**1595 days**	**Thu 9/1/22**	**Wed 10/11/28**		
311		**Engineering**	**620 days**	**Thu 9/1/22**	**Wed 1/15/25**		
312		Preliminary	270 days	Thu 9/1/22	Wed 9/13/23		313
313		Final	350 days	Thu 9/14/23	Wed 1/15/25	312	315
314		**Bid and Award**	**90 days**	**Thu 11/6/25**	**Wed 3/11/26**		
315		Bid and Award	90 days	Thu 11/6/25	Wed 3/11/26	262,289,313,330,343	317
316		**Construction**	**645 days**	**Thu 3/12/26**	**Wed 8/30/28**		
317		Submittals	120 days	Thu 3/12/26	Wed 8/26/26	315	318,319
318		Large Equipment Procurement	250 days	Thu 8/27/26	Wed 8/11/27	317	
319		Structures	300 days	Thu 8/27/26	Wed 10/20/27	317	320
320		Testing	90 days	Thu 4/27/28	Wed 8/30/28	252,319	322
321		**Commissioning**	**30 days**	**Thu 8/31/28**	**Wed 10/11/28**		
322		Commission	30 days	Thu 8/31/28	Wed 10/11/28	320	
323		**Red Bluff Pumping Plant Improvements**	**1005 days**	**Mon 7/3/23**	**Fri 5/7/27**		
324		**Engineering**	**210 days**	**Mon 7/3/23**	**Fri 4/19/24**		
325		Preliminary	90 days	Mon 7/3/23	Fri 11/3/23		326
326		Final	120 days	Mon 11/6/23	Fri 4/19/24	325	
327		**Bid and Award**	**90 days**	**Mon 9/30/24**	**Fri 1/31/25**		
328		Bid and Award	90 days	Mon 9/30/24	Fri 1/31/25		330
329		**Construction**	**560 days**	**Mon 2/3/25**	**Fri 3/26/27**		
330		Submittals	120 days	Mon 2/3/25	Fri 7/18/25	328	315,331
331		Procurement	200 days	Mon 7/21/25	Fri 4/24/26	330	332
332		Mechanical/Electrical	180 days	Mon 4/27/26	Fri 1/1/27	331	333
333		Testing	60 days	Mon 1/4/27	Fri 3/26/27	332	335
334		**Commissioning**	**30 days**	**Mon 3/29/27**	**Fri 5/7/27**		
335		Commission	30 days	Mon 3/29/27	Fri 5/7/27	333	
336		**GCID Improvements**	**1420 days**	**Thu 9/1/22**	**Wed 2/9/28**		
337		**Engineering**	**620 days**	**Thu 9/1/22**	**Wed 1/15/25**		
338		Preliminary	270 days	Thu 9/1/22	Wed 9/13/23		339
339		Final	350 days	Thu 9/14/23	Wed 1/15/25	338	341
340		**Bid and Award**	**90 days**	**Thu 1/16/25**	**Wed 5/21/25**		
341		Bid and Award	90 days	Thu 1/16/25	Wed 5/21/25	339	343
342		**Construction**	**680 days**	**Thu 5/22/25**	**Wed 12/29/27**		
343		Submittals	120 days	Thu 5/22/25	Wed 11/5/25	341	315,344,345
344		Structures	500 days	Thu 11/6/25	Wed 10/6/27	343	
345		Earthwork	500 days	Thu 11/6/25	Wed 10/6/27	343	346
346		Testing	60 days	Thu 10/7/27	Wed 12/29/27	345	348
347		**Commissioning**	**30 days**	**Thu 12/30/27**	**Wed 2/9/28**		
348		Commission	30 days	Thu 12/30/27	Wed 2/9/28	346	



Project: Sites Reservoir
Date: Fri 11/20/20

Task | Milestone | Project Summary | Inactive Milestone | Manual Task | Manual Summary Rollup | Start-only | External Tasks | Deadline | Manual Progress
Split | Summary | Inactive Task | Inactive Summary | Duration-only | Manual Summary | Finish-only | External Milestone | Progress

Draft_0011076

Sites

Topic: **Authority Board Meeting Agenda Item 2.2** **2021 April 21**

Subject: **Approach for Allocating Storage Space in the Reservoir**

Requested Action:

Consider approval of the recommended methodology for allocating storage space in Sites Reservoir to each local Storage Partner using the final proposed formulaic approach of 1 acre-foot Amendment 2 participation to 6.234 acre-feet of storage space.

Detailed Description/Background:

An important component of the Principles for the Storage, Delivery and Sale of Sites Reservoir Project Water (Storage Principles), and a foundational principle of the Sites Project, is that each Storage Partner has allocated storage space in Sites Reservoir (termed "Storage Allocation" in the Storage Principles discussed in Item 2.1 of today's agenda). This Storage Allocation is managed by the Storage Partner to optimize the benefits received from the Sites Project and is used to determine the proportion of diverted water provided to each Storage Partner.

If approved, the recommended method would identify the amount of storage allocation to each Storage Partner. Future documents and contracts would include the amount of storage allocated to the respective Storage Partner.

In February 2021, staff reviewed principles and objectives of allocating reservoir storage with the Reservoir Committee and Authority Board. Principles included equitable treatment between local participants, confirming neither the State nor Reclamation receive disproportionate benefits when compared to local participants, and considerations of the Credit Reimbursement Policy. Staff reviewed the proposed allocation again in March 2021 to provide participants a second opportunity to review and ask questions.

The proposed allocation for local, State and Federal Storage Partners, based on a 1.5 million acre-foot reservoir, is shown in Table 1 below.

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Table 1. Summary of Storage Allocation for Local, State and Federal Storage Partners

Storage Type	Storage Allocation (thousand acre-feet)	Percent Active Storage
Dead Pool	120	N/A
State – CDFW	244	17.7%
Federal - Reclamation (low end of range)	91	6.6%
Local Storage Partners	1,045	75.7%
Total	1,500	100%

The State Storage Allocation is estimated based on the amount of storage required to meet ecosystem benefits awarded through Proposition 1 which is to be "trued up" later this year through the State's feasibility evaluation.

The Federal Storage Allocation is based on assumptions consistent with Alternative 1B, the Authority's preferred alternative in the Revised Draft EIR/Supplemental Draft EIS. Up to 25% cost share was found to be feasible by the Secretary of Interior and could be accommodated with voluntary reductions in the local agency participation consistent with Alternative 3 in the Revised Draft EIR/Supplemental Draft EIS if funding is available. Increasing the reservoir size beyond 1.5 million acre-feet is not being contemplated at this time.

A recommended methodology for allocating storage to local Storage Partners was provided in February and March 2021 and remains unchanged. The recommended method is the following mathematical conversion based on a 1.5 million-acre-foot reservoir:

Existing participation x 6.234 = Storage Allocation

Example: 1,000 acre-feet per year Amendment 2 participation = 6,234 acre-feet Storage Allocation

The recommended methodology allocates all available storage based on existing participation and after accounting for estimated storage for the State and Federal government along with the dead pool. The State and Federal estimates are expected to be finalized over the next six to nine months. The final State and Federal numbers can affect the local storage amounts but the proportionate shares of the local storage among the participants would remain unchanged. Similarly, using the Alternative 2 reservoir size of 1.3 million-acre-feet would have an effect on the local storage amount allocated to each participant but the proportionate share of space among participants would remain the same.

The recommended methodology was reviewed and recommended for approval by the Storage Policy Small Group and the Ad Hoc Reservoir Operations and Engineering Workgroup. Staff recommends that the Reservoir Committee approve the recommended methodology for allocating storage space in Sites Reservoir to each local Storage Partner using the final proposed formulaic approach of 1 acre-foot Amendment 2 participation to 6.234 acre-feet of storage space.

Prior Action:

March Meetings & February 19, 2021: Reviewed and commented on the approach for allocating storage space in the reservoir.

Fiscal Impact/Funding Source:

None.

Staff Contact:

Ali Forsythe

Attachments:

Attachment A - Storage Allocation Based on Amendment 2 Participation

Storage Allocation Based on Amendment 2 Participation Levels
April 16, 2021

Participant Name	Storage (AF)	% Active Storage
Antelope Valley-East Kern WA	3,117	0.2%
Carter MWC	1,870	0.1%
City of American Canyon	24,937	1.8%
Coachella Valley WD	62,343	4.5%
Colusa County	62,343	4.5%
Colusa County WD	62,799	4.6%
Cortina WD	2,805	0.2%
Davis WD	12,469	0.9%
Desert WA	40,523	2.9%
Dunnigan WD	18,528	1.3%
Glenn-Colusa ID	31,172	2.3%
Irvine Ranch WD	6,234	0.5%
LaGrande WD	6,234	0.5%
Metropolitan Water District of SC	311,717	22.6%
Reclamation District 108	24,937	1.8%
Rosedale-Rio Bravo WD	3,117	0.2%
San Bernardino Valley Municipal WD	133,415	9.7%
San Gorgonio Pass WA	87,281	6.3%
Santa Clara Valley WD	3,117	0.2%
Santa Clarita Valley WA	31,172	2.3%
Westside WD	33,510	2.4%
Wheeler Ridge - Maricopa WSD	19,015	1.4%
Zone 7 WA	62,343	4.5%
Reclamation	91,000	6.6%
State of California - Ecosystem	244,000	17.7%
Dead Pool	120,000	N/A
Total	1,500,000	100%

File Provided Natively

From: Jerry Brown [jbrown@sitesproject.org]
Sent: 7/6/2021 9:43:25 AM
To: Leslie Kaufman [lkaufman27@bloomberg.net]
Subject: Re: interview request

Sorry in meetings all morning, can't call until end of day but able to respond to your email:

1. Correct
2. See this website for Prop 1 stats https://bondaccountability.resources.ca.gov/p1.aspx. Chapter 8 is the storage portion, $2.7B total allocation, and through a competitive process 8 storage projects across the state, including Sites Reservoir as the largest dollar recipient, were selected for funding in 2018. In 2021, one of the projects, Temperance Flat Reservoir, dropped out, so 7 remain.

Happy to help and can do a call later if needed.

From: "Leslie Kaufman (BLOOMBERG/ NEWSROOM:)" <lkaufman27@bloomberg.net>
Reply-To: Leslie Kaufman <lkaufman27@bloomberg.net>
Date: Tuesday, July 6, 2021 at 9:35 AM
To: Jerry Brown <jbrown@sitesproject.org>
Subject: Re: interview request

1. Is this an accurate geographical description of Sites's locations: *Driving through the West side of the Sacramento valley an hour North of California's capital, most drivers notice nothing but a few cows grazing on grass scorched brown by the heat. But Jerry Brown, the executive director of the Sites Reservoir Project, sees the future of California's water system.*

And this:

2. California passed a law in 2014 that allowed $7.12 billion in bonds for water infrastructure projects, roughly one dozen are being considered now.

Leslie Kaufman
Senior Climate Change Reporter
Bloomberg Green/Bloomberg News
(o)646-324-6210
(m)718-755-0641

From: jbrown@sitesproject.org At: 06/24/21 16:03:21 UTC-4:00
To: Leslie Kaufman (BLOOMBERG/ NEWSROOM:)
Subject: Re: interview request

130 pst today work for you?

Sent from my iPhone

On Jun 24, 2021, at 12:32 PM, Leslie Kaufman (BLOOMBERG/ NEWSROOM:) <lkaufman27@bloomberg.net> wrote:

Hi Jerry

I am writing a story about new water storage in the West. Wonder if you have a few minutes today to discuss SItes.

Thanks, LEslie

Leslie Kaufman
Senior Climate Change Reporter
Bloomberg Green/Bloomberg News
(o)646-324-6210
(m)718-755-0641

AECOM
2870 Gateway Oaks Drive, Suite 150
Sacramento, CA 95833
Tel: 916.679.2000
Fax: 916.679.2900

Technical Memorandum

Prepared for:	U. S. Bureau of Reclamation
Project:	Contract GS00F188CA 140R2018F0052 – North-of-the Delta Offstream Storage Investigation for Feasibility Studies, Reports, and Supporting Documentation
Date:	July 16, 2019
Subject:	**Assessment of Valuation Analysis of Pumpback Operation for Sites Reservoir Project Report**
Prepared by:	Jeff Herrin and Nik Carlson, AECOM; Christine Vangelatos, ZGlobal; and Wayne Dyok, H2O EcoPower

This memorandum provides insights and recommendations on the results of the ZGlobal Valuation Analysis of Pumpback Operation for Sites Reservoir Project.

REPORT SUMMARY

ZGlobal's evaluation of pumpback operations at Sites Reservoir indicates that given the assumptions input into the PLEXOS model, the project has an estimated 0.87 benefit-cost (BC) ratio, and therefore is considered marginally uneconomic. This lower assessment of the pumpback operation's future economic feasibility differs from previous studies' findings. ZGlobal employed a reasonable and conservative approach based on existing market rules.

The valuation assessment generally followed the draft U.S. Department of Energy pumped storage guidance document. However, there are benefits that were not included, because they are either difficult to quantify, or are beyond the scope of ZGlobal's analysis. These benefits include black start, power system stability, transmission benefits, and greenhouse gas emissions reductions.

The 100-year revenue streams for the pumpback operations projected by the ZGlobal analysis rely predominantly on its price forecast results from modeling for the year 2030 under three water year conditions: one high flow, one average flow, and one low flow year. The year 2030 results for each hydrological year were used to extrapolate the future revenues for the subsequent 96 years of the facility's expected useful life. No future price or revenue escalation was applied in the post-2030 energy prices or pumpback operations revenue projections. Four key analysis factors are discussed below.

Future 2030 Price Spread

ZGlobal's analysis 2030 price forecast projects an average price spread of $41.88 per megawatt hour (MWh). This value is approximately $12/MWh lower (22.5 percent reduction) than the actual observed 2018 average price spread of $54.01/MWh. This is a very significant finding. It contravenes conventional wisdom that as renewables, especially solar, become a greater percentage of the California Independent System Operator (CAISO) system, the price spread is anticipated to increase. This is what is known as the duck curve effect. Under duck curve conditions, there will be morning and evening peak energy price conditions, because minimal solar generation will occur during these periods of relatively high energy demand.

ZGlobal's analysis determined that the main driver for the lower price spread in its 2030 forecast model is likely due to differences in the hourly renewable energy dispatch shapes used in the price forecast modeling, compared to the actual dispatch in the current ISO markets. The dispatch shapes used for the model were derived from National Renewable Energy Laboratory data and represent an hourly output for a representative week in a month, which is then repeated for each week in the month. The hourly price shape therefore represents more of an average impact of renewables to the overall Locational Marginal Prices, compared to what would be observed in actual daily market results, where we would tend to see wider distribution of price spreads throughout the year because of the intermittency and variability of renewable output. As a result, the revenue model (by which the BC ratio is derived) will be more conservative in its identification and assessment of daily pump back opportunities over the life of the project.

If recent 2018 market prices/conditions are used for the future energy price spread over the full study period, the project's BC ratio is estimated to improve to approximately 1.08. This still represents marginal, but positive, economic feasibility. Another contributing factor to the low BC ratio is the PLEXOS model itself, which does not have a random element to fully represent the many energy price events that occurred in 2018.

Round-Trip Efficiency

A second key factor is the sensitivity of the BC ratio to the round-trip efficiency of Sites' pumped storage. Typically, round-trip efficiencies in new pump storage projects are about 80 percent, while existing plant efficiencies typically range from 75 to 80 percent. The Sites project's pumped storage round-trip efficiency is estimated at about 73.3 percent, based on the pumping and generating efficiencies at varying heads. After a more detailed project design is developed, round-trip efficiency improvements can be expected that will improve the BC ratio.

Spin and Non-Spin Future Values

In addition to the reduction in energy arbitrage discussed above, the spin and non-spin values of the project estimated by the ZGlobal analysis are very minor, and do not contribute measurably to the BC ratio. Again, this is a significant difference from the previous studies' findings.

Capacity Value

A fourth aspect of the BC ratio is the capacity value. The projected future capacity value of the project is partly diminished because of the need to generate or pump during the day, thereby limiting the available service capacity from the project facilities. Furthermore, there is a recognition that hydro storage capacity is not appropriately valued in today's CAISO market, as evidenced by the proposed state legislation currently under consideration (SB 772). The project's economic performance could be greatly enhanced if the bill passes and is modified to include projects above 100 megawatts (MW), rather than its current 400 MW. This is due to the fact that most of the necessary pumped storage infrastructure would already be present, because the pumps, conveyance system, and energy recovery turbines would be built by the project even without pumped storage operations. The incremental costs for Sites pumped storage are generally limited to the construction of a lower reservoir needed to provide sufficient storage for pump storage operations.

RECOMMENDATIONS

1. Sensitivity Analysis

CAISO and the hydropower industry recognize that there may be a bias against energy storage projects, and CAISO is working to remedy that with proposed regulatory changes. However, the current modeling and results are necessarily based on existing market rules. Sensitivity studies could be undertaken to incorporate market changes currently under consideration. For example, sensitivity analyses of greater market penetration of renewables (e.g., Senate Bill [SB] 100's requirement for 100 percent statewide renewable energy use by 2045) and different energy price spread projections could also be performed. The level of effort for these supplemental analyses would be relatively limited, because the PLEXOS model can be easily adapted and run to different sensitivity scenarios.

2. Monitor Senate Bill 772

It is highly recommended that Reclamation and the Sites Project Authority monitor the progress of SB 772; and if it appears that the bill will move forward, recommend modifications to that bill to allow a 100-MW project or greater to participate. Due to Sites' unique circumstances, it would be difficult for other pumped storage projects to compete with Sites. Other projects will face higher capital costs, because they would need to construct conveyance structures, install pumps and generation equipment, and most likely also develop upper and/or lower reservoirs. Conversely, the Sites Project Authority would essentially only need to construct the lower reservoir to enable pumped storage operations.

3. Include Fletcher Reservoir in Environmental Analysis

Sites Project Authority should consider including the development of Fletcher Reservoir in the environmental analysis to maintain its future development options. Given its currently limited economic feasibility, the pumped storage component of the project can be deferred until such time as it becomes more feasible or can be permanently eliminated from further consideration. Sites could add pumped storage later, as the Lake Hodges Project did in southern California. Should that approach be taken in the future, Sites' FERC license application will be greatly facilitated by past completion of the environmental analysis requirements.

4. Defer Pumped Storage Component of the Project

Reclamation and Sites may wish to consider deferral of the project's pumped storage operations component until the economics of the project can be better determined.

5. Monitor National Hydropower Association's Market Valuation of Hydro

The National Hydropower Association (NHA) has convened a committee to review how hydropower, and in particular, energy storage projects, are valued regionally. It is generally agreed that hydropower is undervalued. The committee seeks to work with the NHA board to ensure that hydropower is appropriately compensated in the regional markets across the country. This will also include the further development of batteries, and how they will affect the future value of energy storage.

AECOM Imagine it. Delivered.

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Project name:
WSIP Cumulative Flow Analysis

To: David Okita
California Department of Water Resources
Division of Environmental Services

From:
Elizabeth Nielsen, AECOM

CC: Leah McNearney, DWR

Date:
June 21, 2021

DRAFT

Memo

Subject: WSIP Cumulative Analysis for Hydrology

1. Introduction

The Water Storage Investment Program (WSIP) is a $2.7 billion program for investments in water storage projects in California, approved by the voters through Proposition 1 in 2014 and administered by the California Water Commission (CWC). Seven projects have been selected for funding consideration to date based on a rigorous review process. In addition to water storage benefits, the CWC selected projects that demonstrate an ability to provide public benefits related to flood control, ecosystem improvement, water quality improvement, recreation, and emergency response. The selected WSIP projects range from expanding existing reservoirs to boosting groundwater storage to building modern surface storage facilities. Once operational, the seven WSIP projects listed below would increase California's water storage capacity by 4.3 million acre-feet over the current (2021) baseline.

- Chino Basin Conjunctive Use Environmental Water Storage/Exchange Program (CBEWP)
- Kern Fan Groundwater Storage Project (Kern Fan Project)
- Willow Springs Water Bank Conjunctive Use Project (WSWB Project)
- Los Vaqueros Reservoir Expansion Project (LVE Project)
- Sites Reservoir Project (Sites Project)
- Pacheco Reservoir Expansion Project (Pacheco Project)
- Harvest Water Program

The projects are described in Section 2.2. Implementation of the WSIP projects could cumulatively affect water project operations, including Sacramento River flows, south-of-Delta exports, and water availability in the system at various times in the year. This memorandum considers the cumulative change to hydrologic conditions in the Feather River, Sacramento River, and Sacramento-San Joaquin Delta (Delta) with operation of the seven WSIP projects and is based on a review of publicly available information. It documents anticipated changes in flows due to these projects including amounts,

annual seasonality, and year types. It also considers the magnitude of these changes compared to baseline flows and hydrologic conditions (i.e., excess or balanced conditions) to provide context for the anticipated changes.

The purpose of this cumulative flow analysis is to document what can be expected to the flows in the Feather River, Sacramento River, and Delta areas if all seven WSIP projects were in operation. There has been no similar analysis as the projects have evolved, and some are still evolving since the CWC application stage. This analysis puts the cumulative flow changes associated with the projects in the context of overall flows in the waterways on a seasonal and water-year-type basis. This analysis may be helpful identifying flow aspects that need further detailed evaluation. This memorandum does not address the environmental impacts of the WSIP projects pursuant to the California Environmental Quality Act (CEQA). Each WSIP project has either completed or is in the process of completing its own environmental documentation for CEQA compliance, including a discussion of cumulative effects as required by CEQA.

2. Background

This section provides background information on the SWP and the seven WSIP projects considered in the cumulative effect analysis for hydrology. The location of the WSIP projects are shown on Figure 1.

2.1 State Water Project Deliveries

California Department of Water Resources (DWR) holds contracts with 29 public agencies for water supplies from the State Water Project (SWP). The SWP's main facilities are Lake Oroville, the Harvey O. Banks Pumping Plant (Banks Pumping Plant), and San Luis Reservoir. These facilities are operated and connected by a network of canals, aqueducts, and other facilities to deliver on average approximately 2.6 million acre-feet of contracted water supplies annually (Reclamation, 2019).

The U.S. Department of the Interior Bureau of Reclamation (Reclamation) also exports water from the Delta at its Central Valley Project (CVP) pumping plant in the south Delta, Jones Pumping Plant, and either delivers it directly or stores water in San Luis Reservoir for later delivery to its contractors south of the Delta. DWR and Reclamation coordinate their operations on a daily basis. Some factors that DWR and Reclamation consider when coordinating their joint operations include required in-Delta flows, Delta outflow, water quality, fish species protections, schedules for the joint use facilities (e.g., San Luis Reservoir), pumping/wheeling arrangements,[1] and any facility capacity limitations.

During balanced water conditions, DWR and Reclamation share a responsibility to meet in-basin uses and maintain a daily water accounting of the SWP and CVP obligations in conformance with the Coordinated Operation Agreement between the two projects. Balanced water conditions are defined as periods when it is mutually agreed that releases from upstream reservoirs plus unregulated flows approximately equal the water supply needed to meet Sacramento Valley in-basin uses plus exports. Excess water conditions are periods when it is mutually agreed that releases from upstream reservoirs plus unregulated flows exceed Sacramento Valley in-basin uses plus exports. The duration of balanced water conditions varies from year to year. While balanced conditions may never occur in some very wet years, some very dry years may have long continuous periods of balanced conditions, and still other years may have several periods of balanced conditions interspersed with excess water conditions.

[1] Wheeling involves the act of "using the water supply facilities by someone other than the owner or operator to transport water" for a fee.

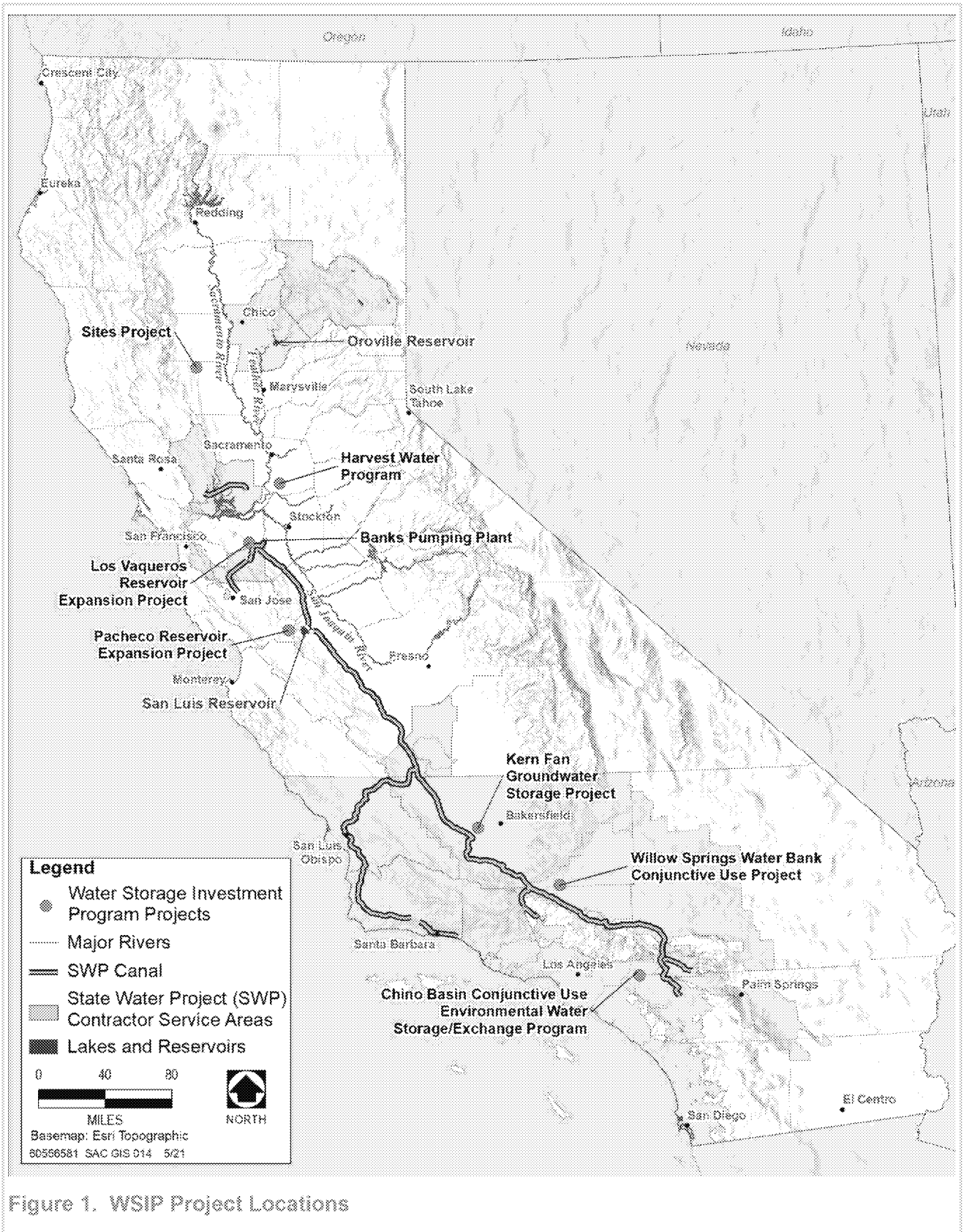

Figure 1. WSIP Project Locations

During excess water conditions, sufficient water is available to meet all beneficial uses, and the CVP and SWP are not required to supplement the supply with water from reservoir storage. In excess water conditions, the "excess water" can be made available to CVP and SWP contractors. As specified in the Coordinated Operation Agreement, DWR and Reclamation have the responsibility during excess water conditions to store and export as much water as possible within physical, legal, and contractual limits (Reclamation, 2019).

Note that Article 21 water is one of several types of SWP water supply made available to the SWP partner contractors under the long-term water supply contracts between DWR and the SWP contractors. Unlike Table A water, which is the maximum allocated annual supply made available for scheduled delivery throughout the year, Article 21 water is made available only when certain conditions exist (which occur predominately in wet years). As with all SWP water, Article 21 water is supplied under existing SWP water rights permits, and is pumped from the Delta under the same environmental, regulatory, and operational constraints that apply to all SWP supplies.

Article 21 water is typically offered to contractors on a short-term (daily or weekly) basis when all of the following conditions exist: (1) the SWP share of San Luis Reservoir is physically full, or projected to be physically full within approximately 1 week at permitted pumping rates; (2) other SWP reservoirs south of the Delta are at their storage targets or the conveyance capacity to fill these reservoirs is maximized; (3) the Delta is in excess condition; (4) current Table A demand is being fully met; and (5) Banks Pumping Plant has export capacity beyond that which is needed to meet current Table A and other SWP operational demands. The increment of available unused Banks Pumping Plant capacity is offered as the Article 21 delivery capacity (Reclamation, 2008).

2.2 WSIP Projects

The seven WSIP projects are described below. As indicated above, these WSIP projects range from expanding existing reservoirs to boosting groundwater storage to building modern surface storage facilities. The location of each of the projects and how operations can affect hydrologic conditions are also described below. For the five WSIP projects that involve the SWP, DWR has not yet approved operations of the projects, so the operations described below are subject to change.

Chino Basin Conjunctive Use Environmental Water Storage/Exchange Program

The CBEWP would expand existing capacity or construct a new advanced water treatment facility and distribution facilities in western San Bernardino County that would store up to 15 thousand acre-feet (TAF) per year of treated wastewater in the existing Chino Basin Water Bank. The Chino Basin Water Bank would be operated to dedicate blocks of water, assumed to be in increments of 50 TAF,[3] for ecosystem benefits. In dry and below normal years, this stored water would be used to provide pulse flows to enhance spring instream flows in the Feather River below Lake Oroville. A water exchange process is required to replace water used for pulse flows with stored groundwater. This would require agreements with one or more of the SWP partner contractors (e.g., Metropolitan Water District of Southern California), to forego SWP Table A deliveries equivalent to the pulse flow amount in exchange for receiving an equivalent amount of Table A water from the Chino Basin Water Bank. It would also require agreements with DWR and California Department of Fish and Wildlife (CDFW) to re-operate Lake Oroville and manage the water to provide the pulse flows. South-of-Delta exports needed to meet SWP partner contractor Table A demands would be reduced by the 50 TAF in a pulse flow year; however, there would not be an overall reduction in exports because the SWP would utilize any available diversion capacity if it has the ability to do so. After the initial 25 years of operation and

[3] Pulse flows are modeled as 50 TAF, occurring on average every 4.4 years.

fulfilling ecosystem public benefits, pulse flows would cease, and the CBEWP would be operated for local water supply benefits.

Kern Fan Groundwater Storage Project

The Kern Fan Project would develop a regional water bank in Kern County, west of Bakersfield, that would store up to 100 TAF per year of Article 21 water. The Kern Fan Project would be operated so that in wet years, the project would divert Article 21 supplies for groundwater storage. The project would use 75 percent of the stored water for water supply purposes. The remaining 25 percent of the stored water would be dedicated for ecosystem benefits in blocks of water assumed to be 18 TAF[3] each. In dry and below normal years, this stored water would be used to provide pulse flows to enhance spring instream flows in the Feather River below Lake Oroville. A water exchange process is required to replace water used for the pulse flow with the stored groundwater. This would require agreements with one or more of the SWP partner contractors (e.g., Kern County Water Agency and Dudley Ridge Water District), to forego SWP Table A deliveries equivalent to the pulse flow amount in exchange for receiving an equivalent amount of Table A water from the Kern Fan Project. It would also require agreements with DWR and CDFW to re-operate Lake Oroville and manage the water to provide the pulse flows. South-of-Delta exports needed to meet SWP partner contractor Table A demands would be reduced by 18 TAF in a pulse flow year; however, there would not be an overall reduction in exports because the SWP would utilize any available diversion capacity if it has the ability to do so. After the initial 50 years of operation and fulfilling ecosystem public benefits, pulse flows would cease, and the Kern Fan Project would be operated for local water supply benefits.

Willow Springs Water Bank Conjunctive Use Project

The WSWB Project would enhance the existing Willow Springs Water Bank located in southern Kern County, northwest of the City of Lancaster, in the adjudicated Antelope Valley Groundwater Basin. The WSWB Project is a conjunctive use and reservoir reoperation project that would leverage 500 TAF of existing groundwater storage facilities at the Willow Springs Water Bank and operate conjunctively with the SWP. The WSWB Project is reformulating its operations plan, so a revised operation scenario is not available at this time and the source of pre-delivery water has not yet been specified. For the purposes of this analysis, the volumes of pulse flows modeled in the original application to the CWC is used.

Pre-delivery of allocated Table A water would be delivered to the WSWB Project and be stored for future use by SWP partner contractors. Article 21 water would not be utilized. By depositing the Table A water in the groundwater bank, the pre-delivery process reduces the amount of water stored in SWP facilities, thus increasing available storage capacity in SWP facilities to be filled at a later date. "New" water is created when the pre-delivery allows SWP facilities to capture water that would otherwise not be pumped at Banks Pumping Plant due to storage capacity limitations. This would effectively increase pumping at Banks Pumping Plant equivalent to the pulse flow amount over time. Pumping would occur when the SWP has water rights to divert and storage space or direct delivery capability in excess or balanced conditions.

The WSWB Project would be operated to dedicate blocks of water assumed to be 28 TAF[4] for ecosystem benefits. In dry and below normal years, this stored water would be used to provide pulse flows to enhance spring instream flows in the Feather River below Lake Oroville. A water exchange process is required to replace water used for the pulse flow with the stored groundwater. This would require agreements with one or more of the SWP partner contractors to forego SWP Table A deliveries equivalent to the pulse flow amount in exchange for receiving an equivalent amount of Table A water

[3] Pulse flows are modeled as 18 TAF, occurring on average every 4.7 years.
[4] Pulse flows are modeled as 28 TAF, occurring on average every 3.3 years.

from the WSWB Project. It would also require agreements with DWR and CDFW to re-operate Lake Oroville and manage the water to provide the pulse flows. South-of-Delta exports needed to meet SWP partner contractor demands would be reduced by the 28 TAF in a pulse flow year; however, there would not be an overall reduction in exports because the SWP would utilize any available diversion capacity if it has the ability to do so. After the initial 50 years of operation and fulfilling ecosystem public benefits, pulse flows would cease, and the WSWB Project would be operated for local water supply benefits.

Los Vaqueros Reservoir Expansion Project

The LVE Project is a surface storage project located in southeastern Contra Costa County that would enlarge the capacity of an existing off-stream reservoir by 115 TAF (from 160 TAF to 275 TAF). This project would also upgrade existing conveyance facilities, construct new conveyance, and re-operate existing facilities to develop water supplies for ecosystem public benefits and increased water supply reliability for project participants. The LVE Project would divert water from the Delta at Contra Costa Water District's Rock Slough, Old River, and Middle River intakes, divert water from the Sacramento River at the Freeport Intake, and deliver water to project participants within Contra Costa Water District's service area, the Bay Area, the Delta, neighboring regions, and south-of-Delta wildlife refuges.

Diversions for the LVE Project can be used for direct deliveries and for diversion to storage. Diversions would occur during excess and balanced conditions. During balanced conditions, total diversions at the Delta and Freeport intakes would increase by a long-term average of 58 TAF per year.[5] These diversions represent a reduction of about 1 percent or less of Delta outflow during dry and critical dry years[6], when balanced conditions are expected. During excess conditions total diversions at the Delta and Freeport intakes would increase by a long-term average of 69 TAF per year.[7] These diversions represent less than 0.5 percent reduction of Delta outflow during wet and above normal years,[8] when excess conditions are expected.

The maximum diversion rates at the intakes are 250 cubic feet per second (cfs) for the Old River Intake, 250 cfs for the Middle River Intake, 350 cfs for the Rock Slough Intake, and 155 cfs (of project supplies) at the Freeport Intake. Diversion to storage requires the use of the Transfer Pump Station, which has a pumping capacity of 200 cfs, so the rate of diversion to storage is limited to 200 cfs. Direct diversions up to 300 cfs can be made to the California Aqueduct through the proposed Bethany Transfer Pipeline.

Sites Reservoir Project

The Sites Project is a new surface storage reservoir located in Colusa County in the Sacramento Valley west of the town of Maxwell. The Sites Project would be an off-stream 1.5 million acre-feet (MAF) reservoir that would impound Funks Creek and Stone Coral Creek and provide storage capacity for Sacramento River diversions. This project also includes conveyance through the use of the existing Tehama Colusa Canal and Glenn-Colusa Irrigation District Canal diversion and conveyance facilities. Operation of the proposed reservoir would be in cooperation with the operations of existing CVP and SWP system facilities. The Sites Project would release water to tributaries to the

[5] This value represents the difference between Alternative 1B with transfers and the no project/no action alternative under existing conditions (see Reclamation 2020, revised Table 4.2-6 in Appendix B-1, Updated Modeling Analysis).
[6] Long-term Delta outflow is estimated at 16.3 million acre-feet per year (MAF/yr), with an average of 28.7 MAF/yr in wet years, 17.7 MAF/yr in above normal years, 9.5 MAF/yr in below normal years, 9.5 MAF/yr in dry years, and 5.3 MAF/yr in critical dry years (Reclamation 2019, Appendix D – Modeling, Table 41-1, Current Operations).
[7] This value represents the difference between Alternative 1B and the no project/no action alternative under existing conditions (see Reclamation, 2020; Revised Table 4.2-8 in Appendix B-1, Updated Modeling Analysis).
[8] See footnote 6.

Sacramento River to deliver water to project participants within neighboring areas, to SWP and CVP contractors, and to south-of-Delta wildlife refuges. The project also includes exchanges with upstream reservoirs to preserve cold water releases for fishery benefits.

Annual diversions would range from 60 to 390 TAF per year, depending on hydrologic conditions, availability of Sacramento River water, and diversion and conveyance facility capacities.[9] Diversions would occur only under excess conditions. The maximum Sacramento River diversion rate is 3,900 cfs. Sacramento River flows would be diverted at the Red Bluff Pumping Plant (up to 2,100 cfs) and the Hamilton City Pump Station (up to 1,800 cfs). Modeling for the environmental documents show that the Sites Project diversions during wet weather years from January through March when excess conditions are expected shows a 3 to 4 percent reduction in flows in the Sacramento River downstream of Red Bluff Diversion Dam.

Excess condition diversions could occur anytime between September 1 to June 15, the timeframe that the Sacramento River is not fully appropriated; however, most diversions would occur from December through March during wet and above normal water years. Diversions are expected to decrease Sacramento River inflow to the Delta by about 2 percent or less, assuming that a 390 TAF annual diversion occurs in a wet or above normal year.[10]

Average annual releases from the Sites Project to Sacramento River tributaries would range from 116 to 382 TAF per year, depending on water year type, with a long-term average annual release of 243 TAF per year (over all year types).[11] Water would be conveyed via existing waterways and a new pipeline to the Sacramento River. Maximum reservoir releases would be 1,000 cfs. Releases would occur during balanced conditions.

Approximately 60 TAF per year, on an average annual basis, could be exchanged with upstream reservoirs to preserve cold water in the upstream reservoirs for fishery benefits, with most of the exchanges occurring in dry and critical water year types.[12] These releases from the Sites Project for exchanges would typically occur in spring and early summer with the exchanges listed below occurring in late summer and fall. Exchanges would occur during balanced conditions.

- Shasta Lake exchanges would result in the Sites Project releasing water in the spring in exchange for Shasta Lake releases in August and September.
- Lake Oroville exchanges would result in the Sites Project releasing water in June and July in exchange for Lake Oroville releases in August through November.
- Folsom Lake exchanges would result in the Sites Project releasing water in the spring and early summer in exchange for Folsom Lake releases in late summer and fall.
- Real-time exchanges with local participants would result in deliveries from the Sites Project to CVP partner contractors in lieu of direct diversions from the Sacramento River.

Pacheco Reservoir Expansion Project

The Pacheco Project is a surface storage project located in southeast Santa Clara County that would enlarge an existing reservoir by 136 TAF (from 6 TAF to 142 TAF). The project would construct new conveyance infrastructure to segments of the CVP San Felipe Division in Merced and Santa Clara counties, and deliver water supply to up to eight south-of-Delta wildlife refuges in Merced County. The

[9] Sites Project Authority, 2021; Section 2.5.2.
[10] Long-term Sacramento River flow at Freeport is estimated at 15.5 MAF/yr, with an average of 22.4 MAF/yr in wet years, 18.2 MAF/yr in above normal years, 12.2 MAF/yr in below normal years, 11.5 MAF/yr in dry years, and 7.6 MAF/yr in critical dry years (Reclamation 2019, Appendix D – Modeling, Table 29-1, Current Operations).
[11] Sites Project Authority, 2020; Table 5-2 and 5-3 and Table B1-1.
[12] Sites Project Authority, 2020; Section 5.2.

primary water sources to fill the expanded reservoir would be natural inflows from the North and East Forks of Pacheco Creek. Supplemental flows to the expanded reservoir would arrive from Valley Water's and the San Benito County Water District's share of contracted CVP pumped water from San Luis Reservoir.

San Luis Reservoir storage is expected to decrease due to transfers to Pacheco Reservoir. This would increase the amount of available San Luis Reservoir storage that can be used by the SWP and CVP. South-of-Delta diversions could increase in both excess and balanced conditions. Modeling is currently not available to quantify these increases.

Harvest Water Program

The Harvest Water Program is a conjunctive use project in Sacramento County, formerly named the South Sacramento County Agriculture and Habitat Lands Recycled Water, Groundwater Storage, and Conjunctive Use Program (South County Ag Program). The project would store and manage groundwater (via in lieu use) while improving stream flow, enhancing groundwater dependent riparian habitats, sustaining prime agricultural lands, and improving regional water supply reliability. Sources of water would be up to 50 TAF per year of tertiary-treated recycled water produced by Sacramento Regional County Sanitation District (Regional San) and diverted from discharge into the Sacramento River. Water produced from the Harvest Water Program would be used to irrigate up to 16,000 acres of agriculture and habitat lands in Sacramento County near the lower Cosumnes River and Stone Lakes National Wildlife Refuge.

Up to 50 TAF per year of recycled water would be applied to lands in lieu of groundwater pumped from the Sacramento Valley groundwater basin. An estimated 32.5 TAF per year of recycled water would be used for irrigation during the growing season (April through October). In a dry year, irrigation demands could be as much as 37.5 TAF per year. An additional 8.75 to 17.5 TAF per year of recycled water would be applied to lands during the non-growing season for wildlife enhancement. In the future, an additional 5.5 TAF per year could also be used for wildlife enhancement purposes. Return flows from irrigation are assumed to be minimal. Reuse of up to 50 TAF per year of recycled water would result in a reduction of up to 50 TAF per year in wastewater outflow to the Sacramento River. The flow rate of the reduction will vary over the year based on annual pattern of wastewater generation. This represents a relatively small change in Sacramento River flow – less than a 0.7 percent decrease in Sacramento River inflow to the Delta.[13]

3. Analysis

This section describes the individual effects of each of the WSIP projects, considers how they interact, and addresses cumulative changes to Delta, Feather River, and Sacramento River flows, and other parts of the SWP system. Note that the volume of the pulse flows will be determined through a process included in an agreement between DWR and CDFW. The pulse flow volumes described below are derived from the modeling assumptions made by project proponents. For the purpose of this analysis they provide a reasonable upper limit of expected volumes of flow.

[13] See Footnote 10.

3.1 Summary of Hydrology Changes for Individual WSIP Projects

Chino Basin Conjunctive Use Environmental Water Storage/Exchange Program

The following changes to hydrology are expected to occur with implementation of the CBEWP:

- Project Additional Groundwater Storage: 15 TAF/year
- Feather River pulse flows: 50 TAF in selected years
- Reduced Delta Exports: 50 TAF in pulse flow years, but likely offset by additional SWP diversions
- Delta Outflow: 50 TAF in pulse flow years

Kern Fan Groundwater Storage Project

The following changes to hydrology are expected to occur with implementation of the Kern Fan Project:

- Delta Exports, Excess Conditions: up to 100 TAF/year when Article 21 is available under excess conditions
- Project Additional Groundwater Storage: up to 25 TAF/year when Article 21 is available under excess conditions
- Feather River pulse flows: 18 TAF in selected years
- Reduced Delta Exports: 18 TAF in pulse flow years, but likely offset by additional SWP diversions
- Delta Outflow: 18 TAF in pulse flow years

Willow Springs Water Bank Conjunctive Use Project

The following changes to hydrology are assumed to occur with implementation of the WSWB:

- Project Additional Groundwater Storage: Information unavailable at this time
- Feather River pulse flows: 28 TAF in selected years
- Reduced Delta Exports: 28 TAF in pulse flow years, but likely offset by additional SWP diversions. Additional information on pre-delivery process may identify Delta export increases.
- Delta Outflow: 28 TAF in pulse flow years

Los Vaqueros Reservoir Expansion Project

The following changes to hydrology are assumed to occur with implementation of the LVE Project:

- Additional Surface Water Storage: 115 TAF
- Sacramento River Diversions: up to 115 cfs (12 TAF/year[14]) at Freeport
- Delta Exports, Balanced Conditions: up to 200 to 300 cfs[15] (58 TAF/year)
- Delta Exports, Excess Conditions: up to 200 to 300 cfs (69 TAF/year)

[14] Freeport diversions would occur during balanced and excess conditions; however, information on Freeport diversions during balanced vs. excess conditions is not available. Therefore, the quantification of Delta exports for balanced and excess conditions include exports for the Old River, Middle River, Rock Slough, and Freeport intakes (i.e., total Delta exports are overestimated by 12 TAF per year).
[15] This range represents either diversion to storage (up to 200 cfs) or direct diversions made to the California Aqueduct (up to 300 cfs).

Sites Reservoir Project

The following changes to hydrology are assumed to occur with implementation of the Sites Project:

- Additional Surface Water Storage: 1,500 TAF
- Sacramento River Diversions: up to 3,900 cfs (60 to 390 TAF/year) during excess conditions
- Sacramento River Releases: up to 1,000 cfs (116 to 382 TAF/year) during balanced conditions. This includes possible releases for exchanges with upstream reservoirs.
- Delta Exports, Balanced Conditions: up to 243 TAF/year from deliveries pumped at Banks and Jones Pumping Plants

Pacheco Reservoir Expansion Project

The following changes to hydrology are assumed to occur with implementation of the Pacheco Project:

- Additional Surface Water Storage: 136 TAF
- Delta Exports: Unknown. San Luis Reservoir will have increased capacity due to the Pacheco Project that will allow some additional SWP and CVP export from the Delta. These exports could occur in balanced or excess conditions.

Harvest Water Program

The following changes to hydrology are expected to occur with implementation of the Harvest Water Program:

- Sacramento River reductions: up to 50 TAF/year in both balanced and excess conditions
- Project Additional Groundwater Storage: up to 50 TAF/year in lieu use

3.2 Cumulative Flows

This section considers cumulative changes to Feather River, Sacramento River, and Delta flows due to implementation of the seven WSIP projects. Cumulative flow effects are considered for both excess and balanced conditions. In all cases, water pumped from the Delta is subject to all applicable operational requirements. SWP and CVP operations can be further limited by the capacity in south-of-Delta storage facilities, the pumping capacity at the Delta pumping facilities, and operational constraints for fish and wildlife protection and water quality, as well as other environmental and legal restrictions.

Table 1 provides a summary of expected changes from each of the WSIP projects. The following observations on the cumulative flow effects from these projects can be made based on this information. Analyses are made based on location of projects and seasonality (balanced and excess conditions).

Spring Pulse Flows

CBEWP, Kern Fan Project, and WSWB Project (collectively referred to as the pulse flow projects) include an ecosystem benefit that allows for springtime releases from Lake Oroville in dry and below normal years upon request by CDFW and approval by DWR. The amount of water conveyed in the Feather River, Sacramento River, and Delta would increase by the pulse flow amount, assumed to be 50 TAF, 18 TAF, and 28 TAF, respectively. These amounts are based on modeling for the WSIP

applications. CDFW will use an adaptive management framework to make requests to DWR for pulse flow releases from Lake Oroville. The volume and duration of any specific pulse flow is not known at this time and it is likely that pulse flows will differ among years. The pulse flow amount will increase Feather River flows, flow into the Sacramento River, and flow through and out of the Delta. CDFW has submitted an example of a pulse flow based on all three pulse flow projects in operation. The example estimates a maximum pulse flow of 3,000 cfs for 10 days with a ramp down rate of 500 cfs per day.

For the Feather River at the low flow channel, the base flow is estimated to be 1,000 cfs, so a pulse flow of 3,000 cfs increases the flow at this location by 300 percent, but the flow is well within the capacity of the low flow channel. During April to May, spring flows in the Feather River downstream of the Thermalito Afterbay Outlet average about 1,500 cfs in dry years.[16] A spring pulse with an additional 3,000 cfs would increase flows by 200 percent. At the mouth of the Feather River, near its confluence with the Sacramento River, spring flows average about 4,300 cfs in dry years; an additional 3,000 cfs is an increase of 70 percent. In the Sacramento River at Freeport, spring flows average about 14,200 cfs in dry years; an additional 3,000 cfs is an increase of 20 percent. And finally, Delta outflow in the spring of a dry year averages about 14,500 cfs; an additional 3,000 cfs is an increase of 20 percent. The timing of these pulse flows would provide fisheries benefits during migration windows.

Conclusion: Pulse flows have no adverse consequences.

Sacramento River Diversions

The LVE Project (through use of the Freeport diversion) and the Sites Project would increase Sacramento River diversions and the Harvest Water Program would reduce inflow into the Sacramento River.

The Sites Project is by far the largest Sacramento River diversion at 3,900 cfs, which would occur only during excess conditions. The LVE Project Freeport diversion has a capacity of 115 cfs and may divert under excess conditions for the LVE Project. Since the Harvest Water Program reduces Sacramento River inflows by 50 TAF per year on a continuous basis, that amount averages to a reduction of 69 cfs per day. Modeling for the environmental documents show that the Sites Project diversions during wet weather years from January through March, when excess conditions are expected, shows a 3 to 4 percent reduction in flows in the Sacramento River downstream of Red Bluff Diversion Dam. Adding a possible 115 cfs from the LVE Project Freeport diversion and 69 cfs from the Harvest Water Program discharge reduction would change these percentages by no more than 0.6 percent.[17]

The LVE Project Freeport diversion could also divert in balanced conditions such as for diverting SWP Table A supplies into the LVE Project. This type of relatively small diversion would be scheduled and coordinated through the LVE Project coordination agreements with the SWP and CVP to eliminate any adverse consequences and will be diverted in conformance with all permits and regulations. Any Harvest Water Program reductions in balanced conditions is not substantial (less than 0.7 percent).[18]

From a volume standpoint, the combined effect from these projects are expected to have maximum flow reduction of 452 TAF in a wet or above normal year (390 TAF from the Sites Project, 12 TAF from the LVE Project, and 50 TAF from the Harvest Water Program), a 2 to 3 percent volume reduction when predominately excess conditions are expected.[19] Similarly, flows could be reduced by 122 TAF

[16] Long-term Operations of the CVP and SWP (Reclamation 2019, Appendix D – Modeling, Tables 21-1, 22-1, 29-1, and 41-1).
[17] Flows in the Sacramento River below Red Bluff Diversion Dam in a wet year during January through March average about 28,800 cfs (Reclamation 2019, Appendix D – Modeling, Table 17-1); a reduction of 184 cfs is a decrease of 0.6 percent.
[18] Average annual flow in the Sacramento River at Freeport is 10,400 to 30,900 cfs depending on year type (Reclamation 2019, Appendix D – Modeling, Table 29-1); a reduction of 69 cfs per day would decrease annual flow by no more than 0.7 percent.
[19] Sacramento River flow at Freeport is estimated at 22.4 MAF/yr in wet years, 18.2 MAF/yr in above normal years, 12.2 MAF/yr in below normal years, 11.5 MAF/yr in dry years, and 7.6 MAF/yr in critical dry years (Reclamation 2019, Appendix D – Modeling, Table 29-1).

in drier years (60 TAF from the Sites Project, 12 TAF from the LVE Project, and 50 TAF from the Harvest Water Program), a 1 to 2 percent volume reduction when predominately balanced conditions are expected.[20]

Conclusion: Since the largest diversion, the Sites Project, occurs in excess conditions and is a relatively small percentage of expected Sacramento River flows, there are no adverse consequences anticipated. The LVE Project Freeport diversion is expected to be utilized less frequently than the Delta diversion locations and is a relatively small diversion rate.

Sacramento River Releases

The Sites Project would release flows back to the Sacramento River during balanced conditions. A long-term average annual release of 243 TAF per year could increase Sacramento River flows by approximately 1 to 3 percent.[21] The releases from the Sites project are estimated to be a maximum of 1,000 cfs. The releases will be to local waterways eventually leading to the Sacramento River and the Delta. The environmental documents for the Sites Project show no significant impacts from this level of deliveries. The releases would be scheduled and coordinated through the Sites Project coordination agreements with the SWP and CVP to avoid any substantial adverse consequences and will be diverted in conformance with all permits and regulations.

Conclusion: Releases in balanced conditions are coordinated with the SWP and CVP, so no adverse consequences are expected.

Delta Exports in Balanced Conditions

The pulse flow projects do not increase Delta exports in balanced conditions. An exception may be the WSWB Project whose pre-delivery concept may result in opportunities for the SWP to export some additional water in both balanced and excess conditions to fill newly available SWP storage created by the WSWB Project. However, until WSWB provides a description of the pre-delivery concept, an analysis cannot be conducted.

The pulse flow projects reduce demand for Delta pumping for individual SWP partner contractors who receive their Table A deliveries from the groundwater banks instead of the Delta or San Luis Reservoir. However, the reduced diversions create additional capacity in the SWP system that the SWP can use by increasing exports, so there is no net reduction in Delta exports.

The Sites Project releases water from storage during balanced conditions for delivery to project participants and for exchanges with upstream SWP and CVP reservoirs. Most of the deliveries to project participants will be exported at SWP and CVP export facilities. The LVE Project will also divert water from the Delta during balanced conditions. An example would be export of SWP Table A water for SWP South Bay Aqueduct contractors.

The Pacheco Project results in increased available capacity in San Luis Reservoir that would allow some additional SWP and CVP export from the Delta in both balanced and excess conditions. Information on the amount of increased Delta exports is not available.

Combined Delta exports in balanced conditions for the Sites Project and the LVE Project are 1,300 cfs and approximately 300 TAF per year.[22] For this analysis additional Delta exports resulting from the Pacheco Project are not included. Note that these exports would occur under the same environmental, regulatory, and operational constraints that apply to all SWP supplies. These constraints, which are

[20] Ibid.
[21] Ibid.
[22] Assumed 243 TAF from the Sites Project and 58 TAF from the LVE Project.

protective of fisheries and water quality beneficial uses, would continue to protect fisheries and water quality even with all of the WSIP projects operating at the same time.

Conclusion: Delta exports in balanced conditions are coordinated with the SWP and CVP, so no adverse consequences are expected.

Delta Exports in Excess Conditions

The Kern Fan Project and the LVE Project would increase Delta exports during excess conditions. The Pacheco Project results in increased available capacity in San Luis Reservoir that will allow some additional SWP and CVP exports from the Delta in both balanced and excess conditions; however, information on the amount of increased Delta exports is not available. The WSWB Project pre-delivery concept may result in opportunities for the SWP to export some additional water to fill SWP storage created by the WSWB Project in both balanced and excess conditions. However, until WSWB provides a description of the pre-delivery concept, an analysis cannot be conducted.

Combined Delta exports in excess conditions for the Kern Fan Project and the LVE Project are approximately 169 TAF per year (up to 100 TAF per year from the Kern Fan Project and 69 TAF per year from the LVE Project). Effects on Delta exports from the Pacheco Project and the WSWB Project are unknown at this time.

Exports during excess conditions would cause a small reduction in Delta outflow. The combined effect of the Kern Fan Project and the LVE Project is expected to reduce Delta outflow by 169 TAF per year in wet and above normal years, a 0.6 to 1 percent volume reduction when predominately excess conditions are expected.[23] Combined flows (in cfs) are expected to be a relatively small percentage of Delta outflow during excess conditions.

Note that these exports would occur under the same environmental, regulatory, and operational constraints that apply to all SWP supplies. These constraints, which are protective of fisheries and water quality beneficial uses, would continue to protect fisheries and water quality even with all of the WSIP projects operating at the same time.

Conclusion: Delta diversions during excess conditions are a relatively small percentage of Delta outflow, so no adverse consequences are expected.

4. Conclusions

The three WSIP pulse flow projects provide an environmental benefit in the Feather River and downstream without any identified adverse consequences.

The Sites Project, the LVE Project, and the Kern Fan Project would divert water during excess conditions. The WSWB Project and the Pacheco Project may result in increased exports during excess conditions, but not enough information is available at this time to quantify. For the Sites Project, the LVE Project, and the Kern Fan Project, diversions during excess conditions from the Sacramento River and the Delta would represent a small fraction of the flows during excess conditions. Regulatory requirements and coordination agreements will further protect against any adverse consequences.

The LVE Project would also divert during balanced conditions. Deliveries from the Sites Project would occur in balanced conditions and increase diversion at SWP and CVP Delta pumping plants. Both

[23] See footnote 6.

projects will have operational agreements with the SWP and CVP to coordinate deliveries including consideration of export capacity for the deliveries. This will ensure that the diversions will be made within the existing regulatory framework and would be subject to all applicable permit conditions. The WSWB Project and the Pacheco Project may result in diversions during balanced conditions, but not enough information is available at this time to quantify the changes.

In summary, the movement of water from the seven WSIP project are relatively small compared to overall seasonal flows in the watershed. The regulatory conditions for water projects in the Bay Delta watershed are well known and any project must be designed to function without substantial adverse consequences. The WSIP projects, except the Harvest Water Program, will be integrated by agreement with the SWP and CVP to ensure operations are coordinated and will not violate any regulations or permit terms. From a flow standpoint, the seven WSIP projects can operate successfully assuming operations agreements and permitting are completed.

5. Recommendation

As more information becomes available for the WSWB Project and the Pacheco Project, this memorandum should be updated. Because of the overall minimal changes to the flow regime in the Delta and Sacramento River additional detailed modeling of the cumulative flow effects may not be warranted.

6. References

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Table 1. Resulting Changes from the WSIP Projects

Location or Type	CBEWP	Kern Fan Project	WSWB Project	LVE Project	Sites Project	Pacheco Project	Harvest Water Program
Additional Surface Reservoir Storage	--	--	--	115 TAF	1,500 TAF	136 TAF	--
Additional Groundwater Storage	15 TAF/yr	up to 100 TAF/yr (up to 25 TAF/yr for project use)	unknown	--	--	--	up to 50 TAF/yr in lieu use
Feather River Pulse Flows	50 TAF assumed	18 TAF assumed	28 TAF assumed	--	--	--	--
Sacramento River Diversions or Reductions	--	--	--	up to 115 cfs (12 TAF/yr[1]) in diversions @ Freeport	up to 3,900 cfs (60-390 TAF/yr) diversions in excess conditions	--	up to 50 TAF/yr in reduced wastewater discharge
Sacramento River Releases	--	--	--	--	up to 1,000 cfs (243 TAF/yr avg., 116-382 TAF/yr) in balanced conditions	--	--
Delta Exports, Balanced Conditions	export unchanged	export unchanged	unknown	200-300 cfs (58 TAF)	up to 1,000 cfs (243 TAF/yr) from deliveries	some additional due to increased capacity available in San Luis Reservoir	--
Delta Exports, Excess Conditions	--	up to 100 TAF/yr	none	200-300 cfs (69 TAF/yr)	--	some additional due to increased capacity in San Luis Reservoir	--

[1] Freeport diversions would occur during balanced and excess conditions; however, information on Freeport diversions during balanced vs. excess conditions is not available. Therefore, the quantification of Delta exports for balanced and excess conditions include exports for the Old River, Middle River, Rock Slough, and Freeport intakes (i.e., total Delta exports are overestimated by 12 TAF per year).

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CC: Alicia Forsythe [aforsythe@sitesproject.org]; Twardochleb, Laura@DWR [Laura.Twardochleb@water.ca.gov]; Martinez, Josh@DWR [Joshua.Martinez@water.ca.gov]; Wright, Hailey@DWR [Hailey.Wright@water.ca.gov]
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Josh Martinez and Hailey Wright, please correct any of my uncertainty or provide additional description.

Thank-you,
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Any help is much appreciated.

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I hope this helps,

-Josh

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Subject: RE: Sites Project WSIP/Yolo Flow Question on NDFA

Thank you all very much, this information is really helpful. I have included our ICF water quality team in this email as they may have some additional questions.
John

John Spranza

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Criteria	Purpose	Description
Baseline		
Baseline Model	Update assumed operations to reflect current requirements and conditions.*	CalSim II 2020 Benchmark developed by Reclamation in coordination with DWR and CDFW.
Fixed Flows?		
American River	Allow flexibility	No - flows allowed to change
Trinity River Fixed	Reflect real conditions	Yes - flows held constant
Sites Facilities		
Sites Reservoir		
Reservoir capacity	Reflect project design	1.5 MAF for Alternatives 1 and 3, 1.3 MAF for Alternative 2
Dead pool size	Reflects project design and water quality considerations	120 TAF for export, 60 TAF for local use
Red Bluff Diversion/Tehama-Colusa Canal Authority Canal		
Diversion capacity	Reflect capacity at site	Up to 2,100 cfs - see following pages for description of diversion function
Bypass flow	Stabilize flow, protect redds	3,250 cfs
Hamilton Diversion/Glenn-Colusa Irrigation District Main Canal		
Diversion capacity	Reflect capacity at site	1,800 cfs
Bypass flow	Ensure proper fish screen function in oxbow	Up to 4,000 cfs - see following pages for description of diversion function
Glenn-Colusa Irrigation District maintenance window	Maintain earthen canal	2 weeks (January/February)
Dunnigan Pipeline		
Release capacity	Reflect design limit	1,000 cfs
Terminus	Reflect design	Colusa Basin Drain for Alt 1 and Alt 3, Sacramento River with turnout to Colusa Basin Drain for Alt 2
Location-Specific Regulations		
Bend Bridge Pulse Protection	Survival of emigrating juvenile salmon	Every pulse
Scaled Diversions	Ensure proper screen function	Rate of diversion controlled by screen design (see following pages)
Wilkins Slough Bypass Flow	Facilitate hatchery fish release	8,000 cfs in April and May; 5,000 cfs all other times

Criteria	Purpose	Description
Fremont Weir Notch Criteria	Limit encroachment on Reclamation obligation, maintain frequency and duration of spills	Versus no action alternative, there can be no more than 1% reduction in flow over weir when spill is less than 600 cfs and no more than a 10% reduction when flow over weir is between 600 and 6,000 cfs. No restriction when flows are greater than 6,000 cfs.
Net Delta Outflow Index (NDOI)	Do not impact implementation of existing regulations	Operations consistent with D-1641 as amended
X2	Do not impact implementation of existing regulations	Operations consistent with 2019 BO, CA DWR ITP
Delta Water Quality	Do not impact implementation of existing regulations	Operations with D-1641 as amended
*Note: Spring pulse flow protection as identified in the 2019 ROC on LTO BiOp is included in the baseline and is preserved in all action alternatives.		

TCCA Red Bluff Facility Operations

Table 3. TCCA Red Bluff Available Diversion Capacity by Streamflow

Sites Project Authority – Sacramento River Intake Fish Screen Operations

Streamflow at Gage (cfs)	River WSEL at U/S Work Point (feet, NAVD88)	Available Facility Diversion Capacity (cfs)
2,010	241.2	1,417
2,175	241.3	1,445
2,350	241.4	1,472
2,525	241.5	1,500
2,700	241.6	1,527
2,875	241.7	1,554
3,075	241.8	1,582
3,275	241.9	1,609
3,330	241.9	1,617
3,475	242.0	1,637
3,675	242.1	1,664
3,950	242.2	1,692
4,225	242.3	1,719
4,500	242.4	1,746
4,775	242.5	1,774
5,050	242.6	1,801
5,325	242.7	1,829
5,350	242.7	1,835
5,600	242.9	1,900
5,925	243.1	1,904
6,250	243.2	1,938
6,575	243.4	1,973
6,900	243.5	2,000
7,184	243.6	2,034
7,468	243.7	2,062
7,751	243.8	2,089
7,862	243.8	2,100
8,035	243.9	2,117
8,319	244.0	2,130

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8,714	244.1	2,175
9,109	244.3	2,206
9,266	244.4	2,237
9,898	244.5	2,240
10,254	244.6	2,295
10,610	244.7	2,322
10,965	244.8	2,350
11,321	244.9	2,377
11,677	245.0	2,380
12,139	245.1	2,432
12,600	245.2	2,500

Diversions limited by instream flow requirement of 3,250 cfs

Diversions limited by River WSEL and submerged screen area

No restrictions (assumes use of future Pump Nos. 2 and 10)

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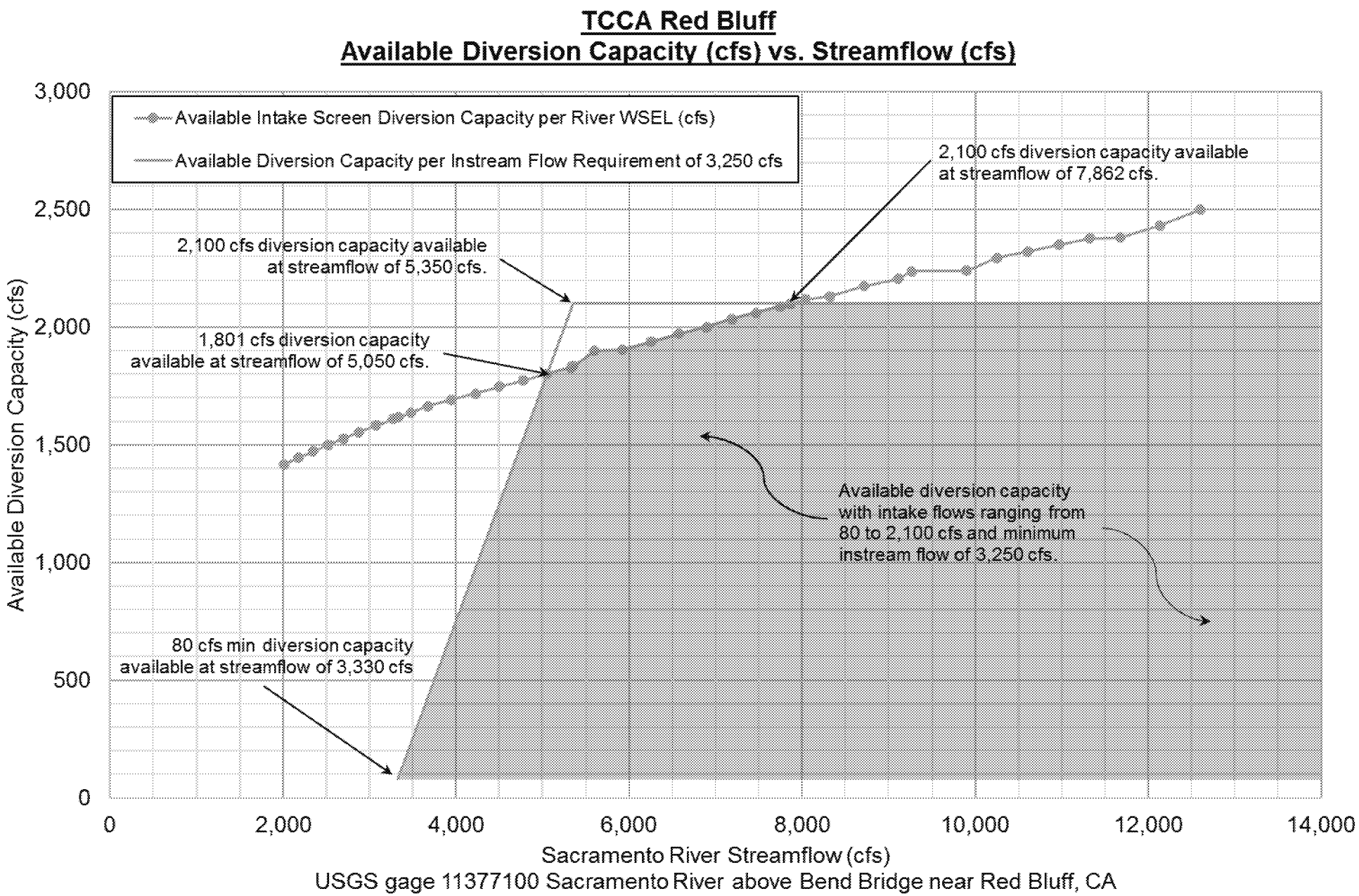
TCCA Red Bluff
Available Diversion Capacity (cfs) vs. Streamflow (cfs)
Available Intake Screen Diversion Capacity per River WSEL (cfs)
Available Diversion Capacity per Instream Flow Requirement of 3,250 cfs
2,100 cfs diversion capacity available at streamflow of 7,862 cfs.
2,100 cfs diversion capacity available at streamflow of 5,350 cfs.
1,801 cfs diversion capacity available at streamflow of 5,050 cfs.
Available diversion capacity with intake flows ranging from 80 to 2,100 cfs and minimum instream flow of 3,250 cfs.
80 cfs min diversion capacity available at streamflow of 3,330 cfs
Available Diversion Capacity (cfs)
3,000
2,500
2,000
1,500
1,000
500
0
0
2,000
4,000
6,000
8,000
10,000
12,000
14,000
Sacramento River Streamflow (cfs)
USGS gage 11377100 Sacramento River above Bend Bridge near Red Bluff, CA

GCID Hamilton City Facility Operations

Table 4. GCID Hamilton City Available Diversion Capacity by Streamflow

Sites Project Authority – Sacramento River Intake Fish Screen Operations

Streamflow Upstream of Oxbow (cfs)	River WSEL at U/S Oxbow (feet, NGVD29)	Available Facility Diversion Capacity (cfs)
900	132.5	1,744
938	132.6	1,777
977	132.7	1,809
1,018	132.8	1,841
1,061	132.9	1,873
1,105	133.0	1,906
1,151	133.1	1,938
1,200	133.2	1,970
1,250	133.3	2,002
2,690	133.4	2,035
2,765	133.5	2,067
2,842	133.6	2,099
2,921	133.7	2,131
3,002	133.8	2,164
3,086	133.9	2,196
3,172	134.0	2,228
3,260	134.1	2,260
3,351	134.2	2,292
3,445	134.3	2,325
3,541	134.4	2,357
3,639	134.5	2,389
3,741	134.6	2,421
3,845	134.7	2,454
3,952	134.8	2,486
4,062	134.9	2,518
4,176	135.0	2,559
4,292	135.1	2,583
4,412	135.2	2,615
4,534	135.3	2,647
4,661	135.4	2,679

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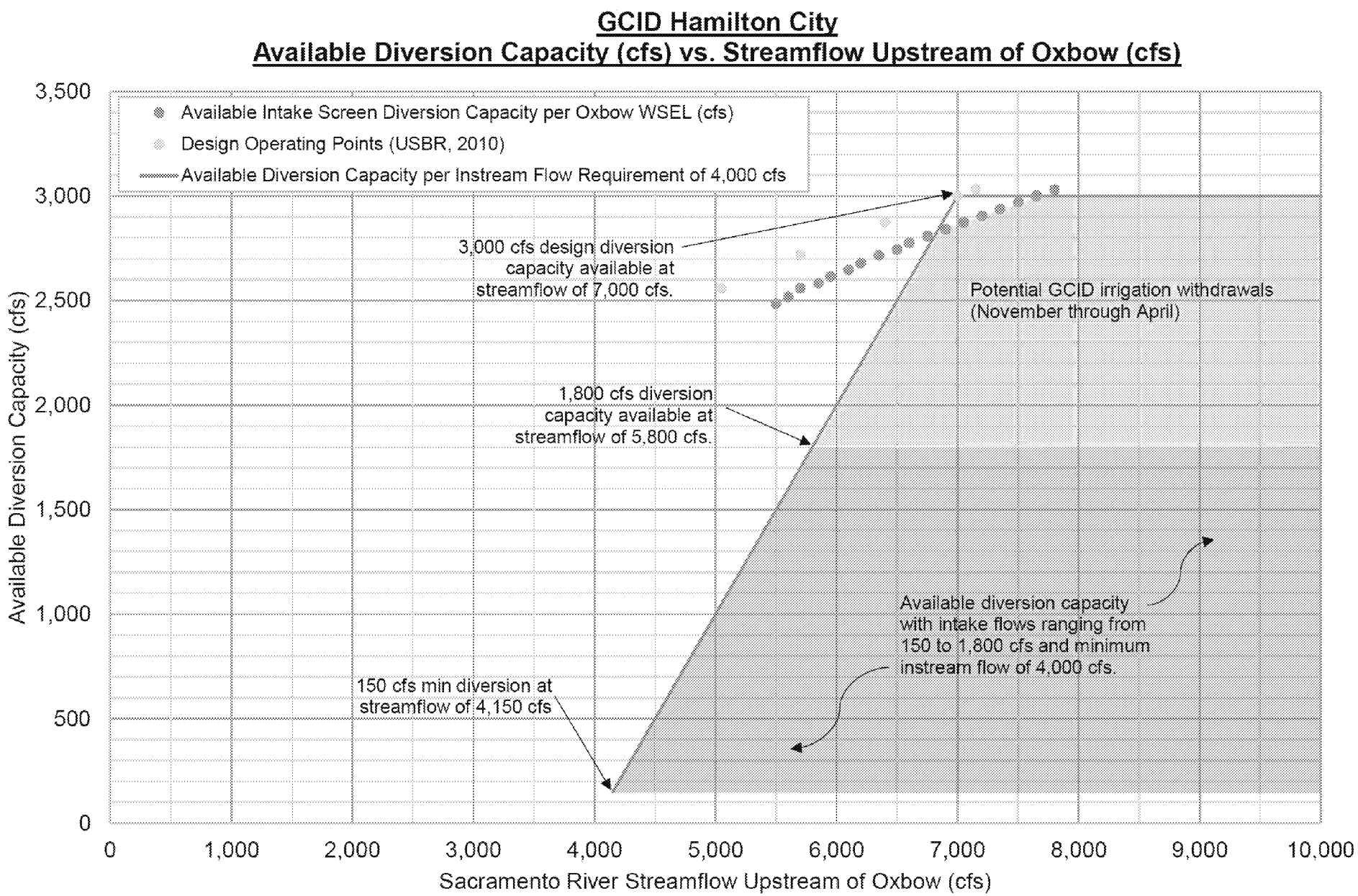
4,791	135.5	2,717
4,924	135.6	2,744
5,061	135.7	2,776
5,203	135.8	2,808
5,348	135.9	2,841
5,497	136.0 (begin possible gravity diversion)	2,874
5,650	136.1	2,905
5,807	136.2	2,937
5,969	136.3	2,969
6,135	136.4	3,002
6,306	136.5	3,031

Diversions limited by instream flow requirement of 4,000 cfs

No restrictions, assuming GCID irrigation withdrawals are less than approximately 1,000 cfs


GCID Hamilton City
Available Diversion Capacity (cfs) vs. Streamflow Upstream of Oxbow (cfs)
Available Intake Screen Diversion Capacity per Oxbow WSEL (cfs)
Design Operating Points (USBR, 2010)
Available Diversion Capacity per Instream Flow Requirement of 4,000 cfs
3,000 cfs design diversion capacity available at streamflow of 7,000 cfs.
Potential GCID irrigation withdrawals (November through April)
1,800 cfs diversion capacity available at streamflow of 5,800 cfs.
Available diversion capacity with intake flows ranging from 150 to 1,800 cfs and minimum instream flow of 4,000 cfs.
150 cfs min diversion at streamflow of 4,150 cfs
Available Diversion Capacity (cfs)
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
8,000
9,000
10,000
Sacramento River Streamflow Upstream of Oxbow (cfs)

Annex to the Operations Term Sheet
Between Reclamation and the Sites Project Authority

POWER GENERATION AND USE
Dated July 5, 2021

Covering the Coordinated Operations of the Central Valley Project and Sites Reservoir Project

The following table (Table 1) describes each of the locations upstream of the Delta where Sites water will be conveyed by the Sites Project Authority. For the purposes of this document, Sites water refers to water pumped, conveyed, and put to beneficial use under the Sites Project Authority's water right. Reclamation also continues to explore additional Federal involvement, including the use of Sites Reservoir to re-divert CVP water. Using Sites to re-divert CVP water would require an amendment to this annex. The table summarizes which types of power may be used based on the ownership of the facility. The table also identifies the season in which the facility would primarily be used.

Table 2. Description of power use by type of water and season.

Season of Use*	Condition	Location on Map	Key terms of Agreement
Excess Conditions (late winter/spring)	1. Power use pumping *Sites water* into the TC and GC canals.	① ②	a. Red Bluff Pumping Plant (RBPP) – Current WAPA power service to be used to pump Sites water to all Sites Participants. If required by WAPA, pumping related to Sites water supplied with market power through separate PLOA with WAPA. PLOA with WAPA would cover Warren Act requirements. b. Hamilton City Pumping Plant (HCPP) – Current PG&E service to be used to pump Sites water for all Sites Participants. Power supply would come through GCID's participation in the Power and Water Resources Pooling Authority (PWRPA). This power use would be covered under Facilities Use Agreement between Sites Authority and GCID. c. Scheduling Power - WAPA is scheduling coordinator through Cal-ISO for power deliveries to

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			RBPP. PWRPA is scheduling coordinator through Cal-ISO for power deliveries to HCPP. Sites Authority agreement with WAPA and GCID/PWRPA to cover use of facilities and scheduling services with an acceptable accounting procedure.
Excess Conditions (late winter/spring)	2. Power use conveying *Sites Water* within TC and GC canals to the Sites Reservoir	③ ④	a. TC Canal – Current WAPA power service to be used. Sites Authority agreement with WAPA to cover any power use above baseline without Sites project conditions. This power use would be covered under PLOA between Sites Authority and WAPA for pumping. b. GC Canal – Current PG&E service to be used with power supply provided through GCID's participation in PWRPA and under Facility Use Agreement between Sites Authority and GCID.
Excess Conditions (late winter/spring)	3. Power use related to pumping *Sites water* from the TC and GC canals into the Sites Reservoir	⑤ ⑥	a. Funks PGP and Terminal Regulating Reservoir PGP – New power service from PGE or WAPA (tbd) with the Sites Authority. b. Administration and Maintenance Buildings - New power service from P&GE or WAPA (tbd) with the Sites Authority. c. Dam and Recreation Facilities - New power service from P&GE or WAPA (tbd) with the Sites Authority.
Balanced conditions with available export capacity/reservoirs operating for	4. Power generation related to releasing *Sites*	⑦	a. Funks PGP Generator – Generated power wheeled to Sites power provider via reverse metering (assumed)

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exports and other demands (summer/early fall)	*water* to the TC and GC Canals.		through PG&E or WAPA (tbd) power service provider. b. TRR Generator - Generated power wheeled to Sites power provider via reverse metering (assumed) through power service through PG&E or WAPA (tbd) power service provider.
Balanced conditions with available export capacity/reservoirs operating for exports or conservation (fall/early winter)	5. Power use related to conveying *Sites water* to water users on the TC and GC Canals.	⑧ ⑨	a. TC Canal – Current WAPA power service to be used. Sites Authority agreement with WAPA to cover any power use above baseline without Sites project conditions. This power use would be covered under PLOA between Sites Authority and WAPA for pumping. b. GC Canal – Current PG&E service to be used with power supply provided through GCIDs participation in PWRPA and under Facility Use Agreement between Sites Authority and GCID. c. To NOD Refuges – Conveyance and power supply provided under current wheeling agreement between GCID and Reclamation. d. Reclamation payment for its share of power use could occur through an energy exchange at federal facilities or O&M cost reimbursement.
	6. Power use related to conveying *CVP water* to water users on the TC and GC Canals.		a. Use of project use power directly at the TC Canal and through energy exchange at the GC Canal.

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Balanced conditions with available export capacity/reservoirs operating for exports or conservation (fall/early winter)	7. Power use related to conveying *Sites water* from the Dunnigan Pipeline turnout at the TC Canal to the Knights Land Outfall Gate.	⑩	a. Metering and monitoring – New power service from PG&E by the Sites Authority. b. Reclamation payment for its share of power use could occur through an energy exchange at federal facilities or O&M cost reimbursement.
	8. Power use related to conveying *CVP water* from the Dunnigan Pipeline turnout at the TC Canal to the Knights Land Outfall Gate.		a. Metering and monitoring – Energy exchange with Reclamation to offset market power use at federal facilities.
Balanced conditions with available export capacity/reservoirs operating for exports or conservation (fall/early winter)	9. Power use related to conveying *Sites water* through the Delta and export pumping through the Jones Pumping Plant		a. To CVP and SWP Contractor – Power provided under Warren Act contract between Sites Participant and Reclamation. b. To IL4 Refuge – To be determined
	10. Effects of water exchange between Sites Authority and Reclamation on power generation at CVP facilities.		a. To be considered, evaluated, and resolved on a case-by-case basis and incorporated as appropriate in terms and conditions of exchange agreement.

*Shown for reference only. Power Usage in the shoulder periods is possible but not shown here.

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From: Kim Floyd [kim@floydcommunications.com]
Sent: 7/6/2021 4:54:23 PM
To: Alicia Forsythe [aforsythe@sitesproject.org]; laurie.warner.herson@phenixenv.com; Kevin Spesert [kspesert@sitesproject.org]; Linda Fisher [Linda.Fisher@hdrinc.com]; monique.briard@icf.com; nicole.williams@icf.com
CC: Elizabeth Cox [ecox@katzandassociates.com]; Sarah Rossetto [srossetto@katzandassociates.com]; Sara M. Katz [SKatz@katzandassociates.com]; Emily Fan Michaelson [emichaelson@katzandassociates.com]
Subject: 6.30.21 Sites RDEIR/SDEIS Public Outreach Planning Meeting Notes
Attachments: 063021 Sites EIR Planning Meeting Summary.pdf

All:

Attached please find draft notes from our June 30 planning meeting for the Sites RDEIR/SDEIS outreach. Please let us know of any needed revisions, or if you have any questions/comments. Ali, can you please forward to Melissa and Vanessa at Reclamation?

Thanks so much,

Kim

Kim Floyd Communications
(916) 838-2666 (cell)
kim@floydcommunications.com

Draft EIR/EIS Outreach Planning Session Meeting Summary

Sites Reservoir Project

Meeting Information:			
Date:	June 30, 2021	**Location:**	Microsoft Teams
Start Time:	2:30 p.m.	**Finish Time:**	4:00 p.m.
Notes By:	Elizabeth Cox (K&A)	**Reviewed By:**	Kim Floyd
Purpose:	EIR Outreach Planning		

Meeting Participants:

Kim Floyd (Floyd Comm.)	Emily Michaelson (K&A)	Laurie Warner-Herson (Phenix Env)
Sara Katz (K&A)	Linda Fisher (HDR)	Kevin Spesert (Authority)
Ali Forsythe (Authority)	Monique Briard (ICF)	Vanessa King (Reclamation)
Melissa Dekar (Reclamation)	Nicole Williams (ICF)	Elizabeth Cox (K&A)

Action Items:

	Action Item	Owner	Deadline	Notes
1	Finalize Draft EIR/EIS release/comment/notification schedule	Ali/Laurie/ICF/Integration	Week of July 5	– Consider building in extra review time – Integration to lead notification effort; consider notice requirements for an extended comment period
2	Confirm and schedule NGO meetings prior to document release	Ali/Laurie	July	– Water Quality/Trinity Group/Fisheries/Landowners
3	Meet to discuss outreach and provide more direction to comms team	Ali/Kevin/Vanessa	Week of July 5	– Consider materials that K&A could start developing (fact sheet, revised Exec. Summary) – Consider meeting format needs – Consider translation needs
4	Schedule a follow up meeting to go into detail on scope and next steps	Kim	Week of July 12	
5	Confirm Section 508 compliance requirements	Vanessa	Week of July 5	

Meeting Minutes:

1. **Team Introductions**
2. **Meeting Goals & Outcomes**
    a. Introduce team
    b. Review the Draft Implementation Plan

c. Discuss the scope for the project and delineate between communications/environmental consultant roles and responsibilities

3. Project Update

a. All chapters of the DEIR were completed in May and the team is very close to having an Administrative Draft. The Authority is working with Reclamation to get comments and feedback from participating agencies.

b. On July 21, 2021, the team will go to the Authority Board with the request to authorize the release of the DEIR. They have ~6 weeks to review the Administrative Draft.

c. On Aug. 26, 2021 (tentative pending input from Jerry Brown), the Authority will release the RDEIR/SDEIS. Reclamation will provide notice in the Federal Registry on Sept. 3, 2021; a press release will be released at that time. It will be a joint document and will be subject to 45 days of public review (review period to start on Sept. 3, 2021, pending confirmation).There may be requests to extend the comment period.

   i. The Authority and Environmental Consultant will confirm comment period and draft document schedule.

d. Before the release of the RDEIR/SDEIS, the team will continue to have discussions with NGO groups including fisheries and water quality-focused groups. The team may host smaller land-owner focused meetings before and after the release of the RDEIR/SDEIS.

4. Draft Implementation Plan Review

a. The Authority would like to have three public meetings: one in-person and two virtual meetings, one each in the day and evening.

b. Virtual meetings will have the option for people to participate by telephone. The team could consider opening the Maxwell office for the meetings for those with no internet access. Both telephone and in-person options for the virtual meetings may be challenging if the team pursues breakout sessions.

c. Integration will review the notification requirements and schedule and get back to the team. The team will also review and confirm the noticing requirements for if the comment period is extended.

   i. Kevin will reach out to elected officials and local agencies. The document will be sent to the Board Clerk or City Council Clerk.

d. Meeting format:

   i. The in-person meeting will consist of a poster session, a presentation and the opportunity to ask questions and submit comments. The poster session could be before or after the presentation.

   ii. The virtual meeting could consist of a presentation and multiple subsequent breakout rooms to ask questions with subject matter experts (SMEs) and a specific breakout room to provide public comments. If the team does not use breakout rooms the comment period will follow a period of Q&A. Format considerations for the team include:

      1. running multiple breakout rooms requires multiple Zoom licenses.

2. running multiple breakout rooms is staffing intensive; each room needs 3-4 staff members (a host, notetaker and 1-2 SMEs).

iii. All meetings should have a court reporter even if the meeting is recorded; this provides the team with backup documentation in the event of technology glitches.

e. Materials:

i. FAQ document.

ii. "User guide" to help the public navigate the RDEIR/SDEIS.

f. Accessibility:

i. The team should consider translating the Official Notice and the Executive Summary, along with needs for an interpreter at the public meetings. Interpretation services could be provided at the request of the community. The "user guide" may also be translated, in addition to or as an alternative to the Executive Summary.

ii. Vanessa to check with the PIO on the 508-compliance requirement. Closed captioning for virtual meetings could consist of live transcription by a court reporter or Zoom has a feature that autogenerates transcription and is fairly good quality.

From: Jerry Brown [jbrown@sitesproject.org]
Sent: 7/6/2021 5:58:35 PM
To: Thad Bettner [tbettner@gcid.net]; Holly Dawley [hdawley@gcid.net]; Alicia Forsythe [aforsythe@sitesproject.org]
Subject: Compliance with Section 2.5 of the Bylaws

Thad and Holly -

I raised the issue of how to approach compliance with Section 2.5 of the bylaws this morning and Holly asked for the kind of questions we need to discuss on Friday in advance of the meeting. Here are my suggestions plus some background:

Background: Section 2.5 generally says that TCCA and GCID have to provide "written consent" prior to Authority actions having certain impacts on either agency's operations, etc. While the release of the public draft EIR does not represent an action that technically constitutes an impact, in the spirit of cooperation the Authority is seeking TCCA and GCID consent and would like to make status of such consent known to the Authority at the time they are considering acting to release the public daft (currently schedule for July 21). I believe TCCA intends to take up such consent with its board at their early August meeting which works for the achieving their consent prior to releasing the document later in the month. I have said that this would work for the Authority as long as we could have assurance that the GM is prepared to recommend consent prior to our July 21. TCCA and the Authority are working toward this schedule goal. I believe our schedule of discussions with GCID support achieving a similar outcome with GCID and this approach would be preferable for the Authority.

Questions:
1. Does GCID plan to go to its board prior to the release of the RDEIR/SDEIS and provide an update on the potential issues to GCID's operations represented in the public drafts before end of August?
2. Does GCID wish to take a similar approach to TCCA when it comes to giving its consent per 2.5 for the release of the draft EIR/EIS?
3. Can a similar schedule be met by GCID to that being taken with TCCA?
4. Is there anything GCID needs from the Authority to take this to its board?

I hope this helps and meets your needs. If not, let me know. Thanks in advance for your cooperation.

Jerry

Land Management Committee Meeting Minutes

Date: April 20, 2021 **Location:** Maxwell / Virtual

Time: 2:00pm – 4:00pm

Leader:	Supervisor Gary Evans	**Recorder:**	Conner McDonald

Purpose: Update on activities associated with TRR Design, Emergency Drawdown Modeling, Colusa Basin Drain Modeling, and in-progress project cost estimate

Attendees:

Supervisor Gary Evans (Colusa)
Supervisor Ken Hahn (Glenn)
Jeff Sutton (TCCA)
Logan Dennis (GCID)
Thad Bettner (GCID)
Mike Azevedo (Colusa)
Jerry Brown (Sites)
Kevin Spesert (Sites)
Conner McDonald (HDR)
Henry Luu (HDR)
Pete Rude (Jacobs)
Frans Lambrechtsen (Jacobs)
Duane McClelland (Jacobs)
Kyle Winslow (Jacobs)
Derek Morley (Geosyntec)
Jeff Herrin (AECOM)
Howard Michael (AECOM)
Michael Smith (AECOM)
Michael Forrest (AECOM)

Agenda:

Discussion Topic	Topic Leader	Time Allotted
1. Introductory Remarks	Evans	2 minutes
2. Meeting Minutes and Action Item Follow-Up	Evans	2 minutes
3. Review TRR West Feasibility Design and Cost Estimate • **Requested Action:** Feedback/Direction	Luu	20 minutes
4. Review Updated Emergency Drawdown Preliminary Hydraulic Model • **Requested Action:** Feedback/Direction	Luu	20 minutes
5. Review Updated Colusa Basin Drain Preliminary Hydraulic Model • **Requested Action:** Feedback/Direction	Luu	15 minutes
6. In-Progress Project Cost Estimate Follow-Up • **Requested Action:** Feedback/Direction	Luu	60 minutes
7. Action Items and Closing Comments	Evans	5 minutes

Agenda Item #1 – Introductory Remarks – Supervisor Gary Evans

Meeting called to order at 2:00pm by Supervisor Gary Evans.

Kevin Spesert confirmed Attendees.

Attendees introduced themselves.

Agenda Item #2 – Meeting Minutes & Action Item Follow-Up – Supervisor Gary Evans

Meeting Minutes from prior meeting have been reviewed.

Agenda Item #3 – TRR West Feasibility Design and Cost Estimate – Henry Luu

Henry Luu introduced the topic, and advised that progress has been made since the last discussion of this matter.

Pete Rude advised that Feasibility Design is now finished.

Derek Morley presented a recap of the information from the Technical Memo. Feasibility Design has been completed to a greater level of detail. The layout for TRR West is configured in two main components, both located on the west side of the GCID Canal, and connected to the canal by the inlet/outlet facility. The pumping-generating plant, and the substation, are on the far western side of the overall feature. The overall location and configuration took into consideration landowner input, and minimization of impact to local land uses.

The overall construction of TRR West would require more earthwork than TRR East, but would not require any ground improvement. The pumping-generating plant, switchyard, and liner are the same for both options. The spoils from TRR West may have project uses, and there is greater potential for optimization of the TRR West site – depending on further information, the site may be able to be significantly downsized.

The TRR West option would result in a decreased length, by 2 Miles, of pipeline and electric transmission line.

The overall estimated cost comparison of TRR East versus TRR West is as follows:

TRR East	~$615M
TRR West	~$470M
Differential	~$140M

The differential in estimated cost results from a) decreased pipeline costs for TRR West; and b) decreased transmission line costs for TRR West.

The increased TRR West earthwork costs have been accounted for in the overall estimated cost comparison. The cost analysis does not assign value to the spoils of TRR West excavation, but there may be a value that could be assigned.

Based on the known information, there are improved soil conditions for TRR West, but the site requires significant earthwork. TRR West would be outside of DSOD jurisdiction, as it is excavation only, versus the embankments that would be required for TRR East.

The conceptual TRR is based upon the requirement of 4 Hours of water storage, in the event that the PGP goes down – in such a situation, TRR provides an emergency storage option. This storage requirements is also related to the capacity of the GCID Canal at that location. Discussions with GCID may determine that the size of TRR can be decreased.

The Committee asked if Funks Creek can be used for the emergency storage, as it may be able to accommodate 500 to 1,000 cfs.

Pete Rude advised that such an idea is a possibility, but has not been analyzed. He also advised that the 4-Hour emergency storage scenario is considered a worst-case situation.

Pete Rude recommended carrying forward both the TRR East and TRR West options, and conducting more geotechnical exploration to confirm assumptions.

Kevin Spesert advised that there has been a significant amount of recent geotechnical exploration already performed in the TRR West area, and the Landowner has been very gracious in accommodating the Project's needs and requests.

Pete Rude advised that the lab data results of the recent geotechnical work will be available in May / June, and he would like additional data at the TRR East location.

Kevin Spesert advised that the private irrigation canal, in the area between the GCID Canal and the proposed TRR West, is used by a local grower, and will need to be perpetuated to serve the existing orchards. There is also an irrigation canal to the west of the proposed TRR West footprint, that provides water from the TCCA Canal to the orchards to the south, and this existing irrigation canal will also need to be perpetuated.

The Project Team advised that, from an economic standpoint, TRR West looks favorable. The layout of TRR West in two portions (bifurcation) minimizes complications with the existing PG&E facilities. The two portions of the TRR West are proposed to be connected by Four 12-Foot-Diameter pipes.

The Committee advised that carrying forward both options in the environmental document is an acceptable approach.

Agenda Item #4 – Review Updated Emergency Drawdown Preliminary Hydraulic Model – Henry Luu

Pete Rude introduced the topic, and provided background.

Frans Lambrechtsen provided a report of the recent activities since the last discussion of this item. The Project Team acknowledged the feedback it received from the Committee, and has done a significant amount of work to analyze the model. The Team has incorporated high-resolution LiDAR into the modeling; conferred with RD-108 and KSN; included levees, major culverts, bridges, and siphons from the Sites Reservoir to the Yolo Bypass; and re-run the model.

Pete Rude advised that this model assumes a dry day, and that local levees continue to offer designed flood protection.

The Committee advised that rice ground land uses are flooded for six months of the year, as part of customary practice.

The Committee further advised that the current model results look similar to the real-world maps of recent flood events.

Agenda Item #5 – Review Updated Colusa Basin Drain Preliminary Hydraulic Model – Henry Luu

Henry Luu introduced this item, and advised that the Project Team has revisited it, after meeting with RD-108 and local Landowners / Operators at the low elevation along CBD. The Team is now more aware of Landowner operations and considerations with regard to this item; and is looking at operations modeling, and how such modeling interplays with CBD capacity.

The objectives of the Team were to quantify the impacts on water level at River Mile 8.9 based on average seasonal patterns of project flows; and also quantify such impacts using CALSIM Alt 1B.

Kyle Winslow advised that two rating curves were developed at RM 8.9 – one with the gates open at KLOG; and another with the gates closed at KLOG. The gates open scenario is the curve of analysis. At elevation 25.3, there is no modeled impact to the adjacent lands at RM 8.9. At elevation 26.5, there is a modeled impact, but such impact may have the potential for mitigation.

The dry years are modeled as the highest delivery years, on average. There is a need to understand what volume of water is in the CBD without the Project – ambient flow exists without project impacts.

Following the analysis, the Team has determined that there is a significant amount of water that can be moved through the Drain. If needed, mitigation measures at RM 8.9 and RM 7 can further enhance capacity.

Henry Luu advised that there will be ongoing analysis regarding CBD, including discussions with adjacent Landowners; discussions with the Operations Team to determine all options in moving water; and discussions with South of Delta Participants to develop additional detail with regard to demand schedules.

Agenda Item #6 – In-Progress Project Cost Estimate Follow-Up – Henry Luu

Henry Luu introduced this item, and advised that there are value engineering design components that can now be incorporated into the current cost estimate, such as re-alignment of Huffmaster Road and elimination of the western bridge span of Sites-Lodoga Road. The cost estimate under discussion uses the TRR East option, so the TRR West cost savings are not yet realized in this current snapshot.

Pete Rude advised that the TRR Funks Conveyance cost estimating has decreased, as there are improved costs on steel pipe.

Jeff Herrin advised that the costs of the 1.3MAF and 1.5 MAF have moved a bit further apart than in the value planning estimate.

Howard Michael advised that the re-alignment of Huffmaster Road has resulted in a decreased road length of 4,000 Feet, and a decreased cost of ~$5M. This re-alignment took into consideration the input of the Committee to align the roadway more closely to the proposed shoreline.

The Sites-Lodoga Road alignment was analyzed, and revised. The roadway length increased by approximately 1,800 Feet, and was placed on more favorable terrain, resulting in a cost reduction of ~$12M. In the roadway alignment analysis, the Team worked to avoid creating any land remnants of less than 40 or 50 Acres.

The Sites-Lodoga Road Causeway was re-designed to eliminate the westerly portion of the bridge, resulting in a cost reduction of ~$13M. The Engineering Team has coordinated with the Environmental Team to evaluate the algal bloom considerations, and it has been determined that the elimination of this span of the bridge does not result in a fatal flaw.

Howard Michael advised that the County data for roadway construction was a good check to the engineering estimating of roadway cost.

Mike Forrest reported on the cost estimating with regard to the dams, and advised that the future construction contractor will likely select quarries for material, and enter into agreement(s) with quarry operator(s), becoming responsible for the materials and process. A measurement of material quality will be performed by DSOD for the dam material.

For road aggregate base, there is no DSOD standard to meet.

Jeff Herrin advised that it is customary for the contractor to select quarries, not just based on price, but based upon production rate of a consistent supply, pursuant to construction needs. There are two types of material needs to be considered – rock fill / random fill; and sand and gravel. For rock fill / random fill, the nearest source is preferred to avoid hauling. A contractor may partner with a local Landowner to develop the quarry. On-site quarries are considered in the environmental document.

With regard to sand and gravel, such material is often delivered from a commercial quarry. AECOM has performed a cursory survey of commercial quarries in the area, and requested information from them. Many quarries have not been responsive. The closest quarries are not necessarily the best fit for the project.

With regard to the potential benefit of using excess materials from the construction of the TRR facilities, Mike Forrest reported that there may be the opportunity for use in road prisms, or portions of the reservoir. With

regard to the cost comparison for foundation prep, the increased costs were mostly related to Saddle Dam 5.

Mike Forrest further advised that the double-handling of materials sometimes results from the need to pre-haul material, and place in a surge pile, for later use.

Mike Forrest advised that quarries are a significant unknown, and will prove out with additional geotechnical exploration.

Supervisor Gary Evans advised the Project Team that if additional geotechnical exploration is needed, the Project Team should provide the information regarding exploration to him as soon as possible, as Supervisor Evans and the Real Estate Team need significant lead time to seek the land permissions that would be prerequisite to geotechnical explorations.

The Project Team advised that it would provide geotechnical needs information as soon as possible.

The Project Team further advised that value planning continues.

Agenda Item #8 – Action Items and Closing Comments – Supervisor Gary Evans

The Committee requested the Project Team to explore assigning value to the spoils of the proposed TRR West.

The Committee requested that any geotechnical exploration needs be provided as soon as possible.

The meeting was adjourned at 4:15pm.

Land Management Committee Meeting Minutes

Date: April 20, 2021 **Location:** Maxwell / Virtual

Time: 2:00pm – 4:00pm

Leader:	Supervisor Gary Evans	**Recorder:**	Conner McDonald

Purpose: Update on activities associated with TRR Design, Emergency Drawdown Modeling, Colusa Basin Drain Modeling, and in-progress project cost estimate

Attendees:

Supervisor Gary Evans (Colusa)
Supervisor Ken Hahn (Glenn)
Jeff Sutton (TCCA)
Logan Dennis (GCID)
Thad Bettner (GCID)
Mike Azevedo (Colusa)
Jerry Brown (Sites)
Kevin Spesert (Sites)
Conner McDonald (HDR)
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Derek Morley (Geosyntec)
Jeff Herrin (AECOM)
Howard Michael (AECOM)
Michael Smith (AECOM)
Michael Forrest (AECOM)

Agenda:

Discussion Topic	Topic Leader	Time Allotted
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2. Meeting Minutes and Action Item Follow-Up	Evans	2 minutes
3. Review TRR West Feasibility Design and Cost Estimate • **Requested Action:** Feedback/Direction	Luu	20 minutes
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5. Review Updated Colusa Basin Drain Preliminary Hydraulic Model • **Requested Action:** Feedback/Direction	Luu	15 minutes
6. In-Progress Project Cost Estimate Follow-Up • **Requested Action:** Feedback/Direction	Luu	60 minutes
7. Action Items and Closing Comments	Evans	5 minutes

Agenda Item #1 – Introductory Remarks – Supervisor Gary Evans

Meeting called to order at 2:00pm by Supervisor Gary Evans.

Kevin Spesert confirmed Attendees.

Attendees introduced themselves.

Agenda Item #2 – Meeting Minutes & Action Item Follow-Up – Supervisor Gary Evans

Meeting Minutes from prior meeting have been reviewed.

Agenda Item #3 – TRR West Feasibility Design and Cost Estimate – Henry Luu

Henry Luu introduced the topic and advised that progress has been made since the last discussion of this matter.

Pete Rude advised that Feasibility Design is now finished.

Derek Morley presented a recap of the information from the Technical Memo. Feasibility Design has been completed to a greater level of detail. The layout for TRR West is configured in two main components, both located on the west side of the GCID Canal and connected to the canal by the inlet/outlet facility. The pumping-generating plant, and the substation, are on the far western side of the overall feature. The overall location and configuration took into consideration landowner input, and minimization of impact to local land uses.

The overall construction of TRR West would require more earthwork than TRR East but would not require any ground improvement. The pumping-generating plant, switchyard, and liner are the same for both options. The spoils from TRR West may have project uses, and there is greater potential for optimization of the TRR West site – depending on further information, the site may be able to be significantly downsized.

The TRR West option would result in a decreased length, by 2 Miles, of pipeline and electric transmission line.

The overall estimated cost comparison of TRR East versus TRR West is as follows:

TRR East	~$615M
TRR West	~$470M
Differential	~$140M

The differential in estimated cost results from a) decreased pipeline costs for TRR West; and b) decreased transmission line costs for TRR West.

The increased TRR West earthwork costs have been accounted for in the overall estimated cost comparison. The cost analysis does not assign value to the spoils of TRR West excavation, but there may be a value that could be assigned.

Based on the known information, there are improved soil conditions for TRR West, but the site requires significant earthwork. TRR West would be outside of DSOD jurisdiction, as it is excavation only, versus the embankments that would be required for TRR East.

The conceptual TRR is based upon the requirement of 4 Hours of water storage, in the event that the PGP goes down – in such a situation, TRR provides an emergency storage option. This storage requirements is also related to the capacity of the GCID Canal at that location. Discussions with GCID may determine that the size of TRR can be decreased.

The Committee asked if Funks Creek can be used for the emergency storage, as it may be able to accommodate 500 to 1,000 cfs.

Pete Rude advised that such an idea is a possibility but has not been analyzed. He also advised that the 4-Hour emergency storage scenario is considered a worst-case situation.

Pete Rude recommended carrying forward both the TRR East and TRR West options and conducting more geotechnical exploration to confirm assumptions.

Kevin Spesert advised that there has been a significant amount of recent geotechnical exploration already performed in the TRR West area, and the Landowner has been very gracious in accommodating the Project's needs and requests.

Pete Rude advised that the lab data results of the recent geotechnical work will be available in May/June, and he would like additional data at the TRR East location.

Kevin Spesert advised that the private irrigation canal, in the area between the GCID Canal and the proposed TRR West, is used by a local grower, and will need to be perpetuated to serve the existing orchards. There is also an irrigation canal to the west of the proposed TRR West footprint, that provides water from the TCCA Canal to the orchards to the south, and this existing irrigation canal will also need to be perpetuated.

The Project Team advised that, from an economic standpoint, TRR West looks favorable. The layout of TRR West in two portions (bifurcation) minimizes complications with the existing PG&E facilities. The two portions of the TRR West are proposed to be connected by Four 12-Foot-Diameter pipes.

The Committee advised that carrying forward both options in the environmental document is an acceptable approach.

Agenda Item #4 – Review Updated Emergency Drawdown Preliminary Hydraulic Model – Henry Luu

Pete Rude introduced the topic and provided background.

Frans Lambrechtsen provided a report of the recent activities since the last discussion of this item. The Project Team acknowledged the feedback it received from the Committee and has done a significant amount of work to analyze the model. The Team has incorporated high-resolution LiDAR into the modeling; conferred with RD-108 and KSN; included levees, major culverts, bridges, and siphons from the Sites Reservoir to the Yolo Bypass; and re-run the model.

Pete Rude advised that this model assumes a dry day, and that local levees continue to offer designed flood protection.

The Committee advised that rice ground land uses are flooded for six months of the year, as part of customary practice.

The Committee further advised that the current model results look similar to the real-world maps of recent flood events.

Agenda Item #5 – Review Updated Colusa Basin Drain Preliminary Hydraulic Model – Henry Luu

Henry Luu introduced this item, and advised that the Project Team has revisited it, after meeting with RD-108 and local Landowners / Operators at the low elevation along CBD. The Team is now more aware of Landowner operations and considerations with regard to this item; and is looking at operations modeling, and how such modeling interplays with CBD capacity.

The objectives of the Team were to quantify the impacts on water level at River Mile 8.9 based on average seasonal patterns of project flows; and also quantify such impacts using CALSIM Alt 1B.

Kyle Winslow advised that two rating curves were developed at RM 8.9 – one with the gates open at KLOG; and another with the gates closed at KLOG. The gates open scenario is the curve of analysis. At elevation 25.3, there is no modeled impact to the adjacent lands at RM 8.9. At elevation 26.5, there is a modeled impact, but such impact may have the potential for mitigation.

The dry years are modeled as the highest delivery years, on average. There is a need to understand what volume of water is in the CBD without the Project – ambient flow exists without project impacts.

Following the analysis, the Team has determined that there is a significant amount of water that can be moved through the Drain. If needed, mitigation measures at RM 8.9 and RM 7 can further enhance capacity.

Henry Luu advised that there will be ongoing analysis regarding CBD, including discussions with adjacent Landowners; discussions with the Operations Team to determine all options in moving water; and discussions with South of Delta Participants to develop additional detail with regard to demand schedules.

Agenda Item #6 – In-Progress Project Cost Estimate Follow-Up – Henry Luu

Henry Luu introduced this item and advised that there are value engineering design components that can now be incorporated into the current cost estimate, such as re-alignment of Huffmaster Road and elimination of the western bridge span of Sites-Lodoga Road. The cost estimate under discussion uses the TRR East option, so the TRR West cost savings are not yet realized in this current snapshot.

Pete Rude advised that the TRR Funks Conveyance cost estimating has decreased, as there are improved costs on steel pipe.

Jeff Herrin advised that the costs of the 1.3MAF and 1.5 MAF have moved a bit further apart than in the value planning estimate.

Howard Michael advised that the re-alignment of Huffmaster Road has resulted in a decreased road length of 4,000 Feet, and a decreased cost of ~$5M. This re-alignment took into consideration the input of the Committee to align the roadway more closely to the proposed shoreline.

The Sites-Lodoga Road alignment was analyzed, and revised. The roadway length increased by approximately 1,800 Feet, and was placed on more favorable terrain, resulting in a cost reduction of ~$12M. In the roadway alignment analysis, the Team worked to avoid creating any land remnants of less than 40 or 50 Acres.

The Sites-Lodoga Road Causeway was re-designed to eliminate the westerly portion of the bridge, resulting in a cost reduction of ~$13M. The Engineering Team has coordinated with the Environmental Team to evaluate the algal bloom considerations, and it has been determined that the elimination of this span of the bridge does not result in a fatal flaw.

Howard Michael advised that the County data for roadway construction was a good check to the engineering estimating of roadway cost.

Mike Forrest reported on the cost estimating with regard to the dams and advised that the future construction contractor will likely select quarries for material, and enter into agreement(s) with quarry operator(s), becoming responsible for the materials and process. A measurement of material quality will be performed by DSOD for the dam material.

For road aggregate base, there is no DSOD standard to meet.

Jeff Herrin advised that it is customary for the contractor to select quarries, not just based on price, but based upon production rate of a consistent supply, pursuant to construction needs. There are two types of material needs to be considered – rock fill / random fill: and sand and gravel. For rock fill / random fill, the nearest source is preferred to avoid hauling. A contractor may partner with a local Landowner to develop the quarry. On-site quarries are considered in the environmental document.

With regard to sand and gravel, such material is often delivered from a commercial quarry. AECOM has performed a cursory survey of commercial quarries in the area and requested information from them. Many quarries have not been responsive. The closest quarries are not necessarily the best fit for the project.

With regard to the potential benefit of using excess materials from the construction of the TRR facilities, Mike Forrest reported that there may be the opportunity for use in road prisms, or portions of the reservoir. With

regard to the cost comparison for foundation prep, the increased costs were mostly related to Saddle Dam 5.

Mike Forrest further advised that the double-handling of materials sometimes results from the need to pre-haul material, and place in a surge pile, for later use.

Mike Forrest advised that quarries are a significant unknown and will prove out with additional geotechnical exploration.

Supervisor Gary Evans advised the Project Team that if additional geotechnical exploration is needed, the Project Team should provide the information regarding exploration to him as soon as possible, as Supervisor Evans and the Real Estate Team need significant lead time to seek the land permissions that would be prerequisite to geotechnical explorations.

The Project Team advised that it would provide geotechnical needs information as soon as possible.

The Project Team further advised that value planning continues.

Agenda Item #8 – Action Items and Closing Comments – Supervisor Gary Evans

The Committee requested the Project Team to explore assigning value to the spoils of the proposed TRR West.

The Committee requested that any geotechnical exploration needs be provided as soon as possible.

The meeting was adjourned at 4:15pm.

From: Joe Trapasso [jtrapasso@sitesproject.org]
Sent: 7/7/2021 9:22:09 AM
To: Marcia Kivett [MKivett@sitesproject.org]
Subject: RE: Meeting w/Secretary of Natural Resources

Agree

From: Marcia Kivett <MKivett@sitesproject.org>
Sent: Wednesday, July 7, 2021 8:05 AM
To: Joe Trapasso <jtrapasso@sitesproject.org>
Subject: RE: Meeting w/Secretary of Natural Resources

I would place that under prop 1 too....right? This is what I added for Kevin.

Consider increasing the amount of early funding levels for eligible Prop 1 projects	Quarter 1, 2022	

Sent from Mail for Windows 10

From: Joe Trapasso
Sent: Wednesday, July 7, 2021 8:02 AM
To: Marcia Kivett; Kevin Spesert; Alicia Forsythe; JP Robinette
Subject: RE: Meeting w/Secretary of Natural Resources

Marcia,

Kevin mentioned an item that I also had and that is follow up on the potential for EFA funding to potentially increase from 5% to 10% that would provide the Authority another $40M.

Joe

From: Marcia Kivett <MKivett@sitesproject.org>
Sent: Wednesday, July 7, 2021 7:50 AM
To: Kevin Spesert <kspesert@sitesproject.org>; Alicia Forsythe <aforsythe@sitesproject.org>; Joe Trapasso <jtrapasso@sitesproject.org>; JP Robinette <jrobinette@brwncald.com>
Subject: Meeting w/Secretary of Natural Resources
Importance: High

Jerry is meeting with Nancy Vogel this afternoon. Please make any additional edits to the subject meeting's Agenda, Sites Asks and Table - 20210713_CNRA Meeting.docx

Kevin, I believe you are not able to access the link. You can reply to me to add the one item you were talking about; I believe under Activities Related to Prop 1.

Milestones and Dates Involving State Agencies for the Sites Reservoir Project

Description	Needed Completion Date	Agency(ies) Involved
Activities Related to Prop 1		
Initiate public review of RDEIR/SDEIS	September 3, 2021	Sites

Complete State Feasibility Determination	December 17, 2021	CWC
Confirm 75% Non-Public Benefit Cost Share Commitment	December 17, 2021	DWR
Complete Final EIR/EIS, CEQA Findings, and Adopt Project	July 2022	Sites
Initiate Benefit Agreements	January 2022	Sites, DWR, CDFW
Complete Benefit Agreements	June 2023	DWR, CDFW
Activities Related to Water Rights		
Support Development of Water Right Application	December 20, 2021	DWR, CDFW, SWRCB
Submit Water Right Application	December 20, 2021	Sites
Complete Application Review and Issue Public Notice	February 14, 2022	SWRCB
Work to Resolve Protests	December 2022	Sites, SWRCB
Conduct Hearing on Any Remaining Issues	March 2023	SWRCB
Issue Final Order and Water Right Permit	July 2023	SWRCB
Activities Related to Critical Permits		
State Incidental Take Permits		
Develop and Submit ITP Applications	December 20, 2021	Sites, CDFW
Issue Incidental Take Permits	August 2022	CDFW
401 Water Quality Certification		
Develop and Submit Draft Permit Application	December 20, 2021	Sites, SWRCB
Review and Refinement of Draft Application	June 2022	Sites, SWRCB
Submit Application	July 2022	Sites
401 Certification Issued	November 2022	SWRCB
Activities Related to Operations Coordination		
Confirm State Contract modifications needed for Sites	October 1, 2021	DWR
Execute Agreement to Coordinate Operations of SWP and Sites	December 2022	DWR

Marcia Kivett
Sites Project Admin
Phone: 561.843.9740
Email: mkivett@sitesproject.org
Web: www.SitesProject.org
P.O. Box 517
122 Old Hwy 99W
Maxwell, CA 95955

From: Kim Floyd [kim@floydcommunications.com]
Sent: 7/8/2021 6:25:33 AM
To: Alicia Forsythe [aforsythe@sitesproject.org]; Kevin Spesert [kspesert@sitesproject.org]; monique.briard@icf.com; laurie.warner.herson@phenixenv.com; linda.fisher@hdrinc.com
CC: Sarah Rossetto [srossetto@katzandassociates.com]; Sara M. Katz [SKatz@katzandassociates.com]; Emily Fan Michaelson [emichaelson@katzandassociates.com]
Subject: RE: Sites - Draft EIR/EIS Outreach Planning Session: Agenda and Materials
Attachments: Sites Reservoir Draft EIR_EIS Implementation Plan_DRAFT 6.29.2021.docx

Good morning, Ali! The Word version is attached.

Thank you!!

Kim

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Thursday, July 8, 2021 5:54 AM
To: Kim Floyd <kim@floydcommunications.com>; Kevin Spesert <kspesert@sitesproject.org>; monique.briard@icf.com; laurie.warner.herson@phenixenv.com; linda.fisher@hdrinc.com
Cc: Sarah Rossetto <srossetto@katzandassociates.com>; Sara M. Katz <SKatz@katzandassociates.com>; Emily Fan Michaelson <emichaelson@katzandassociates.com>
Subject: RE: Sites - Draft EIR/EIS Outreach Planning Session: Agenda and Materials

Kim – Can you send the plan over in a MS Word format? It will just be easier for us to make comments and coordinate our review if we have it in Word.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Kim Floyd <kim@floydcommunications.com>
Sent: Monday, June 28, 2021 1:06 PM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Kevin Spesert <kspesert@sitesproject.org>; monique.briard@icf.com; laurie.warner.herson@phenixenv.com; linda.fisher@hdrinc.com
Cc: Sarah Rossetto <srossetto@katzandassociates.com>; Sara M. Katz <SKatz@katzandassociates.com>; Emily Fan Michaelson <emichaelson@katzandassociates.com>
Subject: Sites - Draft EIR/EIS Outreach Planning Session: Agenda and Materials

All:

In preparation for our EIR/EIS Outreach Planning meeting on Wednesday, June 30, attached please find the proposed agenda and a draft implementation plan for your review and our discussion. In its draft form, the implementation plan provides a framework for decisions regarding noticing, format and logistics for public meetings, and input into the development of informational materials. Areas highlighted in yellow are those for which we need clarification, more information, and/or consensus.

We look forward to seeing you (virtually) on Wednesday afternoon! Please let us know if you have any questions in the meantime.

Thanks,

Kim Floyd
Katz & Associates Team

(916) 838-2666 (cell)
kim@floydcommunications.com

Sites Reservoir Project
Revised Draft EIR/Supplemental Draft EIS
Public Meetings

Implementation Plan

DRAFT v6.28.2021

DRAFT

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I. Introduction: The Draft EIR/EIS public comment period is XX days and is expected to begin on Thursday, August 26, 2021, and end on [DATE]. One in-person Draft EIR/EIS public meeting and one virtual Draft EIR/EIS public meeting are tentatively scheduled for late September 2021. Comment collection details are included below in Section IV. Two in-person stakeholder meetings with landowners are tentatively planned, one to occur prior to the release of the Draft EIR/EIS and one to occur after the release but prior to the two Draft EIR/EIS public meetings. Landowner meeting details are included in Section XI.

The following dates, times, and locations have been identified for the Draft EIR/EIS public meetings.

Table 1. Schedule

Type	Date & Time	Location
Virtual Public Meeting	[DATE] [TIME]	Zoom Webinar
In-Person Public Meeting	[DATE] [TIME]	Sites Project Authority Office, 122 Old Highway 99 West, Maxwell, CA 95955

Staff who have a role during the public meetings as identified in Tables 6 and 7 need to join the Zoom Webinar for the virtual public meeting and arrive at the venue for the in-person meeting 30 minutes prior to the meeting start time.

II. Notifications: The public will be notified of the meeting dates, times, and locations via the notification methods and channels listed in the table below. The responsibility for posting or distributing the notice is identified along with the suggested target date(s) for posting or distributing.

Table 2. Notifications

Notification	Responsible	Target Date(s) for Post/Distribution
Notice of Availability/Public Meetings	Environmental Team/Reclamation	August 26, 2021
News Release	Communications Team	August 26, 2021
Letter – Elected Officials/Agencies	Environmental Team/Reclamation	August 25, 2021
Postcard Mailer – Proximate Properties	Environmental Team/Reclamation	August 25, 2021
Website Update	Communications Team/Reclamation	August 26, 2021
E-blasts	Communications Team	August 26, 2021; reminder prior to public meetings; and before end of comment period
Newspaper Display Advertisements	Communications Team	August 26, 2021 (dates will vary based on newspaper publication schedule)
Social Media	Communications Team/Reclamation (paid social media)	August 26, 2021; reminder prior to public meetings; and before end of comment period

Table 2. Notifications

Notification	Responsible	Target Date(s) for Post/Distribution
Radio Public Service Announcements (PSAs)	Communications Team	August 26, 2021; reminder prior to public meetings
Flier	Communications Team	August 26, 2021
JPA Member Communication (version of flier or e-blast)	Communications Team	August 26, 2021
Information Repositories	Environmental Team	August 26, 2021

III. Meeting Format:

a. ***Virtual Public Meeting:*** The virtual public meeting will be conducted via Zoom Webinar and will consist of a project presentation and formal public comment component to accept verbal comments.

Following the project presentation, breakout sessions that cover the topics listed in Table 6 will open and be conducted via Zoom Webinar. The breakout sessions will allow members of the public to have their informal questions answered, since formal/official questions will not be answered during the virtual public meeting but will be responded to in the Final EIR/EIS. Links to the breakout sessions will be available on the project website. The breakout sessions will be open while the formal public comment session is being conducted and will stay open for one hour after the virtual public meeting concludes.

The project presentation will be delivered at the beginning of the meeting. After the presentation, the moderator will kick off the formal public comment session. Official public comments will be received verbally during the formal public comment session (written comments would be submitted via the accepted methods of mail and email). Instructions on how to provide public comments will be discussed at the beginning of the meeting and again after the project presentation. Instructions for joining the breakout sessions will also be provided after the presentation along with a reminder that if participants missed the presentation, a recording of the presentation can be found on the project website.

The virtual public meeting is scheduled to conclude at [TIME]; however, if there are participants who have their hand raised and have not been called on yet to provide their comments, the virtual public meeting should remain open until all participants who raised their hand prior to [TIME] have been given the opportunity to provide their comments.

Participants who are logged in to Zoom Webinar online can raise their hand by clicking on the hand icon. Participants who call in on the phone can dial *9 to raise their hand. When a participant raises their hand using either method, the moderator can see that a hand is raised, call on that participant, and enable the participant to complete the unmute process to provide a comment during the virtual public meeting or ask a question during the breakout sessions.

Zoom Webinar has a Q&A feature that allows participants to submit written questions, which will be viewable to only the host and panelists, unless the host or a panelist make the question public to the rest of the attendees. The question can be answered verbally and/or answered in writing through the Q&A feature. The Q&A feature will be enabled for the breakout sessions but disabled for the virtual public meeting.

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In addition to the Q&A feature, there is a chat function that can be enabled or disabled. If enabled, attendees can contact the project team via the chat function. The chat settings would be set to only allow communication with the project team and no other attendees. The project team could use the chat function to post links or reminder messages. The chat function could be used to collect Draft EIR/EIS comments during the virtual public meeting.

Since staff will need to be in contact with each other to manage the virtual public meeting, a Microsoft Teams chat session or a messaging platform can be used for internal, back-end communications.

Zoom Webinar: Zoom Webinar is the recommended platform for the virtual public meeting and breakout sessions due to its ease of use and simple user interface, general familiarity by the public, and built-in controls. Zoom Webinar can support up to 10,000 participants and allow participants to dial in with their standard telephone, computer, or smartphone to participate. Zoom Webinar allows participation without registration or downloads, including a phone-in option for those who may not have Internet access. Unlike a Zoom Meeting that can be subject to hijacking or "conference bombing," Zoom Webinar has additional controls, whereas the webinar host controls all audio, video, and screen-sharing functions. Participants do not have access to these controls.

Agenda: Based on the format outlined above, the proposed agenda for the virtual public meeting will be as follows:

Table 3. Virtual Public Meeting Agenda

Item	Presenter(s)	Time
Project Presentation	TBD	**[TIME]** XX minutes
Formal Public Comment Session	TBD	**[TIME]** XX minutes
Breakout Sessions	TBD	**[TIME]** XX minutes

b. ***In-Person Public Meeting:*** The in-person public meeting will consist of staffed informational poster stations, a project presentation, and a formal public comment component to accept verbal comments.

Tables will be set up for attendees to sign in for the meetings and provide their contact information. Attendees can also choose to sign up to receive future project updates. At this location, staff will explain the meeting format and required COVID-19 safety measures.

Poster stations that cover the topics listed in Table 7 will be staffed by project team members who will be available to engage in one-on-one conversations with the public and answer questions. The staffed information stations will close once the project presentation and formal public comment session begin. A station for submitting written comments will also be set up.

The project presentation will begin one hour after the start of the meeting. Following the project presentation, the formal public comment session will be initiated and run for the remainder of the public meeting. Alternatively, the project presentation could be repeated if there are not many verbal comments but an influx of people who were not at the meeting

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when the project presentation was first conducted, or the staffed informational poster stations could be reopened.

COVID-19 Precautions: The in-person public meeting will be conducted as safely as possible and in accordance with face covering requirements. Signage at the entrances will remind people that they cannot enter the meeting if they are not feeling well (fever, cough, etc.). Signage will be posted throughout the venue reminding attendees to wear a face covering if not vaccinated. Masks will be kept at the sign-in tables to provide to attendees if they do not have a face covering to wear. Attendees who are not vaccinated and refuse to wear a mask will not be allowed into the meeting room. Hand sanitizer will be placed at the sign-in tables and written comment station. Venue staff or the project team will wipe down high-touch areas during the meetings, which could include the presentation podium, microphones, shared pens, etc. If the meeting venue has doors that open to the outside, the doors can be kept open for increased air circulation.

Agenda: Based on the format outlined above, the proposed agenda for the in-person public meeting will be as follows:

Table 4. In-Person Public Meeting Agenda

Item	Presenter(s)	Time
Open House Information Stations	TBD	**[TIME]** XX minutes
Project Presentation	TBD	**[TIME]** XX minutes
Formal Public Comment Session	TBD	**[TIME]** XX minutes

IV. Comment Collection:

a. ***Virtual Public Meeting:*** During the virtual public meetings, verbal public comments can be submitted via audio when individuals are called upon and their microphone is unmuted. The moderator will call on individuals in the order they raised their hand to speak and ask each person to state and spell their name for the record. Speakers will be asked to limit their comments to X minutes. A court reporter will transcribe verbal comments. Formal comments will not be accepted during the breakout sessions, and this will be made clear to participants. Written public comments will be accepted by mail and email throughout the public comment period; to consider is also accepting public comments through an auto-fill form on the project website.

b. ***In-Person Public Meeting:*** During the in-person public meeting, public comments can be submitted via two methods: (1) in writing via printed comment forms; and (2) verbal comments during the formal public comment session transcribed by a court reporter. A comment station will be provided for the public to have a dedicated space to write comments. Written comments could be collected in a box similar to a voting box. This ensures comment privacy or anonymity, if desired. The comment station will be staffed by the project team to ensure the written comments are secure. Written public comments will also be accepted by mail and email throughout the public comment period.

Individuals will sign up to provide their comments verbally during the formal public comment session. The moderator will call on individuals in the order they signed up and ask each person

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to state and spell their name for the record; to consider is whether elected officials would be allowed to provide their comments first. Speakers will be asked to limit their comments to X minutes. If desired, a second court reporter could be made available to collect verbal comments in a semi-private setting for individuals who do not wish to speak their comment in front of an audience during the formal public comment session. This second court reporter could be stationed in a separate room or a quiet corner of the meeting room.

V. **Language Interpretation and Translation:** The need for Spanish language interpretation at the meetings will be determined by requests received. The notices will include language directing participants to contact the project team for reasonable accommodations.

The project presentation will be translated and recorded in Spanish, and the recording could be posted to the project website. The project fact sheet will also be translated into Spanish.

VI. **Section 508 Compliance:** Closed captioning during the virtual public meeting is needed for Section 508 compliance. Closed captioning will be generated by Zoom (CC live transcription).

VII. **Recording:** The virtual public meeting will be recorded. The recording of the project presentation portion or the entire virtual public meeting could be posted to the project website. The in-person public meeting will not be recorded.

VIII. **Informational Materials:** A variety of informational materials will be developed to support the Draft EIR/EIS public comment period and meetings. The materials will provide information and address anticipated stakeholder concerns and questions. The type, quantity, format, and topics for the informational materials are listed in the table below. Materials will be posted to the project website in advance of the meetings. Other methods for providing the informational materials are also listed.

Table 5. Informational Materials

Material	Quantity/ Format	Availability	Topics
Fact Sheet	Two-page fact sheet	• Project website • In-person public meeting • Information repositories • Mailed to individuals without access to Internet or computer	Project overview, alternatives, environmental review process
Posters	8	• Project website • In-person public meeting • Information repositories • Mailed to individuals without access to Internet or computer	*Potential poster topics:* 1. Location 2. Project overview 3. Alternatives 4. Resource areas analyzed 5. Environmental analysis – water quality 6. Environmental analysis – fisheries 7. Environmental analysis – other biological resources 8. Environmental analysis – cultural resources

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Table 5. Informational Materials

Material	Quantity/ Format	Availability	Topics
			9. Environmental analysis – local impacts (traffic) 10. Environmental review process 11. Trinity River
Video Vignettes	4 two-minute videos	• Project website • In-person public meeting	1. 2. 3. 4.
Project Presentation	1	• Project website (recording) • Virtual public meeting • In-person public meeting • Presentation slides mailed to individuals without access to Internet or computer	Project overview, alternatives, environmental analysis, environmental review process
Draft EIR/EIS Community Guide	1 (up to 20 pages)	• Project website • In-person public meeting • Information repositories • Mailed to individuals without access to Internet or computer	Project overview, key elements of the environmental analysis provided in the Draft EIR/EIS
FAQs	1	• Project website • In-person public meeting • Mailed to individuals without access to Internet or computer	

IX. Dry-Run Practice Sessions: Several dry-run practice sessions will be held prior to the public meetings. The initial dry run for the virtual public meeting will include a run through of the technology and an opportunity for the project team to practice using the technology. Subsequent dry runs could include an overview of the meeting format and logistics; familiarization with informational materials; a run through of the PowerPoint presentation; and a dry run of potential public interactions in a Q&A setting at poster stations or breakout sessions.

X. Documentation: A summary of outreach activities will be developed and will include meeting noticing, materials developed, number of meeting attendees, list of representative groups and media who identified themselves during the meetings, and general comments heard. Court reporters will prepare a transcript of verbal comments provided at the public meetings. A team debrief will be held the morning after each meeting to capture team comments of issues and concerns heard at their poster stations or breakout sessions.

Table 6. Virtual Public Meeting Roles and Staffing

To be developed

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Table 7. In-Person Public Meeting Roles and Staffing

To be developed

Table 8. In-Person Meeting Materials

To be developed

XI. Landowner Meetings: Two in-person stakeholder meetings with landowners are tentatively planned, one to occur prior to the release of the Draft EIR/EIS and one to occur after the release but prior to the two Draft EIR/EIS public meetings. The landowner meetings would be held at the Sites Project Authority Office in Maxwell. The purpose would be to review Draft EIR/EIS highlights and answer questions. Formal comments will not be accepted during the landowner meetings, and this will be made clear to participants.

DRAFT

Land Management Committee Meeting Minutes

Date: April 20, 2021 **Location:** Maxwell / Virtual

Time: 2:00pm – 4:00pm

Leader:	Supervisor Gary Evans	**Recorder:**	Conner McDonald

Purpose: Update on activities associated with TRR Design, Emergency Drawdown Modeling, Colusa Basin Drain Modeling, and in-progress project cost estimate

Attendees:

Supervisor Gary Evans (Colusa)
Supervisor Ken Hahn (Glenn)
Jeff Sutton (TCCA)
Logan Dennis (GCID)
Thad Bettner (GCID)
Mike Azevedo (Colusa)
Jerry Brown (Sites)
Kevin Spesert (Sites)
Conner McDonald (HDR)
Henry Luu (HDR)
Pete Rude (Jacobs)
Frans Lambrechtsen (Jacobs)
Duane McClelland (Jacobs)
Kyle Winslow (Jacobs)
Derek Morley (Geosyntec)
Jeff Herrin (AECOM)
Howard Michael (AECOM)
Michael Smith (AECOM)
Michael Forrest (AECOM)

Agenda:

Discussion Topic	Topic Leader	Time Allotted
1. Introductory Remarks	Evans	2 minutes
2. Meeting Minutes and Action Item Follow-Up	Evans	2 minutes
3. Review TRR West Feasibility Design and Cost Estimate • **Requested Action:** Feedback/Direction	Luu	20 minutes
4. Review Updated Emergency Drawdown Preliminary Hydraulic Model • **Requested Action:** Feedback/Direction	Luu	20 minutes
5. Review Updated Colusa Basin Drain Preliminary Hydraulic Model • **Requested Action:** Feedback/Direction	Luu	15 minutes
6. In-Progress Project Cost Estimate Follow-Up • **Requested Action:** Feedback/Direction	Luu	60 minutes
7. Action Items and Closing Comments	Evans	5 minutes

Agenda Item #1 – Introductory Remarks – Supervisor Gary Evans

Meeting called to order at 2:00pm by Supervisor Gary Evans.

Kevin Spesert confirmed Attendees.

Attendees introduced themselves.

Agenda Item #2 – Meeting Minutes & Action Item Follow-Up – Supervisor Gary Evans

Meeting Minutes from prior meeting have been reviewed.

Agenda Item #3 – TRR West Feasibility Design and Cost Estimate – Henry Luu

Henry Luu introduced the topic and advised that progress has been made since the last discussion of this matter.

Pete Rude advised that Feasibility Design is now finished.

Derek Morley presented a recap of the information from the Technical Memo. Feasibility Design has been completed to a greater level of detail. The layout for TRR West is configured in two main components, both located on the west side of the GCID Canal and connected to the canal by the inlet/outlet facility. The pumping-generating plant, and the substation, are on the far western side of the overall feature. The overall location and configuration took into consideration landowner input, and minimization of impact to local land uses.

The overall construction of TRR West would require more earthwork than TRR East but would not require any ground improvement. The pumping-generating plant, switchyard, and liner are the same for both options. The spoils from TRR West may have project uses, and there is greater potential for optimization of the TRR West site – depending on further information, the site may be able to be significantly downsized.

The TRR West option would result in a decreased length, by 2 Miles, of pipeline and electric transmission line.

The overall estimated cost comparison of TRR East versus TRR West is as follows:

TRR East	~$615M
TRR West	~$470M
Differential	~$140M

The differential in estimated cost results from a) decreased pipeline costs for TRR West; and b) decreased transmission line costs for TRR West.

The increased TRR West earthwork costs have been accounted for in the overall estimated cost comparison. The cost analysis does not assign value to the spoils of TRR West excavation, but there may be a value that could be assigned.

Based on the known information, there are improved soil conditions for TRR West, but the site requires significant earthwork. TRR West would be outside of DSOD jurisdiction, as it is excavation only, versus the embankments that would be required for TRR East.

The conceptual TRR is based upon the requirement of 4 Hours of water storage, in the event that the PGP goes down – in such a situation, TRR provides an emergency storage option. This storage requirements is also related to the capacity of the GCID Canal at that location. Discussions with GCID may determine that the size of TRR can be decreased.

The Committee asked if Funks Creek can be used for the emergency storage, as it may be able to accommodate 500 to 1,000 cfs.

Pete Rude advised that such an idea is a possibility but has not been analyzed. He also advised that the 4-Hour emergency storage scenario is considered a worst-case situation.

Pete Rude recommended carrying forward both the TRR East and TRR West options and conducting more geotechnical exploration to confirm assumptions.

Kevin Spesert advised that there has been a significant amount of recent geotechnical exploration already performed in the TRR West area, and the Landowner has been very gracious in accommodating the Project's needs and requests.

Pete Rude advised that the lab data results of the recent geotechnical work will be available in May/June, and he would like additional data at the TRR East location.

Kevin Spesert advised that the private irrigation canal, in the area between the GCID Canal and the proposed TRR West, is used by a local grower, and will need to be perpetuated to serve the existing orchards. There is also an irrigation canal to the west of the proposed TRR West footprint, that provides water from the TCCA Canal to the orchards to the south, and this existing irrigation canal will also need to be perpetuated.

The Project Team advised that, from an economic standpoint, TRR West looks favorable. The layout of TRR West in two portions (bifurcation) minimizes complications with the existing PG&E facilities. The two portions of the TRR West are proposed to be connected by Four 12-Foot-Diameter pipes.

The Committee advised that carrying forward both options in the environmental document is an acceptable approach.

Agenda Item #4 – Review Updated Emergency Drawdown Preliminary Hydraulic Model – Henry Luu

Pete Rude introduced the topic and provided background.

Frans Lambrechtsen provided a report of the recent activities since the last discussion of this item. The Project Team acknowledged the feedback it received from the Committee and has done a significant amount of work to analyze the model. The Team has incorporated high-resolution LiDAR into the modeling; conferred with RD-108 and KSN; included levees, major culverts, bridges, and siphons from the Sites Reservoir to the Yolo Bypass; and re-run the model.

Pete Rude advised that this model assumes a dry day, and that local levees continue to offer designed flood protection.

The Committee advised that rice ground land uses are flooded for six months of the year, as part of customary practice.

The Committee further advised that the current model results look similar to the real-world maps of recent flood events.

Agenda Item #5 – Review Updated Colusa Basin Drain Preliminary Hydraulic Model – Henry Luu

Henry Luu introduced this item, and advised that the Project Team has revisited it, after meeting with RD-108 and local Landowners / Operators at the low elevation along CBD. The Team is now more aware of Landowner operations and considerations with regard to this item; and is looking at operations modeling, and how such modeling interplays with CBD capacity.

The objectives of the Team were to quantify the impacts on water level at River Mile 8.9 based on average seasonal patterns of project flows; and also quantify such impacts using CALSIM Alt 1B.

Kyle Winslow advised that two rating curves were developed at RM 8.9 – one with the gates open at KLOG; and another with the gates closed at KLOG. The gates open scenario is the curve of analysis. At elevation 25.3, there is no modeled impact to the adjacent lands at RM 8.9. At elevation 26.5, there is a modeled impact, but such impact may have the potential for mitigation.

The dry years are modeled as the highest delivery years, on average. There is a need to understand what volume of water is in the CBD without the Project – ambient flow exists without project impacts.

Following the analysis, the Team has determined that there is a significant amount of water that can be moved through the Drain. If needed, mitigation measures at RM 8.9 and RM 7 can further enhance capacity.

Henry Luu advised that there will be ongoing analysis regarding CBD, including discussions with adjacent Landowners; discussions with the Operations Team to determine all options in moving water; and discussions with South of Delta Participants to develop additional detail with regard to demand schedules.

Agenda Item #6 – In-Progress Project Cost Estimate Follow-Up – Henry Luu

Henry Luu introduced this item and advised that there are value engineering design components that can now be incorporated into the current cost estimate, such as re-alignment of Huffmaster Road and elimination of the western bridge span of Sites-Lodoga Road. The cost estimate under discussion uses the TRR East option, so the TRR West cost savings are not yet realized in this current snapshot.

Pete Rude advised that the TRR Funks Conveyance cost estimating has decreased, as there are improved costs on steel pipe.

Jeff Herrin advised that the costs of the 1.3MAF and 1.5 MAF have moved a bit further apart than in the value planning estimate.

Howard Michael advised that the re-alignment of Huffmaster Road has resulted in a decreased road length of 4,000 Feet, and a decreased cost of ~$5M. This re-alignment took into consideration the input of the Committee to align the roadway more closely to the proposed shoreline.

The Sites-Lodoga Road alignment was analyzed, and revised. The roadway length increased by approximately 1,800 Feet, and was placed on more favorable terrain, resulting in a cost reduction of ~$12M. In the roadway alignment analysis, the Team worked to avoid creating any land remnants of less than 40 or 50 Acres.

The Sites-Lodoga Road Causeway was re-designed to eliminate the westerly portion of the bridge, resulting in a cost reduction of ~$13M. The Engineering Team has coordinated with the Environmental Team to evaluate the algal bloom considerations, and it has been determined that the elimination of this span of the bridge does not result in a fatal flaw.

Howard Michael advised that the County data for roadway construction was a good check to the engineering estimating of roadway cost.

Mike Forrest reported on the cost estimating with regard to the dams and advised that the future construction contractor will likely select quarries for material, and enter into agreement(s) with quarry operator(s), becoming responsible for the materials and process. A measurement of material quality will be performed by DSOD for the dam material.

For road aggregate base, there is no DSOD standard to meet.

Jeff Herrin advised that it is customary for the contractor to select quarries, not just based on price, but based upon production rate of a consistent supply, pursuant to construction needs. There are two types of material needs to be considered – rock fill / random fill: and sand and gravel. For rock fill / random fill, the nearest source is preferred to avoid hauling. A contractor may partner with a local Landowner to develop the quarry. On-site quarries are considered in the environmental document.

With regard to sand and gravel, such material is often delivered from a commercial quarry. AECOM has performed a cursory survey of commercial quarries in the area and requested information from them. Many quarries have not been responsive. The closest quarries are not necessarily the best fit for the project.

With regard to the potential benefit of using excess materials from the construction of the TRR facilities, Mike Forrest reported that there may be the opportunity for use in road prisms, or portions of the reservoir. With

regard to the cost comparison for foundation prep, the increased costs were mostly related to Saddle Dam 5.

Mike Forrest further advised that the double-handling of materials sometimes results from the need to pre-haul material, and place in a surge pile, for later use.

Mike Forrest advised that quarries are a significant unknown and will prove out with additional geotechnical exploration.

Supervisor Gary Evans advised the Project Team that if additional geotechnical exploration is needed, the Project Team should provide the information regarding exploration to him as soon as possible, as Supervisor Evans and the Real Estate Team need significant lead time to seek the land permissions that would be prerequisite to geotechnical explorations.

The Project Team advised that it would provide geotechnical needs information as soon as possible.

The Project Team further advised that value planning continues.

Agenda Item #8 – Action Items and Closing Comments – Supervisor Gary Evans

The Committee requested the Project Team to explore assigning value to the spoils of the proposed TRR West.

The Committee requested that any geotechnical exploration needs be provided as soon as possible.

The meeting was adjourned at 4:15pm.

Land Management Committee

July 9, 2021

Sites

Draft - Predecisional Working Document - For Discussion Purposes Only

Agenda

- Review Updated Mitigation Cost Estimate
- Section 106 Activities

Updated Mitigation Cost Estimate

Discussion Goals

- Current Planning Level cost estimate for resource mitigation
- Review resources covered by cost analysis
- Discuss approach, methods, and assumptions to develop cost
- Results – overall and by select resource categories

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Resources Covered

- Scope of analysis included the resources covered in 2016 technical memorandum (TM)
  - Aquatic resources
  - Sensitive natural communities and wetland & non-wetland waters resources
  - Terrestrial wildlife resources/wildlife habitat
  - Surface water quality
  - Agricultural resources
  - Cultural resources
  - Paleontological resources
  - Air quality

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Approach, Methods & Key Assumptions

- Cost developed in coordination with core mitigation team
- 2016 TM used as basis
- Review of current resource chapters & discussions with authors
- For terrestrial resources & land cover types
  - Outreach to experts in mitigation banking
  - Assumed 2:1 mitigation ratio & used median, per acre costs
  - Credit stacking (e.g., SWHA foraging habitat and rare plants stacked with annual grasslands)
- Cultural resources cost developed & reviewed by resource specialists
- Agricultural land cost based on preliminary outreach to Sites real estate team

Mitigation Cost Estimate

Resource	June 2021 Planning Level Cost in 2019 Dollars
Aquatic Resources	$56,000,000
Sensitive Natural Communities and Wetland & Non-Wetland Waters Resources	$333,412,500
Terrestrial Wildlife Resources/Wildlife Habitat	$109,215,500
Surface Water Quality	$200,000
Agriculture & Forestry	$46,059,000
Cultural & Paleontological Resources	$13,840,300
Air Quality	$3,750,000
Riverine-Based Species and Habitats (operations)	N/A*
Contingencies and Forward Escalation	N/A
Total	$562,477,300

* Operational mitigation costs are included in the above categories where applicable

Comparison to Value Planning Estimate

Resource	February 2020 Value Planning Estimate ($)	Current Planning Level Cost ($)	Difference
Aquatic Resources	$56,000,000	$56,000,000	$0
Sensitive Natural Communities and Wetland & Non-Wetland Waters Resources	$174,800,000	$333,412,500	$158,612,500
Terrestrial Wildlife Resources/Wildlife Habitat	$53,000,000	$109,215,500	$56,215,500
Surface Water Quality	$200,000	$200,000	$0
Agriculture & Forestry	$31,000,000	$46,059,000	$15,059,000
Cultural & Paleontological Resources	$35,000,000	$13,840,300	-$21,159,700
Air Quality	$200,000	$3,750,000	$3,550,000
Riverine-Based Species and Habitats (operations)	$150,000,000	N/A*	N/A
Contingencies and Forward Escalation	$40,000,000	N/A	N/A
Total	$540,000,000	$562,477,300	$22,477,300

* Operational mitigation costs are included in the above categories where applicable

Aquatic Resources

- Aquatics mitigation cost from 2016 TM used as a placeholder
  - Conservative estimate recognizing some uncertainty
- One specific project identified: Tidal Habitat Restoration for Longfin Smelt

Sensitive Natural Communities and Wetland & Non-Wetland Waters Resources

- Total cost estimated at $333M
- Unit cost based on median estimated cost for 1 acre of mitigation bank credit
- A 2:1 mitigation ratio was assumed for all affected land cover types
- Sensitive natural communities were mapped based on aerial imagery interpretation; on the ground surveys have not been performed
- When each parcel is available for surveys, initial land cover type mapping will be field-truthed
- Variation from Value Planning estimate (+ $159M) - Unit cost of current estimate used mitigation bank pricing

Terrestrial Wildlife Resources/Wildlife Habitat

- Credit stacking with sensitive natural communities, where appropriate
  - Example: SWHA foraging habitat and rare plants stacked with annual grasslands
- Vernal pool branchiopods
  - Cost assumes presence; assumed 1/3 of modeled habitat would be required as mitigation
  - Using this approach, vernal pool mitigation approximately $77M
  - Modeled habitat to be verified; surveyed to determine presence/absence
- CRLF
  - Cost assumes presence, aquatic mitigation approximately $16M
    - Funks Reservoir removed
  - Upland credits stacked with other cover types
- Variation from Value Planning estimate (+ $56M) - primary increase was inclusion of current mitigation bank cost for modeled vernal pool habitat

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Agricultural Lands

- RDEIR/SDEIS Mitigation Measures
  - Purchase Agricultural Conservation Easements to Preserve Regional Important Farmland
    - 304 acres in Colusa County, none in Glenn or Yolo Counties
  - Minimize impacts on Williamson Act-Contracted (WAC) Lands, Comply with Government Code Sections 51290–51293, and Coordinate with Landowners and Agricultural Operators
    - Considers land under WAC to be permanently disturbed, remnant parcels below County thresholds, and WAC contracts rescinded
- Variation from Value Planning estimate (+ $15M) - current estimate reflects increases in real estate cost

Next Steps

- Continue to work with technical team to refine effects and assumptions
- Continue working with design teams to avoid and minimize effects through design refinements
- Work with agencies to solidify mitigation ratios
  - Ensure proper consideration for landscape-level mitigation is reflected in our ratios
- Conduct surveys when land access is granted to refine impacts and firm up costs

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Section 106 Activities

Overview

- Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effects of their undertakings on historic properties (i.e., cultural resources listed in or eligible for listing in the National Register of Historic Places [NRHP])
- Reclamation has agreed to be the lead federal agency responsible for Section 106 compliance for the Project
  - USACE also has Section 106 compliance responsibilities but has tentatively agreed that Reclamation can serve as the lead federal agency

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The Basics

- Basic Section 106 compliance steps:
  - INITIATE Section 106 and determine if it applies to a given project
  - IDENTIFY historic properties in the project area
  - ASSESS the effect of the project on identified historic properties
  - RESOLVE adverse effects to historic properties by exploring alternatives to avoid, minimize, or mitigate the effects
- Key Component: Section 106 requires consultation with consulting parties
  - Tribes, agencies, SHPO, the Advisory Council on Historic Preservation [ACHP], if they choose to participate, the Authority, and other interested parties

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Programmatic Agreement (PA) Development

- Project effects to historic properties cannot be readily determined
  - Large Project footprint
  - Private land without current access
  - Multiple alternatives, constructed in phases
- A Programmatic Agreement (PA) is the right mechanism to address these challenges
- Developed through consultation with the Section 106 consulting parties

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Programmatic Agreement (PA) Development (cont)

- PA will outline the procedures for identifying and considering historic properties that could be affected by the Project
- Authority will be an invited signatory to the PA and will be responsible for implementing much of the procedures and protocols outlined in the PA
- Activities conducted under the PA may include:
  - Preparation of a Programmatic Historic Properties Management Plan (PHPMP)
  - Cultural resources inventories and evaluations
  - Cultural resources excavations or other mitigation measures
  - Implementation of cemetery/burial plans for known cemeteries
  - Inadvertent Discovery Plan
  - Annual reporting on implementation

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Current Status

- Reclamation sent Section 106 consultation letters to Native American tribes on 4/5/21
- Reclamation sent Section 106 initiation package to the State Historic Preservation Officer (SHPO) on 6/3/21
- Reclamation is revising draft programmatic agreement (PA) provided by Authority
- Biweekly Section 106 work group meetings are ongoing with Reclamation and USACE staff

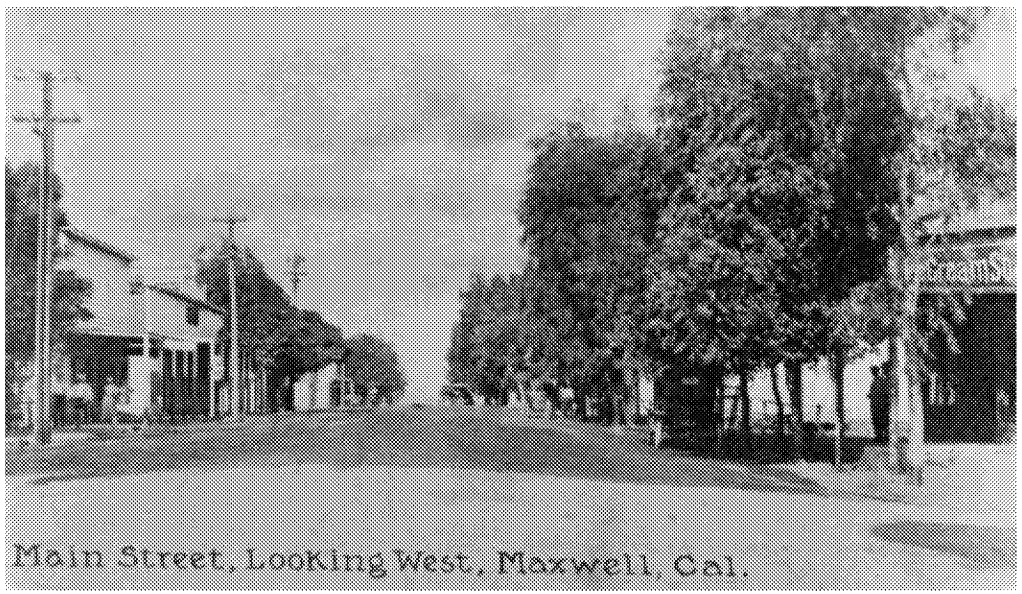
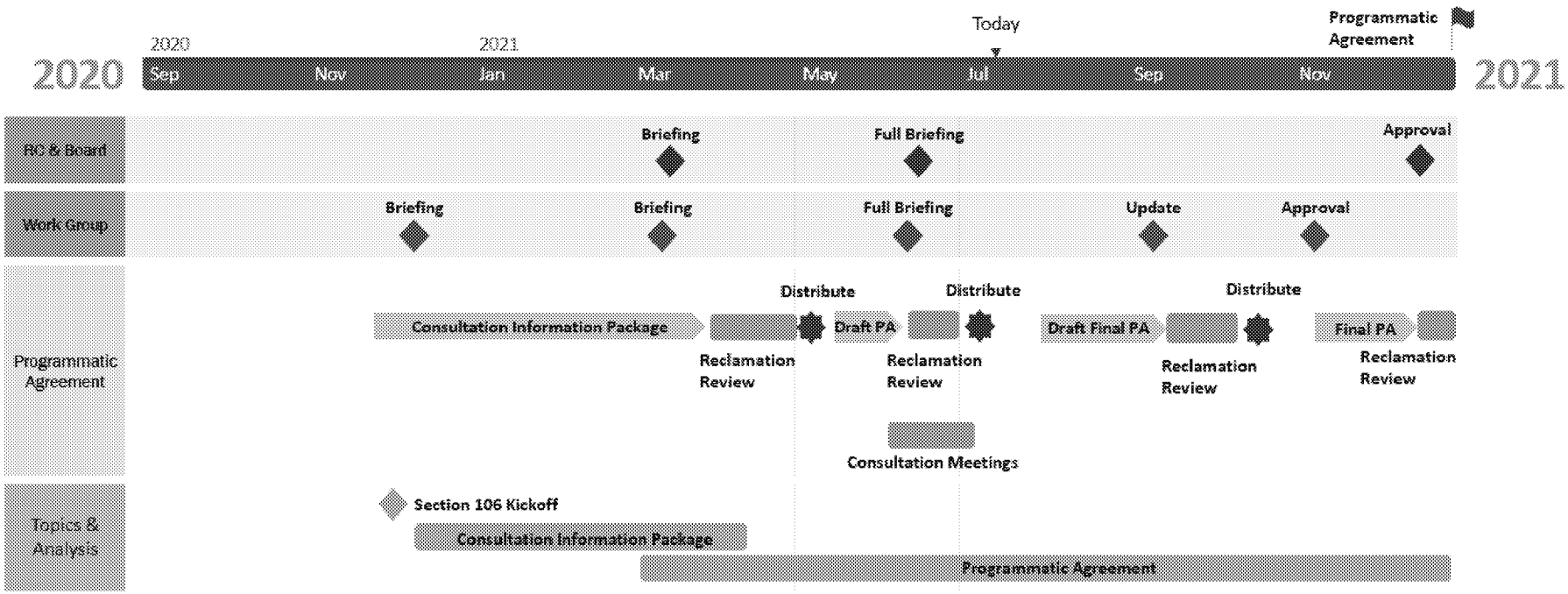


Image of Main Street, Maxwell, California, ca. 1927
Source: Sacramento Valley Museum.

Schedule – Section 106

Section 106 Consultation



Next Steps

- Reclamation to conduct additional outreach to tribes, SHPO, and other interested parties
- Reclamation to send draft PA to Section 106 consulting parties for review
- Following consultation on the draft PA, PA will become final and will be executed (will occur prior to the NEPA ROD)

Image of Sites Quarry, ca. 1897. Source: Sacramento Valley Museum.

Thank you!

From: Janis Offermann [janis@horizonh2o.com]
Sent: 7/8/2021 10:27:03 AM
To: tribaloffice@wiltonrancheria-nsn.gov
CC: Kevin Spesert [kspesert@sitesproject.org]; Alicia Forsythe [aforsythe@sitesproject.org]
Subject: Sites Reservoir Project - Notification of Proposed Project for the Purposes of CEQA Analysis
Attachments: 20210615_Outreach_Letter_Tarango_Wilton.pdf; 02-01 Posting RDEIR-SDEIS Project Description (1).pdf

Dear Honorable Chairperson Tarango,

I am writing on behalf of the Sites Project Authority as a follow-up to the attached letter mailed to you on June 15, 2021. The Authority welcomes your input on the Project and the Authority's evaluation of tribal cultural resources under CEQA. If you have any comments, please reach out to Kevin Spesert, Sites Project Authority External Affairs Manager, per his contact information listed below.

Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
Email: kspesert@sitesproject.org

Thank you for your time,

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

Sites

June 15, 2021

Jesus Tarango, Chairman
Wilton Rancheria
9728 Kent Street
Elk Grove, CA 95624

Subject: Notification of Proposed Project for the Purposes of CEQA Analysis

Dear Honorable Chairman Tarango:

The Sites Project Authority is preparing a Revised Draft Environmental Impact Report (RDEIR) for the proposed Sites Reservoir Project, which includes a new off-stream storage reservoir located in Colusa and Glenn counties, California, about 10 miles west of the town of Maxwell. The Authority published a Draft EIR for the Project in 2017. The Authority has since modified the Project, including revisions to the Project footprint, as depicted in the attached staff report on the Project description. For more detailed information regarding the Project, please see the preliminary draft Project description, which can be found at https://3hm5en24txyp2e4cxyxaklbs-wpengine.netdna-ssl.com/wp-content/uploads/2021/02/Sites_Preliminary-Project-Description_20210219.pdf.

The Authority has identified the Wilton Rancheria as potentially having an interest in this Project and its operations, as revised. The Authority welcomes your input on the Project and the Authority's evaluation of tribal cultural resources under CEQA. If you would like to discuss the Project with us, we respectfully request that you respond, in writing, within 30 days to our designated contact person below, and that you provide a designated contact person for the discussions:

Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
Email: kspesert@sitesproject.org

Sincerely,

Fritz Durst

Fritz Durst, Chair

Sites

Topic: **Reservoir Committee Meeting Agenda Item 2.1** **2021 January 21**

Subject: **Posting RDEIR/SDEIS Project Description**

Requested Action:

Approve release of the RDEIR/SDEIS Project Description (with Operations) to regulatory agencies and interested parties, including posting on the Authority's website, to improve Project transparency and facilitate more detailed Project discussions.

Detailed Description/Background:

At the Reservoir Committee and Board meetings in June, September and December 2020, staff provided an overview of the alternatives under consideration for the Revised Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS). Staff has continued to refine the alternatives and, with the consulting team, is nearing completion of a draft of the RDEIR/SDEIS project description.

The project description comprises Chapter 2 of the RDEIR/SDEIS. The project description includes a summary overview of the alternatives screening and selection process, an overview of the action alternatives and the no action alternative along with a detailed description for each of the three action alternatives. Also included in the project description are best management practices and environmental commitments that would be implemented under all the alternatives.

The project description continues to include three alternatives as discussed with the Reservoir Committee and Board in prior meetings. Table 1 provides a high-level summary of the three alternatives. Attachment A provides a more expansive summary table of the alternatives. The key changes to the alternatives that have been made since the previous presentations to the Reservoir Committee and Board are as follows:

- Hydropower – All alternatives include power generation incidental upon release up to 40 megawatts at Funks Reservoir and up to 40 megawatts at the Terminal Regulating Reservoir. Staff has conferred with staff at the Federal Energy Regulatory Commission (FERC) and believes that incidental power generation at these two separate facilities would qualify for separate FERC exemptions. With this generation capacity built into the Project, power consumption for Project operations will be partially self-generated renewable energy. It is expected that the remaining operating power needs will be met with renewable sources to ensure no net increase in greenhouse gas emissions from the operations of the Project.

- Regulatory Required Emergency Drawdown and Release Flows, Alternative 2 – Refinements to emergency drawdown and release locations have been made to Alternative 2. Emergency releases under this alternative would occur at the Inlet/Outlet Works, Sites Dam, and Saddle Dam 8B into Hunters Creek watershed. On net the frequent flood control benefits far outweigh the very low risk of infrequent, if ever, emergency releases. To improve understanding of the risk and the potential scale of these rare emergency events, an inundation review encompassing the potential release areas will be conducted.

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- Stored water Release Location, Alternative 3 – The release location for Alternative 3 will be the Colusa Basin Drain as it was determined that the Colusa Basin Drain likely has sufficient capacity to handle the flows.

- Diversion Criteria and More Detailed Operations Criteria – Diversion criteria were refined, and more detailed operations criteria were added to all the alternatives. The team conducted an extensive analysis of different possible diversion criteria, including an extensive review of the current scientific literature. Through these efforts, the diversion criteria have been shifted upstream into the Sacramento River to allow for practical operations at the diversion locations. Additional pulse protections to protect migrating juvenile salmonids have also been added. While the species effects analysis and modeling is being completed in January and February, the team believes that the revised diversion criteria are more protective of migrating juvenile salmonids throughout the Sacramento River and Delta and also result in little changes in Sacramento River flows in downstream locations, such as Freeport, and little changes to Delta flows, including net Delta outflow index and Delta salinity. The team will be sharing the outcomes of the species effects analyses in the coming months.

Table 1. Summary of the Alternatives In the RDEIR/SDEIS Project Description

Facilities / Operations	Alternative 1	Alternative 2	Alternative 3
Reservoir Size	1.5 MAF	1.3 MAF	1.5 MAF
Hydropower	Incidental upon release	Same as Alt 1	Same as Alt 1
Diversion Locations	Red Bluff Pumping Plant and Hamilton City	Same as Alt 1	Same as Alt 1
Conveyance Release / Dunnigan Release	1,000 cubic feet per second (cfs) into new Dunnigan Pipeline to Colusa Basin Drain	1,000 cfs into new Dunnigan Pipeline to Sacramento River. Partial release into the Colusa Basin Drain	Same as Alt 1
Reclamation Involvement	1. Funding Partner 2. Operational Exchanges a. Within Year Exchanges b. Real-time Exchanges	Operational Exchanges a. Within Year Exchanges b. Real-time Exchanges	Same as Alt 1, Funding Partner up to 25% investment
DWR Involvement	Operational Exchanges with Oroville and use of SWP facilities South-of-Delta	Same as Alt 1	Same as Alt 1
Route to West Side of Reservoir	Bridge across reservoir	Paved road around southern end of reservoir	Same as Alt 1

The project description identifies Alternative 1 as the Authority's proposed project based on the alternative meeting the intent and the goals of the Value Planning effort, its close alignment with VP-7, and its ability to meet the project objectives.

Staff recommends posting the RDEIR/SDEIS project description on the Authority's website. The project description would be posted for informational purposes to aide in the discussion of permitting approaches with regulatory agencies and in discussions with non-governmental organizations. It is important to note that the Authority is not taking public comments nor responding to comments on the project description and a preamble to the project description would make this clear to the reader. Making the project description available to the public increases transparency and provides a common foundation for regulatory agencies, non-governmental agencies, and other interested stakeholders to understand the project components. Refinements would continue to be made to the project description after posting on the Authority's website until the release of the RDEIR/SDEIS and any significant or material changes would be brought back to the Reservoir Committee and Authority Board for consideration before the change is made.

Prior Action:

December 18, 2020: Reviewed and commented on option to add Alternative 3 with Reclamation at 25% investment to EIR/EIS project description.

September 17, 2020: Approved to designate Alternative 1, based on VP-7 of the Sites Project Value Planning Alternatives Appraisal Report (Value Planning Report), as the Authority's preferred project for the purposes of the RDEIR analysis and for the purposes of the Biological Assessment and State Incidental Take Permit applications.

April 22, 2020: The Authority directed staff to revise and recirculate a Draft EIR to analyze the environmental effects of the options identified in the Final Sites Project Value Planning Alternatives Appraisal Report dated April 2020, including VP7.

April 22, 2020: The Authority accepted: the final report titled "Sites Project Value Planning Alternatives Appraisal Report, dated April 13, 2020" and the recommendations presented within, and a recommendation to the Sites Project Authority to approve the final report titled "Sites Project Value Planning Alternatives Appraisal Report, April 13, 2020" and the recommendations presented within.

February 26, 2020: The Authority approved a recommendation to re-start efforts on the EIR for the Sites Reservoir Project and assess the most appropriate approach for completing the EIR pursuant to the California Environmental Quality Act.

July 20, 2017: The Reservoir Committee approved a recommendation to forward the Draft EIR/EIS to the Authority Board for its consideration to formally receive and adopt the document for inclusion in the Authority's Water Storage Investment Project application.

July 31, 2017: The Authority approved the release of the Draft EIR for public and agency review, in connection with the Authority's application to the California Water Commission by August 14, 2017. The document was published as joint Draft EIR/EIS by the Authority under the California Environmental Quality Act and Reclamation under the National Environmental Policy Act.

December 19, 2016: The Authority approved release of a Supplemental Notice of Preparation (released February 2, 2017) to transfer the California Environmental Quality Act lead agency status from the Department of Water Resources to the Sites Project Authority. Public scoping meetings were conducted on February 14 and 15, 2017.

Fiscal Impact/Funding Source:

Staff reported in December that sufficient funds to incorporate Alternative 3 into the RDEIR/SDEIS were included in the Amendment 2 Work Plan (Budget), which was approved by the Authority at its August 26, 2020 Board meeting. Since that time, staff has become aware of additional fisheries analysis and document formatting needs that will be necessary to incorporate Alternative 3 into the RDEIR/SDEIS. Staff is working with ICF to understand these potential costs and will determine how to incorporate these costs into the Amendment 2

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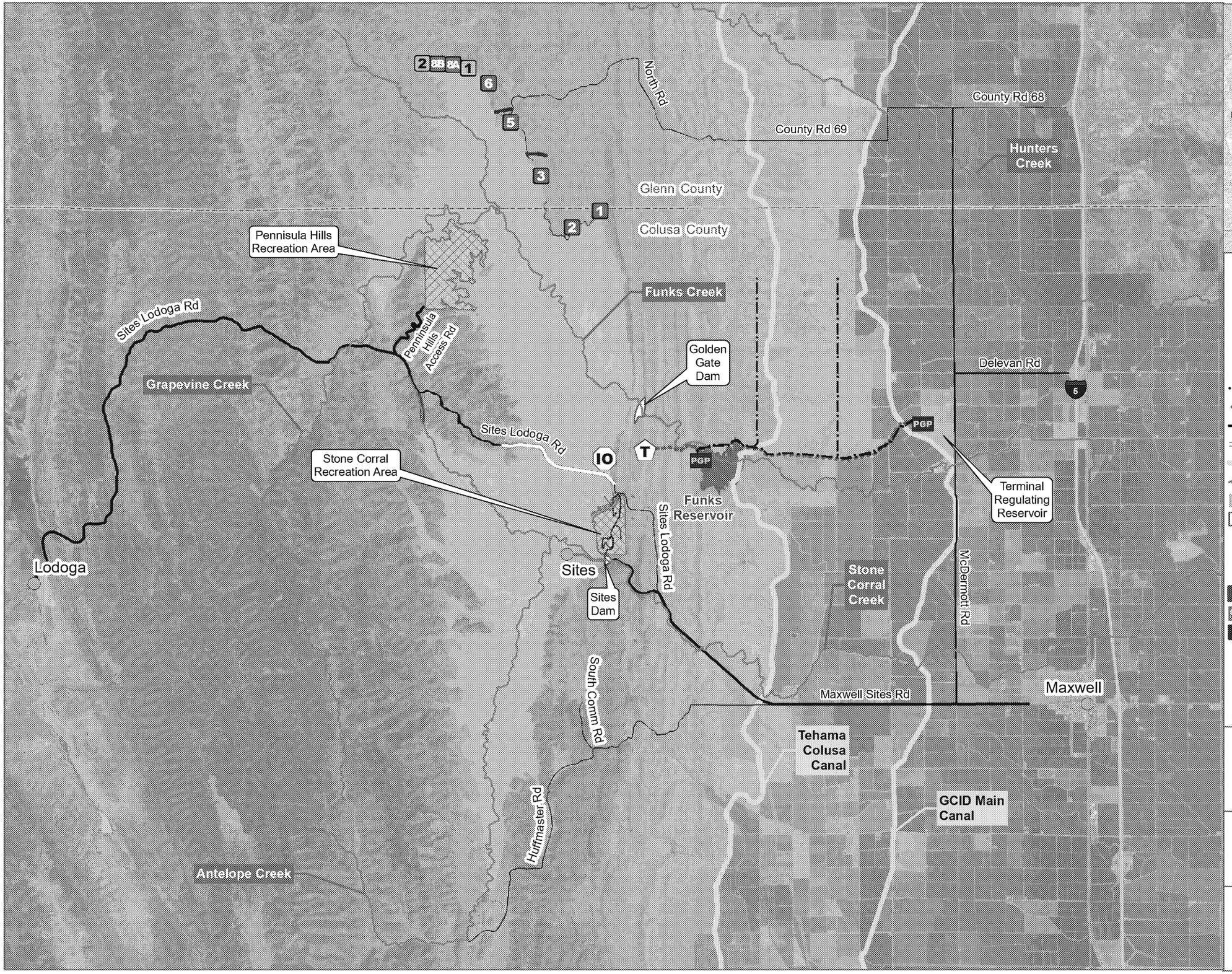
Costs to complete and circulate the Final EIR/EIS will be considered in a future Work Plan.

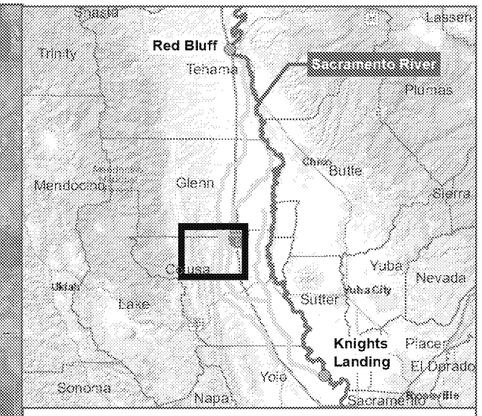
Staff Contact:

Ali Forsythe

Attachments:

Attachment A – Sites Reservoir Project, Revised Draft EIR/Supplemental Draft EIS Project Alternatives





- City\Town
- IO Inlet\Outlet Tower
- T Transition Manifold
- PGP Pump Generating Plant
- Transmission Line
- Underground Pipeline (total of 4)
- Road
- Bridge
- Canal
- Creek\Slough
- Inundation Area (1.5 MAF)
- Main Dam (total of 2)
- 1 Saddle Dikes (total of 2)
- 1 Saddle Dams (total of 7; 8B includes spillway)
- Day Use Boat Ramp
- Recreation Areas
- Emergency Release Structure (total of 2)

DATA SOURCES: Inlet/Outlet Tower and PGP - ICF, 2020; City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canal, River and Creek/Slough (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020; Counties - CALFIRE-FRAP, 2019.

DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 12/22/2020

FIGURE 1 (DRAFT)
ALTERNATIVES 1 AND 3
REGULATING RESERVOIRS AND
CONVEYANCE AND
SITES RESERVOIR FACILITIES

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Sites

PATH: \\PDCCITRDSGIS1\PROJECTS_1\SITES_PA\00528_20\FIGURES\DOC\EIREIS\1_DEIR\01_ADEIR\CHAPTER2\FIG2-1F_ALT1_REGRESERVOIRS_CONV.MXD - USER: 24991 - DATE: 12/22/2020

Tehama Colusa Canal

Tehama Colusa Intake

Colusa Basin Drain

Colusa Basin Drain Outlet

Tehama Colusa Canal

Ritchie Brothers Auction Yard

Tehama Colusa Intake

Bird Creek

Colusa Basin Drain

Colusa Basin Drain Outlet

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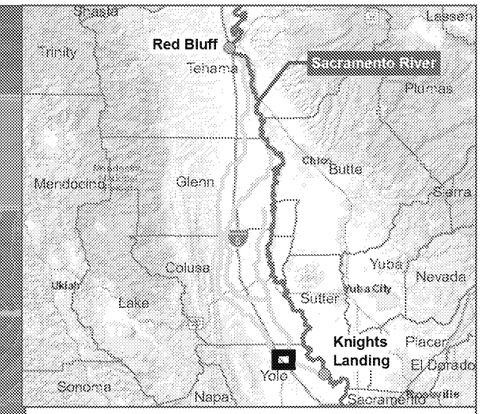

LEGEND

- City\Town
- Bird Creek
- Dunnigan Underground Pipeline

DATA SOURCES: City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.

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MAP DATE: 12/22/2020

FIGURE 2 (DRAFT)

ALTERNATIVES 1 and 3
CONVEYANCE TO COLUSA BASIN DRAIN COMPONENTS

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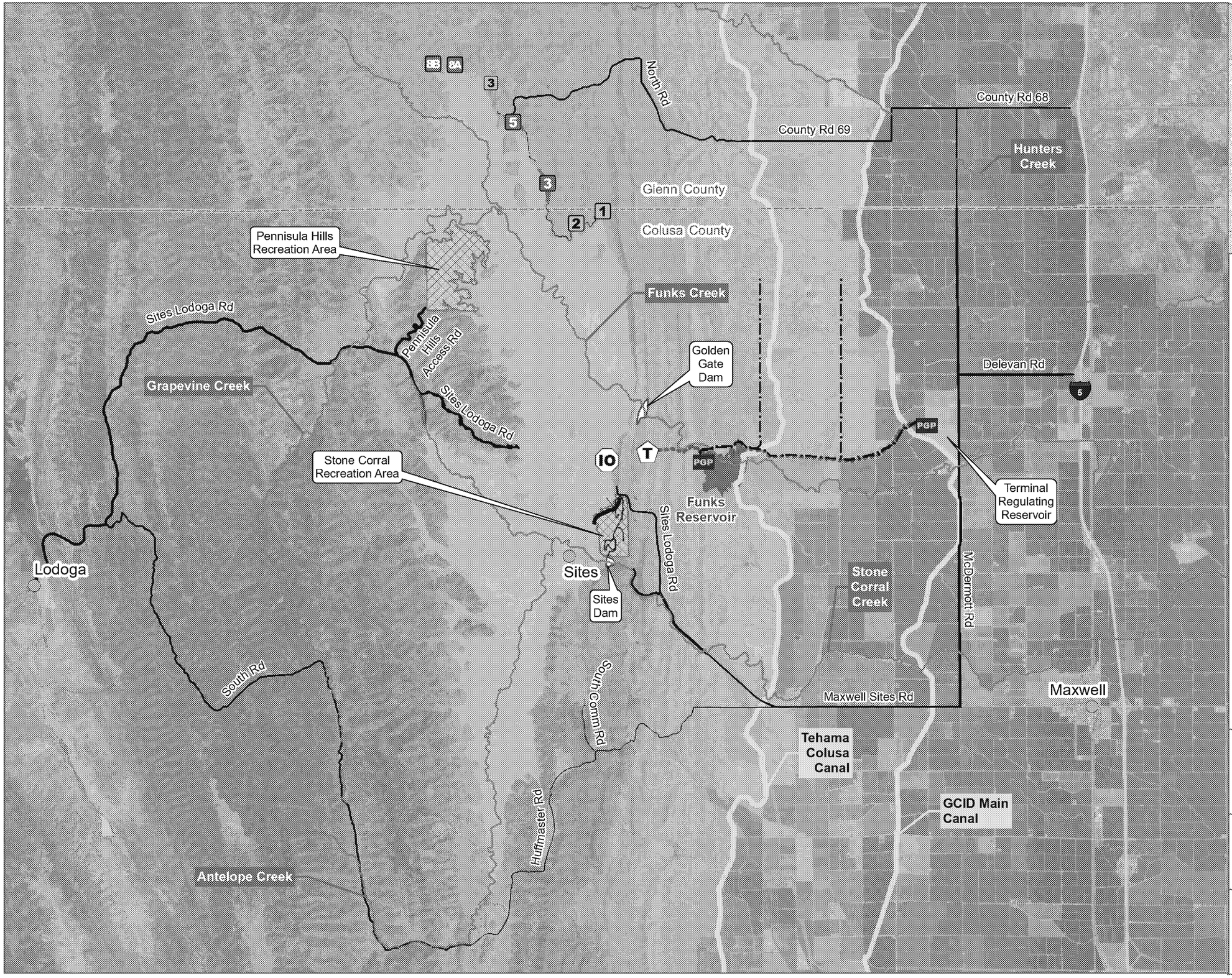

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MAP DATE: 12/23/2020

FIGURE 3 (DRAFT)
ALTERNATIVE 2
REGULATING RESERVOIRS AND CONVEYANCE AND SITES RESERVOIR FACILITIES

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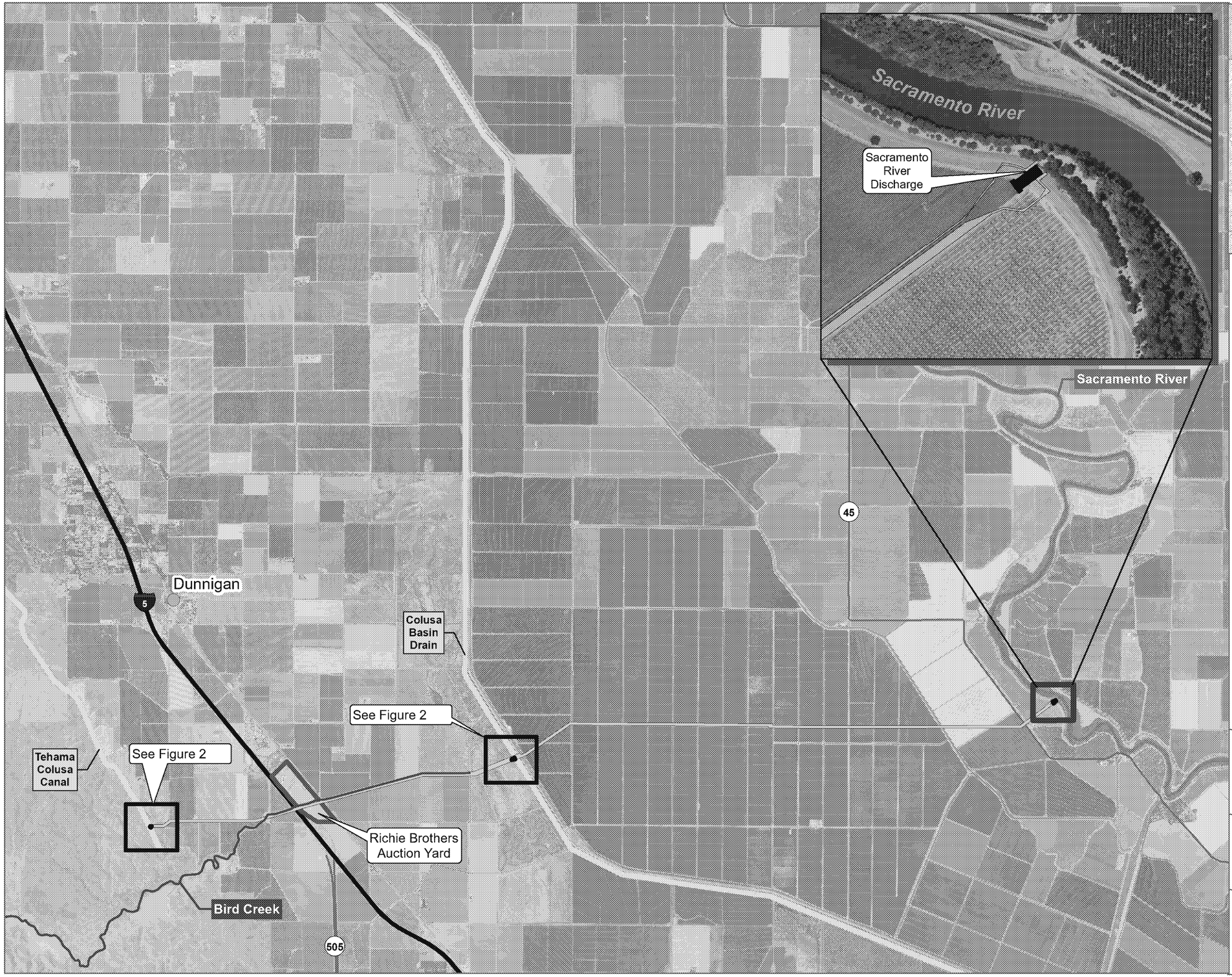

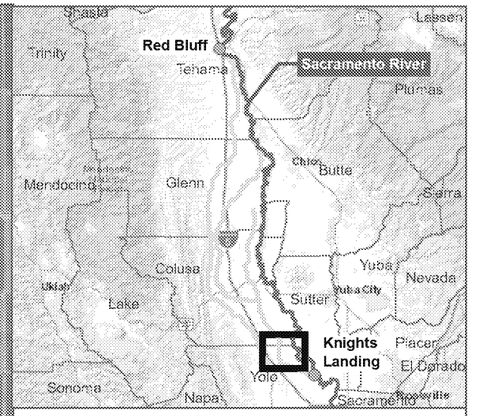

LEGEND

- City\Town
- Bird Creek
- Dunnigan Underground Pipeline

DATA SOURCES: City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.

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MAP DATE: 12/22/2020

FIGURE 4 (DRAFT)

ALTERNATIVE 2
CONVEYANCE TO SACRAMENTO
RIVER COMPONENTS

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From: Janis Offermann [janis@horizonh2o.com]
Sent: 7/8/2021 10:29:15 AM
To: bguth@auburnrancheria.com
CC: Kevin Spesert [kspesert@sitesproject.org]; Alicia Forsythe [aforsythe@sitesproject.org]
Subject: Sites Reservoir Project - Notification of Proposed Project for the Purposes of CEQA Analysis
Attachments: 02-01 Posting RDEIR-SDEIS Project Description (1).pdf; 20210615_Outreach_Letter_Whitehouse_UAIC.pdf

Dear Honorable Chairperson Whitehouse,

I am writing on behalf of the Sites Project Authority as a follow-up to the attached letter mailed to you on June 15, 2021. The Authority welcomes your input on the Project and the Authority's evaluation of tribal cultural resources under CEQA. If you have any comments, please reach out to Kevin Spesert, Sites Project Authority External Affairs Manager, per his contact information listed below.

Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
Email: kspesert@sitesproject.org

Thank you for your time,

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

Sites

Topic: **Reservoir Committee Meeting Agenda Item 2.1** **2021 January 21**

Subject: **Posting RDEIR/SDEIS Project Description**

Requested Action:

Approve release of the RDEIR/SDEIS Project Description (with Operations) to regulatory agencies and interested parties, including posting on the Authority's website, to improve Project transparency and facilitate more detailed Project discussions.

Detailed Description/Background:

At the Reservoir Committee and Board meetings in June, September and December 2020, staff provided an overview of the alternatives under consideration for the Revised Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS). Staff has continued to refine the alternatives and, with the consulting team, is nearing completion of a draft of the RDEIR/SDEIS project description.

The project description comprises Chapter 2 of the RDEIR/SDEIS. The project description includes a summary overview of the alternatives screening and selection process, an overview of the action alternatives and the no action alternative along with a detailed description for each of the three action alternatives. Also included in the project description are best management practices and environmental commitments that would be implemented under all the alternatives.

The project description continues to include three alternatives as discussed with the Reservoir Committee and Board in prior meetings. Table 1 provides a high-level summary of the three alternatives. Attachment A provides a more expansive summary table of the alternatives. The key changes to the alternatives that have been made since the previous presentations to the Reservoir Committee and Board are as follows:

- Hydropower – All alternatives include power generation incidental upon release up to 40 megawatts at Funks Reservoir and up to 40 megawatts at the Terminal Regulating Reservoir. Staff has conferred with staff at the Federal Energy Regulatory Commission (FERC) and believes that incidental power generation at these two separate facilities would qualify for separate FERC exemptions. With this generation capacity built into the Project, power consumption for Project operations will be partially self-generated renewable energy. It is expected that the remaining operating power needs will be met with renewable sources to ensure no net increase in greenhouse gas emissions from the operations of the Project.

- Regulatory Required Emergency Drawdown and Release Flows, Alternative 2 – Refinements to emergency drawdown and release locations have been made to Alternative 2. Emergency releases under this alternative would occur at the Inlet/Outlet Works, Sites Dam, and Saddle Dam 8B into Hunters Creek watershed. On net the frequent flood control benefits far outweigh the very low risk of infrequent, if ever, emergency releases. To improve understanding of the risk and the potential scale of these rare emergency events, an inundation review encompassing the potential release areas will be conducted.

Draft_0011189

- Stored water Release Location, Alternative 3 – The release location for Alternative 3 will be the Colusa Basin Drain as it was determined that the Colusa Basin Drain likely has sufficient capacity to handle the flows.

- Diversion Criteria and More Detailed Operations Criteria – Diversion criteria were refined, and more detailed operations criteria were added to all the alternatives. The team conducted an extensive analysis of different possible diversion criteria, including an extensive review of the current scientific literature. Through these efforts, the diversion criteria have been shifted upstream into the Sacramento River to allow for practical operations at the diversion locations. Additional pulse protections to protect migrating juvenile salmonids have also been added. While the species effects analysis and modeling is being completed in January and February, the team believes that the revised diversion criteria are more protective of migrating juvenile salmonids throughout the Sacramento River and Delta and also result in little changes in Sacramento River flows in downstream locations, such as Freeport, and little changes to Delta flows, including net Delta outflow index and Delta salinity. The team will be sharing the outcomes of the species effects analyses in the coming months.

Table 1. Summary of the Alternatives In the RDEIR/SDEIS Project Description

Facilities / Operations	Alternative 1	Alternative 2	Alternative 3
Reservoir Size	1.5 MAF	1.3 MAF	1.5 MAF
Hydropower	Incidental upon release	Same as Alt 1	Same as Alt 1
Diversion Locations	Red Bluff Pumping Plant and Hamilton City	Same as Alt 1	Same as Alt 1
Conveyance Release / Dunnigan Release	1,000 cubic feet per second (cfs) into new Dunnigan Pipeline to Colusa Basin Drain	1,000 cfs into new Dunnigan Pipeline to Sacramento River. Partial release into the Colusa Basin Drain	Same as Alt 1
Reclamation Involvement	1. Funding Partner 2. Operational Exchanges a. Within Year Exchanges b. Real-time Exchanges	Operational Exchanges a. Within Year Exchanges b. Real-time Exchanges	Same as Alt 1, Funding Partner up to 25% investment
DWR Involvement	Operational Exchanges with Oroville and use of SWP facilities South-of-Delta	Same as Alt 1	Same as Alt 1
Route to West Side of Reservoir	Bridge across reservoir	Paved road around southern end of reservoir	Same as Alt 1

The project description identifies Alternative 1 as the Authority's proposed project based on the alternative meeting the intent and the goals of the Value Planning effort, its close alignment with VP-7, and its ability to meet the project objectives.

Staff recommends posting the RDEIR/SDEIS project description on the Authority's website. The project description would be posted for informational purposes to aide in the discussion of permitting approaches with regulatory agencies and in discussions with non-governmental organizations. It is important to note that the Authority is not taking public comments nor responding to comments on the project description and a preamble to the project description would make this clear to the reader. Making the project description available to the public increases transparency and provides a common foundation for regulatory agencies, non-governmental agencies, and other interested stakeholders to understand the project components. Refinements would continue to be made to the project description after posting on the Authority's website until the release of the RDEIR/SDEIS and any significant or material changes would be brought back to the Reservoir Committee and Authority Board for consideration before the change is made.

Prior Action:

December 18, 2020: Reviewed and commented on option to add Alternative 3 with Reclamation at 25% investment to EIR/EIS project description.

September 17, 2020: Approved to designate Alternative 1, based on VP-7 of the Sites Project Value Planning Alternatives Appraisal Report (Value Planning Report), as the Authority's preferred project for the purposes of the RDEIR analysis and for the purposes of the Biological Assessment and State Incidental Take Permit applications.

April 22, 2020: The Authority directed staff to revise and recirculate a Draft EIR to analyze the environmental effects of the options identified in the Final Sites Project Value Planning Alternatives Appraisal Report dated April 2020, including VP7.

April 22, 2020: The Authority accepted: the final report titled "Sites Project Value Planning Alternatives Appraisal Report, dated April 13, 2020" and the recommendations presented within, and a recommendation to the Sites Project Authority to approve the final report titled "Sites Project Value Planning Alternatives Appraisal Report, April 13, 2020" and the recommendations presented within.

February 26, 2020: The Authority approved a recommendation to re-start efforts on the EIR for the Sites Reservoir Project and assess the most appropriate approach for completing the EIR pursuant to the California Environmental Quality Act.

July 20, 2017: The Reservoir Committee approved a recommendation to forward the Draft EIR/EIS to the Authority Board for its consideration to formally receive and adopt the document for inclusion in the Authority's Water Storage Investment Project application.

July 31, 2017: The Authority approved the release of the Draft EIR for public and agency review, in connection with the Authority's application to the California Water Commission by August 14, 2017. The document was published as joint Draft EIR/EIS by the Authority under the California Environmental Quality Act and Reclamation under the National Environmental Policy Act.

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Work Plan within existing revenue sources. Staff is also working with Reclamation to include these costs in an amendment to the existing Financial Assistance Agreement that will incorporate a portion of the $13.7 million Federal Appropriation signed into law last month. The February 2021 update to the Reservoir Committee and Authority Board on the Amendment 2 Work Plan (Budget) will reflect these changes and these added costs will not impact the second cash call amount to Reservoir Committee Members.

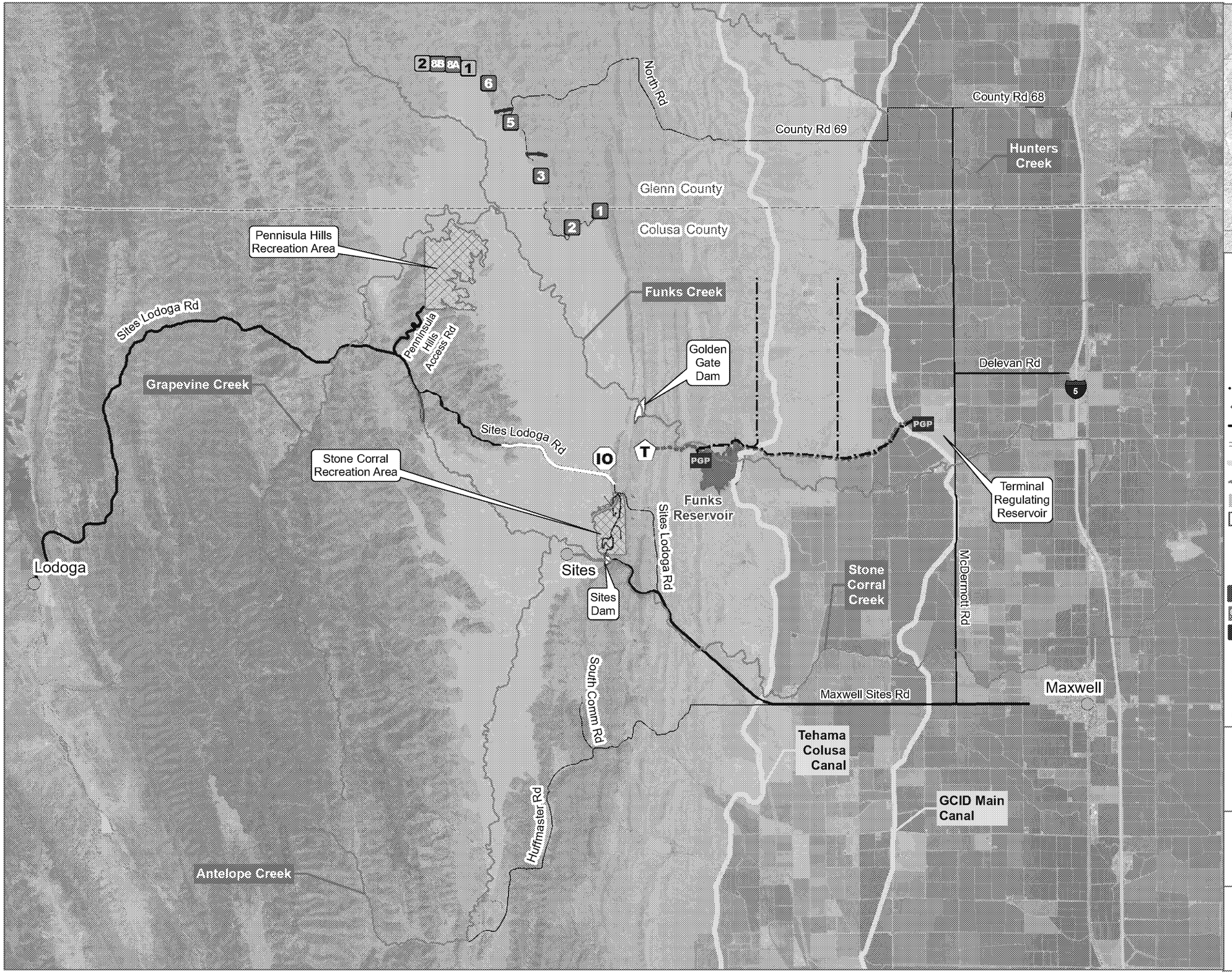
Costs to complete and circulate the Final EIR/EIS will be considered in a future Work Plan.

Staff Contact:

Ali Forsythe

Attachments:

Attachment A – Sites Reservoir Project, Revised Draft EIR/Supplemental Draft EIS Project Alternatives



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Tehama Colusa Canal

Tehama Colusa Intake

Colusa Basin Drain

Colusa Basin Drain Outlet

Tehama Colusa Canal

Ritchie Brothers Auction Yard

Tehama Colusa Intake

Bird Creek

Colusa Basin Drain

Colusa Basin Drain Outlet

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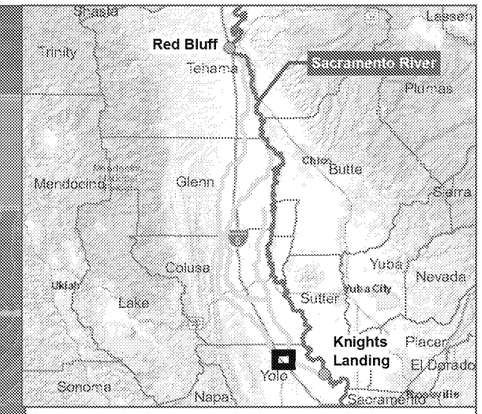

LEGEND

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DATA SOURCES: City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.

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FIGURE 2 (DRAFT)

ALTERNATIVES 1 and 3
CONVEYANCE TO COLUSA BASIN DRAIN COMPONENTS

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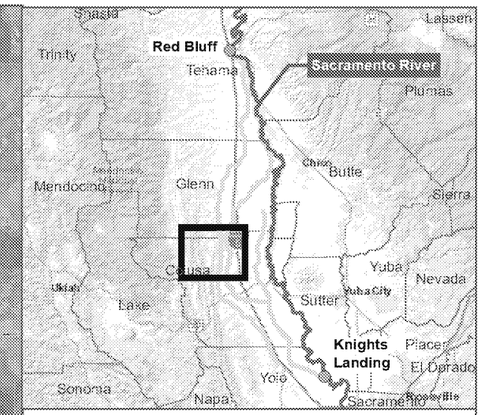

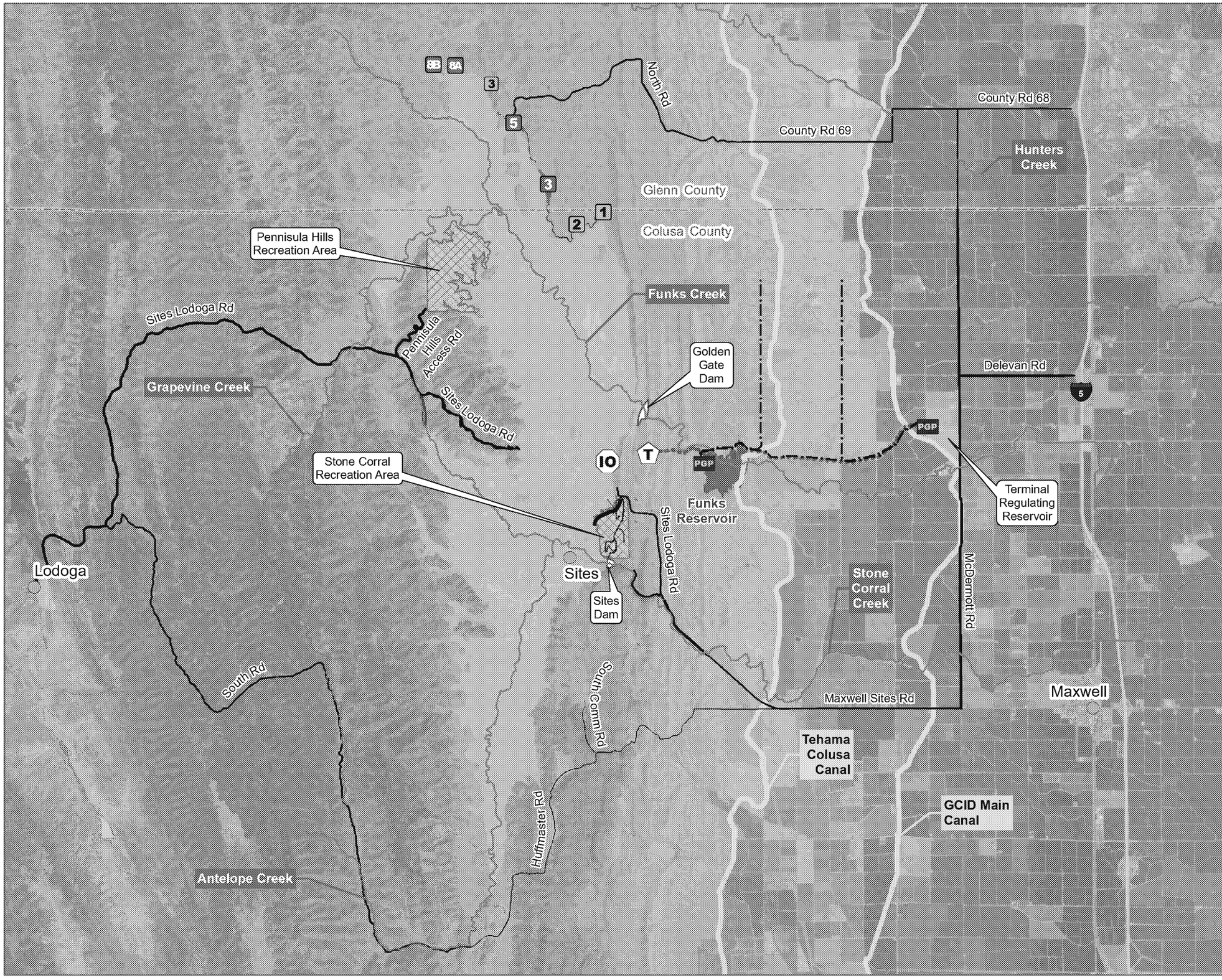

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FIGURE 3 (DRAFT)
ALTERNATIVE 2
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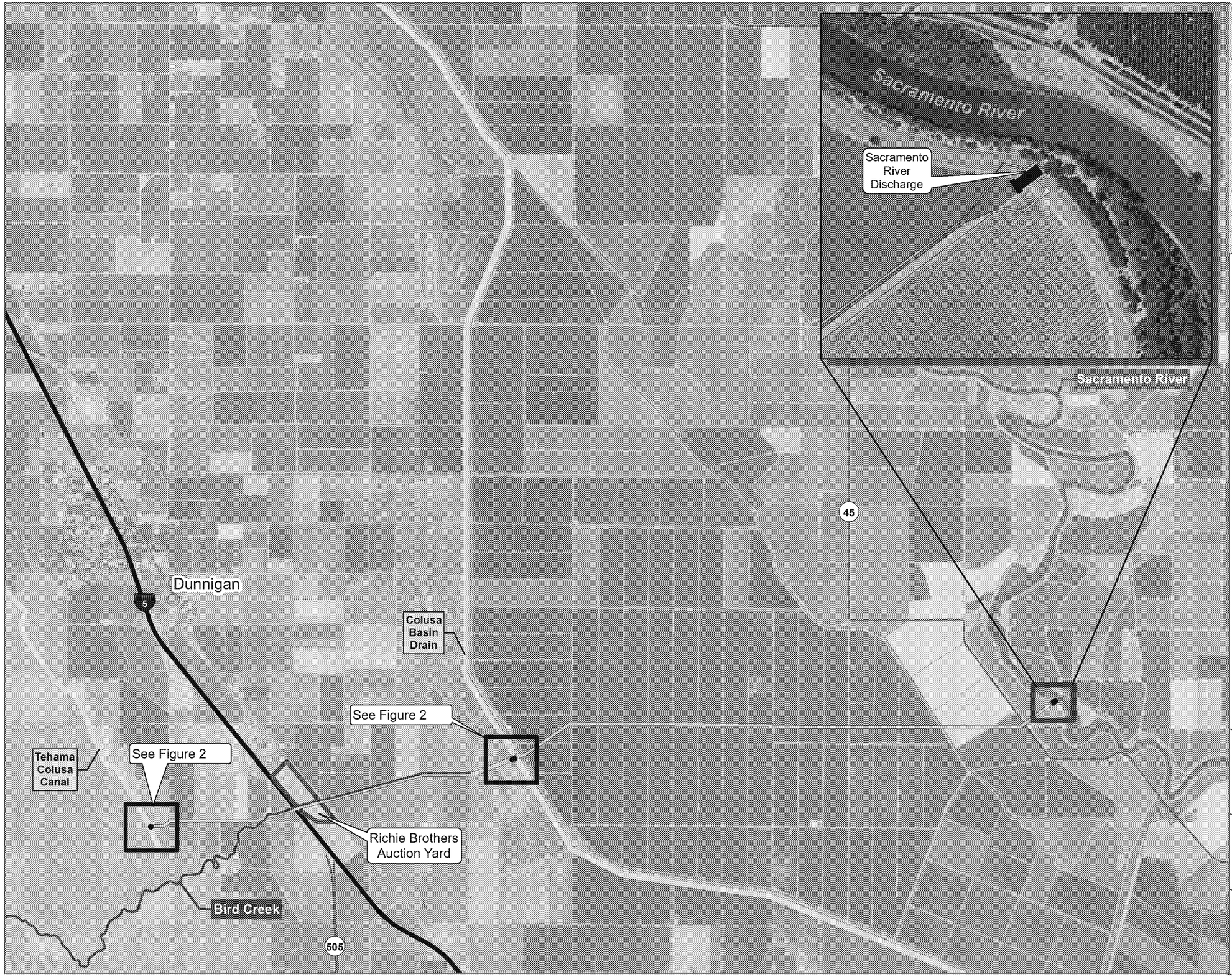

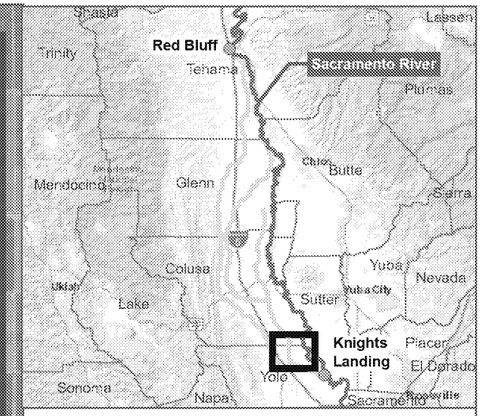

LEGEND

- City\Town
- Bird Creek
- Dunnigan Underground Pipeline

DATA SOURCES: City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.

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MAP DATE: 12/22/2020

FIGURE 4 (DRAFT)

ALTERNATIVE 2
CONVEYANCE TO SACRAMENTO
RIVER COMPONENTS

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June 15, 2021

Mr. Gene Whitehouse, Chairman
United Auburn Indian Community of the Auburn Rancheria
10720 Indian Hill Road
Auburn, CA 95603

Subject: Notification of Proposed Project for the Purposes of CEQA Analysis

Dear Honorable Chairman Whitehouse:

The Sites Project Authority is preparing a Revised Draft Environmental Impact Report (RDEIR) for the proposed Sites Reservoir Project, which includes a new off-stream storage reservoir located in Colusa and Glenn counties, California, about 10 miles west of the town of Maxwell. The Authority published a Draft EIR for the Project in 2017. The Authority has since modified the Project, including revisions to the Project footprint, as depicted in the attached staff report on the Project description. For more detailed information regarding the Project, please see the preliminary draft Project description, which can be found at https://3hm5en24txyp2e4cxyxaklbs-wpengine.netdna-ssl.com/wp-content/uploads/2021/02/Sites_Preliminary-Project-Description_20210219.pdf.

The Authority has identified the United Auburn Indian Community of the Auburn Rancheria as potentially having an interest in this Project and its operations, as revised. The Authority welcomes your input on the Project and the Authority's evaluation of tribal cultural resources under CEQA. If you would like to discuss the Project with us, we respectfully request that you respond, in writing, within 30 days to our designated contact person below, and that you provide a designated contact person for the discussions:

Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
Email: kspesert@sitesproject.org

Sincerely,

Fritz Durst

Fritz Durst, Chair

From: Janis Offermann [janis@horizonh2o.com]
Sent: 7/8/2021 10:31:38 AM
To: rcuellar@ssband.org
CC: Kevin Spesert [kspesert@sitesproject.org]; Alicia Forsythe [aforsythe@sitesproject.org]
Subject: Sites Reservoir Project - Notification of Proposed Project for the Purposes of CEQA Analysis
Attachments: 02-01 Posting RDEIR-SDEIS Project Description (1).pdf; 20210615_Outreach_Letter_Cuellar_Shingle_Springs.pdf

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I am writing on behalf of the Sites Project Authority as a follow-up to the attached letter mailed to you on June 15, 2021. The Authority welcomes your input on the Project and the Authority's evaluation of tribal cultural resources under CEQA. If you have any comments, please reach out to Kevin Spesert, Sites Project Authority External Affairs Manager, per his contact information listed below.

Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
Email: kspesert@sitesproject.org

Thank you for your time,

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

Sites

Topic: **Reservoir Committee Meeting Agenda Item 2.1** **2021 January 21**

Subject: **Posting RDEIR/SDEIS Project Description**

Requested Action:

Approve release of the RDEIR/SDEIS Project Description (with Operations) to regulatory agencies and interested parties, including posting on the Authority's website, to improve Project transparency and facilitate more detailed Project discussions.

Detailed Description/Background:

At the Reservoir Committee and Board meetings in June, September and December 2020, staff provided an overview of the alternatives under consideration for the Revised Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS). Staff has continued to refine the alternatives and, with the consulting team, is nearing completion of a draft of the RDEIR/SDEIS project description.

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Fiscal Impact/Funding Source:

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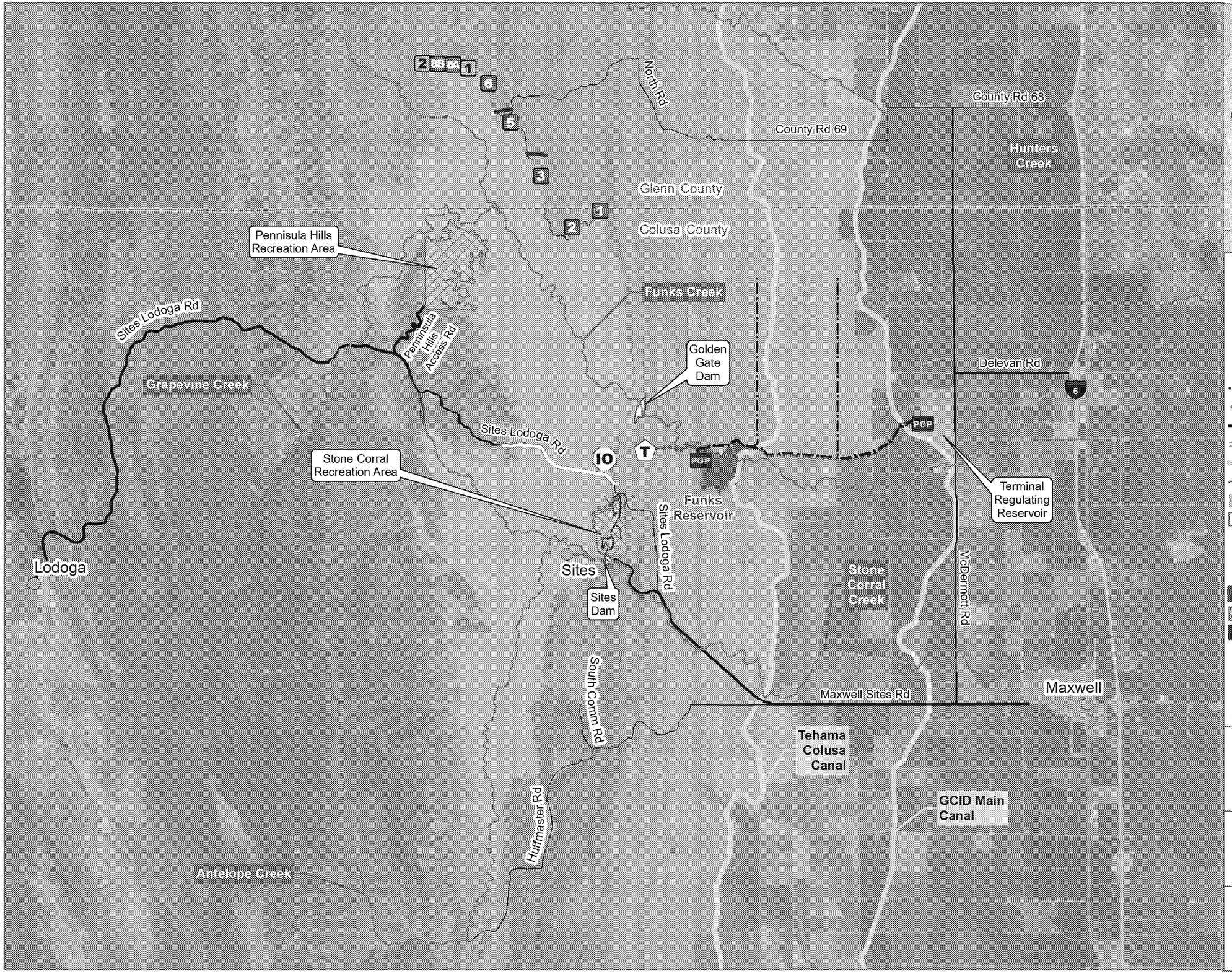
Costs to complete and circulate the Final EIR/EIS will be considered in a future Work Plan.

Staff Contact:

Ali Forsythe

Attachments:

Attachment A – Sites Reservoir Project, Revised Draft EIR/Supplemental Draft EIS Project Alternatives



DATA SOURCES: Inlet/Outlet Tower and PGP - ICF, 2020; City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canal, River and Creek/Slough (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020; Counties - CALFIRE-FRAP, 2019.

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MAP DATE: 12/22/2020

FIGURE 1 (DRAFT)
ALTERNATIVES 1 AND 3
REGULATING RESERVOIRS AND
CONVEYANCE AND
SITES RESERVOIR FACILITIES

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0 1 2
MILES

Sites

PATH: \\PDCCITRDSGIS1\PROJECTS_1\SITES_PA\00528_20\FIGURES\DOC\EIREIS\1_DEIR\01_ADEIR\CHAPTER2\FIG2-1F_ALT1_REGRESERVOIRS_CONV.MXD - USER: 24991 - DATE: 12/22/2020

Tehama Colusa Canal

Tehama Colusa Intake

Colusa Basin Drain

Colusa Basin Drain Outlet

Tehama Colusa Canal

Ritchie Brothers Auction Yard

Tehama Colusa Intake

Bird Creek

Colusa Basin Drain

Colusa Basin Drain Outlet

5

505

Red Bluff

Sacramento River

Shasta

Lassen

Trinity

Tehama

Plumas

Mendocino

Glenn

Butte

Sierra

Colusa

Yuba

Nevada

Lake

Sutter

Knights Landing

Placer

El Dorado

Yolo

Sonoma

Napa

Sacramento

LEGEND

City\Town

Bird Creek

Dunnigan Underground Pipeline

DATA SOURCES: City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.

DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 12/22/2020

FIGURE 2 (DRAFT)

ALTERNATIVES 1 and 3
CONVEYANCE TO COLUSA BASIN DRAIN COMPONENTS

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Sites

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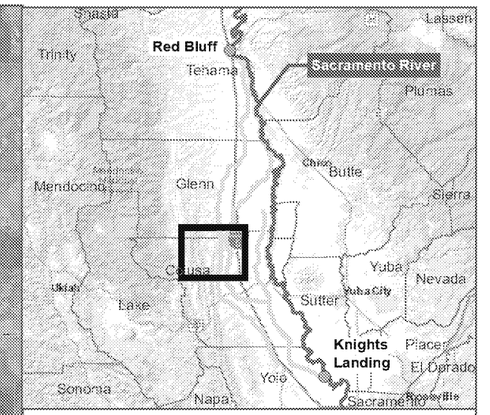

- City\Town
- IO Inlet\Outlet Tower
- T Transmission Manifold
- PGP Pump Generating Plant
- Transmission Line
- Underground Pipeline (total of 4)
- Roads
- Canal
- Creek\Slough
- Inundation Area (1.3 MAF)
- Main Dams
- 1 Saddle Dikes (total of 3)
- 1 Saddle Dams (total of 4; 8B includes spillway)
- Day Use Boat Ramp
- Recreation Areas

DATA SOURCES: Inlet/Outlet Tower and PGP - ICF, 2020; City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canal, River and Creek/Slough (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020; Counties - CALFIRE-FRAP, 2019.

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MAP DATE: 12/23/2020

FIGURE 3 (DRAFT)
ALTERNATIVE 2
REGULATING RESERVOIRS AND CONVEYANCE AND SITES RESERVOIR FACILITIES

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0 1 2
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Sites

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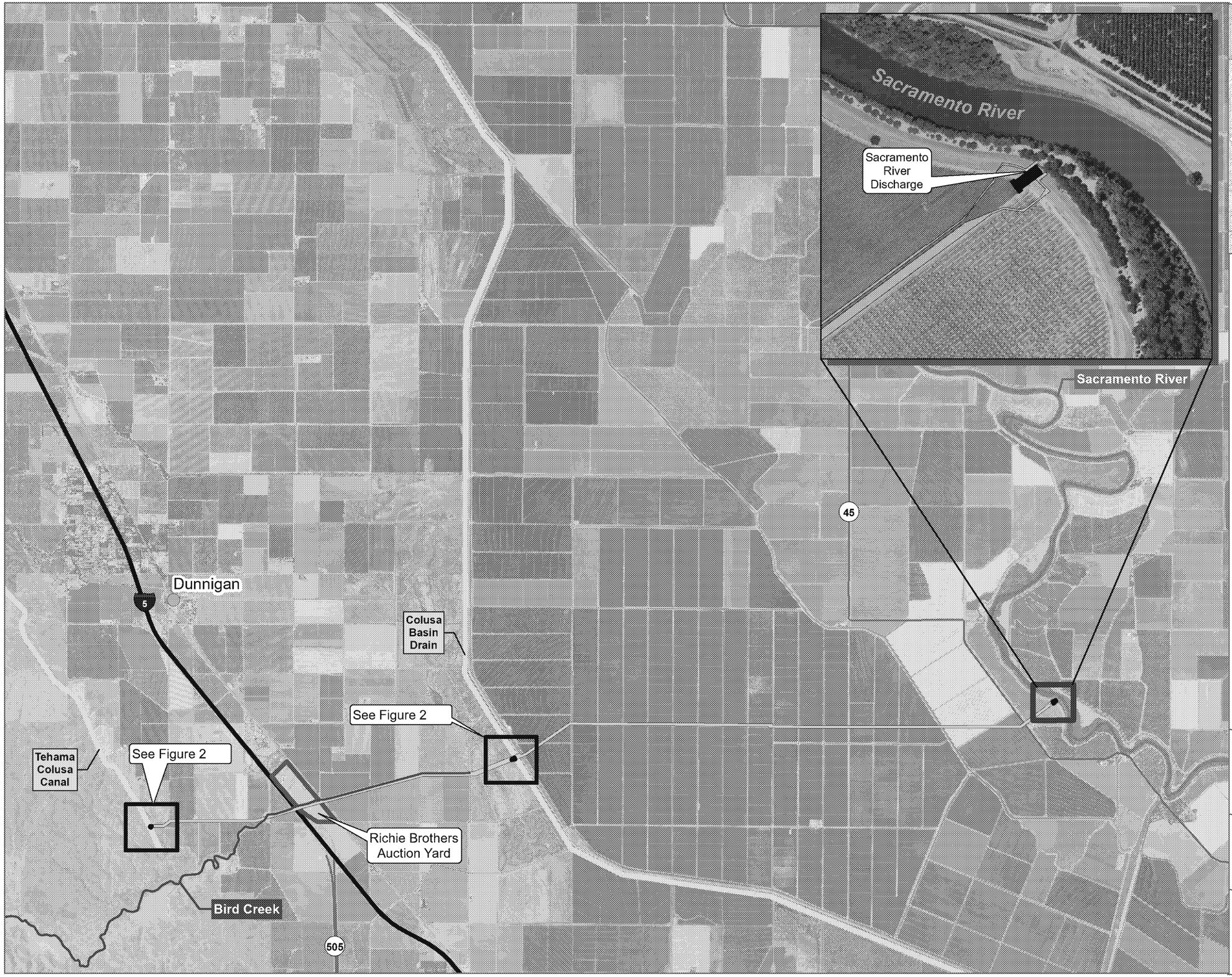

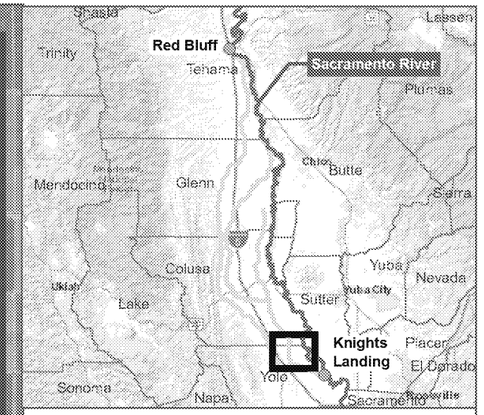

LEGEND

- City\Town
- Bird Creek
- Dunnigan Underground Pipeline

DATA SOURCES: City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.

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MAP DATE: 12/22/2020

FIGURE 4 (DRAFT)

ALTERNATIVE 2
CONVEYANCE TO SACRAMENTO
RIVER COMPONENTS

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MILES

Sites

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Sites

June 15, 2021

Mrs. Regina Cuellar, Chairwoman
Shingle Springs Band of Miwok Indians
P.O. Box 1340
Shingle Springs, CA 95682

Subject: Notification of Proposed Project for the Purposes of CEQA Analysis

Dear Honorable Chairwoman Cuellar:

The Sites Project Authority is preparing a Revised Draft Environmental Impact Report (RDEIR) for the proposed Sites Reservoir Project, which includes a new off-stream storage reservoir located in Colusa and Glenn counties, California, about 10 miles west of the town of Maxwell. The Authority published a Draft EIR for the Project in 2017. The Authority has since modified the Project, including revisions to the Project footprint, as depicted in the attached staff report on the Project description. For more detailed information regarding the Project, please see the preliminary draft Project description, which can be found at https://3hm5en24txyp2e4cxyxaklbs-wpengine.netdna-ssl.com/wp-content/uploads/2021/02/Sites_Preliminary-Project-Description_20210219.pdf.

The Authority has identified the Shingle Springs Band of Miwok Indians as potentially having an interest in this Project and its operations, as revised. The Authority welcomes your input on the Project and the Authority's evaluation of tribal cultural resources under CEQA. If you would like to discuss the Project with us, we respectfully request that you respond, in writing, within 30 days to our designated contact person below, and that you provide a designated contact person for the discussions:

Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
Email: kspesert@sitesproject.org

Sincerely,

Fritz Durst

Fritz Durst, Chair

From: Janis Offermann [janis@horizonh2o.com]
Sent: 7/8/2021 10:34:12 AM
To: sara@ionemiwok.net
CC: Kevin Spesert [kspesert@sitesproject.org]; Alicia Forsythe [aforsythe@sitesproject.org]
Subject: Sites Reservoir Project - Notification of Proposed Project for the Purposes of CEQA Analysis
Attachments: 02-01 Posting RDEIR-SDEIS Project Description (1).pdf; 20210615_Outreach_Letter_Dutschke_Ione.pdf

Dear Honorable Chairperson Dutschke Setchwaelo,

I am writing on behalf of the Sites Project Authority as a follow-up to the attached letter mailed to you on June 15, 2021. The Authority welcomes your input on the Project and the Authority's evaluation of tribal cultural resources under CEQA. If you have any comments, please reach out to Kevin Spesert, Sites Project Authority External Affairs Manager, per his contact information listed below.

Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
Email: kspesert@sitesproject.org

Thank you for your time,

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

Sites

Topic: **Reservoir Committee Meeting Agenda Item 2.1** **2021 January 21**

Subject: **Posting RDEIR/SDEIS Project Description**

Requested Action:

Approve release of the RDEIR/SDEIS Project Description (with Operations) to regulatory agencies and interested parties, including posting on the Authority's website, to improve Project transparency and facilitate more detailed Project discussions.

Detailed Description/Background:

At the Reservoir Committee and Board meetings in June, September and December 2020, staff provided an overview of the alternatives under consideration for the Revised Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS). Staff has continued to refine the alternatives and, with the consulting team, is nearing completion of a draft of the RDEIR/SDEIS project description.

The project description comprises Chapter 2 of the RDEIR/SDEIS. The project description includes a summary overview of the alternatives screening and selection process, an overview of the action alternatives and the no action alternative along with a detailed description for each of the three action alternatives. Also included in the project description are best management practices and environmental commitments that would be implemented under all the alternatives.

The project description continues to include three alternatives as discussed with the Reservoir Committee and Board in prior meetings. Table 1 provides a high-level summary of the three alternatives. Attachment A provides a more expansive summary table of the alternatives. The key changes to the alternatives that have been made since the previous presentations to the Reservoir Committee and Board are as follows:

- Hydropower – All alternatives include power generation incidental upon release up to 40 megawatts at Funks Reservoir and up to 40 megawatts at the Terminal Regulating Reservoir. Staff has conferred with staff at the Federal Energy Regulatory Commission (FERC) and believes that incidental power generation at these two separate facilities would qualify for separate FERC exemptions. With this generation capacity built into the Project, power consumption for Project operations will be partially self-generated renewable energy. It is expected that the remaining operating power needs will be met with renewable sources to ensure no net increase in greenhouse gas emissions from the operations of the Project.

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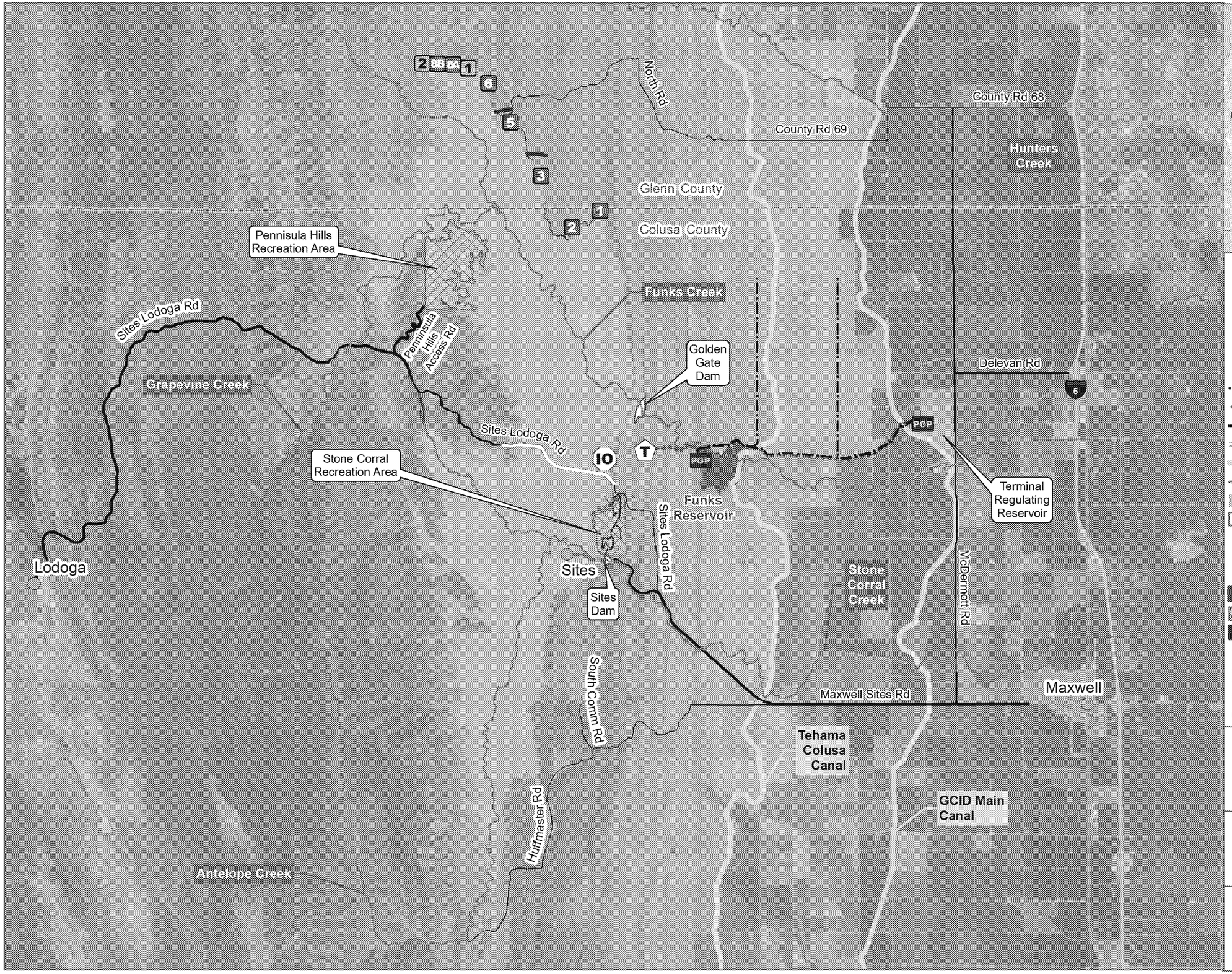
Staff Contact:

Ali Forsythe

Attachments:

Attachment A – Sites Reservoir Project, Revised Draft EIR/Supplemental Draft EIS Project Alternatives



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MAP DATE: 12/22/2020

FIGURE 1 (DRAFT)
ALTERNATIVES 1 AND 3
REGULATING RESERVOIRS AND
CONVEYANCE AND
SITES RESERVOIR FACILITIES

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Sites

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Tehama Colusa Canal

Tehama Colusa Intake

Tehama Colusa Canal

Colusa Basin Drain

Colusa Basin Drain Outlet

Ritchie Brothers Auction Yard

Tehama Colusa Intake

Bird Creek

Colusa Basin Drain

Colusa Basin Drain Outlet

5

505

Red Bluff

Sacramento River

Shasta

Lassen

Trinity

Tehama

Plumas

Mendocino

Glenn

Butte

Sierra

Colusa

Yuba

Nevada

Lake

Sutter

Knights Landing

Placer

El Dorado

Yolo

Sonoma

Napa

Sacramento

LEGEND

- City\Town
- Bird Creek
- Dunnigan Underground Pipeline

DATA SOURCES: City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.

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FIGURE 2 (DRAFT)

ALTERNATIVES 1 and 3
CONVEYANCE TO COLUSA BASIN DRAIN COMPONENTS

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Sites

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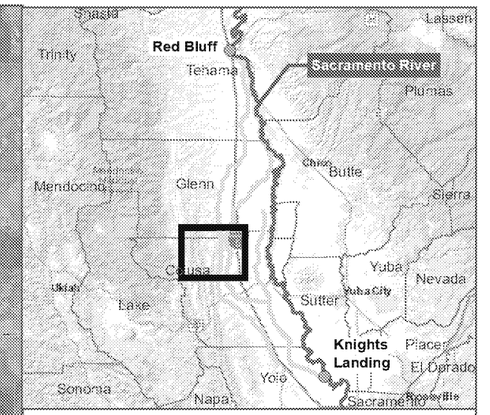

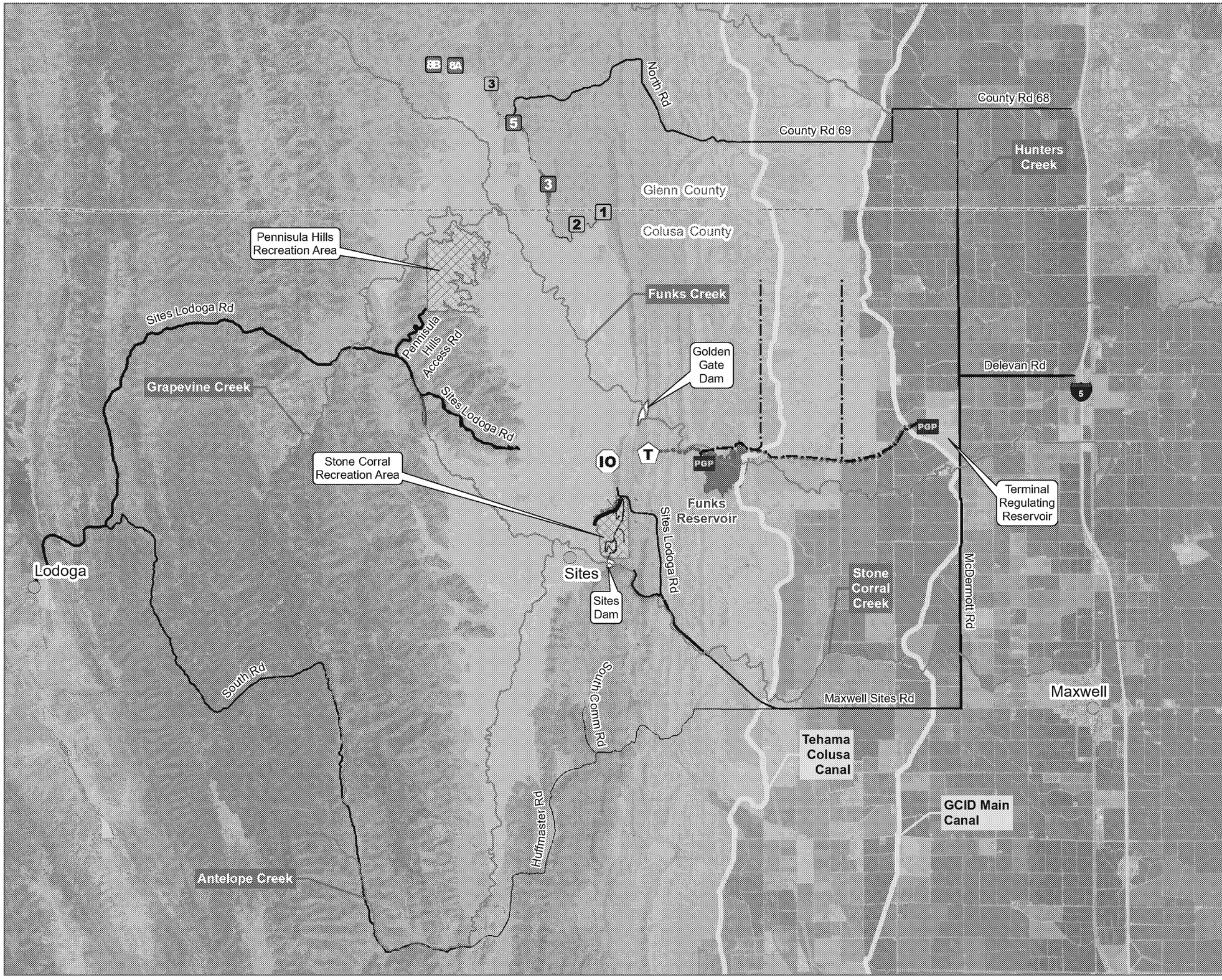

- City\Town
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- Transmission Line
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- Creek\Slough
- Inundation Area (1.3 MAF)
- Main Dams
- 1 Saddle Dikes (total of 3)
- 1 Saddle Dams (total of 4; 8B includes spillway)
- Day Use Boat Ramp
- Recreation Areas

DATA SOURCES: Inlet/Outlet Tower and PGP - ICF, 2020; City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canal, River and Creek/Slough (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020; Counties - CALFIRE-FRAP, 2019.

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MAP DATE: 12/23/2020

FIGURE 3 (DRAFT)
ALTERNATIVE 2
REGULATING RESERVOIRS AND CONVEYANCE AND SITES RESERVOIR FACILITIES

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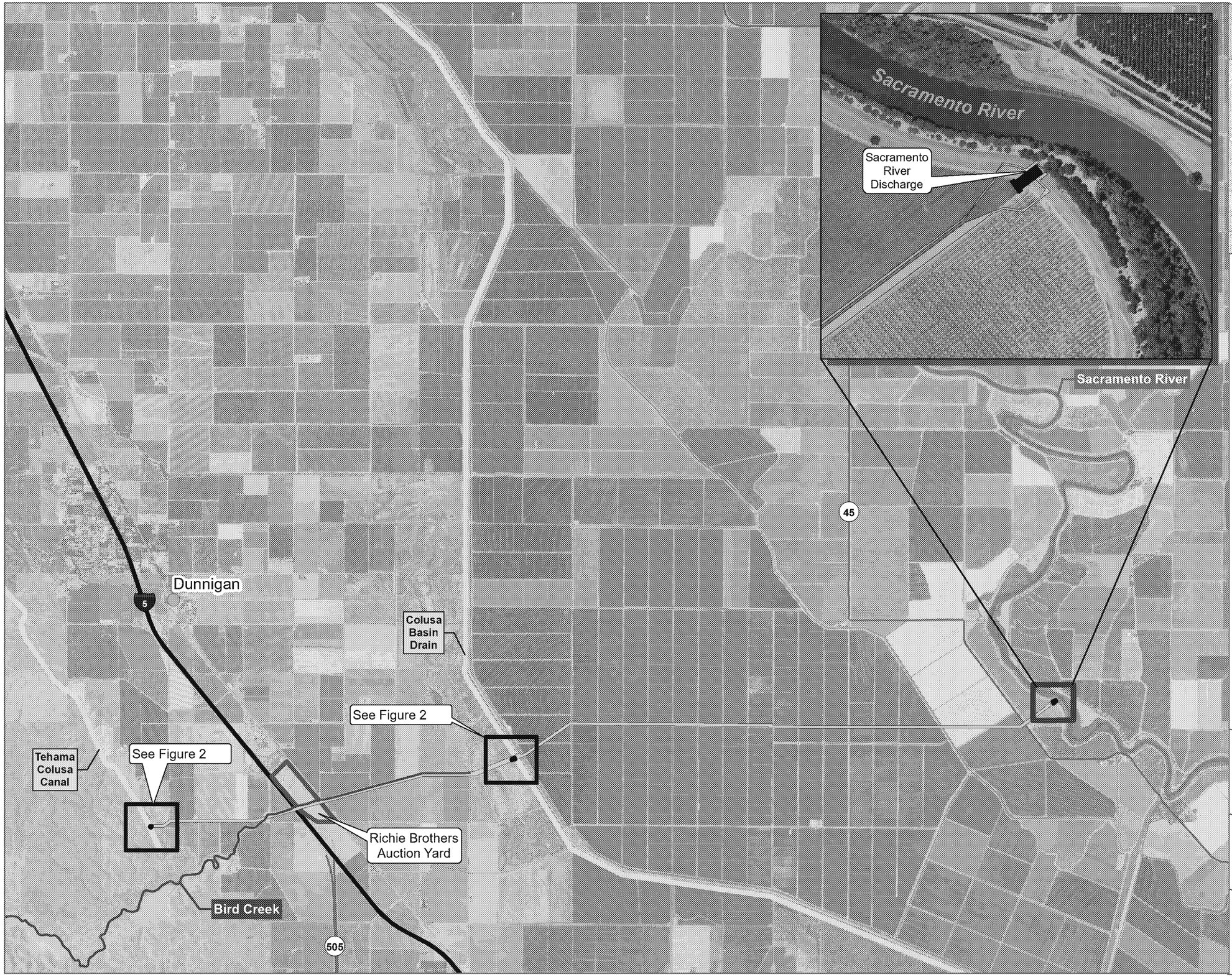
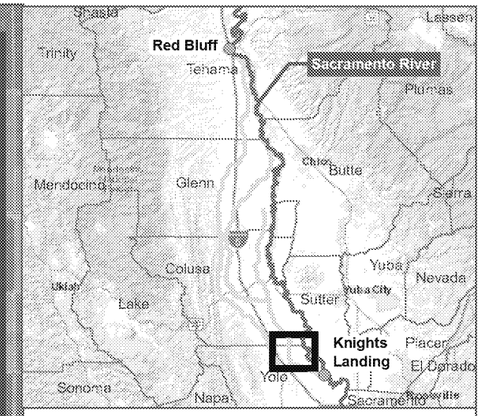
Sites

PATH: \\PDCCITRDSGIS1\PROJECTS_1\SITES_PA\00528_20\FIGURES\DOC\EIREIS\1_DEIR\01_ADEIR\CHAPTER2\FIG2-2A_ALT2_REGRESERVOIRS_CONV.MXD - USER: 24991 - DATE: 12/23/2020





LEGEND

- City\Town
- Bird Creek
- Dunnigan Underground Pipeline

DATA SOURCES: City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.

DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 12/22/2020

FIGURE 4 (DRAFT)

ALTERNATIVE 2
CONVEYANCE TO SACRAMENTO
RIVER COMPONENTS

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Sites

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Sites

June 15, 2021

Mrs. Sara Dutschke Setchwaelo, Chairwoman
Ione Band of Miwok Indians
9252 Bush Street
Plymouth, CA 95669

Subject: Notification of Proposed Project for the Purposes of CEQA Analysis

Dear Honorable Chairwoman Dutschke Setchwaelo:

The Sites Project Authority is preparing a Revised Draft Environmental Impact Report (RDEIR) for the proposed Sites Reservoir Project, which includes a new off-stream storage reservoir located in Colusa and Glenn counties, California, about 10 miles west of the town of Maxwell. The Authority published a Draft EIR for the Project in 2017. The Authority has since modified the Project, including revisions to the Project footprint, as depicted in the attached staff report on the Project description. For more detailed information regarding the Project, please see the preliminary draft Project description, which can be found at https://3hm5en24txyp2e4cxyxaklbs-wpengine.netdna-ssl.com/wp-content/uploads/2021/02/Sites_Preliminary-Project-Description_20210219.pdf.

The Authority has identified the Ione Band of Miwok Indians as potentially having an interest in this Project and its operations, as revised. The Authority welcomes your input on the Project and the Authority's evaluation of tribal cultural resources under CEQA. If you would like to discuss the Project with us, we respectfully request that you respond, in writing, within 30 days to our designated contact person below, and that you provide a designated contact person for the discussions:

Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
Email: kspesert@sitesproject.org

Sincerely,

Fritz Durst

Fritz Durst, Chair

From: Janis Offermann [janis@horizonh2o.com]
Sent: 7/8/2021 10:36:31 AM
To: information@reddingrancheria-msn.gov
CC: Kevin Spesert [kspesert@sitesproject.org]; Alicia Forsythe [aforsythe@sitesproject.org]
Subject: Sites Reservoir Project - Notification of Proposed Project for the Purposes of CEQA Analysis
Attachments: 02-01 Posting RDEIR-SDEIS Project Description (1).pdf; 20210615_Outreach_Letter_Potter_Redding.pdf

Dear Honorable Chairperson Potter,

I am writing on behalf of the Sites Project Authority as a follow-up to the attached letter mailed to you on June 15, 2021. The Authority welcomes your input on the Project and the Authority's evaluation of tribal cultural resources under CEQA. If you have any comments, please reach out to Kevin Spesert, Sites Project Authority External Affairs Manager, per his contact information listed below.

Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
Email: kspesert@sitesproject.org

Thank you for your time,

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

Sites

Topic: **Reservoir Committee Meeting Agenda Item 2.1** **2021 January 21**

Subject: **Posting RDEIR/SDEIS Project Description**

Requested Action:

Approve release of the RDEIR/SDEIS Project Description (with Operations) to regulatory agencies and interested parties, including posting on the Authority's website, to improve Project transparency and facilitate more detailed Project discussions.

Detailed Description/Background:

At the Reservoir Committee and Board meetings in June, September and December 2020, staff provided an overview of the alternatives under consideration for the Revised Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS). Staff has continued to refine the alternatives and, with the consulting team, is nearing completion of a draft of the RDEIR/SDEIS project description.

The project description comprises Chapter 2 of the RDEIR/SDEIS. The project description includes a summary overview of the alternatives screening and selection process, an overview of the action alternatives and the no action alternative along with a detailed description for each of the three action alternatives. Also included in the project description are best management practices and environmental commitments that would be implemented under all the alternatives.

The project description continues to include three alternatives as discussed with the Reservoir Committee and Board in prior meetings. Table 1 provides a high-level summary of the three alternatives. Attachment A provides a more expansive summary table of the alternatives. The key changes to the alternatives that have been made since the previous presentations to the Reservoir Committee and Board are as follows:

- Hydropower – All alternatives include power generation incidental upon release up to 40 megawatts at Funks Reservoir and up to 40 megawatts at the Terminal Regulating Reservoir. Staff has conferred with staff at the Federal Energy Regulatory Commission (FERC) and believes that incidental power generation at these two separate facilities would qualify for separate FERC exemptions. With this generation capacity built into the Project, power consumption for Project operations will be partially self-generated renewable energy. It is expected that the remaining operating power needs will be met with renewable sources to ensure no net increase in greenhouse gas emissions from the operations of the Project.

- Regulatory Required Emergency Drawdown and Release Flows, Alternative 2 – Refinements to emergency drawdown and release locations have been made to Alternative 2. Emergency releases under this alternative would occur at the Inlet/Outlet Works, Sites Dam, and Saddle Dam 8B into Hunters Creek watershed. On net the frequent flood control benefits far outweigh the very low risk of infrequent, if ever, emergency releases. To improve understanding of the risk and the potential scale of these rare emergency events, an inundation review encompassing the potential release areas will be conducted.

- Stored water Release Location, Alternative 3 – The release location for Alternative 3 will be the Colusa Basin Drain as it was determined that the Colusa Basin Drain likely has sufficient capacity to handle the flows.

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Staff recommends posting the RDEIR/SDEIS project description on the Authority's website. The project description would be posted for informational purposes to aide in the discussion of permitting approaches with regulatory agencies and in discussions with non-governmental organizations. It is important to note that the Authority is not taking public comments nor responding to comments on the project description and a preamble to the project description would make this clear to the reader. Making the project description available to the public increases transparency and provides a common foundation for regulatory agencies, non-governmental agencies, and other interested stakeholders to understand the project components. Refinements would continue to be made to the project description after posting on the Authority's website until the release of the RDEIR/SDEIS and any significant or material changes would be brought back to the Reservoir Committee and Authority Board for consideration before the change is made.

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Work Plan within existing revenue sources. Staff is also working with Reclamation to include these costs in an amendment to the existing Financial Assistance Agreement that will incorporate a portion of the $13.7 million Federal Appropriation signed into law last month. The February 2021 update to the Reservoir Committee and Authority Board on the Amendment 2 Work Plan (Budget) will reflect these changes and these added costs will not impact the second cash call amount to Reservoir Committee Members.

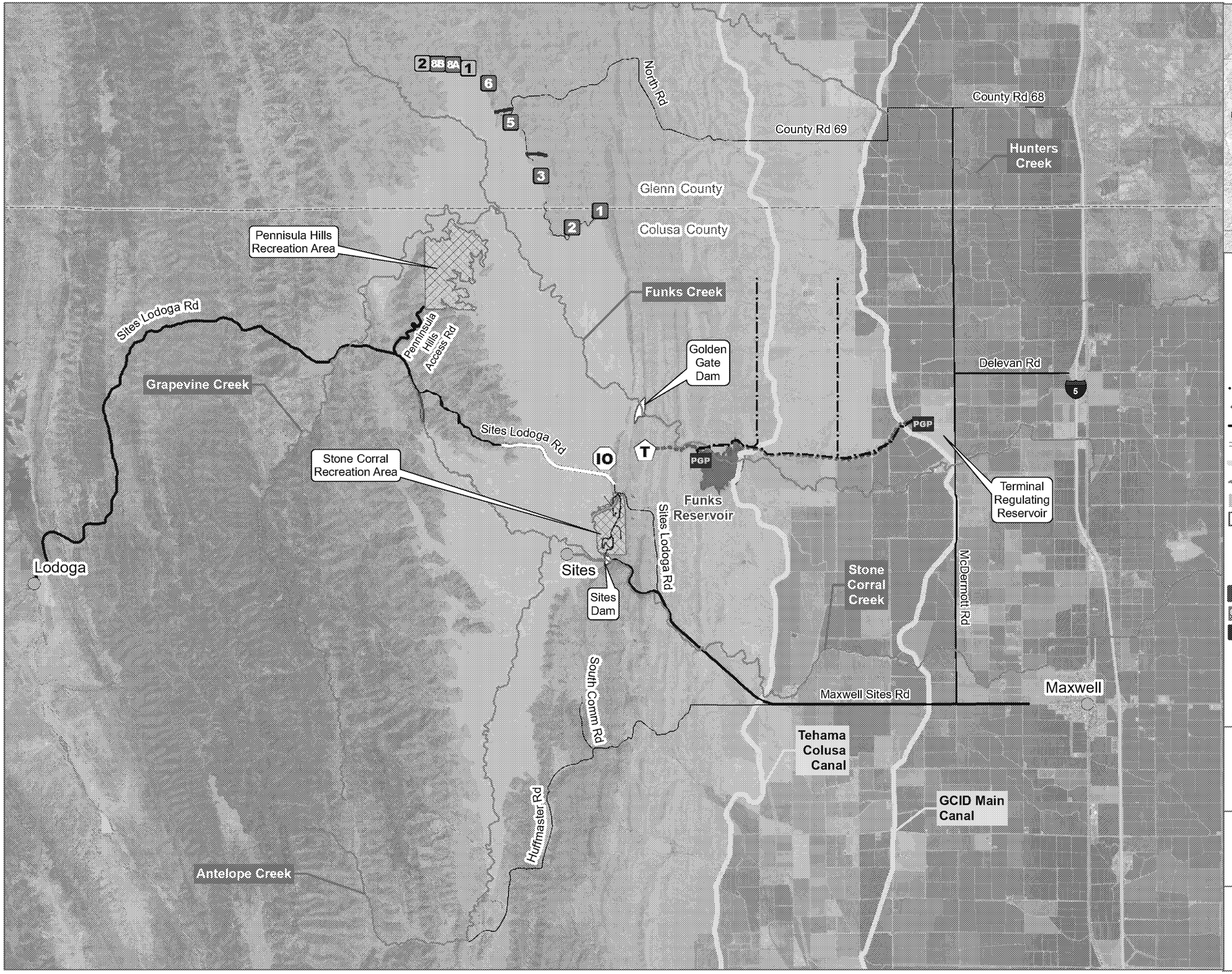
Costs to complete and circulate the Final EIR/EIS will be considered in a future Work Plan.

Staff Contact:

Ali Forsythe

Attachments:

Attachment A – Sites Reservoir Project, Revised Draft EIR/Supplemental Draft EIS Project Alternatives



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Tehama Colusa Canal

Tehama Colusa Intake

Colusa Basin Drain

Colusa Basin Drain Outlet

Tehama Colusa Canal

Ritchie Brothers Auction Yard

Tehama Colusa Intake

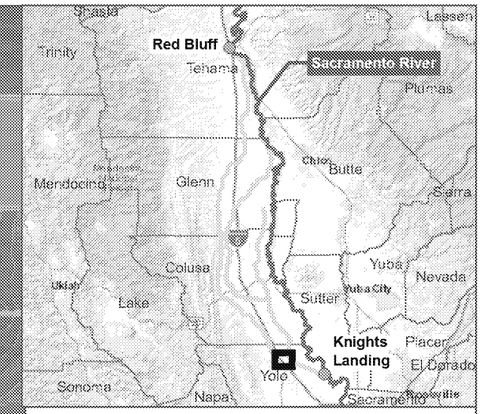
Bird Creek

Colusa Basin Drain

Colusa Basin Drain Outlet

5

505



LEGEND

- City\Town
- Bird Creek
- Dunnigan Underground Pipeline

DATA SOURCES: City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.

DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 12/22/2020

FIGURE 2 (DRAFT)

ALTERNATIVES 1 and 3
CONVEYANCE TO COLUSA BASIN DRAIN COMPONENTS

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MILES

Sites

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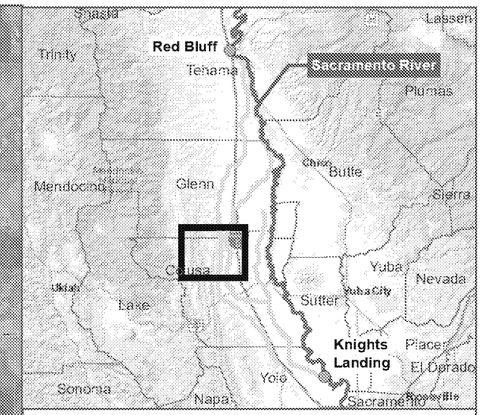

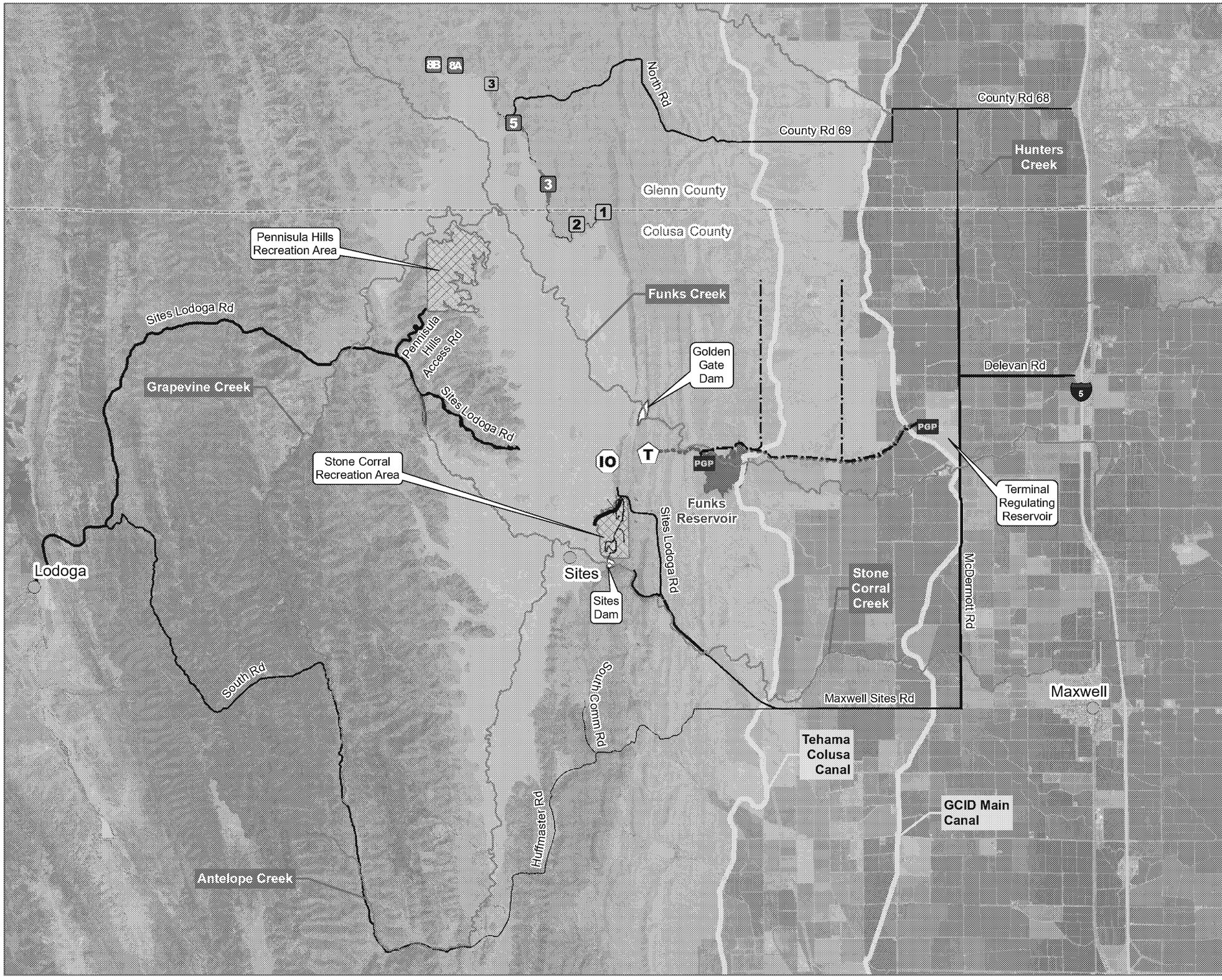

- City\Town
- IO Inlet\Outlet Tower
- T Transmission Manifold
- PGP Pump Generating Plant
- Transmission Line
- Underground Pipeline (total of 4)
- Roads
- Canal
- Creek\Slough
- Inundation Area (1.3 MAF)
- Main Dams
- 1 Saddle Dikes (total of 3)
- 1 Saddle Dams (total of 4; 8B includes spillway)
- Day Use Boat Ramp
- Recreation Areas

DATA SOURCES: Inlet/Outlet Tower and PGP - ICF, 2020; City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canal, River and Creek/Slough (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020; Counties - CALFIRE-FRAP, 2019.

DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 12/23/2020

FIGURE 3 (DRAFT)
ALTERNATIVE 2
REGULATING RESERVOIRS AND CONVEYANCE AND SITES RESERVOIR FACILITIES

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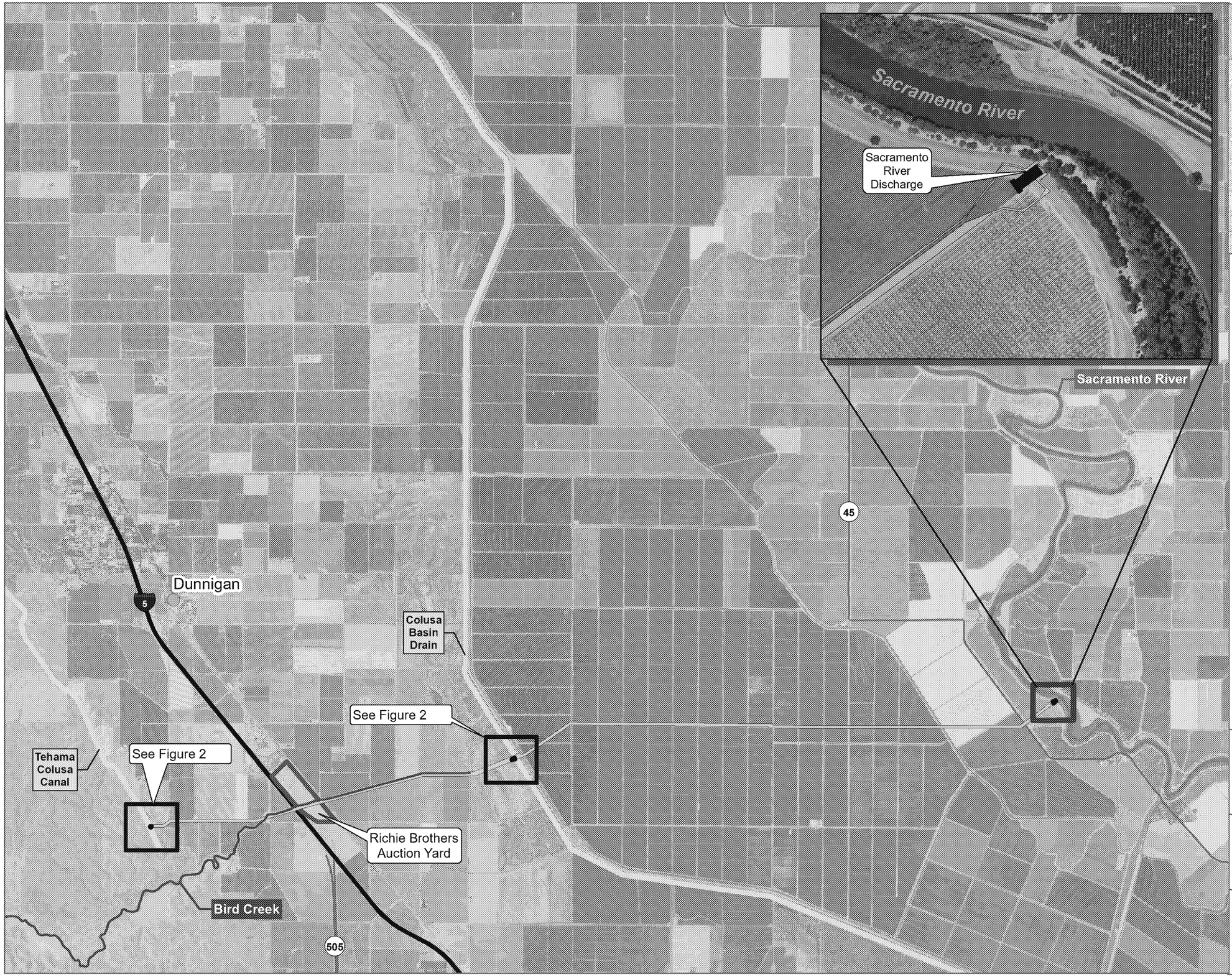

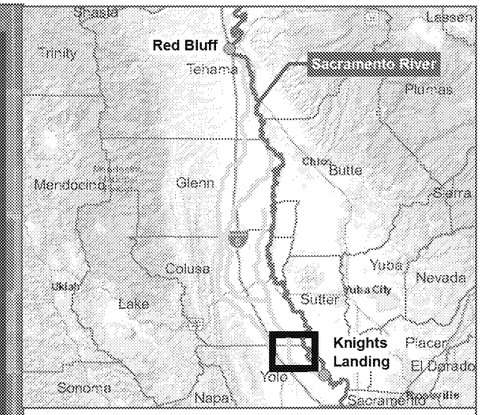

LEGEND

- City\Town
- Bird Creek
- Dunnigan Underground Pipeline

DATA SOURCES: City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.

DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 12/22/2020

FIGURE 4 (DRAFT)

ALTERNATIVE 2
CONVEYANCE TO SACRAMENTO
RIVER COMPONENTS

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Sites

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Sites

June 15, 2021

Mr. Jack Potter Jr., Chairman
Redding Rancheria
2000 Redding Rancheria Road
Redding, CA 96001

Subject: Notification of Proposed Project for the Purposes of CEQA Analysis

Dear Honorable Chairman Potter:

The Sites Project Authority is preparing a Revised Draft Environmental Impact Report (RDEIR) for the proposed Sites Reservoir Project, which includes a new off-stream storage reservoir located in Colusa and Glenn counties, California, about 10 miles west of the town of Maxwell. The Authority published a Draft EIR for the Project in 2017. The Authority has since modified the Project, including revisions to the Project footprint, as depicted in the attached staff report on the Project description. For more detailed information regarding the Project, please see the preliminary draft Project description, which can be found at https://3hm5en24txyp2e4cxyxaklbs-wpengine.netdna-ssl.com/wp-content/uploads/2021/02/Sites_Preliminary-Project-Description_20210219.pdf.

The Authority has identified the Redding Rancheria as potentially having an interest in this Project and its operations, as revised. The Authority welcomes your input on the Project and the Authority's evaluation of tribal cultural resources under CEQA. If you would like to discuss the Project with us, we respectfully request that you respond, in writing, within 30 days to our designated contact person below, and that you provide a designated contact person for the discussions:

Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
Email: kspesert@sitesproject.org

Sincerely,

Fritz Durst

Fritz Durst, Chair

From: Janis Offermann [janis@horizonh2o.com]
Sent: 7/8/2021 10:49:56 AM
To: thaddeus@maidu.com
CC: Kevin Spesert [kspesert@sitesproject.org]; Alicia Forsythe [aforsythe@sitesproject.org]
Subject: Sites Reservoir Project - Notification of Proposed Project for the Purposes of CEQA Analysis
Attachments: 02-01 Posting RDEIR-SDEIS Project Description (1).pdf; 20210615_Outreach_Letter_Cason_Konkow_Valley.pdf

Dear Honorable Chairperson Cason,

I am writing on behalf of the Sites Project Authority as a follow-up to the attached letter mailed to you on June 15, 2021. The Authority welcomes your input on the Project and the Authority's evaluation of tribal cultural resources under CEQA. If you have any comments, please reach out to Kevin Spesert, Sites Project Authority External Affairs Manager, per his contact information listed below.

Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
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Thank you for your time,

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

Sites

Topic: **Reservoir Committee Meeting Agenda Item 2.1** **2021 January 21**

Subject: **Posting RDEIR/SDEIS Project Description**

Requested Action:

Approve release of the RDEIR/SDEIS Project Description (with Operations) to regulatory agencies and interested parties, including posting on the Authority's website, to improve Project transparency and facilitate more detailed Project discussions.

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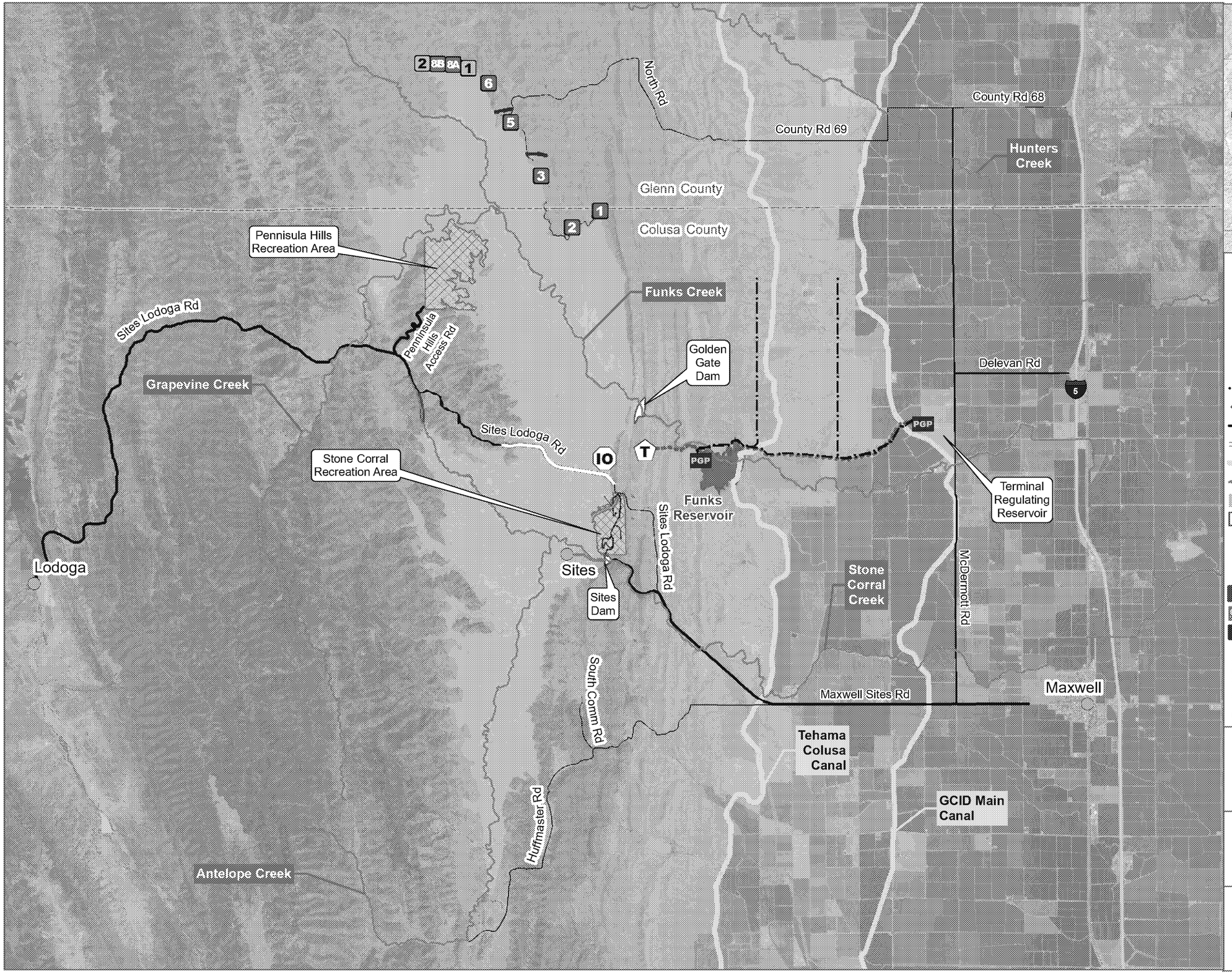
Costs to complete and circulate the Final EIR/EIS will be considered in a future Work Plan.

Staff Contact:

Ali Forsythe

Attachments:

Attachment A – Sites Reservoir Project, Revised Draft EIR/Supplemental Draft EIS Project Alternatives



DATA SOURCES: Inlet/Outlet Tower and PGP - ICF, 2020; City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canal, River and Creek/Slough (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020; Counties - CALFIRE-FRAP, 2019.

DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 12/22/2020

FIGURE 1 (DRAFT)
ALTERNATIVES 1 AND 3
REGULATING RESERVOIRS AND
CONVEYANCE AND
SITES RESERVOIR FACILITIES

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MILES

Sites

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Tehama Colusa Canal

Tehama Colusa Intake

Colusa Basin Drain

Colusa Basin Drain Outlet

Tehama Colusa Canal

Ritchie Brothers Auction Yard

Tehama Colusa Intake

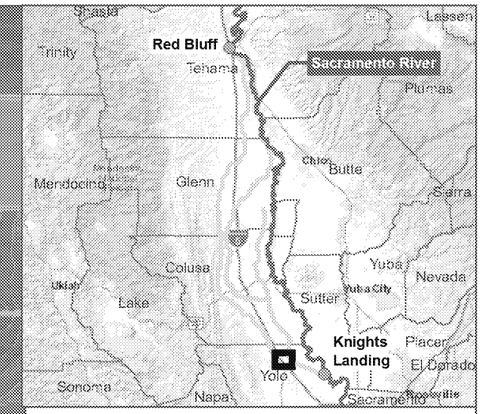
Bird Creek

Colusa Basin Drain

Colusa Basin Drain Outlet

5

505



LEGEND

- City\Town
- Bird Creek
- Dunnigan Underground Pipeline

DATA SOURCES: City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.

DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 12/22/2020

FIGURE 2 (DRAFT)

ALTERNATIVES 1 and 3
CONVEYANCE TO COLUSA BASIN DRAIN COMPONENTS

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MILES

Sites

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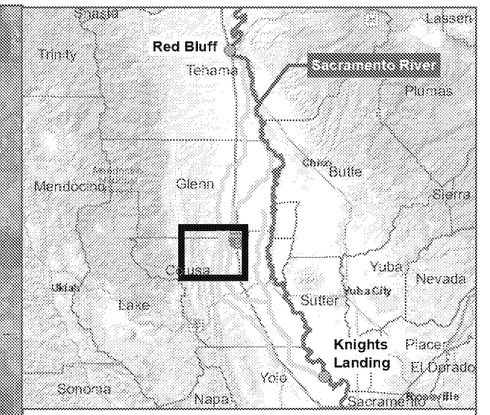

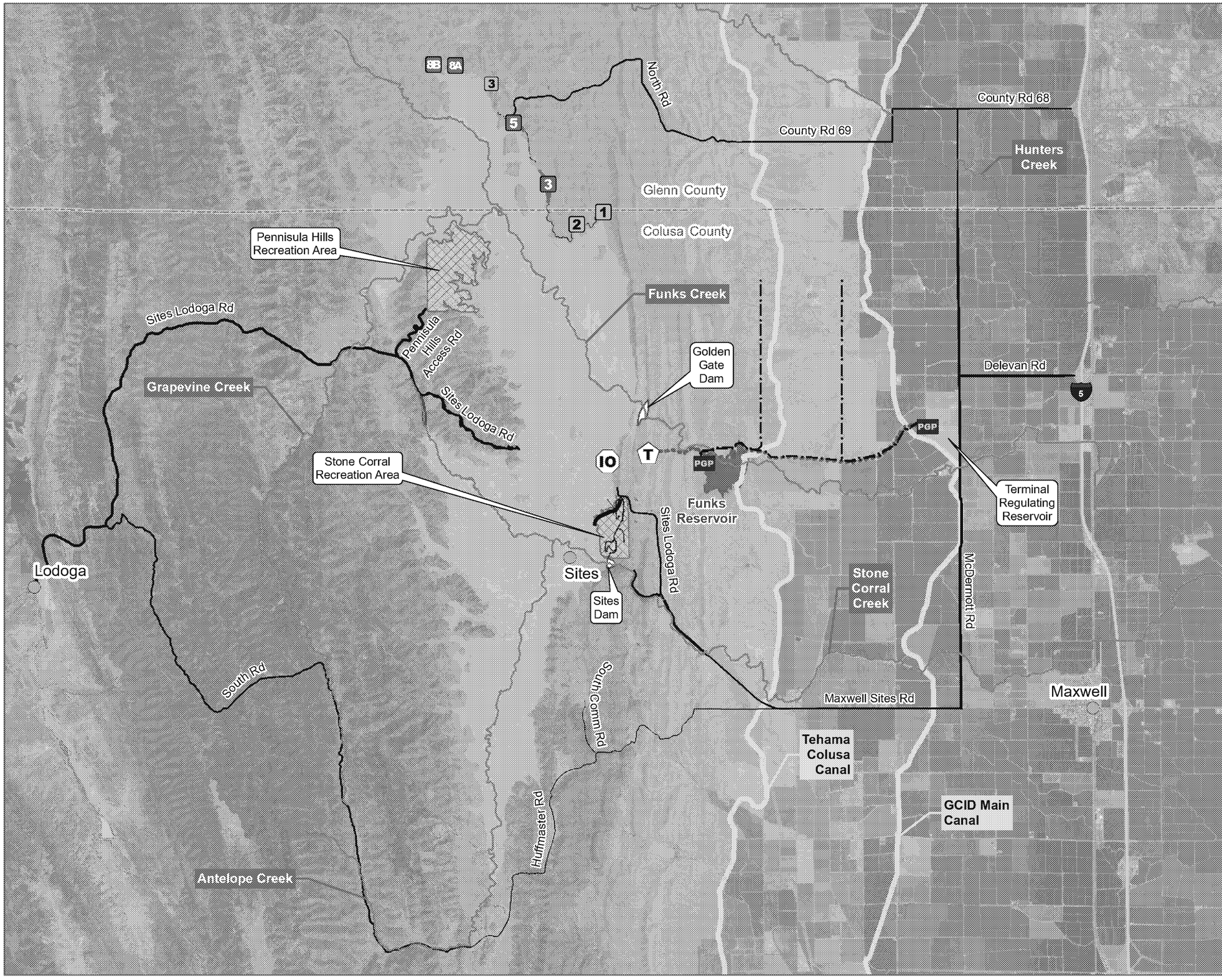

- City\Town
- IO Inlet\Outlet Tower
- T Transmission Manifold
- PGP Pump Generating Plant
- Transmission Line
- Underground Pipeline (total of 4)
- Roads
- Canal
- Creek\Slough
- Inundation Area (1.3 MAF)
- Main Dams
- 1 Saddle Dikes (total of 3)
- 1 Saddle Dams (total of 4; 8B includes spillway)
- Day Use Boat Ramp
- Recreation Areas

DATA SOURCES: Inlet/Outlet Tower and PGP - ICF, 2020; City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canal, River and Creek/Slough (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020; Counties - CALFIRE-FRAP, 2019.

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MAP DATE: 12/23/2020

FIGURE 3 (DRAFT)
ALTERNATIVE 2
REGULATING RESERVOIRS AND CONVEYANCE AND SITES RESERVOIR FACILITIES

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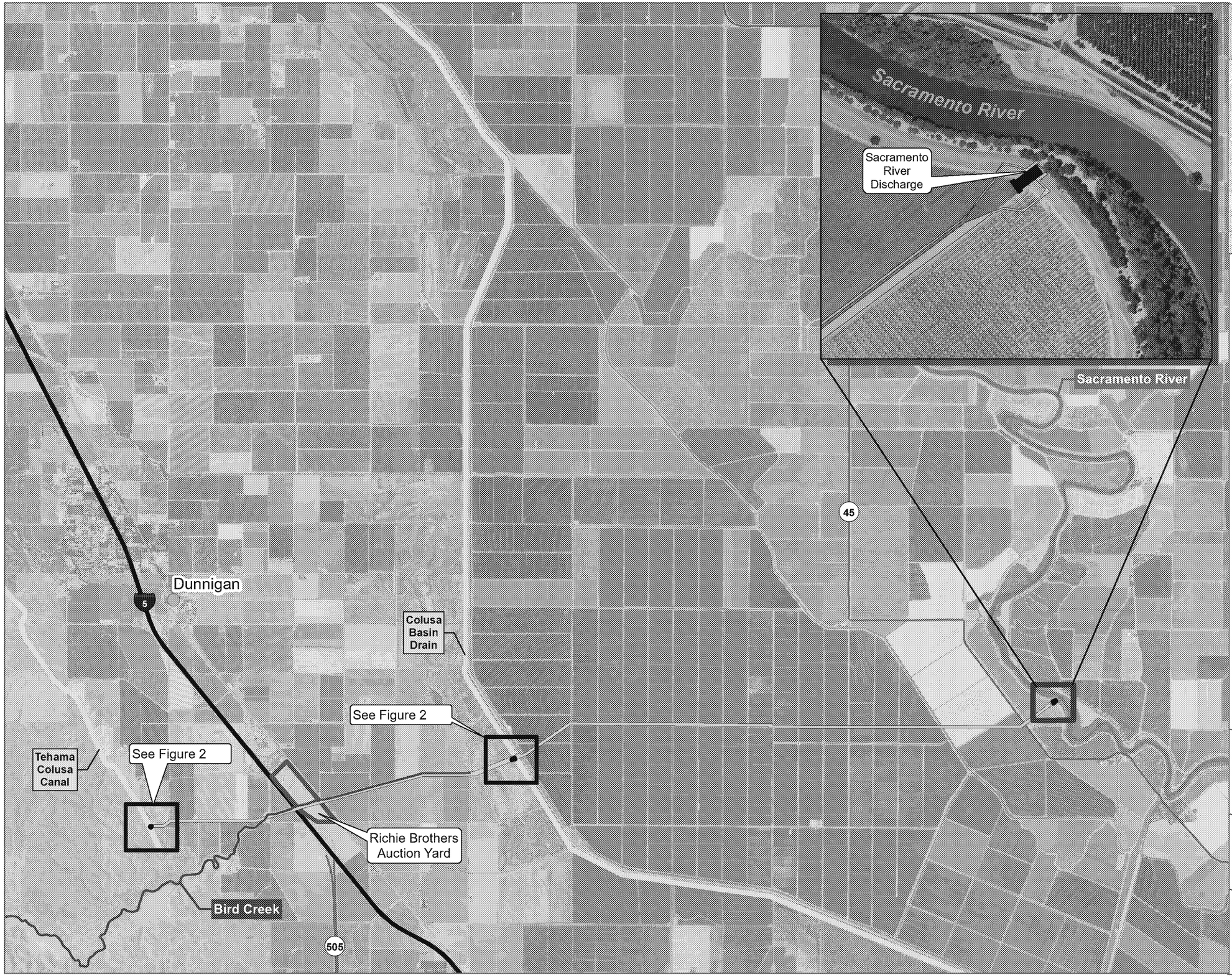

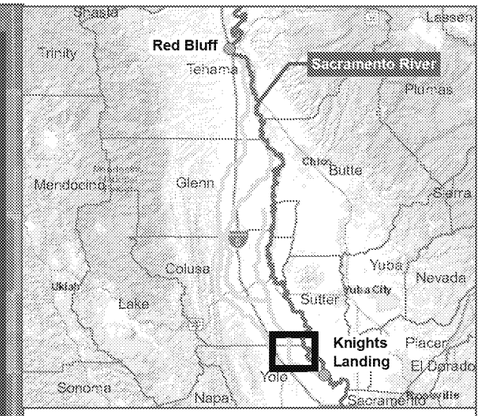

LEGEND

- City\Town
- Bird Creek
- Dunnigan Underground Pipeline

DATA SOURCES: City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.

DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 12/22/2020

FIGURE 4 (DRAFT)

ALTERNATIVE 2
CONVEYANCE TO SACRAMENTO
RIVER COMPONENTS

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MILES

Sites

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Sites

June 15, 2021

Mr. Thaddeus Cason, Chairman
Konkow Valley Band of Maidu
13006 Concow Road
Oroville, CA 95965

Subject: Notification of Proposed Project for the Purposes of CEQA Analysis

Dear Honorable Chairman Cason:

The Sites Project Authority is preparing a Revised Draft Environmental Impact Report (RDEIR) for the proposed Sites Reservoir Project, which includes a new off-stream storage reservoir located in Colusa and Glenn counties, California, about 10 miles west of the town of Maxwell. The Authority published a Draft EIR for the Project in 2017. The Authority has since modified the Project, including revisions to the Project footprint, as depicted in the attached staff report on the Project description. For more detailed information regarding the Project, please see the preliminary draft Project description, which can be found at https://3hm5en24txyp2e4cxyxaklbs-wpengine.netdna-ssl.com/wp-content/uploads/2021/02/Sites_Preliminary-Project-Description_20210219.pdf.

The Authority has identified the Konkow Valley Band of Maidu as potentially having an interest in this Project and its operations, as revised. The Authority welcomes your input on the Project and the Authority's evaluation of tribal cultural resources under CEQA. If you would like to discuss the Project with us, we respectfully request that you respond, in writing, within 30 days to our designated contact person below, and that you provide a designated contact person for the discussions:

Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
Email: kspesert@sitesproject.org

Sincerely,

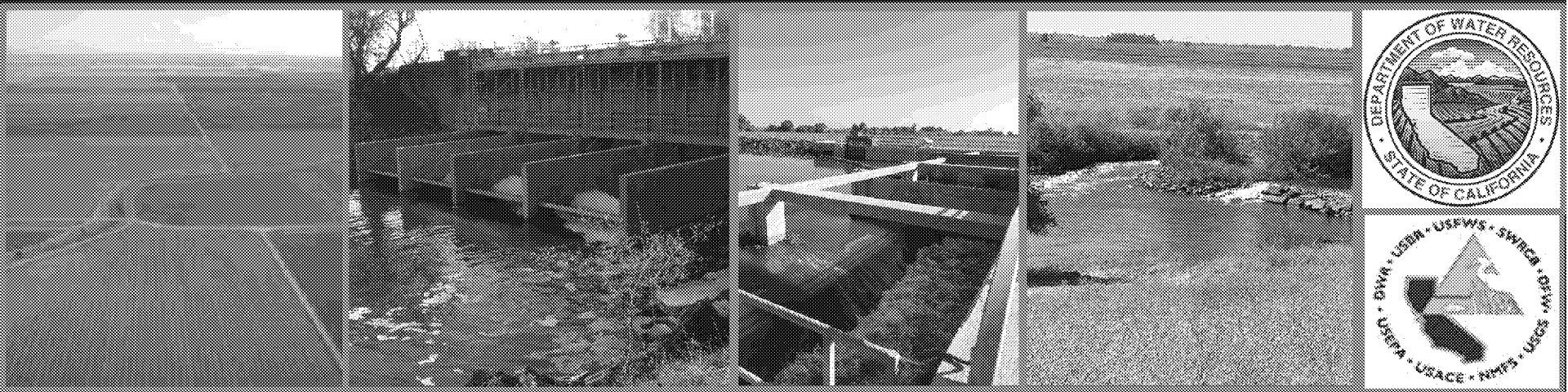
Fritz Durst

Fritz Durst, Chair

CALIFORNIA DEPARTMENT OF WATER RESOURCES

North Delta Food Subsidies Action

Stakeholder Meeting



Laura Twardochleb, Principal Investigator

Laura.Twardochleb@water.ca.gov

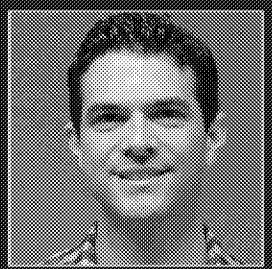
July 8, 2021

2021 North Delta Food Subsidies Action Meeting

1. **Project Leadership and Collaborators**
2. **Background**
   - Regulatory
   - Operations
   - Project Goals
3. **Project Updates**
   - 2019 Report
   - 2020 Monitoring
   - 2011-2019 Synthesis Study
4. **Expectations for 2021 "No-action" Year**
   - Flow Pulse
   - Updates:
     - Land and Water Use: Lewis Bair (RD108) and Jered Shipley (GCID)
     - Construction on Wallace Weir/Fish Rescue Facility: Hailey Wright (DWR)
5. **2021-2023 Operations and Monitoring Plan**
   - Annual Operations Decision Process
   - Monitoring Questions
   - Monitoring Predictions
   - Monitoring Spatial Scope
   - Variables Monitored
   - 2021 Monitoring Timeline
6. **Questions**

Project Leadership

Principal Investigator
Laura Twardochleb
Senior Environmental Scientist Specialist
DWR DISE Estuarine Science & Synthesis



Landowner/Agency Planning
Josh Martinez
Senior Environmental Scientist Supervisor
DWR DISE Restoration Ecology

Project Sponsor, BiOp/ITP Coordination, Adaptive Management
Brittany Davis
Environmental Program Manager Specialist
DWR DISE Synthesis, Resiliency, & Adaptive Management

Project Sponsor
Daphne Gille
Environmental Program Manager Supervisor
DWR DISE Estuarine Science & Monitoring

Project Collaborators

Mallory Bedwell
DWR Aquatic Ecology Unit
Field monitoring and analysis

Jared Frantzich
DWR North Central Regional Office
Continuous water quality monitoring

Morgan Gilbert
USFWS Delta Juvenile Fish Monitoring Program
Sampling in Lower Yolo Bypass, Cache Slough, Rio Vista

Frances Wilkerson
SFSU Estuary & Ocean Science Center
Phytoplankton productivity

Jim Orlando
USGS Pesticide Fate Lab
Contaminants investigation

Michael MacWilliams
Anchor QEA
Hydrologic modeling

Knaggs Ranch

Conaway Preservation Group

Swanston Ranch

USGS science for a changing world

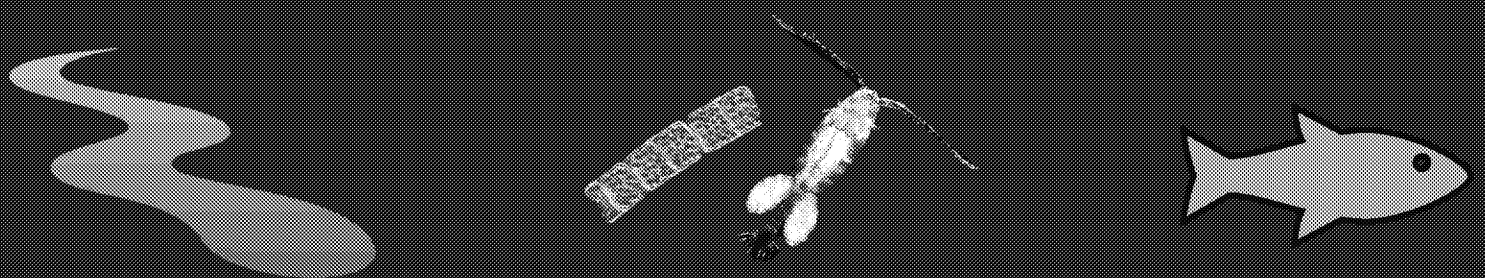
SWC

— BUREAU OF — RECLAMATION

108

Background

- SFE has low productivity and food availability, contributing to declines in pelagic fish, such as Delta Smelt
- Management of summer-fall habitat and flow may increase food availability to benefit declining fish species

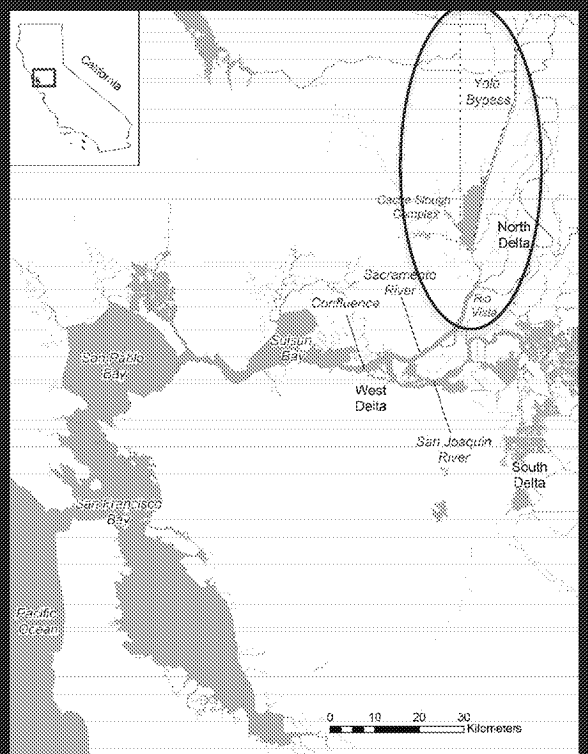


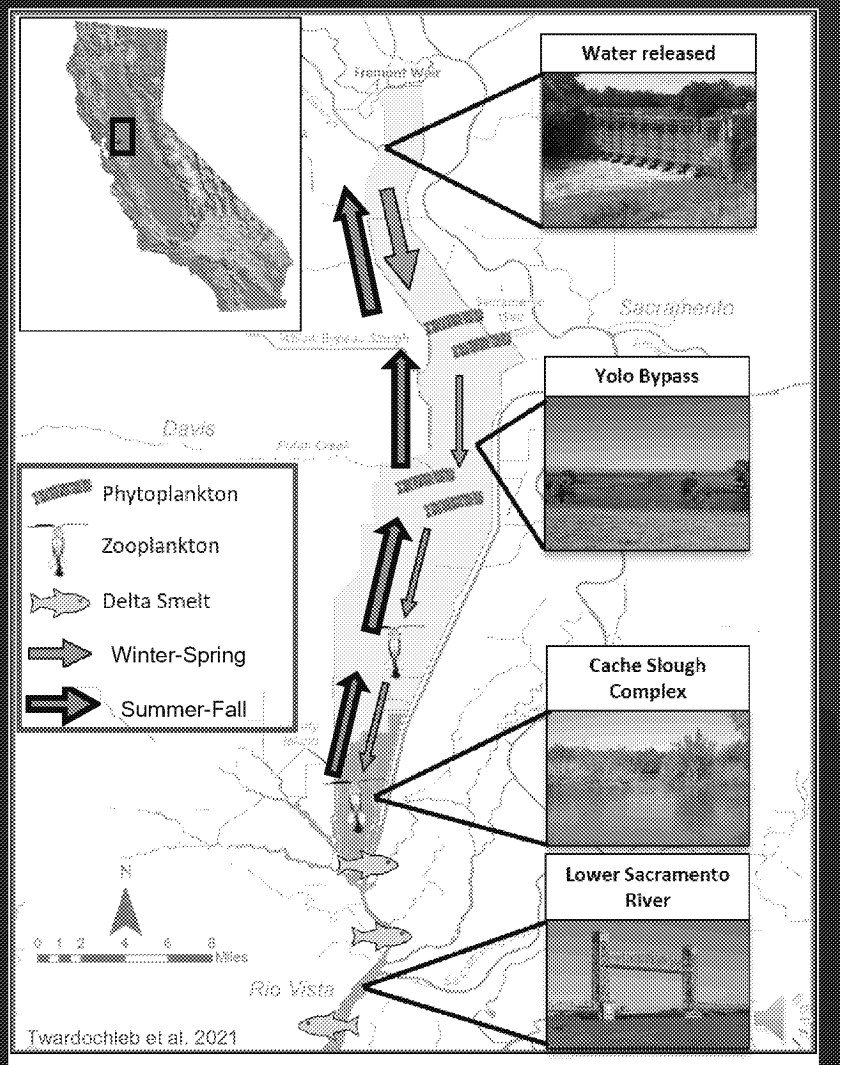
Cloern and Jassby 2008; Mac Nally et al. 2010

Background

Yolo Bypass:

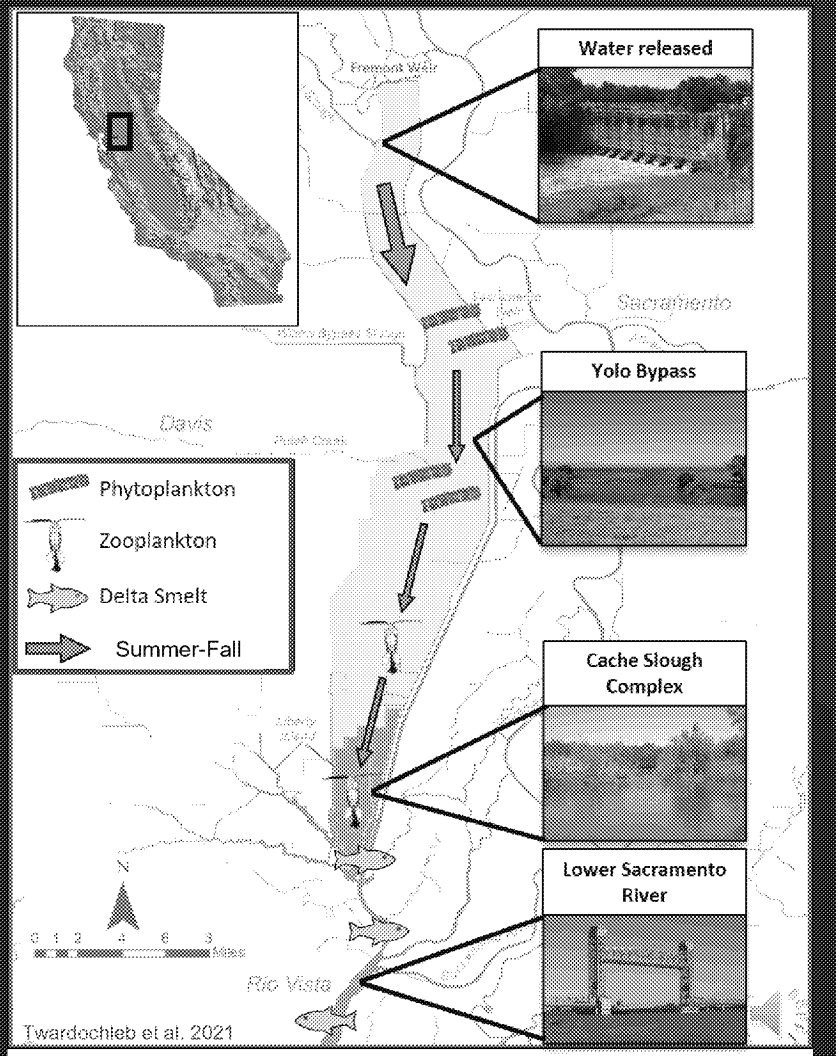
- Productive habitat
- Positive Winter-Spring flow
- Negative Summer-Fall flows





Background

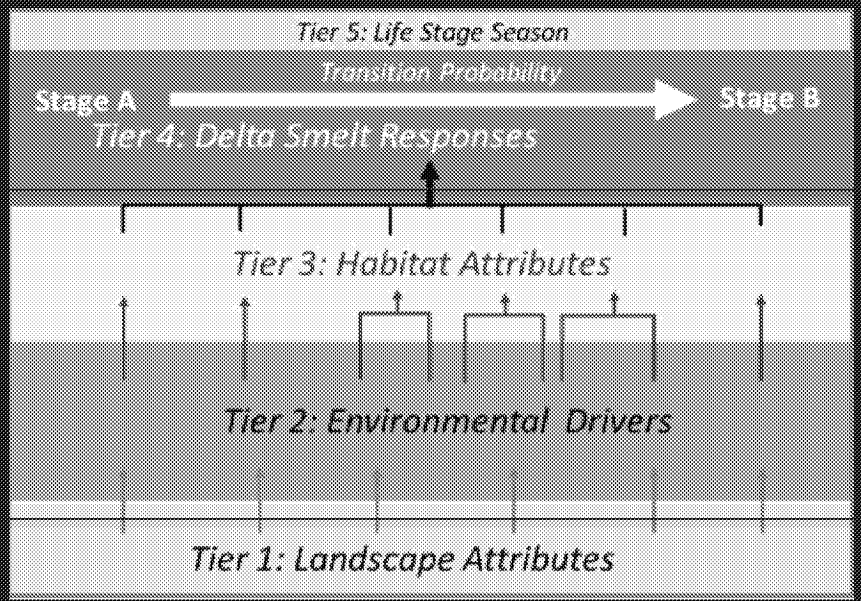
- North Delta Food Subsidies Action uses existing infrastructure to re-direct agricultural drainage or Sacramento River water through the Yolo Bypass and downstream
- Generate a flow pulse to increase transport of food to downstream habitats to benefit Delta Smelt



Frantzich et al. 2018, 2019

Regulatory Background

- Delta Smelt Resiliency Strategy contributing to environmental drivers (food production) and habitat attributes (food availability) of the Delta Smelt conceptual models



IEP-MAST 2015

Regulatory Background

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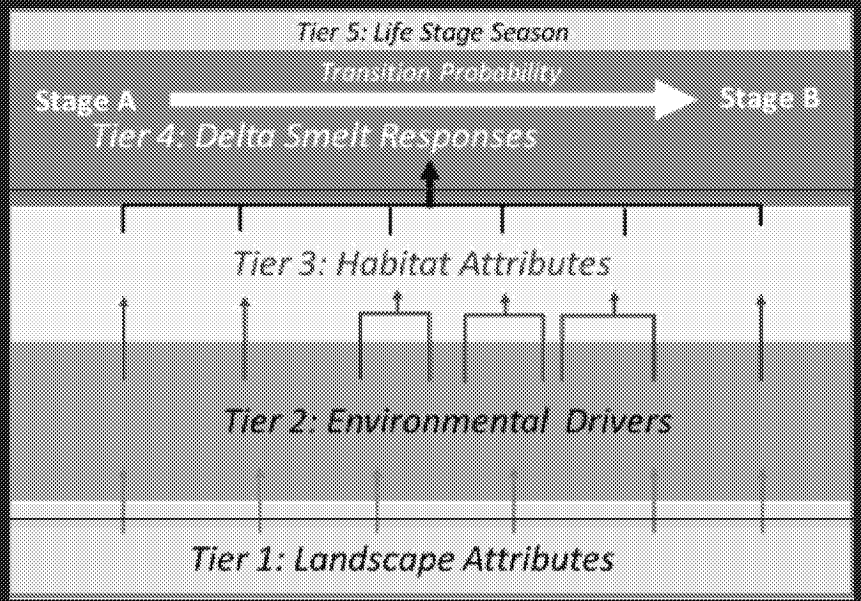

IEP-MAST 2015

- Now included as a summer-fall habitat action in 2019 USFWS/NMFS BiOp and 2020 ITP for continued operations of Central Valley Project and State Water Project
- Adaptively managed using structure decision making by the Delta Coordination Group: federal and state agencies and water contractors

Operations Background:

- Flow pulse – sustained net positive flow measured at Lisbon Weir in the Yolo Bypass Toe Drain, can be managed or non-managed
- Flow action – above average flow, or “managed” flow pulse
- Flow pulses occur annually in fall, flow actions may occur in summer or fall dependent on hydrology

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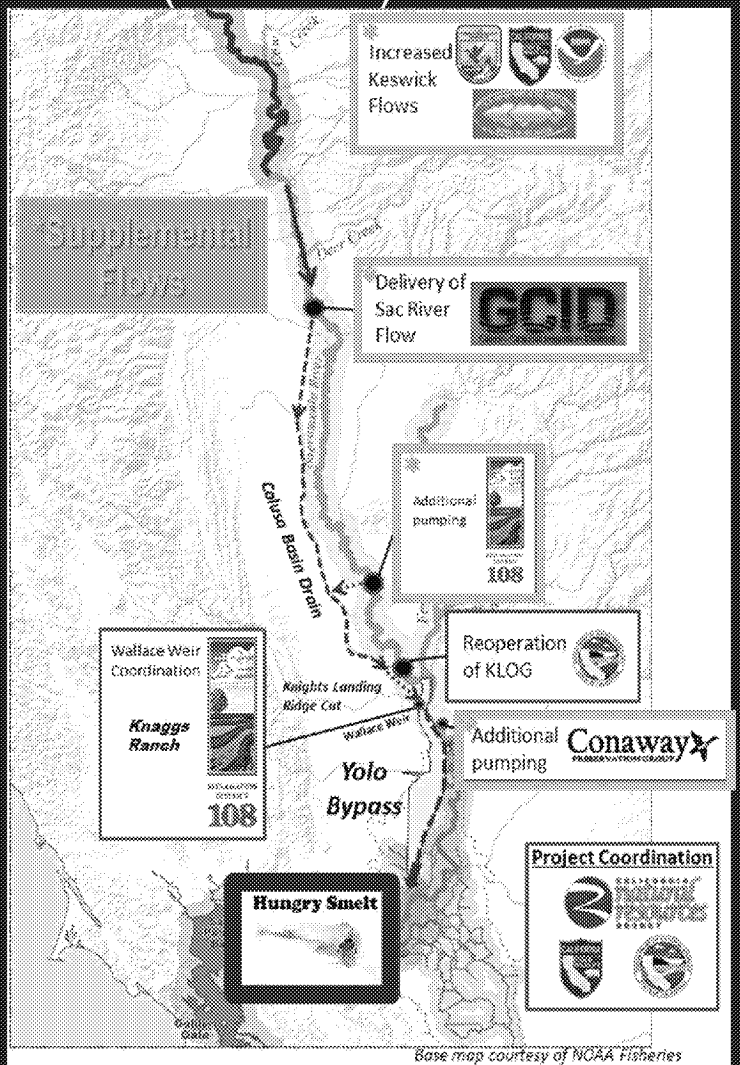
- Flow action – above average flow, or "managed" flow pulse
- Flow pulses occur annually in fall, flow actions may occur in summer or fall dependent on hydrology

No action	Sac River	Agriculture
• Non-managed pulses • Small agriculture pulse	• Managed action • Shasta releases for supplemental flow • Large summer pulse	• Managed action • Rice field drainage • Large fall pulse

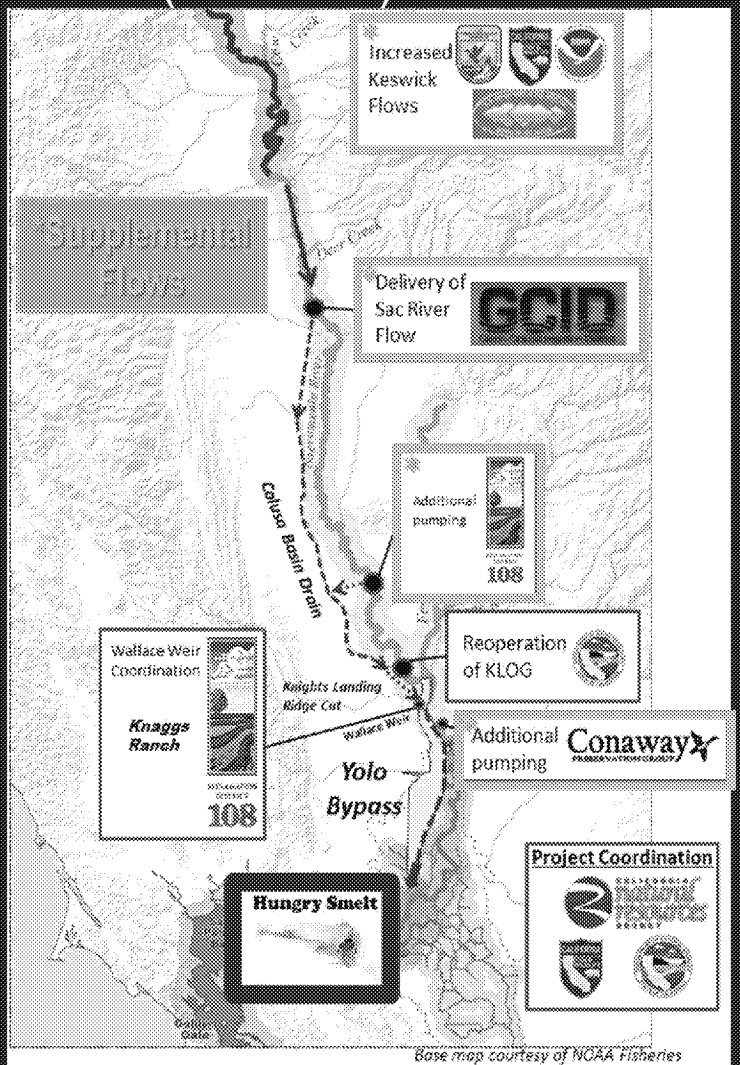
Two Types of Flow Action:

Managed Sac River (MA-SR): 2016 (Summer)

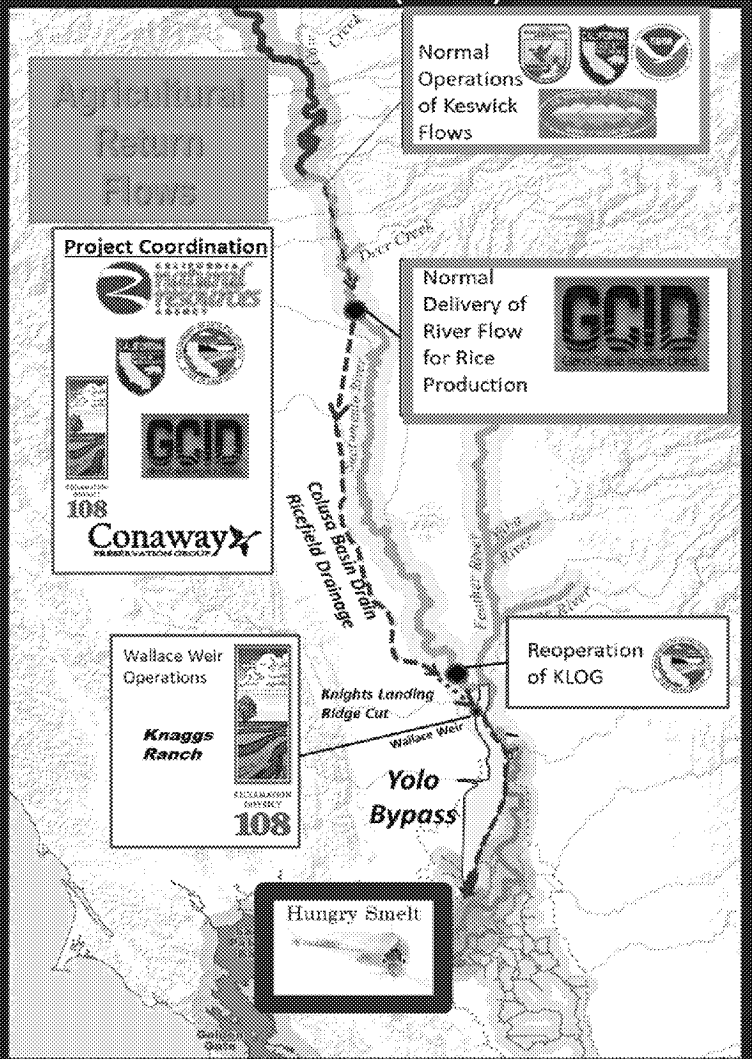


Two Types of Flow Action:

Managed Sac River (MA-SR): 2016 (Summer)

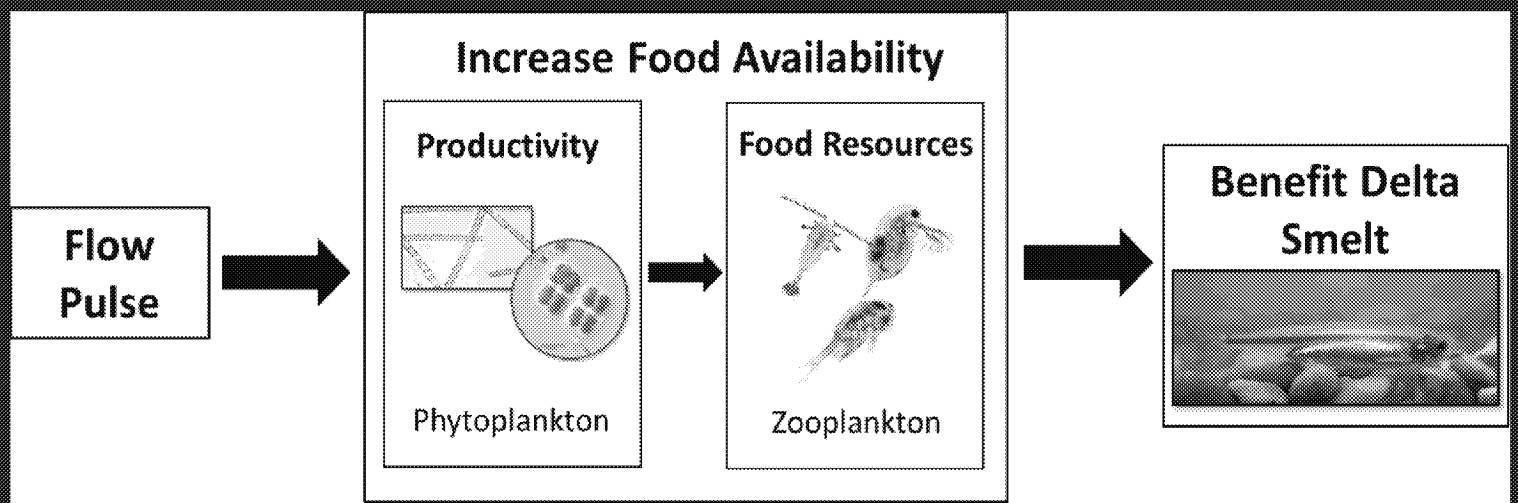


Managed Agricultural (MA-Ag): 2018 and 2019 (Fall)



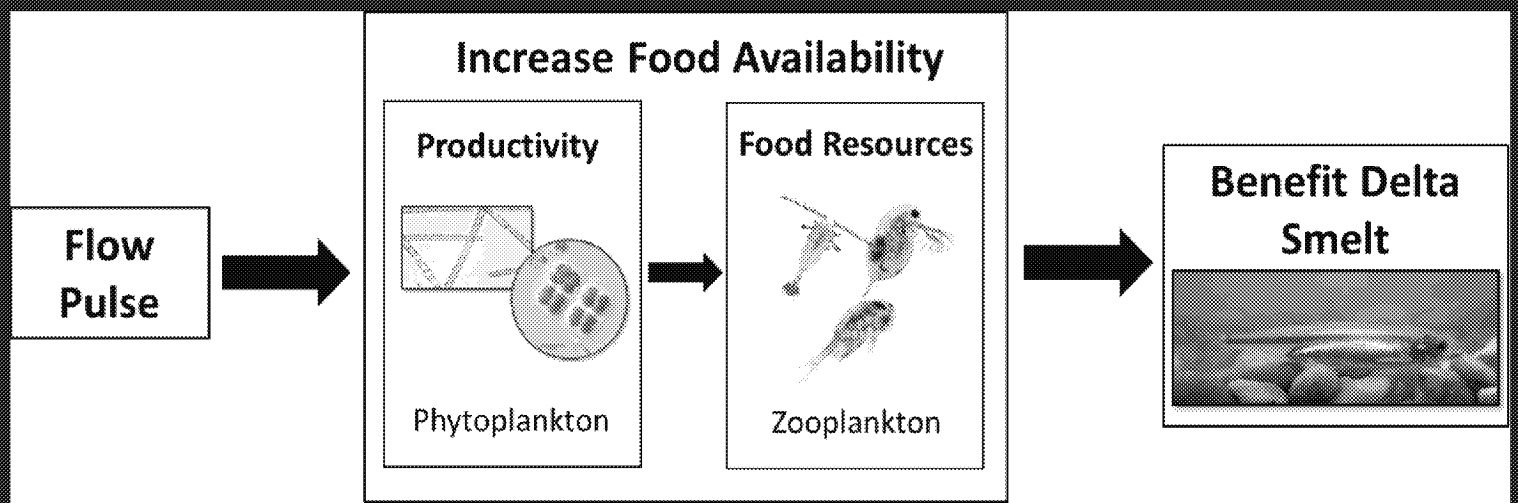
Project Goals:

1. **Increase net positive flow** from Yolo Bypass to downstream habitats of Cache Slough Complex and lower Sacramento River



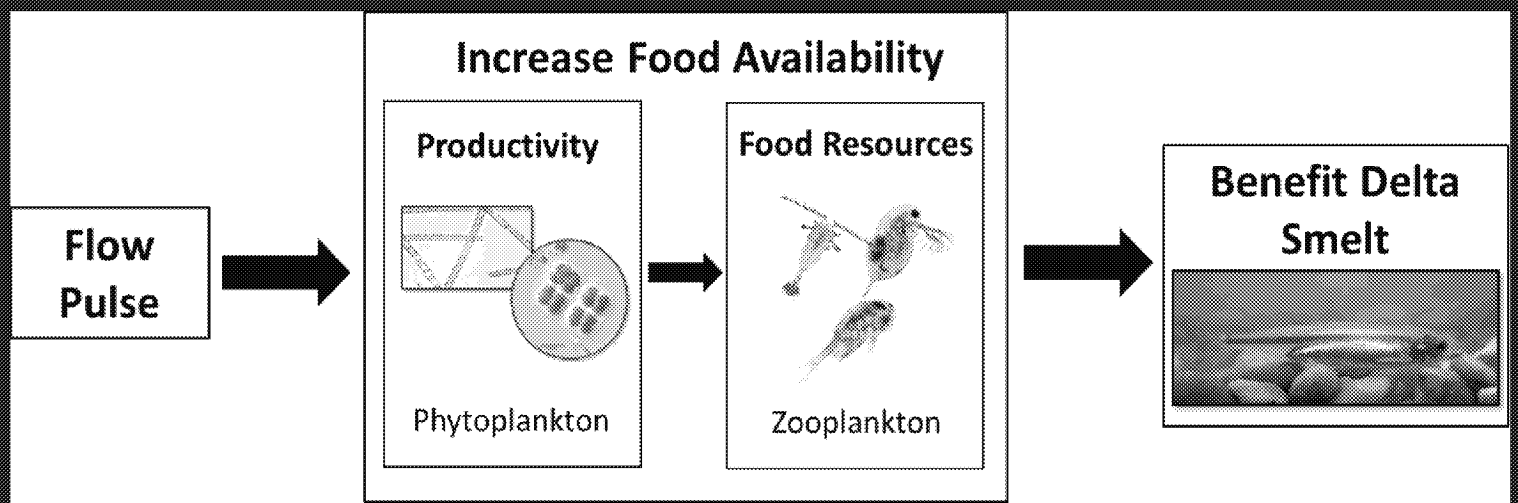
Project Goals:

1. **Increase net positive flow** from Yolo Bypass to downstream habitats of Cache Slough Complex and lower Sacramento River
2. Increase food availability for Delta Smelt and other fish species by **transporting plankton and increasing productivity** in downstream habitats



Project Goals:

1. **Increase net positive flow** from Yolo Bypass to downstream habitats of Cache Slough Complex and lower Sacramento River
2. Increase food availability for Delta Smelt and other fish species by **transporting plankton and increasing productivity** in downstream habitats
3. **Adaptively manage flow actions** through annual monitoring and assessment



Project Updates

2019 Report Now Available

North Delta Food Subsidies Study: Monitoring Food Web Responses to the North Delta Flow Action

March 5, 2021

Authors: Laura Twardochleb (DWR); Amanda Maguire (DWR); Leela Dixit (DWR); Mallory Bedwell (DWR); Jim Orlando (USGS); Michael MacWilliams (Anchor QEA); Aaron Bever (Anchor QEA); Brittany Davis (DWR)

Special Studies Section

Environmental Water Quality and Estuarine Studies Branch

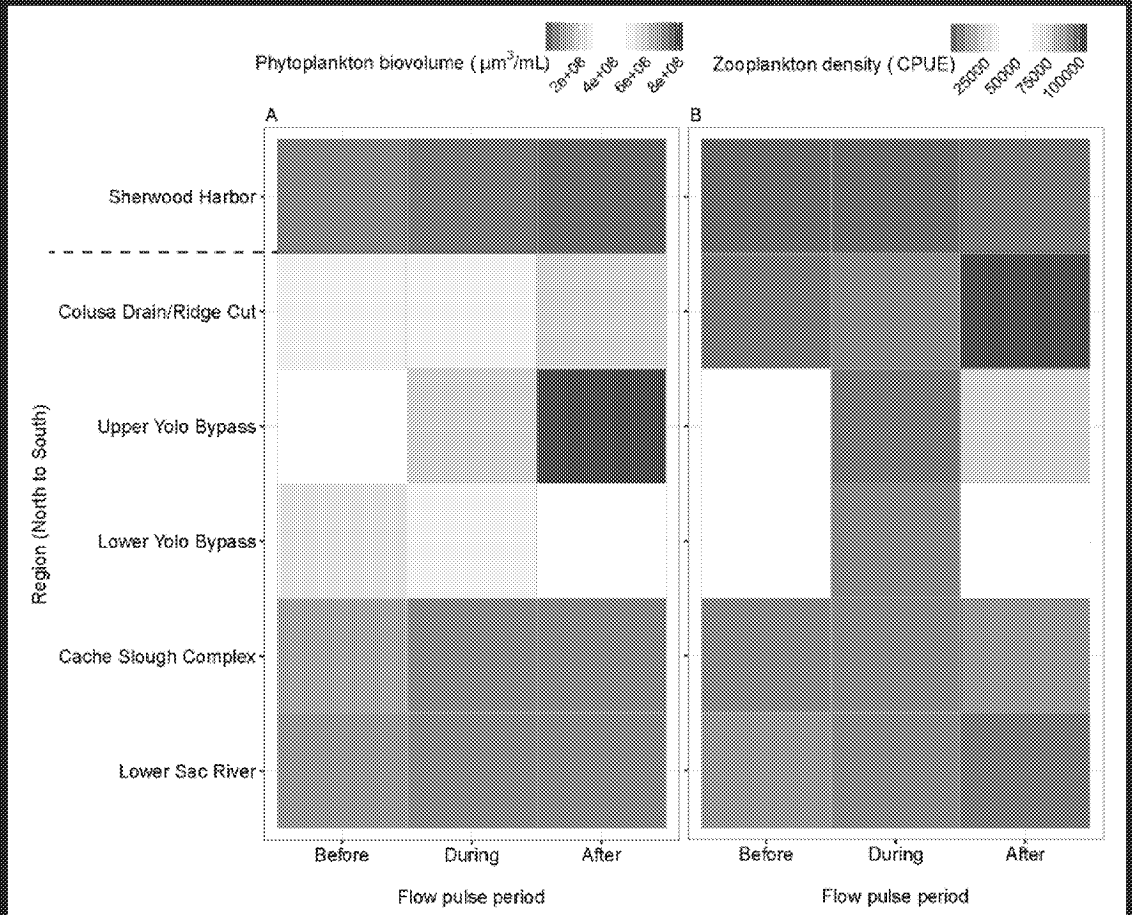
Office of Water Quality and Estuarine Ecology

Division of Environmental Services

California Department of Water Resources

2019 Flow Action Key Findings

- Increased plankton in Yolo Bypass and transport of phytoplankton and zooplankton downstream
- No plankton blooms in Cache Slough Complex and lower Sacramento River



Twardochleb et al. 2021

2020 Monitoring

- No flow action
- Reduced monitoring due to wildfire smoke and COVID restrictions
- Preliminary monitoring results (water quality only) included in Delta Smelt Summer-Fall Habitat Seasonal Report for WY 2020 in coordination with USBR
  - Final results will be included in 2021 report

2011-2019 Synthesis

Led by Brittany Davis (DWR)

Synthesis team

Michael MacWilliams, Aaron Bever

Dave Bosworth, Amanda Maguire, Traci Treleaven, Sarah Perry, Jared Frantzich, Jenna Rinde

Ted Flynn, Mallory Bedwell, Jesse Adams

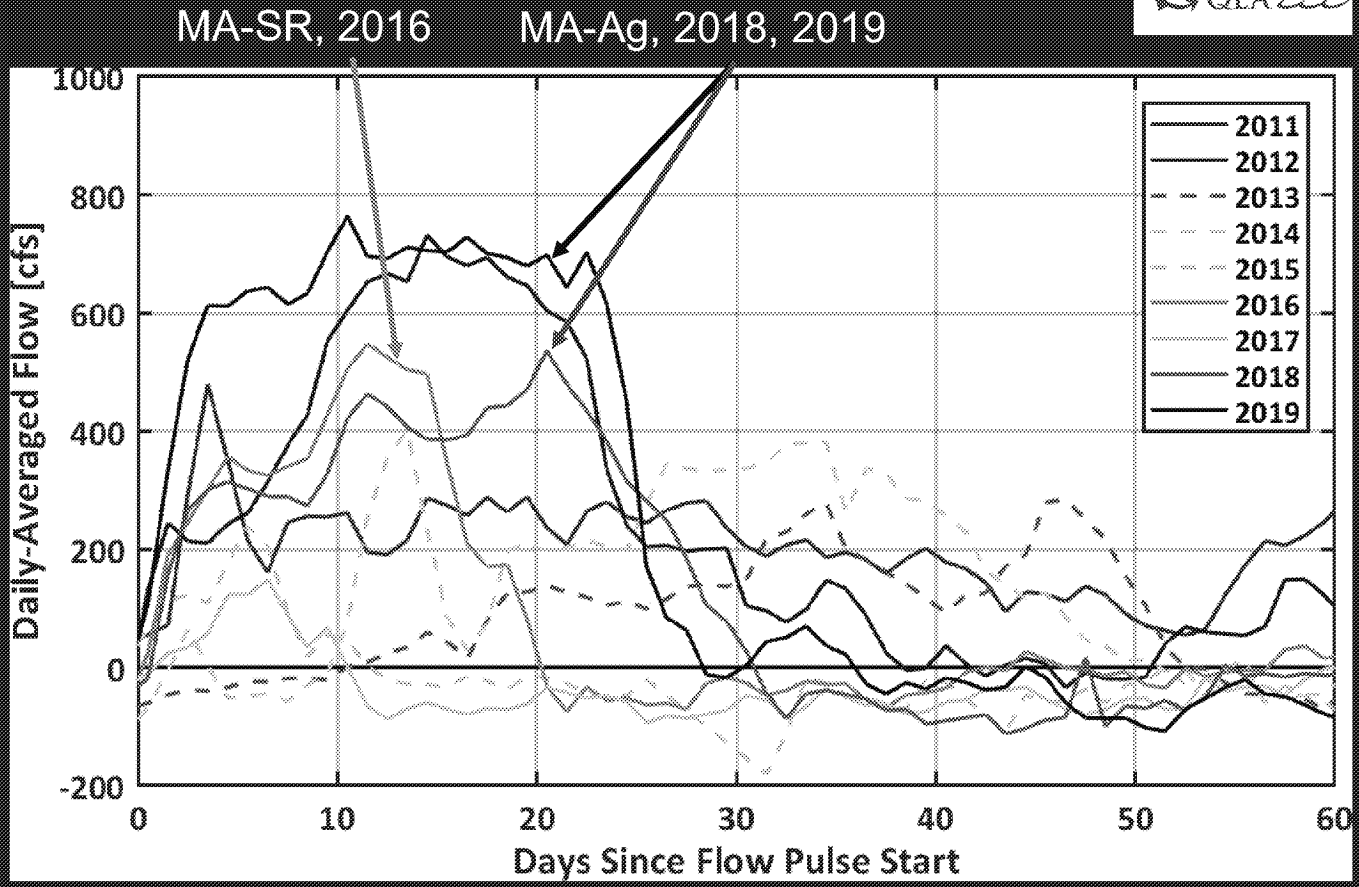
Nicole Kwan, Cat Pien, Jeff Jenkins, Hailey Wright, Rosemary Hartman

Report available in summer 2021:

- Comparing small/large and managed/unmanaged flow pulses
- Comparing habitats
  - Upstream vs. Downstream
- Comparing pulse periods
  - Before, During, After

2011-2019 Synthesis Key Findings

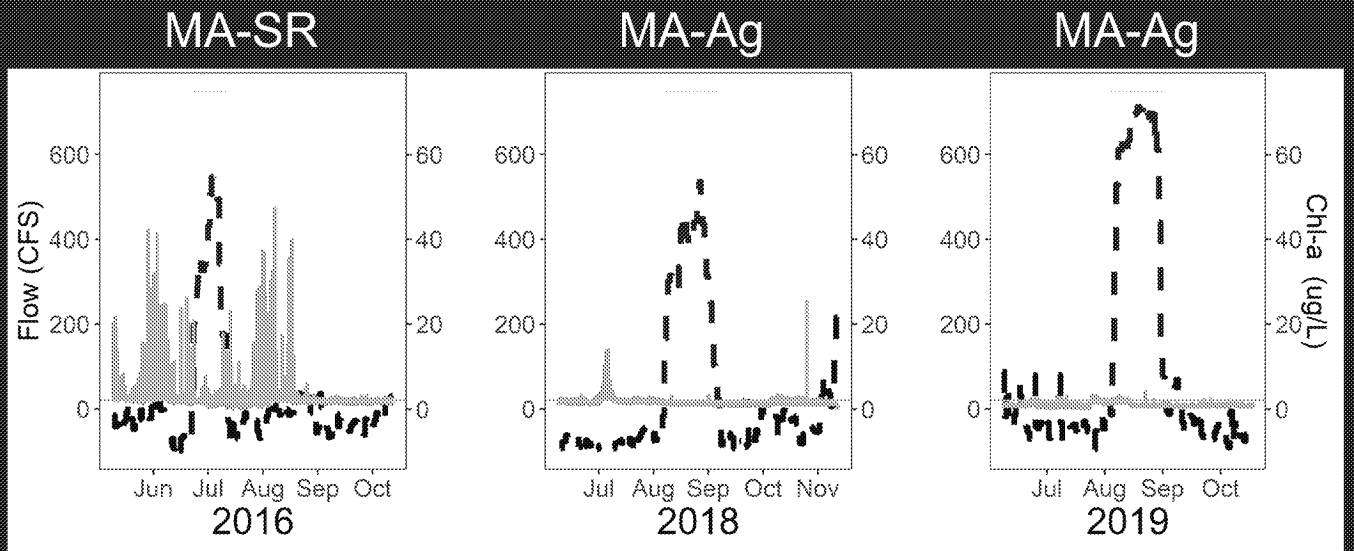
- Large, managed flow actions restore positive net flow from Yolo Bypass to Cache Slough Complex



Daily average flow (cfs) at Lisbon Weir in the Yolo Bypass Toe Drain

2011-2019 Synthesis Key Findings

- Variable responses of plankton to flow actions
- Increased plankton biomass in Yolo Bypass and transport of phytoplankton and zooplankton to downstream Delta Smelt habitats
- Transport does not always result in plankton blooms in Cache Slough Complex and lower Sacramento River



Flow at Lisbon Weir in Yolo Bypass Toe Drain (black lines) and chlorophyll-a at Rio Vista Bridge in Sacramento River

2021 Flow Action Update

No flow action planned in 2021 due to:

- critically dry water year
- low acreage planted for rice agriculture
- potential for anoxic conditions in Yolo Bypass (as observed during summer 2015)

Small flow pulse expected in late summer due to agricultural drainage into Colusa Basin Drain and Yolo Bypass Toe Drain

Baseline monitoring will continue before, during, and after small pulse

2021 Flow Action Collaborator Updates

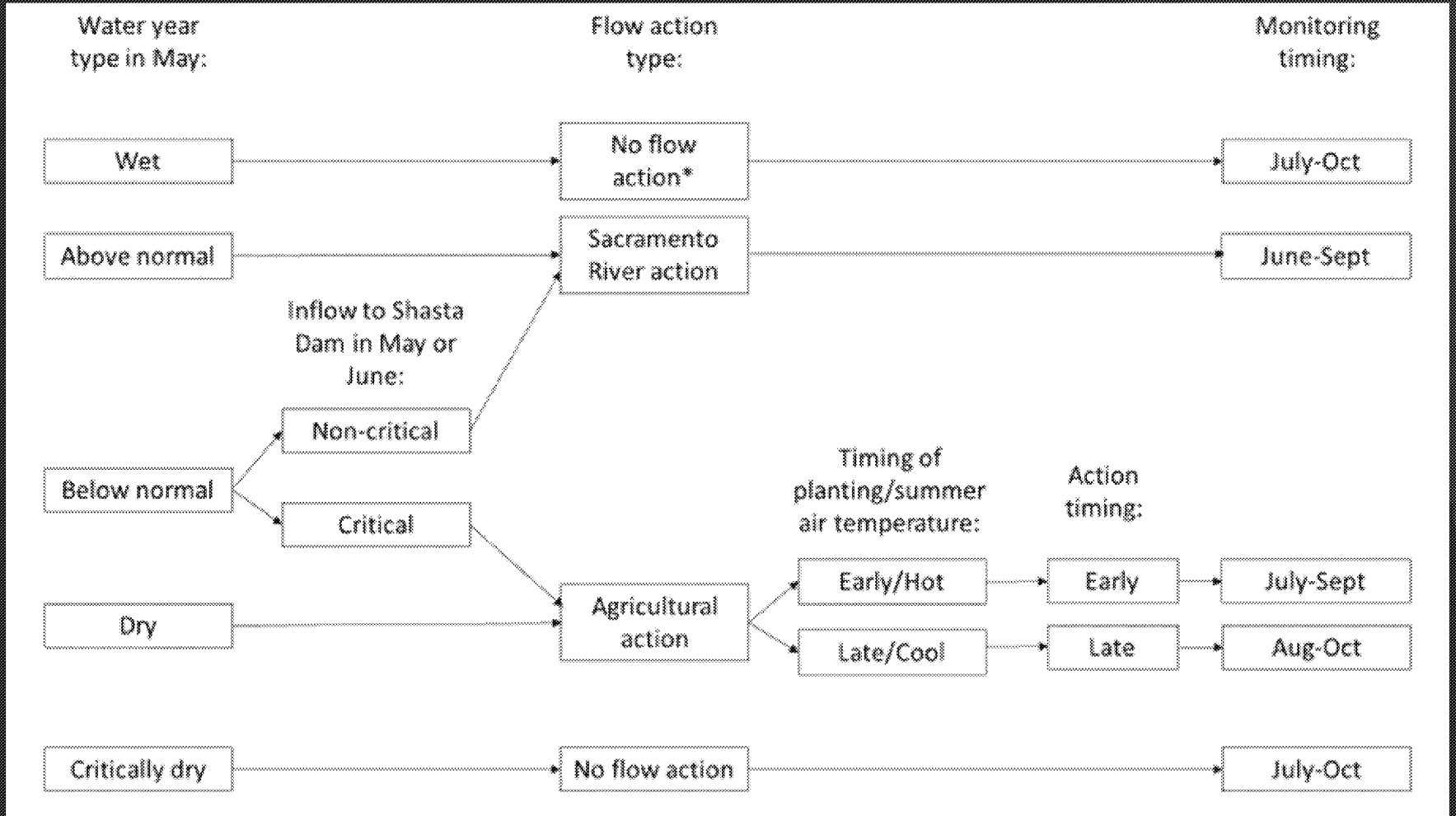
- Land and Water Use: Lewis Bair (RD108) and Jered Shipley (GCID)
- Construction on Wallace Weir/Fish Rescue Facility: Hailey Wright (DWR)

North Delta Food Subsidies Study
2021-2023
Operations and Monitoring Plan

March 30, 2021

Authors: Laura Twardochleb (DWR); Josh Martinez (DWR); Mallory Bedwell (DWR); Jared Frantzich (DWR); Ted Sommer (DWR); Brittany Davis (DWR)

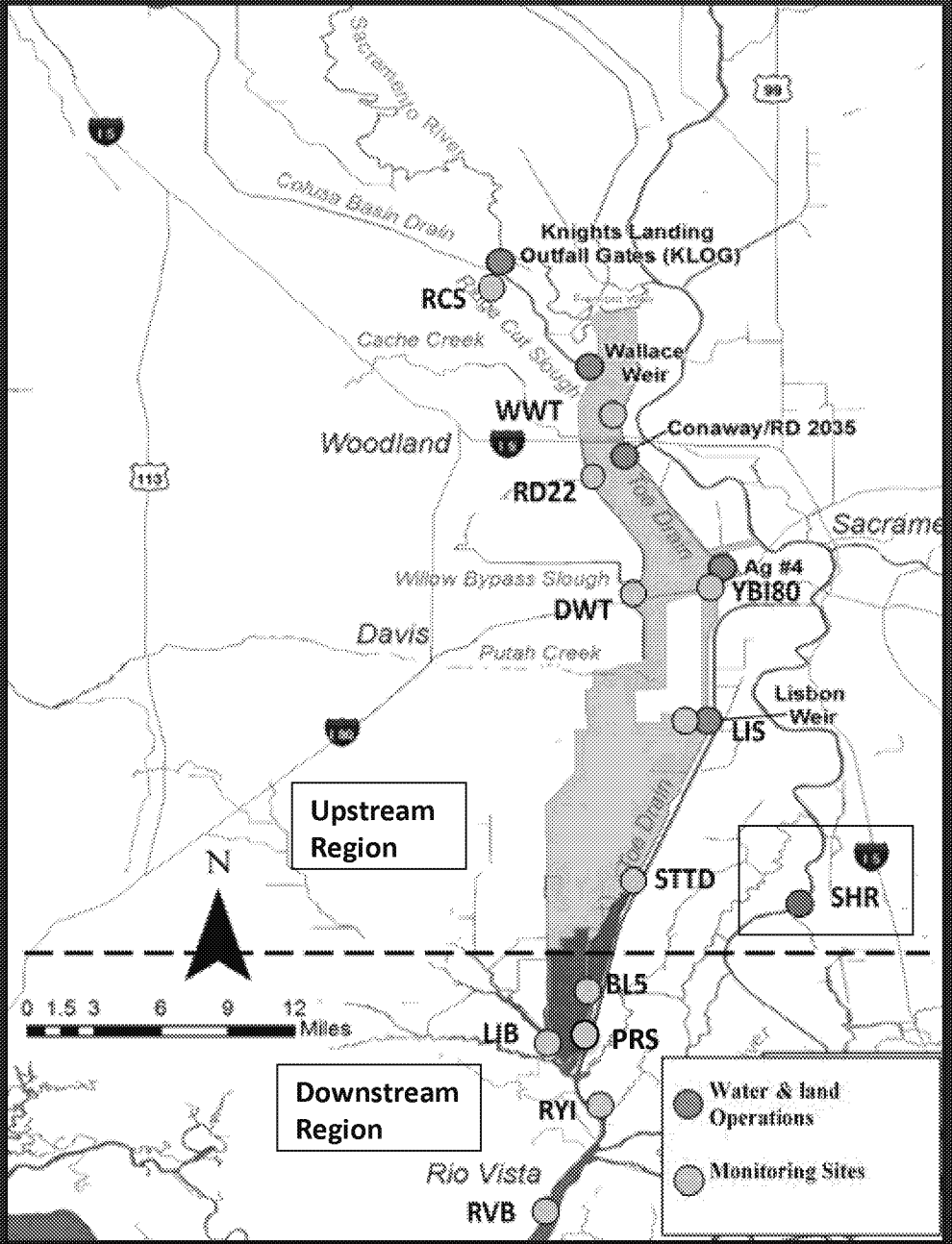
Annual Operations Decision Steps:



- In addition to water year type in May, we will consider previous water year type, cold-water pool for salmon, outflow from Keswick (Shasta) Dam
- May consider alternative action scenarios

Annual Monitoring

- Continuous WQ monitoring
- Discrete sampling of food web 2 x before, during, after non-managed flow pulse
- Five core sites in each of upstream and downstream regions, one middle Sac River site



Monitoring Questions:

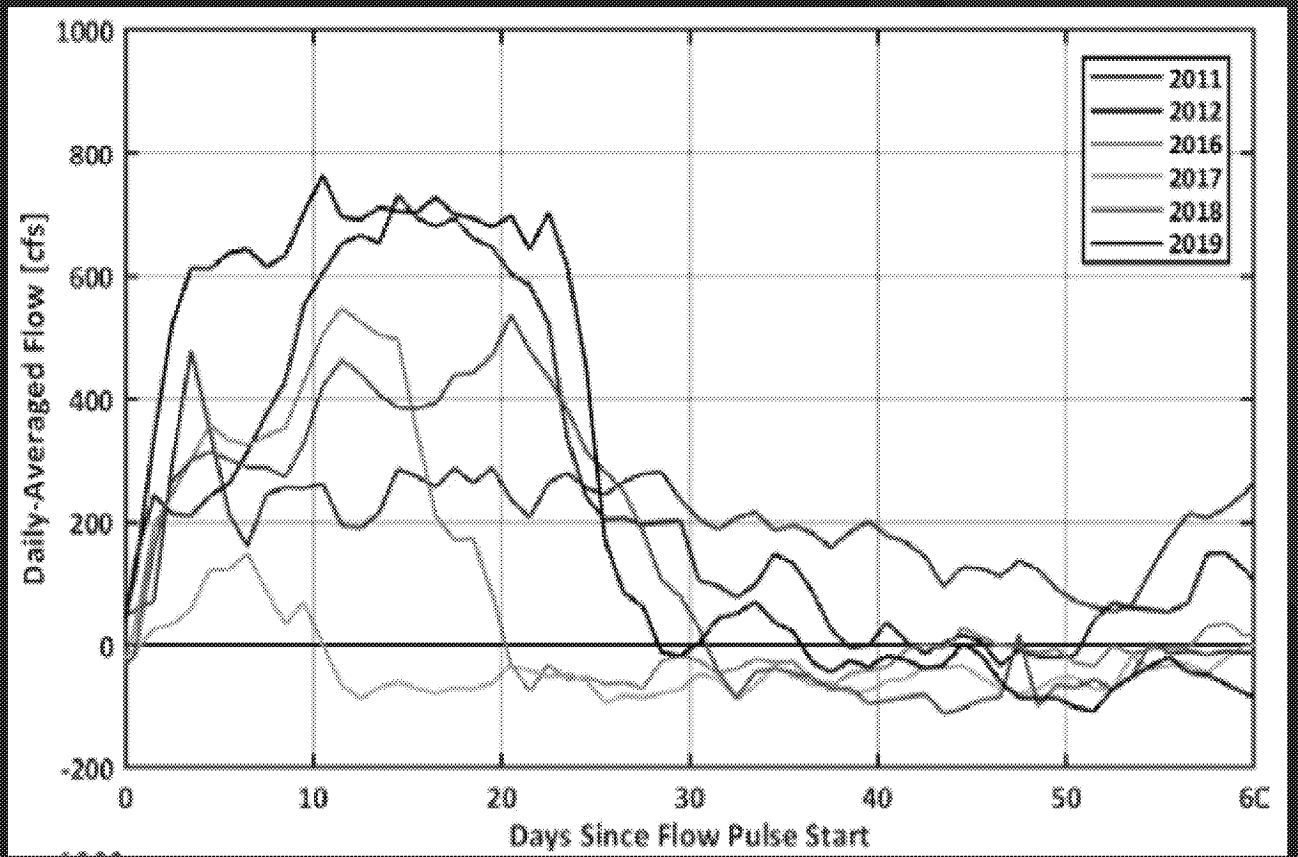
1. Do managed flow actions through the Yolo Bypass increase positive net flow to the Cache Slough Complex and lower Sacramento River?
2. How do levels of water quality, chlorophyll, phytoplankton, and zooplankton change before, during, and after summer-fall flow pulses?
3. How does the type of flow pulse (MA-SR, MA-Ag, non-managed) and antecedent conditions (e.g., hydrology) affect its efficacy?
4. Could pesticides in the flow pulse water affect the food web?

Monitoring Predictions:

Abiotic and Biotic Responses	Non-managed flow pulse		Managed flow pulse	
	Upstream	Downstream	Upstream	Downstream
Habitat Conditions				
Average Daily Net Flow	Increase	Neutral	Increase	Increase
Pesticides	Increase	Neutral	Increase	Increase
Lower Trophic Food Web				
Chlorophyll a	Increase	Neutral	Increase	Increase
Phytoplankton	Increase	Neutral	Increase	Increase
Zooplankton	Increase	Neutral	Increase	Increase

Hydrodynamic Modeling

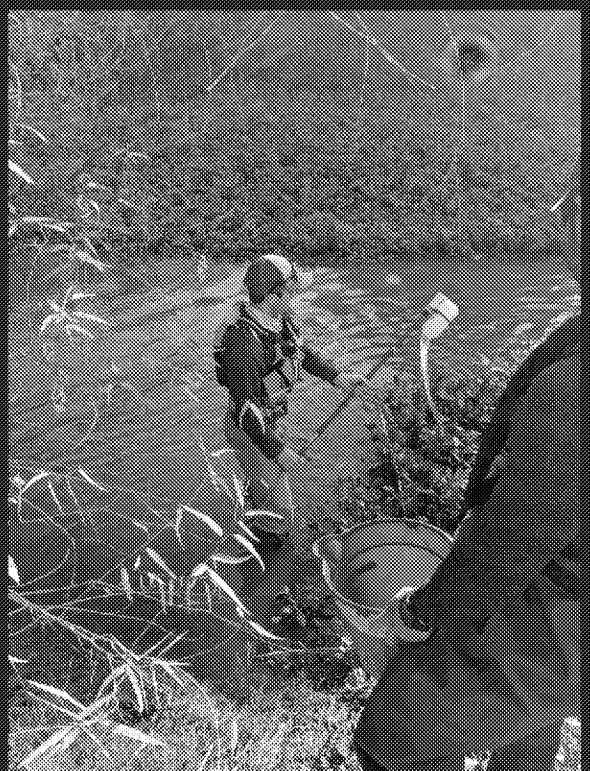
- 3D UNTRIM Bay-Delta model
- Model movement of flow pulse water downstream
- Model water sources downstream before/during/after and with/without the pulse



Daily average flow (cfs) at Lisbon Weir in the Yolo Bypass Toe Drain

Discrete Water Quality and Plankton

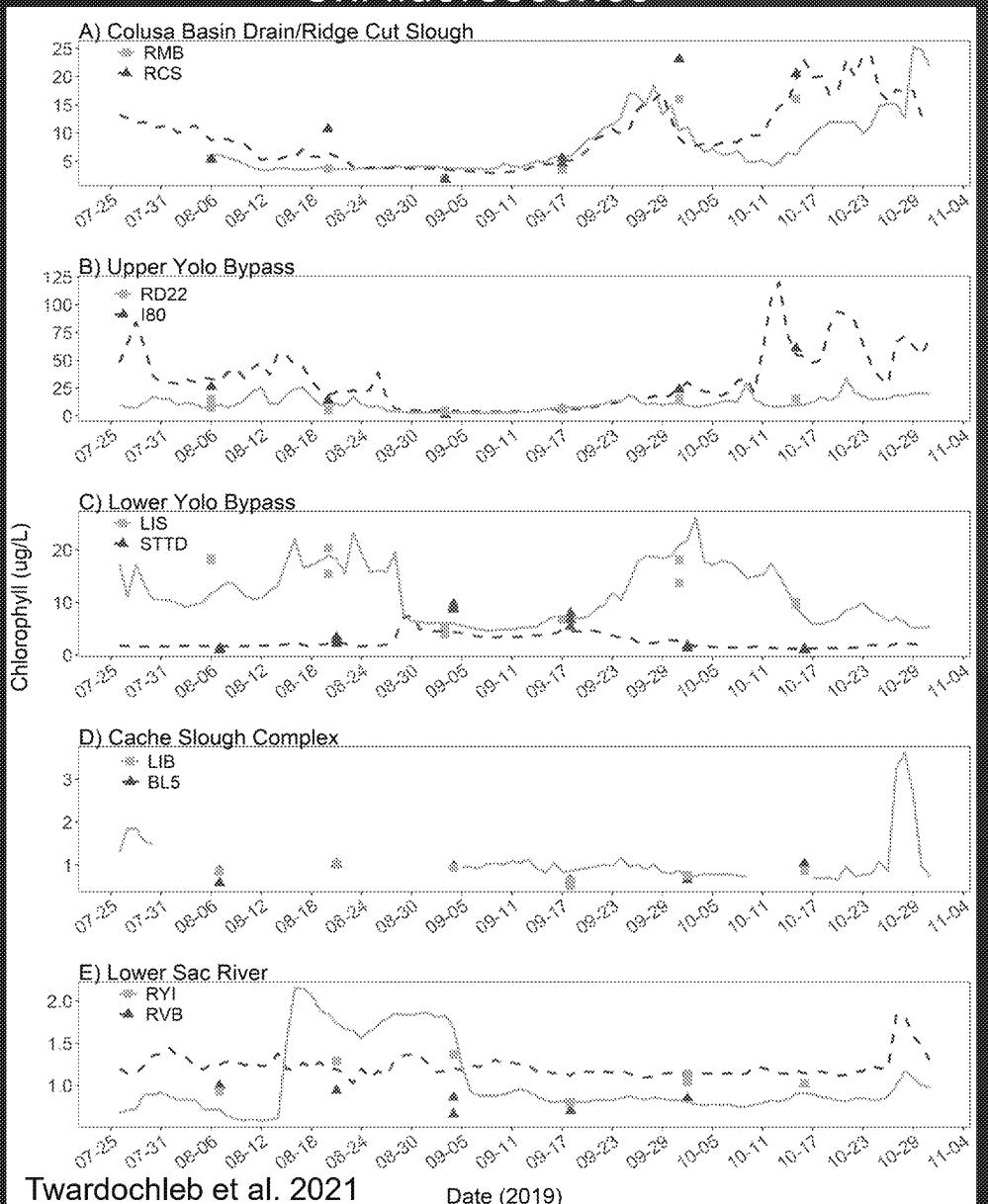
- Physical WQ
- Nutrients
- Phytoplankton biovolume and community composition
- Zooplankton CPUE and community composition



Continuous Water Quality

EXO2 Sondes (DWR NCRO)

Chl fluorescence



Twardochleb et al. 2021

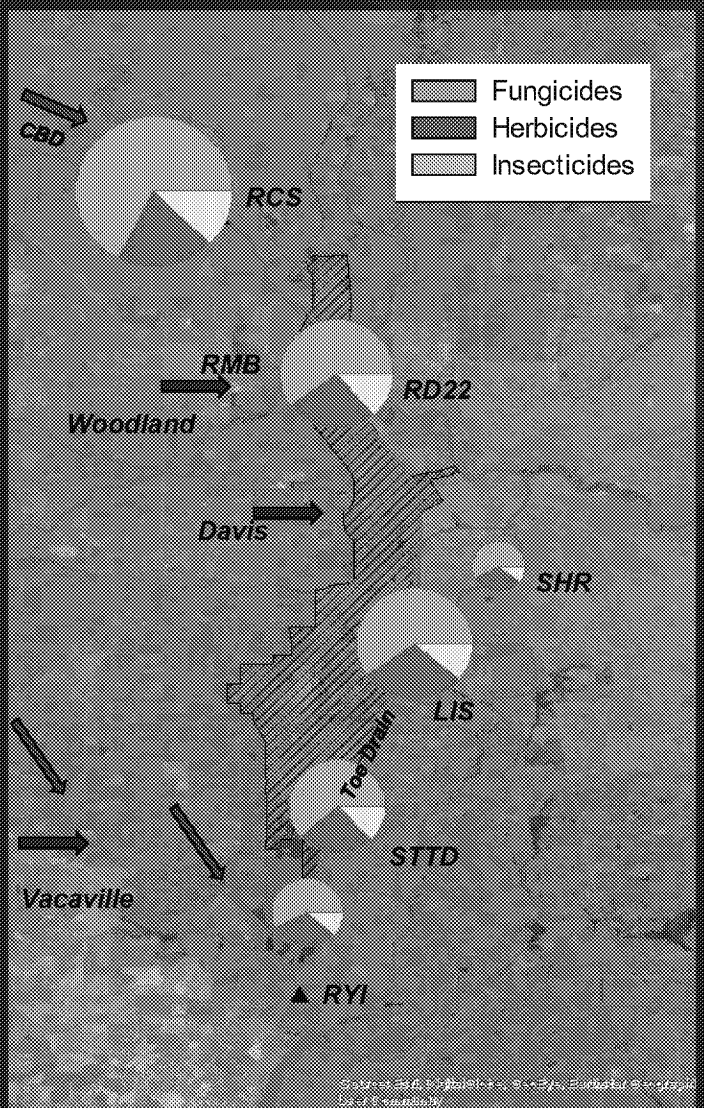
Pesticides in water and zooplankton

How do flow pulses affect pesticides in water and zooplankton?

Does this vary by flow pulse type?

- Surface water grabs
- Live zooplankton (2021 pilot)

Jim Orlando, USGS



Phytoplankton Growth and Nutrient Uptake

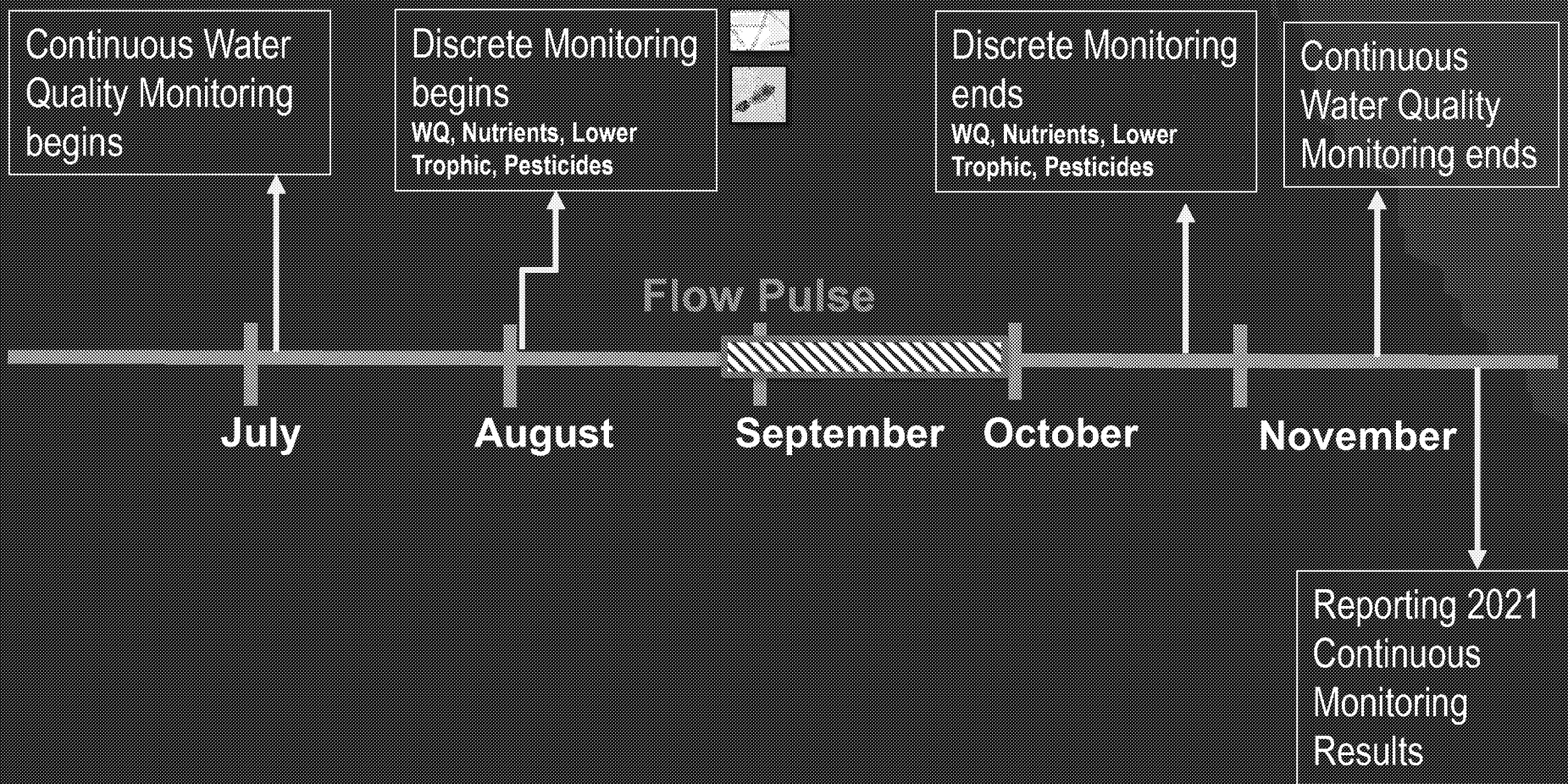
How does the pulse water affect phytoplankton growth?

Phytoplankton enclosure experiments
Frances Wilkerson, SFSU

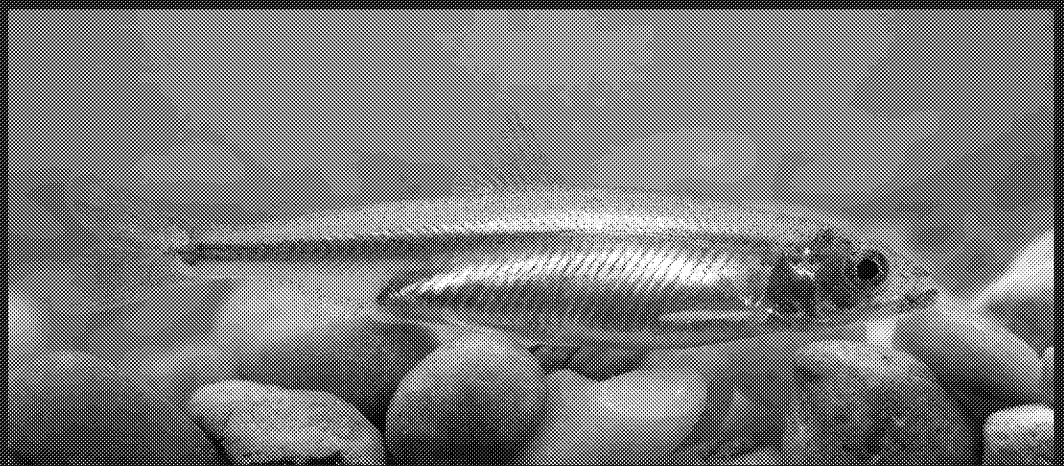
Monitoring Salmonid Catch

- Summary of Salmonid catches, salvage, and mortalities during and after flow pulses
- Temperature and dissolved oxygen thresholds at Lisbon Weir during and after flow pulses
- Data from:
  - CDFW, Wallace Weir Fish Rescue Facility salvage
  - CDFW, beach seine rescue data
  - DWR Yolo Bypass Fish Monitoring Program, fyke trap data
  - Habitat Restoration Program, Yolo Bypass Adult Fall-Run Chinook Salmon Telemetry Study

Timeline for 2021 Monitoring



Questions?



Land Management Committee Meeting Minutes

Date: April 20, 2021 **Location:** Maxwell / Virtual

Time: 2:00pm – 4:00pm

Leader:	Supervisor Gary Evans	**Recorder:**	Conner McDonald

Purpose: Update on activities associated with TRR Design, Emergency Drawdown Modeling, Colusa Basin Drain Modeling, and in-progress project cost estimate

Attendees:

Supervisor Gary Evans (Colusa)
Supervisor Ken Hahn (Glenn)
Jeff Sutton (TCCA)
Logan Dennis (GCID)
Thad Bettner (GCID)
Mike Azevedo (Colusa)
Jerry Brown (Sites)
Kevin Spesert (Sites)
Conner McDonald (HDR)
Henry Luu (HDR)
Pete Rude (Jacobs)
Frans Lambrechtsen (Jacobs)
Duane McClelland (Jacobs)
Kyle Winslow (Jacobs)
Derek Morley (Geosyntec)
Jeff Herrin (AECOM)
Howard Michael (AECOM)
Michael Smith (AECOM)
Michael Forrest (AECOM)

Agenda:

Discussion Topic	Topic Leader	Time Allotted
1. Introductory Remarks	Evans	2 minutes
2. Meeting Minutes and Action Item Follow-Up	Evans	2 minutes
3. Review TRR West Feasibility Design and Cost Estimate • **Requested Action:** Feedback/Direction	Luu	20 minutes
4. Review Updated Emergency Drawdown Preliminary Hydraulic Model • **Requested Action:** Feedback/Direction	Luu	20 minutes
5. Review Updated Colusa Basin Drain Preliminary Hydraulic Model • **Requested Action:** Feedback/Direction	Luu	15 minutes
6. In-Progress Project Cost Estimate Follow-Up • **Requested Action:** Feedback/Direction	Luu	60 minutes
7. Action Items and Closing Comments	Evans	5 minutes

Agenda Item #1 – Introductory Remarks – Supervisor Gary Evans

Meeting called to order at 2:00pm by Supervisor Gary Evans.

Kevin Spesert confirmed Attendees.

Attendees introduced themselves.

Agenda Item #2 – Meeting Minutes & Action Item Follow-Up – Supervisor Gary Evans

Meeting Minutes from prior meeting have been reviewed.

Agenda Item #3 – TRR West Feasibility Design and Cost Estimate – Henry Luu

Henry Luu introduced the topic and advised that progress has been made since the last discussion of this matter.

Pete Rude advised that Feasibility Design is now finished.

Derek Morley presented a recap of the information from the Technical Memo. Feasibility Design has been completed to a greater level of detail. The layout for TRR West is configured in two main components, both located on the west side of the GCID Canal and connected to the canal by the inlet/outlet facility. The pumping-generating plant, and the substation, are on the far western side of the overall feature. The overall location and configuration took into consideration landowner input, and minimization of impact to local land uses.

The overall construction of TRR West would require more earthwork than TRR East but would not require any ground improvement. The pumping-generating plant, switchyard, and liner are the same for both options. The spoils from TRR West may have project uses, and there is greater potential for optimization of the TRR West site – depending on further information, the site may be able to be significantly downsized.

The TRR West option would result in a decreased length, by 2 Miles, of pipeline and electric transmission line.

The overall estimated cost comparison of TRR East versus TRR West is as follows:

TRR East	~$615M
TRR West	~$470M
Differential	~$140M

The differential in estimated cost results from a) decreased pipeline costs for TRR West; and b) decreased transmission line costs for TRR West.

The increased TRR West earthwork costs have been accounted for in the overall estimated cost comparison. The cost analysis does not assign value to the spoils of TRR West excavation, but there may be a value that could be assigned.

Based on the known information, there are improved soil conditions for TRR West, but the site requires significant earthwork. TRR West would be outside of DSOD jurisdiction, as it is excavation only, versus the embankments that would be required for TRR East.

The conceptual TRR is based upon the requirement of 4 Hours of water storage, in the event that the PGP goes down – in such a situation, TRR provides an emergency storage option. This storage requirements is also related to the capacity of the GCID Canal at that location. Discussions with GCID may determine that the size of TRR can be decreased.

The Committee asked if Funks Creek can be used for the emergency storage, as it may be able to accommodate 500 to 1,000 cfs.

Pete Rude advised that such an idea is a possibility but has not been analyzed. He also advised that the 4-Hour emergency storage scenario is considered a worst-case situation.

Pete Rude recommended carrying forward both the TRR East and TRR West options and conducting more geotechnical exploration to confirm assumptions.

Kevin Spesert advised that there has been a significant amount of recent geotechnical exploration already performed in the TRR West area, and the Landowner has been very gracious in accommodating the Project's needs and requests.

Pete Rude advised that the lab data results of the recent geotechnical work will be available in May/June, and he would like additional data at the TRR East location.

Kevin Spesert advised that the private irrigation canal, in the area between the GCID Canal and the proposed TRR West, is used by a local grower, and will need to be perpetuated to serve the existing orchards. There is also an irrigation canal to the west of the proposed TRR West footprint, that provides water from the TCCA Canal to the orchards to the south, and this existing irrigation canal will also need to be perpetuated.

The Project Team advised that, from an economic standpoint, TRR West looks favorable. The layout of TRR West in two portions (bifurcation) minimizes complications with the existing PG&E facilities. The two portions of the TRR West are proposed to be connected by Four 12-Foot-Diameter pipes.

The Committee advised that carrying forward both options in the environmental document is an acceptable approach.

Agenda Item #4 – Review Updated Emergency Drawdown Preliminary Hydraulic Model – Henry Luu

Pete Rude introduced the topic and provided background.

Frans Lambrechtsen provided a report of the recent activities since the last discussion of this item. The Project Team acknowledged the feedback it received from the Committee and has done a significant amount of work to analyze the model. The Team has incorporated high-resolution LiDAR into the modeling; conferred with RD-108 and KSN; included levees, major culverts, bridges, and siphons from the Sites Reservoir to the Yolo Bypass; and re-run the model.

Pete Rude advised that this model assumes a dry day, and that local levees continue to offer designed flood protection.

The Committee advised that rice ground land uses are flooded for six months of the year, as part of customary practice.

The Committee further advised that the current model results look similar to the real-world maps of recent flood events.

Agenda Item #5 – Review Updated Colusa Basin Drain Preliminary Hydraulic Model – Henry Luu

Henry Luu introduced this item, and advised that the Project Team has revisited it, after meeting with RD-108 and local Landowners / Operators at the low elevation along CBD. The Team is now more aware of Landowner operations and considerations with regard to this item; and is looking at operations modeling, and how such modeling interplays with CBD capacity.

The objectives of the Team were to quantify the impacts on water level at River Mile 8.9 based on average seasonal patterns of project flows; and also quantify such impacts using CALSIM Alt 1B.

Kyle Winslow advised that two rating curves were developed at RM 8.9 – one with the gates open at KLOG; and another with the gates closed at KLOG. The gates open scenario is the curve of analysis. At elevation 25.3, there is no modeled impact to the adjacent lands at RM 8.9. At elevation 26.5, there is a modeled impact, but such impact may have the potential for mitigation.

The dry years are modeled as the highest delivery years, on average. There is a need to understand what volume of water is in the CBD without the Project – ambient flow exists without project impacts.

Following the analysis, the Team has determined that there is a significant amount of water that can be moved through the Drain. If needed, mitigation measures at RM 8.9 and RM 7 can further enhance capacity.

Henry Luu advised that there will be ongoing analysis regarding CBD, including discussions with adjacent Landowners; discussions with the Operations Team to determine all options in moving water; and discussions with South of Delta Participants to develop additional detail with regard to demand schedules.

Agenda Item #6 – In-Progress Project Cost Estimate Follow-Up – Henry Luu

Henry Luu introduced this item and advised that there are value engineering design components that can now be incorporated into the current cost estimate, such as re-alignment of Huffmaster Road and elimination of the western bridge span of Sites-Lodoga Road. The cost estimate under discussion uses the TRR East option, so the TRR West cost savings are not yet realized in this current snapshot.

Pete Rude advised that the TRR Funks Conveyance cost estimating has decreased, as there are improved costs on steel pipe.

Jeff Herrin advised that the costs of the 1.3MAF and 1.5 MAF have moved a bit further apart than in the value planning estimate.

Howard Michael advised that the re-alignment of Huffmaster Road has resulted in a decreased road length of 4,000 Feet, and a decreased cost of ~$5M. This re-alignment took into consideration the input of the Committee to align the roadway more closely to the proposed shoreline.

The Sites-Lodoga Road alignment was analyzed, and revised. The roadway length increased by approximately 1,800 Feet, and was placed on more favorable terrain, resulting in a cost reduction of ~$12M. In the roadway alignment analysis, the Team worked to avoid creating any land remnants of less than 40 or 50 Acres.

The Sites-Lodoga Road Causeway was re-designed to eliminate the westerly portion of the bridge, resulting in a cost reduction of ~$13M. The Engineering Team has coordinated with the Environmental Team to evaluate the algal bloom considerations, and it has been determined that the elimination of this span of the bridge does not result in a fatal flaw.

Howard Michael advised that the County data for roadway construction was a good check to the engineering estimating of roadway cost.

Mike Forrest reported on the cost estimating with regard to the dams and advised that the future construction contractor will likely select quarries for material, and enter into agreement(s) with quarry operator(s), becoming responsible for the materials and process. A measurement of material quality will be performed by DSOD for the dam material.

For road aggregate base, there is no DSOD standard to meet.

Jeff Herrin advised that it is customary for the contractor to select quarries, not just based on price, but based upon production rate of a consistent supply, pursuant to construction needs. There are two types of material needs to be considered – rock fill / random fill: and sand and gravel. For rock fill / random fill, the nearest source is preferred to avoid hauling. A contractor may partner with a local Landowner to develop the quarry. On-site quarries are considered in the environmental document.

With regard to sand and gravel, such material is often delivered from a commercial quarry. AECOM has performed a cursory survey of commercial quarries in the area and requested information from them. Many quarries have not been responsive. The closest quarries are not necessarily the best fit for the project.

With regard to the potential benefit of using excess materials from the construction of the TRR facilities, Mike Forrest reported that there may be the opportunity for use in road prisms, or portions of the reservoir. With

regard to the cost comparison for foundation prep, the increased costs were mostly related to Saddle Dam 5.

Mike Forrest further advised that the double-handling of materials sometimes results from the need to pre-haul material, and place in a surge pile, for later use.

Mike Forrest advised that quarries are a significant unknown and will prove out with additional geotechnical exploration.

Supervisor Gary Evans advised the Project Team that if additional geotechnical exploration is needed, the Project Team should provide the information regarding exploration to him as soon as possible, as Supervisor Evans and the Real Estate Team need significant lead time to seek the land permissions that would be prerequisite to geotechnical explorations.

The Project Team advised that it would provide geotechnical needs information as soon as possible.

The Project Team further advised that value planning continues.

Agenda Item #8 – Action Items and Closing Comments – Supervisor Gary Evans

The Committee requested the Project Team to explore assigning value to the spoils of the proposed TRR West.

The Committee requested that any geotechnical exploration needs be provided as soon as possible.

The meeting was adjourned at 4:15pm.

Preliminary Planning for Design-Level Investigations Amendment 3

July 2021

Sites

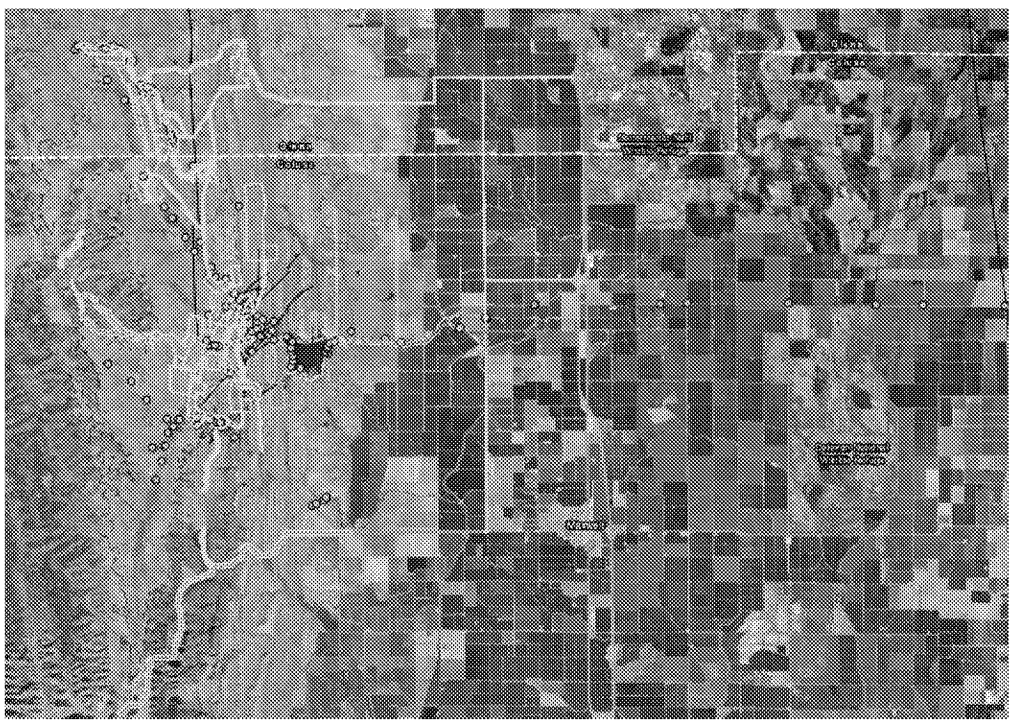
Draft – Pre-decisional Working Document – For Discussion Purposes Only

Studies Completed to Date

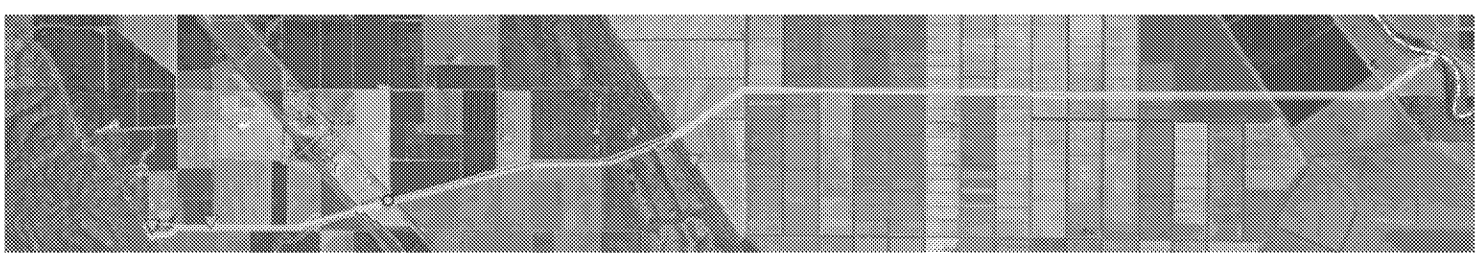
Objectives of Historic Data Gathering Efforts

- To support Engineering Feasibility Studies
  - ❑ Sufficient to support concept assessments and preliminary alternative evaluations.
  - ❑ Sufficient to develop preliminary construction cost estimates.
  - ❑ Sufficient to identify scope for future design-level investigations.
- Insufficient to:
  - ❑ complete engineering analysis and designs.
  - ❑ garner regulatory acceptance of designs.
  - ❑ refine construction cost estimates.

Historic Field Investigations



- In areas of dams, saddle dams, and dikes.
- Along proposed TRR and Delevan area conveyance pipelines.
- In areas of proposed TRR/Fletcher reservoir features.
- Along proposed Dunnigan conveyance pipeline

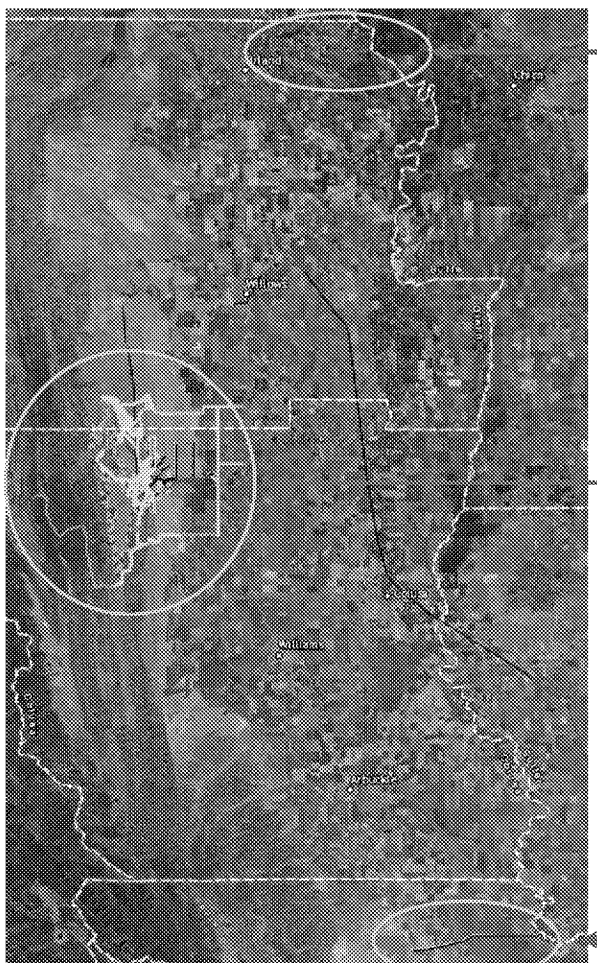


Proposed Design-Level Field Investigations

Objectives of Design-Level Field Investigations

- To support engineering design of all project elements.
- To support development of a refined construction cost estimates.
- To facilitate development of construction drawings.
- Sufficient to address all jurisdictional concerns (flood control agency, USACE).
- Sufficient to garner acceptance and permitting of design elements (DSOD and building departments).

Field Investigation Areas



GCID Headworks – Glenn County, north of Hamilton City

Sites Reservoir Dams and TRR Facilities, Road Improvements, Colusa and Glenn Counties

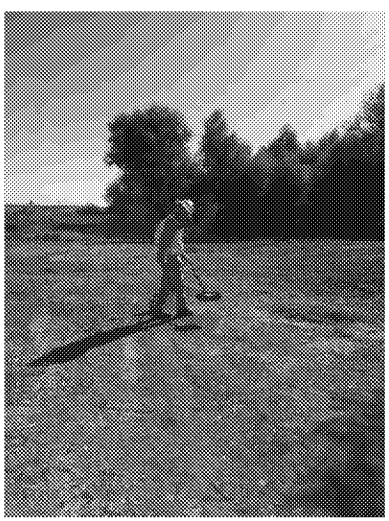
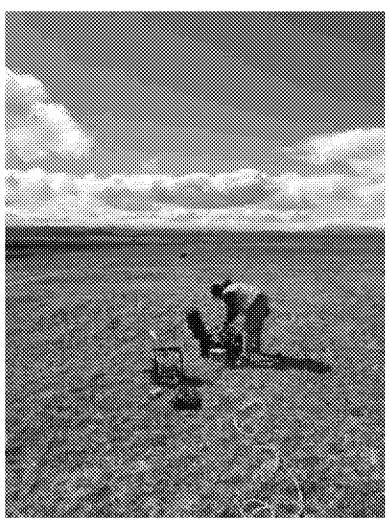
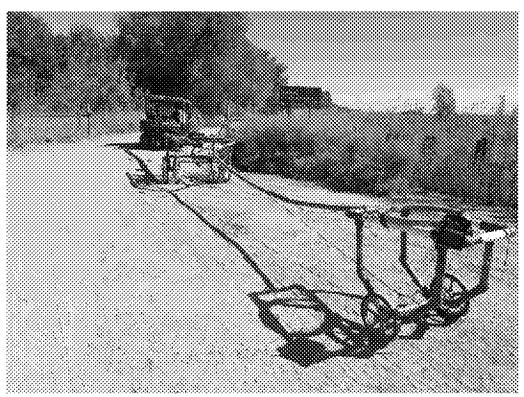
Dunnigan Pipeline to CBD/Sac River, Yolo County

Types of Disturbance to be Expected

- Geologic Mapping and Reconnaissance - Pedestrian Surveys.
  - ✓ Value-added – increased understanding of topographic features and surficial geologic expressions such as stratigraphy in drainages and cuts.

Types of Disturbance to be Expected

- Utility Locating and Screening – Pedestrian Surveys with hand-held equipment.
  - ✓ Value-added – Jobsite hazard assessment.
- Surficial Geophysics – light equipment and net of sensors placed on the ground in survey area which is moved to cover area of concern.
  - ✓ Value-added – less invasive tools able to cover more area between borings and CPTs. Can be used to screen areas for buried changes in subsurface conditions.

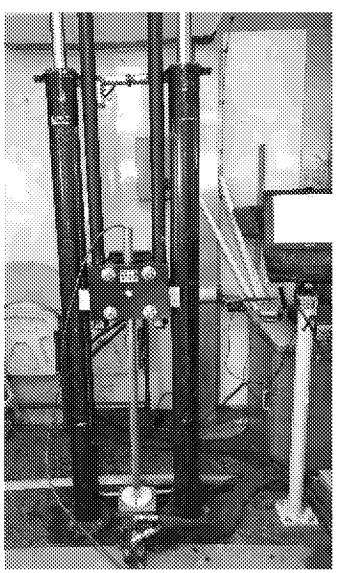
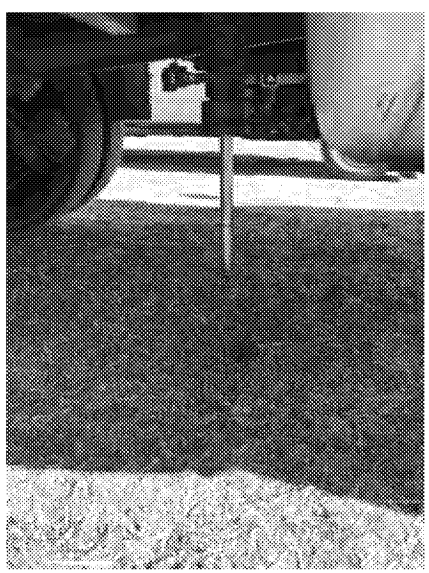
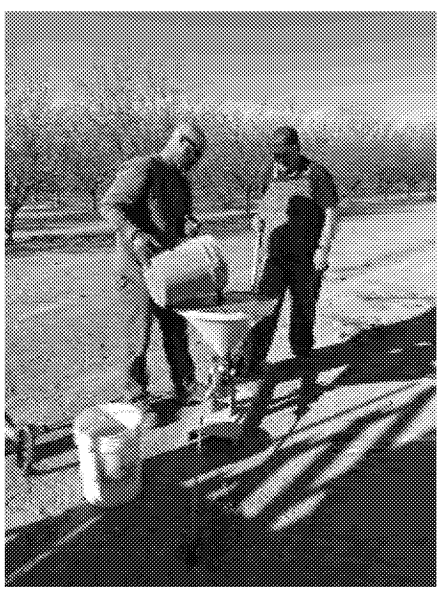




Types of Disturbance to be Expected

- Borings –1 to 7 field days depending on data needed, with equipment and vehicles covering 500 to 2000 sq ft footprints.
- Deeper borings will have multiple passes with various probes and sensors after sample collection.
  - ✓ Value-added, sample collection for laboratory testing, stratigraphy logging.

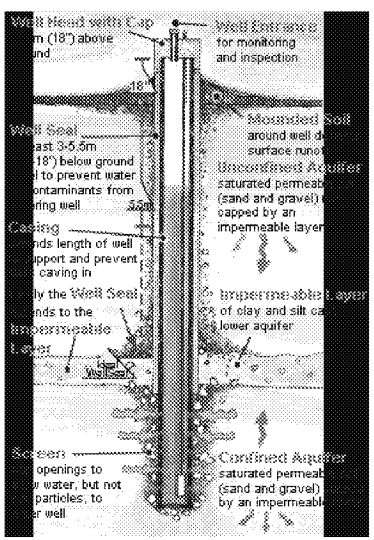
Types of Disturbance to be Expected

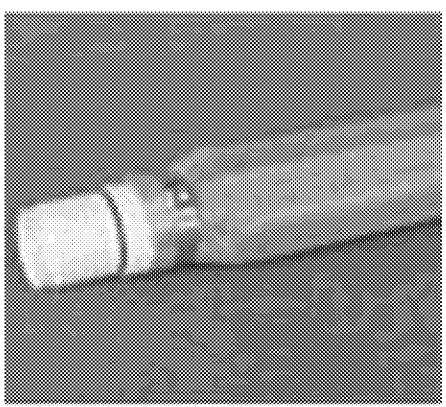
- CPTs – 1-2 days at each location, with equipment and vehicles covering 500 sq ft footprints.
  - ✓ Value-added – less invasive than borings, faster production rates for stratigraphy, and soil response characterization, great when you need more definition on soft soil behavior.

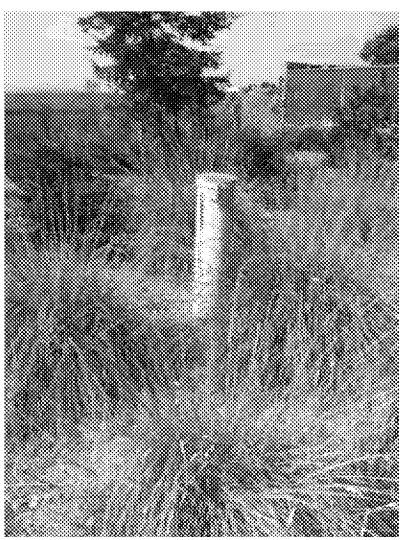




Types of Disturbance to be Expected

- Piezometers – improvement and instrumentation left in place temporarily up to construction or beyond.
- Water Level Monitoring – periodic data collection.
  - ✓ Value-added – provides trend analysis of water level fluctuation in areas where groundwater management is required during construction.







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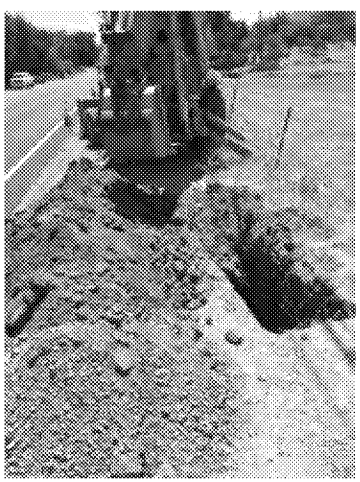
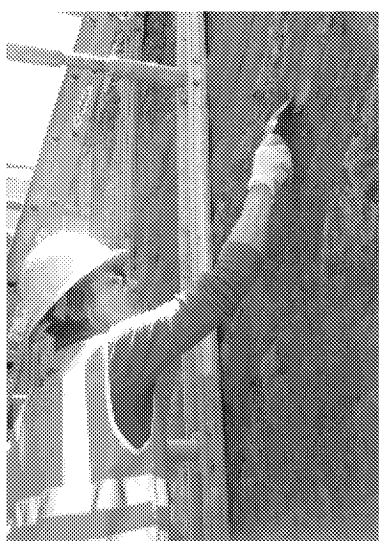
Types of Disturbance to be Expected

- Test Pits, 10-18 feet deep, sides sloped back 2:1, can be completed and backfilled in a day.
- Fault Trenches, trench shores installed to keep staff safe while observing geologic stratigraphy and evidence of faulting, left open several days to weeks, access restriction required.
- Dozer Trenches, minimize work areas to what can be opened and backfilled on a given day.
  - ✓ Value-added – there is nothing better than being able to explore an area by open cutting it. Increased visualization of subsurface conditions. Build understanding of variations.
- Test Fill Construction
  - ✓ Value-added – provides the ability to observe and create a mini dam shell and core out of existing materials. Able to try different means and methods on a pilot scale.





Proposed Design-Level Field Investigation

Design Investigations are an Iterative Process with Numerous Constraints

- **Collect data only when right of access is secured and environmental permitting allows.**

- Collect data to inform various design levels.
  - ❑ Collect data to inform non-jurisdictional features (roads, bridges, PGPs, conveyances, reservoirs, headworks).

  - ❑ Collect data to inform jurisdictional features (dams, saddle dams, saddle dikes) and material borrow areas.

- Collect data to support advancing engineering to 65% design level to meet permitting requirements.

Proposed Design-Level Field Investigation

First 18 months of Amendment 3

- Limited data collection in public right of ways or where access is available.
- Limited data collection to support advancing engineering to 65% design level to meet permitting requirements.

Second 18 months of Amendment 3

- Collect data needed for overall 30% design level.

Proposed Design-Level Field Investigation

Glenn County - GCID Headworks
North of Montgomery Avenue Bridge

Proposed field investigation at proposed structure end points to include:

- Geologic Reconnaissance and Borings

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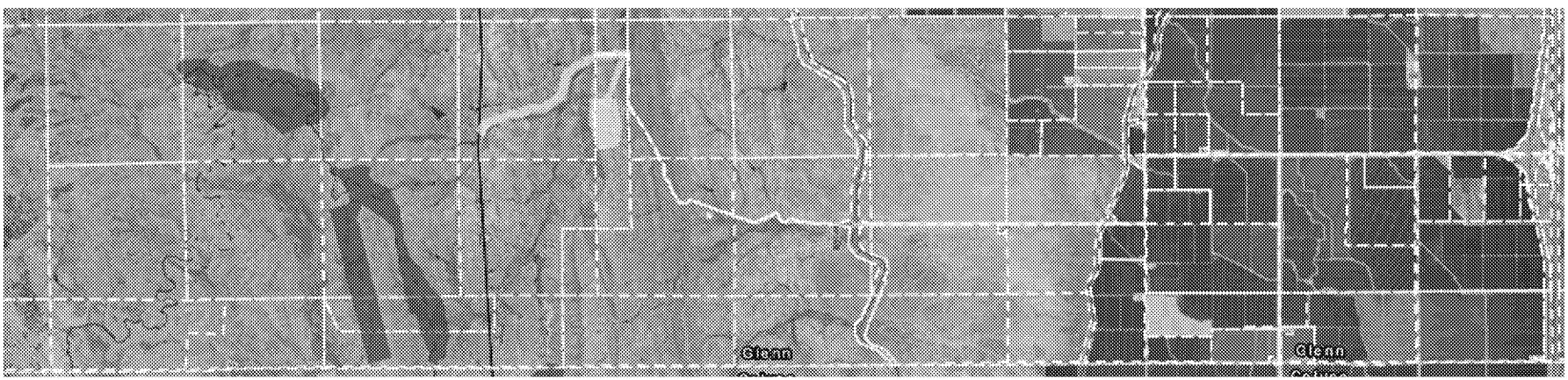
Proposed Design-Level Field Investigation

Glenn County – North and East of Sites Reservoir
East of Road 68 Exit off I-5.



Proposed investigation along reservoir ridge, saddle dams and dikes, quarry areas, and service roads to include:

Low to High Density of Geologic Mapping, Surficial Geophysics, Borings, CPTs, Test pits, Piezometers, Fault Trenching, and Dozer Trenching

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Proposed Design-Level Field Investigation

Colusa County –Sites Reservoir Area to Funks

Proposed investigation along reservoir ridge, dams, saddle dams and dikes, quarry areas, borrow areas, structures, and service roads to include:

Moderate to High Density of Geologic Mapping, Surficial Geophysics, Borings, CPTs, Test pits, Piezometers, Fault Trenching, Dozer Trenching, and Test Fill Construction

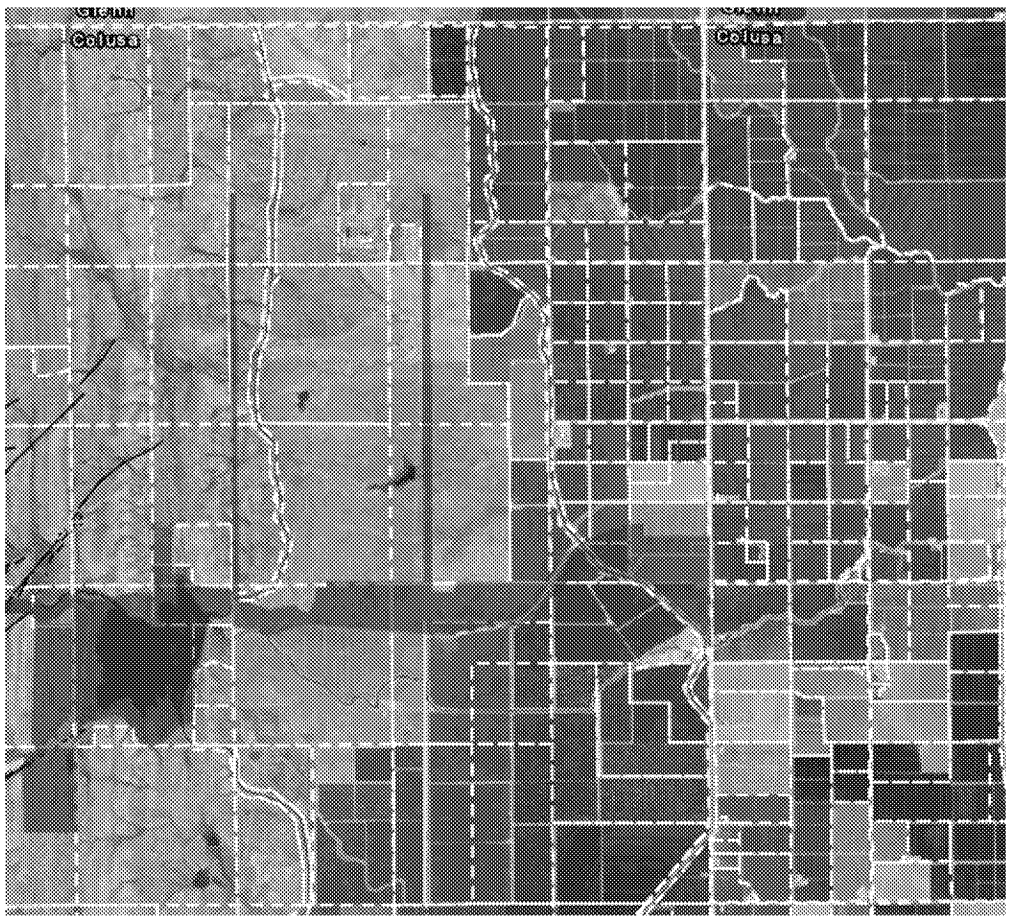
Proposed Design-Level Field Investigation

Colusa County - Funks and TRR Areas, McDermott Road and Delevan Road Exit off I-5.

Proposed investigation along pipeline alignment, transmission line towers, reservoirs, service roads, material processing areas and structures to include:

High Density of Borings and CPTs

Low to Moderate Density of Piezometers, Test pits, Trenches, Geologic Mapping and Surficial Geophysics



Proposed Design-Level Field Investigation

Colusa County –East of Sites Reservoir and South of TRR GCID and TCC and Maxwell Sites Road

Proposed investigation along access and service roads to include:

Moderate to High Density of Geologic Mapping and Borings

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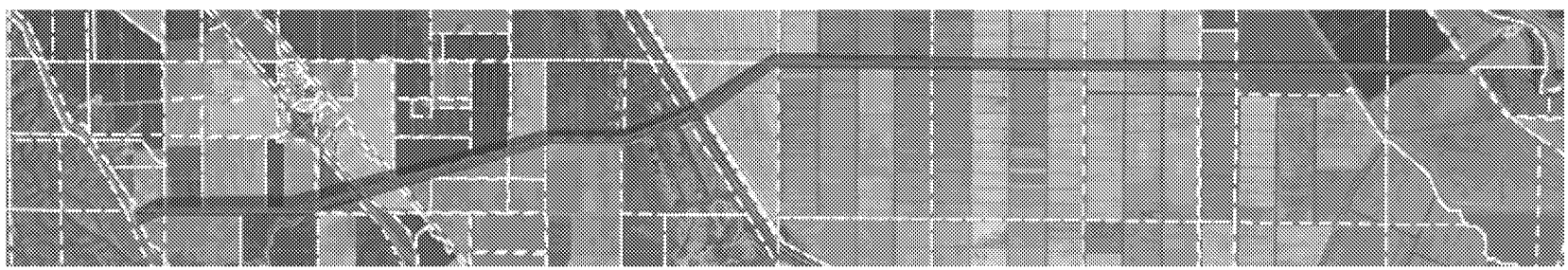
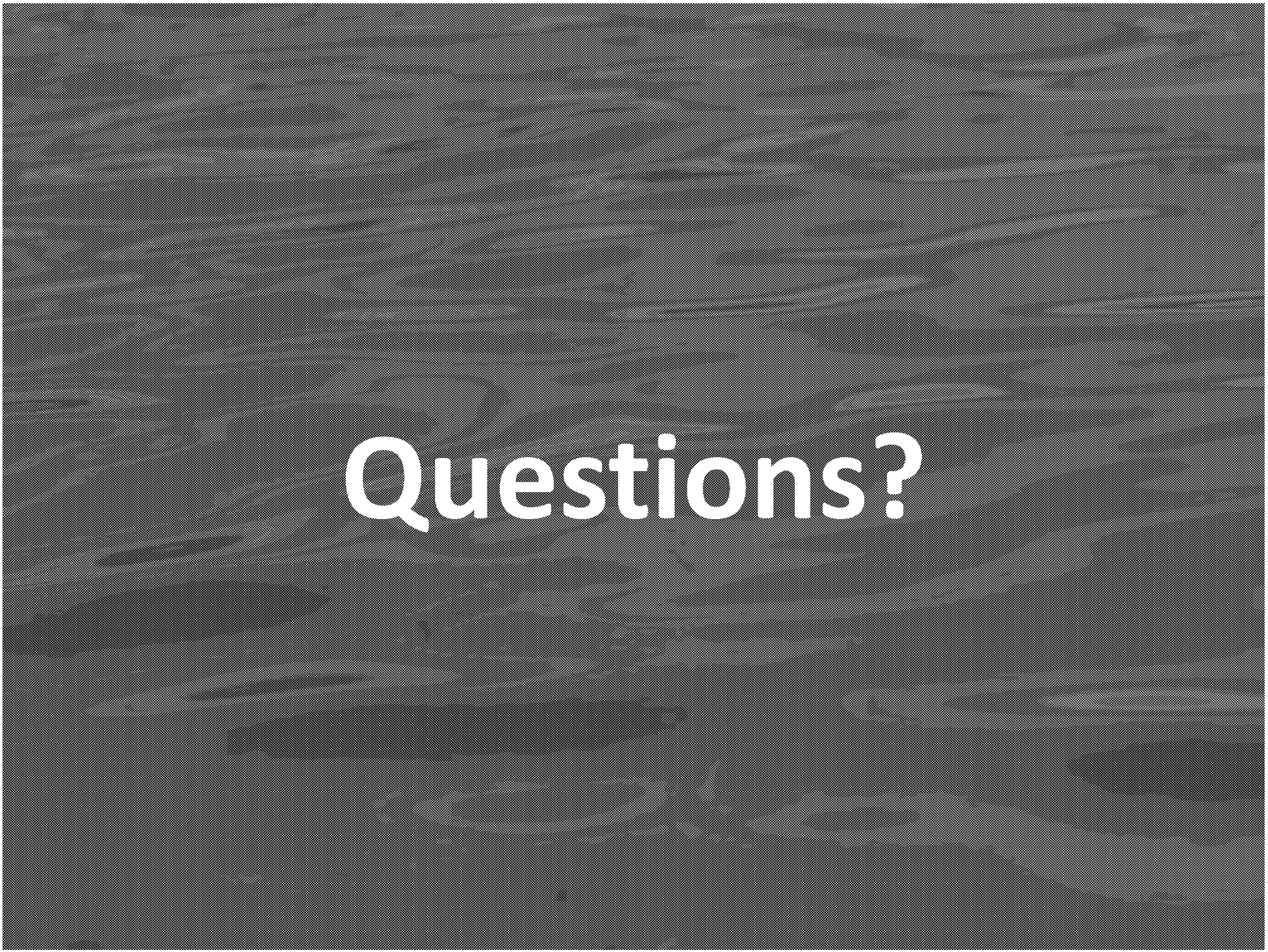
Proposed Design-Level Field Investigation

Yolo County - Dunnigan Pipeline Alignment and Structures
TCC, CBD and Sacramento River



Proposed investigation along pipeline alignment and at new structures to include:

Moderate to High Density of Geologic Mapping, Borings, CPTs, Test pits, and Piezometers


Questions?

Sites

From: Janis Offermann [janis@horizonh2o.com]
Sent: 7/9/2021 11:28:43 AM
To: wintu.tribe1@gmail.com
CC: Kevin Spesert [kspesert@sitesproject.org]; Alicia Forsythe [aforsythe@sitesproject.org]
Subject: Sites Reservoir Project - Notification of Proposed Project for the Purposes of CEQA Analysis
Attachments: 02-01 Posting RDEIR-SDEIS Project Description (1).pdf; 20210615_Outreach_Letter_Rickard_Wintu.pdf

Dear Honorable Chairperson Rickard,

I am writing on behalf of the Sites Project Authority, who attempted to mail the attached letter to you last month; unfortunately it was returned as "unable to deliver" and we apologize in the delay in getting it to you. The Authority welcomes your input on the Sites Reservoir Project and the Authority's evaluation of tribal cultural resources under CEQA. If you have any comments, please reach out to Kevin Spesert, Sites Project Authority External Affairs Manager, per his contact information listed below.

Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
Email: kspesert@sitesproject.org

Thank you for your time,

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

Sites

Topic: **Reservoir Committee Meeting Agenda Item 2.1** **2021 January 21**

Subject: **Posting RDEIR/SDEIS Project Description**

Requested Action:

Approve release of the RDEIR/SDEIS Project Description (with Operations) to regulatory agencies and interested parties, including posting on the Authority's website, to improve Project transparency and facilitate more detailed Project discussions.

Detailed Description/Background:

At the Reservoir Committee and Board meetings in June, September and December 2020, staff provided an overview of the alternatives under consideration for the Revised Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS). Staff has continued to refine the alternatives and, with the consulting team, is nearing completion of a draft of the RDEIR/SDEIS project description.

The project description comprises Chapter 2 of the RDEIR/SDEIS. The project description includes a summary overview of the alternatives screening and selection process, an overview of the action alternatives and the no action alternative along with a detailed description for each of the three action alternatives. Also included in the project description are best management practices and environmental commitments that would be implemented under all the alternatives.

The project description continues to include three alternatives as discussed with the Reservoir Committee and Board in prior meetings. Table 1 provides a high-level summary of the three alternatives. Attachment A provides a more expansive summary table of the alternatives. The key changes to the alternatives that have been made since the previous presentations to the Reservoir Committee and Board are as follows:

- Hydropower – All alternatives include power generation incidental upon release up to 40 megawatts at Funks Reservoir and up to 40 megawatts at the Terminal Regulating Reservoir. Staff has conferred with staff at the Federal Energy Regulatory Commission (FERC) and believes that incidental power generation at these two separate facilities would qualify for separate FERC exemptions. With this generation capacity built into the Project, power consumption for Project operations will be partially self-generated renewable energy. It is expected that the remaining operating power needs will be met with renewable sources to ensure no net increase in greenhouse gas emissions from the operations of the Project.

- Regulatory Required Emergency Drawdown and Release Flows, Alternative 2 – Refinements to emergency drawdown and release locations have been made to Alternative 2. Emergency releases under this alternative would occur at the Inlet/Outlet Works, Sites Dam, and Saddle Dam 8B into Hunters Creek watershed. On net the frequent flood control benefits far outweigh the very low risk of infrequent, if ever, emergency releases. To improve understanding of the risk and the potential scale of these rare emergency events, an inundation review encompassing the potential release areas will be conducted.

- Stored water Release Location, Alternative 3 – The release location for Alternative 3 will be the Colusa Basin Drain as it was determined that the Colusa Basin Drain likely has sufficient capacity to handle the flows.

- Diversion Criteria and More Detailed Operations Criteria – Diversion criteria were refined, and more detailed operations criteria were added to all the alternatives. The team conducted an extensive analysis of different possible diversion criteria, including an extensive review of the current scientific literature. Through these efforts, the diversion criteria have been shifted upstream into the Sacramento River to allow for practical operations at the diversion locations. Additional pulse protections to protect migrating juvenile salmonids have also been added. While the species effects analysis and modeling is being completed in January and February, the team believes that the revised diversion criteria are more protective of migrating juvenile salmonids throughout the Sacramento River and Delta and also result in little changes in Sacramento River flows in downstream locations, such as Freeport, and little changes to Delta flows, including net Delta outflow index and Delta salinity. The team will be sharing the outcomes of the species effects analyses in the coming months.

Table 1. Summary of the Alternatives In the RDEIR/SDEIS Project Description

Facilities / Operations	Alternative 1	Alternative 2	Alternative 3
Reservoir Size	1.5 MAF	1.3 MAF	1.5 MAF
Hydropower	Incidental upon release	Same as Alt 1	Same as Alt 1
Diversion Locations	Red Bluff Pumping Plant and Hamilton City	Same as Alt 1	Same as Alt 1
Conveyance Release / Dunnigan Release	1,000 cubic feet per second (cfs) into new Dunnigan Pipeline to Colusa Basin Drain	1,000 cfs into new Dunnigan Pipeline to Sacramento River. Partial release into the Colusa Basin Drain	Same as Alt 1
Reclamation Involvement	1. Funding Partner 2. Operational Exchanges a. Within Year Exchanges b. Real-time Exchanges	Operational Exchanges a. Within Year Exchanges b. Real-time Exchanges	Same as Alt 1, Funding Partner up to 25% investment
DWR Involvement	Operational Exchanges with Oroville and use of SWP facilities South-of-Delta	Same as Alt 1	Same as Alt 1
Route to West Side of Reservoir	Bridge across reservoir	Paved road around southern end of reservoir	Same as Alt 1

The project description identifies Alternative 1 as the Authority's proposed project based on the alternative meeting the intent and the goals of the Value Planning effort, its close alignment with VP-7, and its ability to meet the project objectives.

Staff recommends posting the RDEIR/SDEIS project description on the Authority's website. The project description would be posted for informational purposes to aide in the discussion of permitting approaches with regulatory agencies and in discussions with non-governmental organizations. It is important to note that the Authority is not taking public comments nor responding to comments on the project description and a preamble to the project description would make this clear to the reader. Making the project description available to the public increases transparency and provides a common foundation for regulatory agencies, non-governmental agencies, and other interested stakeholders to understand the project components. Refinements would continue to be made to the project description after posting on the Authority's website until the release of the RDEIR/SDEIS and any significant or material changes would be brought back to the Reservoir Committee and Authority Board for consideration before the change is made.

Prior Action:

December 18, 2020: Reviewed and commented on option to add Alternative 3 with Reclamation at 25% investment to EIR/EIS project description.

September 17, 2020: Approved to designate Alternative 1, based on VP-7 of the Sites Project Value Planning Alternatives Appraisal Report (Value Planning Report), as the Authority's preferred project for the purposes of the RDEIR analysis and for the purposes of the Biological Assessment and State Incidental Take Permit applications.

April 22, 2020: The Authority directed staff to revise and recirculate a Draft EIR to analyze the environmental effects of the options identified in the Final Sites Project Value Planning Alternatives Appraisal Report dated April 2020, including VP7.

April 22, 2020: The Authority accepted: the final report titled "Sites Project Value Planning Alternatives Appraisal Report, dated April 13, 2020" and the recommendations presented within, and a recommendation to the Sites Project Authority to approve the final report titled "Sites Project Value Planning Alternatives Appraisal Report, April 13, 2020" and the recommendations presented within.

February 26, 2020: The Authority approved a recommendation to re-start efforts on the EIR for the Sites Reservoir Project and assess the most appropriate approach for completing the EIR pursuant to the California Environmental Quality Act.

July 20, 2017: The Reservoir Committee approved a recommendation to forward the Draft EIR/EIS to the Authority Board for its consideration to formally receive and adopt the document for inclusion in the Authority's Water Storage Investment Project application.

July 31, 2017: The Authority approved the release of the Draft EIR for public and agency review, in connection with the Authority's application to the California Water Commission by August 14, 2017. The document was published as joint Draft EIR/EIS by the Authority under the California Environmental Quality Act and Reclamation under the National Environmental Policy Act.

December 19, 2016: The Authority approved release of a Supplemental Notice of Preparation (released February 2, 2017) to transfer the California Environmental Quality Act lead agency status from the Department of Water Resources to the Sites Project Authority. Public scoping meetings were conducted on February 14 and 15, 2017.

Fiscal Impact/Funding Source:

Staff reported in December that sufficient funds to incorporate Alternative 3 into the RDEIR/SDEIS were included in the Amendment 2 Work Plan (Budget), which was approved by the Authority at its August 26, 2020 Board meeting. Since that time, staff has become aware of additional fisheries analysis and document formatting needs that will be necessary to incorporate Alternative 3 into the RDEIR/SDEIS. Staff is working with ICF to understand these potential costs and will determine how to incorporate these costs into the Amendment 2

Work Plan within existing revenue sources. Staff is also working with Reclamation to include these costs in an amendment to the existing Financial Assistance Agreement that will incorporate a portion of the $13.7 million Federal Appropriation signed into law last month. The February 2021 update to the Reservoir Committee and Authority Board on the Amendment 2 Work Plan (Budget) will reflect these changes and these added costs will not impact the second cash call amount to Reservoir Committee Members.

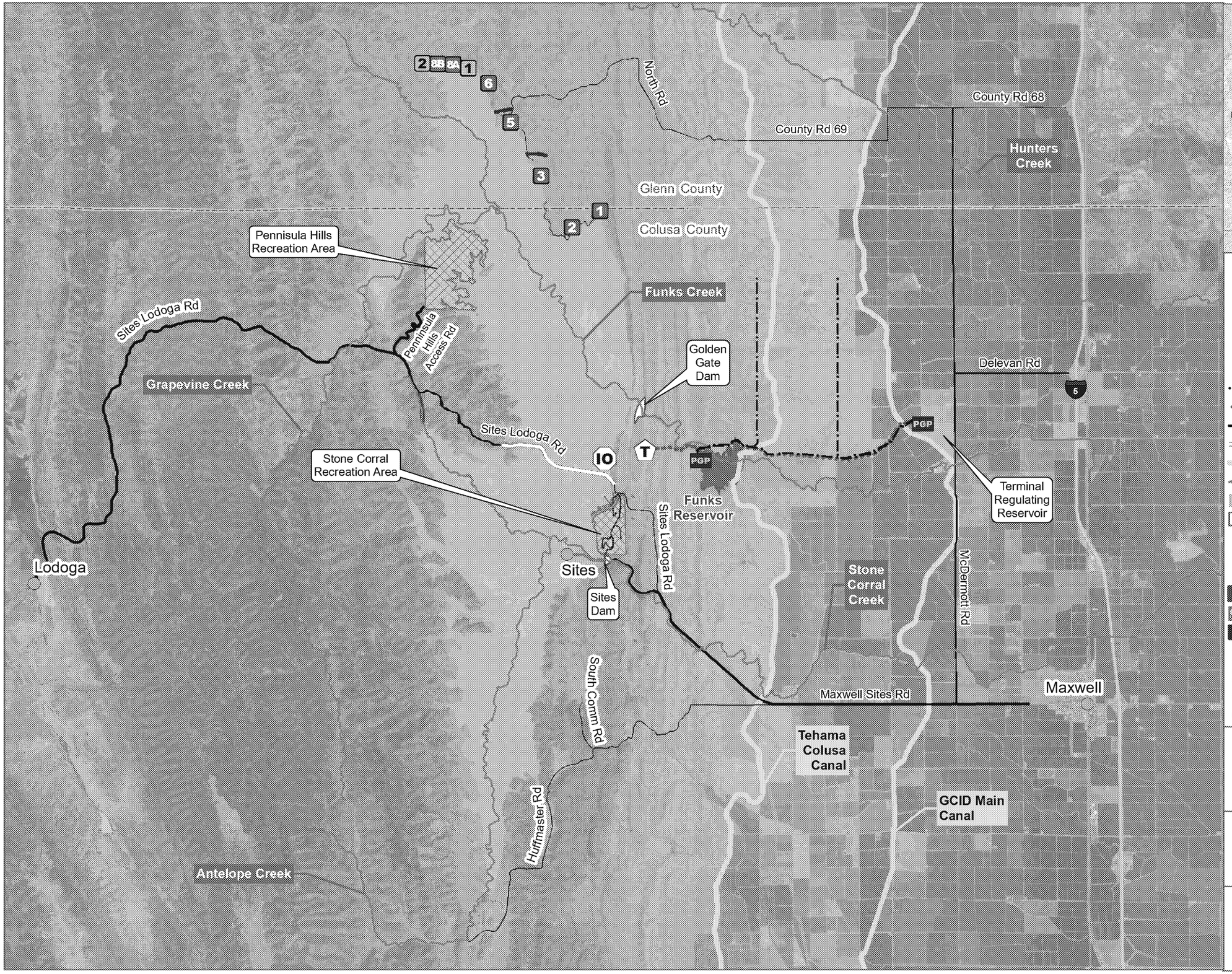
Costs to complete and circulate the Final EIR/EIS will be considered in a future Work Plan.

Staff Contact:

Ali Forsythe

Attachments:

Attachment A – Sites Reservoir Project, Revised Draft EIR/Supplemental Draft EIS Project Alternatives



DATA SOURCES: Inlet/Outlet Tower and PGP - ICF, 2020; City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canal, River and Creek/Slough (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020; Counties - CALFIRE-FRAP, 2019.

DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 12/22/2020

FIGURE 1 (DRAFT)
ALTERNATIVES 1 AND 3
REGULATING RESERVOIRS AND
CONVEYANCE AND
SITES RESERVOIR FACILITIES

N
0 1 2
MILES

Sites

PATH: \\PDCCITRDSGIS1\PROJECTS_1\SITES_PA\00528_20\FIGURES\DOC\EIREIS\1_DEIR\01_ADEIR\CHAPTER2\FIG2-1F_ALT1_REGRESERVOIRS_CONV.MXD - USER: 24991 - DATE: 12/22/2020

Tehama Colusa Canal

Tehama Colusa Intake

Colusa Basin Drain

Colusa Basin Drain Outlet

Tehama Colusa Canal

Ritchie Brothers Auction Yard

Tehama Colusa Intake

Bird Creek

Colusa Basin Drain

Colusa Basin Drain Outlet

5

505

Red Bluff

Sacramento River

Shasta

Lassen

Trinity

Tehama

Plumas

Butte

Glenn

Mendocino

Sierra

Colusa

Yuba

Nevada

Lake

Sutter

Yuba City

Knights Landing

Placer

El Dorado

Yolo

Sonoma

Napa

Sacramento

LEGEND

- City\Town
- Bird Creek
- Dunnigan Underground Pipeline

DATA SOURCES: City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.

DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 12/22/2020

FIGURE 2 (DRAFT)

ALTERNATIVES 1 and 3
CONVEYANCE TO COLUSA BASIN DRAIN COMPONENTS

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0 0.5 1
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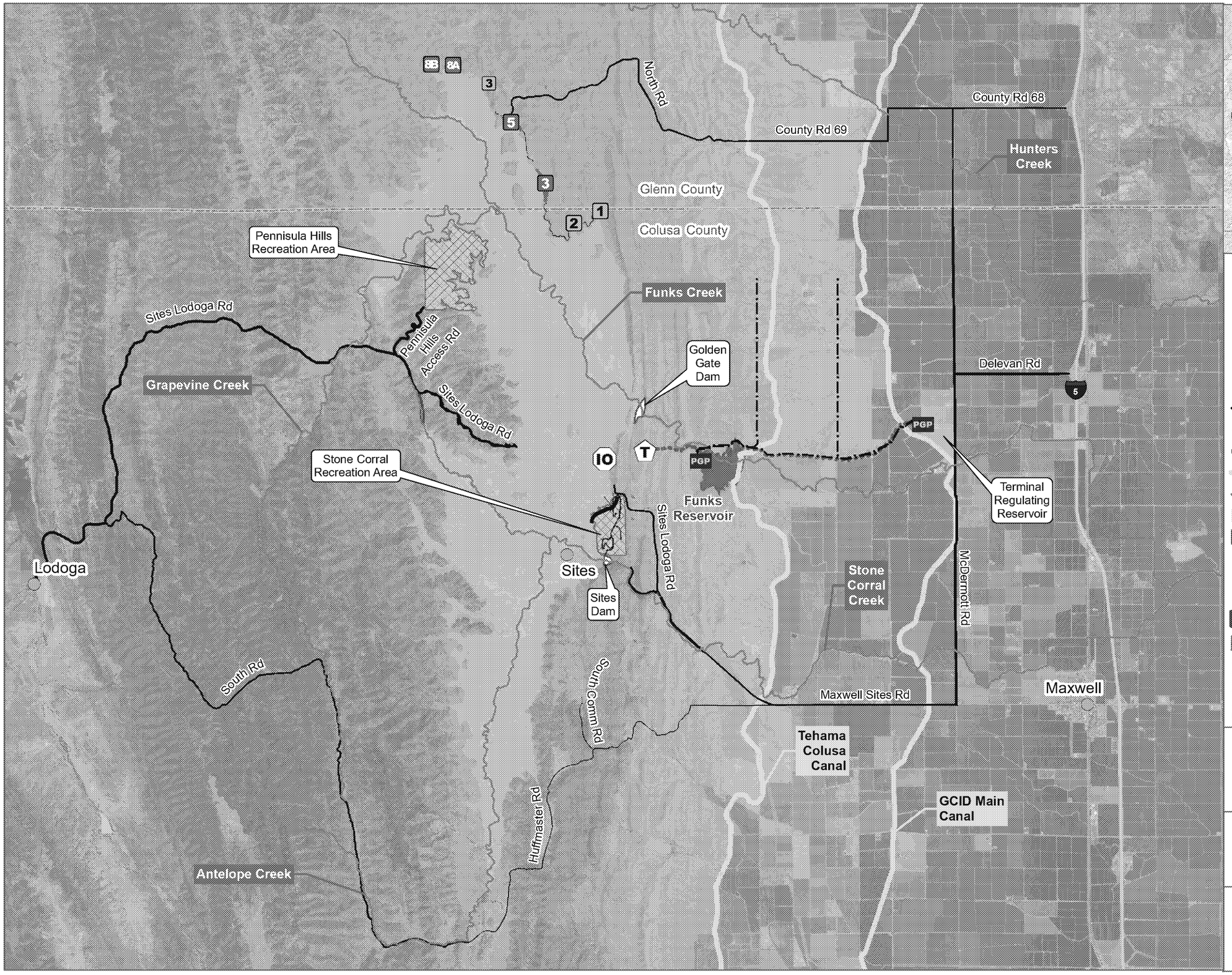

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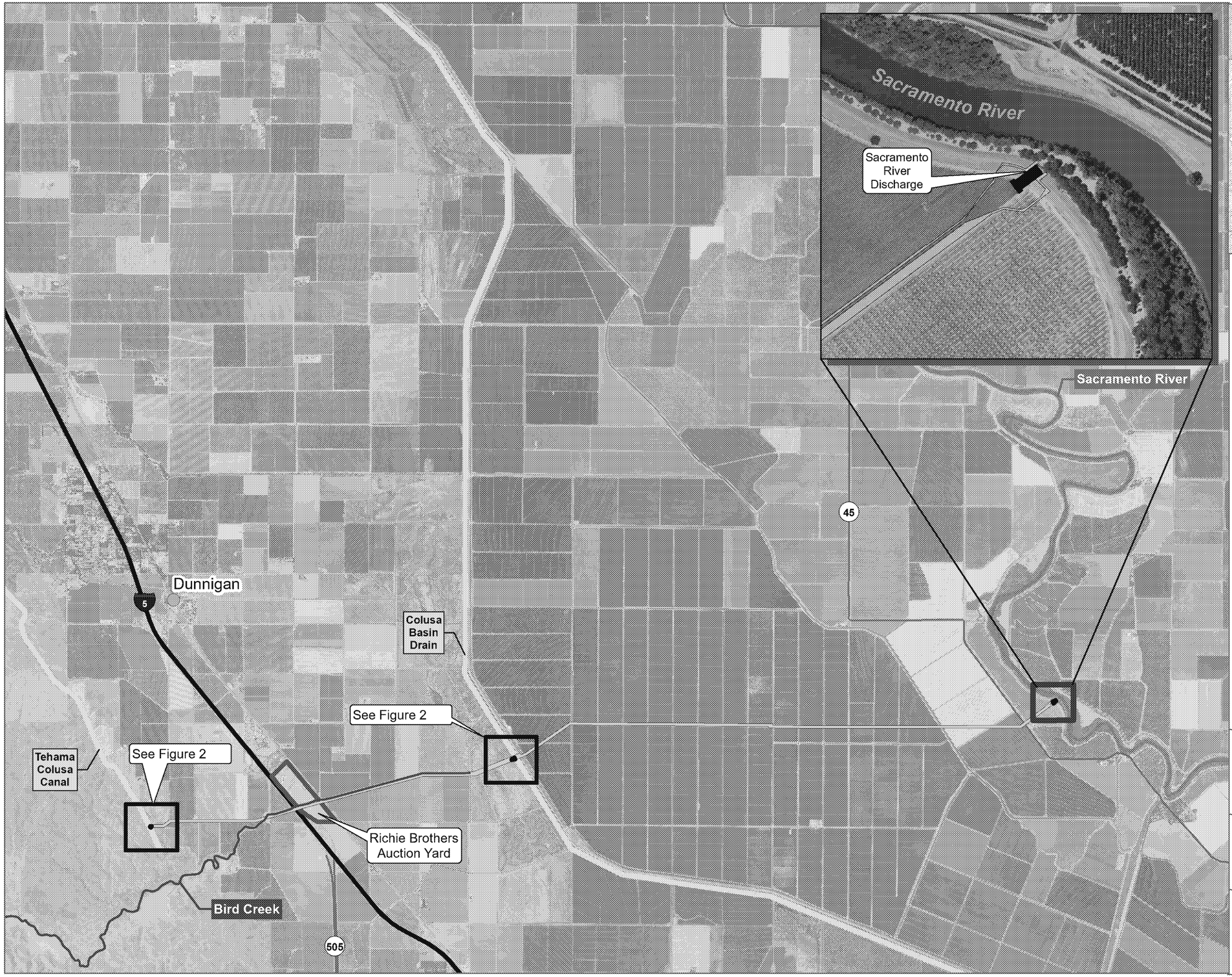

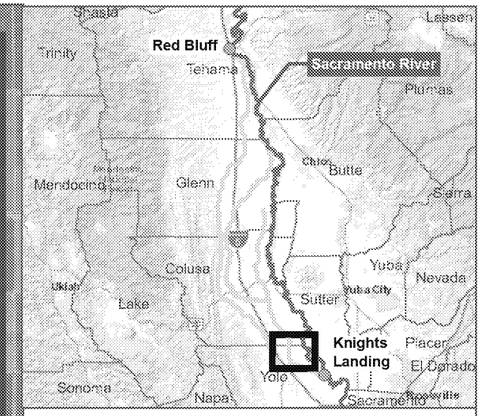

LEGEND

- City\Town
- Bird Creek
- Dunnigan Underground Pipeline

DATA SOURCES: City\Town - GNIS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.

DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 12/22/2020

FIGURE 4 (DRAFT)

ALTERNATIVE 2
CONVEYANCE TO SACRAMENTO
RIVER COMPONENTS

N

0 0.5 1
MILES

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PATH: \\PDCCITRDSGIS1\PROJECTS_1\SITES_PA\00528_20\FIGURES\DOC\EIREIS\1_DEIR\01_ADEIR\CHAPTER2\FIG2-2B_ALT2_CONV_SAC_RIVER.MXD - USER: 19105 - DATE: 12/22/2020

Sites

June 15, 2021

Mr. Gary Rickard, Chairman
Wintu Tribe of Northern California
4755 Shasta Dam Blvd.
Shasta Lake CA 96019

Subject: Notification of Proposed Project for the Purposes of CEQA Analysis

Dear Honorable Chairman Rickard:

The Sites Project Authority is preparing a Revised Draft Environmental Impact Report (RDEIR) for the proposed Sites Reservoir Project, which includes a new off-stream storage reservoir located in Colusa and Glenn counties, California, about 10 miles west of the town of Maxwell. The Authority published a Draft EIR for the Project in 2017. The Authority has since modified the Project, including revisions to the Project footprint, as depicted in the attached staff report on the Project description. For more detailed information regarding the Project, please see the preliminary draft Project description, which can be found at https://3hm5en24txyp2e4cxyxaklbs-wpengine.netdna-ssl.com/wp-content/uploads/2021/02/Sites_Preliminary-Project-Description_20210219.pdf.

The Authority has identified the Wintu Tribe of Northern California as potentially having an interest in this Project and its operations, as revised. The Authority welcomes your input on the Project and the Authority's evaluation of tribal cultural resources under CEQA. If you would like to discuss the Project with us, we respectfully request that you respond, in writing, within 30 days to our designated contact person below, and that you provide a designated contact person for the discussions:

Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
Email: kspesert@sitesproject.org

Sincerely,

Fritz Durst

Fritz Durst, Chair

Notice of Availability of the Draft Environmental Impact Report/Environmental Impact Statement (Draft EIR/EIS) for Sites Reservoir Project, Sites, California

AGENCY: Sites Project Authority

SUMMARY: The Sites Project Authority, as the California Environmental Quality Act (CEQA) State lead agency, and the Bureau of Reclamation (Reclamation), as the National Environmental Policy Act (NEPA) Federal lead agency, have made available for public review and comment the Sites Reservoir Project Draft Environmental Impact Report/Environmental Impact Statement (Draft EIR/EIS). The Draft EIR/EIS describes the environmental effects of the No-Action Alternative and four action alternatives. Two public meetings will be held to receive comments from individuals and organizations on the Draft EIR/EIS.

DATES: The Draft EIR/EIS will be available for public review from August 14, 2017 to November 13, 2017. Submit written comments on the Draft EIR/EIS on or before November 13, 2017.

Two public meetings have been scheduled to receive oral or written comments regarding environmental effects:

- Tuesday, September 26, 2017, 6:00 p.m. to 8:00 p.m., Maxwell, CA
- Thursday, September 28, 2017, 1:00 p.m. to 3:00 p.m., Sacramento, CA

A 1-hour open house to view project information and interact with the project team will take place at the beginning of each public meeting.

ADDRESSES: Send written comments on the Draft EIR/EIS to Mr. Rob Thomson, Sites Project Authority, P.O. Box 517, Maxwell, CA 95955; or Mr. Michael Dietl, Bureau of Reclamation, 2800 Cottage Way, W-2830, Sacramento, CA 95825; or EIR-EIS-Comments@SitesProject.org.

Electronic CD copies of the Draft EIR/EIS may be requested from Sites Project Authority at 530-438-2309, or EIR-EIS-Comments@SitesProject.org. The Draft EIR/EIS is also accessible from the following websites: https://www.sitesproject.org/information/DraftEIR-EIS or https://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=139.

The public meetings will be held at the following locations:

- Maxwell – Sites Project Authority, 122 Old Highway 99 West, Maxwell, CA 95955
- Sacramento – Convention Center: 1400 J Street, Room 306 Sacramento, CA 95814

FOR FURTHER INFORMATION CONTACT: Please contact Mr. Rob Thomson, Sites Project Authority, at 530-438-2309, or via email at EIR-EIS-Comments@SitesProject.org.

SUPPLEMENTARY INFORMATION: The Draft EIR/EIS describes the Sites Reservoir Project, and potential alternatives to the Sites Reservoir Project; environmental setting; potential direct, indirect, and cumulative impacts that could result from implementation of each of the alternatives; and mitigation measures for potentially significant impacts, as applicable. Five alternative methods of constructing and operating the Sites Reservoir Project to meet all or the majority of the purpose, need, and objectives of the project are evaluated in the Draft EIR/EIS. The alternatives were developed to avoid or substantially reduce one or more of the project's significant impacts. Other alternatives evaluated over the past several decades (some of which were the subject of prior CEQA and NEPA analyses and decision making) are summarized and discussed in Chapter 2 Alternatives Analysis of the Draft EIR/EIS.

P.O. Box 517
Maxwell, CA 95955
530.438.2309

The proposed Sites Reservoir Project facilities would primarily be located in Colusa and Glenn counties, approximately 10 miles west of the town of Maxwell, California. Proposed minor modifications within the existing diversion facility would also need to occur at the existing Red Bluff Pumping Plant in Tehama County, California. The Sites Reservoir Project would consist of a new offstream surface storage reservoir (Sites Reservoir) with two main dams, up to nine saddle dams, and up to five recreation areas. The Sites Reservoir would be filled via two existing Sacramento River diversions/canals (included in all alternatives) and a proposed new inlet/outlet structure and pipeline (included in the majority of alternatives). The pipeline would allow the diversion of excess Sacramento River flows for most alternatives and the discharge of water under all alternatives. Water conveyance between the reservoir and the canals and pipeline would be facilitated by two new regulating reservoirs. Pumping/generating plants would also be included as part of most alternatives. A new overhead power line would connect the pumping/generating plants and their associated electrical switchyards to an existing overhead power line in the Sites Reservoir Project area. New roads would be constructed to provide access to the proposed Sites Reservoir Project facilities, a new bridge would be constructed to provide access over the proposed reservoir, and some existing roads would be relocated or improved. The Sites Reservoir Project would require modifications to the Tehama-Colusa Canal and Holthouse Reservoir. A more complete description of the Sites Reservoir Project can be found in Chapter 3 Description of the Sites Reservoir Project Alternatives in the Draft EIR/EIS.

SIGNIFICANT ENVIRONMENTAL EFFECTS: The Sites Reservoir Project would result in significant environmental effects to terrestrial biological resources, paleontological resources, land use, air quality, greenhouse gases, and growth inducement.

PUBLIC NOTICING: The Sites Reservoir Project is the subject of a Notice of Preparation (NOP) issued on November 5, 2001, to prepare an EIR under CEQA, and a Notice of Intent published on November 9, 2001, (66 FR 56708), to prepare an EIS under NEPA. The Sites Reservoir Project was formerly known as the North-of-Delta Offstream Storage project led by the California Department of Water Resources (DWR). The Sites Project Authority has assumed the role of the CEQA lead agency in place of DWR and will be responsible for constructing, operating, and maintaining the Sites Reservoir Project. Because of this change in lead agency, the Sites Project Authority issued a Supplemental NOP on February 2, 2017, for the Draft EIR for the Project.

AVAILABILITY OF THE DRAFT EIR/EIS: Copies of the Draft EIR/EIS are available for public review at the following locations:

1. Sites Project Authority, 122 Old Highway 99 West, Maxwell, CA 95955
2. Bureau of Reclamation, Mid – Pacific Region, Regional Library, 2800 Cottage Way, Sacramento, CA 95825
3. Sacramento Public Library, Central Branch, 828 I Street, Sacramento, CA 95814
4. Colusa County Free Library, Main Branch, 738 Market Street, Colusa, CA 95932
5. Glenn County Public Library, Willows Branch, 201 N. Lassen Street, Willows, CA 95988
6. Tehama County Library, Red Bluff Branch, 645 Madison Street, Red Bluff, CA 96080

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment, including your personal identifying information, may be made publicly available at any time. Although you can request in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Dated: Aug 8, 2017

Signed: Jim C Watson

Jim Watson, General Manager
Sites Project Authority

P.O. Box 517
Maxwell, CA 95955
530.438.2369

Sites Reservoir Project
Revised Draft EIR/Supplemental Draft EIS
Public Meetings

Implementation Plan

DRAFT v6.28.2021

DRAFT

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I. **Introduction:** The Draft EIR/EIS public comment period is ~~XX~~ 60 days and is expected to begin on ~~Thursday, August 26, 2021~~Friday, September 3, 2021, and end on November 2, 2021~~[DATE]~~. One in-person Draft EIR/EIS public meeting and ~~one~~ two virtual Draft EIR/EIS public meeting are tentatively scheduled for ~~late September~~early October 2021. Comment collection details are included below in Section IV. Two in-person stakeholder meetings with landowners are tentatively planned, one to occur prior to the release of the Draft EIR/EIS and one to occur after the release but prior to the two Draft EIR/EIS public meetings. Landowner meeting details are included in Section XI.

Commented [AF1]: Kevin to review

The following dates, times, and locations have been identified for the Draft EIR/EIS public meetings.

Table 1. Schedule

Type	Date & Time	Location
Virtual Public Meeting	[DATE] [TIME]	Zoom Webinar
Virtual Public Meeting	[DATE] [TIME]	Zoom Webinar
In-Person Public Meeting	[DATE] [TIME]	Sites Project Authority Office, 122 Old Highway 99 West, Maxwell, CA 95955

Commented [KS2]: One virtual meeting should be during regular business hours...the other in the evening

Commented [KS3]: In-Person should be in the evening

Commented [AF4]: Move to early October – first week (4 to 7)

Anytime those days is good for me. Lets check with Reclamation on their availability and get these scheduled.

Commented [KS5]: The Maxwell Office may be too small...consider the VFW Hall or the High School Gym

Staff who have a role during the public meetings as identified in Tables 6 and 7 need to join the Zoom Webinar for the virtual public meeting and arrive at the venue for the in-person meeting 30 minutes prior to the meeting start time.

II. **Notifications:** The public will be notified of the meeting dates, times, and locations via the notification methods and channels listed in the table below. The responsibility for posting or distributing the notice is identified along with the suggested target date(s) for posting or distributing.

Table 2. Notifications

Notification	Responsible	Target Date(s) for Post/Distribution
Notice of Availability~~, Public Meetings~~	~~Environmental Team~~/Reclamation	~~August 26~~September 3, 2021
~~News~~ Joint Reclamation/Authority ~~Press~~ Release	Communications Team/Reclamation	September 3~~August 26~~, 2021
~~Letter – Elected Officials/Agencies~~	~~Environmental Team/Reclamation~~	~~August 25, 2021~~
Postcard Mailer – Proximate Properties	Environmental Team/Reclamation	August ~~25~~26, 2021
Website Update	Communications Team/Reclamation	August 26, 2021 for Authority to Post document; September 3, 2021 for Reclamation to Post document
E-blasts	Communications Team	September 3~~August 26~~, 2021; reminder prior to public meetings; and before end of comment period
Newspaper Display Advertisements	Communications Team	On or after September 3~~August 26~~, 2021 (dates will vary based

Commented [KS6]: The Government Affairs Team will do personal calls to the appropriate electeds -

Commented [KS7]: Is this our landowners list?

Commented [KS8]: Please list the papers were are targeting

Table 2. Notifications

Notification	Responsible	Target Date(s) for Post/Distribution
		on newspaper publication schedule)
Social Media	Communications Team/Reclamation (paid social media)	~~September 3~~August 26, 2021; reminder prior to public meetings; and before end of comment period
~~Radio Public Service Announcements (PSAs)~~	~~Communications Team~~	~~August 26, 2021; reminder prior to public meetings~~
Flier	Communications Team	~~September 3~~August 26, 2021
JPA Member Communication (version of flier or e-blast)	Communications Team	~~September 3~~August 26, 2021
Information Repositories	Environmental Team	August 26, 2021

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Commented [KS9]: Needs further discussion on the "paid" social media

III. Meeting Format:

a. ***Virtual Public Meeting:*** The virtual public meeting will be conducted via Zoom Webinar and will consist of a project presentation and formal public comment component to accept verbal comments.

Commented [KS10]: Make sure that Reclamation can participate vis ZOOM...not sure if they have a preferred program

~~Following the project presentation, breakout sessions that cover the topics listed in Table 6 will open and be conducted via Zoom Webinar. The breakout sessions will allow members of the public to have their informal questions answered, since formal/official questions will not be answered during the virtual public meeting but will be responded to in the Final EIR/EIS. Links to the breakout sessions will be available on the project website. The breakout sessions will be open while the formal public comment session is being conducted and will stay open for one hour after the virtual public meeting concludes.~~

Commented [KS11]: Breakout sessions are being removed...too high of a chance for technology failure and will stretch staff out too thin

The project presentation will be delivered at the beginning of the meeting. A project overview will be provided first, followed by technical team members providing overview of key topic areas (based on list of posters below). After the presentation, the team will take Q&A for a set period of time. Then the moderator will kick off the formal public comment session. Official public comments will be received verbally during the formal public comment session (written comments would be submitted via the accepted methods of mail and email). Instructions on how to provide public comments will be discussed at the beginning of the meeting and again after the project presentation. ~~Instructions for joining the breakout sessions will also be provided after the presentation along with a reminder that if participants missed the presentation, a recording of the presentation can be found on the project website.~~

Commented [AF12]: Comms team, please update with this new format. Q&A questions will be done with the chat function and we will moderate those and ask technical team members or authority to respond.

Commented [KS13]: Please add who the meeting moderator will be

The virtual public meeting is scheduled to conclude at [TIME]; however, if there are participants who have their hand raised and have not been called on yet to provide their comments, the virtual public meeting should remain open until all participants who raised their hand prior to [TIME] have been given the opportunity to provide their comments.

Participants who are logged in to Zoom Webinar online can raise their hand by clicking on the hand icon. Participants who call in on the phone can dial *9 to raise their hand. When a participant raises their hand using either method, the moderator can see that a hand is raised,

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call on that participant, and enable the participant to complete the unmute process to provide a comment during the virtual public meeting or ask a question during the breakout sessions.

Zoom Webinar has a Q&A feature that allows participants to submit written questions, which will be viewable to only the host and panelists, unless the host or a panelist make the question public to the rest of the attendees. The question can be answered verbally and/or answered in writing through the Q&A feature. The Q&A feature will be enabled for the breakout sessions but disabled for the virtual public meeting.

In addition to the Q&A feature, there is a chat function that can be enabled or disabled. If enabled, attendees can contact the project team via the chat function. The chat settings would be set to only allow communication with the project team and no other attendees. The project team could use the chat function to post links or reminder messages. The chat function could be used to collect Draft EIR/EIS comments during the virtual public meeting.

Since staff will need to be in contact with each other to manage the virtual public meeting, a Microsoft Teams chat session or a messaging platform can be used for internal, back-end communications.

Zoom Webinar: Zoom Webinar is the recommended platform for the virtual public meeting and breakout sessions due to its ease of use and simple user interface, general familiarity by the public, and built-in controls. Zoom Webinar can support up to 10,000 participants and allow participants to dial in with their standard telephone, computer, or smartphone to participate. Zoom Webinar allows participation without registration or downloads, including a phone-in option for those who may not have Internet access. Unlike a Zoom Meeting that can be subject to hijacking or "conference bombing," Zoom Webinar has additional controls, whereas the webinar host controls all audio, video, and screen-sharing functions. Participants do not have access to these controls.

Agenda: Based on the format outlined above, the proposed agenda for the virtual public meeting will be as follows:

Table 3. Virtual Public Meeting Agenda

Item	Presenter(s)	Time
Project Presentation	TBD	**[TIME]** XX minutes
Q&A	TBD	[TIME] XX minutes
Formal Public Comment Session	TBD	**[TIME]** XX minutes
~~Breakout Sessions~~	~~TBD~~	~~[TIME]~~ ~~XX minutes~~

b. ***In-Person Public Meeting:*** The in-person public meeting will consist of staffed informational poster stations, a project presentation, and a formal public comment component to accept verbal comments.

Tables will be set up for attendees to sign in for the meetings and provide their contact information. Attendees can also choose to sign up to receive future project updates. At this location, staff will explain the meeting format and required COVID-19 safety measures.

Commented [AF14]: VFW or Fire hall; Maxwell office likely to not have enough room to accommodate

Also, change format:
Presentation
Break out sessions
Formal comments

No second court reporter; one break out station can be court reporter who can take comments directly from individuals during the break out sessions

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Poster stations that cover the topics listed in Table 7 will be staffed by project team members who will be available to engage in one-on-one conversations with the public and answer questions. The staffed information stations will close once the project presentation and formal public comment session begin. A station for submitting written comments will also be set up.

The project presentation will begin one hour after the start of the meeting. Following the project presentation, the formal public comment session will be initiated and run for the remainder of the public meeting. Alternatively, the project presentation could be repeated if there are not many verbal comments but an influx of people who were not at the meeting when the project presentation was first conducted, or the staffed informational poster stations could be reopened.

COVID-19 Precautions: The in-person public meeting will be conducted as safely as possible and in accordance with Colusa County requirements and facility standards. ~~face covering requirements~~. Signage at the entrance will direct any COVID safety precautions required for participation. ~~at the entrances will remind people that they cannot enter the meeting if they are not feeling well (fever, cough, etc.). Signage will be posted throughout the venue reminding attendees to wear a face covering if not vaccinated.~~ Masks will be kept at the sign-in tables to provide to attendees as~~if~~ requested. ~~they do not have a face covering to wear. Attendees who are not vaccinated and refuse to wear a mask will not be allowed into the meeting room.~~ Hand sanitizer will be placed at the sign-in tables and written comment station. Venue staff or the project team will wipe down high-touch areas during the meetings, which could include the presentation podium, microphones, shared pens, etc. If the meeting venue has doors that open to the outside, the doors can be kept open for increased air circulation.

Agenda: Based on the format outlined above, the proposed agenda for the in-person public meeting will be as follows:

Table 4. In-Person Public Meeting Agenda

Item	Presenter(s)	Time
Project Presentation	TBD	[TIME] XX minutes
Open House Information Stations	TBD	**[TIME]** XX minutes
~~Project Presentation~~	~~TBD~~	~~[TIME]~~ ~~XX minutes~~
Formal Public Comment Session	TBD	**[TIME]** XX minutes

IV. Comment Collection:

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a. ***Virtual Public Meeting:*** During the virtual public meetings, verbal public comments can be submitted via audio when individuals are called upon and their microphone is unmuted. The moderator will call on individuals in the order they raised their hand to speak and ask each person to state and spell their name for the record. Speakers will be asked to limit their comments to X minutes. A court reporter will transcribe verbal comments. ~~Formal comments will not be accepted during the breakout sessions, and this will be made clear to participants.~~ Written public comments will be accepted by mail and email throughout the public comment period~~; to consider is also accepting public comments through an auto-fill form on the project website~~.

b. ***In-Person Public Meeting:*** During the in-person public meeting, public comments can be submitted via two methods: (1) in writing via printed comment forms; and (2) verbal comments during the formal public comment session transcribed by a court reporter. A comment station will be provided for the public to have a dedicated space to write comments. Written comments could be collected in a box similar to a voting box. This ensures comment privacy or anonymity, if desired. The comment station will be staffed by the project team to ensure the written comments are secure. Written public comments will also be accepted by mail and email throughout the public comment period.

   Individuals will sign up to provide their comments verbally during the formal public comment session. The moderator will call on individuals in the order they signed up and ask each person to state and spell their name for the record; to consider is whether elected officials would be allowed to provide their comments first. Speakers will be asked to limit their comments to X minutes. ~~If desired, a second court reporter could be made available to collect verbal comments in a semi-private setting for individuals who do not wish to speak their comment in front of an audience during the formal public comment session. This second court reporter could be stationed in a separate room or a quiet corner of the meeting room.~~

V. **Language Interpretation and Translation:** The need for Spanish language interpretation at the meetings will be determined by requests received. The notices will include language directing participants to contact the project team for reasonable accommodations.

   The project presentation will be translated and recorded in Spanish, and the recording could be posted to the project website. The Executive Summary, press release, and project fact sheet will also be translated into Spanish.

VI. **Section 508 Compliance:** Closed captioning during the virtual public meeting is needed for Section 508 compliance. Closed captioning will be generated by Zoom (CC live transcription).

VII. **Recording:** The virtual public meeting will be recorded. The recording of the project presentation portion or the entire virtual public meeting could be posted to the project website. The in-person public meeting will not be recorded.

VIII. **Informational Materials:** A variety of informational materials will be developed to support the Draft EIR/EIS public comment period and meetings. The materials will provide information and address anticipated stakeholder concerns and questions. The type, quantity, format, and topics for the informational materials are listed in the table below. Materials will be posted to the project website in advance of the meetings. Other methods for providing the informational materials are also listed.

Commented [AF15]: Change – will have a translator at the in-person meeting.

Commented [AF16]: I agree with this, but translation isn't a reasonable accommodation. So move this to a different section.

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Commented [AF17]: Need to plan for this

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Table 5. Informational Materials

Material	Quantity/ Format	Availability	Topics
Fact Sheet	Two-page fact sheet	• Project website • In-person public meeting • Information repositories • Mailed to individuals without access to Internet or computer •	General Project overview, alternatives, environmental review process, schedule for reviewing document, text box or call out box on how to effectively comment
Posters	8	• Project website • In-person public meeting • Information repositories • Mailed to individuals without access to Internet or computer	*Potential poster topics:* 1. Location 2. Project overview 3.1. Alternatives 4.2. Resource areas analyzed 5.3. Environmental analysis – water quality 6.4. Environmental analysis – fisheries 7.5. Environmental analysis – other biological resources 8. Environmental analysis – cultural resources 9.6. Environmental analysis – local impacts (traffic) 10.7. Environmental review process 11. Trinity River
Video Vignettes	4 two-minute videos	• Project website • In-person public meeting	1. 2. 3. 4.1.
Project Presentation	1	• Project website (recording) • Virtual public meeting • In-person public meeting • Presentation slides mailed to individuals without access to internet or computer	Project overview, alternatives, environmental analysis, environmental review process
Draft EIR/EIS Community Guide	1 (up to 20 4 pages)	• Project website • In-person public meeting • Information repositories • Mailed to individuals without access to Internet or computer	Project overview, key elements of the environmental analysis provided in the Draft EIR/EIS
FAQs	1	• Project website • In-person public meeting • Mailed to individuals without access to Internet or computer	

Commented [AF18]: I see us only doing this based on request, so we can delete throughout this table.

Commented [KS19]: The Fact Sheet should focus on the RDEIR/EIS…alternatives, review process, schedule and how to comment

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Commented [AF20]: Lets talk about the community guide. Our preference would be to keep it short.

Commented [KS21]: This should be 11x14 4 page…focus should be on project overview, operations, DEIR/EIS analysis

DRAFT

IX. **Dry-Run Practice Sessions:** Several dry-run practice sessions will be held prior to the public meetings. The initial dry run for the virtual public meeting will include a run through of the technology and an opportunity for the project team to practice using the technology. Subsequent dry runs could include an overview of the meeting format and logistics; familiarization with informational materials; a run through of the PowerPoint presentation; and a dry run of potential public interactions in a Q&A setting at poster stations or breakout sessions.

X. **Documentation:** A summary of outreach activities will be developed and will include meeting noticing, materials developed, number of meeting attendees, list of representative groups and media who identified themselves during the meetings, and general comments heard. Court reporters will prepare a transcript of verbal comments provided at the public meetings. A team debrief will be held the morning after each meeting to capture team comments of issues and concerns heard at their poster stations ~~or breakout sessions~~.

Table 6. Virtual Public Meeting Roles and Staffing

To be developed

Table 7. In-Person Public Meeting Roles and Staffing

To be developed

Table 8. In-Person Meeting Materials

To be developed

XI. **Landowner Meetings:** Two in-person stakeholder meetings with landowners are tentatively planned, one to occur prior to the release of the Draft EIR/EIS and one to occur after the release but prior to the two Draft EIR/EIS public meetings. The landowner meetings would be held at the Sites Project Authority Office in Maxwell. The purpose would be to review Draft EIR/EIS highlights and answer questions. Formal comments will not be accepted during the landowner meetings, and this will be made clear to participants.

Commented [KS22]: 1st meeting is tentative for August 20th

DRAFT

From: Micko, Steve/SAC [Steve.Micko@jacobs.com]
Sent: 7/12/2021 9:15:00 AM
To: Alicia Forsythe [aforsythe@sitesproject.org]
CC: Spranza, John [john.spranza@hdrinc.com]
Subject: RE: Sites Water Rights/Water Quality Joint Agency Workshop

At the least, I can attend and speak to it.
I'll get in touch with RBI ASAP.

Best,
Steve

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Monday, July 12, 2021 8:31 AM
To: Micko, Steve/SAC <Steve.Micko@jacobs.com>
Cc: Spranza, John <john.spranza@hdrinc.com>
Subject: [EXTERNAL] RE: Sites Water Rights/Water Quality Joint Agency Workshop

Hi Steve – We are talking to the fisheries agencies on water quality this Wednesday from 8 AM to 9:30 AM. Would you and/or the team from RBI be able to attend to speak to mercury?

Sorry for the late notice.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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-----Original Appointment-----
From: Spranza, John <John.Spranza@hdrinc.com>
Sent: Thursday, July 1, 2021 2:15 PM
To: Spranza, John; Spranza, John; Leaf, Rob/SAC (Rob.Leaf@jacobs.com); Davis-Fadtke, Kristal@Wildlife; Kundargi, Kenneth (Kenneth.Kundargi@wildlife.ca.gov); Williams, Jonathan@Wildlife; Hendrick, Mike (Mike.Hendrick@icf.com); Melissa Dekar (mdekar@usbr.gov); Cordova, Daniel (dcordova@usbr.gov); Wilder, Rick; La Luz, Felipe@Wildlife; Chris Fitzer (CFitzer@esassoc.com); Hassrick, Jason (Jason.Hassrick@icf.com); Greenwood, Marin; Evan Sawyer - NOAA Federal; Jim Lecky (jim.Lecky@icf.com); Erin Heydinger (Erin.Heydinger@hdrinc.com); Micko, Steve/SAC; Monique Briard (monique.briard@icf.com); Cathy Marcinkevage - NOAA Federal; Perry, Russell W; ebuttermore@usbr.gov; mbeakes@usbr.gov; smanugian@usbr.gov; Alicia Forsythe; Schoenberg, Steven; cyril.michel@noaa.gov; Bauer, Nick@Wildlife; Huneycutt, Andrew@Wildlife; Marc VanCamp (Vancamp@mbkengineers.com); Johnson, Matt@Wildlife; Sherrick, Robert@Wildlife; Nelson, Jonathan@Wildlife; Meyers, Erica@Wildlife; annmarie.ore@waterboards.ca.gov; Biondi, Oscar@Waterboards; Kurth, Ryon@Wildlife; gordon.stephanieS@epa.gov; King, Vanessa M; stephen.maurano@noaa.gov; Angela Bezzone; Huber, Anne
Cc: Arsenijevic, Jelica; Kevin Spesert (kspesert@sitesproject.org); Jerry Brown (jbrown@sitesproject.org); Marcia Kivett; Lee Bergfeld; Paccassi, Michael@Wildlife
Subject: Sites Water Rights/Water Quality Joint Agency Workshop

When: Wednesday, July 14, 2021 8:00 AM-9:30 AM (UTC-08:00) Pacific Time (US & Canada).
Where: Microsoft Teams Meeting

Workshop to review and discuss the Sites Project water right process and select water quality results from the draft EIR/EIS. Agenda to follow

---

Microsoft Teams meeting

Join on your computer or mobile app
Click here to join the meeting

Or call in (audio only)
+1 213-514-6883,,69497778# United States, Los Angeles
(833) 255-2803,,69497778# United States (Toll-free)
Phone Conference ID: 694 977 78#
Find a local number | Reset PIN

Learn More | Meeting options

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From: Spranza, John [John.Spranza@hdrinc.com]
Sent: 7/12/2021 10:52:24 AM
To: Haire, Jennifer [Jennifer.Haire@icf.com]
CC: Alicia Forsythe [aforsythe@sitesproject.org]
Subject: RE: Sites Reservoir ringtail/tule elk comments

Thanks for keeping on this.

John Spranza

D 916.679.8858 M 818.640.2487

From: Haire, Jennifer <Jennifer.Haire@icf.com>
Sent: Friday, July 9, 2021 11:53 AM
To: Zachary.Kearns@Wildlife.ca.gov
Cc: Juan.Torres@wildlife.ca.gov; Berryman, Ellen <Ellen.Berryman@icf.com>; Spranza, John <John.Spranza@hdrinc.com>
Subject: Sites Reservoir ringtail/tule elk comments

CAUTION: [EXTERNAL] This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello Zach,

Ellen Berryman and I had a call with Juan this morning about some of the CDFW comments in the Sites Reservoir EIR/EIS. I was hoping to get some clarification on comments made about including ringtail and tule elk in the EIR/EIS:

1. We had assumed based on available data that ringtail could occur along the Sacramento River, however since we only have one small area where construction would occur along the river (at the Sacramento River discharge location under Alternative 2) and operations under any alternative would not impact riparian habitat along the river (and there are no CNDDB records for occurrences within 5 miles of the project footprint), we didn't prepare a model or address ringtail in the document. Juan indicated that Josh Bush might have some information on ringtail occurrence in the project area. We also would like to know if there are other areas in the project footprint that CDFW thinks should be considered suitable ringtail habitat?
2. There was a comment to include tule elk in the document – is this specific to including tule elk in the blue oak woodland habitat discussion (i.e., as a species that could occur there) or to prepare a species model and address impacts on the species in the document? If the latter, what is the justification for this given that tule elk is not special-status? Would you consider it rare under CEQA? Impacts on tule elk movement would be addressed through the wildlife corridors impact discussion.

Could you provide info/answers to the above or let me know if we can have a short call next week to discuss?

Thanks,
Jennifer

JENNIFER HAIRE| Senior Wildlife Biologist | 916.231.9575 | jennifer.haire@icf.com | icf.com
ICF| 980 9th Street, Suite 1200, Sacramento, CA 95814 | 916.737.3030 (f) | 916.529.6975 (m)

CNRA Meeting Agenda

Affordable Water, Sustainably Managed

Our Core Values – Safety, Trust and Integrity, Respect for Local Communities, Environmental Stewardship, Shared Responsibility and Shared Benefits, Accountability and Transparency, Proactive Innovation, Diversity and Inclusivity
Our Commitment – To live up to these values in everything we do

Meeting Information:

Date:	July 13, 2021	**Location:**	1416 9th St #1311, Sacramento, CA 95814
Start Time:	10:30 a.m.	**Finish Time:**	11:30 a.m.
Purpose:	Update of the Sites Reservoir Project		

Meeting Participants:

Wade Crowfoot, Secretary, CNRA	Fritz Durst, RD108/Authority Board Chair	Randal Neudeck, MWD/Sites Participant
Chuck Bonham, Director, CDFW	Jeff Sutton, TCCA/Authority Board Vice-Chair	Valarie Pryor, Zone 7/Participant
Karla Nemeth, Director, DWR	Jeff Davis, San Gorgonio Pass WA/Reservoir Committee Chair	Deven Upadhyay, MWD/Sites Participant
Nancy Vogel, Director, CNRA	Thad Bettner, GCID/Sites Participant	Jerry Brown, Executive Director, Sites
Joseph Yun, Exe. Officer, CWC	Gary Evans, Colusa County/Sites Participant	Ali Forsythe, Environmental Planning & Permitting, Sites

Agenda:

Discussion Topic	Topic Leader	Time Allotted
1. Introductions	All	5 mins
2. Overview of the "Rightsized" Project		5 mins
3. Review How Objectives Laid Out in the Governor's Water Resilience Portfolio Can be Achieved a. Accelerate project permitting b. Acquire through a contract a portion of Sites storage for Prop 1 investment		20 mins
4. Leveraging State Prop 1 investment with Federal Dollars a. Reclamation participation b. State Support for WIFIA and WIIN		20 mins
5. Next Steps		5 mins

Sites Asks of the Secretary:

1. Assign a person from the Secretary's office to regularly report to the Secretary on the progress being made within the state agencies to support the Sites project schedule and conduct regular check-in meetings with the Secretary and the Sites project team.

2. Engage at the federal level by showing State support for WIFIA and WIIN program designations and appropriations to Prop 1 storage projects including the Sites Reservoir Project.

Milestones and Dates Involving State Agencies for the Sites Reservoir Project

Description	Needed Completion Date	Agency(ies) Involved
Activities Related to Prop 1		
Initiate public review of RDEIR/SDEIS	September 3, 2021	Sites
Complete State Feasibility Determination	December 17, 2021	CWC
Confirm 75% Non-Public Benefit Cost Share Commitment	December 17, 2021	DWR
Complete Final EIR/EIS, CEQA Findings, and Adopt Project	July 2022	Sites
Initiate Benefit Agreements	January 2022	Sites, DWR, CDFW
Consider increasing the amount of early funding levels for eligible Prop 1 projects	March 2022	CWC
Complete Benefit Agreements and Final Award of Prop 1 Funds	June 2023	DWR, CDFW, CWC
Activities Related to Water Rights		
Support Development of Sites Water Right Application	December 20, 2021	DWR, CDFW, SWRCB
Submit Sites Water Right Application	December 20, 2021	Sites
Complete Application Review and Issue Public Notice	February 14, 2022	SWRCB
Complete Resolution of Protests	December 2022	Sites, SWRCB
Conduct Hearing on Any Remaining Issues	March 2023	SWRCB
Issue Final Order and Water Right Permit	July 2023	SWRCB
Activities Related to Critical Permits		
State Incidental Take Permits		
Develop and Submit ITP Applications	December 20, 2021	Sites, CDFW
Issue Incidental Take Permits	August 2022	CDFW
401 Water Quality Certification		
Develop and Submit Draft Permit Application	December 20, 2021	Sites, SWRCB
Review and Refinement of Draft Application	June 2022	Sites, SWRCB
Submit Application	July 2022	Sites
401 Certification Issued	November 2022	SWRCB
Permit to Construct Dams		
Concurrence with Design Approach	December 2022	DWR/DSOD
Activities Related to Operations Coordination		
Confirm State Water Project Contract modifications needed for Sites	October 1, 2021	DWR
Execute Agreement to Coordinate Operations of SWP and Sites	December 2022	DWR

Sites Project Water Rights and Water Quality Joint Agency Workshop

July 14, 2021

Sites

Draft – Predecisional Working Document – For Discussion Purposes Only

Agenda

1. Introductions and Objectives
2. Water Right Overview and Discussion
3. Water Quality
   a) Discussion of flow mechanisms and pathways
   b) Metals
   c) Salinity
   d) Pesticides
4. Open Topics Discussion
5. Action Items and Adjourn

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Water Rights

Application Key Approaches

- Reinitiated efforts on water right application
- Developing key parameters for application
  - Informs and sets the foundation of our water right permit approach
  - Ensures these components are covered in the Revised EIR/Supplemental EIS
- Recent team focus
  - Refining parameters and discussing them with State Board staff
  - Developing approach for Water Availability Analysis
  - Establishing regular coordination meetings with State Board staff
  - Developing approach to navigating the new State Board on-line application process
  - Discussions with Reclamation and DWR through the Operations Agreement efforts

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State Filing – Likely to Petition to Assign

- Petition to amend and assign A025517 (Colusa Reservoir)
  - Full Application package to describe current project
- Request release from priority
  - A025514 (Glenn Reservoir)
  - A025513 (Glenn Reservoir - power)
- Key Consideration for Assignment / Release
  - Prevents another party from assigning state-filed application in the future and directly competing with Sites in terms of priority
- Team continues to assess pros and cons of assignment

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Water Right Approach

- Sites seeking to divert Sacramento River flows when all of the following conditions are met:
  - Flow exceed minimum diversion criteria
  - Delta is in "excess" conditions
  - Senior downstream water rights and other more senior flow priorities have been satisfied
  - Flow are available above those needed to meet all applicable laws, regulations, BiOps and court orders in place at the time of diversion
- Sites would operate within all applicable laws, regulations, biological opinions and incidental take permits, and court orders in place at the time
- Sites is not applying for a water right to divert or redivert Trinity River water
  - Reclamation would continue to operate Trinity River consistent with all applicable statutory, legal, and contractual obligations with and without Sites
  - Sites is not limiting, constraining, changing, or affecting Reclamation's Trinity River operations

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Purpose of Use

- How water diverted into Sites Reservoir would subsequently be used
- Generally follow the purposes of use in the SWP and CVP water right permits
- Purpose of Use:
  - Irrigation
  - Domestic
  - Municipal
  - Industrial
  - Water Quality
  - Recreational
  - Fish and Wildlife Preservation and Enhancement
  - Incidental Power Generation
  - Stockwatering

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Source

- Sources:
  - Sacramento River
  - Stone Corral Creek
  - Funks Creek

Diversion to Off-stream Storage

- How much the project seeks to divert and store over what time period
- Request would be consistent with the available canal capacity and facilities to move water into Sites
- Season limited to the season when the Sacramento River is not fully appropriated (September 1 to June 15)
- Storage of up to 1.5 million acre-feet per year from all sources

Points of Diversion

- Locations where the project would divert water (or take "control" of water)
- Points of diversion:
  - Tehama-Colusa Canal (existing, screened facility)
  - Glenn-Colusa Irrigation District's Main Canal (existing, screened facility)
  - Sites Dam
  - Golden Gate Dam

Releases from Sites for Storage Partners

- Storage Partners –
  - Those that have funded and received a Storage Allocation in Sites Reservoir and the resulting water supply or water supply related environmental benefits
  - Includes local agencies, the State of California, and the Federal Government
- Partners along the TC Canal and GCID Main Canal
- Partners along the Sacramento River
- Partners along the Colusa Basin Drain, Yolo Bypass, and North Bay Aqueduct
- Partners South-of-Delta

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Place of Use

- Area where water diverted to storage could subsequently be used
- Place of Use:
  - Sites Reservoir, associated facilities and recreation areas
  - CVP and SWP place of use upstream of the Delta where water from Sites Reservoir can physically be delivered
  - All areas of Colusa County where water from Sites Reservoir can physically be delivered
  - Entire CVP and SWP area of export
- Place of use includes Yolo Bypass

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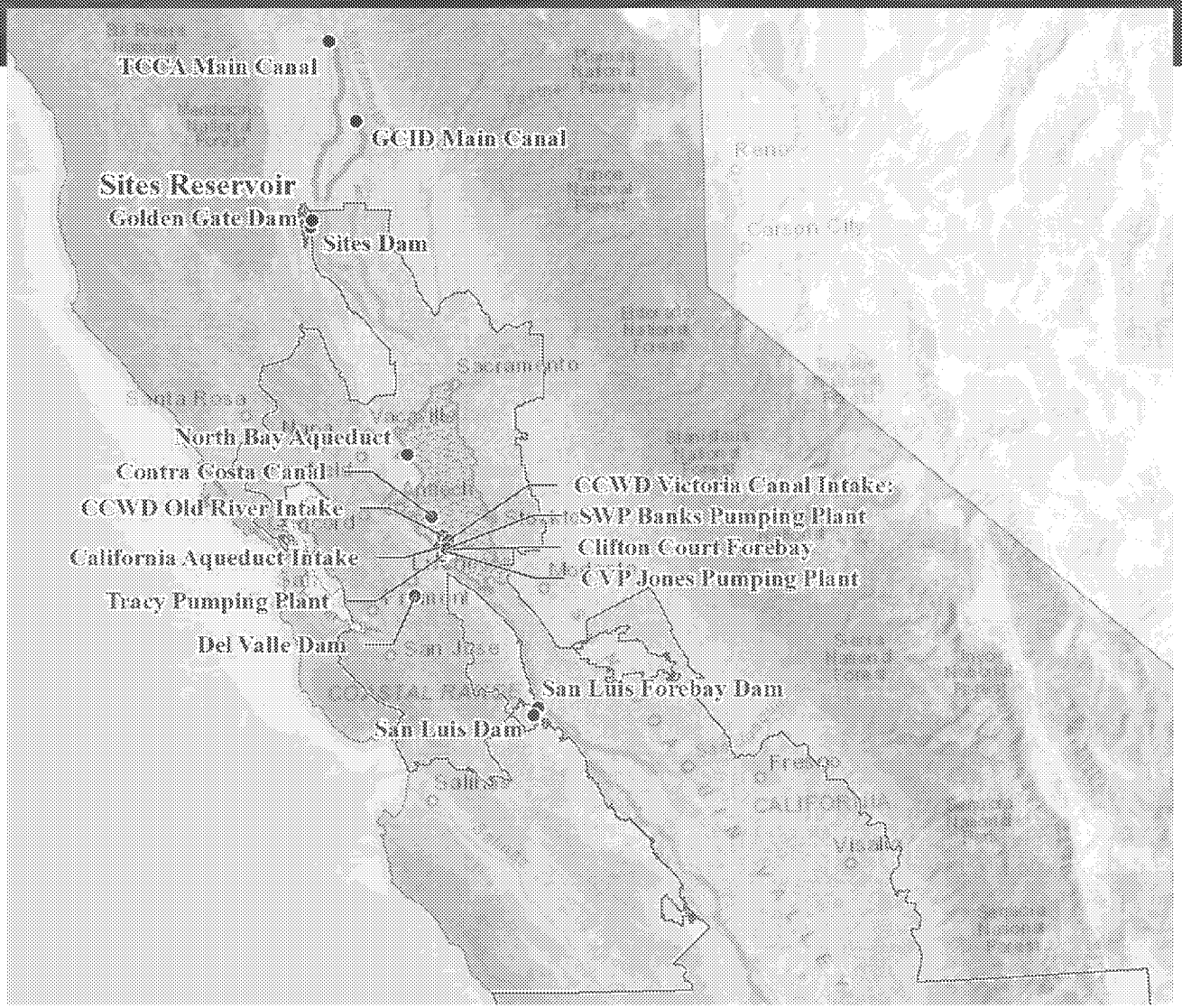
Place of Use – North of Delta and Delta



Place of Use – South of Delta

Points of Rediversion

- Waterways where water previously diverted for the project could be re-diverted
- Points of re-diversion:
  - North Bay Aqueduct
  - Freeport Intake
  - Contra Costa's facilities
  - Reclamation's Rock Slough Intake
  - SWP Delta and South-of-Delta facilities
  - CVP Delta and South-of-Delta facilities
  - Adding more for refuge deliveries under Prop 1

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Prop 1 Water Considerations

- Cover Prop 1 Water Use in Place of Use and Points of Rediversion
  - Yolo Bypass Water
    - Yolo Bypass in Place of Use
    - Delta to Chipps Island in Place of Use
  - Refuge Water Supply
    - May need additional points of rediversion south-of-Delta (Mendota Dam and Sack Dam on San Joaquin River)
- 1707 not applicable to a new water right application

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Water Right Schedule

- Late Summer – Revised Draft EIR/Supplemental Draft EIS
- December 2021 – Submit Application
- Early 2022 – State Board Notice
- Spring 2022 – Final EIR/EIS
- Spring/Summer 2022 – Formal Protest Resolution Period
- Winter 2022/Early 2023 – Hearing (if needed)
- Spring 2023 – State Board issues Order and water right permit
- Assuming 18 months from application to issuance of Order and water right permit
- Sites team will work to resolve protests, we do not anticipate going straight to hearing

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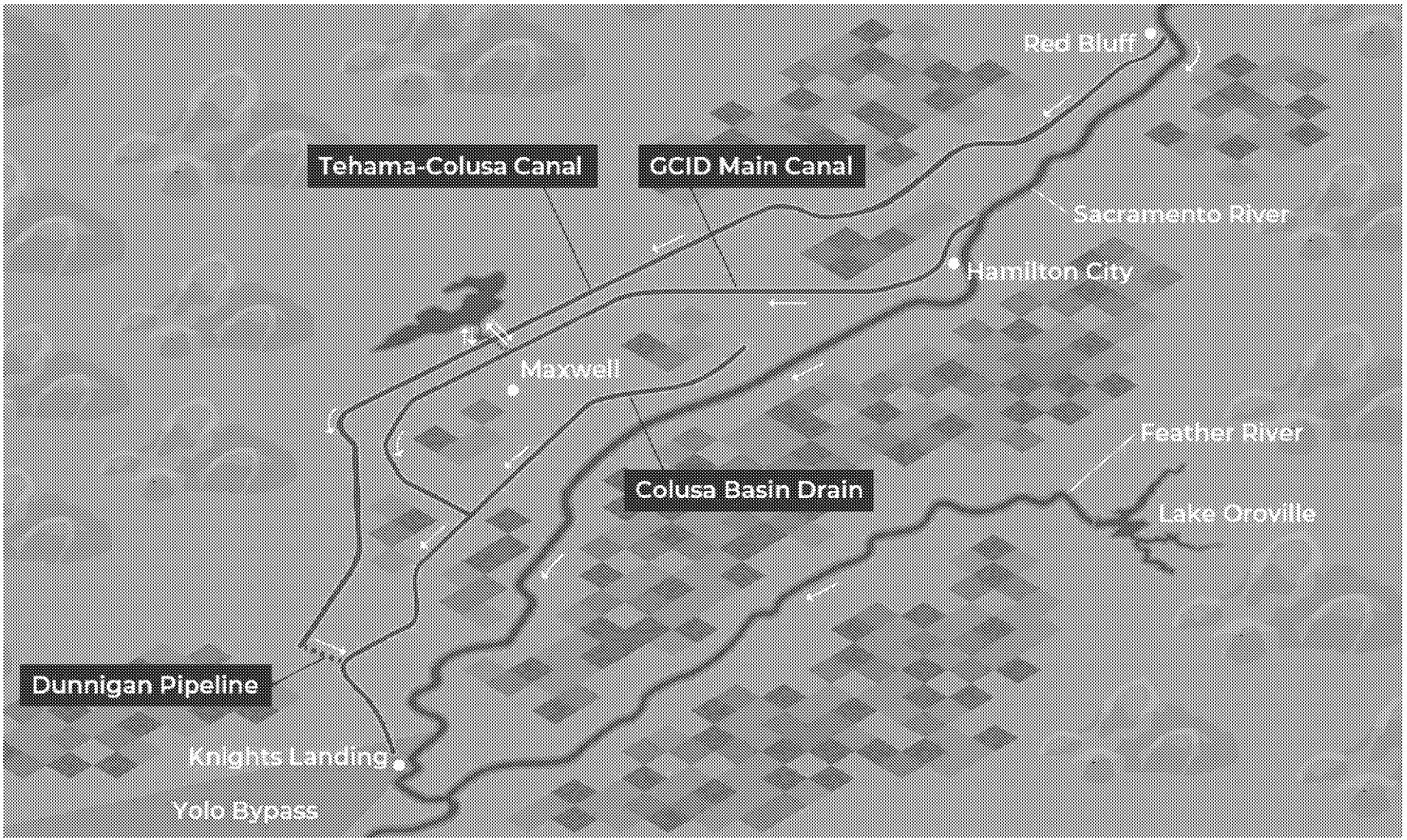
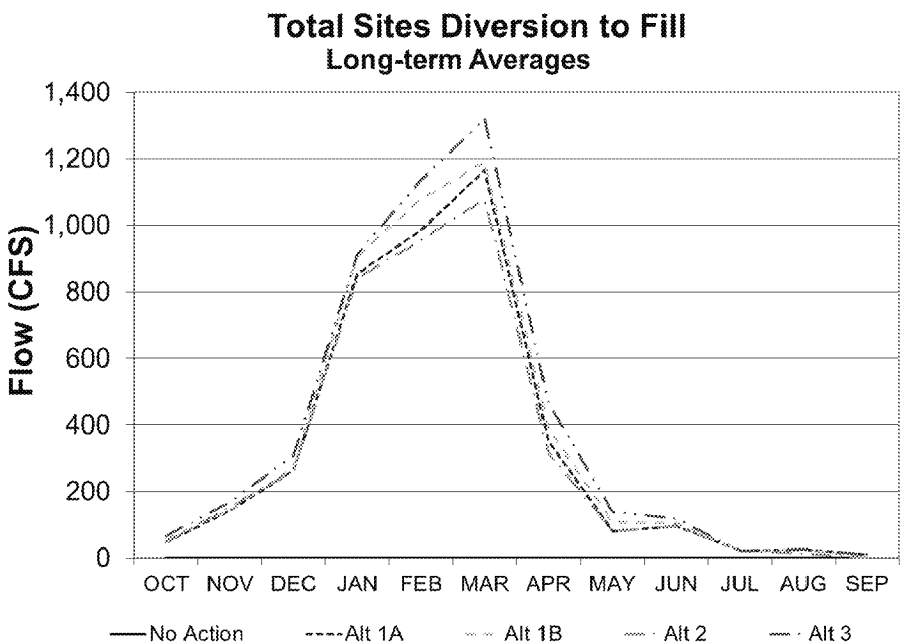
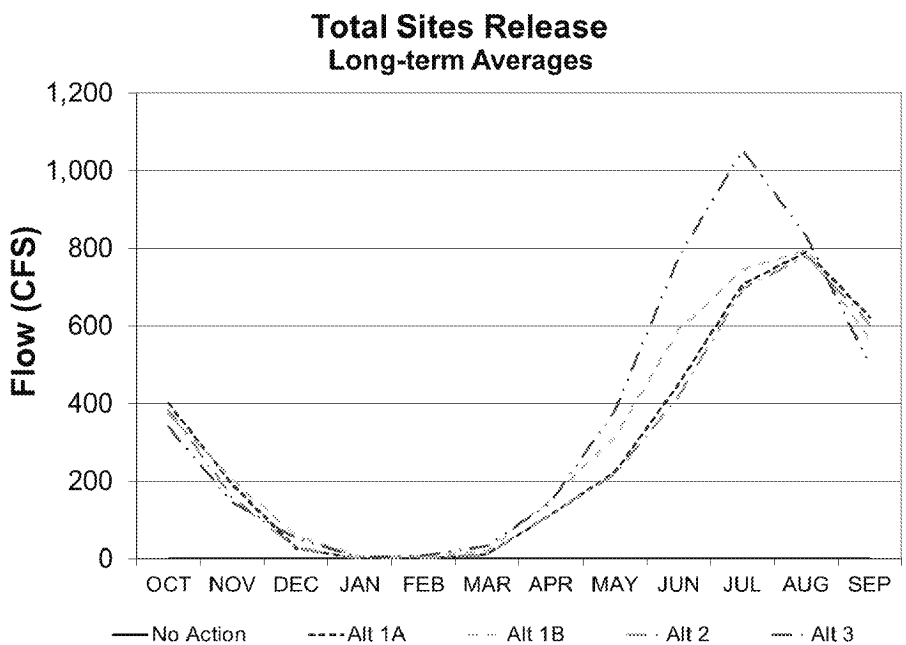
Water Quality

Project Water Operations



Diversions and Releases





Draft - Predecisional Working Document - For Discussion Purposes Only

Reservoir Management Plan

- Purpose: describe the management of water resources in Sites Reservoir
  - Water Quality: describe metrics, standards, testing and monitoring protocols, and outcomes
- Part of the Project
- Constituents currently included:
  - HABs
  - Invasive Aquatic Vegetation
  - Methylmercury
  - Metals
  - Water Temperature
  - Salt and Minerals (Salt Pond)

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Primary Operational Effects Considered

Mechanism	Main Constituents Considered	Main Region of Concern	Model Results Considered
Temporal Shift (when concentrations in water used to fill Sites Reservoir are higher than concentrations in the Sacramento River at time of release)	Metals Pesticides Salinity	Sacramento River downstream of discharge locations	CALSIM (provided timing of diversions, input to metals calculations, and comparison of Sites discharge to Sacramento River flow)
Evapoconcentration in Sites Reservoir	Metals Salinity	Sites Reservoir and Sacramento River downstream of discharge locations	CALSIM (reservoir water balance)
In-Reservoir Processes	Mercury, Metals HABs Nutrients/DOC/DO Temperature Salinity	Sites Reservoir and receiving waters	CALSIM (Sites discharge vs Sacramento R flow) Sites Reservoir temperature (CE-QUAL-W2) Central Valley Regional Water Quality Control Board model of fish tissue methylmercury concentrations in Yolo Bypass and Delta
Change in System Reservoir Operations	Temperature HABs Mercury	Shasta, Oroville, Folsom, and San Luis Reservoirs. Sacramento, Feather, and American Rivers	CALSIM HEC5Q Reclamation temperature model
Change in Delta Operations	Salinity/Chloride	Delta	DSM2 QUAL – with input from CALSIM and DSM2 HYDRO
Redirection of Some CBD Flow through Yolo Bypass	Pesticides Nutrients/organic carbon/DO HABs Mercury Temperature	North Delta/Cache Slough Complex / Yolo Bypass	CALSIM (provided timing and flow of Sites releases to Yolo Bypass)

Hydrologic Effects Important for Water Quality

- Simulated Sites Reservoir Release to Sacramento River (Release to Dunnigan Pipeline minus Release to Yolo Bypass) for All Alternatives (cfs)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Average for Critically Dry Water Years												
NAA	0	0	0	0	0	0	0	0	0	0	0	0
Alt 1A	204	99	3	0	0	0	108	432	529	615	416	428
Alt 1B	127	96	10	15	0	13	123	417	520	621	435	373
Alt 2	131	100	3	0	0	0	109	425	497	605	346	319
Alt 3	80	83	10	19	21	78	148	396	464	593	379	179
Average for Dry Water Years												
NAA	0	0	0	0	0	0	0	0	0	0	0	0
Alt 1A	325	364	23	0	0	0	58	111	794	970	609	572
Alt 1B	367	294	31	0	15	15	184	178	765	956	594	538
Alt 2	251	206	26	0	0	0	58	111	750	966	583	487
Alt 3	284	163	12	0	0	38	156	231	656	936	531	443
Average of All Water Year Types												
NAA	0	0	0	0	0	0	0	0	0	0	0	0
Alt 1A	113	130	11	0	0	0	28	88	271	391	276	218
Alt 1B	107	139	43	5	5	7	60	100	314	385	275	191
Alt 2	87	102	13	0	0	0	29	87	257	388	254	184
Alt 3	99	91	39	3	8	21	57	109	307	397	271	147
Average for Wet Water Years												
NAA	0	0	0	0	0	0	0	0	0	0	0	0
Alt 1A	0	17	14	0	0	1	0	0	0	0	0	0
Alt 1B	0	93	102	0	3	6	0	0	0	0	0	0
Alt 2	0	15	17	0	0	1	0	0	0	0	0	0
Alt 3	0	81	102	0	4	5	0	0	0	0	0	0

- When Sites Reservoir would release water to the Sacramento River, it would constitute 6%–7% of the Sacramento River flow on average and 12%–13% when discharges are relatively high compared to river flow (i.e., 90th percentile values), depending on Alternative

Hydrologic Effects Important for Water Quality

- Simulated Sites Reservoir Release to Yolo Bypass for All Alternatives (cfs)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Average for Critically Dry Water Years												
NAA	0	0	0	0	0	0	0	0	0	0	0	0
Alt 1A	37	0	0	0	0	0	0	0	0	0	123	61
Alt 1B	54	0	0	0	0	0	0	0	0	0	103	77
Alt 2	37	0	0	0	0	0	0	0	0	0	150	37
Alt 3	37	0	0	0	0	0	0	0	0	0	37	39
Average for Wet Water Years												
NAA	0	0	0	0	0	0	0	0	0	0	0	0
Alt 1A	286	0	0	0	0	0	0	0	0	0	356	404
Alt 1B	284	0	0	0	0	0	0	0	0	0	356	391
Alt 2	272	0	0	0	0	0	0	0	0	0	356	437
Alt 3	239	0	0	0	0	0	0	0	0	0	356	382

Mercury In Reservoir

- Long-term (~10 years after initial filling)
  - Comparable to existing reservoirs
  - 1.9 to 2.3 ng/L total mercury
  - 0.10 to 0.15 methylmercury
- Short-term (up to ~10 years after initial filling)
  - Conditions are conducive to mercury methylation
  - 3.8 to 4.5 ng/L total mercury
  - 0.2 to 0.3 ng/L methylmercury
- Total mercury concentrations would not exceed California Toxics Rule Objective (50 ng/L)
- Tissue concentrations among other reservoirs > CA sport fish objective (0.2 mg/kg ww in 350 mm largemouth bass)

Downstream Methylmercury

- Concentrations of Mercury expected to remain below CTR mercury criterion of 50 ng/L
- Increases in aqueous and fish tissue methylmercury may occur in Funks and Stone Corral Creeks, CBD, and Sacramento River at Freeport/North Delta.
- Increases in methylmercury would likely be greater during initial fill and the following 10 years.
- Yolo Bypass Floodplain inundation
  - Winter flows not expected to result in increase
  - Habitat flows (Aug-Oct) zero to minimal increase

Mercury Mitigation and Management

- Reservoir Management Plan
  - Remove vegetation in inundation footprint prior to initial filling
  - Delay fish stocking- approx. 10 years
  - Monitor reservoir fish tissue methylmercury
  - Post fish consumption warning signs if fish tissue methylmercury concentrations exceed CA sport fish objective
  - Adhere to the State Water Board TMDL for mercury in reservoirs, once adopted

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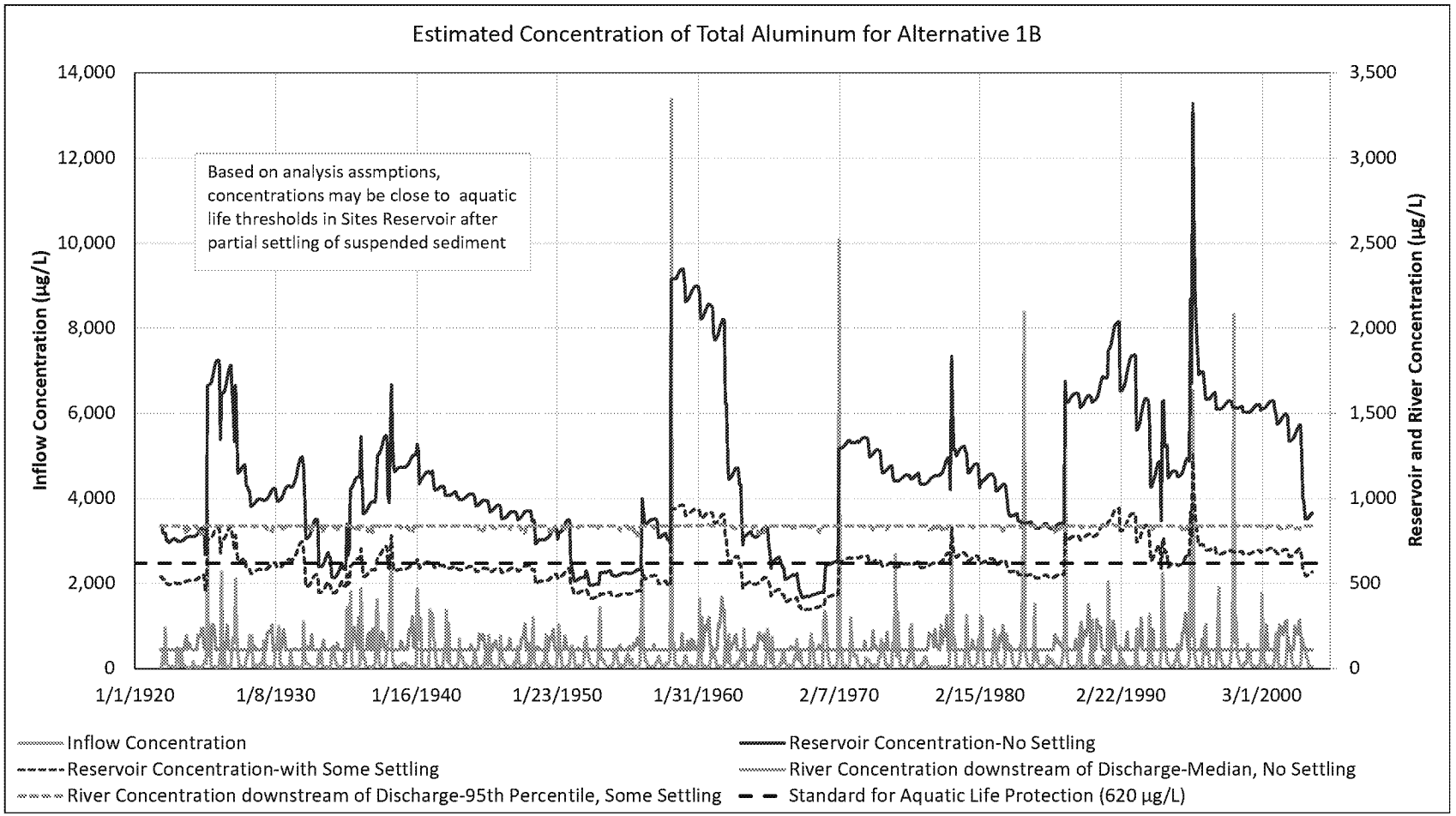
Other Metals

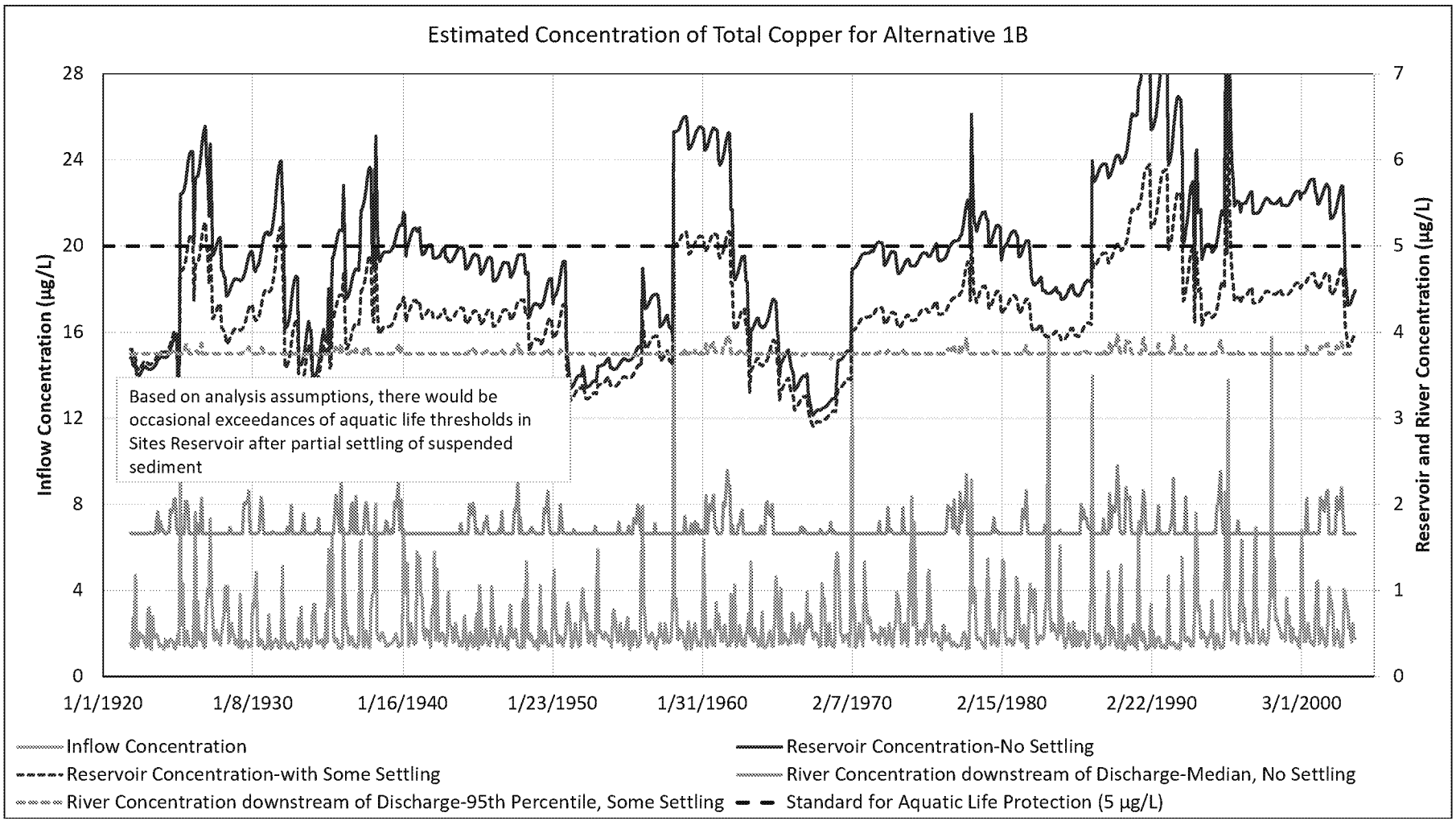
- Calculations include:
  - Estimation of inflow concentration (based on both flow at Keswick and Keswick/Bend Bridge)
  - Evapoconcentration
  - With and without demonstration of effect of partial settling of suspended sediment
- Reservoir Management Plan
  - Monitor concentrations of aluminum, copper, iron, and lead upstream of, in, and downstream of Sites Reservoir

Draft_0011354

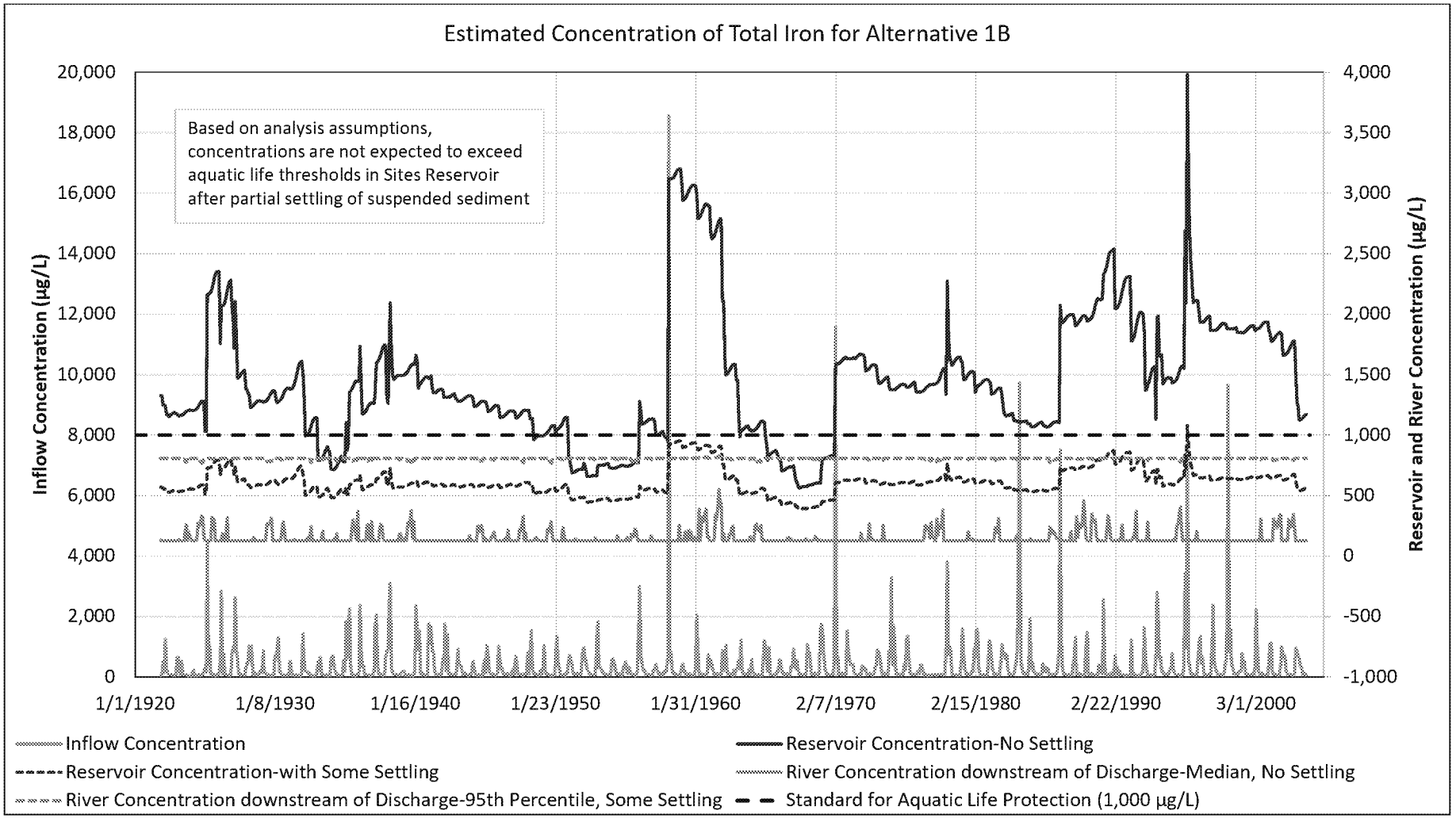
Other Metals: Aluminum



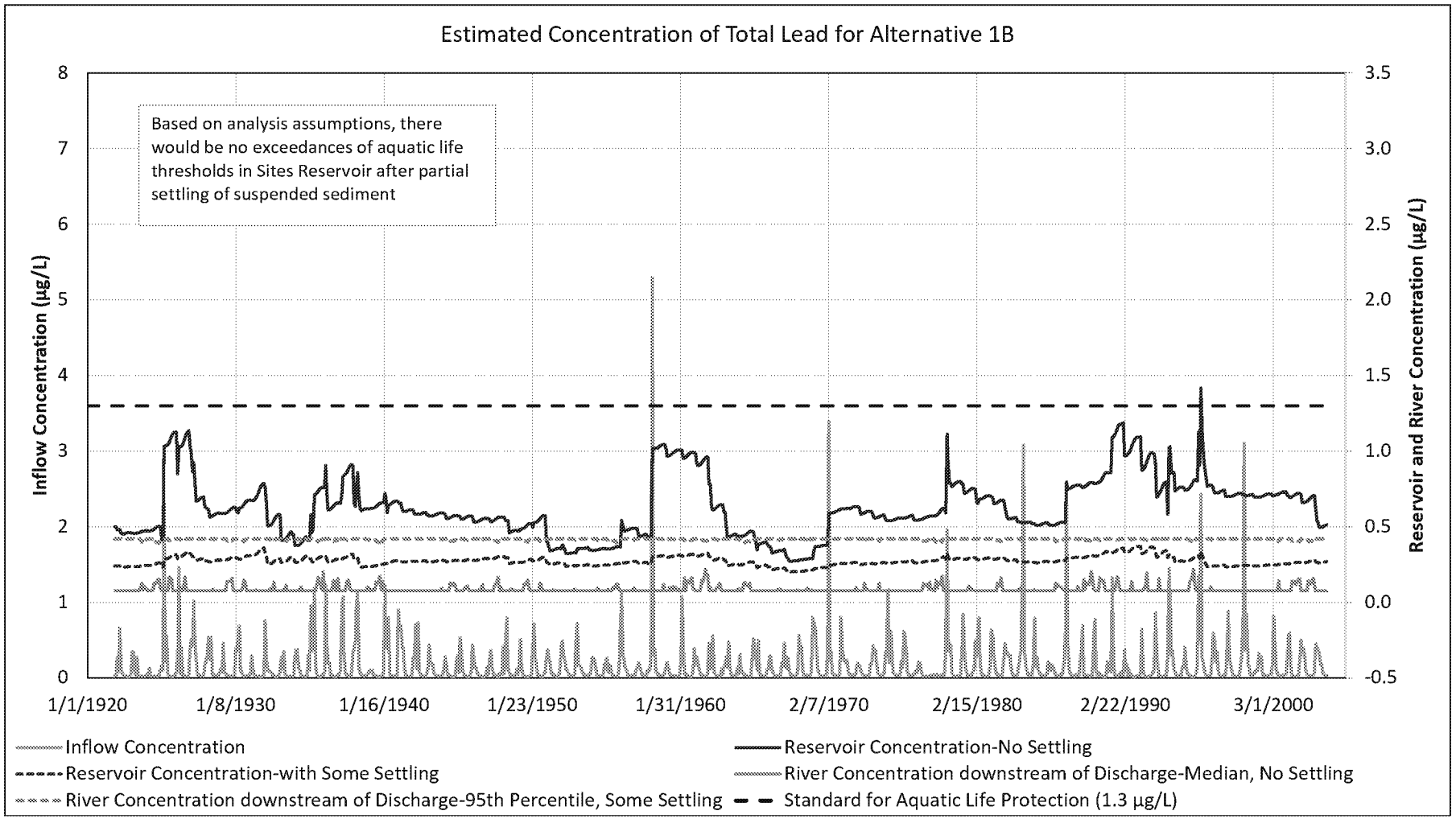
Other Metals: Total Copper



Other Metals: Total Iron



Other Metals: Total Lead



Metals Effects Summary

- Less that Significant without Mitigation
  - Within in Sacramento River
  - Within Sites Reservoir
  - Within Colusa Basin Drain
  - Within Bay-Delta
  - Funks Creek
- Less than Significant with Mitigation
  - Yolo Bypass
    - Due to Colusa Basin Drain water
  - Stone Corral Creek
    - Due to bottom release
- Significant and Unavoidable
  - Methylmercury downstream of Sites

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Pesticides and Salinity

- Pesticides
  - Sites Reservoir – minimal pesticides
  - Yolo Bypass – inflow from Colusa Basin Drain
- Salinity
  - Salt Pond – limited data, possible fates of water, estimated flow of 0.1 cfs, small effect
  - Evapoconcentration
    - Average concentration approximately 13-16 percent higher than the inflow concentration
    - Estimated maximum increase of 41 – 48 percent depending on alternative
    - Small effect on Sacramento River
  - Delta – next slide

Delta Outflow and Salinity

- Simulated Delta Outflow: No Action Alternative (cfs) and % Change between No Action and Project Alternatives

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Average for Critically Dry Water Years												
NAA	4,083	3,905	8,495	10,608	13,663	11,103	9,539	5,682	5,371	4,019	3,375	3,110
Alt 1A	24	-8	-5	-2	-2	-2	0	-1	0	1	5	0
Alt 1B	22	-6	-5	-2	-1	-3	0	-1	0	1	5	1
Alt 2	22	-7	-4	-2	-1	-3	0	-1	0	1	5	0
Alt 3	17	-4	-5	-2	-3	-2	0	-2	0	1	2	-1
Average for Wet Water Years												
NAA	7,958	11,658	26,283	85,174	99,942	80,070	54,824	37,979	23,391	11,761	7,207	12,538
Alt 1A	2	-3	0	-2	-1	-1	-2	-1	-1	0	3	2
Alt 1B	2	-3	0	-2	-2	-1	-2	-1	-1	0	3	3
Alt 2	2	-3	0	-1	-1	-1	-1	-1	-1	0	4	3
Alt 3	2	-3	0	-1	-1	-2	-2	-1	-1	0	3	2

- X2: No Action Alternative (km) and Change between No Action and Project Alternatives

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Average for Critically Dry Water Years												
NAA	92.9	92.4	87.6	83.5	77.2	76.7	79.0	84.1	87.2	89.6	91.5	93.0
Alt 1A	-1.3	-0.7	0.4	0.3	0.4	0.5	0.1	0.1	0.0	-0.3	-0.5	-0.5
Alt 1B	-1.2	-0.7	0.4	0.3	0.3	0.4	0.1	0.1	0.1	-0.3	-0.5	-0.6
Alt 2	-1.2	-0.6	0.4	0.3	0.3	0.4	0.1	0.1	0.1	-0.3	-0.5	-0.4
Alt 3	-0.8	-0.6	0.4	0.3	0.4	0.4	0.1	0.1	0.1	-0.2	-0.4	-0.3
Wet Water Years												
NAA	78.7	79.5	75.3	57.5	54.8	55.5	56.7	59.3	65.4	73.6	81.0	78.4
Alt 1A	-0.3	0.1	0.3	0.1	0.0	0.1	0.0	0.0	0.1	0.1	-0.1	-0.3
Alt 1B	-0.3	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.1	-0.1	-0.3
Alt 2	-0.3	0.2	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.1	-0.2	-0.4
Alt 3	-0.3	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.1	0.1	-0.1	-0.3

Open Topic Discussion

Action Items

Thank you!

Sites

From: Spranza, John [John.Spranza@hdrinc.com]
Sent: 7/13/2021 11:46:43 AM
To: Alicia Forsythe [aforsythe@sitesproject.org]; Berryman, Ellen [Ellen.Berryman@icf.com]
Subject: RE: Sites - CRLF, Discussion with Dan
Attachments: CRLF habitat delineation talking points_20210713.docx

Flag: Follow up

Ali,
Attached for your review are draft talking points.

John Spranza

D 916.679.8858 M 818.640.2487

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Thursday, July 1, 2021 12:57 PM
To: Spranza, John <John.Spranza@hdrinc.com>; Berryman, Ellen <Ellen.Berryman@icf.com>
Subject: Sites - CRLF, Discussion with Dan

CAUTION: [EXTERNAL] This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi John and Ellen – I just had a good discussion with Dan. I didn't question his perspective – I don't have the technical basis to do that. I simply shared with him that I need to share this outcome with Jeff Sutton and I expect Jeff to raise some concerns.

I suggested that we work on some talking points for the discussion with Jeff so that we had a consistent message. Can you both take a stab at these and then we can get them to Dan to review? I am thinking of how we would explain this to Jeff – what is left in, why its left in, and why we feel like we cant rule it out. And then a few talking points on what does this mean for the future – we survey; if we don't find frogs, then nothing; if we do find frogs, then what? Dan didn't think it would trigger a consultation on the TC Canal operations even if in the rare instance we found frog there. He did say that the Service might have different ideas, but his thought was more that if they are there, they have been able to survive there and Reclamation wouldn't see a need to consult.

Anyway, I am thinking that we should try to close this loop with Jeff in the next few weeks. Could we have talking points drafted and over to Dan by the end of next week?

My assumption is that this is more of an ESA issue – NOT an EIR issue. Meaning that the EIR is broad and general enough that we don't pinpoint this location, correct (meaning, we don't say we assume presence of CRLF in Funks Creek below Funks Reservoir in the EIR or show a map in the document or appendix that would show this)? If this is the case, then I think we have a little time. If we do pinpoint this in the EIR, then we need to move quickly (but I don't recall that we do).

Thanks to you both for keeping this topic moving.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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CRLF talking points

- California red-legged frog (CRLF) occurs from sea level to elevations of approximately 5,200 feet but was probably extirpated from the floor of the Central Valley before 1960 as the last verifiable record of the species on the valley floor was in San Joaquin County in 1957.

- There is no clear-cut definition of "valley floor" in literature describing the species' current range. We originally defined habitat as areas generally west of Funks Reservoir because this is where the topography changes from flat to foothills. A clear delineation has been challenging, however, because the species is not limited by elevation or topography. Reclamation has suggested the cut-off point should be at the edge of the cultivated croplands, as these lands clearly do not provide suitable habitat or the species.

- Planned locations for Sites Reservoir and associated facilities are outside USFWS's current mapped range for CRLF (CRLF: https://ecos.fws.gov/ecp/species/2891). The California Natural Diversity Database (CNDDB) does not identify any recorded California red-legged frog occurrences within 50 miles of the Sites project area.

- In contrast to the CNDDB, the USFWS has indicated in recent biological opinions for Maxwell Intertie Project and 2019-2021 geotechnical investigations that, "there are occurrences from 1963 in Glenn County approximately 20 miles from the action area and 1933 in Colusa County approximately 13 miles from the action area depicted in the species account in *California Amphibian and Reptile Species of Special Concern*."

    - As no CRLF surveys could be performed, the Maxwell Intertie environmental documents and Sites geotechnical work Biological Assessment assumed that CRLF may occupy potential suitable aquatic, upland, and dispersal habitat in the project area ("Assumed Presence").

- The species was not detected during non-protocol surveys conducted within the Sites Reservoir project area from 1997 to 2001. The surveys generally followed the methods *in Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (USFWS, 2005a) but did not include the complete number of recommended surveys and were not conducted during the breeding season, and not all properties were accessible at the time of the surveys.

- During periods of wet weather CRLF may disperse through a variety of upland habitats (e.g., grassland, riparian, woodlands) to reach breeding and nonbreeding sites, upland refugia and foraging habitats, or new breeding locations. Although CRLF may in some cases disperse over two miles from breeding sites, a one-mile buffer around suitable aquatic habitat is generally used to identify all potential impacts areas and areas potentially needing surveys.

- Future Considerations

    - If Sites' protocol CRLF surveys detect the species, all future projects in suitable aquatic or upland dispersal habitat within 5 miles of the occurrence would likely be required to consult with the USFWS under the Endangered Species Act. and perform CRLF protocol surveys

    - Regardless of the findings of the Sites' surveys, protocol CRLF surveys could be required for any future project in suitable aquatic or upland dispersal habitat should a federal permit nexus exist and avoidance measures similar to those utilized in Sites' geotechnical activities not be possible.

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- CRLF Survey Timing – January 1 to June 30 (6 surveys – 2 day, 4 night) and July 1 to September (2 surveys – 1 day and 1 night). Best survey period is January 1 to February 28 for the Sites region. Each survey 7 days apart though day and night surveys can take place on the same day

- Mitigation ratios are up to 3:1 for permanent impacts

- Construction monitoring for projects within 300 feet of suitable aquatic habitat would be required and is a significant cost

- It is uncertain if future TC Canal operations or maintenance would trigger CRLF consultation

Draft_0011369

From: Hendrick, Mike [Mike.Hendrick@icf.com]
Sent: 7/13/2021 1:01:47 PM
To: Williams, Nicole [Nicole.Williams@icf.com]; Briard, Monique [Monique.Briard@icf.com]; Unger, Sophie [Sophie.Unger@icf.com]; Huber, Anne [Anne.Huber@icf.com]; Webber, Lisa [Lisa.Webber@icf.com]; Haire, Jennifer [Jennifer.Haire@icf.com]; Roberts, Diana [Diana.Roberts@icf.com]; Berryman, Ellen [Ellen.Berryman@icf.com]; Kimball, Ingrid [Ingrid.Kimball@icf.com]; Laurie Warner Herson [laurie.warner.herson@phenixenv.com]; Alicia Forsythe [aforsythe@sitesproject.org]; Heydinger, Erin [erin.heydinger@hdrinc.com]; Leaf, Rob/SAC [Rob.Leaf@jacobs.com]; steve.micko@jacobs.com; Hassrick, Jason [Jason.Hassrick@icf.com]; Lecky, Jim [Jim.Lecky@icf.com]; Wilder, Rick [Rick.Wilder@icf.com]
Subject: RE: Sites Reservoir: Yolo Modeling Results Discussion with Jacobs

-----Original Appointment-----
From: Williams, Nicole <Nicole.Williams@icf.com>
Sent: Monday, July 12, 2021 6:34 AM
To: Williams, Nicole; Williams, Nicole; Briard, Monique; Hendrick, Mike; Unger, Sophie; Huber, Anne; Webber, Lisa; Haire, Jennifer; Roberts, Diana; Berryman, Ellen; Kimball, Ingrid; Laurie Warner Herson; Alicia Forsythe; Heydinger, Erin; Leaf, Rob/SAC; Micko, Steve/SAC; Hassrick, Jason; Lecky, Jim
Subject: Sites Reservoir: Yolo Modeling Results Discussion with Jacobs
When: Wednesday, July 14, 2021 1:00 PM-2:00 PM (UTC-08:00) Pacific Time (US & Canada).
Where: Microsoft Teams Meeting

Hello – this meeting is to quickly discuss Yolo Bypass modeling results to clarify results and the information contained in the RDEIR/SDEIS, particularly regarding non-fish resources. Currently, vegetation, wildlife, and agriculture are working with the following text with respect to Yolo Bypass:

Based on observations during North Delta Flow Actions (Davis pers. Comm 2021), the comparable August – October habitat flows from Sites Reservoir through the Yolo Bypass may cause limited inundation of low-elevation parcels in the upper Yolo Bypass (north of the I-80 Causeway). The intent of the releases from Sites to the Yolo Bypass during this time period is to temporally and spatially distribute food resources for fish species. If the water inundates floodplain areas (i.e., areas outside existing channels) the food would be deposited and would fail to move into the Delta. As such, the Sites Reservoir would be operated to maintain flows within the existing Toe Drain, Tule Canal, and other channels, and adjustments in operations would be coordinated between Sites Authority and parcel owners using the existing Yolo Bypass monitoring network.

Surface Hydrology, Fluvial Geomorphology, Water Quality, and Aquatic Resources use more detailed modeling results presented in Appendix 11M.

Invitees include:
AUTHORITY/INTEGRATION:
- Ali Forsythe, Authority
- Laurie Warner Herson, Integration CEQA/NEPA lead
- Erin Heydinger, Integration Modeling Lead
JACOBS:
- Steve Micko, modeling
- Rob Leaf, modeling
ICF
- Nicole Williams
- Monique Briard
- Anne Huber – water resources/water quality
- Mike Hendrick and Sophie Unger and Jason Hassrick and Jim Lecky – Fish

- Lisa Webber – vegetation
- Diana Roberts – agriculture
- Ellen Berryman/Jennifer Haire – wildlife
- Ingrid Kimball – fluvial geomorphology

Microsoft Teams meeting

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From: Micko, Steve/SAC [Steve.Micko@jacobs.com]
Sent: 7/13/2021 1:53:48 PM
To: Alicia Forsythe [aforsythe@sitesproject.org]; Heydinger, Erin [erin.heydinger@hdrinc.com]; Leaf, Rob/SAC [Rob.Leaf@jacobs.com]; Spranza, John [john.spranza@hdrinc.com]; Laurie Warner Herson [laurie.warner.herson@phenixenv.com]; Leaf, Rob/SAC [Rob.Leaf@jacobs.com]
Subject: RE: Sites Reservoir: Yolo Modeling Results Discussion with Jacobs

Yep! I'll be there.

Steve

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Tuesday, July 13, 2021 1:31 PM
To: Heydinger, Erin <erin.heydinger@hdrinc.com>; Leaf, Rob/SAC <Rob.Leaf@jacobs.com>; Spranza, John <john.spranza@hdrinc.com>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Micko, Steve/SAC <Steve.Micko@jacobs.com>; Leaf, Rob/SAC <Rob.Leaf@jacobs.com>
Subject: [EXTERNAL] RE: Sites Reservoir: Yolo Modeling Results Discussion with Jacobs

Hi Steve and Rob – I hope you will be able to make this expanded time work for this meeting. There are a few questions around fall run redd dewatering that ICF has in Alternative 3 that we also need to discuss ASAP. We expanded out this meeting to try to cover both topics.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Hendrick, Mike <Mike.Hendrick@icf.com>
Sent: Tuesday, July 13, 2021 1:02 PM
To: Williams, Nicole <Nicole.Williams@icf.com>; Briard, Monique <Monique.Briard@icf.com>; Unger, Sophie <Sophie.Unger@icf.com>; Huber, Anne <Anne.Huber@icf.com>; Webber, Lisa <Lisa.Webber@icf.com>; Haire, Jennifer <Jennifer.Haire@icf.com>; Roberts, Diana <Diana.Roberts@icf.com>; Berryman, Ellen <Ellen.Berryman@icf.com>; Kimball, Ingrid <Ingrid.Kimball@icf.com>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Alicia Forsythe <aforsythe@sitesproject.org>; Heydinger, Erin <erin.heydinger@hdrinc.com>; Leaf, Rob/SAC <Rob.Leaf@jacobs.com>; steve.micko@jacobs.com; Hassrick, Jason <Jason.Hassrick@icf.com>; Lecky, Jim <Jim.Lecky@icf.com>; Wilder, Rick <Rick.Wilder@icf.com>
Subject: RE: Sites Reservoir: Yolo Modeling Results Discussion with Jacobs

-----Original Appointment-----
From: Williams, Nicole <Nicole.Williams@icf.com>
Sent: Monday, July 12, 2021 6:34 AM
To: Williams, Nicole; Williams, Nicole; Briard, Monique; Hendrick, Mike; Unger, Sophie; Huber, Anne; Webber, Lisa; Haire, Jennifer; Roberts, Diana; Berryman, Ellen; Kimball, Ingrid; Laurie Warner Herson; Alicia Forsythe; Heydinger, Erin; Leaf, Rob/SAC; Micko, Steve/SAC; Hassrick, Jason; Lecky, Jim

Subject: Sites Reservoir: Yolo Modeling Results Discussion with Jacobs
When: Wednesday, July 14, 2021 1:00 PM-2:00 PM (UTC-08:00) Pacific Time (US & Canada).
Where: Microsoft Teams Meeting

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Surface Hydrology, Fluvial Geomorphology, Water Quality, and Aquatic Resources use more detailed modeling results presented in Appendix 11M.

Invitees include:
AUTHORITY/INTEGRATION:
- Ali Forsythe, Authority
- Laurie Warner Herson, Integration CEQA/NEPA lead
- Erin Heydinger, Integration Modeling Lead
JACOBS:
- Steve Micko, modeling
- Rob Leaf, modeling
ICF
- Nicole Williams
- Monique Briard
- Anne Huber – water resources/water quality
- Mike Hendrick and Sophie Unger and Jason Hassrick and Jim Lecky – Fish
- Lisa Webber – vegetation
- Diana Roberts – agriculture
- Ellen Berryman/Jennifer Haire – wildlife
- Ingrid Kimball – fluvial geomorphology

Microsoft Teams meeting

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
650 Capitol Mall, Suite 5-100
Sacramento, California 95814-4700

July 12, 2021

Melissa Dekar
Natural Resources Specialist
Environmental Compliance and Conservation Branch, CGB-152
2800 Cottage Way, Sacramento, CA 95825
Interior Region 10, Bureau of Reclamation

Re: NMFS Comments on the Sites Reservoir, Supplemental Draft Environmental Impact Statement (SDEIS)/Revised Environmental Impact Report (REIR), Chapter 11

Dear Ms. Dekar,

We are writing in response to your June 17 request for Cooperating Agency review of the Sites Project Authority and U.S. Bureau of Reclamation Supplemental Draft Environmental Impact Statement/Revised Environmental Impact Report (SDEIS/REIR) Groups 2 and 3 for the proposed Sites Reservoir and associated facilities (Project). NOAA's National Marine Fisheries Service (NMFS) has reviewed one chapter of the draft and is providing technical assistance comments as they relate to anadromous fishes under our jurisdiction. As a Cooperating Agency under the National Environmental Policy Act (NEPA), we have agreed to work closely with you in evaluating key sections of the SDEIS/REIR and to provide feedback regarding the level of analysis therein. We have also taken the opportunity during this review to identify those elements of the Project that will need further review during the development of a Biological Assessment and materials required for the initiation of consultation pursuant to section 7 of the Endangered Species Act (ESA). As such, we view the analyses presented in the SDEIS/REIR as foundational for any additional analysis necessary to support the ESA consultation for the proposed action.

Our review period was significantly truncated due to lack of notification of available materials and inadequate completion of materials. Our review period began on June 17, rather than May 26 and June 2, the dates when the materials were made available to other parties. Four sections that we intended to review were not complete as of late June. We provided preliminary verbal comments on sections reviewed on June 28, and our written comments are in this correspondence. We value our role as a Cooperating Agency to provide feedback on environmental analyses where we have special expertise, but due to the abbreviated review period, our comments should not be considered comprehensive, and the absence of comments on a given topic does not imply our concurrence.

We understand that the Project timeline requests accelerated review of environmental documents by the resource agencies. Due to drought response, other workload priorities throughout the Central Valley, and an overall reduced workforce, NMFS cannot guarantee a high level of

engagement on this project. We encourage resumed discussions on resource opportunities, as discussed earlier this year regarding both technical assistance and life cycle modeling. This would allow NMFS to provide increased and consistent support to this project, which incurs a prolonged (multi-year) and heavy workload (multiple staff) demand on existing NMFS resources.

In our review of the SDEIS/REIR, Chapter 11, NMFS staff have compiled a number of comments identified by section number. Our comments are consolidated in Table 1 and provided in the attached track changes Word document. We anticipate that a continued dialogue will allow us to build on our understanding of the Project and its potential impacts and we look forward to discussing these comments in future meetings.

Table 1: NMFS Comments on Sites Reservoir, SDEIS/REIR, Chapter 11.

Section	Comment	Comment type
Chapter 11: Aquatic Resources		
11.1	The document states that, "...where the results indicated essentially no difference between the Project and No Action, no effect was assumed. Areas of no effect included the Trinity River, Trinity Lake, and the San Joaquin River watershed upstream of the Delta." Were Whiskeytown Lake and Clear Creek determined to be areas of no effect? Please define "essentially no difference." For example, were the effects averaged over some amount of space or time? What is the quantitative explanation of what qualified as a "difference?"	Baseline Assumptions
11.1.1	The proposed Delta Conveyance Project (DCP) is likely to be a contemporaneous infrastructure project to the proposed Sites Reservoir with congruent potential effects on aquatic resources. Therefore it should be more explicitly discussed, recognizing the uncertainty in the timeline for construction and operations of both proposed projects. If the model runs for Sites include DCP in the baseline, and vice versa, the projects will be better positioned for environmental review, including ESA consultation.	Baseline Assumptions
11.2.1	"Area of occurrence" is too broadly described. Please hone your descriptions of species occurrence to areas where they are or historically have been, for example winter-run would include the Lassen Tributaries (Battle, Mill and Deer), Feather and American Rivers.	Baseline assumptions
11.2.3	The environmental settings would benefit from updates to include construction and operational changes made over the last 5-10 years, especially in Section 11.2.3 regarding Sacramento River Flood Bypasses. The section would also benefit by adding references from recent publications on the relationship between flows and food webs.	Baseline assumptions

11.2.5	The discussion of Sacramento River temperature management requires correction. It states that temperature targets are "...modified by the 2019 NMFS BiOp, which prescribes a tiered operational approach..." Rather, this approach was established in the 2019 USBR BA/PA and 2020ROD. We recommend you adjust this accordingly to include the BA/PA and ROD, rather than the BiOp, in the quoted section from the text. Within this context, the terms "modified" and "prescribed" are not good descriptions of the BiOp. Additionally, there is an unclear citation to a USFWS & NMFS BiOps on page 31 of the document that we'd suggest clarifying.	Regulatory
11.5	We'd suggest a greater focus and presentation of the minimum flows for critically dry summers. The average flows are helpful to see, but it's important to analyze the critical conditions (in addition to the average ones) that fish populations will face. Likewise, in analyzing temperature impacts, more detailed analysis of critical condition months and water year types are imperative to the analysis.	Operations
11.5	Chapter 11 states that, "...application of the flow-threshold criteria from Michel et al. (2021) suggests that flow-survival effects on juvenile Chinook salmon (including spring-run Chinook salmon) would be greatly limited by the diversion criteria." However, this is also dependent on water year type (WYT). Analysis shows significant change in flow and survival for wet years (2011, 2017) where survival is decreased by project operations 5%-11% in those WYTs. Since the effects of operations are highly dependent on hydrology, general conclusions that effects "would be greatly limited by the diversion criteria" are misleading. Please review conclusory statements to ensure they are accurate with quantitative support.	Operations
11.5	There is substantial information missing within the document, such as 139 references to "Table X" (which appear to be tables not yet prepared, formatted or cross-referenced). The general draft nature of the document creates an absence of specific information that precludes effective review. Specifically, reference to Chapter 6 and Appendix 6D is problematic in that that chapter/appendix provide an incomplete understanding of temperature changes in the reservoir and conveyance infrastructure. Ultimately, reliance on incomplete or missing sections of analysis is problematic as conclusions lack support. NMFS expects to have an opportunity to review the full section and will reserve additional comment and feedback for that time.	Operations

11.5	As was previously communicated to Reclamation, including in multiple conversations from January through April of this year, NMFS generally recommends the use of the winter-run Life Cycle Model (WRLCM) for a project of this magnitude to adequately integrate effects of the alternatives on the species. NMFS is concerned about the limitations of the individual models used (Interactive Object-Oriented Simulation and Oncorhynchus Bayesian Analysis) and the ability to integrate the results from both models. Use of this alternate framework will require demonstrating the reliability of this modelling, the availability of documentation, and rigor of review. The WRLCM was used in recent consultations on the CVP/SWP Long Term Operations and California WaterFix, projects, like Sites, that have valley-wide operations impacts or create major physical alteration to the Sacramento River system network, affecting hydrodynamics of the system and habitat for several aquatic species, including endangered winter-run Chinook salmon. There is therefore a precedent of the science advancing to include the WRLCM as a standard tool for sufficient analysis of this type of project. Sites should consider the risk tradeoff of not including this analysis in the NEPA process and anticipated ESA consultation.	Operations

We appreciate the opportunity to comment on this important document and for continued engagement. If you have any questions regarding our input, please contact me at cathy.marcinkevage@noaa.gov and (916) 930-5648.

Sincerely,

A. Catherine Marcinkevage

Cathy Marcinkevage
Assistant Regional Administrator
California Central Valley Office

Cc: Vanessa King
Hydrologist and Interim Project Manager for Sites Reservoir Project
Division of Planning
U.S. Bureau of Reclamation
2800 Cottage Way, MP–720
Sacramento, CA 958

Reservoir Committee Meeting

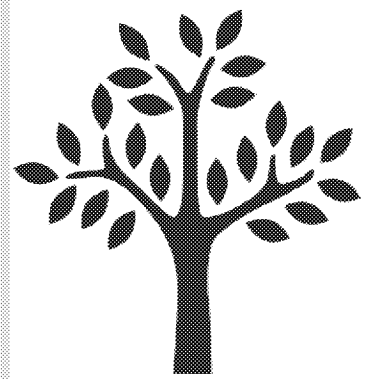
Agenda Item 3-2, Materials for Allocating Reservoir Storage

July 15, 2021

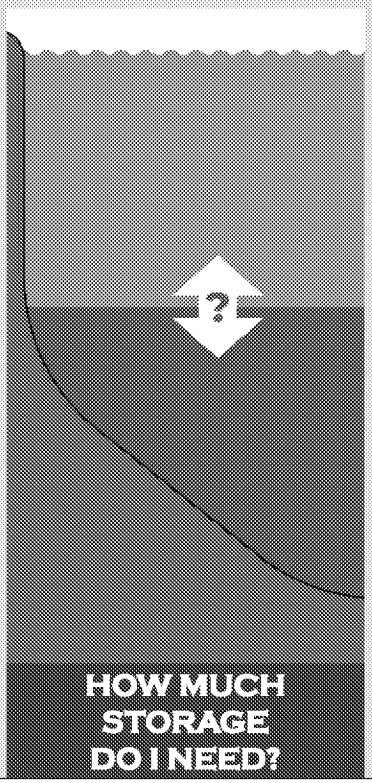
Sites

Sites
Reservoir Project
Allocating Reservoir Storage

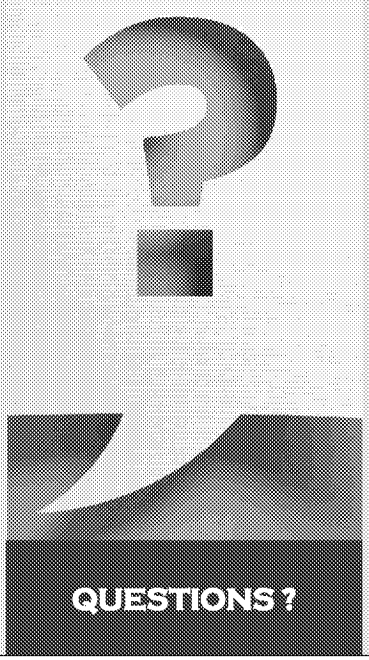
Sites
Reservoir Project



STORAGE BENEFITS



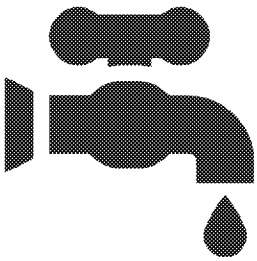
HOW MUCH STORAGE DO I NEED?



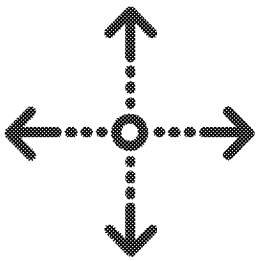
QUESTIONS?

Benefits of Investing in Storage

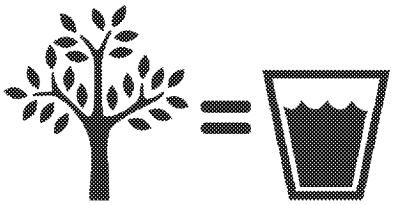
Sites Reservoir Project



RELIABLE
CERTAIN



FLEXIBLE
LOCAL CONTROL



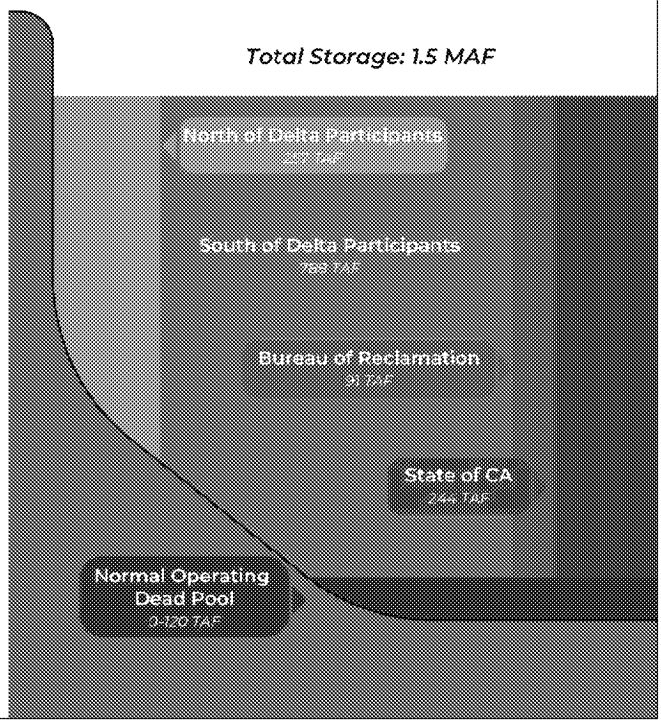
EQUITABLE

Storage Partner Benefits

Sites Reservoir Project

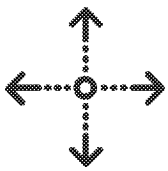
RELIABLE CERTAIN

- Known storage space and diversions to storage
- Improved ability to deliver in dry years
- Certainty in availability



Storage Partner Benefits

Sites Reservoir Project



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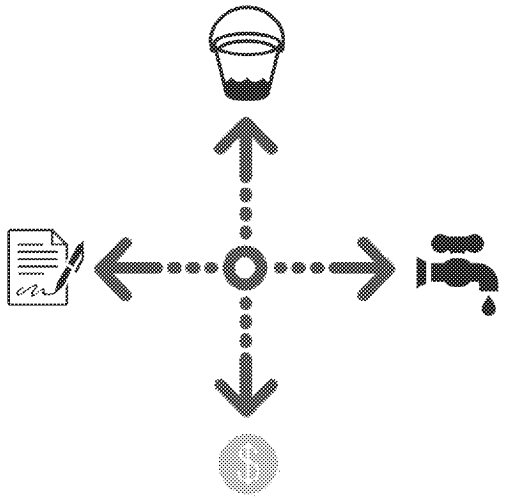
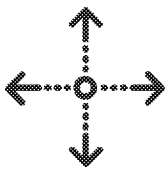


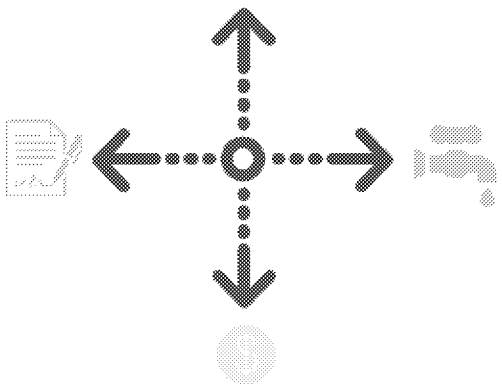
Storage Partner Benefits

Sites Reservoir Project



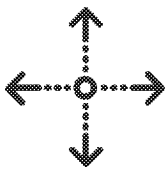
FLEXIBLE
LOCAL CONTROL

Hold Water



Storage Partner Benefits

Sites Reservoir Project



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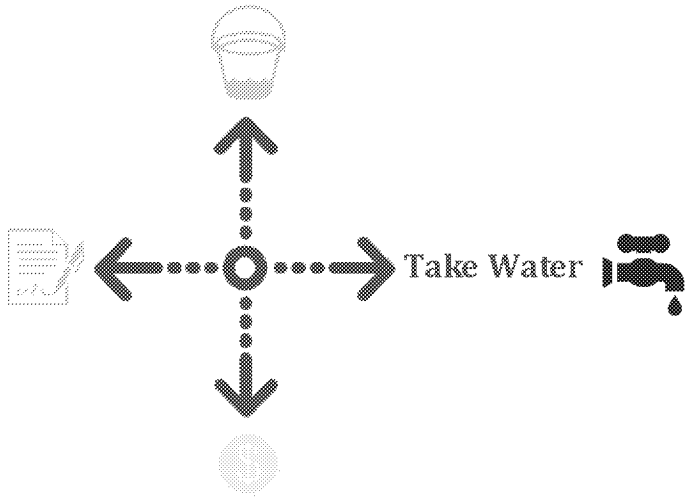
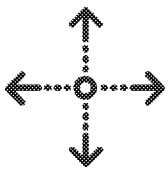
LOCAL CONTROL



Storage Partner Benefits

Sites Reservoir Project



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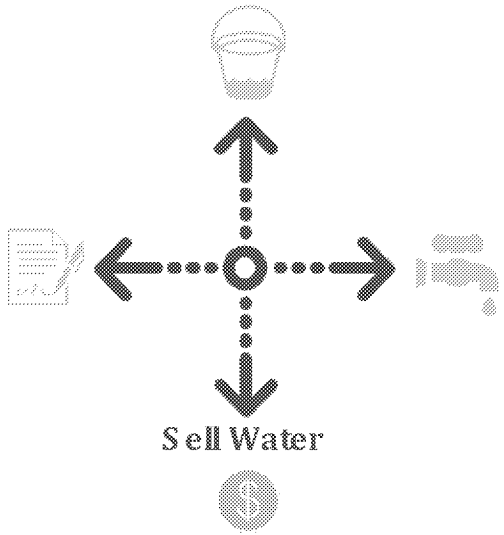
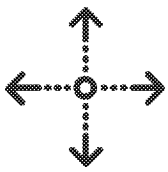


Storage Partner Benefits

Sites Reservoir Project



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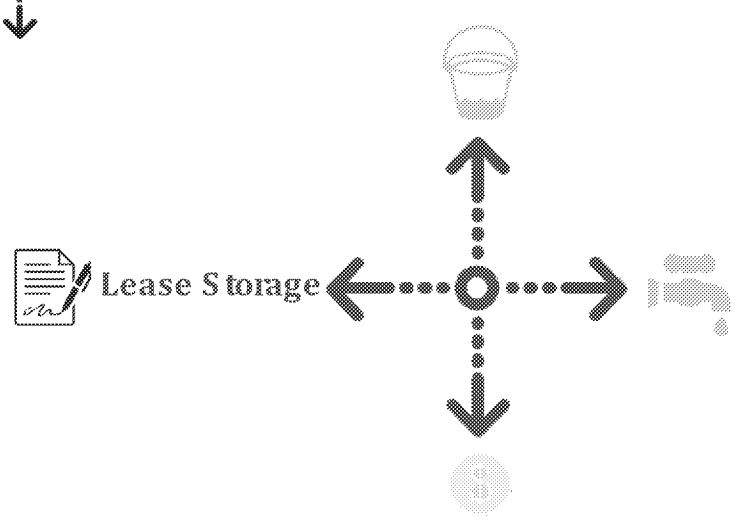
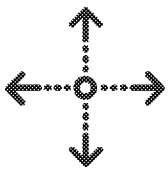


Storage Partner Benefits

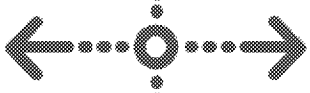
Sites Reservoir Project



FLEXIBLE
LOCAL CONTROL

Hold Water

Lease Storage



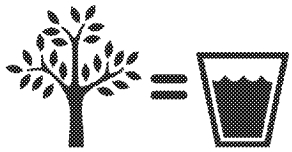
Take Water

Sell Water

... or combinations

Storage Partner Benefits

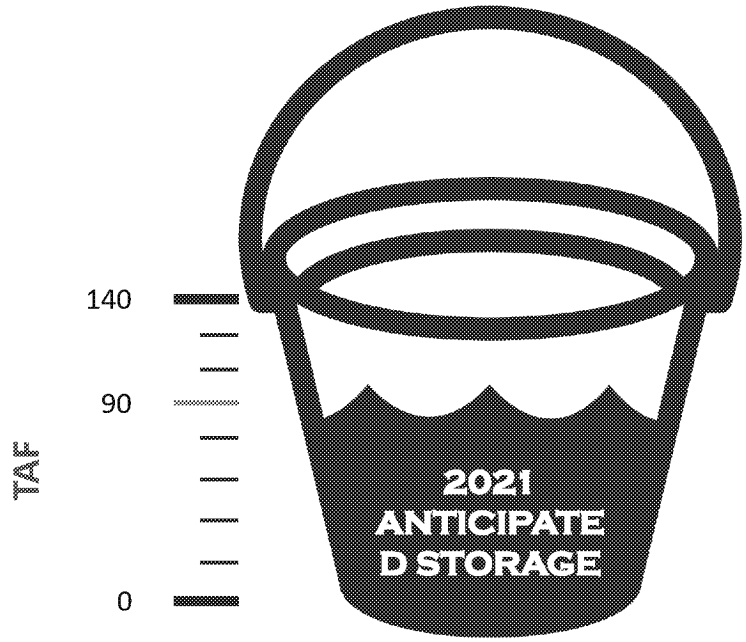
Sites Reservoir Project



EQUITABLE

- Storage space does not define operations/options
- Unit price for storage same for all
- Current participation level translates directly to amount of storage space
- Beneficiary pays

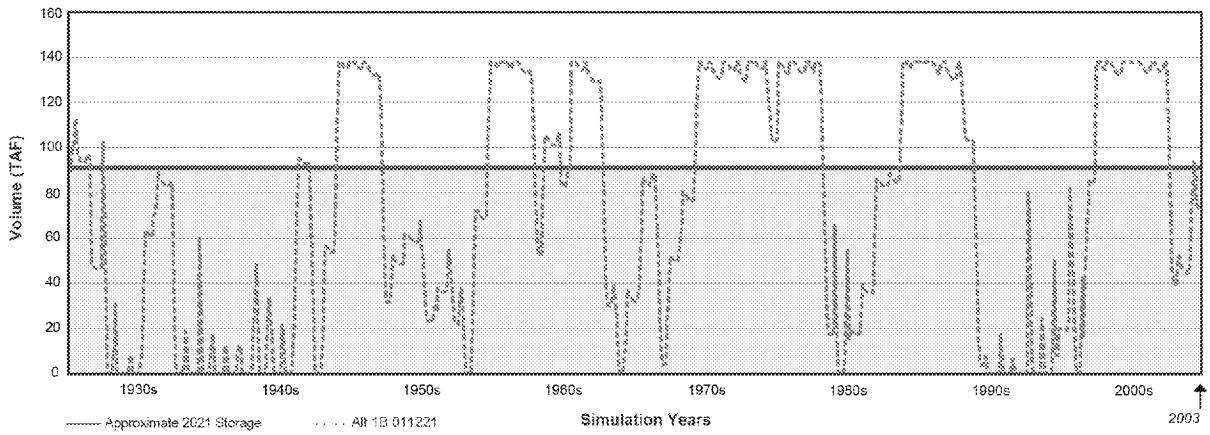
Example: Tehama-Colusa Canal Authority



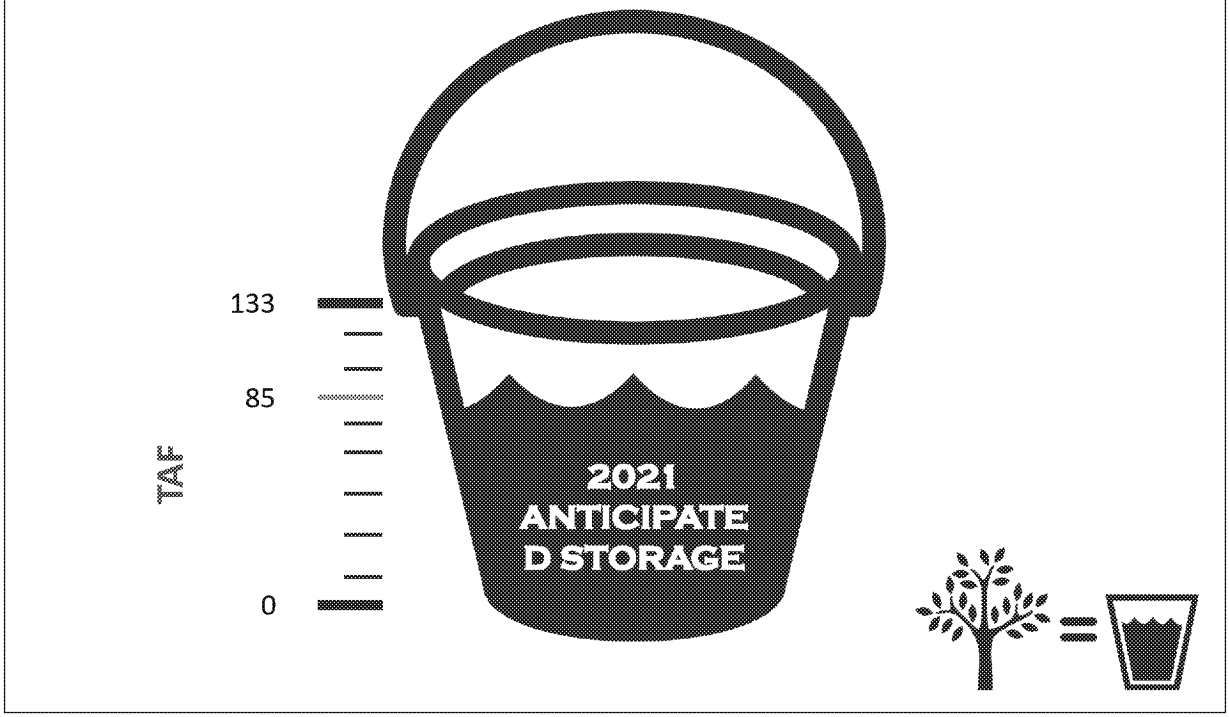
Example: Tehama-Colusa Canal Authority

Sites Reservoir Project

SITES STORAGE: TCCA

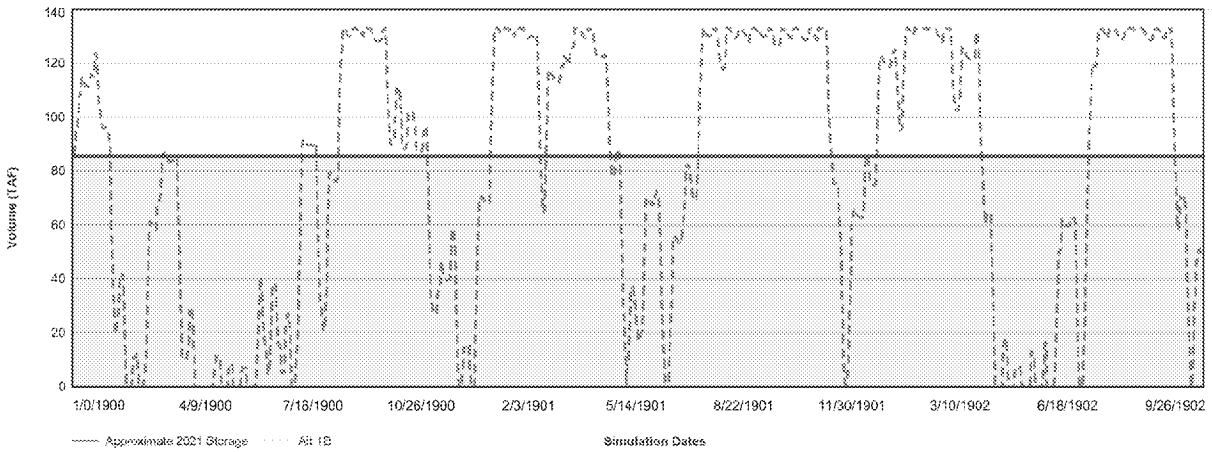


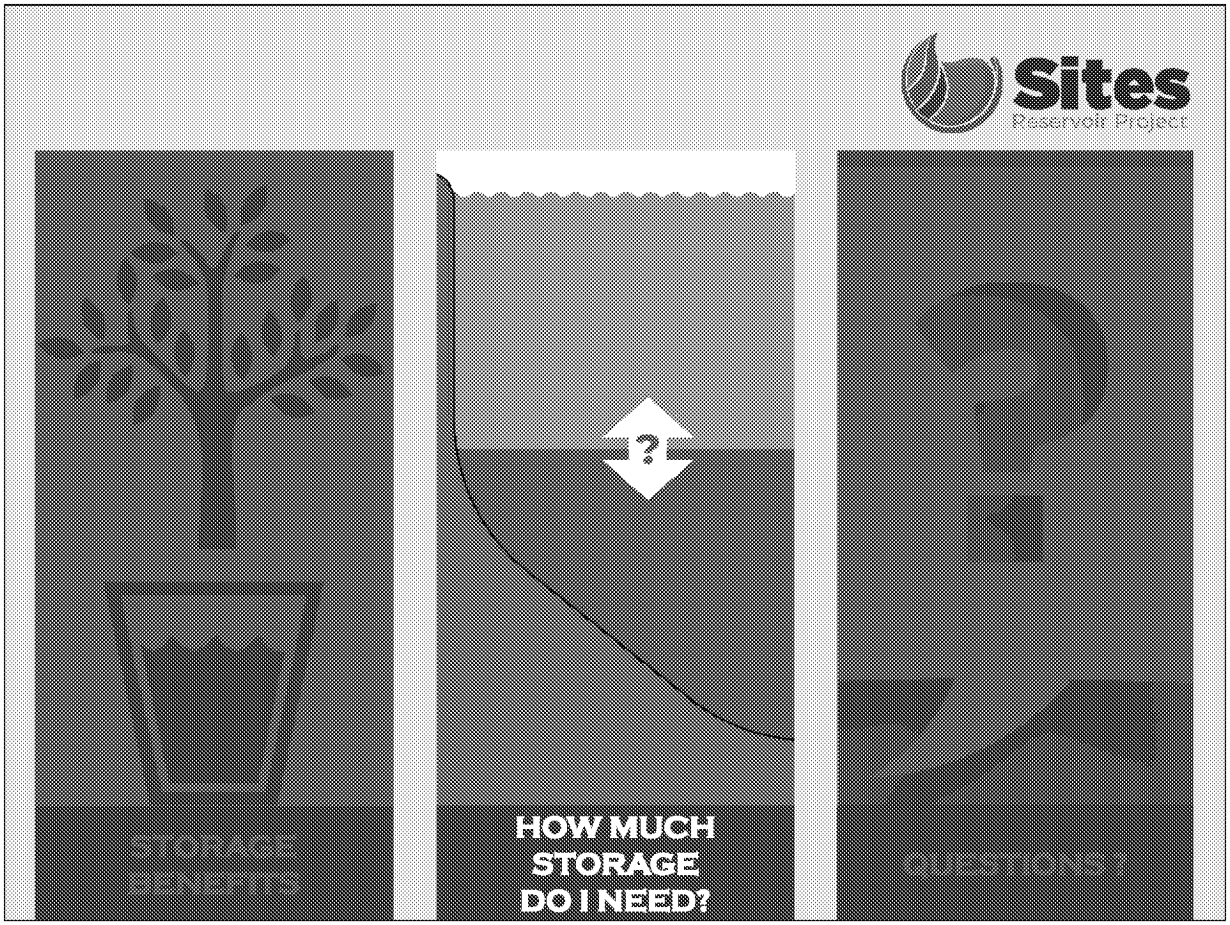
Example: San Bernardino Valley Municipal Water District



Example: San Bernardino Valley Municipal Water District

SITES STORAGE: SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT




Sites
Reservoir Project
?
HOW MUCH
STORAGE
DO I NEED?

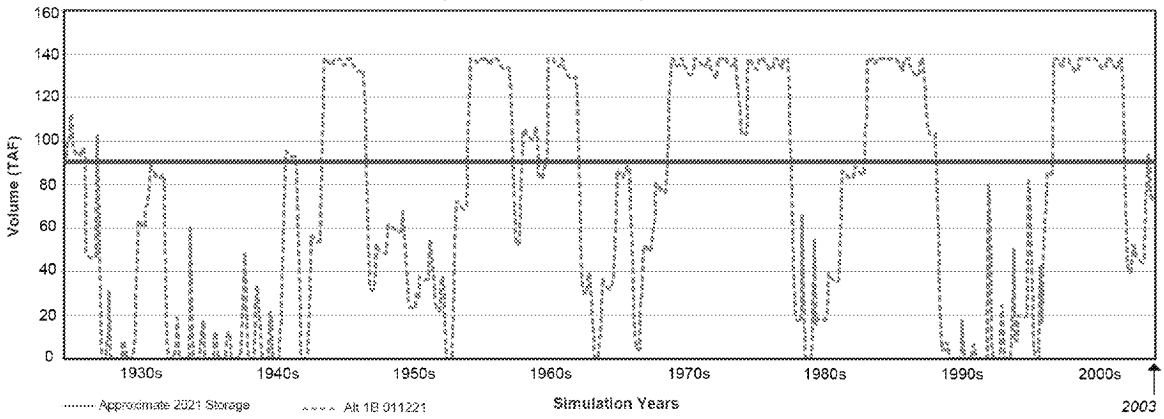
How Much Storage is Right for my Agency?

Sites Reservoir Project

SOME CONSIDERATIONS:

- ✓ Multiple dry years
- ✓ Assume limited or no diversions in a drought
- ✓ Consider selling and leasing
- ✓ Resiliency against future uncertainties
- ✓ Use existing modeling to see storage level fluctuations

SITES STORAGE: TCCA



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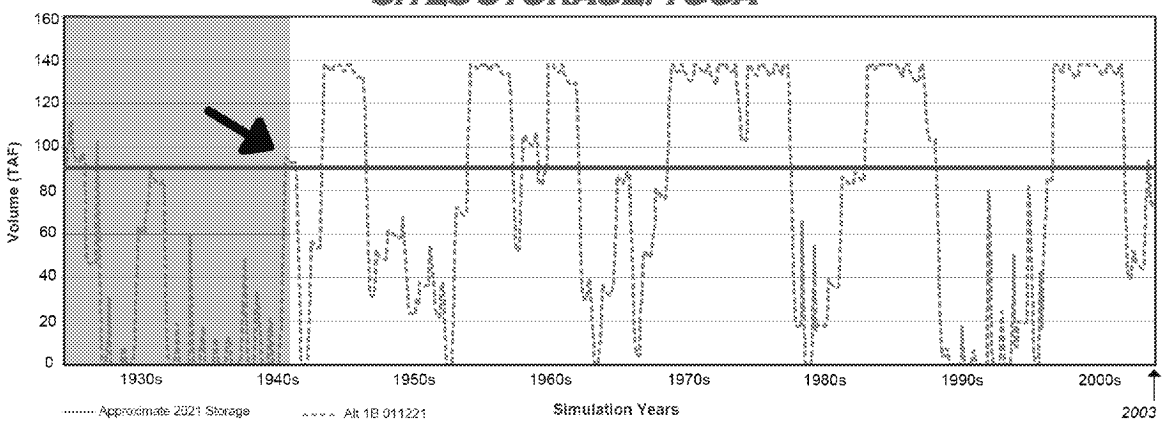

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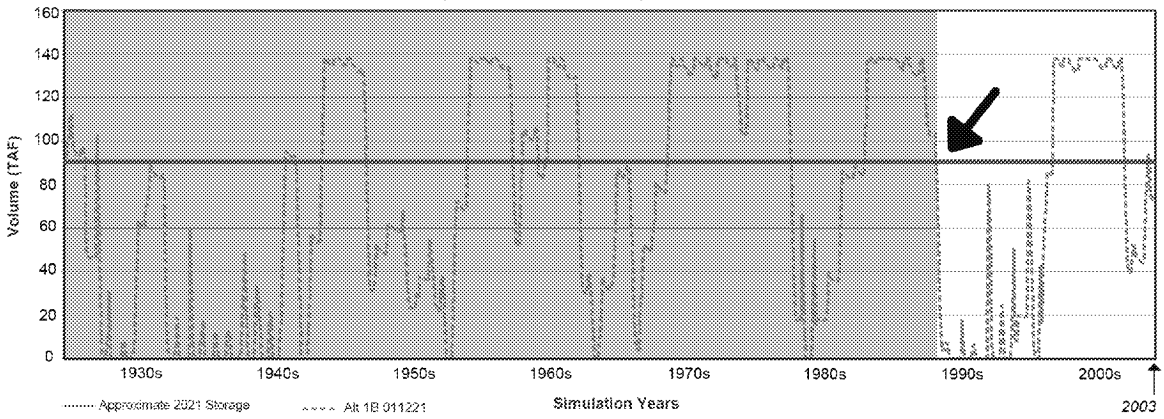

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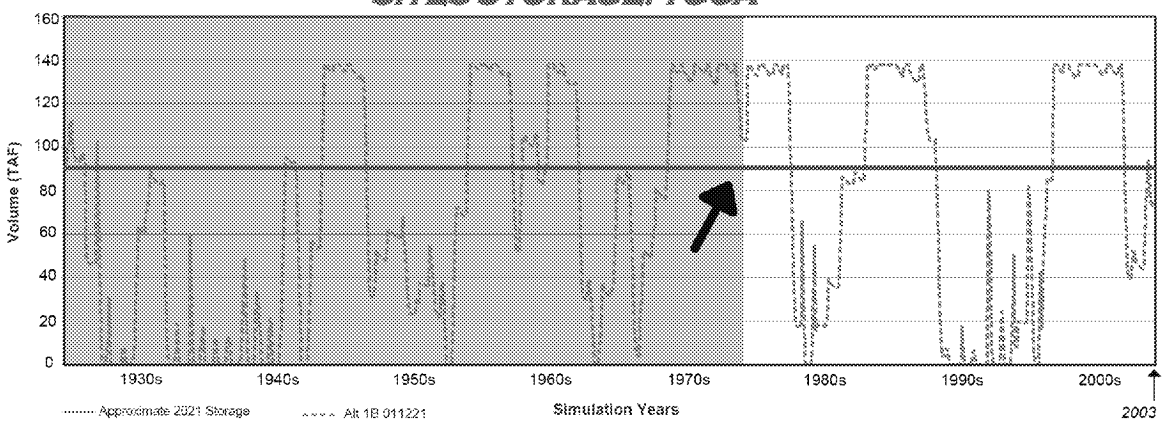


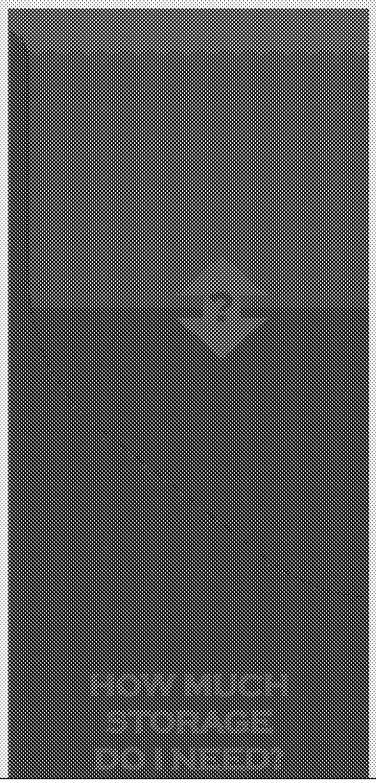
Summary

Sites Reservoir Project

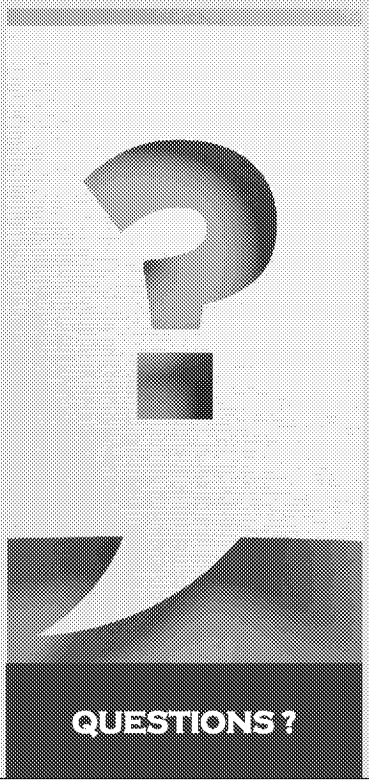
- **Benefits of Storage**
  - ✓ Reliability and certainty
  - ✓ Flexibility
  - ✓ Equity
- **How much do I need?**
  - ✓ Consider multiple dry years
  - ✓ Consider sale/lease of water and storage
  - ✓ Future uncertainty
    - Climate variability
    - CVP/SWP Reliability
    - Regulatory
    - Economic

Sites
Reservoir Project

Shoreline Stabilization



Fish and Wildlife Habitat Improvement



QUESTIONS?

Reservoir Committee Meeting

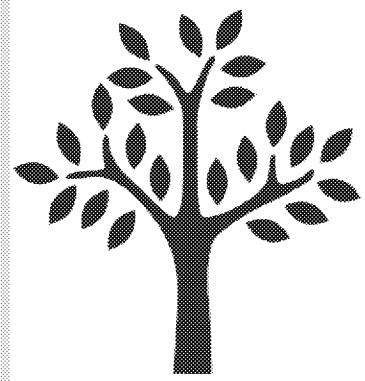
Agenda Item 3-2, Materials for Allocating Reservoir Storage

July 15, 2021

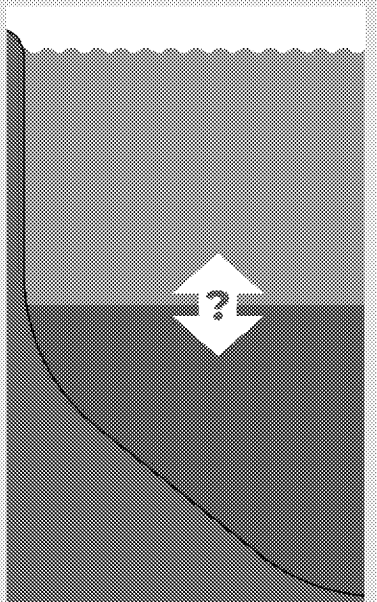
Sites

Sites
Reservoir Project
Allocating Reservoir Storage

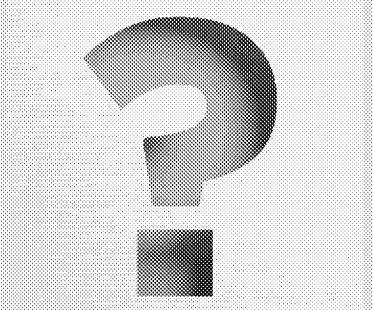
Sites
Reservoir Project



STORAGE BENEFITS



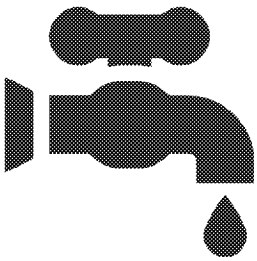
HOW MUCH STORAGE DO I NEED?



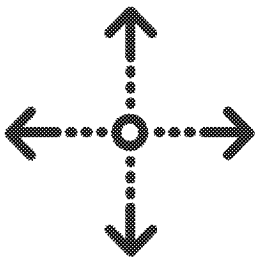
QUESTIONS?

Benefits of Investing in Storage

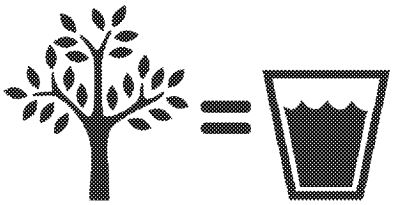
Sites Reservoir Project



RELIABLE
CERTAIN



FLEXIBLE
LOCAL CONTROL



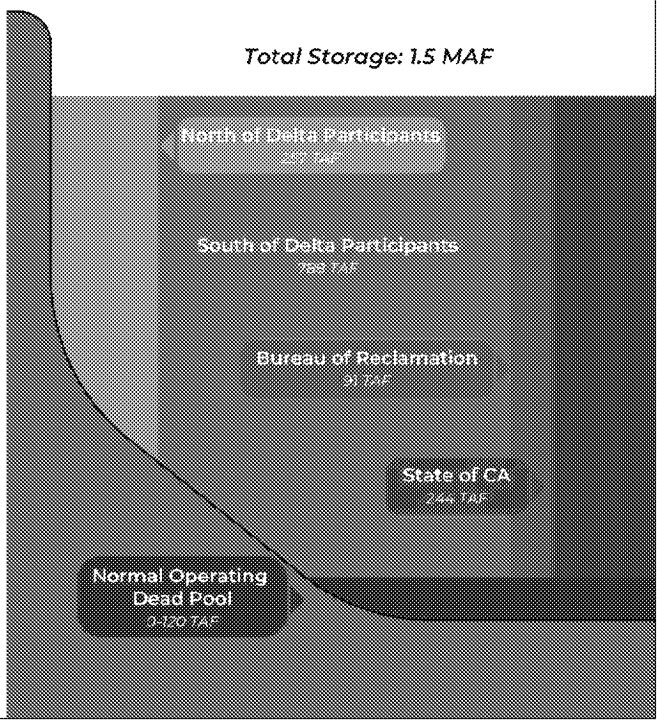
EQUITABLE

Storage Partner Benefits

Sites Reservoir Project

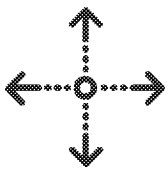
RELIABLE
CERTAIN

- Known storage space and diversions to storage
- Improved ability to deliver in dry years
- Certainty in availability

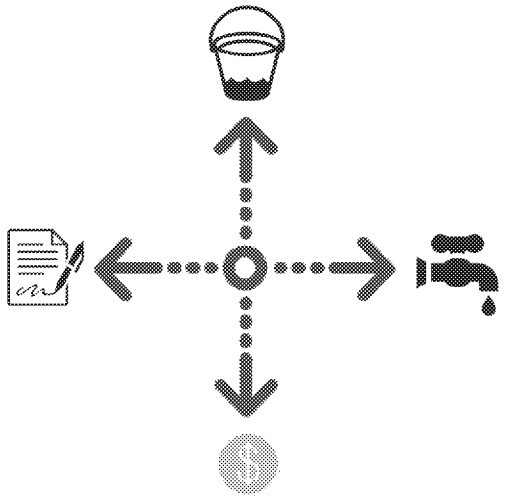


Storage Partner Benefits

Sites Reservoir Project

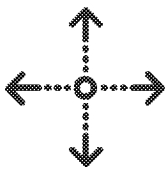


FLEXIBLE
LOCAL CONTROL

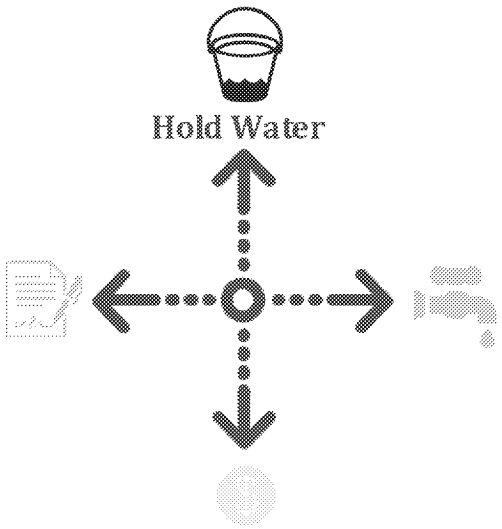


Storage Partner Benefits

Sites Reservoir Project

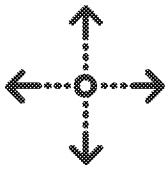


FLEXIBLE
LOCAL CONTROL



Storage Partner Benefits

Sites Reservoir Project



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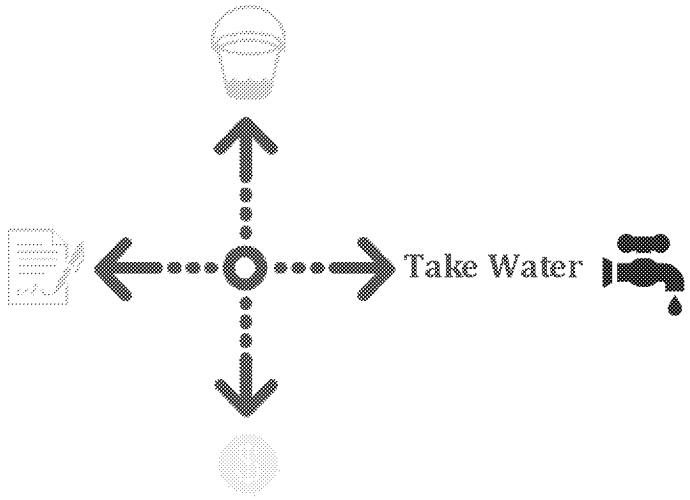
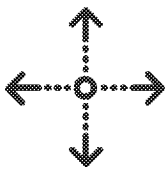


Storage Partner Benefits

Sites Reservoir Project



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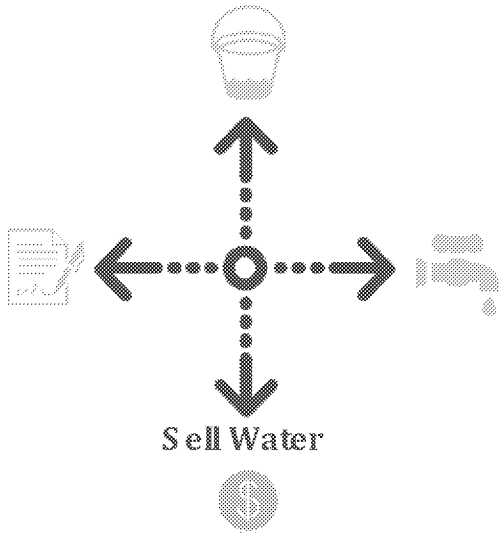
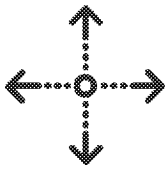
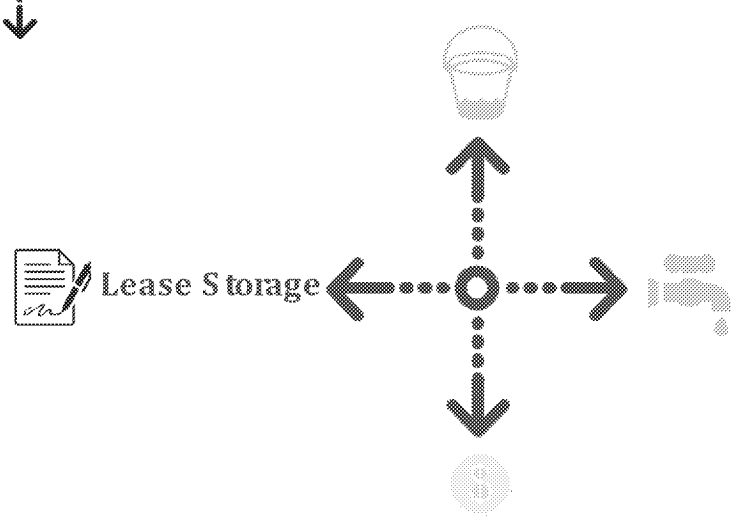


Storage Partner Benefits

Sites Reservoir Project

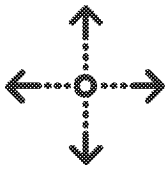


FLEXIBLE
LOCAL CONTROL



Storage Partner Benefits

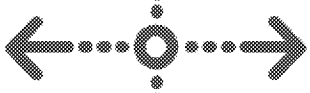
Sites Reservoir Project



FLEXIBLE
LOCAL CONTROL

Hold Water

Lease Storage

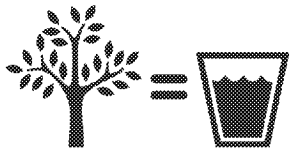


Take Water

Sell Water

... or combinations

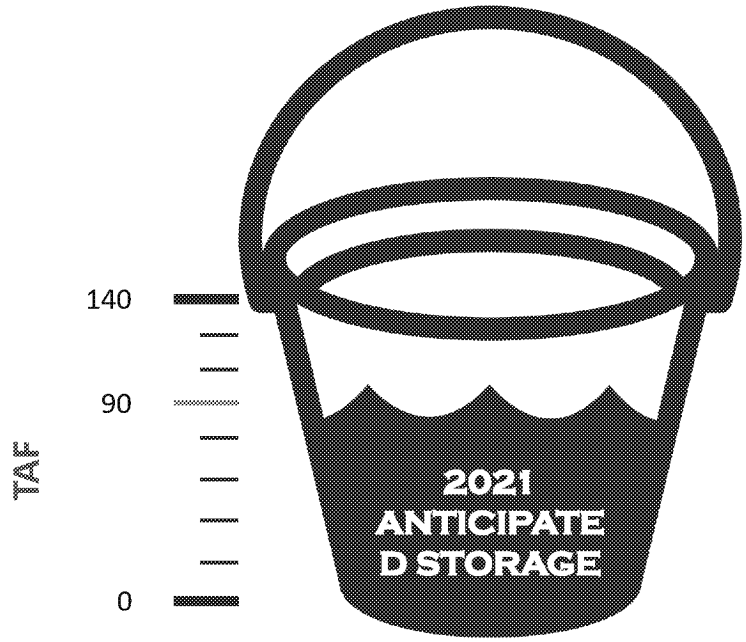
Storage Partner Benefits



EQUITABLE

- Storage space does not define operations/options
- Unit price for storage same for all
- Current participation level translates directly to amount of storage space
- Beneficiary pays

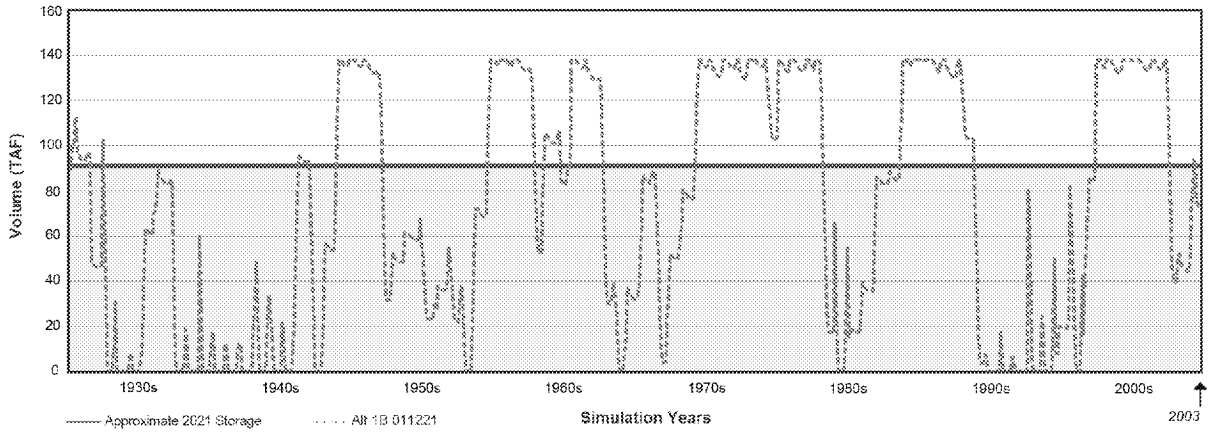
Example: Tehama-Colusa Canal Authority



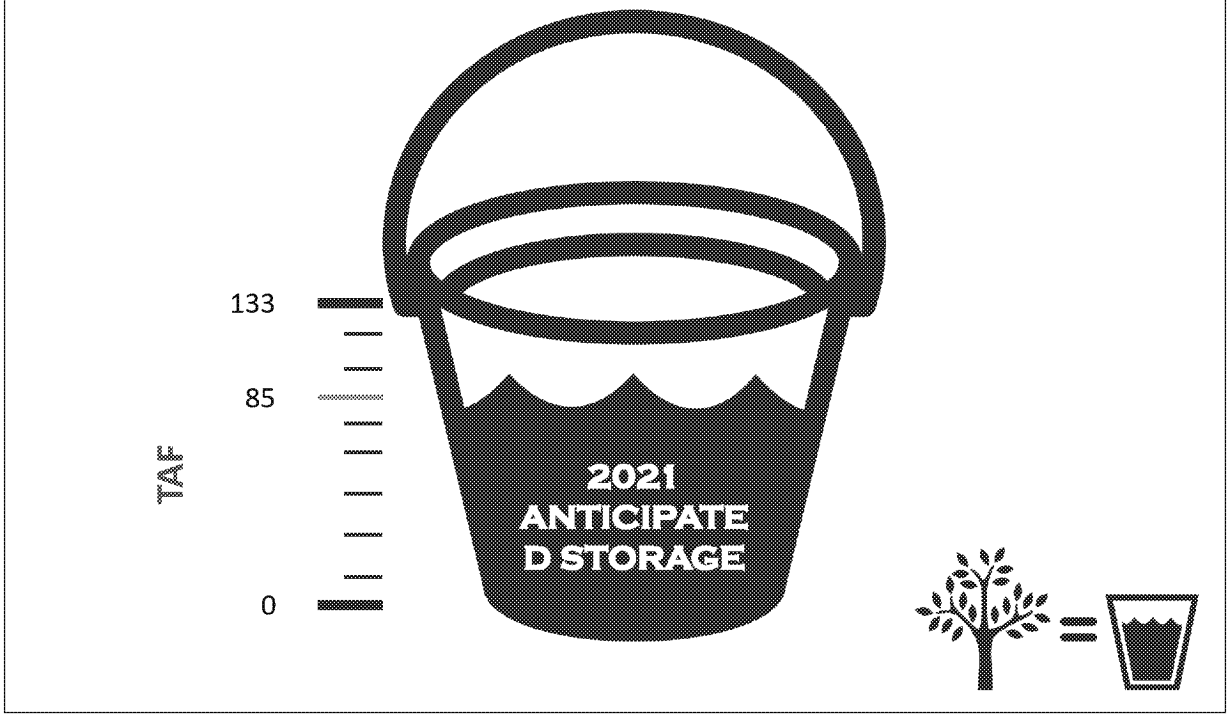
Example: Tehama-Colusa Canal Authority

Sites Reservoir Project

SITES STORAGE: TCCA



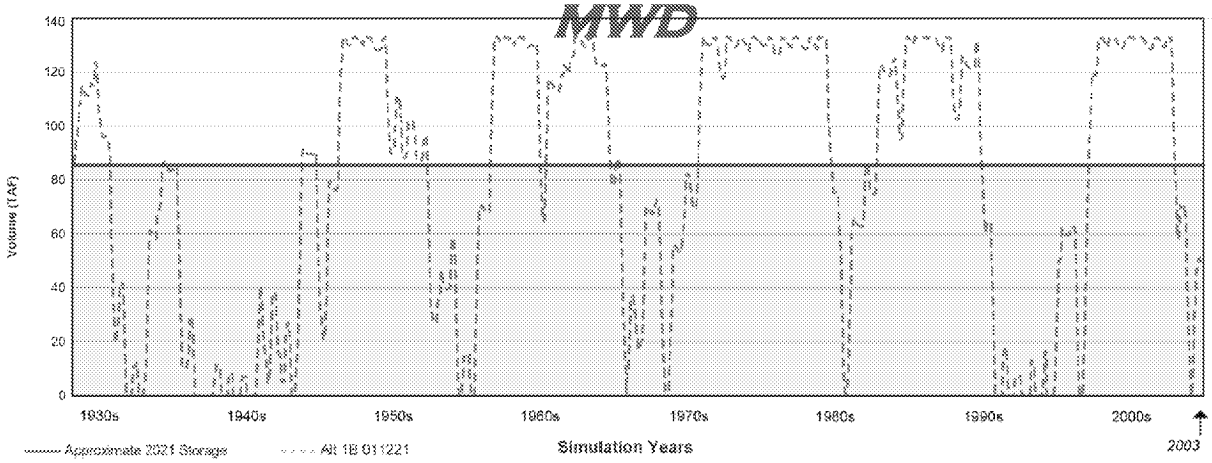
Example: San Bernardino Valley Municipal Water District

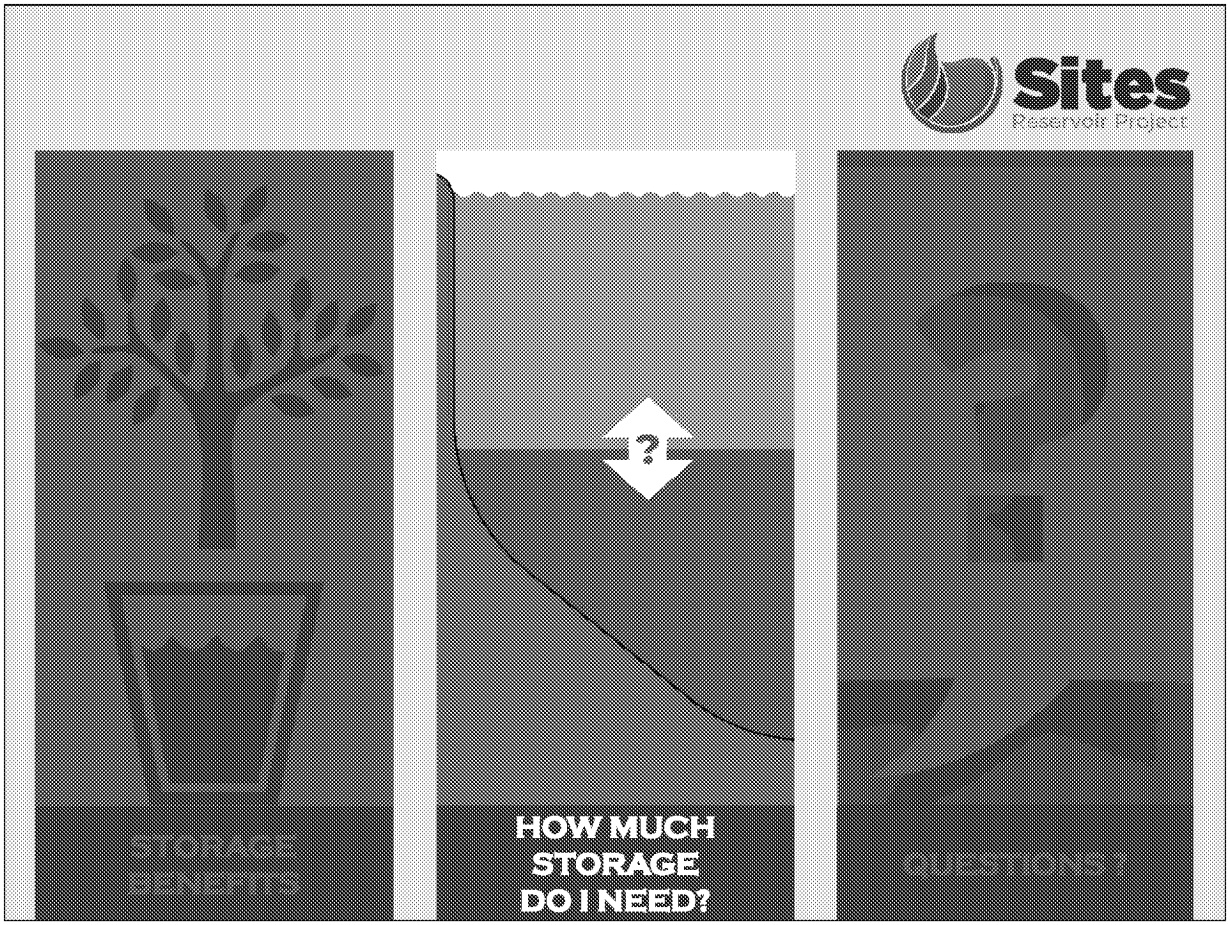


Example: San Bernardino Valley Municipal Water District

Sites Reservoir Project

SITES STORAGE: SAN BERNARDINO VALLEY MWD




Sites
Reservoir Project
?
HOW MUCH
STORAGE
DO I NEED?

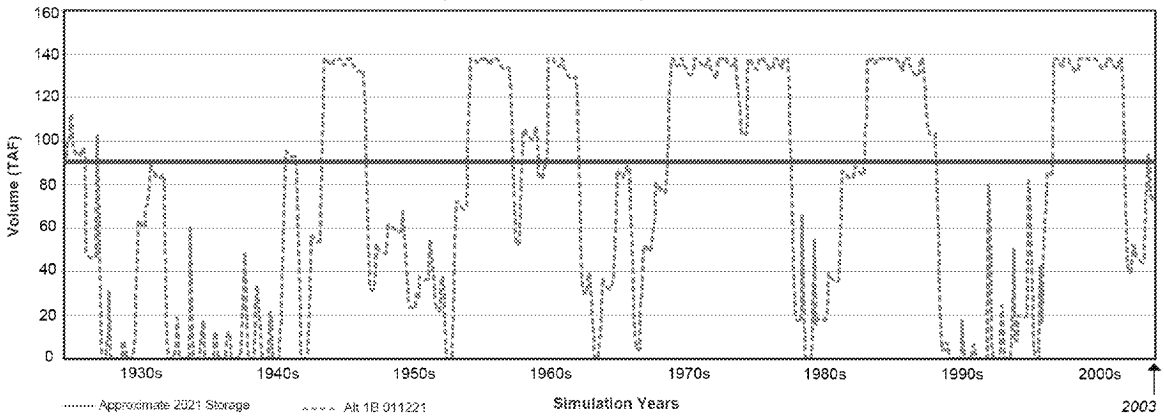
How Much Storage is Right for my Agency?

Sites Reservoir Project

SOME CONSIDERATIONS:

- ✓ Multiple dry years
- ✓ Assume limited or no diversions in a drought
- ✓ Consider selling and leasing
- ✓ Resiliency against future uncertainties
- ✓ Use existing modeling to see storage level fluctuations

SITES STORAGE: TCCA



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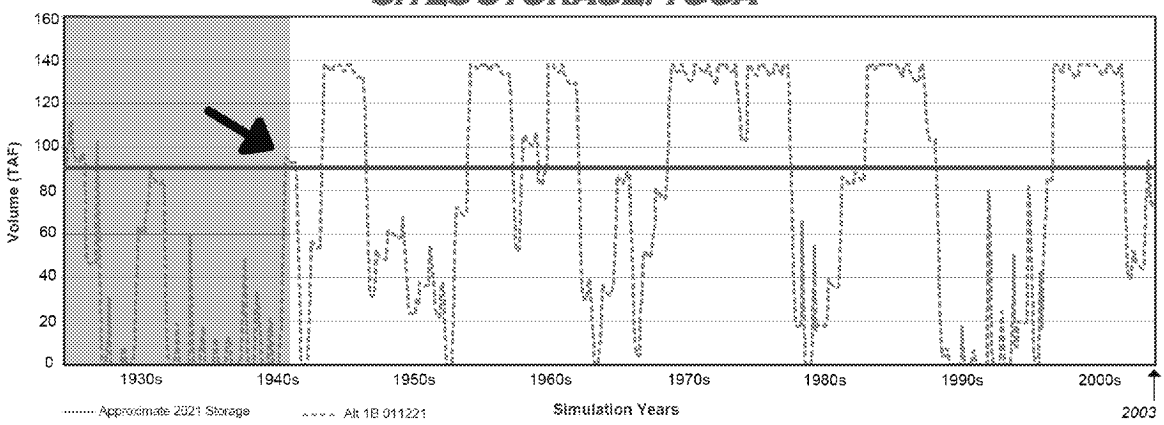

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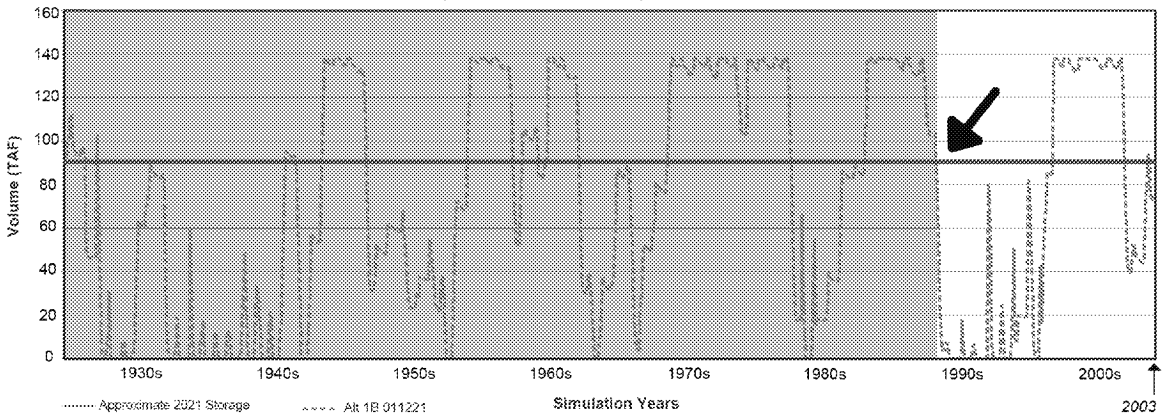

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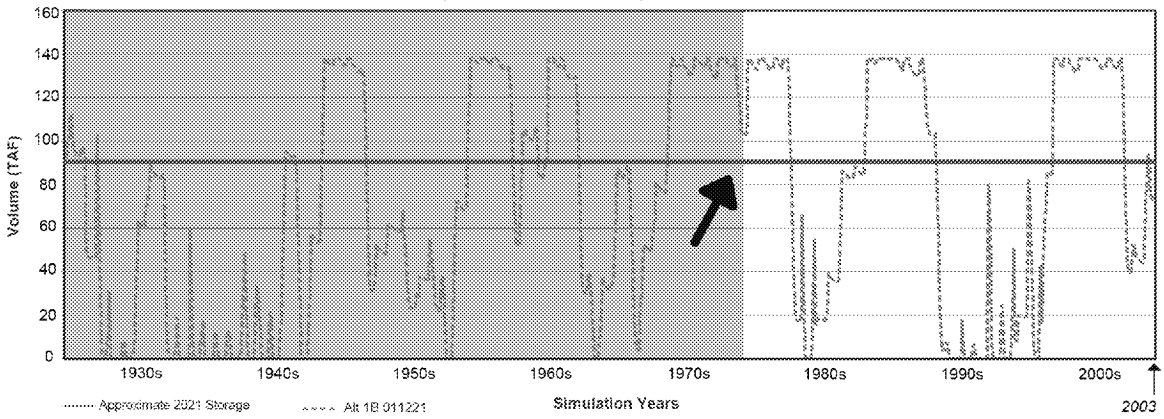

Summary

Sites Reservoir Project

- **Benefits of Storage**
  - ✓ Reliable and certain
  - ✓ Flexible, local control
  - ✓ Equitible
- **How much do I need?**
  - ✓ Consider multiple dry years
  - ✓ Consider sale/lease of water and storage
  - ✓ Future uncertainty
    - Climate variability
    - CVP/SWP Reliability
    - Regulatory
    - Economic

Sites
Reservoir Project
Proposed Plantings
Potential Storage Scenarios
QUESTIONS?

Sites

July 16, 2021

The Honorable Janet Yellen
Secretary
Department of the Treasury
C/O Office of the Undersecretary for Domestic Finance
1500 Pennsylvania Avenue NW
Washington, DC 20220

Re: Comments on Interim Final Rule Regarding Coronavirus State and Local Fiscal Recovery Funds for Water Infrastructure

Dear Secretary Yellen,

Thank you for the opportunity to provide comments on eligibility of water infrastructure projects to receive funding made available in section 602(c)(1)(D) of the American Rescue Plan Act (ARPA) for "necessary investments in water, sewer or broadband infrastructure." The Interim Final Rule aligns eligibility for ARPA water investments with existing criteria in the Drinking Water State Revolving Fund (DWSRF) and Clean Water State Revolving Fund (CWSRF). While the two State Revolving Funds (SRFs) have been successful and support important wastewater and drinking water projects, limiting eligibility for ARPA funding based on the criteria for those programs will eliminate needed federal support for essential water supply projects. As the Department moves to a Final Rule, the Sites Project Authority (Authority), the Joint Power Authority formed under California law to build the Sites Reservoir Project, recommends changes to the eligibility criteria to allow funding for all water supply-related infrastructure including surface and groundwater storage, conveyance, water management, habitat restoration and enhancement in support of water supply resiliency, and system improvements and upgrades.

This year, as farms and communities across the Western United States face significant impacts from historic drought conditions, we are again reminded of the importance of forward-looking investments in storage, conveyance, and other water supply-related infrastructure. Inadequate water storage, along with aging and failing existing western water supply infrastructure, is exacerbating the impacts of the current drought. Without significant federal investment in water supply-related infrastructure, climate change, continued population growth, and water project deferrals due to COVID-19 related budget shortfalls will further increase water insecurity and make future droughts even more damaging.

Below are responses to questions 18 through 21 posed in the Interim Final Rule. In addition to providing input on these water specific eligibility criteria, we urge consideration of extending requirement in the Interim Rule that eligible costs must be incurred before December 31, 2024 and must be completed by December 31, 2026. The design, permitting and other complexities

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Maxwell, CA 95955
530.438.2309

associated with water supply projects typically require years to complete and should not prevent critical projects, or components of projects, from pursuing ARPA funding.

Question 18: What are the advantages and disadvantages of aligning eligible uses with the eligible project type requirements of the DWSRF and CWSRF? What other water or sewer project categories, if any, should Treasury consider in addition to DWSRF and CWSRF eligible projects? Should Treasury consider a broader general category of water and sewer projects?

Yes, Treasury should broaden the eligibility criteria for ARPA funding to include design and construction of federal and non-federal surface and groundwater storage and conveyance facilities, along with investments to modernize and improve the efficiency and management of existing federal and non-federal water systems.
Limiting the eligibility to projects meeting DWSRF and CWSRF requirements has the significant disadvantage of excluding infrastructure needed to provide a reliable supply of water in the face of climate change and limiting the ability of communities to use ARPA funds to improve long-term drought resilience without further increasing water affordability challenges.

Question 19: What additional water and sewer infrastructure categories, if any, should Treasury consider to address and respond to the needs of unserved, underserved, or rural communities? How do these projects differ from DWSFR and CWSRF eligible projects?

Expanding eligibility to include surface and groundwater storage and conveyance is especially important to unserved and rural communities, which often do not have access to surface water and rely on low quality groundwater resources. Allowing ARPA funds to be utilized for storage and conveyance will assist these rural and unserved communities access a reliable supply of water and often improve the quality of drinking water resources. Additionally, because the cost of water storage and conveyance is so high, rural, and disadvantaged communities usually require substantial financial assistance to avoid significant increase unaffordable water prices.

Construction of the Sites Project will certainly help promote recovery and address needs in an economically distressed, rural portion of our state. Glenn and Colusa Counties, the two counties where Sites is located, are rural with high rates of poverty. The two counties have a combined population of 49,361. Fifty-five percent of the residents are people of color (the national average is 36 percent); 42 percent of the residents are low-income, compared to regional and national averages of 33 percent; and 27 percent of the residents have less than a high school education, far higher than the state, region, and national averages (17%, 16% and 13% respectively).

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Sites

Question 20: What new categories of water and sewer infrastructure, if any, should Treasury consider to support State, local, and Tribal governments in mitigating the negative impacts of climate change? Discuss emerging technologies and processes that support resiliency of water and sewer infrastructure. Discuss any challenges faced by States and local governments when pursuing or implementing climate resilient infrastructure projects.

Surface and groundwater storage, conveyance, habitat restoration and enhancement in support of water supply resiliency, and system modernization and efficiency are critical tools for water managers to respond to climate change and should be included as eligible projects under ARPA. This category should ensure eligibility for projects undertaken by state and local entities regardless of asset ownership, and specifically allow state and local agencies to implement infrastructure projects on Reclamation owned facilities as well. In parts of Western United States, models show that climate change will result in droughts increasing in frequency and duration. Additionally, more precipitation is expected to fall as rain rather than snow, and snow melt is already occurring earlier in the year. This hydrologic change reduces the natural storage reservoir once provided by snowpack, and these factors, among others, make it essential that sufficient storage and conveyance exist to capture water resources in the wetter years for use during dry periods and ensure that basins have the storage capacity needed to mitigate impacts caused by earlier and less gradual runoff patterns.

Recent climate studies have shown that California's winter runoff is likely to remain similar in volume but come in fewer months of the year, concentrating runoff and increasing flood risks. Adapting to this challenge requires infrastructure that can store surplus water when it is available and deploy it for ecosystem and human uses when water is not available. In our own area, Sites Reservoir is one of the best opportunities to re-imagine our water system, prepare for future climate variability, and add value to our current water system by providing high-quality water to enhance natural infrastructure, the environment, public safety, the economy, and quality of life for Californians. Sites Reservoir is an innovative 21st century water project: an off-stream regulating reservoir on the west-side of the Sacramento Valley that can store water for the future by capturing it during high runoff periods, and then releasing it for various beneficial uses at a later time. With its location upstream of the Delta and near the Sacramento River, water in Sites Reservoir would serve multiple benefits in the Sacramento River Basin, as well as the Delta and the rest of the state.

As communities across the West are preparing to meet their needs with less water, investing in the repair, replacement or upgrade of existing federal and non-federal facilities will reduce water loss and allow water managers to more efficiently manage and utilize scarce water resources. As such, these types of modernization and restoration projects should also be eligible for ARPA funds.

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Sites

Question 21: Infrastructure projects related to dams and reservoirs are generally not eligible under the CWSRF and DWSRF categories. Should Treasury consider expanding eligible infrastructure under the Interim Final Rule to include dam and reservoir projects? Discuss public health, environmental, climate, or equity benefits and costs in expanding the eligibility to include these types of projects.

Yes, as discussed above, dams and reservoirs (including small regulating reservoirs associated with water conservation and efficiency improvements), along with associated large scale conveyance projects and aquifer recharge projects, are fundamental in providing climate and drought resilient water resources to farms and communities throughout the West. As millions of Americans are experiencing this year, inadequate water storage reduces the ability to sustain reliable water supplies during prolonged drought and results in reductions in water delivery that impact the economy and way of life. And the "perfect storm" of the current megadrought along with the already devastating effects of the COVID-19 pandemic highlight the critical importance of making these investments now.

Thank you again for the opportunity to provide feedback on the Interim Final Rule regarding Coronavirus State and Local Fiscal Recovery Funds and for all your work on the American Rescue Plan. Expanding the eligibility of water infrastructure to include supply projects will meet multiple goals of the Biden Administration including job creation, climate resilience, and assistance for disadvantaged communities.

Sincerely,

Jerry Brown
Executive Direstor, Sites Project Authority

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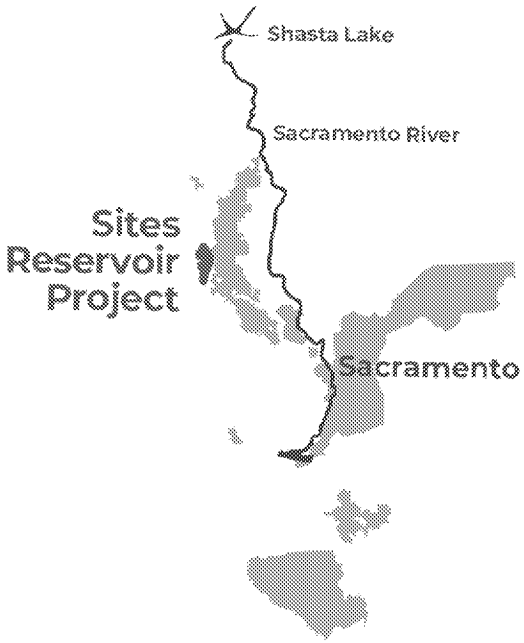

Blue shading represents participant service areas.

The relationship of storage capacity and water supply

- Storage space and water supply are dependent variables
  - 1 acre-foot of water supply = 6.234 acre feet of storage space
  - 1 acre-foot of water supply = 3.000 acre feet of storage space
- The project is diversion limited and currently fully subscribed, so adding new participant demands would reduce storage space and water supply for all participants.
- If an agency wished to maintain their water supply and reduce their storage space they could
  - remain at their current capacity (note the agencys share of fixed and variable cost would remain unchanged) AND
  - find a buyer for the excess storage space AND
  - The buyer would need to understand that the space would not come with a water supply

How does the cost for one agency affect the cost for another agency?

- Fixed Costs
  - If no changes to capacity reservation
    - NO IMPACT
  - If an agency wishes to decrease capacity reservation, EITHER
    - A new participant is needed to fill the vacated space, or
    - The other agency's fixed cost increases AND they receive additional units of capacity proportionate to their increased fixed cost
  - If an agency wishes to increase capacity reservation
    - Another agency would need to vacate space

How does the costs for one agency affect the cost for another agency? cont'd

- Variable Costs
  - If Sites Water from the Sacramento River is stored,
    - each agency pays its proportionate share of costs to divert and pump the water available within permit conditions
  - If non-Sites Water is stored
    - The agency storing the non-Sites water pays all the cost to divert and store the water
  - If an agency chooses to NOT fill its storage space,
    - each agency pays its proportionate share of costs to divert and pump Sites water until all demands are met and/or available within permit conditions

From: Jerry Brown [jbrown@sitesproject.org]
Sent: 7/16/2021 4:57:31 PM
To: mount.jeffrey@gmail.com; Alicia Forsythe [aforsythe@sitesproject.org]
Subject: Re: Sites

Jeff – Thanks for sharing. While crazy on the surface, this idea is not beyond the realm of possibility.

Jerry

From: Jeffrey Mount <mount.jeffrey@gmail.com>
Reply-To: "mount.jeffrey@gmail.com" <mount.jeffrey@gmail.com>
Date: Friday, July 16, 2021 at 3:50 PM
To: Jerry Brown <jbrown@sitesproject.org>, Alicia Forsythe <aforsythe@sitesproject.org>
Subject: Sites

Good afternoon to you both. We had a really interesting meeting with CVP, SWP, Yuba Water Agency and the New Don Pedro folks this week. We learned a ton, which is why we hold these meetings.

After listening to these folks I was reminded of an idea we pitched many years ago. And I am sure folks must have batted this around, but under the previous federal administration this would have been a non-starter.

How about Sites just becomes 100% dedicated to managing the environment as a hedge against climate change. Of course that is a non-starter on the surface, but to pay for O&M and help fund restoration projects, the operator--or trustee--would have to sell a substantial amount of water to the water user community. This increases the amount of water available through storage, but dedicates the revenue to doing good. And of course, Sites then becomes essential to the operations of Shasta and Oroville through exchanges.

Of course, it is too late in the game to even suggest such a thing, but if the Feds could pick up the rest of the cost of Sites as part of a commitment to the environment, it would make all of this financially doable. I think.

There is a wild ass Friday idea.

Best

Jeff

--

Jeffrey Mount
Public Policy Institute of California and UC Davis
mount.jeffrey@gmail.com

From: Jerry Brown [jbrown@sitesproject.org]
Sent: 7/19/2021 8:19:03 AM
To: Heather Dyer [heatherd@sbvmwd.com]; Alicia Forsythe [aforsythe@sitesproject.org]; Fritz Durst (fritz.durst@gmail.com) [fritz.durst@gmail.com]
Subject: Re: Encouraging words...

Heather – Much thanks for the words of encouragement and for sharing your latest communication from NGO's on the region's HCP. Thanks for being a water leader that makes collaboration a priority.

I would say our efforts on Sites are just getting started. You're right that the Sites house has "good bones". Achieving understanding and following-through on commitments is the work we have to put in. The project team is committed to doing this work with the Board's continued support.

Jerry

From: Heather Dyer <heatherd@sbvmwd.com>
Date: Friday, July 16, 2021 at 5:33 PM
To: Jerry Brown <jbrown@sitesproject.org>, Alicia Forsythe <aforsythe@sitesproject.org>, Fritz Durst <fritz.durst@gmail.com>
Subject: Encouraging words...

Hey all –

I know that people on the Sites team are probably tired of hearing me spout the benefits of being transparent and working with the NGOs (there may be some eyerolling at times but that's ok ☺). However, I wanted to share this letter with you as evidence that this approach does actually pay off. Hopefully, this will encourage the Authority and staff to keep doing the hard work to make the environmental NGOs understand the project and why it's needed, and how we are trying to do our best to minimize harm and maximize benefits to the environment.

Here is a letter that I just received on our Santa Ana River Habitat Conservation Plan DEIR – which proposes to take 30% of baseflow out of a river with endangered fish and capture another 50,000 AFY of stormwater. Clearly – that's an activity that is very challenging in California. Their letter really demonstrates that this collaborative approach of talking to the organizations and building relationships/trust will pay off in the end. It's not a slam dunk - but I've never read a more reasonable letter from CBD and I know that's because I've been very honest about our impacts but also stressed the major benefits that we can bring to the River and species. I sincerely hope that this "proof" solidifies the collaborative and forward-thinking approach that your staff has been taking - as I truly believe Sites is the perfect project to pull off something similar with the NGOs. So, please keep up the great work that you've been doing! I'm excited to see the DEIR when it's released.

Have a great weekend.

Heather

Heather Dyer, MS, MBA
CEO/General Manager
heatherd@sbvmwd.com
909/387-9256

For immediate assistance or a meeting request, please contact my Chief of Staff, Mr. Jose Macedo.

Jose Macedo, MA/ML, CPT (USA Retired)
Chief of Staff | Clerk of the Board
San Bernardino Valley Municipal Water District

380 East Vanderbilt Way | San Bernardino, CA 92408
P 909.387.9214 | M: 915.539.8329
josem@sbvmwd.com

From: Spranza, John [John.Spranza@hdrinc.com]
Sent: 7/19/2021 2:46:04 PM
To: Alicia Forsythe [aforsythe@sitesproject.org]; Laurie Warner Herson [laurie.warner.herson@phenixenv.com]; Heydinger, Erin [erin.heydinger@hdrinc.com]; Gordon, Stephanie (Skophammer) [GORDON.STEPHANIES@EPA.GOV]; David Zelinsky [zelinsky.david@gmail.com]; asanchez@calwild.org; reis@bayecotarium.org; Dekar, Melissa D [mdekar@usbr.gov]; King, Vanessa M [vking@usbr.gov]; steve.micko@jacobs.com; Huber, Anne [Anne.Huber@icf.com]; tstokely@att.net; jimb@aqualliance.net; dobegi@nrdc.org; rzwillinger@defenders.org; DLucero@ButteCounty.net [DLucero@buttecounty.net]; rebeccadawnwu@yahoo.com; chicojerry@yahoo.com; regina@californiasalmon.org; Williams, Nicole (Nicole.Williams@icf.com) [Nicole.Williams@icf.com]; Ron Stork [RStork@friendsoftheriver.org]; Davis, Ryan A [rdavis@usbr.gov]; Morgan, Joseph [Morgan.Joseph@epa.gov]; Wolder, Natalie L [nwolder@usbr.gov]; Deeds, Daniel A [ddeeds@usbr.gov]
CC: Leaf, Rob/SAC [Rob.Leaf@jacobs.com]
Subject: Sites Water Quality Meeting 3
Attachments: 20210719_Water Quality Discussion_Presentation_Part 1_Final.pdf

Thank you for participating in todays water quality discussion. I have attached the portion of the presentation that we covered today, if you have any questions please let me know. I will be sending a doodle poll out for the Part 2 of this agenda soon.

With respect to the question on inflows from Stone Corral and Funks creeks, the data below is for the 26 years of recorded data that is available for Stone Corral Creek. As Funks Creek watershed is approximately the same size, you can double the Stone Corral number for a good approximation of total inflows from source creeks.

water yr	annual mean daily flow- cfs	mean AF per year from mean annual flow
1959	2.85	2064.68
1960	0.495	358.60
1961	0.799	578.84
1962	3.55	2571.80
1963	3.09	2238.55
1964	0.177	128.23
1966	1.93	1398.19
1967	10.8	7824.06
1968	6.7	4853.81
1969	20.6	14923.66
1970	14.7	10649.41
1971	2.86	2071.93
1972	0	0.00
1973	27.2	19705.03
1974	3.83	2774.64
1975	2.99	2166.10
1976	0	0.00
1977	0	0.00
1978	19.6	14199.21
1979	3.18	2303.75
1980	19.5	14126.77
1981	4.12	2984.73

1982	10.3	7461.83
1983	55.2	39989.62
1984	19.7	14271.66
1985	0.384	278.19

John Spranza, MS, CCN
Senior Ecologist / Regulatory Specialist

HDR
2379 Gateway Oaks Drive, Suite 200
Sacramento, CA 95833
D 916.679.8858 M 818.640.2487
john.spranza@hdrinc.com

hdrinc.com/follow-us
hdrinc.com/follow-us

From: King, Vanessa M [vking@usbr.gov]
Sent: 7/19/2021 2:56:31 PM
To: Spranza, John [john.spranza@hdrinc.com]; Alicia Forsythe [aforsythe@sitesproject.org]; Dekar, Melissa D [mdekar@usbr.gov]
Subject: Re: [EXTERNAL] Sites Water Quality Meeting 3

Hi John,

Thanks for sending this so quickly! Ali mentioned setting up a meeting to discuss how the "1 MAF in 2021" number was calculated - to clarify, that's going to be separate from the next water quality meeting, right? Just want to make sure we let the right people know about each meeting.

Vanessa

Vanessa King
Hydrologist and Interim Project Manager for Sites Reservoir Project
Bureau of Reclamation, Interior Region 10 · California-Great Basin, Division of Planning
Office: 916-978-5077

From: Spranza, John <John.Spranza@hdrinc.com>
Sent: Monday, July 19, 2021 2:46 PM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Heydinger, Erin <Erin.Heydinger@hdrinc.com>; Gordon, Stephanie (Skophammer) <GORDON.STEPHANIES@EPA.GOV>; David Zelinsky <zelinsky.david@gmail.com>; asanchez@calwild.org <asanchez@calwild.org>; reis@bayecotarium.org <reis@bayecotarium.org>; Dekar, Melissa D <mdekar@usbr.gov>; King, Vanessa M <vking@usbr.gov>; Micko, Steve/SAC <steve.micko@jacobs.com>; Huber, Anne <Anne.Huber@icf.com>; tstokely@att.net <tstokely@att.net>; jimb@aqualliance.net <jimb@aqualliance.net>; dobegi@nrdc.org <dobegi@nrdc.org>; rzwillinger@defenders.org <rzwillinger@defenders.org>; DLucero@ButteCounty.net <DLucero@buttecounty.net>; rebeccadawnwu@yahoo.com <rebeccadawnwu@yahoo.com>; chicojerry@yahoo.com <chicojerry@yahoo.com>; regina@californiasalmon.org <regina@californiasalmon.org>; Williams, Nicole (Nicole.Williams@icf.com) <Nicole.Williams@icf.com>; Ron Stork <RStork@friendsoftheriver.org>; Davis, Ryan A <rdavis@usbr.gov>; Morgan, Joseph <Morgan.Joseph@epa.gov>; Wolder, Natalie L <NWolder@usbr.gov>; Deeds, Daniel A <ddeeds@usbr.gov>
Cc: Leaf, Rob/SAC <Rob.Leaf@jacobs.com>
Subject: [EXTERNAL] Sites Water Quality Meeting 3

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Thank you for participating in todays water quality discussion. I have attached the portion of the presentation that we covered today, if you have any questions please let me know. I will be sending a doodle poll out for the Part 2 of this agenda soon.

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Sites Project Water Quality Group Discussion

April 7, 2021

Sites

Draft – Predecisional Working Document – For Discussion Purposes Only

Agenda

1. Introductions
2. Group Norms
3. Preferred Project
4. Approach to Analysis
    a. Qualitative
    b. Quantitative
5. Source Water
    a. Operations
    b. Data Sources
    c. Example Data
6. Schedule and Future Meeting Topics
7. Action Items and Next Steps

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Group Norms

- Encourage everyone to be on video
- Mute yourself when others are speaking
- Respectful, professional dialogue
- Ask questions throughout, lets have a dialogue
  - Let the speaker finish their point
  - Use the raise your hand function in Teams if needed
- Topics for next meeting will be discussed and recorded

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Sites' Preferred Project

Sites

Major Revisions to Project

- Reservoir size reduced from 1.8 MAF to 1.5 MAF
- No Delevan diversion, pipeline or outfall
  - Utilize existing at Red Bluff and Hamilton City pumping plants
  - Releases to Tehama-Colusa Canal to the Colusa Basin Drain
  - New 1,000 cfs pipeline and release near Dunnigan
  - Alternative 2: a new 1,000 cfs outfall near Tyndall Landing
- Max diversion rate reduced from 5,900 cfs to 3,900 cfs
- Releases reduced from 1,500 cfs to 1,000 cfs

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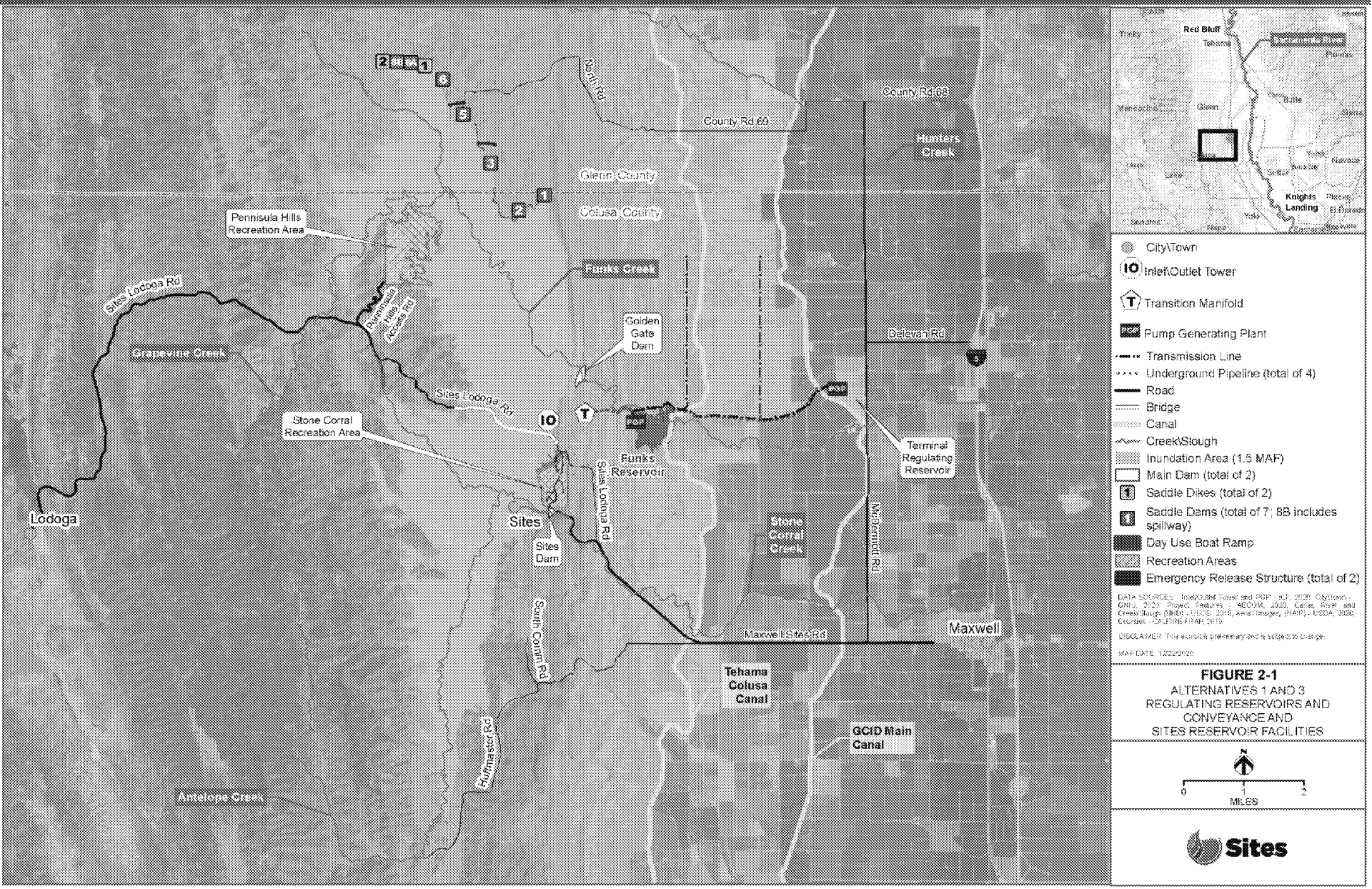
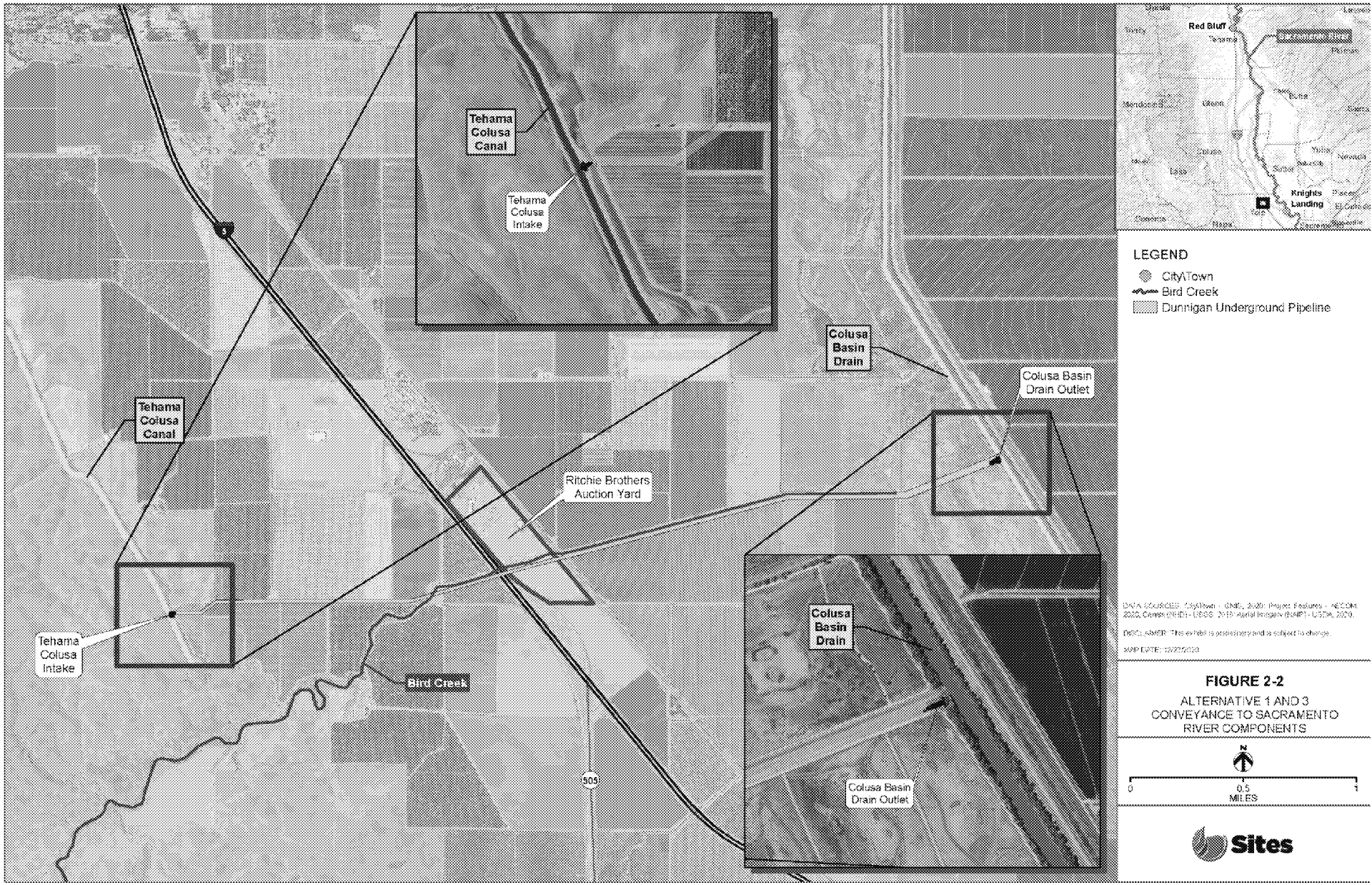
Alt 1 – Preferred Project



Alt 1 – Preferred Project



Approach to Analysis

Method Analysis Overview

Mechanisms by which Sites Reservoir Operations Could Affect Water Quality	Main Constituents Considered	Qualitative	Quantitative	Model Results Considered
Temporal Shift	Metals Pesticides Salinity	X	X	CalSim
Evapoconcentration	Metals Salinity		X	CalSim
In-Reservoir Processes	Mercury HABs Nutrients/OC/DO Temperature	X	X	Reservoir temperature modeling (CE QUAL W2)
Change in System Reservoir Operations	Temperature HABs Mercury	X	X	CalSim, HEC5Q and Reclamation temperature model
Change in Delta Operations	Salinity Chloride	X	X	CalSim and DSM2 QUAL
Redirection of CBD Flow to Yolo Bypass	Pesticides Nutrients/OC/DO HABs Mercury Temperature	X	X	CalSim

Quantitative Models

- CalSim II used for overall operations
  - Hydrological planning tool used to represent state-wide changes that would result from Sites
  - Monthly timestep
  - Results inform water quality models
  - Comparative analysis of results
- Water quality models
  - Reservoir Temperature: CE QUAL W2
  - River Temperature: HEC5Q, Reclamation Temperature Model
  - Delta salinity: DSM2 QUAL

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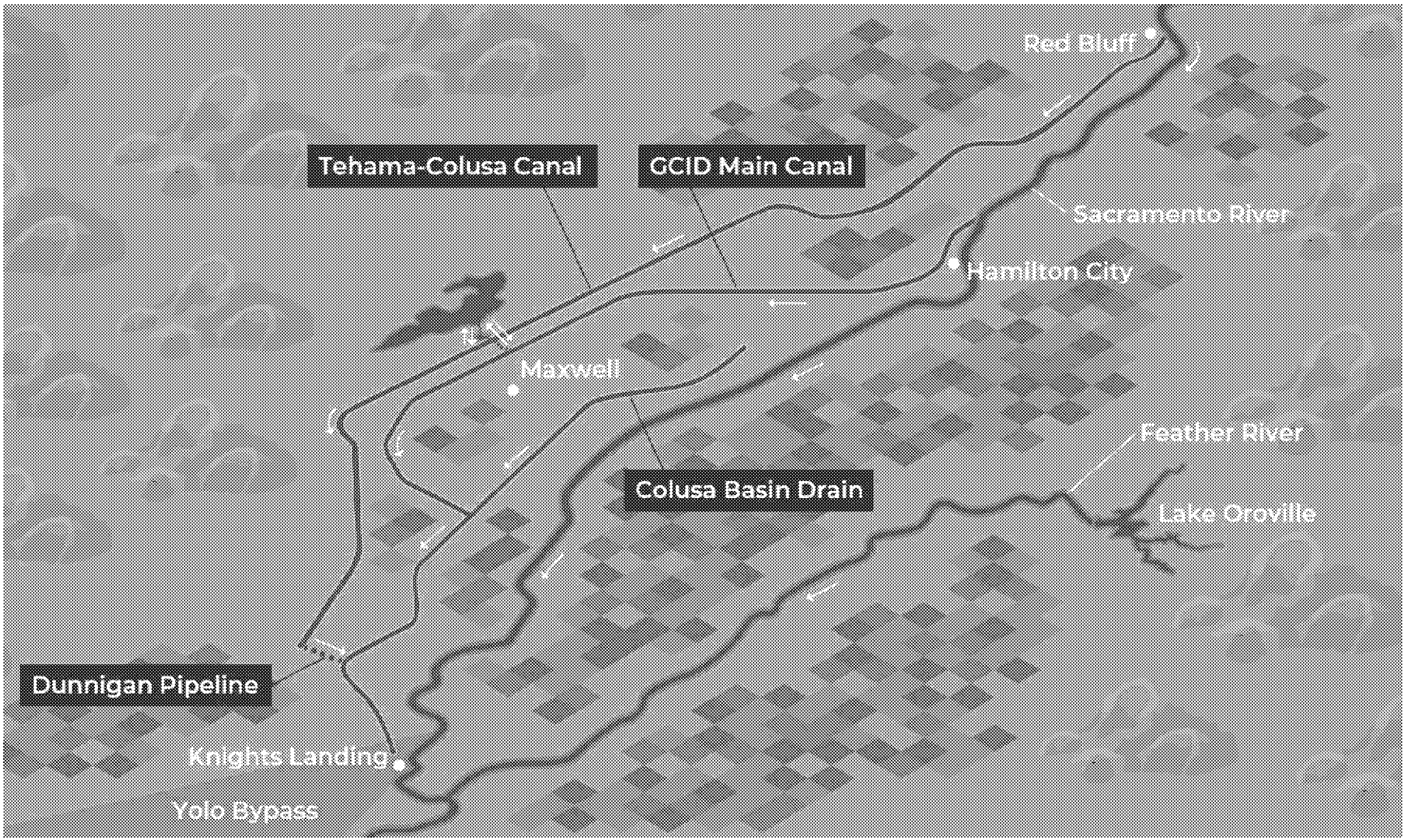
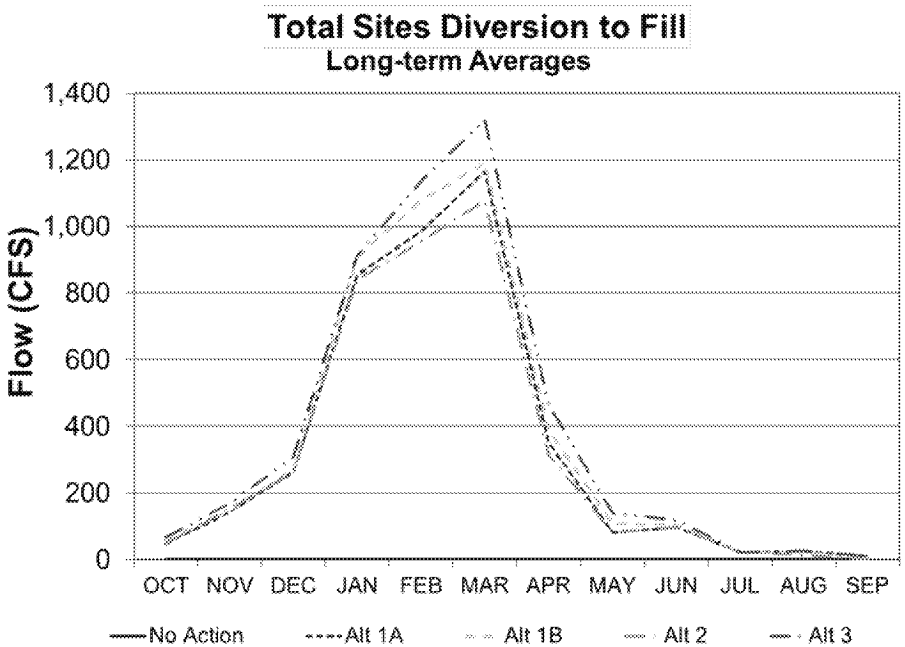
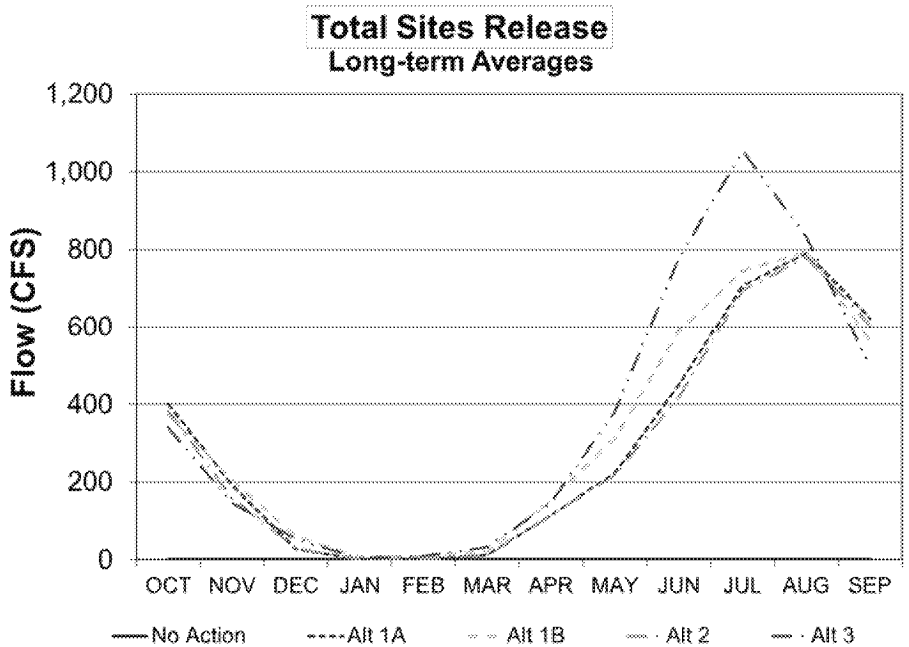
Source Water

Project Water Operations



Diversions and Releases





Main Data Sources

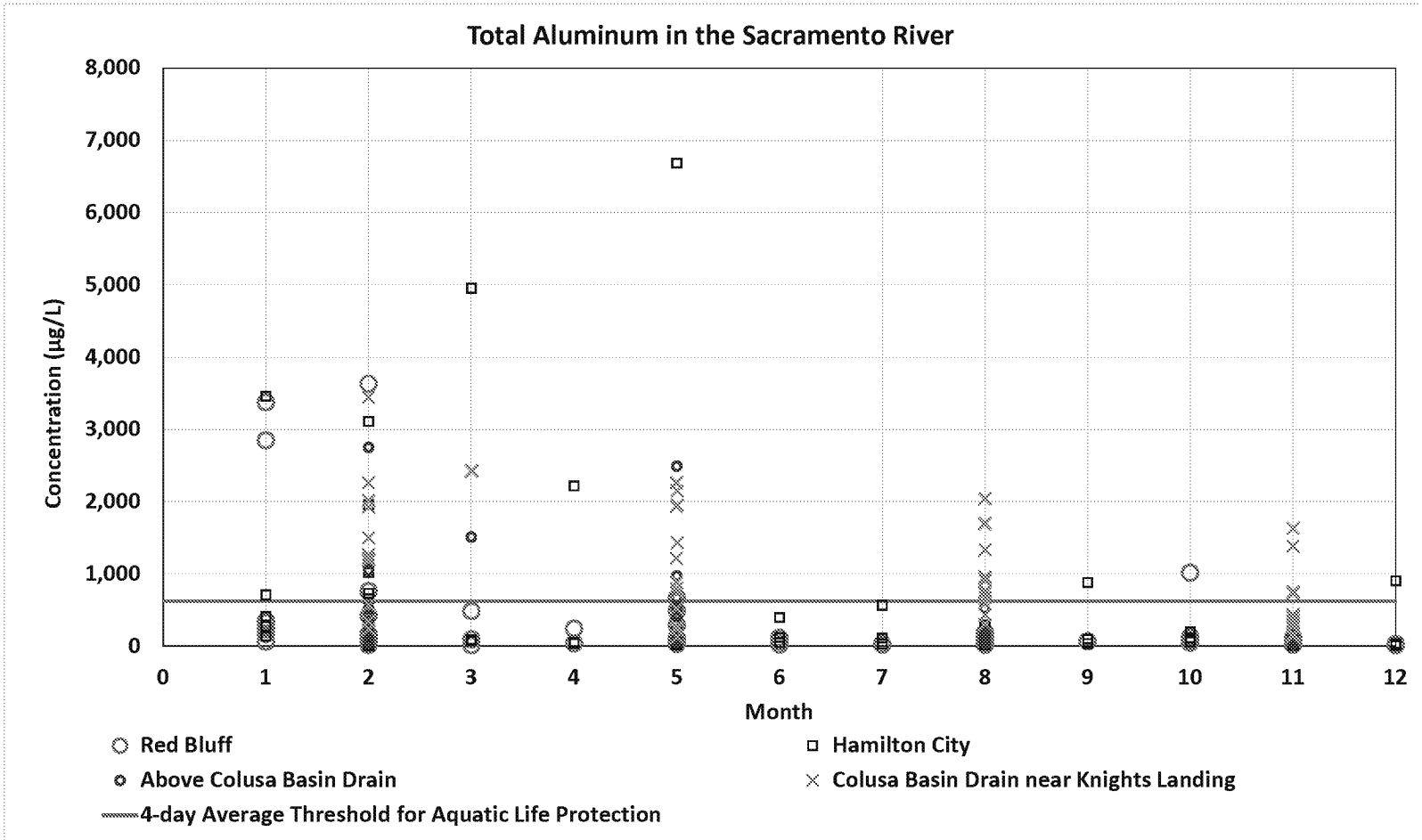
Constituent Group	Data Source	Location
Metals Electrical Conductivity Nutrients	DWR Water Data Library (WDL)	Sacramento River below Red Bluff Sacramento River at Hamilton City Sacramento River above CBD CBD near Knights Landing Stone Corral Creek near Sites
Flow	USGS WDL CA Data Exchange Center	Sacramento River at Keswick Sacramento River above Bend Bridge
Pesticides	CA Dept of Pesticide Regulation Surface Water Database (CDPR SURF)	Sacramento River near Hamilton City Sacramento River at Colusa CBD above Knights Landing Yolo Bypass Toe Drain near Babel Slough

Average Metal/Metalloid Concentrations

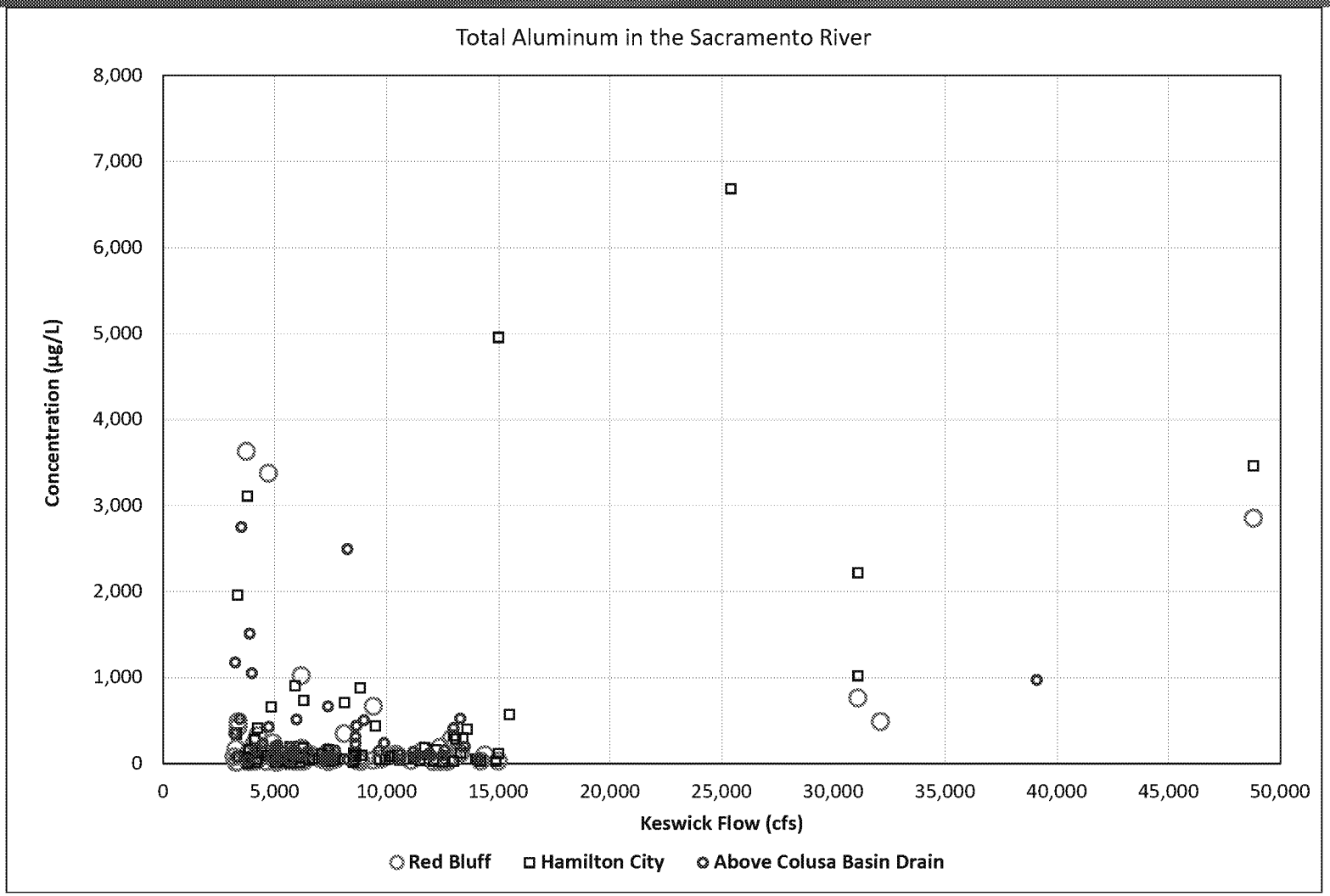
- Units are in micrograms per liter
- No available data for Funks Creek
- Source for Stone Corral Creek and Sacramento River = DWR Water Data Library. See Slide 14
- Source for groundwater is DWR NODOS study (2007)

Metal/Metalloid	Stone Corral Creek	Groundwater in Sites Reservoir Footprint	Sacramento River at Intake Locations
Dissolved Aluminum	149	3	94
Total Aluminum	562	12	359
Dissolved Arsenic	2.8	0.7	1.5
Total Arsenic	3.1	0.8	1.6
Dissolved Cadmium	0.05	0.02	0.04
Total Cadmium	0.06	0.05	0.04
Dissolved Chromium	2.9	2.6	0.7
Total Chromium	4.0	3.3	1.4
Dissolved Copper	2.8	2.7	1.3
Total Copper	3.9	3.4	2.3
Dissolved Iron	123	7	67
Total Iron	512	81	424
Dissolved Lead	0.08	0.12	0.03
Total Lead	0.31	0.27	0.20
Dissolved Manganese	12	18	2
Total Manganese	37	21	15
Dissolved Nickel	2.8	1.0	1.2
Total Nickel	4.0	1.3	2.2
Dissolved Selenium	6.1	4.6	1.2
Total Selenium	6.7	5.0	0.2
Dissolved Silver	0.03	0.00	0.01
Total Silver	0.05	0.01	0.03
Dissolved Zinc	1.4	112.5	0.9
Total Zinc	3.7	115.2	3.8

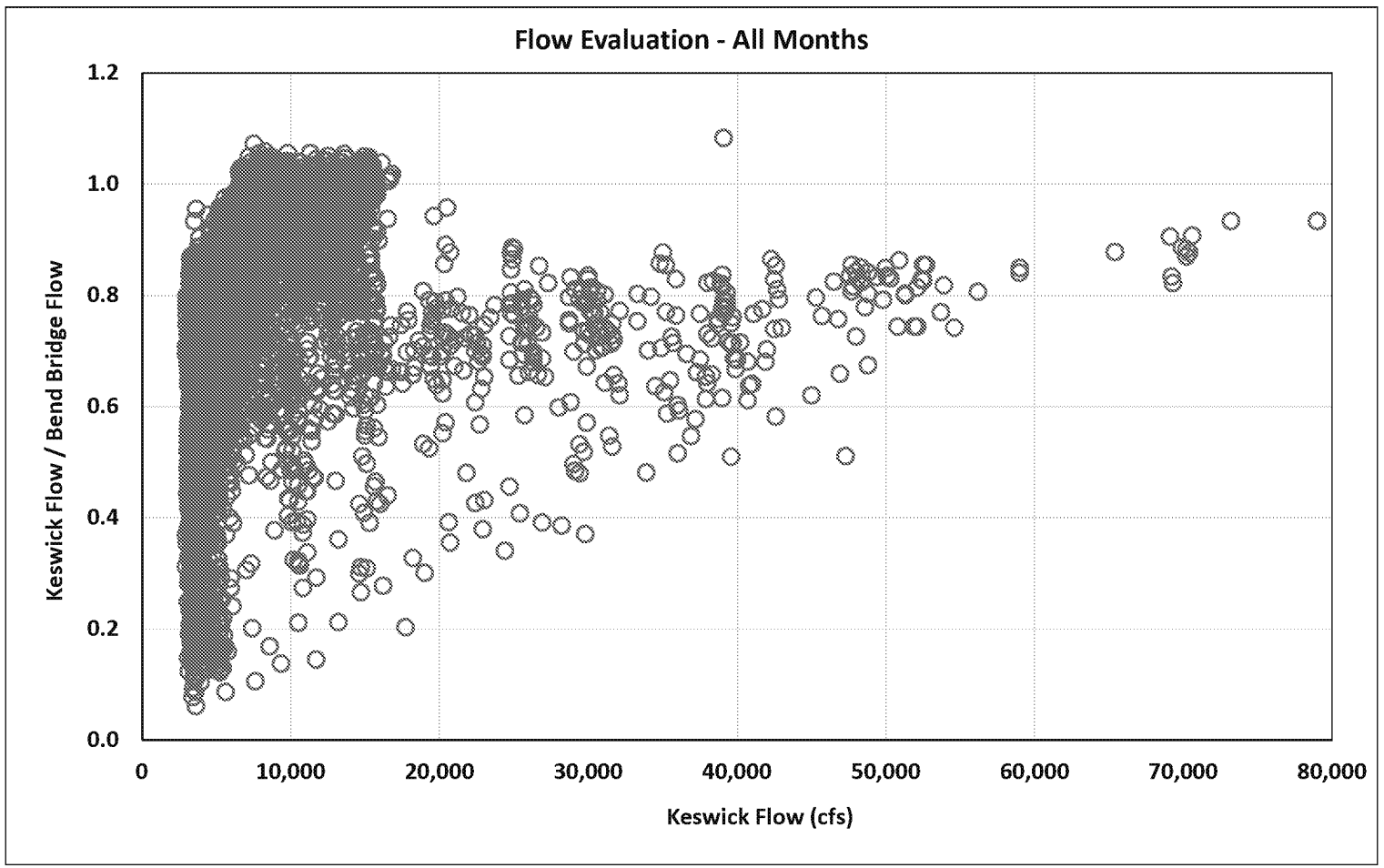
Metals – Aluminum Example



Compared to Flow



Sacramento River Indicator of Local Runoff vs Flow



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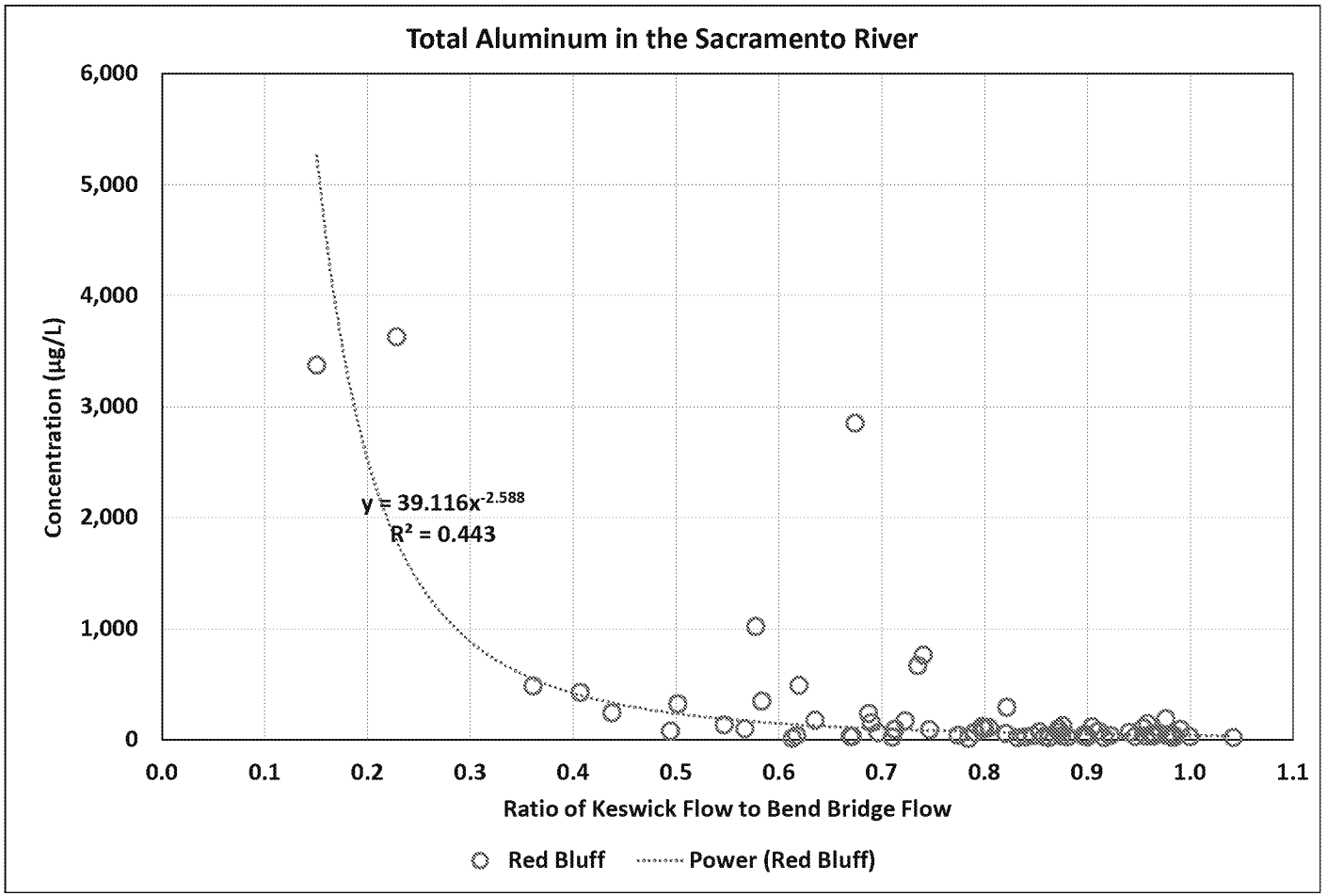
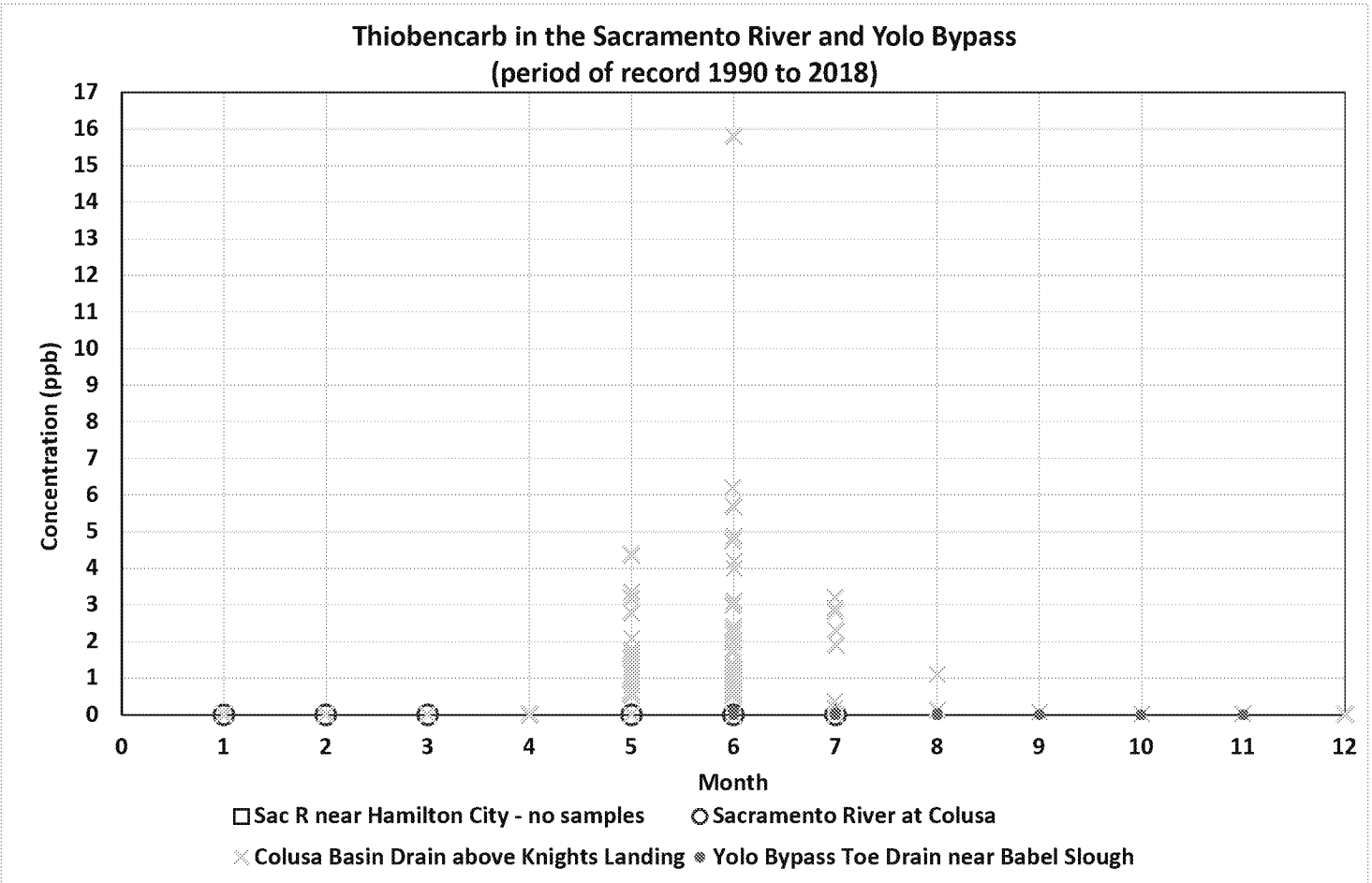
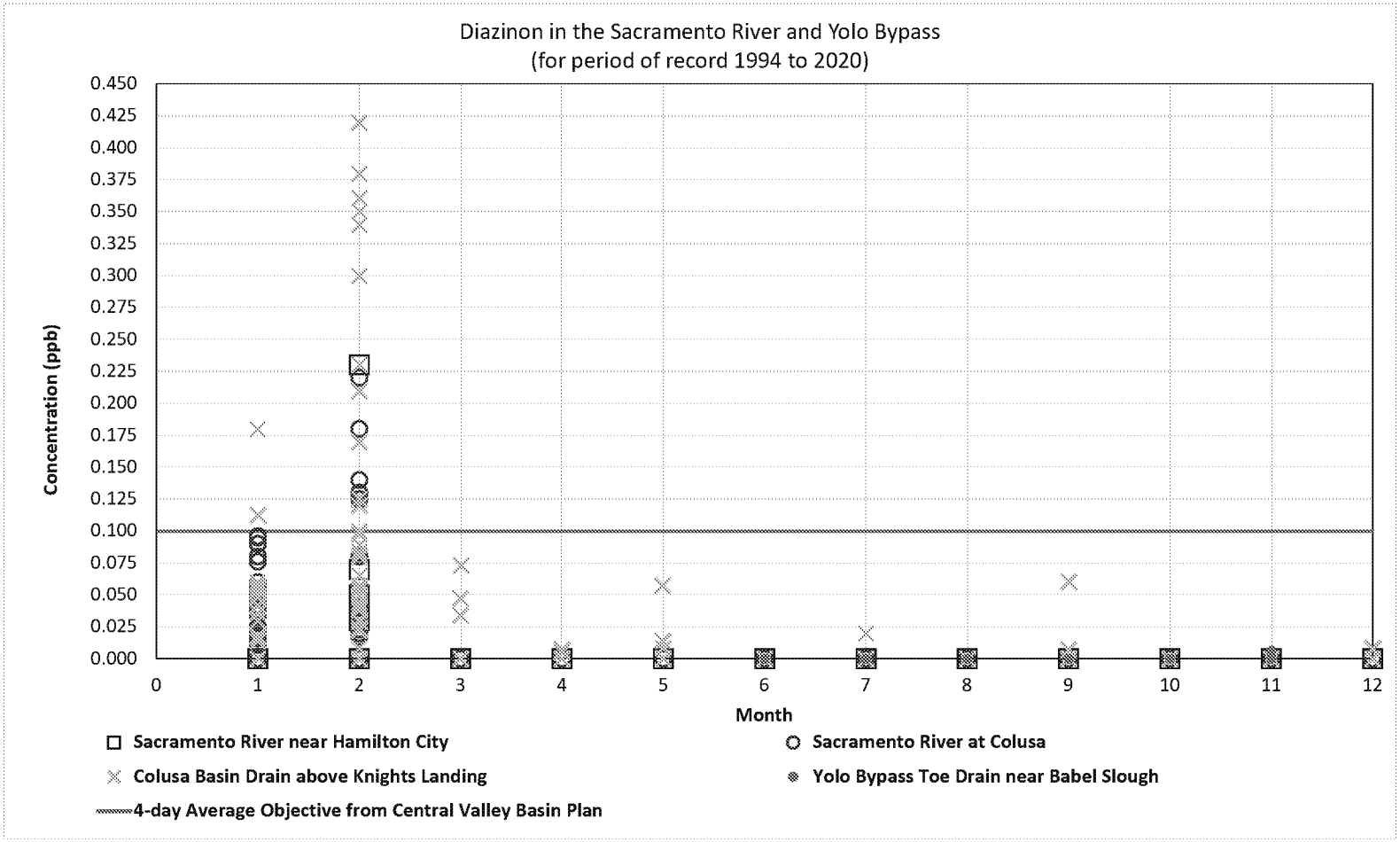
Example Quantitative Approach



Thiobencarb – typical pesticide pattern



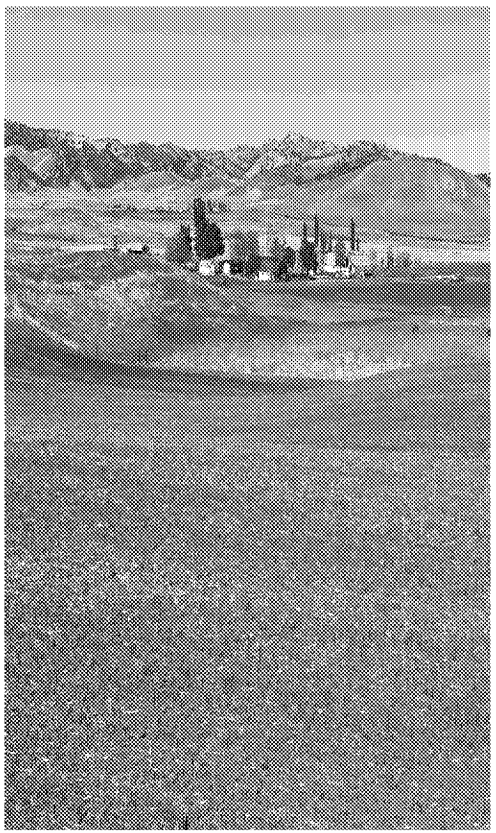
Diazinon – atypical pesticide pattern



Schedule and Next Meeting

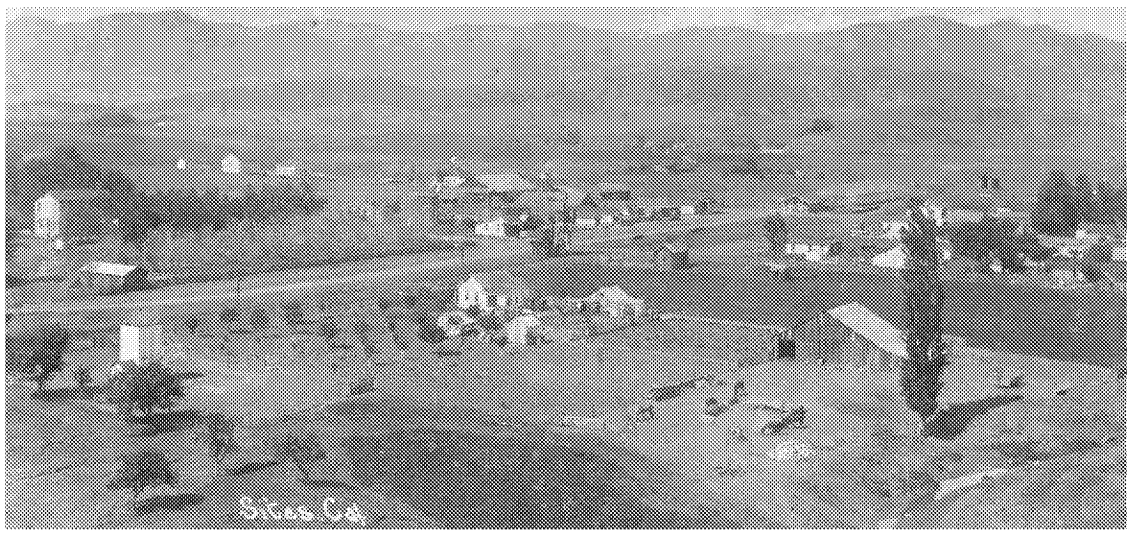
Schedule

- Summer 2021
  - Draft EIR and Supplemental EIS Released
- December 2021
  - Biological Assessment to Agencies
  - Submit State ITP Applications
- Spring 2022
  - Final EIR/Final EIS
- Spring 2023
  - All permits obtained
- Spring 2024 Construction Begins
- Topics for the next meeting?



Additional Topics from the Group

- Any additional questions or thoughts?
- Topics for the next meeting?



Action Items and Next Steps

Thank you!

Sites

Bi-Weekly Sites-USBR Coordination Draft Agenda

Affordable Water, Sustainably Managed

Our Core Values – Safety, Trust and Integrity, Respect for Local Communities, Environmental Stewardship, Shared Responsibility and Shared Benefits, Accountability and Transparency, Proactive Innovation, Diversity and Inclusivity
Our Commitment – To live up to these values in everything we do

Meeting Participants:

Date: May 31, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	Kevin Jacobs, Bureau

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. None		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: May 17, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
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Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	Kevin Jacobs, Bureau

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1. Introductions	All	
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4. Financial Assistance		20 min
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6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: June 28, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	Kevin Jacobs, Bureau

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. None.		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
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Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: July 26, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites
Ali Forsythe, Sites
Erin Heydinger, Sites
Laurie Warner Herson, Sites
John Spranza, Sites
Henry Luu, Sites
Richard Welsh, Bureau
Don Bader, Bureau
Allison Jacobson, Bureau
Vanessa King, Bureau
Natalie Taylor, Bureau
Gregory Mongano, Bureau
Mark Morberg, Bureau
Levi Johnson, Bureau
Jobaid Kabir, Bureau
Stacey Leigh, Bureau
Mark Carper, Bureau
Shane Hunt, Bureau
Darryl Good, Bureau
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Melissa Dekar, Bureau
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6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Our Commitment – To live up to these values in everything we do.

Meeting Participants:

Date: June 13, 2023 **Location:** Jerry will call Richard on his cell.

Start Time: 5:00 p.m. **Finish Time:** 5:30 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites Richard Welsh, Bureau

Discussion Topic	Topic Leader	Time
1. Follow-up on action items from the last meeting a. BA/BO/ITP Status – Coordination with state ITP, we need the CALSIM3 baseline this summer!!! b. Cost Sharing MOA and New FAA c. Status update on Reclamation's BON – Finalizing the 3 party Operations Agreement and starting the Benefits and Obligation Contract Development d. DC Leg Visits – Commissioner mtg debrief, OMB still trying to get scheduled e. EIR/EIS Schedule – September		20 min
2. New Items a. Gov Permit Reform Proposal b. Support Letters c. Water Right Term – Reclamation's concern with using "abandoned" d. Coordination among Other Storage Projects		10 min
3. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

Affordable Water, Sustainably Managed

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Our Commitment – To live up to these values in everything we do.

Meeting Participants:

Date: June 27, 2023 **Location:** Click here to join the meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites Richard Welsh, Bureau

Discussion Topic	Topic Leader	Time
1. Follow-up on action items from the last meeting a. BA/BO/ITP Status – CALSIM3 baseline availability from Reclamation? b. Cost Sharing MOA and New FAA – Reclamation in kind services, start date of cost estimate c. Status update on Reclamation's BON – need to finalize the DWR/Recl/Sites Operations Agreement d. DC Leg Visits –OMB still trying to get scheduled e. EIR/EIS Schedule – staying on track, September RD attendance maybe f. Water Rights Notice – Reclamation's concern with using "abandoned", status of protests/outreach		20 min
2. New Items a. Gov Permit Reform Proposal b. B&O Contract – getting started, confidentiality c. Next strike team mtg items		10 min
3. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: May 31, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	Kevin Jacobs, Bureau

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. None		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: May 17, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	Kevin Jacobs, Bureau

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. None		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: June 28, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	Kevin Jacobs, Bureau

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. None.		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: July 26, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites
Ali Forsythe, Sites
Erin Heydinger, Sites
Laurie Warner Herson, Sites
John Spranza, Sites
Henry Luu, Sites
Richard Welsh, Bureau
Don Bader, Bureau
Allison Jacobson, Bureau
Vanessa King, Bureau
Natalie Taylor, Bureau
Gregory Mongano, Bureau
Mark Morberg, Bureau
Levi Johnson, Bureau
Jobaid Kabir, Bureau
Stacey Leigh, Bureau
Mark Carper, Bureau
Shane Hunt, Bureau
Darryl Good, Bureau
Luke Davis, Bureau
Michael Mosley, Bureau
Melissa Dekar, Bureau
Susanne Manugian, Bureau
Austin Olah, Bureau
Kevin Jacobs, Bureau

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: May 31, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
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Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	Kevin Jacobs, Bureau

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. None		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: May 17, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

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Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	Kevin Jacobs, Bureau

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. None		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: June 28, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
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Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. None.		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: July 26, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Richard Welsh, Bureau	Levi Johnson, Bureau	Luke Davis, Bureau
Ali Forsythe, Sites	Don Bader, Bureau	Jobaid Kabir, Bureau	Michael Mosley, Bureau
Erin Heydinger, Sites	Allison Jacobson, Bureau	Stacey Leigh, Bureau	Melissa Dekar, Bureau
Laurie Warner Herson, Sites	Vanessa King, Bureau	Mark Carper, Bureau	Susanne Manugian, Bureau
John Spranza, Sites	Natalie Taylor, Bureau	Shane Hunt, Bureau	Austin Olah, Bureau
Henry Luu, Sites	Gregory Mongano, Bureau	Darryl Good, Bureau	Kevin Jacobs, Bureau
	Mark Morberg, Bureau		

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: May 31, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

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Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	Kevin Jacobs, Bureau

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. None		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

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Meeting Participants:

Date: May 17, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

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Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	Kevin Jacobs, Bureau

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. None		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: June 28, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	Kevin Jacobs, Bureau

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. None.		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: July 26, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Richard Welsh, Bureau	Levi Johnson, Bureau	Luke Davis, Bureau
Ali Forsythe, Sites	Don Bader, Bureau	Jobaid Kabir, Bureau	Michael Mosley, Bureau
Erin Heydinger, Sites	Allison Jacobson, Bureau	Stacey Leigh, Bureau	Melissa Dekar, Bureau
Laurie Warner Herson, Sites	Vanessa King, Bureau	Mark Carper, Bureau	Susanne Manugian, Bureau
John Spranza, Sites	Natalie Taylor, Bureau	Shane Hunt, Bureau	Austin Olah, Bureau
Henry Luu, Sites	Gregory Mongano, Bureau	Darryl Good, Bureau	Kevin Jacobs, Bureau
	Mark Morberg, Bureau		

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: April 4, 2023 **Location:** Join Microsoft Teams Meeting

Start Time: 9:00 a.m. **Finish Time:** 10:00 a.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites Richard Welsh, Bureau

Discussion Topic	Topic Leader	Time
1. Follow-up on action items from the last meeting a. BA/BO/ITP Status b. Cost Sharing MOA and New FAA c. Status update on Reclamation's BON – Finalizing the 3 party Operations Agreement and starting the Benefits and Obligation Contract Development d. Sites DC Leg Visit – Apr 25/26 e. USFWS Eagle Permit consultation and issuance of permit		20 min
2. New Items a. Water Right Process Update – Apr 5 b. Next Strike Team Mtg – April 17? c. WIFIA Application was submitted – Reclamation @16% d. EIR Process Video		10 min
3. Review of Action Items		As time allows

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Meeting Participants:

Date: April 18, 2023 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites Richard Welsh, Bureau

Discussion Topic	Topic Leader	Time
1. Follow-up on action items from the last meeting a. BA/BO/ITP Status b. Cost Sharing MOA and New FAA c. Status update on Reclamation's BON – Finalizing the 3 party Operations Agreement and starting the Benefits and Obligation Contract Development d. Congressional Tour Last Week and Sites DC Leg Visit – Apr 25/26 e. USFWS Eagle Permit consultation and issuance of permit f. EIR Process Video		20 min
2. New Items a. Strike Team Mtg Follow-up b. Water Right Follow-up w/Sec'ys – Apr 25 c. Item on SPA 4/21 Board Mtg Agenda – Reclamation 9% d. ACWA – Tuesday 130-300, Sites Briefing for Storage Partners		10 min
3. Review of Action Items		As time allows

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Meeting Participants:

Date: May 2, 2023 **Location:** Join Microsoft Teams Meeting

Start Time: 11:00 a.m. **Finish Time:** 12:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites Richard Welsh, Bureau

Discussion Topic	Topic Leader	Time
1. Follow-up on action items from the last meeting a. BA/BO/ITP Status b. Cost Sharing MOA and New FAA c. Status update on Reclamation's BON – Finalizing the 3 party Operations Agreement and starting the Benefits and Obligation Contract Development d. DC Leg Visits – Follow-up w/OMB (pro-forma 2.0) e. USFWS Eagle Permit consultation and issuance of permit f. EIR Process Video Update g. ACWA – Tuesday 130-300, Sites Briefing for Storage Partners		20 min
2. New Items a. Water Right Follow-up w/Sec'ys – Apr 25 outcome b. VA Discussions c. Soft Call – early indications		10 min
3. Review of Action Items		As time allows

Authority Board Meeting

Agenda Item 2-1, Authorize Release of the Revised Draft EIR/Supplemental Draft EIS

July 21, 2021

Sites

Agenda

- Cumulative analysis
- NEPA required chapters
- Air quality and water quality
- Public review
- Request for authorization to release the RDEIR/SDEIS

Cumulative Analysis Preliminary Determinations

- Approach
  - Considers over 60 closely related past, present, or reasonably foreseeable probable future projects
  - Each resource area is evaluated
- Preliminary Cumulatively Considerable Impacts
  - Water Quality: mercury and methylmercury
  - Vegetation: loss of oak woodlands
  - Wildlife: effects to special status wildlife and changes in wildlife movement
  - Agriculture: loss of important farmland; cancellation of Williamson Act contracts
  - Air Quality: emissions during construction

NEPA-Required Chapters Preliminary Determinations

- Ch 28, Climate Change
  - Operations – No effect to beneficial effects
- Ch 29, Indian Trust Assets
  - Construction – No effect
  - Operations – No adverse effect
- Ch 30, Environmental Justice
  - All Alts Construction – substantially adverse effects associated with air quality and visual resources to minority and low-income populations
  - All Alts Operation – substantially adverse effects associated with air quality
  - Alt 2 Operations – substantially adverse effects associated with land use and transportation to minority and low-income populations
- Ch 30, Socioeconomics
  - Construction and Operation – No adverse effect to beneficial effect

Air Quality and Water Quality Preliminary Determinations

Chapter (# and Title)	Impacts Requiring Mitigation	Significant and Unavoidable Impacts
6, Surface Water Quality	All Alts – Implement mercury and methylmercury control and reduction measures; Evaluate metal concentrations and effects in Stone Corral Creek; Evaluate metal and pesticide concentrations and effects in the Yolo Bypass	All Alts – Increased methylmercury concentrations downstream of Sites Reservoir
20, Air Quality	All Alts – Increase in criteria pollutant for which region is nonattainment during construction; recreational boat emissions during operations	All Alts – Increase in criteria pollutant for which region is nonattainment during construction
21, Greenhouse Gas Emissions (GHG)	All Alts – Develop a GHG Reduction Plan to achieve net-zero emissions during construction and operations	None

Draft - Predecisional Working Document - For Discussion Purposes Only

Public Review

- Staff currently in the planning stages
- Target release
  - Under CEQA on August 26
  - Under NEPA on September 3
- 60-day review period from September 3
- Public Meetings
  - 2 virtual meetings; 1 during day, 1 in evening
  - 1 in-person meeting in Maxwell

Request for Authorization to Release

- Staff requests that the Reservoir Committee
  - Authorize the release the RDEIR/SDEIS when it is ready
  - Authorize the Executive Director to file Notice of Completion and complete other noticing requirements to initiate public review process
- Release of the RDEIR/SDEIS would not occur until the following:
  - The team addresses the comments received on administrative draft versions of the document
  - TCCA and GCID consent to the release consistent with Section 2.5 of the Authority's Joint Powers Agreement
  - Reclamation has scheduled the release of the Notice of Availability in the Federal Register

Questions

Sites

Sites

SITES PROJECT AUTHORITY
P.O. BOX 517
122 OLD HIGHWAY 99 WEST
MAXWELL, CALIFORNIA 95955
www.SitesProject.org

JERRY BROWN, EXECUTIVE DIRECTOR
925.260.7417

YOLANDA TIRADO, CLERK
530.438.2309
Boardclerk@SitesProject.org

Board of Directors

FRITZ DURST, RECLAMATION DISTRICT 108, CHAIR
JEFF SUTTON, TEHAMA-COLUSA CANAL AUTHORITY, VICE-CHAIR
GARY EVANS, COLUSA COUNTY SUPERVISOR
KEN HAHN, GLENN COUNTY SUPERVISOR
LOGAN DENNIS, GLENN-COLUSA IRRIGATION DISTRICT
BRUCE HOUDESHELDT, PLACER COUNTY WATER AGENCY/CITY OF ROSEVILLE
DOUG PARKER, WESTSIDE WATER DISTRICT
JOE MARSH, COLUSA COUNTY WATER DISTRICT
KERRY SCHMITZ, CITY OF SACRAMENTO/SACRAMENTO COUNTY WATER AGENCY
DON BADER, BUREAU OF RECLAMATION *(COST-SHARE PARTNER, NON-VOTING)*
ROB COOKE, CA DEPARTMENT OF WATER RESOURCES *(EX-OFFICIO, NON-VOTING)*

Associate Members *(NON-VOTING)*
GREG JOHNSON, WESTERN CANAL WATER DISTRICT
JAMIE TRAYNHAM, TC 4 DISTRICTS

Notice: Pursuant to Executive Orders N-25-20 & N-33-20, issued by Governor Newsom on March 12, 2020, and guidance by the California Department of Public Health dated March 11, 2020, this meeting will be conducted by teleconference. The public may attend the meeting and offer public comments by phone, using the call-in number provided below. Members of the Board will participate by teleconference from other locations.

July 21, 2021 ***1:30 p.m.***
Sites Project Authority
Agenda

Teleconference: **1-213-379-5743** Conference ID: **515 683 556#** **Click here to join the meeting**

Notice: Pursuant to Executive Order N-29-20, issued by Governor Newsom on March 17, 2020, as modified by Executive Order N-08-21, this meeting will be conducted by teleconference. The public may attend the meeting and offer public comments by phone, using the call-in number above. Members of the Committee will participate by teleconference from other locations.

ROLL CALL & CALL TO ORDER:

- Introductions.
- Pledge of Allegiance.
- Approval of the July 21, 2021 Agenda.
- Period for Public Comment.

1. Consent Agenda: Approximate start time 1:40 pm

The Executive Director reviewed the following items. To his knowledge, there is no opposition to the action. The items can be acted on in one consolidated motion as recommended or may be removed from the Consent Calendar and separately considered at the request of any person.

1.1 Consider approval of the June 23, 2021 Joint Authority Board & Reservoir Committee Meeting Minutes. **(Attachments A & B)**

1.2 Consider acceptance of the Sites Project Authority Treasurer's Report. **(Attachment A)**

1.3 Consider approval of the Payment of Claims. **(Attachments A, B & C)**

2. Action Items: Approximate start time 1:50 pm

2.1 Consider authorizing the release Revised Draft EIR/Supplemental Draft EIS and authorize the Executive Director to file a Notice of Completion with the State Clearinghouse and complete other noticing requirements to initiate the public review process.

2.2 Consider approval of a new Budget Policy to provide budget approval requirements for the Sites Reservoir Project in line with governing board expectations to become effective January 1, 2022 coincident with the start of the Amendment 3 work period. **(Attachment A)**

2.3 Recognizing the Governor's June 11, 2021 rescinding of COVID-19 stay at home orders related to public meetings and the Brown Act, direct staff to reinitiate Reservoir Committee and Authority Board meetings under standard statutory requirements starting in September 2021.

3. Discussion and Information Items: Approximate start time 2:50 pm

3.1 Receive progress update and comment on technical considerations for Operations Coordination with Department of Water Resources and Bureau of Reclamation.

3.2 Receive an update and provide feedback on the materials developed to further illustrate and analyze operations scenarios for participants use and value creation from owning a storage allocation in Sites Reservoir.

4. Reports: Approximate start time 3:00 pm

4.1 Member's Reports:

4.1.1 Chairpersons' Report:

This time is set aside to allow the Chair/Co-Chair an opportunity to disclose/discuss items related to the Sites Project.

4.1.2 Committee Chairpersons' Report:

This time is set aside to allow the Committee Chairpersons' an opportunity to disclose/discuss items related to the Sites Project.

4.1.3 Authority Board Participant Reports:

This time is set aside to allow Representatives or their Alternates an opportunity to disclose/discuss items related to the Sites Project.

4.2 Executive Director's Reports:

- Monthly status report. **(Attachment A)**
- Work Plan Key Deliverables Report. **(Attachment B)**
- Meetings Action Items Summary. **(Attachment C)**

Recap: Approximate start time 3:30 pm

5.1 Suggested Future Agenda Items.

5.2 Upcoming Meetings:

Affordability Joint Workshop:
Friday, July 23, 2021, 9:00 AM – 12:00 PM

Reservoir Committee:
Friday, August 20, 2021, 9:00 AM – 12:00 PM

Authority Board:
Wednesday, August 25, 2021 – 1:30 to 4:00 PM

Virtual Information will be provided prior to all meetings at Sitesproject.org.

ADJOURN

PERIOD OF PUBLIC COMMENT: Any person may speak about any subject of concern, provided it is within the jurisdiction of the Reservoir Committee and is not already on today's agenda. The total amount of time allotted for receiving such public communication shall be limited to a total of 10 minutes per issue and each individual or group will be limited to no more than 3 minutes each within the 10 minutes allocated per issue. **Note:** No action shall be taken on comments made under this comment period.

ADA COMPLIANCE: Upon request, agendas will be made available in alternative formats to accommodate persons with disabilities. In addition, any person with a disability who requires a modification or accommodation to participate or attend this meeting may request necessary accommodation. Please make your request to the Board Clerk, specifying your disability, the format in which you would like to receive this Agenda and any other accommodation required no later than 24 hours prior to the start of the meeting.

This meeting will be recorded.

THE SACRAMENTO BEE

California voters OK'd billions for water projects. Where are the new dams, reservoirs?

BY DALE KASLER AND RYAN SABALOW

JULY 21, 2021 12:00 AM, UPDATED 3 MINUTES AGO

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MAXWELL

It doesn't look like much now, a dry and dusty valley surrounded by the modest mountains of California's Coast Range.

This story is a subscriber exclusive

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These barren, brown hills an hour northwest of Sacramento will be the future home of Sites Reservoir, one of the few major water projects to be built in California since the 1970s. California taxpayers are helping pay for Sites, which would hold more water than Folsom Lake, through a $7.1 billion bond they approved during the 2014 election.

With the state facing a potentially catastrophic drought, leaders of the Sites Project Authority say the reservoir would dramatically improve California's water supplies.

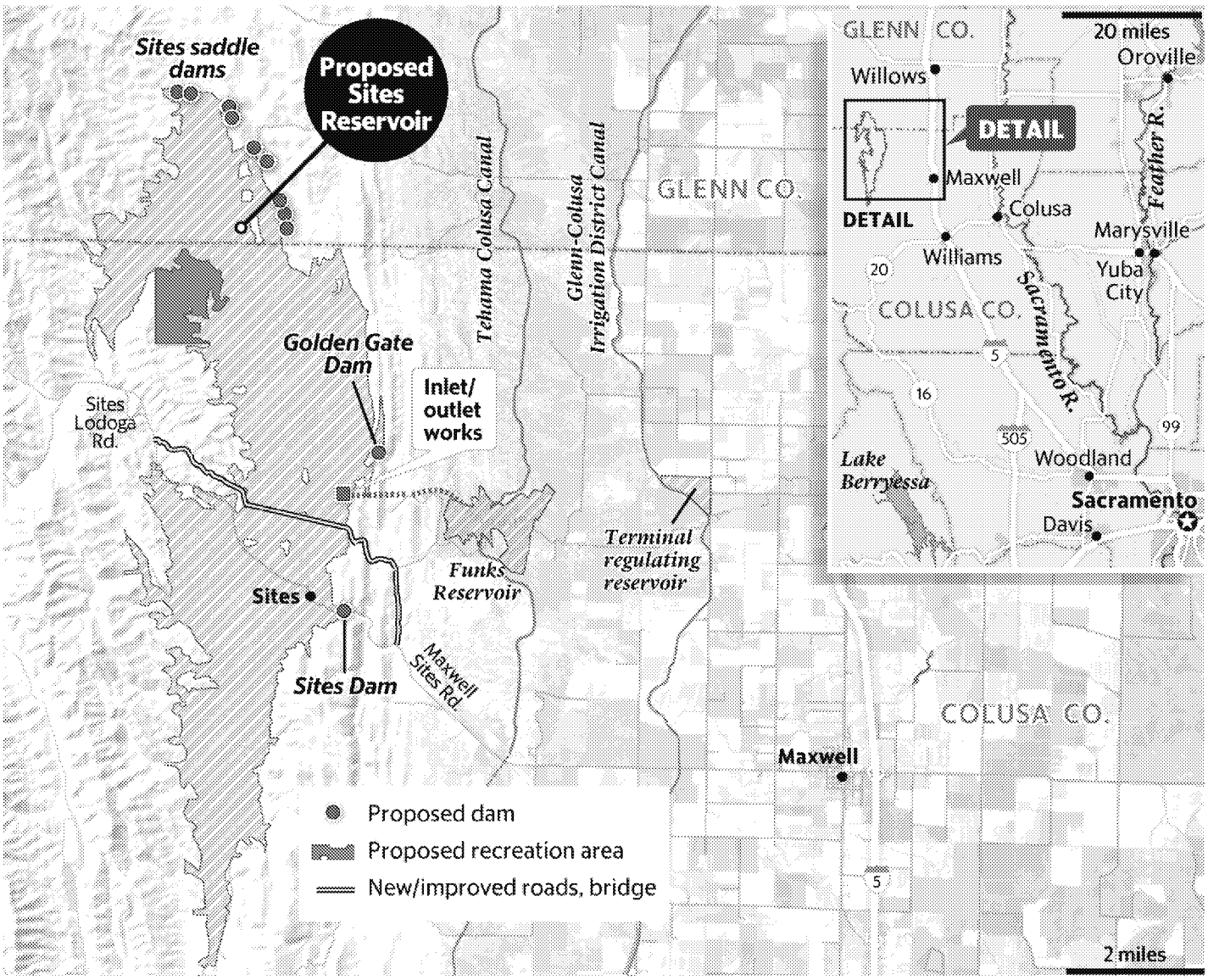
"If Sites were open today, we'd have nearly 1 million acre feet of water for farms, the environment, cities," said the authority's executive director Jerry Brown (no relation to the former governor).

But here's the thing: Sites isn't ready to open today, tomorrow or anytime soon. Mired in red tape and struggling with rising costs, even after the project was downsized, the reservoir isn't scheduled to begin construction until 2024 and wouldn't begin filling until 2030.

The Sites Reservoir will likely be the first major water storage project built in California since the 1970s. Funded in part by a 2014 water bond, the reservoir isn't scheduled to start construction until 2024.
BY **DANIEL KIM**

THE SITES PLAN

The proposed Sites Reservoir west of the town of Maxwell in the Coast Range mountains would flood the Antelope Valley in Colusa and Glenn counties. The reservoir would be filled by using two existing canals during winter, and release water using those canals during summer.



Map: The Sacramento Bee • Source: Sites Authority

None of the major water storage projects being funded by Proposition 1, the 2014 water bond, will be able to provide short-term relief for California's worsening water situation.They're all still in the pre-construction phase: reviewing environmental impacts, designing dams and nailing down financing to pay for the costs the state won't handle.

"Anybody who thought we would have a new surface reservoir by now from the 2014 water bond doesn't understand how ... that kind of project happens," said Ellen Hanak, a water expert at the Public Policy Institute of California. "Those are not overnight projects."

In other words, California, for the time being, is going to have to make do with the overtaxed portfolio of dams and reservoirs built in the last century as it confronts the escalating threat from climate change.

"We're largely going to manage the future of water with the infrastructure we have today," said Jay Lund, co-director of the Center for Watershed Sciences at UC Davis.

Proposition 1 passed by a resounding 67-33 margin. A bipartisan group of boosters said the bond "secures our water future, keeps our family farms and businesses productive, and puts Californians to work building the new facilities we need to store, deliver and treat water."

While Sites would become the state's eighth-largest reservoir, the other projects are considerably smaller, with more of a local consequence. How much new water these projects can capture for California's growing and changing needs is unclear.

"Clearly these seven projects that are going through the Prop 1 process are important for drought resilience over time, but while they're important, they're not adequate," said Wade Crowfoot, secretary of the California Natural Resources Agency. "We need significantly more investment, from the state, the federal and the local governments to build our drought resilience."

Federal funds may be coming. The tentative infrastructure deal struck by President Joe Biden and Senate Republicans includes $5 billion for Western water storage projects, although which projects would get funded is unclear.

Of the seven big water storage projects receiving Proposition 1 funding, the earliest that anything will get completed is late 2024, when a groundwater-banking project south of Sacramento is scheduled to begin operations.

The other projects won't get done until much later. A reservoir expansion in the East Bay is eight years away; an expansion of a Silicon Valley reservoir is 11 years off. A groundwater project in the desert north of Los Angeles is supposed to be done in 2030, the same year as Sites.

Jeff Kightlinger, the just-retired general manager of the Metropolitan Water District of Southern California, said the painstaking nature of the Proposition 1

process demonstrates once again how slowly things usually get done in California water.

"I think if the voters were oversold anything, they were undersold the difficulty of building new reservoirs," said Kightlinger, whose former agency plans to store water at Sites.

A 'LABORIOUS' PROCESS FOR BIG WATER PROJECTS

Lund, the UC Davis watershed expert, has this set answer when he's asked about the difficulty in building a dam or some other big water project in California these days: The state has 1,500 reservoirs and most of the prime locations already have a dam on them.

"The remaining dam sites are going to be more expensive and give you less water than the 1,500 dam sites that already exist," he said.

When it comes to Proposition 1, Gov. Gavin Newsom's administration says there's a good reason the process is moving slowly — there's so much at stake, the state is being careful.

"Proposition 1 ... clearly represents an important investment in long-term water resilience," Crowfoot said. "It was structured in a manner that requires a significant amount of time to put those projects in place."

Applications for the bond money weren't due until August 2017. The following spring — three and a half years after Proposition 1 passed — the California Water Commission approved funding for eight of the 12 applicants. (One of the eight later dropped out).

The state put strict conditions on funding. The state would only contribute to the portion of the project that would dedicate water to "public benefits," with an emphasis on environmental needs. Most of the winners received less than they asked for.

Picking the winners required "a very laborious selection process," Crowfoot said.

On the other hand, Crowfoot said California is moving quickly to facilitate billions of dollars worth of smaller water projects that lawmakers recently approved in the new state budget.

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The budget commits California to $5.1 billion worth of spending on water over four years, starting with more than $300 million in emergency aid for rural and urban water systems whose wells have already failed — or are at risk of failing — as the drought intensifies and groundwater tables fall. The new budget also earmarks $1.3 billion for somewhat longer-term projects such as repairing leaky pipes, installing water meters, digging new wells, and cleaning contaminated water systems. The money will also be spent on new septic systems and sewer lines in disadvantaged communities to prevent groundwater from becoming tainted.

Much of the funding approved by the Legislature, totaling $2.1 billion, hasn't been earmarked for any particular projects yet; that's expected to be hashed out later this summer by lawmakers and the governor.

In the meantime, state officials say they will get money out the door quickly for the emergency projects.

"We face a set of challenges this summer and fall that could grow significantly, or worsen significantly, with another dry winter," Crowfoot said. "It's our goal to get this drought resiliency funding working and actually building redundancy and reliability in case of an extended drought."

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Sacramento Bee Reporter Dale Kasler takes readers behind the scenes into his reporting process. He shows how he came up with his story, which examines the billions spend on new reservoirs and other water projects. BY **CAMERON CLARK** | **DALE KASLER**

A NEW ERA OF RESERVOIRS IN CALIFORNIA?

In 1944, Congress authorized construction of New Melones reservoir, on the Stanislaus River about an hour east of Stockton. The main impetus was to replace a 1920s-era dam and protect Oakdale, Riverbank and other downstream communities from floods.

Getting New Melones built wasn't easy.

Construction didn't begin until 1966, and controversy flared as environmentalists protested a project that would flood archaeological sites and a popular whitewater rapids area. In 1974, while construction was still under way, environmentalists qualified a ballot initiative that would have limited the size of the lake to the capacity needed for flood control. Voters rejected it. In early 1979, as construction was finally winding down, the leader of Sacramento environmental group Friends of the River chained himself to a rock to prevent the Corps of Engineers from filling the reservoir with water.

Today the reservoir, capable of storing 2.4 million acre-feet of water, stands as something of a relic from another era. It's the last major reservoir built in California by the federal government following the dam-building boom that began in the Great Depression. Environmentalists — who argue that damming rivers is harmful to fish and wildlife — hope it stays that way.

The New Melones Dam, to be the second-highest earth filled dam in California when completed, is under construction on Dec. 15, 1976. At left are two large power tunnels for the project's hydroelectric plant and a smaller tunnel designed for flood control and irrigation uses. Owen Brewer *SACRAMENTO BEE FILE*

Water spills over the old Melones Dam, built in 1928, in the foreground, as New Melones Dam takes shape in this June 2, 1978 aerial photo. A top, the new spillway is being cut into mountain. The project first approved by Congress in 1944, but not completed until the late 1970s. It was the last major dam built in California. Forrest Jackson Jr. *FRESNO BEE FILE*

"We've already built a lot of dams and squeezed a lot of water out of the system," said Ron Stork, who's Friends of the River's senior policy advocate.

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Most Californians apparently thought otherwise. Seventy years after Congress gave New Melones the green light, with the state in the early stages of the last drought, the Legislature placed an initiative on the ballot to borrow billions for new water projects.

"It was an amazing convergence over a big idea, and the big idea is that the future of California needs a lot of water and we've got to use it in the best way possible," said then-Gov. Jerry Brown, whose first stint in office coincided with the completion of New Melones, as he signed the bill putting Proposition 1 on the 2014 ballot.

Voters agreed, and Proposition 1 became law. It generated funds for all manner of water needs: $1.5 billion for protecting lakes and watersheds, $395 million for flood control, $725 million for recycling. At least $250 million in Proposition 1 funding also is being used to tear down some existing dams — namely, a group of small dams on the Klamath River along the Oregon border that are being removed to improve salmon runs. The hydroelectric dams aren't used for storage.

The biggest slug of money was for the "water storage investment program" — $2.7 billion that's now been set aside for seven different projects.

Some are moving ahead fairly swiftly. The $440 million Harvest Water project, conceived by the Sacramento Regional County Sanitation District, will build a network of pipes and pumps to deliver recycled water from the agency's treatment plant outside of Sacramento to an agricultural area south of Elk Grove. The farmers will use that recycled water instead of the groundwater they normally pump, enabling a vast aquifer at the south end of the county to fill gradually. In 40 years, the aquifer will hold enough water to fill half of Folsom Lake, said Terrie Mitchell, the agency's manager of regulatory affairs.

The project, which has been awarded $287 million in Proposition 1 money, should be finished by late 2024 — by far the earliest of the projects chosen by the water commission. By California water standards, it's a pretty easy lift.

"It's more of a traditional construction (project)," said Mike Crooks, the district's deputy operations director. "It's pump stations and pipes."

HOW A BIG WATER PROJECT GOT SUNK

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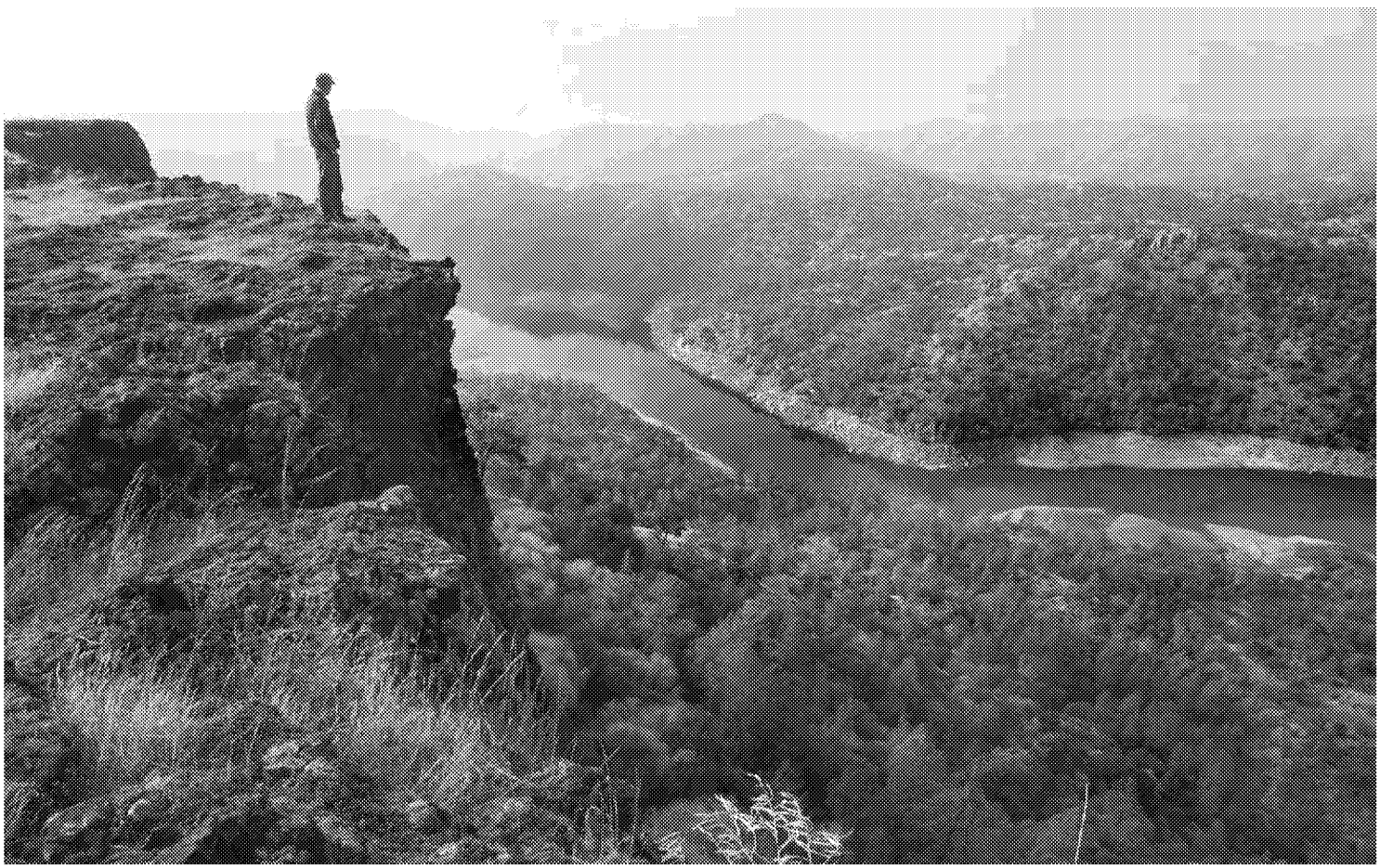
At the other end of the spectrum is Temperance Flat — a large new reservoir proposed for the San Joaquin River.

On the drawing board for decades, the reservoir has long been controversial with environmentalists, who say Temperance Flat would further degrade the river's troubled eco-system. The Water Commission awarded the project a mere $171 million in funds from Proposition 1, concluding that it would provide meager benefits to the environment.

That was just a sliver of the more than $3 billion needed to build it. Faced with a major funding gap, the Temperance Flat Reservoir Authority declined the state's money last fall, putting the project's future in serious jeopardy.

Kole Upton, the authority's chairman and a Chowchilla farmer, said the troubles with Temperance Flat reflect the difficulties of building a new reservoir from scratch nowadays.

"If it wasn't done years ago, then it's probably not going to get done," he said.



Logan Page, then-stewardship director of the Sierra Foothill Conservancy, looks over the edge of Big Table Mountain into the gorge containing the upper reaches of Millerton Lake near Temperance Flat in 2009. The

proposed Temperance Flat Dam, which would be beyond the first ridge in the center of the photo, received a sliver of the funding it needs from Proposition 1 – putting the project's future in jeopardy. MARK CROSSE *FRESNO BEE FILE*

Financial shortfalls seem endemic to big water projects, whether they're in rural Fresno County or the epicenter of high technology.

The Santa Clara Valley Water District secured nearly $500 million in Proposition 1 money to increase dramatically the size of tiny Pacheco Reservoir on a creek southeast of San Jose. The state dollars represented about half the cost of the project.

Then came a bombshell announcement. In January, the district announced that the project would now cost $2.5 billion, largely because of "major changes to the dam and spillway design." The gap between state funding and total cost is now $2 billion.

"It's a significant cost overrun," said Gary Kremen, the board's vice chairman. "The board hasn't decided what to do."

Kremen said the board might have little choice but to proceed with the project. Under orders from federal dam-safety regulators, it almost completely drained the county's largest reservoir last year to begin work on a seismic retrofit. That's left the valley with practically no storage in the midst of an ever-worsening drought.

Expanding Pacheco to hold up 140,000 acre feet of water "would have solved the problem we have right now," Kremen said.

But regardless of cost, the Pacheco project won't solve Silicon Valley's short-term woes. The expansion is scheduled to get done in 2032, according to the district's website.

RAISING THE STATE'S LARGEST DAM

The slow pace doesn't just apply to Proposition 1.

At the northern edge of the Sacramento Valley, Lake Shasta, the state's largest reservoir, is just over one-third full — its arms little more than rivers surrounded by steep, barren banks of mud and rock. Farmers in the San Joaquin Valley, who rely heavily on Shasta's supplies, have for years been promoting a plan to raise

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Shasta Dam by 18 feet. That would increase Shasta Lake's storage capacity by 14%, enough to fill Folsom Lake about two-thirds full.

The proposal isn't getting any Proposition 1 money; the project's backers didn't bother asking for any.

California officials have been adamantly opposed to raising the dam, saying the project would inundate the lower stretch of the McCloud River, protected by the Wild and Scenic Rivers Act, and submerge ancestral sites that are sacred to the Winnemem Wintu Tribe. Westlands Water District, the Fresno-based irrigation district that bought land along the McCloud to facilitate the project, said the consequence for the river would be minimal and would actually ensure more cold water stays in the lake to be used to protect endangered fish downstream of Shasta Dam.

A ring of exposed lake bed surrounds the water held back by Shasta Dam on June 30, as the Salt Fire burns north of the lake. A proposal to raise the dam 18 feet, increasing the lake's capacity 18%, is currently seeking funding. Paul Kitagaki Jr. *PKITAGAKI@SACBEE.COM*

Backers say that with a price tag of $1.4 billion, raising the dam represents a comparatively cheap water-storage investment to supply the state with an additional 634,000 acre feet of water. (An acre-foot is 326,000 gallons.) The proposed Sites Reservoir, by comparison, is currently projected to cost almost three times as much and store only a little more than twice as much water.

Raising Shasta Dam gained momentum during the Trump administration but now, with Democrat Joe Biden in the White House, its prospects appear to have stalled.

That's fine with California officials.

"We've been focused on getting projects done that frankly are more realistic and can deliver water reliability and ecological restoration," Crowfoot said.

CAN SITES RESERVOIR OVERCOME COST INCREASES?

Straddling the Glenn-Colusa county line, Sites Reservoir would be built on a ghost town, the remnants of a small community built in the 1880s by a rancher named John Sites. Today it's mostly populated by grazing cattle, along with a smattering of human occupants who would be compensated for their land. An old wooden sign,

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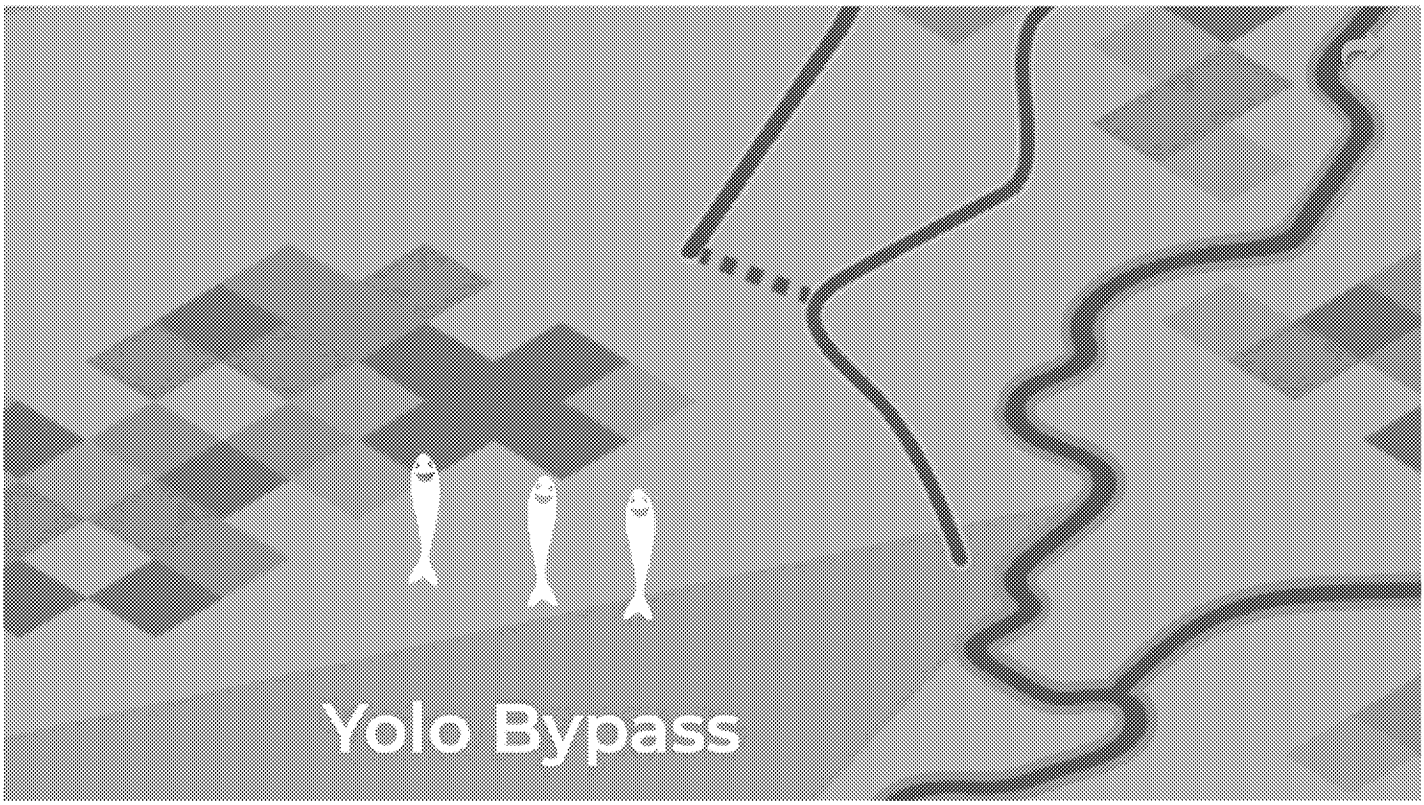
marking the former town square, sits on the east side of the would-be reservoir's floor. The whole area is ringed by mountains that would help contain the water.

The proposed reservoir location lies about 10 miles west of the Sacramento River. Sites will be an "off-stream" facility; water will be diverted from the river and shipped via canals to the reservoir, and then dispatched back into the river when it's needed.



California voters approved the spending of billions on new reservoirs and other water projects through Proposition 1 in 2014. The Sites Reservoir is one plan. Here's how the drought buster is supposed to work. BY SITES RESERVOIR AUTHORITY

Sites would hold 1.5 million acre-feet of water, making it California's eighth-largest reservoir, and the first major reservoir built in the state since Diamond Valley Lake opened in Riverside County in 2000. To get Proposition 1 funding, the reservoir will have to dedicate much of its water to environmental needs; its backers say wildlife refuges and the Yolo Bypass in particular will benefit.

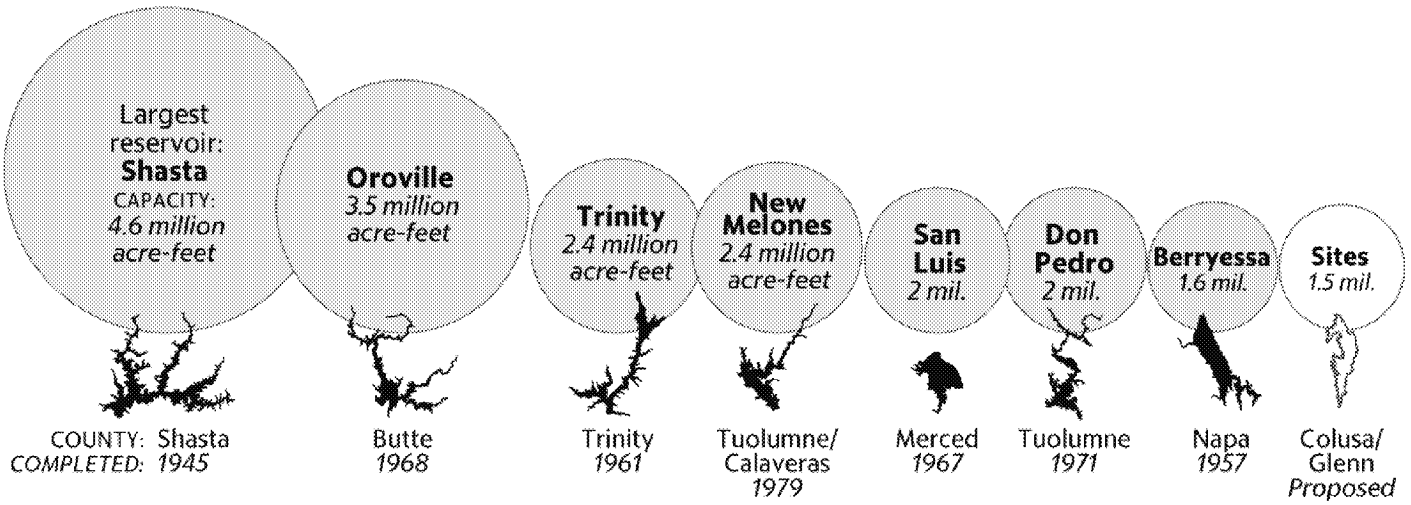
Still, environmental concerns have been raised. In 2018, the state Department of Fish and Wildlife declared that Sites was planning to divert too much water from the Sacramento River, potentially harming the river's struggling Chinook salmon population.

Since then, the reservoir's planners have made revisions that they believe will address the state's protests. But the issue hasn't been resolved. Kristal Davis Fadtke, an environmental program manager at Fish and Wildlife, said her agency is still evaluating Sites' new proposal for pulling water from the river.

A ranch sits on the bottom of the planned Sites Reservoir on July 14. The valley that would be inundated holds the remnants the town of Sites. it's now mostly populated by grazing cattle, along with a smattering of human occupants who would be compensated for their land. Daniel Kim *DKIM@SACBEE.COM*

CALIFORNIA'S LARGEST RESERVOIRS

If built, the Sites Reservoir would be the state's eighth largest.



Map: The Sacramento Bee • Source: Sites Authority, California Dept. of Water Resources

"Whether their proposed changes are adequately protective are still unknown," she said.

Sites is designed to be a local affair — by state law its governing board is made up exclusively of representatives of Sacramento Valley irrigation districts and other entities. The board chairman, Fritz Durst, is a rice farmer in northern Yolo County.

Valley pride notwithstanding, Sites received just $837 million in Proposition 1 money — far more than any other storage project, but barely one fifth of the cost. The award was about half as much as Sites requested from the state.

Most of the rest of the money will have to come from Sites' "investors" — cities, counties and farm irrigation districts that would store water at the reservoir.

As of now, the biggest investor is the Metropolitan Water District of Southern California, the mega-agency with 19 million urban customers. Metropolitan would control a bigger share of Sites' water than all of the Sacramento Valley agricultural districts combined. Other urban agencies are major participants in Sites as well, including agencies in the Bay Area and north of Los Angeles.

Kightlinger, the just-retired general manager of Metropolitan, fears that Sites won't be able to stitch together enough funding to complete the work. The cost is so high that, without more help from the state and federal governments, "Sites is going to hit the wall," Kightlinger said.

Acknowledging funding problems, the Sites Authority downsized the project last year, bringing the cost from $5.1 billion to just over $3 billion. But just a month ago the Sites board accepted a new estimate that pegged the project at around $3.9 billion, reflecting ordinary inflationary pressures and new geotechnical studies showing that it will cost hundreds of millions more than anticipated to build the main dam structures.

At such a price, the water coming out of Sites will cost its investors plenty — maybe $700 to $800 an acre-foot. That's relatively affordable for cities, which can spread the costs over millions of customers. It's a different story for farmers, who typically pay in the $200 range for an acre-foot.

Durst, the board chair, pays about $30 an acre-foot for the irrigation water he receives from Reclamation District 108. He acknowledged the high cost of Sites' water. But he said the reservoir will be worth it — and he's convinced the project can find enough money to get to the finish line.

"If we want security, we're going to have to buy this quote-unquote expensive insurance," he said. "The way insurance is, it's always expensive until the day you need it, and then you wish you had more."

And with California gasping for water, Durst said the project has to move forward — now. Delays will simply mean more cost increases.

"If it goes out another year or two or three, you're going to add a lot of zeros to the cost of this project," Durst said.

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From: Jerry Brown [jbrown@sitesproject.org]
Sent: 7/22/2021 7:55:06 AM
To: Tognolini, Michael [michael.tognolini@ebmud.com]
CC: Alicia Forsythe [aforsythe@sitesproject.org]
Subject: Re: Touch Bases on Sites Reservoir Project

Mike - Very helpful to see your areas of interest. Here's brief responses. Let Ali and know if you'd like to have any technical discussions on any of these topics and we can make arrangements.

Jerry

- Modeling or data that shows how the Freeport Project might be used for rediversion. Currently the Freeport POD is NOT modeled for use as part of the Sites project. However there are potential participants in the Sac Area and this existing POD could be used to serve them water so we plan to include it as a possible point of rediversion in our water right application to ensure we cover all of the bases. If you think a specific meeting on the Sites water right application with your water rights team would help please let us know.
- Would the use of Freeport require facilities or capacity controlled by EBMUD? No, not at this time. If this was ever contemplated the Sites Authority understands an agreement with EBMUD would be needed prior to any serious consideration of using EBMUD's capacity in the Freeport facilities. As you know Sac County Water Agency is part of the Sites Authority and it is envisioned that any capacity use at the freeport POD would be under their control and would follow all of the FRWA's requirements for its use. Right now the potential use of the Freeport POD is conceptual, and no written agreements are in place for its use.
- Modeling or information that shows how Delta flows change under Sites operation and whether that could impact Mokelumne fisheries. The operations modeling for the project will be included in the upcoming RDEIR/SDEIS. Generally, Sites is moving its water through the Delta only during the transfer window of Jul-Nov and diversions are occurring during the very wet periods on the Sacramento River after all other demands on the system and Delta conditions are met. The Sites team does not foresee any significant effects on Mokelumne fisheries due to Sites diversions or releases. If you would like to have a technical meeting among the modelers to discuss this, please let us know and arrangements can be made.
- Any cumulative effects on the Delta when Sites is combined with Delta Conveyance. No modeling has been done by the Sites Authority looking at the combined operations of Sites and the Delta Conveyance. Sites is being evaluated and will be operated independent of the Delta Conveyance project. As you know Delta Conveyance is going through significant revision and has not yet identified the revised project. We are aware that some of the SOD Sites participants are interested in looking at combined operations, but the Sites Project is not conducting any of this analysis. We do however include Delta Conveyance in the cumulative analysis section of the upcoming RDEIR/SDEIS and described potential cumulative effects in a qualitative way.

From: "Tognolini, Michael" <michael.tognolini@ebmud.com>
Date: Wednesday, July 21, 2021 at 3:59 PM
To: Jerry Brown <jbrown@sitesproject.org>
Subject: RE: Touch Bases on Sites Reservoir Project

Hi Jerry,
Thanks for checking in. It was great to talk with you back in March.

We would be interested in any information you can share on the following:
- Modeling or data that shows how the Freeport Project might be used for rediversion.
- Would the use of Freeport require facilities or capacity controlled by EBMUD?

- Modeling or information that shows how Delta flows change under Sites operation and whether that could impact Mokelumne fisheries.
- Any cumulative effects on the Delta when Sites is combined with Delta Conveyance.

Thanks again for keeping the lines of communication open!
Mike

Michael Tognolini
Director of Water and Natural Resources
(510) 287-0125 / michael.tognolini@ebmud.com / he/him/his

EAST BAY MUNICIPAL UTILITY DISTRICT
stewardship integrity respect teamwork

From: Jerry Brown <jbrown@sitesproject.org>
Sent: Tuesday, July 20, 2021 3:51 PM
To: Tognolini, Michael <michael.tognolini@ebmud.com>
Subject: Re: Touch Bases on Sites Reservoir Project

CAUTION – This email came from outside of EBMUD. Do not open attachments or click on links in suspicious emails.

Hi Mike – Great to talk to you earlier this year about the Sites Reservoir Project on March 30 – it seems like yesterday. We continue to march forward toward an end of August release of the public draft RDEIR/SDEIS. Also, including Freeport in the Sites water right application (expected to be submitted Dec '21) as a possible point of rediversion is planned and might of interest to EBMUD. We're having discussions with Sac area water agencies potentially interested in receiving deliveries of Sites water through the Freeport POD and other means.

My recollection from our March discussion was that you wanted to discuss all of this with your water rights folks and I'm just checking back in to see if any specific concerns or issues have arisen that the Sites Project should know about to inform our upcoming release and filing.

Look forward to hearing back from you and happy to provide additional information if needed.

Jerry

From: Jerry Brown <jbrown@sitesproject.org>
Date: Saturday, March 6, 2021 at 5:29 PM
To: "Tognolini, Michael" <michael.tognolini@ebmud.com>
Subject: Touch Bases on Sites Reservoir Project

Hi Mike – I hope you are well. I was wondering if you would have any interest in getting an update on the Sites Reservoir Project. At the least, I think you might be interested in our water rights application that we're planning to file at the end of this year. Also, we are preparing a RDEIR/SDEIS coming out in August that you might be interested in too.

Let me know if you would like to get together for a conversation in the next few weeks and I'll ask my assistant, Marcia to get in touch with your assistant and something on our calendars.

Jerry

From: Jerry Brown [jbrown@sitesproject.org]
Sent: 7/22/2021 10:47:45 AM
To: Alicia Forsythe [aforsythe@sitesproject.org]
Subject: Re: Prop 1 Projects | DWR CEQA Analysis

Good thanks.

From: Alicia Forsythe <aforsythe@sitesproject.org>
Date: Thursday, July 22, 2021 at 10:37 AM
To: Jerry Brown <jbrown@sitesproject.org>
Subject: FW: Prop 1 Projects | DWR CEQA Analysis

Jerry – I lost track of this with everything else going on right now. Below are my initial thoughts. I don't see anything concerning. Would just want to work with them to make sure they have the most up to date information. I don't think that will change their conclusions.

- They have characterized the project based on the Value Planning effort, which is fair considering that's the readily available public information. We'd like to work with them to updated based on the RDEIR/SDEIS analysis.

- We are concerned that the analysis appears to use the ranges and averages out of the Value Planning Effort. As noted above, we'd like to work with them to update these based on the RDEIR/SDEIS modeling. However, the team needs to consider that Sites operations are highly variable from year to year. Using these ranges and averages may not adequately characterize future Sites operations.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Alicia Forsythe
Sent: Thursday, July 22, 2021 9:53 AM
To: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Heydinger, Erin <Erin.Heydinger@hdrinc.com>
Cc: John Spranza (john.spranza@hdrinc.com) <john.spranza@hdrinc.com>
Subject: RE: Prop 1 Projects | DWR CEQA Analysis

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I will keep reviewing. Let me know if you have more comments.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Alicia Forsythe
Sent: Tuesday, June 22, 2021 4:22 PM
To: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Heydinger, Erin <Erin.Heydinger@hdrinc.com>
Cc: John Spranza (john.spranza@hdrinc.com) <john.spranza@hdrinc.com>
Subject: FW: Prop 1 Projects | DWR CEQA Analysis

Hi Laurie and Erin – See below and attached. We need to review this and get comments back to Jerry on July 20.

Laurie – can you skim this and provide any comments you have?

Erin – Can you read the Sites description carefully to make sure they have characterized the project correctly and have the correct modeling information in here?

John – Including you for awareness.

The file is on SharePoint here: https://sitesreservoirproject.sharepoint.com/:f:/r/envpermitting/Confidential/WSIP%20Benefits%20Agreement/DWR%20Prop%201%20Cumulative%20Assessment?csf=1&web=1&e=KYWPWe

Please make all changes in track changes and comment bubbles.

Thanks all!

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Jerry Brown <jbrown@sitesproject.org>
Sent: Tuesday, June 22, 2021 10:40 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>
Cc: Marcia Kivett <MKivett@sitesproject.org>
Subject: FW: Prop 1 Projects | DWR CEQA Analysis

Ali – Lets discuss during our 1v1 this week.

I read through this report. Nothing in particular stands out for me however I think we need to have someone on the Sites team familiar with all of the current diversion and releases numbers to go through their description for Sites and verify that they are using is current and correct information.

Also if you have any concerns with their conclusions as it relates to Sites we should articulate those in our comments.

Note that comments are due back to Dave O by July 23.

Thanks

Marcia – please give me a reminder 3 days prior to due date

From: "Okita, David@DWR" <David.Okita@water.ca.gov>
Date: Tuesday, June 22, 2021 at 7:08 AM
To: Sylvie Lee <slee@ieua.org>, "Cowin, Mark" <mcowin@geiconsultants.com>, Paul Weghorst <Weghorst@irwd.com>, Marguerite Patil <mpatil@ccwater.com>, Fiona Sanchez <sanchezf@irwd.com>, Jerry Brown <jbrown@sitesproject.org>, Terrie Mitchell <mitchellt@sacsewer.com>, "chakes@valleywater.org" <chakes@valleywater.org>, "mbeuhler@wswaterbank.com" <mbeuhler@wswaterbank.com>, "Young, Amy@DWR" <Amy.Young@water.ca.gov>, "Yun, Joseph@DWR" <Joseph.Yun@water.ca.gov>, Dave Richardson <drichardson@woodardcurran.com>, "Uttley, Paige@Wildlife" <Paige.Uttley@wildlife.ca.gov>, "Davis-Fadtke, Kristal@Wildlife" <Kristal.Davis-Fadtke@wildlife.ca.gov>
Cc: "Melton, Holly" <hmelton@kcwa.com>, Craig Wallace <cwallace@kcwa.com>, Steve Arakawa <sarakawa@mwdh2o.com>, "Chilmakuri, Chandra@SWC" <cchilmakuri@swc.org>, Brandon Goshi <bgoshi@mwg2o.com>, Dwayne Chisam <dchisam@avek.org>, "Laura J. Hidas (laura.hidas@acwd.com)" <laura.hidas@acwd.com>, Amparo Flores <aflores@zone7water.com>, Cindy Kao <ckao@valleywater.org>, "'Rob Kunde (rkunde@wrmwsd.com)'" <rkunde@wrmwsd.com>
Subject: Re: Prop 1 Projects | DWR CEQA Analysis

Attached is the draft cumulative flow analysis for the WSIP projects. Please review carefully that we have described your project correctly. To save time, we did not have AECOM contact each project directly, we relied on past information and this is the opportunity to make updates and corrections. The challenge is that the projects have evolved since the application stage so we may not have captured the most recent numbers. Our thought was that we would show you the format of the analysis, then seek conformation of the numbers.

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Please provide comments by July 23. DWR will be participating in a workshop with the State Water Contractors at the end of July and will be sharing general results of this analysis.

David Okita, PE

Department of Water Resources
530 902-7588

From: Laurie Warner Herson [laurie.warner.herson@phenixenv.com]
Sent: 7/22/2021 11:27:00 AM
To: Alicia Forsythe [aforsythe@sitesproject.org]; Heydinger, Erin [erin.heydinger@hdrinc.com]
CC: Spranza, John [john.spranza@hdrinc.com]
Subject: RE: Prop 1 Projects | DWR CEQA Analysis

Great – thank you!

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Thursday, July 22, 2021 11:26 AM
To: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Heydinger, Erin <erin.heydinger@hdrinc.com>
Cc: Spranza, John <john.spranza@hdrinc.com>
Subject: RE: Prop 1 Projects | DWR CEQA Analysis

Thanks Laurie and Erin. I put some comments in the file on SharePoint. It is here:

https://sitesreservoirproject.sharepoint.com/:f:/r/envpermitting/Confidential/WSIP%20Benefits%20Agreement/DWR%20Prop%201%20Cumulative%20Assessment?csf=1&web=1&e=KYWPWe

If you have a chance to put your comments into this file by COB today, that would be fantastic.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>
Sent: Thursday, July 22, 2021 11:17 AM
To: Heydinger, Erin <erin.heydinger@hdrinc.com>; Alicia Forsythe <aforsythe@sitesproject.org>
Cc: Spranza, John <john.spranza@hdrinc.com>
Subject: RE: Prop 1 Projects | DWR CEQA Analysis

Hi Ali, as we discussed previously, this isn't a CEQA cumulative analysis but I can send some comments over today – it was on my to-do list as well.

From: Heydinger, Erin <Erin.Heydinger@hdrinc.com>
Sent: Thursday, July 22, 2021 10:52 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>
Cc: Spranza, John <John.Spranza@hdrinc.com>
Subject: RE: Prop 1 Projects | DWR CEQA Analysis

This is on my to-do list for today. I've also gotten some comments back from Steve on the baseline and will incorporate those.

Erin

Erin Heydinger PE, PMP
D 916.679.8863 M 651.307.9758

hdrinc.com/follow-us

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Thursday, July 22, 2021 9:53 AM
To: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Heydinger, Erin <Erin.Heydinger@hdrinc.com>
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I will keep reviewing. Let me know if you have more comments.

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Please make all changes in track changes and comment bubbles.

Thanks all!

Ali

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Cc: "Melton, Holly" <hmelton@kcwa.com>, Craig Wallace <cwallace@kcwa.com>, Steve Arakawa <sarakawa@mwdh2o.com>, "Chilmakuri, Chandra@SWC" <cchilmakuri@swc.org>, Brandon Goshi <bgoshi@mwg2o.com>, Dwayne Chisam <dchisam@avek.org>, "Laura J. Hidas (laura.hidas@acwd.com)" <laura.hidas@acwd.com>, Amparo Flores <aflores@zone7water.com>, Cindy Kao <ckao@valleywater.org>,

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David Okita, PE
Department of Water Resources
530 902-7588

From: Heydinger, Erin [Erin.Heydinger@hdrinc.com]
Sent: 7/22/2021 12:49:16 PM
To: Alicia Forsythe [aforsythe@sitesproject.org]; King, Vanessa M [vking@usbr.gov]; Dekar, Melissa D [mdekar@usbr.gov]
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

That sounds good to me. Derya did attend the last meeting we had on the 1.0 MAF estimate, if I recall correctly. Do you know if she had any questions or concerns with anything presented? If so, we could be sure to have answers to her questions ready to discuss.

Erin

Erin Heydinger PE, PMP
D 916.679.8863 M 651.307.9758

hdrinc.com/follow-us

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Thursday, July 22, 2021 12:44 PM
To: King, Vanessa M <vking@usbr.gov>; Heydinger, Erin <Erin.Heydinger@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

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I just realized that we should also have the CH team involved as they did the heavy lift on the analysis.

Erin, once we get some times from Vanessa, maybe you can check with Steve on their availability? This would be for a meeting with Reclamation on the 1 MAF estimate.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Alicia Forsythe
Sent: Thursday, July 22, 2021 12:43 PM
To: King, Vanessa M <vking@usbr.gov>; Heydinger, Erin <Erin.Heydinger@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

Hi Vanessa – I lost track of this and now this time is taken. My apologies.

Looks like we are still available the following times:

August 12 – 10:30 AM to 2 PM

August 13 – noon to 1:30 PM or 2:30 to 5 PM

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: King, Vanessa M <vking@usbr.gov>
Sent: Tuesday, July 20, 2021 10:12 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Spranza, John <john.spranza@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: Re: [EXTERNAL] Sites Water Quality Meeting 3

Let's do 2-3 on 8/11. Do you want to set it up or should I?

Thanks,

Vanessa

Vanessa King
Hydrologist and Interim Project Manager for Sites Reservoir Project
Bureau of Reclamation, Interior Region 10 · California-Great Basin, Division of Planning
Office: 916-978-5077

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Tuesday, July 20, 2021 8:50 AM
To: King, Vanessa M <vking@usbr.gov>; Spranza, John <john.spranza@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: Re: [EXTERNAL] Sites Water Quality Meeting 3

Sounds good. Erin and I are both out the week of August 2. So the week of August 9 would be best. Here's a few dates/times that work for us (I think, Erin, correct me if I am wrong):

August 9 – 10 am to 11:30 AM
August 11 – 11 AM to 3 Pm
August 12 – 10:30 AM to 2 PM
August 13 – noon to 1:30 PM or 2:30 to 5 PM

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

From: King, Vanessa M <vking@usbr.gov>
Sent: Tuesday, July 20, 2021 7:33:34 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Spranza, John <john.spranza@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: Re: [EXTERNAL] Sites Water Quality Meeting 3

Thanks Ali! Yes, I do think it might be better to have a separate meeting with Reclamation where we can talk more openly. Would the week of 8/2 work for that? I'd like to include Derya, who's on leave through 7/29.

Vanessa

Vanessa King
Hydrologist and Interim Project Manager for Sites Reservoir Project
Bureau of Reclamation, Interior Region 10 · California-Great Basin, Division of Planning
Office: 916-978-5077

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Monday, July 19, 2021 5:03 PM
To: Spranza, John <john.spranza@hdrinc.com>; King, Vanessa M <vking@usbr.gov>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

Yes. That will be a separate meeting.

Vanessa – do you think the Reclamation team will have questions on this? I ask as I would rather not have those questions in front of NGOs so that we show a consolidated front. So if you think there will be questions from the Reclamation team, I'd be happy to set up a separate meeting for just the Reclamation team to have a more free internal team discussion. Just let me know your preference.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Spranza, John <John.Spranza@hdrinc.com>
Sent: Monday, July 19, 2021 3:44 PM
To: King, Vanessa M <vking@usbr.gov>; Alicia Forsythe <aforsythe@sitesproject.org>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

Vanessa, I believe that it will be separate, but I would need Ali to confirm.

John Spranza

D 916.679.8858 M 818.640.2487

From: King, Vanessa M <vking@usbr.gov>
Sent: Monday, July 19, 2021 2:57 PM
To: Spranza, John <John.Spranza@hdrinc.com>; Alicia Forsythe <aforsythe@sitesproject.org>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: Re: [EXTERNAL] Sites Water Quality Meeting 3

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Hi John,

Thanks for sending this so quickly! Ali mentioned setting up a meeting to discuss how the "1 MAF in 2021" number was calculated - to clarify, that's going to be separate from the next water quality meeting, right? Just want to make sure we let the right people know about each meeting.

Vanessa

Vanessa King
Hydrologist and Interim Project Manager for Sites Reservoir Project
Bureau of Reclamation, Interior Region 10 · California-Great Basin, Division of Planning
Office: 916-978-5077

From: Spranza, John <John.Spranza@hdrinc.com>
Sent: Monday, July 19, 2021 2:46 PM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Heydinger, Erin <Erin.Heydinger@hdrinc.com>; Gordon, Stephanie (Skophammer) <GORDON.STEPHANIES@EPA.GOV>; David Zelinsky <zelinsky.david@gmail.com>; asanchez@calwild.org <asanchez@calwild.org>; reis@bayecotarium.org <reis@bayecotarium.org>; Dekar, Melissa D <mdekar@usbr.gov>; King, Vanessa M <vking@usbr.gov>; Micko, Steve/SAC <steve.micko@jacobs.com>; Huber, Anne <Anne.Huber@icf.com>; tstokely@att.net <tstokely@att.net>; jimb@aqualliance.net <jimb@aqualliance.net>; dobegi@nrdc.org <dobegi@nrdc.org>; rzwillinger@defenders.org <rzwillinger@defenders.org>; DLucero@ButteCounty.net <DLucero@buttecounty.net>; rebeccadawnwu@yahoo.com <rebeccadawnwu@yahoo.com>; chicojerry@yahoo.com <chicojerry@yahoo.com>; regina@californiasalmon.org <regina@californiasalmon.org>; Williams, Nicole (Nicole.Williams@icf.com) <Nicole.Williams@icf.com>; Ron Stork <RStork@friendsoftheriver.org>; Davis, Ryan A <rdavis@usbr.gov>; Morgan, Joseph <Morgan.Joseph@epa.gov>; Wolder, Natalie L <NWolder@usbr.gov>; Deeds, Daniel A <ddeeds@usbr.gov>
Cc: Leaf, Rob/SAC <Rob.Leaf@jacobs.com>
Subject: [EXTERNAL] Sites Water Quality Meeting 3

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Thank you for participating in todays water quality discussion. I have attached the portion of the presentation that we covered today, if you have any questions please let me know. I will be sending a doodle poll out for the Part 2 of this agenda soon.

With respect to the question on inflows from Stone Corral and Funks creeks, the data below is for the 26 years of recorded data that is available for Stone Corral Creek. As Funks Creek watershed is approximately the same size, you can double the Stone Corral number for a good approximation of total inflows from source creeks.

water yr	annual mean daily flow- cfs	mean AF per year from mean annual flow
1959	2.85	2064.68
1960	0.495	358.60
1961	0.799	578.84
1962	3.55	2571.80
1963	3.09	2238.55
1964	0.177	128.23
1966	1.93	1398.19
1967	10.8	7824.06
1968	6.7	4853.81
1969	20.6	14923.66
1970	14.7	10649.41
1971	2.86	2071.93
1972	0	0.00
1973	27.2	19705.03
1974	3.83	2774.64
1975	2.99	2166.10
1976	0	0.00
1977	0	0.00
1978	19.6	14199.21
1979	3.18	2303.75
1980	19.5	14126.77
1981	4.12	2984.73
1982	10.3	7461.83
1983	55.2	39989.62
1984	19.7	14271.66
1985	0.384	278.19

John Spranza, MS, CCN
Senior Ecologist / Regulatory Specialist

HDR
2379 Gateway Oaks Drive, Suite 200
Sacramento, CA 95833
D 916.679.8858 M 818.640.2487
john.spranza@hdrinc.com

hdrinc.com/follow-us
hdrinc.com/follow-us

From: Heydinger, Erin [Erin.Heydinger@hdrinc.com]
Sent: 7/22/2021 1:09:10 PM
To: Alicia Forsythe [aforsythe@sitesproject.org]
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

Also, I know you are swamped. Thanks for getting this booked. I do think I could probably take this on with the CH team if you'd prefer.

Erin

Erin Heydinger PE, PMP
D 916.679.8863 M 651.307.9758

hdrinc.com/follow-us

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Thursday, July 22, 2021 1:07 PM
To: Heydinger, Erin <Erin.Heydinger@hdrinc.com>
Subject: FW: [EXTERNAL] Sites Water Quality Meeting 3

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Hey Steve – Reclamation wants to talk about the 1 MAF estimate again. Would sometime 8/13 from 2:30 to 5 PM work for the CH team?

Erin – How does your schedule look for this date/time?

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: King, Vanessa M <vking@usbr.gov>
Sent: Thursday, July 22, 2021 12:54 PM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Heydinger, Erin <erin.heydinger@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: Re: [EXTERNAL] Sites Water Quality Meeting 3

Ali, no problem. Any time 2:30-5 on 8/13 would work. We might also be able to make 12-1 work if needed.

Erin, I do think Derya still has some questions, but I don't know the specifics. I'll check with her when she gets back from leave and get back to you.

Thanks,

Vanessa

Vanessa King
Hydrologist and Interim Project Manager for Sites Reservoir Project
Bureau of Reclamation, Interior Region 10 · California-Great Basin, Division of Planning
Office: 916-978-5077

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Thursday, July 22, 2021 12:44 PM
To: King, Vanessa M <vking@usbr.gov>; Heydinger, Erin <erin.heydinger@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

I just realized that we should also have the CH team involved as they did the heavy lift on the analysis.

Erin, once we get some times from Vanessa, maybe you can check with Steve on their availability? This would be for a meeting with Reclamation on the 1 MAF estimate.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Alicia Forsythe
Sent: Thursday, July 22, 2021 12:43 PM
To: King, Vanessa M <vking@usbr.gov>; Heydinger, Erin <Erin.Heydinger@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

Hi Vanessa – I lost track of this and now this time is taken. My apologies.

Looks like we are still available the following times:

August 12 – 10:30 AM to 2 PM
August 13 – noon to 1:30 PM or 2:30 to 5 PM

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: King, Vanessa M <vking@usbr.gov>
Sent: Tuesday, July 20, 2021 10:12 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Spranza, John <john.spranza@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: Re: [EXTERNAL] Sites Water Quality Meeting 3

Let's do 2-3 on 8/11. Do you want to set it up or should I?

Thanks,

Vanessa

Vanessa King
Hydrologist and Interim Project Manager for Sites Reservoir Project
Bureau of Reclamation, Interior Region 10 · California-Great Basin, Division of Planning
Office: 916-978-5077

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Tuesday, July 20, 2021 8:50 AM
To: King, Vanessa M <vking@usbr.gov>; Spranza, John <john.spranza@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: Re: [EXTERNAL] Sites Water Quality Meeting 3

Sounds good. Erin and I are both out the week of August 2. So the week of August 9 would be best. Here's a few dates/times that work for us (I think, Erin, correct me if I am wrong):

August 9 – 10 am to 11:30 AM
August 11 – 11 AM to 3 Pm
August 12 – 10:30 AM to 2 PM
August 13 – noon to 1:30 PM or 2:30 to 5 PM

Ali

———————

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

---

From: King, Vanessa M <vking@usbr.gov>
Sent: Tuesday, July 20, 2021 7:33:34 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Spranza, John <john.spranza@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: Re: [EXTERNAL] Sites Water Quality Meeting 3

Thanks Ali! Yes, I do think it might be better to have a separate meeting with Reclamation where we can talk more openly. Would the week of 8/2 work for that? I'd like to include Derya, who's on leave through 7/29.

Vanessa

Vanessa King
Hydrologist and Interim Project Manager for Sites Reservoir Project
Bureau of Reclamation, Interior Region 10 · California-Great Basin, Division of Planning
Office: 916-978-5077

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Monday, July 19, 2021 5:03 PM
To: Spranza, John <john.spranza@hdrinc.com>; King, Vanessa M <vking@usbr.gov>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

Yes. That will be a separate meeting.

Vanessa – do you think the Reclamation team will have questions on this? I ask as I would rather not have those questions in front of NGOs so that we show a consolidated front. So if you think there will be questions from the Reclamation team, I'd be happy to set up a separate meeting for just the Reclamation team to have a more free internal team discussion. Just let me know your preference.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Spranza, John <John.Spranza@hdrinc.com>
Sent: Monday, July 19, 2021 3:44 PM
To: King, Vanessa M <vking@usbr.gov>; Alicia Forsythe <aforsythe@sitesproject.org>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

Vanessa, I believe that it will be separate, but I would need Ali to confirm.

John Spranza

D 916.679.8858 M 818.640.2487

From: King, Vanessa M <vking@usbr.gov>
Sent: Monday, July 19, 2021 2:57 PM
To: Spranza, John <John.Spranza@hdrinc.com>; Alicia Forsythe <aforsythe@sitesproject.org>; Dekar, Melissa D

<mdekar@usbr.gov>
Subject: Re: [EXTERNAL] Sites Water Quality Meeting 3

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Hi John,

Thanks for sending this so quickly! Ali mentioned setting up a meeting to discuss how the "1 MAF in 2021" number was calculated - to clarify, that's going to be separate from the next water quality meeting, right? Just want to make sure we let the right people know about each meeting.

Vanessa

Vanessa King
Hydrologist and Interim Project Manager for Sites Reservoir Project
Bureau of Reclamation, Interior Region 10 · California-Great Basin, Division of Planning
Office: 916-978-5077

From: Spranza, John <John.Spranza@hdrinc.com>
Sent: Monday, July 19, 2021 2:46 PM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Heydinger, Erin <Erin.Heydinger@hdrinc.com>; Gordon, Stephanie (Skophammer) <GORDON.STEPHANIES@EPA.GOV>; David Zelinsky <zelinsky.david@gmail.com>; asanchez@calwild.org <asanchez@calwild.org>; reis@bayecotarium.org <reis@bayecotarium.org>; Dekar, Melissa D <mdekar@usbr.gov>; King, Vanessa M <vking@usbr.gov>; Micko, Steve/SAC <steve.micko@jacobs.com>; Huber, Anne <Anne.Huber@icf.com>; tstokely@att.net <tstokely@att.net>; jimb@aqualliance.net <jimb@aqualliance.net>; dobegi@nrdc.org <dobegi@nrdc.org>; rzwillinger@defenders.org <rzwillinger@defenders.org>; DLucero@ButteCounty.net <DLucero@buttecounty.net>; rebeccadawnwu@yahoo.com <rebeccadawnwu@yahoo.com>; chicojerry@yahoo.com <chicojerry@yahoo.com>; regina@californiasalmon.org <regina@californiasalmon.org>; Williams, Nicole (Nicole.Williams@icf.com) <Nicole.Williams@icf.com>; Ron Stork <RStork@friendsoftheriver.org>; Davis, Ryan A <rdavis@usbr.gov>; Morgan, Joseph <Morgan.Joseph@epa.gov>; Wolder, Natalie L <NWolder@usbr.gov>; Deeds, Daniel A <ddeeds@usbr.gov>
Cc: Leaf, Rob/SAC <Rob.Leaf@jacobs.com>
Subject: [EXTERNAL] Sites Water Quality Meeting 3

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Thank you for participating in todays water quality discussion. I have attached the portion of the presentation that we covered today, if you have any questions please let me know. I will be sending a doodle poll out for the Part 2 of this agenda soon.

With respect to the question on inflows from Stone Corral and Funks creeks, the data below is for the 26 years of recorded data that is available for Stone Corral Creek. As Funks Creek watershed is approximately the same size, you can double the Stone Corral number for a good approximation of total inflows from source creeks.

water yr	annual mean daily flow- cfs	mean AF per year from mean annual flow
1959	2.85	2064.68
1960	0.495	358.60
1961	0.799	578.84
1962	3.55	2571.80
1963	3.09	2238.55
1964	0.177	128.23
1966	1.93	1398.19
1967	10.8	7824.06
1968	6.7	4853.81
1969	20.6	14923.66
1970	14.7	10649.41
1971	2.86	2071.93
1972	0	0.00
1973	27.2	19705.03
1974	3.83	2774.64
1975	2.99	2166.10
1976	0	0.00
1977	0	0.00
1978	19.6	14199.21
1979	3.18	2303.75
1980	19.5	14126.77
1981	4.12	2984.73
1982	10.3	7461.83
1983	55.2	39989.62
1984	19.7	14271.66
1985	0.384	278.19

John Spranza, MS, CCN
Senior Ecologist / Regulatory Specialist

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john.spranza@hdrinc.com

hdrinc.com/follow-us
hdrinc.com/follow-us

From: Anna Starkey [astarkey@auburnrancheria.com]
Sent: 7/22/2021 1:31:20 PM
To: 'Janis Offermann' [janis@horizonh2o.com]
CC: Kevin Spesert [kspesert@sitesproject.org]; Alicia Forsythe [aforsythe@sitesproject.org]; Anna Cheng [acheng@auburnrancheria.com]
Subject: RE: Sites Reservoir Project - Notification of Proposed Project for the Purposes of CEQA Analysis

Dear Ms. Offerman,
On behalf of the United Auburn Indian Community, thank you for the information on the above referenced project. We have reviewed the project and it is located predominantly outside of the Tribes' geographic area of traditional and cultural affiliation. Therefore, UAIC will defer tribal consultation to affiliated tribes that are closer to this project. However, we would like to continue to receive project updates and have the opportunity to review and comment on the draft environmental report, including the cultural report. Please also let me know if other tribes are actively consulting.

Lastly, for all future notifications, we ask that you please use our online form, linked below. Please do this despite what the NAHC list provides. We have not updated our contact method with the NAHC yet, so it is out of date. The link below is the best way to contact UAIC for notifications and information gathering. https://auburnrancheria.com/programs-services/tribal-preservation/submit-agency-notification/ Bookmark this link!

Please acknowledge the receipt of this email and UAIC's requests.
Kind regards,
Anna Starkey

The United Auburn Indian Community is now accepting electronic consultation request, project notifications, and requests for information! Please fill out and submit through our website. Do not mail hard copy letters or documents. https://auburnrancheria.com/programs-services/tribal-preservation ***Bookmark this link!***

Anna M. Starkey, M.A., RPA
Cultural Regulatory Specialist
Tribal Historic Preservation Department| UAIC
10720 Indian Hill Road
Auburn, CA 95603
Direct line: (916) 251-1565 | Cell: (530) 863-6503
astarkey@auburnrancheria.com |www.auburnrancheria.com

From: Janis Offermann <janis@horizonh2o.com>
Sent: Thursday, July 8, 2021 10:29 AM
To: Brian Guth <bguth@auburnrancheria.com>
Cc: Kevin Spesert <kspesert@sitesproject.org>; Alicia Forsythe <aforsythe@sitesproject.org>
Subject: Sites Reservoir Project - Notification of Proposed Project for the Purposes of CEQA Analysis

Dear Honorable Chairperson Whitehouse,

I am writing on behalf of the Sites Project Authority as a follow-up to the attached letter mailed to you on June 15, 2021. The Authority welcomes your input on the Project and the Authority's evaluation of tribal cultural resources under CEQA. If you have any comments, please reach out to Kevin Spesert, Sites Project Authority External Affairs Manager, per his contact information listed below.

Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
Email: kspesert@sitesproject.org

Thank you for your time,

Janis Offermann

Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

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From: Janis Offermann [janis@horizonh2o.com]
Sent: 7/22/2021 1:51:45 PM
To: Anna Starkey [astarkey@auburnrancheria.com]
CC: Kevin Spesert [kspesert@sitesproject.org]; Alicia Forsythe [aforsythe@sitesproject.org]; Anna Cheng [acheng@auburnrancheria.com]
Subject: RE: Sites Reservoir Project - Notification of Proposed Project for the Purposes of CEQA Analysis

Hi, Anna
Thank you for your reply. We will certainly keep UAIC up to date on the project and the tribe will be notified with the draft environmental document is available for review. I will forward your request to the authors of the cultural resources report.
The Yocha Dehe Wintun Nation and the Cachil Dehe Band of Wintun are both formally consulting with the Authority under AB52 and we are working closely with them.

Thanks, also for providing the link for future notifications. We will use that as we move forward.
Sincerely,
Janis

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

From: Anna Starkey <astarkey@auburnrancheria.com>
Sent: Thursday, July 22, 2021 1:31 PM
To: 'Janis Offermann' <janis@horizonh2o.com>
Cc: Kevin Spesert <kspesert@sitesproject.org>; Alicia Forsythe <aforsythe@sitesproject.org>; Anna Cheng <acheng@auburnrancheria.com>
Subject: RE: Sites Reservoir Project - Notification of Proposed Project for the Purposes of CEQA Analysis

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Lastly, for all future notifications, we ask that you please use our online form, linked below. Please do this despite what the NAHC list provides. We have not updated our contact method with the NAHC yet, so it is out of date. The link below is the best way to contact UAIC for notifications and information gathering. https://auburnrancheria.com/programs-services/tribal-preservation/submit-agency-notification/ Bookmark this link!

Please acknowledge the receipt of this email and UAIC's requests.
Kind regards,

Anna Starkey

The United Auburn Indian Community is now accepting electronic consultation request, project notifications, and requests for information! Please fill out and submit through our website. Do not mail hard copy letters or documents. https://auburnrancheria.com/programs-services/tribal-preservation ***Bookmark this link!***

Anna M. Starkey, M.A., RPA
Cultural Regulatory Specialist
Tribal Historic Preservation Department| UAIC
10720 Indian Hill Road
Auburn, CA 95603
Direct line: (916) 251-1565 | Cell: (530) 863-6503
astarkey@auburnrancheria.com |www.auburnrancheria.com

From: Janis Offermann <janis@horizonh2o.com>
Sent: Thursday, July 8, 2021 10:29 AM
To: Brian Guth <bguth@auburnrancheria.com>
Cc: Kevin Spesert <kspesert@sitesproject.org>; Alicia Forsythe <aforsythe@sitesproject.org>
Subject: Sites Reservoir Project - Notification of Proposed Project for the Purposes of CEQA Analysis

Dear Honorable Chairperson Whitehouse,
I am writing on behalf of the Sites Project Authority as a follow-up to the attached letter mailed to you on June 15, 2021. The Authority welcomes your input on the Project and the Authority's evaluation of tribal cultural resources under CEQA. If you have any comments, please reach out to Kevin Spesert, Sites Project Authority External Affairs Manager, per his contact information listed below.
Kevin Spesert, External Affairs Manager
Sites Project Authority
P.O. Box 517
Maxwell, CA 95955
Phone: (530) 632-4071
Email: kspesert@sitesproject.org
Thank you for your time,

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

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From: Jerry Brown [jbrown@sitesproject.org]
Sent: 7/22/2021 2:34:35 PM
To: Luu, Henry [Henry.Luu@hdrinc.com]
Subject: Re: Reporting to SWCs on Sites

I made edits in the document accordingly based on the AECOM responses.

Last thing, I do not understand how this paragraph is consistent with our position of securing more WSIP funds if they become available?

2. Public Benefit Ratio

Table 528 also shows that **the Sites Reservoir Project would have a PBR of 1.15** (based on its estimated WSIP benefits in 2021 dollars) if it receives the full amount of its conditionally approved $836.8 million WSIP funding. Using the Project's estimated WSIP benefits in 2015 dollars, **the Sites Reservoir Project would have a PBR of 1.04**.
Ecosystem improvements account for 72.3 percent of the Project public benefits, which far exceeds the 50 percent WSIP funding requirement. These values indicate that WSIP funding for the Project would be an economically feasible and cost-effective investment.

From: "Luu, Henry" <Henry.Luu@hdrinc.com>
Date: Thursday, July 22, 2021 at 12:51 PM
To: Jerry Brown <jbrown@sitesproject.org>
Subject: RE: Reporting to SWCs on Sites

Jerry,

Attached is AECOM's response to your comment on the Draft Feasibility Report.

In summary:
1. Energy requirement and cost was determined based on CALSIM results for conveyance of water to point of use.
2. The difference in unit cost is attributed to point of use locations; JPA deliveries are carried further compared to Refuge and CVP Ops Flex.
3. This unit cost does not include conveyance to storage.

Does this sufficiently address your comment, or would you like me to setup a meeting with the team?

Henry H. Luu, PE
D 916.679.8857 M 916.754.7566

hdrinc.com/follow-us

From: Jerry Brown <jbrown@sitesproject.org>
Sent: Wednesday, July 21, 2021 5:15 PM
To: Luu, Henry <Henry.Luu@hdrinc.com>
Subject: Re: Reporting to SWCs on Sites

CAUTION: [EXTERNAL] This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Let's see how far we can get with the emails and then if necessary we can meet Friday afternoon at four.

Sent from my iPhone

On Jul 21, 2021, at 4:52 PM, Luu, Henry <Henry.Luu@hdrinc.com> wrote:

Jerry, it looks like the only availability that works for both you and Jeff Herrin is Friday (7/23/2021) at 4pm (I unfortunately have a conflict and am unable to join). Are you ok with that? I have also asked Jeff to provide a response to your comment prior to the meeting.

Henry N. Luu, PE
D 916.679.8857 M 916.754.7566

hdrinc.com/follow-us

From: Jerry Brown <jbrown@sitesproject.org>
Sent: Wednesday, July 21, 2021 1:23 PM
To: Luu, Henry <Henry.Luu@hdrinc.com>
Subject: Re: Reporting to SWCs on Sites

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Edits added. Lets talk with Jeff Herrin tomorrow so I can have access to the document while talking. Work with Marcia to find a time.

From: "Luu, Henry" <Henry.Luu@hdrinc.com>
Date: Wednesday, July 21, 2021 at 12:31 PM
To: Jerry Brown <jbrown@sitesproject.org>
Subject: RE: Reporting to SWCs on Sites

Sorry...it may have been too large to come through as an attachment. You can make edits to the version on SharePoint @ https://sitesreservoirproject.sharepoint.com/:w:/r/Engineering%26Geotechnical/WSIP%20Feasibility/CWC%20Feasibility%20Report/Drafts/Sites%20Reservoir%20Feasibility%20Report%2007-20-21.docx?d=w7cc9864fa3614ac5a43d913bb7be61fd&csf=1&web=1&e=PWStNh

Henry N. Luu, PE
D 916.679.8857 M 916.754.7566

hdrinc.com/follow-us

From: Jerry Brown <jbrown@sitesproject.org>
Sent: Wednesday, July 21, 2021 12:27 PM
To: Luu, Henry <Henry.Luu@hdrinc.com>
Subject: Re: Reporting to SWCs on Sites

CAUTION: [EXTERNAL] This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Attachment?

From: "Luu, Henry" <Henry.Luu@hdrinc.com>
Date: Wednesday, July 21, 2021 at 12:25 PM
To: Jerry Brown <jbrown@sitesproject.org>
Subject: RE: Reporting to SWCs on Sites

Jerry,

Attached is the Draft Feasibility Report Word doc. I think we can add a paragraph re: the unfunded benefit within Section 5...maybe following the last paragraph in 5.1 Background. Section 5.3.7 specifically discusses SWP (WSIP Non-Eligible) benefit allocation, so could be another location to consider making adjustments to the verbiage. There are a number of tables that we can add an * next to SWP (tables 5-19, 5-20, 6-2)...I will scrub after you make your edits.

Thank you,
Henry H. Luu, PE
D 916.679.8857 M 916.754.7566

hdrinc.com/follow-us

From: Jerry Brown <jbrown@sitesproject.org>
Sent: Wednesday, July 14, 2021 12:09 PM
To: Luu, Henry <Henry.Luu@hdrinc.com>
Subject: FW: Reporting to SWCs on Sites

CAUTION: [EXTERNAL] This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

FYI – You can see how I have characterized the SWC apparent benefit in the feasibility report. Please confirm this issue is addressed accordingly in the report before it goes to CWC. Thanks. I'll keep you posted on how this issue evolves with DWR.

From: "Cooke, Robert@DWR" <Robert.Cooke@water.ca.gov>
Date: Wednesday, July 14, 2021 at 9:50 AM
To: Jerry Brown <jbrown@sitesproject.org>, "Okita, David@DWR" <David.Okita@water.ca.gov>
Subject: RE: Reporting to SWCs on Sites

I agree we should meet. David, what are your thoughts?
Rob-

From: Jerry Brown <jbrown@sitesproject.org>
Sent: Wednesday, July 14, 2021 9:07 AM
To: Okita, David@DWR <David.Okita@water.ca.gov>; Cooke, Robert@DWR <Robert.Cooke@water.ca.gov>
Subject: Reporting to SWCs on Sites

Good Morning Gentlemen –

When I attended the SWC meeting last month with an overview of Sites, in response to a contractor comment Jennifer Pierre suggested that she would be getting together with DWR in the near future to discuss the group's needs in understanding DWRs evaluation of the Sites Project and the potential impacts on the State Water Project. I have three items we should discuss in preparing for this activity:

1. Have you heard anything from Jennifer on this front? My understanding is that Dave is scheduled to present the P1 Storage Cumulative Review to this group very soon. I think this could be a great segue to talking about Sites, but my preference would be to speak to the impacts analysis of Sites separate from the other prop 1 projects if possible. As you know each project has its own operations and I wouldn't want impacts from other projects to be confused with Sites and, vice versa. In large part, I believe the work we've done on the Joint technical discussions should suffice to satisfy the SWC curiousity about potential Sites impact. I'd like to know if you have other thoughts or a different approach.
2. The current Sites Admin Draft CWC Feasibility analysis (to be provided next week to CWC staff for their input before finalizing and submittal in October) shows an unfunded benefit to the SWCs from the improved water quality mostly from the Sites water returning to the river after the Yolo Bypass Prop 1 objectives are completed. As you know we've been discussing this block of water as a rationale for reduced carriage water conditions for Sites in recognition of beneficiary pays but without having this approach finalized we didn't feel comfortable representing it this way at this time. I'd like to hear your thoughts on this point and I'm wanting to ensure this does not create anxiety for the SWC group.
3. I'm happy to provide you a debrief on the meeting we had yesterday with the Secretary and Dept Directors on the Sites project.

You okay with Marcia setting a time for us to meet in the near future?

Jerry

From: Heydinger, Erin [Erin.Heydinger@hdrinc.com]
Sent: 7/22/2021 3:04:04 PM
To: Alicia Forsythe [aforsythe@sitesproject.org]
Subject: RE: Reservoir release modeling for CVWD

Yep, I can get back to Robert today. Thanks for the reminder! I will send him the presentation with the modeling assumptions as well as the SOD storage account results from CalSim.

Erin

Erin Heydinger PE, PMP
D 916.679.8863 M 651.307.9758

hdrinc.com/follow-us

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Thursday, July 22, 2021 1:54 PM
To: Heydinger, Erin <Erin.Heydinger@hdrinc.com>
Subject: FW: Reservoir release modeling for CVWD

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Erin – Did you see this email from Robert? I think we are doing this generally as part of the proforma, correct? But I guess the graphs from RC we the EIR/EIS modeling. So a little different.

Are you working on this or should we chat on how to address this? Just want to follow up with Robert and either let him know we're working on it or if we cant do it, why not.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Robert Cheng <RCheng@cvwd.org>
Sent: Wednesday, July 21, 2021 8:06 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Heydinger, Erin <erin.heydinger@hdrinc.com>
Cc: Petya Vasileva <PVasileva@cvwd.org>
Subject: Reservoir release modeling for CVWD

Ali and Erin,

Thanks for a good discussion yesterday on water rights. There are some nuances between rights and diversions that I still have to get straight, so I may reach back with you when I've had a chance to digest the information a bit more.

You showed some release graphics for TCCA and San Bernardino during last week's Reservoir Committee meeting which I found interesting, and we asked a few questions about what conditions these releases simulated (e.g. releasing water at every opportunity (turning over storage as frequently as possible), dry year releases only) and I don't remember what the answer was. We are very interested in seeing if these types of conditions can be simulated for CVWD as this really will be a key part of the discussion with our Board to show what we are getting for our investment.

Please remind me if we've already had this conversation, and if not, I wonder if we might have some time to discuss how we can get these results for our discussion with the Board for Phase 3.

Thanks,

Robert

From: Heydinger, Erin [Erin.Heydinger@hdrinc.com]
Sent: 7/22/2021 4:11:34 PM
To: Robert Cheng [RCheng@cvwd.org]; Alicia Forsythe [aforsythe@sitesproject.org]
CC: Petya Vasileva [PVasileva@cvwd.org]
Subject: RE: Reservoir release modeling for CVWD
Attachments: Sites SOD Modeling Review 4-13-21 (1).pptx; Amendment 2 Storage Allocation.pdf; SitesSODStorage-2021-7.xlsx

Hi Robert,

Thanks for reaching out. For south-of-Delta participants, the model assumes that water is moved whenever possible during below normal, dry, and critically dry years. These are the years where conditions in the Delta would likely allow Sites to export water. I have attached our existing modeling assumptions here, from a past presentation.

We also have done some modeling to look at moving water during wet and above normal years, as well as moving water outside of the transfer window. We will review those results both at the next workgroup meeting as well as at workshops in August and September. I will say, the opportunity for moving water at other times is fairly limited due to Delta restrictions.

Right now, all south-of-Delta participants are modeled together as one group. So, your storage account would look exactly like San Bernardino's, just adjusted proportionally to your investment/storage space. This is just how the model is set up – in real time you would be able to operate to your own requirements and could make different decisions with your storage space. I've attached here a spreadsheet that includes the estimated storage levels by month for south-of-Delta participants and proportionately reduced it for Coachella Valley's storage amount.

Please let me know if you need any more information, and don't hesitate to give me a call at my cell phone number below.

Thanks!
Erin

Erin Heydinger PE, PMP
D 916.679.8863 M 651.307.9758

hdrinc.com/follow-us

From: Robert Cheng <RCheng@cvwd.org>
Sent: Wednesday, July 21, 2021 8:06 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Heydinger, Erin <Erin.Heydinger@hdrinc.com>
Cc: Petya Vasileva <PVasileva@cvwd.org>
Subject: Reservoir release modeling for CVWD

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You showed some release graphics for TCCA and San Bernardino during last week's Reservoir Committee meeting which I found interesting, and we asked a few questions about what conditions these releases simulated (e.g. releasing water at every opportunity (turning over storage as frequently as possible), dry year releases only) and I don't remember what the answer was. We are very interested in seeing if these types of conditions can be simulated for CVWD as this really will be a key part of the discussion with our Board to show what we are getting for our investment.

Please remind me if we've already had this conversation, and if not, I wonder if we might have some time to discuss how we can get these results for our discussion with the Board for Phase 3.

Thanks,

Robert

Storage Allocation Based on Amendment 2 Participation Levels
April 16, 2021

Participant Name	Storage (AF)	% Active Storage
Antelope Valley-East Kern WA	3,117	0.2%
Carter MWC	1,870	0.1%
City of American Canyon	24,937	1.8%
Coachella Valley WD	62,343	4.5%
Colusa County	62,343	4.5%
Colusa County WD	62,799	4.6%
Cortina WD	2,805	0.2%
Davis WD	12,469	0.9%
Desert WA	40,523	2.9%
Dunnigan WD	18,528	1.3%
Glenn-Colusa ID	31,172	2.3%
Irvine Ranch WD	6,234	0.5%
LaGrande WD	6,234	0.5%
Metropolitan Water District of SC	311,717	22.6%
Reclamation District 108	24,937	1.8%
Rosedale-Rio Bravo WD	3,117	0.2%
San Bernardino Valley Municipal WD	133,415	9.7%
San Gorgonio Pass WA	87,281	6.3%
Santa Clara Valley WD	3,117	0.2%
Santa Clarita Valley WA	31,172	2.3%
Westside WD	33,510	2.4%
Wheeler Ridge - Maricopa WSD	19,015	1.4%
Zone 7 WA	62,343	4.5%
Reclamation	91,000	6.6%
State of California - Ecosystem	244,000	17.7%
Dead Pool	120,000	N/A
Total	1,500,000	100%

From: Jerry Brown [jbrown@sitesproject.org]
Sent: 7/22/2021 4:21:20 PM
To: Luu, Henry [Henry.Luu@hdrinc.com]
Subject: Re: Reporting to SWCs on Sites

I'm good with this addition.

From: "Luu, Henry" <Henry.Luu@hdrinc.com>
Date: Thursday, July 22, 2021 at 4:20 PM
To: Jerry Brown <jbrown@sitesproject.org>
Subject: RE: Reporting to SWCs on Sites

This paragraph was intended to reaffirm (check the box) that the project is indeed a feasible project meeting WSIP benefit requirements. We were not positioning for additional project funding, however I think the notion that the project provides greater than the required benefits leave potential for discussion. If you think we should be more specific, then maybe adding another sentence to the end of the paragraph:

2. Public Benefit Ratio

Table 528 also shows that **the Sites Reservoir Project would have a PBR of 1.15** (based on its estimated WSIP benefits in 2021 dollars) if it receives the full amount of its conditionally approved $836.8 million WSIP funding. Using the Project's estimated WSIP benefits in 2015 dollars, **the Sites Reservoir Project would have a PBR of 1.04**.
Ecosystem improvements account for 72.3 percent of the Project public benefits, which far exceeds the 50 percent WSIP funding requirement. These values indicate that WSIP funding for the Project would be an economically feasible and cost-effective investment. *The excess public benefits demonstrate the Sites Reservoir Project should be considered eligible for additional WSIP funding, if available, to align with the Authority's beneficiary pays principle.*

Thoughts?

Henry M. Luu, PE
D 916.679.8857 M 916.754.7566

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From: Jerry Brown <jbrown@sitesproject.org>
Sent: Thursday, July 22, 2021 2:35 PM
To: Luu, Henry <Henry.Luu@hdrinc.com>
Subject: Re: Reporting to SWCs on Sites

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I made edits in the document accordingly based on the AECOM responses.

Last thing, I do not understand how this paragraph is consistent with our position of securing more WSIP funds if they become available?

2. Public Benefit Ratio

Table 528 also shows that **the Sites Reservoir Project would have a PBR of 1.15** (based on its estimated WSIP benefits in 2021 dollars) if it receives the full amount of its conditionally approved $836.8 million WSIP funding. Using the Project's estimated WSIP benefits in 2015 dollars, **the Sites Reservoir Project would have a PBR of 1.04**.

Ecosystem improvements account for 72.3 percent of the Project public benefits, which far exceeds the 50 percent WSIP funding requirement. These values indicate that WSIP funding for the Project would be an economically feasible and cost-effective investment.

From: "Luu, Henry" <Henry.Luu@hdrinc.com>
Date: Thursday, July 22, 2021 at 12:51 PM
To: Jerry Brown <jbrown@sitesproject.org>
Subject: RE: Reporting to SWCs on Sites

Jerry,

Attached is AECOM's response to your comment on the Draft Feasibility Report.

In summary:
1. Energy requirement and cost was determined based on CALSIM results for conveyance of water to point of use.
2. The difference in unit cost is attributed to point of use locations; JPA deliveries are carried further compared to Refuge and CVP Ops Flex.
3. This unit cost does not include conveyance to storage.

Does this sufficiently address your comment, or would you like me to setup a meeting with the team?

Henry H. Luu, PE
D 916.679.8857 M 916.754.7566

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From: Jerry Brown <jbrown@sitesproject.org>
Sent: Wednesday, July 21, 2021 5:15 PM
To: Luu, Henry <Henry.Luu@hdrinc.com>
Subject: Re: Reporting to SWCs on Sites

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Let's see how far we can get with the emails and then if necessary we can meet Friday afternoon at four.

Sent from my iPhone

On Jul 21, 2021, at 4:52 PM, Luu, Henry <Henry.Luu@hdrinc.com> wrote:

Jerry, it looks like the only availability that works for both you and Jeff Herrin is Friday (7/23/2021) at 4pm (I unfortunately have a conflict and am unable to join). Are you ok with that? I have also asked Jeff to provide a response to your comment prior to the meeting.

Henry H. Luu, PE
D 916.679.8857 M 916.754.7566

hdrinc.com/follow-us

From: Jerry Brown <jbrown@sitesproject.org>
Sent: Wednesday, July 21, 2021 1:23 PM

To: Luu, Henry <Henry.Luu@hdrinc.com>
Subject: Re: Reporting to SWCs on Sites

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Edits added. Lets talk with Jeff Herrin tomorrow so I can have access to the document while talking. Work with Marcia to find a time.

From: "Luu, Henry" <Henry.Luu@hdrinc.com>
Date: Wednesday, July 21, 2021 at 12:31 PM
To: Jerry Brown <jbrown@sitesproject.org>
Subject: RE: Reporting to SWCs on Sites

Sorry...it may have been too large to come through as an attachment. You can make edits to the version on SharePoint @ https://sitesreservoirproject.sharepoint.com/:w:/r/Engineering%26Geotechnical/WSIP%20Feasibility/CWC%20Feasibility%20Report/Drafts/Sites%20Reservoir%20Feasibility%20Report%2007-20-21.docx?d=w7cc9864fa3614ac5a43d913bb7be61fd&csf=1&web=1&e=PWStNh

Henry H. Luu, PE
D 916.679.8857 M 916.754.7566

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From: Jerry Brown <jbrown@sitesproject.org>
Sent: Wednesday, July 21, 2021 12:27 PM
To: Luu, Henry <Henry.Luu@hdrinc.com>
Subject: Re: Reporting to SWCs on Sites

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Attachment?

From: "Luu, Henry" <Henry.Luu@hdrinc.com>
Date: Wednesday, July 21, 2021 at 12:25 PM
To: Jerry Brown <jbrown@sitesproject.org>
Subject: RE: Reporting to SWCs on Sites

Jerry,

Attached is the Draft Feasibility Report Word doc. I think we can add a paragraph re: the unfunded benefit within Section 5...maybe following the last paragraph in 5.1 Background. Section 5.3.7 specifically discusses SWP (WSIP Non-Eligible) benefit allocation, so could be another location to consider making adjustments to the verbiage. There are a number of tables that we can add an * next to SWP (tables 5-19, 5-20, 6-2)...I will scrub after you make your edits.

Thank you,
Henry H. Luu, PE
D 916.679.8857 M 916.754.7566

From: Jerry Brown <jbrown@sitesproject.org>
Sent: Wednesday, July 14, 2021 12:09 PM
To: Luu, Henry <Henry.Luu@hdrinc.com>
Subject: FW: Reporting to SWCs on Sites

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FYI – You can see how I have characterized the SWC apparent benefit in the feasibility report. Please confirm this issue is addressed accordingly in the report before it goes to CWC. Thanks. I'll keep you posted on how this issue evolves with DWR.

From: "Cooke, Robert@DWR" <Robert.Cooke@water.ca.gov>
Date: Wednesday, July 14, 2021 at 9:50 AM
To: Jerry Brown <jbrown@sitesproject.org>, "Okita, David@DWR" <David.Okita@water.ca.gov>
Subject: RE: Reporting to SWCs on Sites

I agree we should meet. David, what are your thoughts?
Rob-

From: Jerry Brown <jbrown@sitesproject.org>
Sent: Wednesday, July 14, 2021 9:07 AM
To: Okita, David@DWR <David.Okita@water.ca.gov>; Cooke, Robert@DWR <Robert.Cooke@water.ca.gov>
Subject: Reporting to SWCs on Sites

Good Morning Gentlemen –

When I attended the SWC meeting last month with an overview of Sites, in response to a contractor comment Jennifer Pierre suggested that she would be getting together with DWR in the near future to discuss the group's needs in understanding DWRs evaluation of the Sites Project and the potential impacts on the State Water Project. I have three items we should discuss in preparing for this activity:

1. Have you heard anything from Jennifer on this front? My understanding is that Dave is scheduled to present the P1 Storage Cumulative Review to this group very soon. I think this could be a great segue to talking about Sites, but my preference would be to speak to the impacts analysis of Sites separate from the other prop 1 projects if possible. As you know each project has its own operations and I wouldn't want impacts from other projects to be confused with Sites and, vice versa. In large part, I believe the work we've done on the Joint technical discussions should suffice to satisfy the SWC curiousity about potential Sites impact. I'd like to know if you have other thoughts or a different approach.
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3. I'm happy to provide you a debrief on the meeting we had yesterday with the Secretary and Dept Directors on the Sites project.

You okay with Marcia setting a time for us to meet in the near future?

Jerry

From: Heydinger, Erin [Erin.Heydinger@hdrinc.com]
Sent: 7/22/2021 4:51:41 PM
To: dkahn@politico.com
CC: Jerry Brown [jbrown@sitesproject.org]; Kevin Spesert [kspesert@sitesproject.org]; Sara M. Katz [skatz@katzandassociates.com]; Marcia Kivett [MKivett@sitesproject.org]
Subject: Sites Reservoir - Request for Data
Attachments: Reclamation Water Storage Projects- Section 4007 of the Water Infrastructure Improvements for the Nation Act[2][1].pdf; Map_for_Politico.pdf; ShapefilesForPolitico.zip

Hi Debra,

I'm a consultant with the Sites project, getting back to you on your request for data. I've attached here a few pieces of information:

- Shapefiles with the project features, as well as a PDF showing what data was included
- Congressional Research Service white paper on the WIIN Act

Sounds like you were also asking for a couple of phone numbers for folks at CCWD:

- Jennifer Allen o: 925-688-8041, c: 925-297-9739
- Marguerite Patil o: 925-688-8018, c: 925-297-9738

Please let us know if you need any more information.

Thanks and have a great day!
Erin

Erin Heydinger, PE, PMP
Project Manager
Water/Wastewater

HDR
2379 Gateway Oaks Dr, #200
Sacramento, CA 95833
D 916.679.8863 M 651.307.9758

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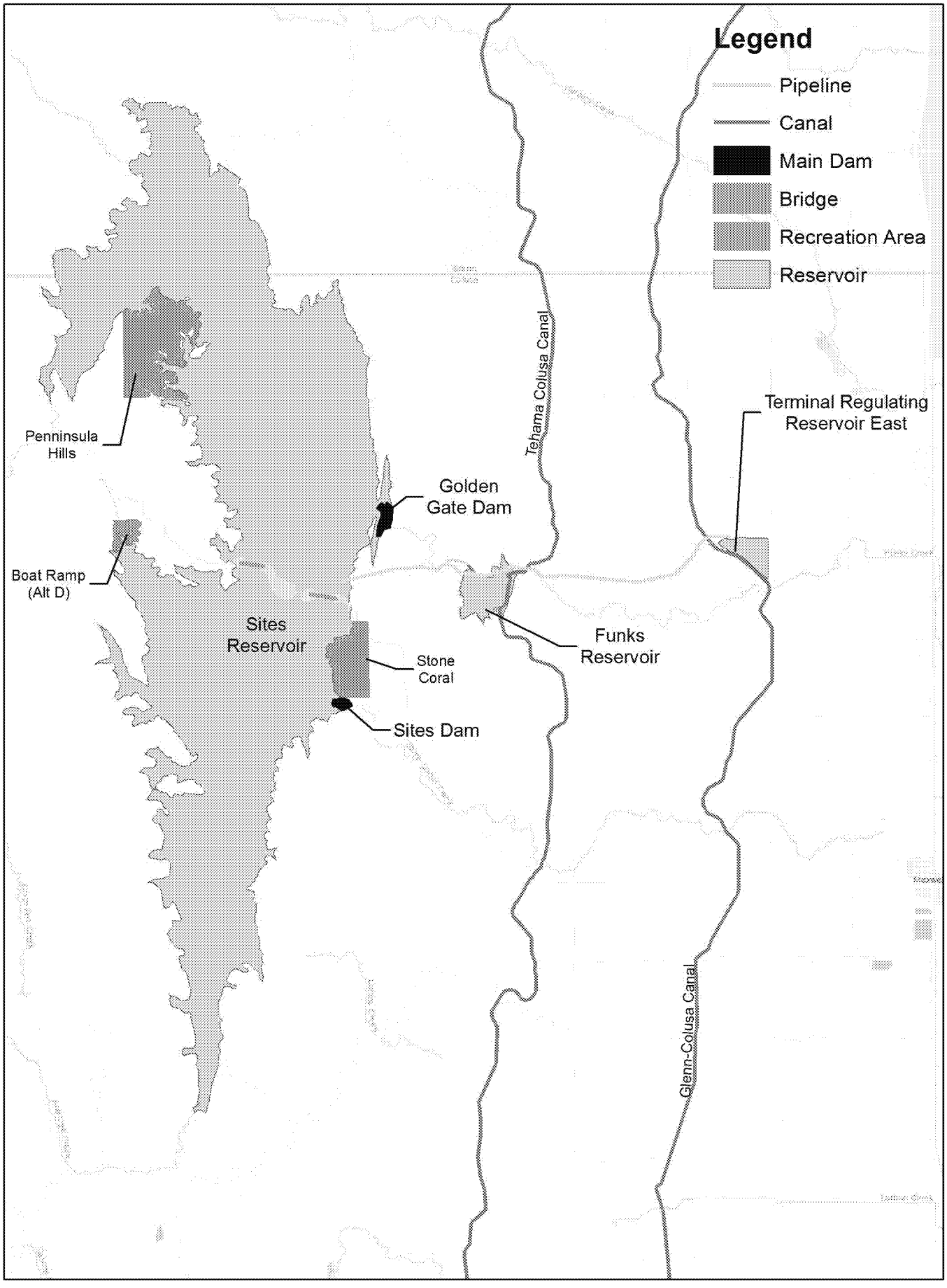
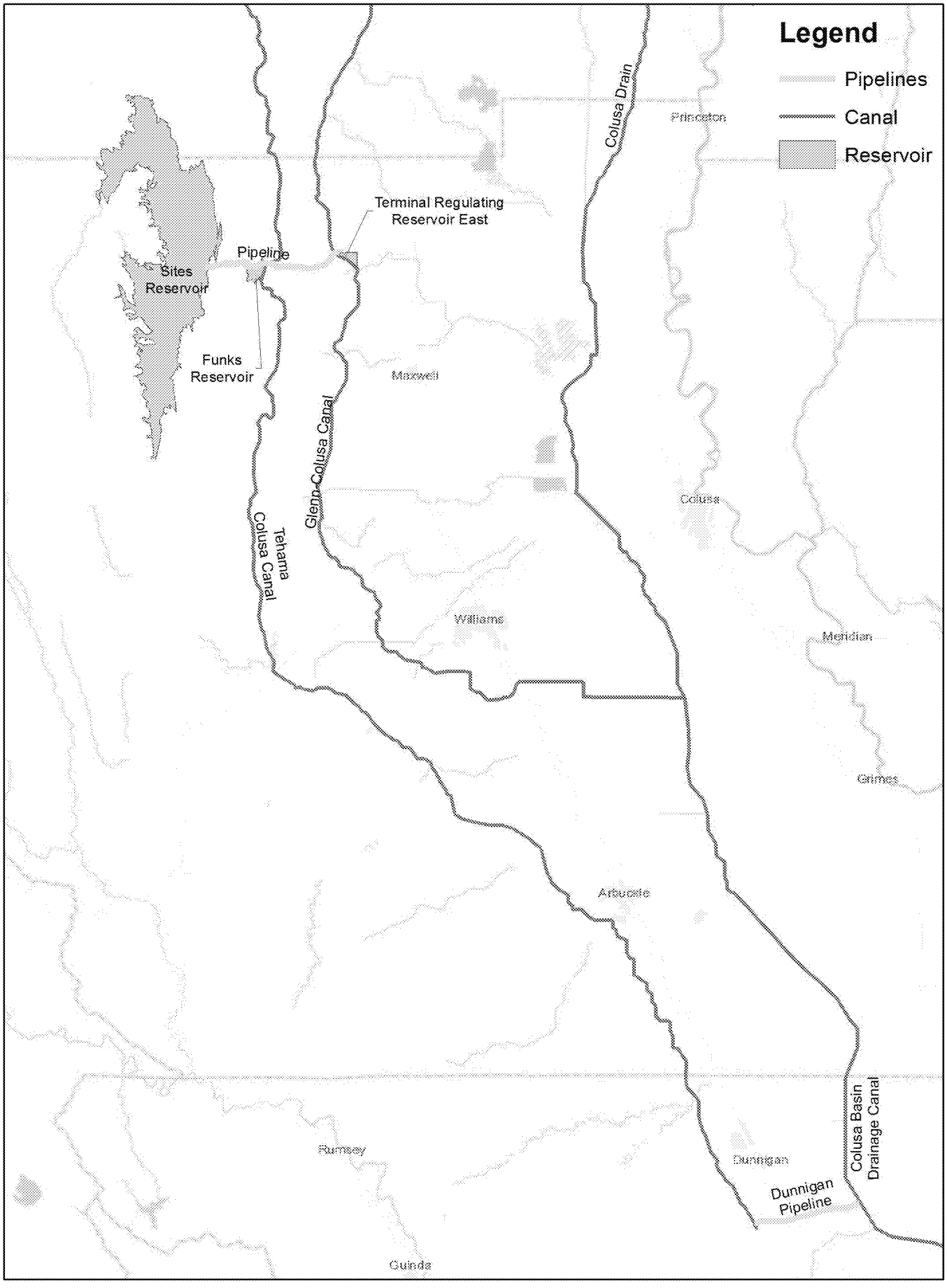

Legend
Pipeline
Canal
Main Dam
Bridge
Recreation Area
Reservoir
Penninsula Hills
Golden Gate Dam
Tehama Colusa Canal
Terminal Regulating Reservoir East
Boat Ramp (Alt D)
Sites Reservoir
Funks Reservoir
Stone Coral
Sites Dam
Glenn-Colusa Canal


Legend
Pipelines
Canal
Reservoir
Colusa Drain
Princeton
Terminal Regulating Reservoir East
Pipeline
Sites Reservoir
Funks Reservoir
Maxwell
Glenn-Colusa Canal
Tehama Colusa Canal
Colusa
Williams
Meridian
Grimes
Arbuckle
Colusa Basin Drainage Canal
Dunnigan
Dunnigan Pipeline
Rumsey
Guinda

From: Micko, Steve/SAC [Steve.Micko@jacobs.com]
Sent: 7/22/2021 4:53:38 PM
To: Heydinger, Erin [erin.heydinger@hdrinc.com]; Alicia Forsythe [aforsythe@sitesproject.org]
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

Aside from proforma workshop (in Erin's note), we're available!

From: Heydinger, Erin <Erin.Heydinger@hdrinc.com>
Sent: Thursday, July 22, 2021 1:09 PM
To: Alicia Forsythe <aforsythe@sitesproject.org>
Cc: Micko, Steve/SAC <Steve.Micko@jacobs.com>
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

I think you forgot Steve 😊 This is the same day as the workshop with ag/NOD participants where we will review proforma results. I will check with JP on timing for that workshop.

Erin

Erin Heydinger PE, PMP
D 916.679.8863 M 651.307.9758

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From: Alicia Forsythe <aforsythe@sitesproject.org>
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To: Heydinger, Erin <Erin.Heydinger@hdrinc.com>
Subject: FW: [EXTERNAL] Sites Water Quality Meeting 3

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Hey Steve – Reclamation wants to talk about the 1 MAF estimate again. Would sometime 8/13 from 2:30 to 5 PM work for the CH team?

Erin – How does your schedule look for this date/time?

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: King, Vanessa M <vking@usbr.gov>
Sent: Thursday, July 22, 2021 12:54 PM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Heydinger, Erin <erin.heydinger@hdrinc.com>; Dekar, Melissa D

<mdekar@usbr.gov>
Subject: Re: [EXTERNAL] Sites Water Quality Meeting 3

Ali, no problem. Any time 2:30-5 on 8/13 would work. We might also be able to make 12-1 work if needed.

Erin, I do think Derya still has some questions, but I don't know the specifics. I'll check with her when she gets back from leave and get back to you.

Thanks,

Vanessa

Vanessa King
Hydrologist and Interim Project Manager for Sites Reservoir Project
Bureau of Reclamation, Interior Region 10 · California-Great Basin, Division of Planning
Office: 916-978-5077

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Thursday, July 22, 2021 12:44 PM
To: King, Vanessa M <vking@usbr.gov>; Heydinger, Erin <erin.heydinger@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

I just realized that we should also have the CH team involved as they did the heavy lift on the analysis.

Erin, once we get some times from Vanessa, maybe you can check with Steve on their availability? This would be for a meeting with Reclamation on the 1 MAF estimate.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Alicia Forsythe
Sent: Thursday, July 22, 2021 12:43 PM
To: King, Vanessa M <vking@usbr.gov>; Heydinger, Erin <Erin.Heydinger@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

Hi Vanessa – I lost track of this and now this time is taken. My apologies.

Looks like we are still available the following times:

August 12 – 10:30 AM to 2 PM
August 13 – noon to 1:30 PM or 2:30 to 5 PM

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: King, Vanessa M <vking@usbr.gov>
Sent: Tuesday, July 20, 2021 10:12 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Spranza, John <john.spranza@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: Re: [EXTERNAL] Sites Water Quality Meeting 3

Let's do 2-3 on 8/11. Do you want to set it up or should I?

Thanks,

Vanessa

Vanessa King
Hydrologist and Interim Project Manager for Sites Reservoir Project
Bureau of Reclamation, Interior Region 10 · California-Great Basin, Division of Planning
Office: 916-978-5077

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Tuesday, July 20, 2021 8:50 AM
To: King, Vanessa M <vking@usbr.gov>; Spranza, John <john.spranza@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: Re: [EXTERNAL] Sites Water Quality Meeting 3

Sounds good. Erin and I are both out the week of August 2. So the week of August 9 would be best. Here's a few dates/times that work for us (I think, Erin, correct me if I am wrong):

August 9 – 10 am to 11:30 AM
August 11 – 11 AM to 3 Pm
August 12 – 10:30 AM to 2 PM
August 13 – noon to 1:30 PM or 2:30 to 5 PM

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

From: King, Vanessa M <vking@usbr.gov>
Sent: Tuesday, July 20, 2021 7:33:34 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Spranza, John <john.spranza@hdrinc.com>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: Re: [EXTERNAL] Sites Water Quality Meeting 3

Thanks Ali! Yes, I do think it might be better to have a separate meeting with Reclamation where we can talk more openly. Would the week of 8/2 work for that? I'd like to include Derya, who's on leave through 7/29.

Vanessa

Vanessa King
Hydrologist and Interim Project Manager for Sites Reservoir Project
Bureau of Reclamation, Interior Region 10 · California-Great Basin, Division of Planning
Office: 916-978-5077

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Monday, July 19, 2021 5:03 PM
To: Spranza, John <john.spranza@hdrinc.com>; King, Vanessa M <vking@usbr.gov>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

Yes. That will be a separate meeting.

Vanessa – do you think the Reclamation team will have questions on this? I ask as I would rather not have those questions in front of NGOs so that we show a consolidated front. So if you think there will be questions from the Reclamation team, I'd be happy to set up a separate meeting for just the Reclamation team to have a more free internal team discussion. Just let me know your preference.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Spranza, John <John.Spranza@hdrinc.com>
Sent: Monday, July 19, 2021 3:44 PM
To: King, Vanessa M <vking@usbr.gov>; Alicia Forsythe <aforsythe@sitesproject.org>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: RE: [EXTERNAL] Sites Water Quality Meeting 3

Vanessa, I believe that it will be separate, but I would need Ali to confirm.

John Spranza

D 916.679.8858 M 818.640.2487

From: King, Vanessa M <vking@usbr.gov>
Sent: Monday, July 19, 2021 2:57 PM
To: Spranza, John <John.Spranza@hdrinc.com>; Alicia Forsythe <aforsythe@sitesproject.org>; Dekar, Melissa D <mdekar@usbr.gov>
Subject: Re: [EXTERNAL] Sites Water Quality Meeting 3

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Hi John,

Thanks for sending this so quickly! Ali mentioned setting up a meeting to discuss how the "1 MAF in 2021" number was calculated - to clarify, that's going to be separate from the next water quality meeting, right? Just want to make sure we let the right people know about each meeting.

Vanessa

Vanessa King
Hydrologist and Interim Project Manager for Sites Reservoir Project
Bureau of Reclamation, Interior Region 10 · California-Great Basin, Division of Planning
Office: 916-978-5077

From: Spranza, John <John.Spranza@hdrinc.com>
Sent: Monday, July 19, 2021 2:46 PM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Heydinger, Erin <Erin.Heydinger@hdrinc.com>; Gordon, Stephanie (Skophammer) <GORDON.STEPHANIES@EPA.GOV>; David Zelinsky <zelinsky.david@gmail.com>; asanchez@calwild.org <asanchez@calwild.org>; reis@bayecotarium.org <reis@bayecotarium.org>; Dekar, Melissa D <mdekar@usbr.gov>; King, Vanessa M <vking@usbr.gov>; Micko, Steve/SAC <steve.micko@jacobs.com>; Huber, Anne <Anne.Huber@icf.com>; tstokely@att.net <tstokely@att.net>; jimb@aqualliance.net <jimb@aqualliance.net>; dobegi@nrdc.org <dobegi@nrdc.org>; rzwillinger@defenders.org <rzwillinger@defenders.org>; DLucero@ButteCounty.net <DLucero@buttecounty.net>; rebeccadawnwu@yahoo.com <rebeccadawnwu@yahoo.com>; chicojerry@yahoo.com <chicojerry@yahoo.com>; regina@californiasalmon.org <regina@californiasalmon.org>; Williams, Nicole (Nicole.Williams@icf.com) <Nicole.Williams@icf.com>; Ron Stork <RStork@friendsoftheriver.org>; Davis, Ryan A <rdavis@usbr.gov>; Morgan, Joseph <Morgan.Joseph@epa.gov>; Wolder, Natalie L <NWolder@usbr.gov>; Deeds, Daniel A <ddeeds@usbr.gov>
Cc: Leaf, Rob/SAC <Rob.Leaf@jacobs.com>
Subject: [EXTERNAL] Sites Water Quality Meeting 3

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Thank you for participating in todays water quality discussion. I have attached the portion of the presentation that we covered today, if you have any questions please let me know. I will be sending a doodle poll out for the Part 2 of this agenda soon.

With respect to the question on inflows from Stone Corral and Funks creeks, the data below is for the 26 years of recorded data that is available for Stone Corral Creek. As Funks Creek watershed is approximately the same size, you can double the Stone Corral number for a good approximation of total inflows from source creeks.

water yr	annual mean daily flow- cfs	mean AF per year from mean annual flow
1959	2.85	2064.68
1960	0.495	358.60
1961	0.799	578.84
1962	3.55	2571.80
1963	3.09	2238.55
1964	0.177	128.23
1966	1.93	1398.19
1967	10.8	7824.06
1968	6.7	4853.81
1969	20.6	14923.66
1970	14.7	10649.41
1971	2.86	2071.93
1972	0	0.00
1973	27.2	19705.03
1974	3.83	2774.64
1975	2.99	2166.10
1976	0	0.00
1977	0	0.00
1978	19.6	14199.21
1979	3.18	2303.75
1980	19.5	14126.77
1981	4.12	2984.73
1982	10.3	7461.83
1983	55.2	39989.62
1984	19.7	14271.66
1985	0.384	278.19

John Spranza, MS, CCN
Senior Ecologist / Regulatory Specialist

HDR
2379 Gateway Oaks Drive, Suite 200
Sacramento, CA 95833
D 916.679.8858 M 818.640.2487
john.spranza@hdrinc.com

hdrinc.com/follow-us
hdrinc.com/follow-us

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From: Spranza, John [John.Spranza@hdrinc.com]
Sent: 7/23/2021 8:41:26 AM
To: Alicia Forsythe [aforsythe@sitesproject.org]; Lecky, Jim [jim.lecky@icf.com]; Hendrick, Mike [mike.hendrick@icf.com]; Hassrick, Jason (Jason.Hassrick@icf.com) [Jason.Hassrick@icf.com]; tstokely@att.net; jimb@aqualliance.net; dobegi@nrdc.org; reis@bayecotarium.org; rzwillinger@defenders.org; DLucero@ButteCounty.net; rebeccadawnwu@yahoo.com; chicojerry@yahoo.com; regina@californiasalmon.org; Williams, Nicole [nicole.williams@icf.com]; steve.micko@jacobs.com; David Zelinsky [zelinsky.david@gmail.com]; asanchez@calwild.org; Ron Stork [RStork@friendsoftheriver.org]; Dekar, Melissa D [mdekar@usbr.gov]; King, Vanessa M [vking@usbr.gov]; Heydinger, Erin [erin.heydinger@hdrinc.com]; Morgan, Joseph [Morgan.Joseph@epa.gov]; Gordon, Stephanie (Skophammer) [GORDON.STEPHANIES@EPA.GOV]; Wolder, Natalie L [nwolder@usbr.gov]; Deeds, Daniel A [ddeeds@usbr.gov]; Manugian, Suzanne C [smanugian@usbr.gov]; Greenwood, Marin [Marin.Greenwood@icf.com]; Monique Briard (monique.briard@icf.com) [monique.briard@icf.com]; Laurie Warner Herson [laurie.warner.herson@phenixenv.com]
Subject: RE: Sites Project Fishery Resources Discussion Group Meeting 2
Attachments: 20210726- Sites Fishery Discussion Group Agenda_AGN.pdf

Hello,
The agenda for Monday's fishery discussion group meeting is attached. Talk with you then.
John

John Spranza

D 916.679.8858 M 816.640.2487

-----Original Appointment-----
From: Spranza, John
Sent: Thursday, July 8, 2021 10:07 AM
To: Spranza, John; aforsythe (aforsythe@sitesproject.org); Lecky, Jim; Hendrick, Mike (Mike.Hendrick@icf.com); Hassrick, Jason (Jason.Hassrick@icf.com); tstokely@att.net; jimb@aqualliance.net; dobegi@nrdc.org; reis@bayecotarium.org; rzwillinger@defenders.org; DLucero@ButteCounty.net; rebeccadawnwu@yahoo.com; chicojerry@yahoo.com; regina@californiasalmon.org; Williams, Nicole (Nicole.Williams@icf.com); Micko, Steve/SAC (Steve.Micko@jacobs.com); David Zelinsky; asanchez@calwild.org; Ron Stork; Melissa Dekar (mdekar@usbr.gov); King, Vanessa M; Erin Heydinger (Erin.Heydinger@hdrinc.com); Morgan, Joseph; Gordon, Stephanie (Skophammer); Wolder, Natalie L; Deeds, Daniel A; smanugian (smanugian@usbr.gov); Greenwood, Marin; Monique Briard (monique.briard@icf.com); Laurie Warner Herson
Subject: Sites Project Fishery Resources Discussion Group Meeting 2
When: Monday, July 26, 2021 11:00 AM-12:30 PM (UTC-08:00) Pacific Time (US & Canada).
Where: Microsoft Teams Meeting

Second meeting of the NGO fishery resources discussion group to review modeling and effects analyses.
Agenda to follow

Microsoft Teams meeting

Join on your computer or mobile app
Click here to join the meeting

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+1 213-514-6883,,493006940# United States, Los Angeles

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Fishery Group Discussion #2 – Project Effects Agenda

Affordable Water, Sustainably Managed

Our Core Values – Safety, Trust and Integrity, Respect for Local Communities, Environmental Stewardship, Shared Responsibility and Shared Benefits, Accountability and Transparency, Proactive Innovation, Diversity and Inclusivity
Our Commitment – To live up to these values in everything we do

Meeting Information:

Date:	July 26, 2021	**Location:**	Microsoft Teams Or call in (audio only) (833) 255-2803,,156125785#
Start Time:	11:00 p.m.	**Finish Time:**	12:30 p.m.
Purpose:	Overview and discussion of the Sites Project's aquatic modeling and EIR/S analysis approach		

Meeting Invitees:

André Sanchez	Rebecca Wu	Laurie Warner Herson
Dave Zelinski	Regina Chichizola	Jason Hassrick
Debra Lucero	Ron Stork	Jim Lecky
Doug Obegi	Stephanie Gordon	Marin Greenwood
Greg Reis	Suzanne Manugian	Melissa Dekar
Jerry Boles	Tom Stokely	Mike Hendrick
Jim Brobeck	Ali Forsythe	Natalie Wolder
Joe Morgan	Dan Deeds	Nicole Williams
Rachel Zwillinger	Erin Heydinger	Steve Micko
	John Spranza	Vanessa King

Agenda:

Discussion Topic	Topic Leader	Time Allotted
1. Introductions	John S	5 mins
2. Meeting Norms	John S	5 mins
3. Salmonid Effects	Mike H	30 min
4. Sturgeon Effects	Mike H	20 min
5. Smelt Effects	Mike H	20 mins
6. Schedule	John S	5 mins
7. Action Items Review and Adjourn	John S	5 mins

Draft_0011566

From: Heydinger, Erin [Erin.Heydinger@hdrinc.com]
Sent: 7/25/2021 1:22:16 PM
To: Alicia Forsythe [aforsythe@sitesproject.org]
Subject: FW: Sites: Excess with Restrictions

FYI. I sent this over to Lee because he was on the phone when Ken asked the question and because he then followed up with a couple of emails to me and Jacobs team. Seems there's still a little confusion here, so I will try to get it resolved before sending over to the group.

Erin

Erin Heydinger PE, PMP
D 916.679.8863 M 651.307.9758

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From: Heydinger, Erin
Sent: Sunday, July 25, 2021 1:21 PM
To: Lee Bergfeld <Bergfeld@mbkengineers.com>
Cc: Walter Bourez <Bourez@mbkengineers.com>
Subject: RE: Sites: Excess with Restrictions

Hi Lee,

Thanks for this. I do think the reference to COA was to help with the definition. On the second point, I think they are saying something slightly different – that Sites would *not* divert during excess with restrictions for the most part. The exception would be if the excess condition is not due to Sacramento River flows (so pumping would not take the Delta out of excess). Does that make more sense? I'm trying to wrap my head around it myself and am hoping to send an explanatory paragraph over to CDFW.

Erin

Erin Heydinger PE, PMP
D 916.679.8863 M 651.307.9758

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From: Lee Bergfeld <Bergfeld@mbkengineers.com>
Sent: Wednesday, July 21, 2021 11:54 AM
To: Heydinger, Erin <Erin.Heydinger@hdrinc.com>
Cc: Walter Bourez <Bourez@mbkengineers.com>
Subject: RE: Sites: Excess with Restrictions

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Erin,

I generally follow the explanation, but I think it could be a little clearer if we are talking to Reclamation/DWR or the public. Here are a few areas that are unclear to me.

- I am not sure how the reference to COA helps explain the point, unless we are just using it to support/define excess with restrictions conditions.

- I don't follow the statement, "However, when excess is not due to Sacramento River flows, Sites may divert."

If this explanation is going outside the JPA, then I suggest we keep it simple. Something along the lines of, "Diversion to storage in Sites will occur when the Delta is in an excess condition, including during excess with restrictions conditions. These diversions will not impinge on the operations of the CVP/SWP during these periods."

We are still working on our review of the CalSim II modeling. We will look into how diversions during excess with restrictions are modeled to ensure it is consistent with that simple statement.

I hope that is helpful. Please give me a call if you'd like to discuss.

Lee

Lee G. Bergfeld, P.E.
MBK Engineers
455 University Avenue, Suite 100
Sacramento, CA 95825
Phone: (916) 456-4400
Cell: (916) 832-4104
Fax: (916) 456-0253

From: Heydinger, Erin <Erin.Heydinger@hdrinc.com>
Sent: Wednesday, July 21, 2021 10:47 AM
To: Lee Bergfeld <Bergfeld@mbkengineers.com>
Subject: FW: Sites: Excess with Restrictions

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Hi Lee,

Following up on some emails and meetings you have been involved in, please see below from Steve. Does this explanation make sense to you and do you see any potential red flags or issues?

Thanks!

Erin Heydinger PE, PMP
D 916.679.8863 M 651.307.9758

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From: Micko, Steve/SAC <Steve.Micko@jacobs.com>
Sent: Wednesday, July 21, 2021 10:39 AM
To: Heydinger, Erin <Erin.Heydinger@hdrinc.com>
Cc: Leaf, Rob/SAC <Rob.Leaf@jacobs.com>; Alicia Forsythe <aforsythe@sitesproject.org>
Subject: RE: Sites: Excess with Restrictions

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Hi Erin,

I updated the text, per your comments.

Let me know if you have any questions.

Best,
Steve

Per the 2018 COA Addendum, Article 10(i) is added to the 1986 COA to provide:
Sharing of Applicable Export Capacity When Exports are Constrained. During period when exports are constrained by non-discretionary requirements imposed on the SWP and CVP south Delta exports by any federal or state agency, applicable export capacity shall be shared by the following percentages:

	United States	**State**
Balanced Water Condition	65%	35%
Excess Water Condition	60%	40%

In summary, "Excess with Restrictions" conditions is specified when the system is in excess conditions due to non-discretionary regulations (e.g. D1641). Generally, the CalSim model does not allow Sites to divert during "Excess with Restrictions" conditions. However, when excess is not due to Sacramento River flows, Sites may divert. In the CalSim model, operations of CVP/SWP are prioritized over Sites operations. As such, Sites operations cannot negatively impact CVP/SWP operations, including operations during "Excess with Restrictions" conditions.

Regardless of the modeling, Sites will reduce flows during excess conditions. However, Sites will not operate in a manner that impinges on the ability for SWP/CVP operations.

From: Heydinger, Erin <Erin.Heydinger@hdrinc.com>
Sent: Tuesday, July 20, 2021 3:22 PM
To: Micko, Steve/SAC <Steve.Micko@jacobs.com>; Alicia Forsythe <aforsythe@sitesproject.org>
Cc: Leaf, Rob/SAC <Rob.Leaf@jacobs.com>
Subject: [EXTERNAL] RE: Sites: Excess with Restrictions

Okay great, thanks!

Erin Heydinger PE, PMP
D 916.679.8863 M 651.307.9758

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From: Micko, Steve/SAC <Steve.Micko@jacobs.com>
Sent: Tuesday, July 20, 2021 1:14 PM
To: Heydinger, Erin <Erin.Heydinger@hdrinc.com>; Alicia Forsythe <aforsythe@sitesproject.org>
Cc: Leaf, Rob/SAC <Rob.Leaf@jacobs.com>
Subject: RE: Sites: Excess with Restrictions

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Thinking has remained the same.
Your reading of Rob's email is consistent with my thoughts.

My description missed the following point:

- In CalSim II, generally Sites diversions are not restricted from taking "Excess with restrictions" when the resulting excess is not due to Sacramento River.

Apologies for any potential confusion,
Steve

From: Heydinger, Erin <Erin.Heydinger@hdrinc.com>
Sent: Tuesday, July 20, 2021 1:01 PM
To: Micko, Steve/SAC <Steve.Micko@jacobs.com>; Alicia Forsythe <aforsythe@sitesproject.org>
Cc: Leaf, Rob/SAC <Rob.Leaf@jacobs.com>
Subject: [EXTERNAL] RE: Sites: Excess with Restrictions

Thanks Steve.

Is this the same/in-line with the email Rob sent back in April? See attached. I read Rob's email as Sites could divert in excess with restrictions as long as it doesn't impact the CVP or SWP's ability to divert. So am I correct that your email below is slightly different than the attached or that your thinking on this has changed over the past few months? Just want to be sure I am understanding.

Thanks,
Erin

Erin Heydinger PE, PMP
D 916.679.8863 M 651.307.9758

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From: Micko, Steve/SAC <Steve.Micko@jacobs.com>
Sent: Tuesday, July 20, 2021 11:20 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>; Heydinger, Erin <Erin.Heydinger@hdrinc.com>
Cc: Leaf, Rob/SAC <Rob.Leaf@jacobs.com>
Subject: Sites: Excess with Restrictions

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Hi Ali and Erin,

Please see paragraph regarding excess with restrictions below.

Let me know if you have any questions.

Best,
Steve

Per the 2018 COA Addendum, Article 10(i) is added to the 1986 COA to provide:
Sharing of Applicable Export Capacity When Exports are Constrained. During period when exports are constrained by non-discretionary requirements imposed on the SWP and CVP south Delta exports by any federal or state agency, applicable export capacity shall be shared by the following percentages:

	United States	**State**
Balanced Water Condition	65%	35%
Excess Water Condition	60%	40%

In summary, "Excess with Restrictions" conditions is specified when the system is in excess conditions due to non-discretionary regulations (e.g. D1641). In the CalSim modeling, Sites does not divert during "Excess with Restrictions"

conditions. Operations of CVP/SWP are prioritized over Sites operations. As such, Sites operations cannot negatively impact CVP/SWP operations, including operations during "Excess with Restrictions" conditions.

Regardless of the modeling, Sites will reduce flows during excess conditions. However, Sites will not operate in a manner that impinges on the ability for SWP/CVP operations.

Steve Micko, PE | Jacobs | Project Manager
O:916.286.0358 | M:408.834.6614 | Steve.Micko@jacobs.com
2485 Natomas Park Drive Suite 600 | Sacramento, CA 95833

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From: Laurie Warner Herson [laurie.warner.herson@phenixenv.com]
Sent: 7/26/2021 6:30:35 AM
To: Alicia Forsythe [aforsythe@sitesproject.org]
Subject: Re: Sites - CEQA Responsible Agency Review of "Group 3" Chapters - Due June 21

Thanks Ali, that is reassuring. I've reviewed water rights EIRs for Kern River projects so I'm familiar with requirements but good to know that the coordination meetings have been taking place.

Re: Colusa County comments - I may have forwarded them to you because we were prepping for the meeting the following day.

On Jul 26, 2021, at 6:02 AM, Alicia Forsythe <aforsythe@sitesproject.org> wrote:

Thanks Laurie. I just wanted to make sure we didn't forget these as it was odd that they were forwarded onto me and I was on the original email.

Nothing has come out of the local meetings that changes the document. Its been more about walking them through what is in the document.

And thanks for the thoughts on the water right process. I feel good that we have what we need in the document. I've been through 2 water right processes where I've lead the EIR, so I think I have a good sense of what the Board needs. We have also have monthly meetings with the Board staff and they have reviewed sections of the document and haven't raised any fatal flaw concerns. So I feel like we are on a good track there. But always appreciate the thoughts and thinking ahead on these issues.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>
Sent: Saturday, July 24, 2021 7:44 PM
To: Alicia Forsythe <aforsythe@sitesproject.org>
Subject: Re: Sites - CEQA Responsible Agency Review of "Group 3" Chapters - Due June 21

Hi Ali,

I reviewed these when they came in and we discussed the non-biological comments with the county when we met. The comments were minimal and consistent with comments received by others.

I do think you and John should take another run through the bio chapters to make sure Colusa Co, GCID and TCCA concerns have been addressed. There were a lot of meetings in the last week(s) when chapters were already being finalized and I wasn't always able to attend.

At some point you and John will need to bring Nicole and I up to speed on your SWRCB and water rights discussions. I worry that we may not have info to support water rights approval in the REEI/SDEIS.

Laurie

Sent from my iPhone

On Jul 24, 2021, at 6:46 PM, Alicia Forsythe <aforsythe@sitesproject.org> wrote:

Laurie – I was just cleaning out my inbox and came across this one. I was going to file this, but realized that you forwarded these to me.

Did these get to Nicole so that she could get these into the document?

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>
Sent: Thursday, July 8, 2021 12:06 PM
To: Alicia Forsythe <aforsythe@sitesproject.org>
Subject: FW: Sites - CEQA Responsible Agency Review of "Group 3" Chapters - Due June 21

From: Michael Azevedo <mjazevedo@countyofcolusa.com>
Sent: Thursday, July 1, 2021 10:25 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>
Cc: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Linda Fisher (linda.fisher@hdrinc.com) <linda.fisher@hdrinc.com>
Subject: RE: Sites - CEQA Responsible Agency Review of "Group 3" Chapters - Due June 21

Please see attached..... We appreciate the opportunity prior to release of the document and are always available to offer additional detail ☺

Michael J Azevedo

Colusa County Public Works
530.458.0466

From: Michael Azevedo
Sent: Tuesday, June 29, 2021 4:54 PM
To: 'Alicia Forsythe' <aforsythe@sitesproject.org>
Cc: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Linda Fisher (linda.fisher@hdrinc.com) <linda.fisher@hdrinc.com>
Subject: RE: Sites - CEQA Responsible Agency Review of "Group 3" Chapters - Due June 21

Really appreciate the patience from you and staff Ali. We are in the process of codifying Sup Evans comments in track changes. We hope to get them to you by the end of the week.

Michael J Azevedo
Colusa County Public Works
530.458.0466

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Tuesday, June 29, 2021 4:25 PM
To: Michael Azevedo <mjazevedo@countyofcolusa.com>
Cc: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Linda Fisher (linda.fisher@hdrinc.com) <linda.fisher@hdrinc.com>
Subject: RE: Sites - CEQA Responsible Agency Review of "Group 3" Chapters - Due June 21

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Hi Mike – I just wanted to check in with you on the status of the County's review of EIR/EIS chapters. I realize we have a meeting scheduled on July 9, but any comments you have ready now would be very much appreciated and hugely helpful in keeping us on schedule. You can post your comments on One Drive or send directly to me.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Alicia Forsythe
Sent: Thursday, June 3, 2021 6:34 AM
To: Michael Azevedo (mjazevedo@countyofcolusa.com) <mjazevedo@countyofcolusa.com>; Thad Bettner (tbettner@gcid.net) <tbettner@gcid.net>; Jeff Sutton (jsutton@tccanal.com) <jsutton@tccanal.com>; hdawley@gcid.net
Cc: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Linda Fisher (linda.fisher@hdrinc.com) <linda.fisher@hdrinc.com>
Subject: RE: Sites - CEQA Responsible Agency Review of "Group 3" Chapters - Due June 21

Resending as I realized that I forgot to update the subject line. These Group 3 chapters are due on June 21.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Alicia Forsythe
Sent: Thursday, June 3, 2021 5:35 AM
To: Michael Azevedo (mjazevedo@countyofcolusa.com) <mjazevedo@countyofcolusa.com>; Thad Bettner (tbettner@gcid.net) <tbettner@gcid.net>; Jeff Sutton (jsutton@tccanal.com) <jsutton@tccanal.com>; hdawley@gcid.net
Cc: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Linda Fisher (linda.fisher@hdrinc.com) <linda.fisher@hdrinc.com>
Subject: RE: Sites - CEQA Responsible Agency Review of "Group 2" Chapters - Due June 14

CEQA Responsible Agencies – We now have Group 3 Chapters ready on OneDrive for your review. Below are the Group 3 Chapters along with the Responsible Agencies identified for review. Please let me know if you would like to review additional chapters not currently identified for your organization. Comments are due June 21.

- Executive Summary – TCCA, GCID, Colusa County
- App 2D (BMPs and AMMs)
- Ch 5, Surface Water Resources - TCCA, GCID, Colusa County
- Ch 11, Aquatic Resources – TCCA, GCID
- Ch 15, Agriculture and Forestry Resources – Colusa County
- Ch 20, Air Quality – Colusa County
- Ch 28, Climate Change
- Ch 30, Environmental Justice and Socioeconomics
- Ch 31, Cumulative Impacts
- Ch 33, Consultation and Coordination

A note on Chapter 11. The ICF technical fisheries team has been working literally day and night on this chapter. To allow the technical team as much time as possible, we elected to NOT have this chapter edited prior to your review. Therefore, there is still a good amount of work to do on this chapter and ICF will be doing that in parallel with our collective review (this is the first time we have also seen this chapter). Please focus your comments on issues of substance and not editorial, repetition, or length issues. We will clean these up in parallel, but wanted to allow you all as much time as possible to review and as much time as possible for ICF to be able to make substance changes in response to your comments.

Thanks all for your continued review and efforts on the Sites Project. We very much appreciate it! Linda can help if you have any challenges connecting to OneDrive.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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including the Electronic Communications Privacy Act. If you are not the intended recipient, please contact the sender and destroy all copies of the communication.

From: Alicia Forsythe
Sent: Wednesday, May 26, 2021 11:06 AM
To: Michael Azevedo (mjazevedo@countyofcolusa.com) <mjazevedo@countyofcolusa.com>; Thad Bettner (tbettner@gcid.net) <tbettner@gcid.net>; Jeff Sutton (jsutton@tccanal.com) <jsutton@tccanal.com>; hdawley@gcid.net
Cc: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Linda Fisher (linda.fisher@hdrinc.com) <linda.fisher@hdrinc.com>
Subject: Sites - CEQA Responsible Agency Review of "Group 2" Chapters - Due June 14

CEQA Responsible Agencies – We now have Group 2 Chapters ready for your review. Below are the Group 2 Chapters along with the Responsible Agencies identified for review. Please let me know if you would like to review additional chapters not currently identified for your organization. Note, that I have TCCA and GCID reviewing Surface Water Quality only. Happy to send you other chapters if you'd like.

Comments on Group 2 are due June 14.

6 – Surface Water Quality – TCCA, GCID and Colusa County
11 – Aquatic Resources, Some Appendices ONLY
12 – Geology and Soils – Colusa County
13 – Minerals – Colusa County
14 – Land Use – Colusa County
16 – Recreation Resources – Colusa County
19 – Noise – Colusa County
21 – Greenhouse Gas Emissions
23 – Tribal Cultural Resources
24 – Visual Resources
25 – Population and Housing – Colusa County
26 – Public Services and Utilities – Colusa County
27 – Public Health and Environmental Hazards – Colusa County
29 – Indian Trust Assets
32 – Other Required Analyses
33 – Consultation and Coordination
34 – Document Distribution

Let me know if you would like any additional chapters not currently identified for your agency review. Linda can help if you have any challenges connecting to OneDrive.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Alicia Forsythe
Sent: Thursday, May 13, 2021 10:32 AM
To: Michael Azevedo (mjazevedo@countyofcolusa.com) <mjazevedo@countyofcolusa.com>; Thad Bettner

(tbettner@gcid.net) <tbettner@gcid.net>; Jeff Sutton (jsutton@tccanal.com) <jsutton@tccanal.com>
Cc: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Linda Fisher (linda.fisher@hdrinc.com) <linda.fisher@hdrinc.com>
Subject: Sites - CEQA Cooperating Agency Review of "Group 1" Chapters

Hi all – We are diligently working on the Admin Draft document. Chapters are coming to the Authority in "Groups" from ICF as they are completed.

We currently have our "Group 1" Chapters from ICF and would like to get your review of these chapters. Linda has sent you a link to a SharePoint site where you can access the chapters.

Please make changes in track changes and comments using the comment function in MS Word. It is best and easiest for us if you consolidate all of your comments from your agency into one file. To do this, it would likely be best if you download the files and share in your organization and then re-post them with comments. However, we can also give others access to SharePoint if you would like to work in SharePoint or would like someone to have access to help manage the process. If you have any issues accessing the files or need access for anyone else, please contact Linda.

Comments on these chapters are due on Thursday, May 27.

We will have "Group 2" chapters available on May 25, and Group 3 chapters available on June 1.

Please note that the Authority staff HAVE NOT reviewed all of these chapters. So please do not panic if you see something concerning. Note it in your comments or give me a call/send me an email if you are really concerned. We are moving quickly to get this document out and we are reviewing these at the same time as you. There may very well be things in there chapters that we don't agree with and will revise, we just haven't had time to catch those before you are also seeing these chapters.

Thanks and please feel free to let me know if you have any questions or concerns. We appreciate your input!

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Alicia Forsythe [aforsythe@sitesproject.org]
Sent: 7/27/2021 8:53:56 AM
To: Jerry Brown [jbrown@sitesproject.org]
CC: Marcia Kivett [MKivett@sitesproject.org]
Subject: RE: Prop 1 Projects | DWR CEQA Analysis

Yep. Will do right now.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Jerry Brown <jbrown@sitesproject.org>
Sent: Tuesday, July 27, 2021 8:14 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>
Cc: Marcia Kivett <MKivett@sitesproject.org>
Subject: Re: Prop 1 Projects | DWR CEQA Analysis

I did not yet send Dave the file you emailed me on Friday. Can you do?

Also I didn't read or remove the highlighted comment you included. So still needs to be addressed before sending.

Sent from my iPhone

On Jul 27, 2021, at 7:59 AM, Okita, David@DWR <David.Okita@water.ca.gov> wrote:

Are you going to send me a mark up with suggested changes?

David Okita, PE
Department of Water Resources
530 902-7588

From: Jerry Brown <jbrown@sitesproject.org>
Sent: Thursday, July 22, 2021 10:56 AM
To: Okita, David@DWR <David.Okita@water.ca.gov>
Cc: Alicia Forsythe <aforsythe@sitesproject.org>
Subject: Re: Prop 1 Projects | DWR CEQA Analysis

Dave – thanks for the opportunity to review this document. Please accept the following as comments from the Sites project. We can discuss any questions on our call later this morning on a similar subject:

- It appears the Sites Project has been characterized based on the April 2020 Value Planning Report, which is fair considering that's the most recent readily available information for the project engineering. We'd like to work with you and your consultant to update based on the RDEIR/SDEIS analysis which is forthcoming for public release next month.

- We are concerned that the analysis appears to use the ranges and averages out of the Value Planning Effort. However, the DWR analysis needs to consider that Sites operations are highly variable from year to year. Using these ranges and averages may not adequately characterize future Sites operations. We'd like to work with you and your consultant to ensure the full range of project operations and potential effects are reviewed consistent with Sites RDEIR/SDEIS analysis.

Jerry

From: "Okita, David@DWR" <David.Okita@water.ca.gov>
Date: Tuesday, June 22, 2021 at 7:08 AM
To: Sylvie Lee <slee@ieua.org>, "Cowin, Mark" <mcowin@geiconsultants.com>, Paul Weghorst <Weghorst@irwd.com>, Marguerite Patil <mpatil@ccwater.com>, Fiona Sanchez <sanchezf@irwd.com>, Jerry Brown <jbrown@sitesproject.org>, Terrie Mitchell <mitchellt@sacsewer.com>, "chakes@valleywater.org" <chakes@valleywater.org>, "mbeuhler@wswaterbank.com" <mbeuhler@wswaterbank.com>, "Young, Amy@DWR" <Amy.Young@water.ca.gov>, "Yun, Joseph@DWR" <Joseph.Yun@water.ca.gov>, Dave Richardson <drichardson@woodardcurran.com>, "Uttley, Paige@Wildlife" <Paige.Uttley@wildlife.ca.gov>, "Davis-Fadtke, Kristal@Wildlife" <Kristal.Davis-Fadtke@wildlife.ca.gov>
Cc: "Melton, Holly" <hmelton@kcwa.com>, Craig Wallace <cwallace@kcwa.com>, Steve Arakawa <sarakawa@mwdh2o.com>, "Chilmakuri, Chandra@SWC" <cchilmakuri@swc.org>, Brandon Goshi <bgoshi@mwg2o.com>, Dwayne Chisam <dchisam@avek.org>, "Laura J. Hidas (laura.hidas@acwd.com)" <laura.hidas@acwd.com>, Amparo Flores <aflores@zone7water.com>, Cindy Kao <ckao@valleywater.org>, "'Rob Kunde (rkunde@wrmwsd.com)'" <rkunde@wrmwsd.com>
Subject: Re: Prop 1 Projects | DWR CEQA Analysis

Attached is the draft cumulative flow analysis for the WSIP projects. Please review carefully that we have described your project correctly. To save time, we did not have AECOM contact each project directly, we relied on past information and this is the opportunity to make updates and corrections. The challenge is that the projects have evolved since the application stage so we may not have captured the most recent numbers. Our thought was that we would show you the format of the analysis, then seek conformation of the numbers.

Although this is being done through the contract for the CEQA Initial Study for the pulse flow projects and DWR actions on the Emergency Supply WSIP public benefits, it may or may not be used in the Initial Study and subsequent CEQA documents pending further review. We will also make a decision on whether additional flow modeling or analysis is necessary. This is not a cumulative analysis of all impacts of the WSIP projects, just flow impacts to the Feather River, the Sacramento River and the Delta.

Please provide comments by July 23. DWR will be participating in a workshop with the State Water Contractors at the end of July and will be sharing general results of this analysis.

David Okita, PE

Department of Water Resources
530 902-7588

From: Alicia Forsythe [aforsythe@sitesproject.org]
Sent: 7/27/2021 8:59:09 AM
To: Okita, David@DWR [David.Okita@water.ca.gov]
CC: Jerry Brown [jbrown@sitesproject.org]; Marcia Kivett [MKivett@sitesproject.org]
Subject: RE: Prop 1 Projects | DWR CEQA Analysis
Attachments: WSIP Cumulative Memo 2021-06-21_Sites Comments.docx

David – Jerry asked me to send this to you as he is out of the office this week. Please let Jerry or I know if you have any questions or concerns.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Jerry Brown <jbrown@sitesproject.org>
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Jerry

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Date: Tuesday, June 22, 2021 at 7:08 AM
To: Sylvie Lee <slee@ieua.org>, "Cowin, Mark" <mcowin@geiconsultants.com>, Paul Weghorst <Weghorst@irwd.com>, Marguerite Patil <mpatil@ccwater.com>, Fiona Sanchez <sanchezf@irwd.com>, Jerry Brown <jbrown@sitesproject.org>, Terrie Mitchell <mitchellt@sacsewer.com>, "chakes@valleywater.org" <chakes@valleywater.org>, "mbeuhler@wswaterbank.com" <mbeuhler@wswaterbank.com>, "Young, Amy@DWR" <Amy.Young@water.ca.gov>, "Yun, Joseph@DWR" <Joseph.Yun@water.ca.gov>, Dave Richardson <drichardson@woodardcurran.com>, "Uttley, Paige@Wildlife" <Paige.Uttley@wildlife.ca.gov>,

"Davis-Fadtke, Kristal@Wildlife" <Kristal.Davis-Fadtke@wildlife.ca.gov>
Cc: "Melton, Holly" <hmelton@kcwa.com>, Craig Wallace <cwallace@kcwa.com>, Steve Arakawa <sarakawa@mwdh2o.com>, "Chilmakuri, Chandra@SWC" <cchilmakuri@swc.org>, Brandon Goshi <bgoshi@mwg2o.com>, Dwayne Chisam <dchisam@avek.org>, "Laura J. Hidas (laura.hidas@acwd.com)" <laura.hidas@acwd.com>, Amparo Flores <aflores@zone7water.com>, Cindy Kao <ckao@valleywater.org>, "'Rob Kunde (rkunde@wrmwsd.com)'" <rkunde@wrmwsd.com>
Subject: Re: Prop 1 Projects | DWR CEQA Analysis

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Please provide comments by July 23. DWR will be participating in a workshop with the State Water Contractors at the end of July and will be sharing general results of this analysis.

David Okita, PE
Department of Water Resources
530 902-7588

AECOM
300 Lakeside Drive
Suite 400
Oakland
CA 94612
aecom.com

Project name:
WSIP Cumulative Flow Analysis

To: David Okita
California Department of Water Resources
Division of Environmental Services

From:
Elizabeth Nielsen, AECOM

CC: Leah McNearney, DWR

Date:
June 21, 2021

DRAFT

Memo

Subject: WSIP Cumulative Analysis for Hydrology

1. Introduction

Commented [HE1]: I'm unsure how the model that was sent out was used in this analysis, or whether it was used. However, we suggest using the Reclamation 2020 Benchmark Baseline developed by Reclamation and CDFW. The baseline provided was reviewed and does not have the latest/updated operations, primarily for the CVP.

The Water Storage Investment Program (WSIP) is a $2.7 billion program for investments in water storage projects in California, approved by the voters through Proposition 1 in 2014 and administered by the California Water Commission (CWC). Seven projects have been selected for funding consideration to date based on a rigorous review process. In addition to water storage benefits, the CWC selected projects that demonstrate an ability to provide public benefits related to flood control, ecosystem improvement, water quality improvement, recreation, and emergency response. The selected WSIP projects range from expanding existing reservoirs to boosting groundwater storage to building modern surface storage facilities. Once operational, the seven WSIP projects listed below would increase California's water storage capacity by 4.3 million acre-feet over the current (2021) baseline.

- Chino Basin Conjunctive Use Environmental Water Storage/Exchange Program (CBEWP)
- Kern Fan Groundwater Storage Project (Kern Fan Project)
- Willow Springs Water Bank Conjunctive Use Project (WSWB Project)
- Los Vaqueros Reservoir Expansion Project (LVE Project)
- Sites Reservoir Project (Sites Project)
- Pacheco Reservoir Expansion Project (Pacheco Project)
- Harvest Water Program

The projects are described in Section 2.2. Implementation of the WSIP projects could cumulatively affect water project operations, including Sacramento River flows, south-of-Delta exports, and water availability in the system at various times in the year. This memorandum considers the cumulative change to hydrologic conditions in the Feather River, Sacramento River, and Sacramento-San Joaquin Delta (Delta) with operation of the seven WSIP projects and is based on a review of publicly available information. It documents anticipated changes in flows due to these projects including amounts,

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annual seasonality, and year types. It also considers the magnitude of these changes compared to baseline flows and hydrologic conditions (i.e., excess or balanced conditions) to provide context for the anticipated changes.

The purpose of this cumulative flow analysis is to document what can be expected to the flows in the Feather River, Sacramento River, and Delta areas if all seven WSIP projects were in operation. There has been no similar analysis as the projects have evolved, and some are still evolving since the CWC application stage. This analysis puts the cumulative flow changes associated with the projects in the context of overall flows in the waterways on a seasonal and water-year-type basis. This analysis may be helpful identifying flow aspects that need further detailed evaluation. This memorandum does not address the environmental impacts of the WSIP projects pursuant to the California Environmental Quality Act (CEQA). Each WSIP project has either completed or is in the process of completing its own environmental documentation for CEQA compliance, including a discussion of cumulative effects as required by CEQA.

2. Background

This section provides background information on the SWP and the seven WSIP projects considered in the cumulative effect analysis for hydrology. The location of the WSIP projects are shown on Figure 1.

2.1 State Water Project Deliveries

California Department of Water Resources (DWR) holds contracts with 29 public agencies for water supplies from the State Water Project (SWP). The SWP's main facilities are Lake Oroville, the Harvey O. Banks Pumping Plant (Banks Pumping Plant), and San Luis Reservoir. These facilities are operated and connected by a network of canals, aqueducts, and other facilities to deliver on average approximately 2.6 million acre-feet of contracted water supplies annually (Reclamation, 2019).

The U.S. Department of the Interior Bureau of Reclamation (Reclamation) also exports water from the Delta at its Central Valley Project (CVP) pumping plant in the south Delta, Jones Pumping Plant, and either delivers it directly or stores water in San Luis Reservoir for later delivery to its contractors south of the Delta. DWR and Reclamation coordinate their operations on a daily basis. Some factors that DWR and Reclamation consider when coordinating their joint operations include required in-Delta flows, Delta outflow, water quality, fish species protections, schedules for the joint use facilities (e.g., San Luis Reservoir), pumping/wheeling arrangements,[1] and any facility capacity limitations.

During balanced water conditions, DWR and Reclamation share a responsibility to meet in-basin uses and maintain a daily water accounting of the SWP and CVP obligations in conformance with the Coordinated Operation Agreement between the two projects. Balanced water conditions are defined as periods when it is mutually agreed that releases from upstream reservoirs plus unregulated flows approximately equal the water supply needed to meet Sacramento Valley in-basin uses plus exports. Excess water conditions are periods when it is mutually agreed that releases from upstream reservoirs plus unregulated flows exceed Sacramento Valley in-basin uses plus exports. The duration of balanced water conditions varies from year to year. While balanced conditions may never occur in some very wet years, some very dry years may have long continuous periods of balanced conditions, and still other years may have several periods of balanced conditions interspersed with excess water conditions.

[1] Wheeling involves the act of "using the water supply facilities by someone other than the owner or operator to transport water" for a fee.

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DRAFT

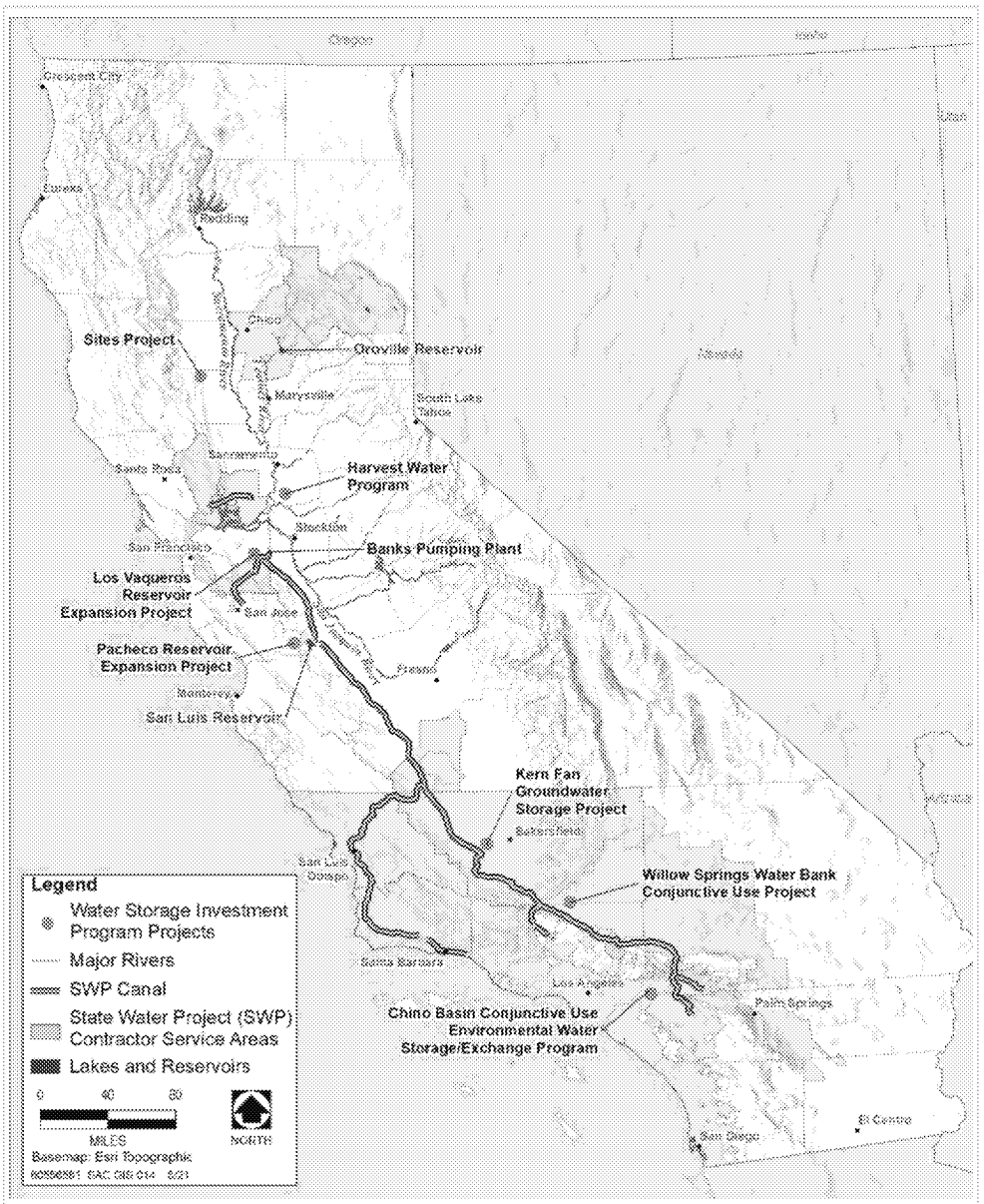

Figure 1. WSIP Project Locations

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During excess water conditions, sufficient water is available to meet all beneficial uses, and the CVP and SWP are not required to supplement the supply with water from reservoir storage. In excess water conditions, the "excess water" can be made available to CVP and SWP contractors. As specified in the Coordinated Operation Agreement, DWR and Reclamation have the responsibility during excess water conditions to store and export as much water as possible within physical, legal, and contractual limits (Reclamation, 2019).

Note that Article 21 water is one of several types of SWP water supply made available to the SWP partner contractors under the long-term water supply contracts between DWR and the SWP contractors. Unlike Table A water, which is the maximum allocated annual supply made available for scheduled delivery throughout the year, Article 21 water is made available only when certain conditions exist (which occur predominately in wet years). As with all SWP water, Article 21 water is supplied under existing SWP water rights permits, and is pumped from the Delta under the same environmental, regulatory, and operational constraints that apply to all SWP supplies.

Article 21 water is typically offered to contractors on a short-term (daily or weekly) basis when all of the following conditions exist: (1) the SWP share of San Luis Reservoir is physically full, or projected to be physically full within approximately 1 week at permitted pumping rates; (2) other SWP reservoirs south of the Delta are at their storage targets or the conveyance capacity to fill these reservoirs is maximized; (3) the Delta is in excess condition; (4) current Table A demand is being fully met; and (5) Banks Pumping Plant has export capacity beyond that which is needed to meet current Table A and other SWP operational demands. The increment of available unused Banks Pumping Plant capacity is offered as the Article 21 delivery capacity (Reclamation, 2008).

2.2 WSIP Projects

The seven WSIP projects are described below. As indicated above, these WSIP projects range from expanding existing reservoirs to boosting groundwater storage to building modern surface storage facilities. The location of each of the projects and how operations can affect hydrologic conditions are also described below. For the five WSIP projects that involve the SWP, DWR has not yet approved operations of the projects, so the operations described below are subject to change.

Chino Basin Conjunctive Use Environmental Water Storage/Exchange Program

The CBEWP would expand existing capacity or construct a new advanced water treatment facility and distribution facilities in western San Bernardino County that would store up to 15 thousand acre-feet (TAF) per year of treated wastewater in the existing Chino Basin Water Bank. The Chino Basin Water Bank would be operated to dedicate blocks of water, assumed to be in increments of 50 TAF,[2] for ecosystem benefits. In dry and below normal years, this stored water would be used to provide pulse flows to enhance spring instream flows in the Feather River below Lake Oroville. A water exchange process is required to replace water used for pulse flows with stored groundwater. This would require agreements with one or more of the SWP partner contractors (e.g., Metropolitan Water District of Southern California), to forego SWP Table A deliveries equivalent to the pulse flow amount in exchange for receiving an equivalent amount of Table A water from the Chino Basin Water Bank. It would also require agreements with DWR and California Department of Fish and Wildlife (CDFW) to re-operate Lake Oroville and manage the water to provide the pulse flows. South-of-Delta exports needed to meet SWP partner contractor Table A demands would be reduced by the 50 TAF in a pulse flow year; however, there would not be an overall reduction in exports because the SWP would utilize any available diversion capacity if it has the ability to do so. After the initial 25 years of operation and

[2] Pulse flows are modeled as 50 TAF, occurring on average every 4.4 years.

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fulfilling ecosystem public benefits, pulse flows would cease, and the CBEWP would be operated for local water supply benefits.

Kern Fan Groundwater Storage Project

The Kern Fan Project would develop a regional water bank in Kern County, west of Bakersfield, that would store up to 100 TAF per year of Article 21 water. The Kern Fan Project would be operated so that in wet years, the project would divert Article 21 supplies for groundwater storage. The project would use 75 percent of the stored water for water supply purposes. The remaining 25 percent of the stored water would be dedicated for ecosystem benefits in blocks of water assumed to be 18 TAF[3] each. In dry and below normal years, this stored water would be used to provide pulse flows to enhance spring instream flows in the Feather River below Lake Oroville. A water exchange process is required to replace water used for the pulse flow with the stored groundwater. This would require agreements with one or more of the SWP partner contractors (e.g., Kern County Water Agency and Dudley Ridge Water District), to forego SWP Table A deliveries equivalent to the pulse flow amount in exchange for receiving an equivalent amount of Table A water from the Kern Fan Project. It would also require agreements with DWR and CDFW to re-operate Lake Oroville and manage the water to provide the pulse flows. South-of-Delta exports needed to meet SWP partner contractor Table A demands would be reduced by 18 TAF in a pulse flow year; however, there would not be an overall reduction in exports because the SWP would utilize any available diversion capacity if it has the ability to do so. After the initial 50 years of operation and fulfilling ecosystem public benefits, pulse flows would cease, and the Kern Fan Project would be operated for local water supply benefits.

Willow Springs Water Bank Conjunctive Use Project

The WSWB Project would enhance the existing Willow Springs Water Bank located in southern Kern County, northwest of the City of Lancaster, in the adjudicated Antelope Valley Groundwater Basin. The WSWB Project is a conjunctive use and reservoir reoperation project that would leverage 500 TAF of existing groundwater storage facilities at the Willow Springs Water Bank and operate conjunctively with the SWP. The WSWB Project is reformulating its operations plan, so a revised operation scenario is not available at this time and the source of pre-delivery water has not yet been specified. For the purposes of this analysis, the volumes of pulse flows modeled in the original application to the CWC is used.

Pre-delivery of allocated Table A water would be delivered to the WSWB Project and be stored for future use by SWP partner contractors. Article 21 water would not be utilized. By depositing the Table A water in the groundwater bank, the pre-delivery process reduces the amount of water stored in SWP facilities, thus increasing available storage capacity in SWP facilities to be filled at a later date. "New" water is created when the pre-delivery allows SWP facilities to capture water that would otherwise not be pumped at Banks Pumping Plant due to storage capacity limitations. This would effectively increase pumping at Banks Pumping Plant equivalent to the pulse flow amount over time. Pumping would occur when the SWP has water rights to divert and storage space or direct delivery capability in excess or balanced conditions.

The WSWB Project would be operated to dedicate blocks of water assumed to be 28 TAF[4] for ecosystem benefits. In dry and below normal years, this stored water would be used to provide pulse flows to enhance spring instream flows in the Feather River below Lake Oroville. A water exchange process is required to replace water used for the pulse flow with the stored groundwater. This would require agreements with one or more of the SWP partner contractors to forego SWP Table A deliveries equivalent to the pulse flow amount in exchange for receiving an equivalent amount of Table A water

[3] Pulse flows are modeled as 18 TAF, occurring on average every 4.7 years.
[4] Pulse flows are modeled as 28 TAF, occurring on average every 3.3 years.

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from the WSWB Project. It would also require agreements with DWR and CDFW to re-operate Lake Oroville and manage the water to provide the pulse flows. South-of-Delta exports needed to meet SWP partner contractor demands would be reduced by the 28 TAF in a pulse flow year; however, there would not be an overall reduction in exports because the SWP would utilize any available diversion capacity if it has the ability to do so. After the initial 50 years of operation and fulfilling ecosystem public benefits, pulse flows would cease, and the WSWB Project would be operated for local water supply benefits.

Los Vaqueros Reservoir Expansion Project

The LVE Project is a surface storage project located in southeastern Contra Costa County that would enlarge the capacity of an existing off-stream reservoir by 115 TAF (from 160 TAF to 275 TAF). This project would also upgrade existing conveyance facilities, construct new conveyance, and re-operate existing facilities to develop water supplies for ecosystem public benefits and increased water supply reliability for project participants. The LVE Project would divert water from the Delta at Contra Costa Water District's Rock Slough, Old River, and Middle River intakes, divert water from the Sacramento River at the Freeport Intake, and deliver water to project participants within Contra Costa Water District's service area, the Bay Area, the Delta, neighboring regions, and south-of-Delta wildlife refuges.

Diversions for the LVE Project can be used for direct deliveries and for diversion to storage. Diversions would occur during excess and balanced conditions. During balanced conditions, total diversions at the Delta and Freeport intakes would increase by a long-term average of 58 TAF per year.[5] These diversions represent a reduction of about 1 percent or less of Delta outflow during dry and critical dry years[6], when balanced conditions are expected. During excess conditions total diversions at the Delta and Freeport intakes would increase by a long-term average of 69 TAF per year.[7] These diversions represent less than 0.5 percent reduction of Delta outflow during wet and above normal years,[8] when excess conditions are expected.

The maximum diversion rates at the intakes are 250 cubic feet per second (cfs) for the Old River Intake, 250 cfs for the Middle River Intake, 350 cfs for the Rock Slough Intake, and 155 cfs (of project supplies) at the Freeport Intake. Diversion to storage requires the use of the Transfer Pump Station, which has a pumping capacity of 200 cfs, so the rate of diversion to storage is limited to 200 cfs. Direct diversions up to 300 cfs can be made to the California Aqueduct through the proposed Bethany Transfer Pipeline.

Sites Reservoir Project

The Sites Project is a new surface storage reservoir located in Colusa County in the Sacramento Valley west of the town of Maxwell. The Sites Project would be an off-stream 1.5 million acre-feet (MAF) reservoir that would impound Funks Creek and Stone Coral Creek and provide storage capacity for Sacramento River diversions. This project also includes conveyance through the use of the existing Tehama Colusa (T-C) Canal and Glenn-Colusa Irrigation District (GCID) Canal diversion and conveyance facilities. Operation of the proposed reservoir would be in cooperation with the operations of existing CVP and SWP system facilities. The Sites Project would release water to the GCID Canal and the T-C Canal. Sites water in the T-C Canal would flow to a newly constructed

[5] This value represents the difference between Alternative 1B with transfers and the no project/no action alternative under existing conditions (see Reclamation 2020, revised Table 4.2-6 in Appendix B-1, Updated Modeling Analysis).
[6] Long-term Delta outflow is estimated at 16.3 million acre-feet per year (MAF/yr), with an average of 28.7 MAF/yr in wet years, 17.7 MAF/yr in above normal years, 9.5 MAF/yr in below normal years, 9.5 MAF/yr in dry years, and 5.3 MAF/yr in critical dry years (Reclamation 2019, Appendix D – Modeling, Table 41-1, Current Operations).
[7] This value represents the difference between Alternative 1B and the no project/no action alternative under existing conditions (see Reclamation, 2020; Revised Table 4.2-8 in Appendix B-1, Updated Modeling Analysis).
[8] See footnote 6.

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pipeline which would discharge into the Colusa Basin Drain and ultimately back into the Sacramento River. Using these facilities, Sites water would be delivered to ~~tributaries to the Sacramento River to deliver water to project~~ participants within neighboring areas, to SWP and CVP contractors, to the Yolo Bypass, and to north and south-of-Delta wildlife refuges. The project also includes exchanges with upstream reservoirs to preserve cold water releases for fishery benefits.

Annual diversions would range from 60 to 390 TAF per year, depending on hydrologic conditions, availability of Sacramento River water, and diversion and conveyance facility capacities.[9] Diversions would occur only under excess conditions. The maximum Sacramento River diversion rate is 3,900 cfs. Sacramento River flows would be diverted at the Red Bluff Pumping Plant (up to 2,100 cfs) and the Hamilton City Pump Station (up to 1,800 cfs). Modeling for the environmental documents show that the Sites Project diversions during wet weather years from January through March when excess conditions are expected shows a 3 to 4 percent reduction in flows in the Sacramento River downstream of Red Bluff Diversion Dam.

Excess condition diversions could occur anytime between September 1 to June 15, the timeframe that the Sacramento River is not fully appropriated; however, most diversions would occur from December through March during wet and above normal water years. Diversions are expected to decrease Sacramento River inflow to the Delta by about 2 percent or less, assuming that a 390 TAF annual diversion occurs in a wet or above normal year.[10]

Average annual releases from the Sites Project ~~to Sacramento River tributaries~~ would range from 116 to 382 TAF per year, depending on water year type, with a long-term average annual release of 243 TAF per year (over all year types).[11] Water would be conveyed via existing waterways and a new pipeline to the Sacramento River. Maximum ~~reservoir~~ releases to the Sacramento River would be 1,000 cfs. Releases would occur during balanced conditions.

Approximately 60 TAF per year, on an average annual basis, could be exchanged with upstream reservoirs to preserve cold water in the upstream reservoirs for fishery benefits, with most of the exchanges occurring in dry and critical water year types.[12] These releases from the Sites Project for exchanges would typically occur in spring and early summer with the exchanges listed below occurring in late summer and fall. Exchanges would occur during balanced conditions.

- Shasta Lake exchanges would result in the Sites Project releasing water in the spring in exchange for Shasta Lake releases in August and September.
- Lake Oroville exchanges would result in the Sites Project releasing water in June and July in exchange for Lake Oroville releases in August through November.
- Folsom Lake exchanges would result in the Sites Project releasing water in the spring and early summer in exchange for Folsom Lake releases in late summer and fall.
- Real-time exchanges with local participants would result in deliveries from the Sites Project to CVP partner contractors in lieu of direct diversions from the Sacramento River.

Pacheco Reservoir Expansion Project

The Pacheco Project is a surface storage project located in southeast Santa Clara County that would enlarge an existing reservoir by 136 TAF (from 6 TAF to 142 TAF). The project would construct new

Commented [AF2]: It appears these numbers were from value planning, which was really a post processing of CALSIM results. Not actually running the model. We are happy to work with DWR or AECOM to update all of these numbers with our modeling for the RDEIR/SDEIS.

This also appear to be using ranges and averages from the model. Sites operations are highly variable form year to year. With this in mind, are the ranges and averages really appropriate to use? We suspect the extreme years may not make a huge difference, for example the year that we would divert 1.2 MAF+ may not make a huge difference as one would expect very high Delta outflow that year and no impacts to DWR's operations (Table A, Article 21). So maybe the big years are less concerning, but it just seems like it would be valuable to take some time to consider this.

We think using the ranges is okay since it says "depending on hydrologic conditions." However, we do think we should make sure we have the numbers updated for our results from the EIR/EIS.

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Commented [AF3]: I believe this number is based on Shasta exchanges and what we thought possible using post processing in the Value Planning effort. I think we would have some better numbers to share today. And numbers for Oroville. We'd be happy to work with DWR and/or AECOM on more recent numbers for these exchanges.

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[9] Sites Project Authority, 2021; Section 2.5.2.
[10] Long-term Sacramento River flow at Freeport is estimated at 15.5 MAF/yr, with an average of 22.4 MAF/yr in wet years, 18.2 MAF/yr in above normal years, 12.2 MAF/yr in below normal years, 11.5 MAF/yr in dry years, and 7.6 MAF/yr in critical dry years (Reclamation 2019, Appendix D – Modeling, Table 29-1, Current Operations).
[11] Sites Project Authority, 2020; Table 5-2 and 5-3 and Table B1-1.
[12] Sites Project Authority, 2020; Section 5.2.

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conveyance infrastructure to segments of the CVP San Felipe Division in Merced and Santa Clara counties, and deliver water supply to up to eight south-of-Delta wildlife refuges in Merced County. The primary water sources to fill the expanded reservoir would be natural inflows from the North and East Forks of Pacheco Creek. Supplemental flows to the expanded reservoir would arrive from Valley Water's and the San Benito County Water District's share of contracted CVP pumped water from San Luis Reservoir.

San Luis Reservoir storage is expected to decrease due to transfers to Pacheco Reservoir. This would increase the amount of available San Luis Reservoir storage that can be used by the SWP and CVP. South-of-Delta diversions could increase in both excess and balanced conditions. Modeling is currently not available to quantify these increases.

Harvest Water Program

The Harvest Water Program is a conjunctive use project in Sacramento County, formerly named the South Sacramento County Agriculture and Habitat Lands Recycled Water, Groundwater Storage, and Conjunctive Use Program (South County Ag Program). The project would store and manage groundwater (via in lieu use) while improving stream flow, enhancing groundwater dependent riparian habitats, sustaining prime agricultural lands, and improving regional water supply reliability. Sources of water would be up to 50 TAF per year of tertiary-treated recycled water produced by Sacramento Regional County Sanitation District (Regional San) and diverted from discharge into the Sacramento River. Water produced from the Harvest Water Program would be used to irrigate up to 16,000 acres of agriculture and habitat lands in Sacramento County near the lower Cosumnes River and Stone Lakes National Wildlife Refuge.

Up to 50 TAF per year of recycled water would be applied to lands in lieu of groundwater pumped from the Sacramento Valley groundwater basin. An estimated 32.5 TAF per year of recycled water would be used for irrigation during the growing season (April through October). In a dry year, irrigation demands could be as much as 37.5 TAF per year. An additional 8.75 to 17.5 TAF per year of recycled water would be applied to lands during the non-growing season for wildlife enhancement. In the future, an additional 5.5 TAF per year could also be used for wildlife enhancement purposes. Return flows from irrigation are assumed to be minimal. Reuse of up to 50 TAF per year of recycled water would result in a reduction of up to 50 TAF per year in wastewater outflow to the Sacramento River. The flow rate of the reduction will vary over the year based on annual pattern of wastewater generation. This represents a relatively small change in Sacramento River flow – less than a 0.7 percent decrease in Sacramento River inflow to the Delta.[11]

3. Analysis

This section describes the individual effects of each of the WSIP projects, considers how they interact, and addresses cumulative changes to Delta, Feather River, and Sacramento River flows, and other parts of the SWP system. Note that the volume of the pulse flows will be determined through a process included in an agreement between DWR and CDFW. The pulse flow volumes described below are derived from the modeling assumptions made by project proponents. For the purpose of this analysis they provide a reasonable upper limit of expected volumes of flow.

[11] See Footnote 10.

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3.1 Summary of Hydrology Changes for Individual WSIP Projects

Chino Basin Conjunctive Use Environmental Water Storage/Exchange Program

The following changes to hydrology are expected to occur with implementation of the CBEWP:

- Project Additional Groundwater Storage: 15 TAF/year
- Feather River pulse flows: 50 TAF in selected years
- Reduced Delta Exports: 50 TAF in pulse flow years, but likely offset by additional SWP diversions
- Delta Outflow: 50 TAF in pulse flow years

Kern Fan Groundwater Storage Project

The following changes to hydrology are expected to occur with implementation of the Kern Fan Project:

- Delta Exports, Excess Conditions: up to 100 TAF/year when Article 21 is available under excess conditions
- Project Additional Groundwater Storage: up to 25 TAF/year when Article 21 is available under excess conditions
- Feather River pulse flows: 18 TAF in selected years
- Reduced Delta Exports: 18 TAF in pulse flow years, but likely offset by additional SWP diversions
- Delta Outflow: 18 TAF in pulse flow years

Willow Springs Water Bank Conjunctive Use Project

The following changes to hydrology are assumed to occur with implementation of the WSWB:

- Project Additional Groundwater Storage: Information unavailable at this time
- Feather River pulse flows: 28 TAF in selected years
- Reduced Delta Exports: 28 TAF in pulse flow years, but likely offset by additional SWP diversions. Additional information on pre-delivery process may identify Delta export increases.
- Delta Outflow: 28 TAF in pulse flow years

Los Vaqueros Reservoir Expansion Project

The following changes to hydrology are assumed to occur with implementation of the LVE Project:

- Additional Surface Water Storage: 115 TAF
- Sacramento River Diversions: up to 115 cfs (12 TAF/year[14]) at Freeport
- Delta Exports, Balanced Conditions: up to 200 to 300 cfs[15] (58 TAF/year)
- Delta Exports, Excess Conditions: up to 200 to 300 cfs (69 TAF/year)

[14] Freeport diversions would occur during balanced and excess conditions; however, information on Freeport diversions during balanced vs. excess conditions is not available. Therefore, the quantification of Delta exports for balanced and excess conditions include exports for the Old River, Middle River, Rock Slough, and Freeport intakes (i.e., total Delta exports are overestimated by 12 TAF per year).
[15] This range represents either diversion to storage (up to 200 cfs) or direct diversions made to the California Aqueduct (up to 300 cfs).

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Sites Reservoir Project

The following changes to hydrology are assumed to occur with implementation of the Sites Project:

- Additional Surface Water Storage: 1,500 TAF
- Sacramento River Diversions: up to 3,900 cfs (average of 60 to 390 TAF/year, depending on year type) during excess conditions
- Sacramento River Releases: up to 1,000 cfs (116 to 382 TAF/year) during balanced conditions. This includes possible releases for exchanges with upstream reservoirs. The reservoir facilities may release up to 3,100 cfs, but the pipeline to the river has a capacity of 1,000 cfs. Additional releases are delivered to local Sites participants or north-of-Delta refuges.
- Delta Exports, Balanced Conditions: up to 243 TAF/year from deliveries pumped at Banks and Jones Pumping Plants

Commented [AF4]: Same comment as previous. We'd be happy to work with DWR and AECOM to update these numbers.

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Commented [AF5]: We don't think this is an up to number. Also, this is an average over all years where Sites will only be releasing water for Delta Exports in certain years (in years when there is capacity to move water across the Delta). So the long-term average is lower than what would happen in the years that we would actually move water across.

Also some of these numbers are wonky because they're release numbers from the reservoir, but a lot of that would not reach the River and would instead be used by local participants. We'd have to parse this out a bit if the focus in water moving through the Delta.

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Pacheco Reservoir Expansion Project

The following changes to hydrology are assumed to occur with implementation of the Pacheco Project:

- Additional Surface Water Storage: 136 TAF
- Delta Exports: Unknown. San Luis Reservoir will have increased capacity due to the Pacheco Project that will allow some additional SWP and CVP export from the Delta. These exports could occur in balanced or excess conditions.

Harvest Water Program

The following changes to hydrology are expected to occur with implementation of the Harvest Water Program:

- Sacramento River reductions: up to 50 TAF/year in both balanced and excess conditions
- Project Additional Groundwater Storage: up to 50 TAF/year in lieu use

3.2 Cumulative Flows

This section considers cumulative changes to Feather River, Sacramento River, and Delta flows due to implementation of the seven WSIP projects. Cumulative flow effects are considered for both excess and balanced conditions. In all cases, water pumped from the Delta is subject to all applicable operational requirements. SWP and CVP operations can be further limited by the capacity in south-of-Delta storage facilities, the pumping capacity at the Delta pumping facilities, and operational constraints for fish and wildlife protection and water quality, as well as other environmental and legal restrictions.

Table 1 provides a summary of expected changes from each of the WSIP projects. The following observations on the cumulative flow effects from these projects can be made based on this information. Analyses are made based on location of projects and seasonality (balanced and excess conditions).

Spring Pulse Flows

CBEWP, Kern Fan Project, and WSWB Project (collectively referred to as the pulse flow projects) include an ecosystem benefit that allows for springtime releases from Lake Oroville in dry and below

normal years upon request by CDFW and approval by DWR. The amount of water conveyed in the Feather River, Sacramento River, and Delta would increase by the pulse flow amount, assumed to be 50 TAF, 18 TAF, and 28 TAF, respectively. These amounts are based on modeling for the WSIP applications. CDFW will use an adaptive management framework to make requests to DWR for pulse flow releases from Lake Oroville. The volume and duration of any specific pulse flow is not known at this time and it is likely that pulse flows will differ among years. The pulse flow amount will increase Feather River flows, flow into the Sacramento River, and flow through and out of the Delta. CDFW has submitted an example of a pulse flow based on all three pulse flow projects in operation. The example estimates a maximum pulse flow of 3,000 cfs for 10 days with a ramp down rate of 500 cfs per day.

For the Feather River at the low flow channel, the base flow is estimated to be 1,000 cfs, so a pulse flow of 3,000 cfs increases the flow at this location by 300 percent, but the flow is well within the capacity of the low flow channel. During April to May, spring flows in the Feather River downstream of the Thermalito Afterbay Outlet average about 1,500 cfs in dry years.[15] A spring pulse with an additional 3,000 cfs would increase flows by 200 percent. At the mouth of the Feather River, near its confluence with the Sacramento River, spring flows average about 4,300 cfs in dry years; an additional 3,000 cfs is an increase of 70 percent. In the Sacramento River at Freeport, spring flows average about 14,200 cfs in dry years; an additional 3,000 cfs is an increase of 20 percent. And finally, Delta outflow in the spring of a dry year averages about 14,500 cfs; an additional 3,000 cfs is an increase of 20 percent. The timing of these pulse flows would provide fisheries benefits during migration windows.

Conclusion: Pulse flows have no adverse consequences.

Sacramento River Diversions

The LVE Project (through use of the Freeport diversion) and the Sites Project would increase Sacramento River diversions and the Harvest Water Program would reduce inflow into the Sacramento River.

The Sites Project is by far the largest Sacramento River diversion at 3,900 cfs, which would occur only during excess conditions. The LVE Project Freeport diversion has a capacity of 115 cfs and may divert under excess conditions for the LVE Project. Since the Harvest Water Program reduces Sacramento River inflows by 50 TAF per year on a continuous basis, that amount averages to a reduction of 69 cfs per day. Modeling for the environmental documents show that the Sites Project diversions during wet weather years from January through March, when excess conditions are expected, shows a 3 to 4 percent reduction in flows in the Sacramento River downstream of Red Bluff Diversion Dam. Adding a possible 115 cfs from the LVE Project Freeport diversion and 69 cfs from the Harvest Water Program discharge reduction would change these percentages by no more than 0.6 percent.[17]

The LVE Project Freeport diversion could also divert in balanced conditions such as for diverting SWP Table A supplies into the LVE Project. This type of relatively small diversion would be scheduled and coordinated through the LVE Project coordination agreements with the SWP and CVP to eliminate any adverse consequences and will be diverted in conformance with all permits and regulations. Any Harvest Water Program reductions in balanced conditions is not substantial (less than 0.7 percent).[18]

Commented [AF6]: LVE Project?

From a volume standpoint, the combined effect from these projects are expected to have maximum flow reduction of 452 TAF in a wet or above normal year (390 TAF from the Sites Project, 12 TAF from

Commented [HE7]: This is the long-term average for wet years, not the true max.

[15] Long-term Operations of the CVP and SWP (Reclamation 2019, Appendix D – Modeling, Tables 21-1, 22-1, 29-1, and 41-1).
[17] Flows in the Sacramento River below Red Bluff Diversion Dam in a wet year during January through March average about 28,800 cfs (Reclamation 2019, Appendix D – Modeling, Table 17-1); a reduction of 184 cfs is a decrease of 0.6 percent.
[18] Average annual flow in the Sacramento River at Freeport is 10,400 to 30,900 cfs depending on year type (Reclamation 2019, Appendix D – Modeling, Table 29-1); a reduction of 69 cfs per day would decrease annual flow by no more than 0.7 percent.

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the LVE Project, and 50 TAF from the Harvest Water Program), a 2 to 3 percent volume reduction when predominately excess conditions are expected.[38] Similarly, flows could be reduced by 122 TAF in drier years (60 TAF from the Sites Project, 12 TAF from the LVE Project, and 50 TAF from the Harvest Water Program), a 1 to 2 percent volume reduction when predominately balanced conditions are expected.[39]

Conclusion: Since the largest diversion, the Sites Project, occurs in excess conditions and is a relatively small percentage of expected Sacramento River flows, there are no adverse consequences anticipated. The LVE Project Freeport diversion is expected to be utilized less frequently than the Delta diversion locations and is a relatively small diversion rate.

Sacramento River Releases

The Sites Project would release flows back to the Sacramento River during balanced conditions. A long-term average annual release of 243 TAF per year could increase Sacramento River flows by approximately 1 to 3 percent.[41] The releases from the Sites project are estimated to be a maximum of 1,000 cfs. The releases will be to local waterways eventually leading to the Sacramento River and the Delta. The environmental documents for the Sites Project show no significant impacts from this level of deliveries. The releases would be scheduled and coordinated through the Sites Project coordination agreements with the SWP and CVP to avoid any substantial adverse consequences and will be diverted in conformance with all permits and regulations.

Conclusion: Releases in balanced conditions are coordinated with the SWP and CVP, so no adverse consequences are expected.

Delta Exports in Balanced Conditions

The pulse flow projects do not increase Delta exports in balanced conditions. An exception may be the WSWB Project whose pre-delivery concept may result in opportunities for the SWP to export some additional water in both balanced and excess conditions to fill newly available SWP storage created by the WSWB Project. However, until WSWB provides a description of the pre-delivery concept, an analysis cannot be conducted.

The pulse flow projects reduce demand for Delta pumping for individual SWP partner contractors who receive their Table A deliveries from the groundwater banks instead of the Delta or San Luis Reservoir. However, the reduced diversions create additional capacity in the SWP system that the SWP can use by increasing exports, so there is no net reduction in Delta exports.

The Sites Project releases water from storage during balanced conditions for delivery to project participants and for exchanges with upstream SWP and CVP reservoirs. Most of the deliveries to project participants will be exported at SWP and CVP export facilities. The LVE Project will also divert water from the Delta during balanced conditions. An example would be export of SWP Table A water for SWP South Bay Aqueduct contractors.

The Pacheco Project results in increased available capacity in San Luis Reservoir that would allow some additional SWP and CVP export from the Delta in both balanced and excess conditions. Information on the amount of increased Delta exports is not available.

Commented [AF8]: We just don't know that long-term average annual is the best to use here as flows will be highly variable. What about releases in the dry and critically dry years when you would also expect to see the lowest flows in the system (but when Sites would be releasing the most)? We doubt that this would change the ultimate conclusion, but just feeling like we are masking the variability of Sites with long-term averages.

In addition, not all releases from Sites will be moved across the Delta. Some will be for Sac Valley participants and North of Delta uses.

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Commented [LWH9]: We would want to work on this with DWR and AECOM based on the RDEIR/SDEIS. We need a few more weeks to finish up the document and could parse out and provide a summary based on the current analysis. We don't think there are significant impacts under CEQA of the movement of water across the Delta, but would want to confirm that this statement is alluding to this only versus the Project as a whole.

[38] Sacramento River flow at Freeport is estimated at 22.4 MAF/yr in wet years, 18.2 MAF/yr in above normal years, 12.2 MAF/yr in below normal years, 11.5 MAF/yr in dry years, and 7.6 MAF/yr in critical dry years (Reclamation 2019, Appendix D – Modeling, Table 29-1).
[39] Ibid.
[41] Ibid.

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Combined Delta exports in balanced conditions for the Sites Project and the LVE Project are 1,300 cfs and approximately 300 TAF per year.[22] For this analysis additional Delta exports resulting from the Pacheco Project are not included. Note that these exports would occur under the same environmental, regulatory, and operational constraints that apply to all SWP supplies. These constraints, which are protective of fisheries and water quality beneficial uses, would continue to protect fisheries and water quality even with all of the WSIP projects operating at the same time.

Conclusion: Delta exports in balanced conditions are coordinated with the SWP and CVP, so no adverse consequences are expected.

Delta Exports in Excess Conditions

The Kern Fan Project and the LVE Project would increase Delta exports during excess conditions. The Pacheco Project results in increased available capacity in San Luis Reservoir that will allow some additional SWP and CVP exports from the Delta in both balanced and excess conditions; however, information on the amount of increased Delta exports is not available. The WSWB Project pre-delivery concept may result in opportunities for the SWP to export some additional water to fill SWP storage created by the WSWB Project in both balanced and excess conditions. However, until WSWB provides a description of the pre-delivery concept, an analysis cannot be conducted.

Combined Delta exports in excess conditions for the Kern Fan Project and the LVE Project are approximately 169 TAF per year (up to 100 TAF per year from the Kern Fan Project and 69 TAF per year from the LVE Project). Effects on Delta exports from the Pacheco Project and the WSWB Project are unknown at this time.

Exports during excess conditions would cause a small reduction in Delta outflow. The combined effect of the Kern Fan Project and the LVE Project is expected to reduce Delta outflow by 169 TAF per year in wet and above normal years, a 0.6 to 1 percent volume reduction when predominately excess conditions are expected.[23] Combined flows (in cfs) are expected to be a relatively small percentage of Delta outflow during excess conditions.

Note that these exports would occur under the same environmental, regulatory, and operational constraints that apply to all SWP supplies. These constraints, which are protective of fisheries and water quality beneficial uses, would continue to protect fisheries and water quality even with all of the WSIP projects operating at the same time.

Conclusion: Delta diversions during excess conditions are a relatively small percentage of Delta outflow, so no adverse consequences are expected.

4. Conclusions

The three WSIP pulse flow projects provide an environmental benefit in the Feather River and downstream without any identified adverse consequences.

The Sites Project, the LVE Project, and the Kern Fan Project would divert water during excess conditions. The WSWB Project and the Pacheco Project may result in increased exports during excess conditions, but not enough information is available at this time to quantify. For the Sites Project, the LVE Project, and the Kern Fan Project, diversions during excess conditions from the Sacramento River and the Delta would represent a small fraction of the flows during excess

Commented [AF10]: This is outside of the Sites Project, but we share that we have been a little surprised by some of the concerns raised by CDFW with regard to impacts of the Prop 1 benefits water. We just suggest talking to them early as concerns on the IMPACTS of the Prop 1 water have come up that we did not anticipate originally.

[22] Assumed 243 TAF from the Sites Project and 58 TAF from the LVE Project.
[23] See footnote 6.

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conditions. Regulatory requirements and coordination agreements will further protect against any adverse consequences.

The LVE Project would also divert during balanced conditions. Deliveries from the Sites Project would occur in balanced conditions and increase diversion at SWP and CVP Delta pumping plants. Both projects will have operational agreements with the SWP and CVP to coordinate deliveries including consideration of export capacity for the deliveries. This will ensure that the diversions will be made within the existing regulatory framework and would be subject to all applicable permit conditions. The WSWB Project and the Pacheco Project may result in diversions during balanced conditions, but not enough information is available at this time to quantify the changes.

In summary, the movement of water from the seven WSIP project are relatively small compared to overall seasonal flows in the watershed. The regulatory conditions for water projects in the Bay Delta watershed are well known and any project must be designed to function without substantial adverse consequences. The WSIP projects, except the Harvest Water Program, will be integrated by agreement with the SWP and CVP to ensure operations are coordinated and will not violate any regulations or permit terms. From a flow standpoint, the seven WSIP projects can operate successfully assuming operations agreements and permitting are completed.

5. Recommendation

As more information becomes available for the WSWB Project and the Pacheco Project, this memorandum should be updated. Because of the overall minimal changes to the flow regime in the Delta and Sacramento River additional detailed modeling of the cumulative flow effects may not be warranted.

6. References

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Kern Fan Project Documents

Irvine Ranch Water District/Rosedale-Rio Bravo Water Storage District, 2017. Kern Fan Groundwater Storage Project WSIP Application; Proposal Summary, Executive Summary, and Project Description. August 15, 2017.

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Southern California Water Bank Authority, 2017. Willow Springs Water Bank Conjunctive Use Project WSIP Application; Executive Summary, Project Description, Project Conditions, and Preliminary Operations Plan. August 2017.

Rosamond Community Services District, 2018. Addendum to the Environmental Impact Report, Willow Springs Water Bank Project (Formerly Antelope Valley Water Bank Project). July 2018.

LVE Project Documents

Association of California Water Agencies, 2017. Storage Integration Study. Prepared by MBK Engineers. June 2017.

Contra Costa Water District, 2017. Los Vaqueros Reservoir Expansion Project WSIP Application; Executive Summary, Project Description, Project Conditions, and Preliminary Operations Plan, August 2017.

U.S. Department of the Interior Bureau of Reclamation and Contra Costa Water District, 2017. Draft Supplement to the Final EIS/EIR, Los Vaqueros Reservoir Expansion Project, including Volume 2 Appendices. June 2017.

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U.S. Department of the Interior Bureau of Reclamation, 2020. Final Feasibility Report and Appendix B – Modeling, Los Vaqueros Reservoir Expansion Investigation. February 2020.

Draft_0011597

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Pacheco Project Documents

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Santa Clara Valley Water District, 2017. Project Conditions Chapter 3 SCVWD Watersheds and System (WEAP Model), Pacheco Reservoir Expansion Project WSIP Application. August 2017.

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Regional San, 2017. Integrated Groundwater and Surface Water Modeling Results Technical Memorandum, South Sacramento County Agriculture and Habitat Lands Recycled Water, Groundwater Storage, and Conjunctive Use Program. Prepared by RMC. August 7, 2017.

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Table 1. Resulting Changes from the WSIP Projects

Location or Type	CBEWP	Kern Fan Project	WSWB Project	LVE Project	Sites Project	Pacheco Project	Harvest Water Program
Additional Surface Reservoir Storage	--	--	--	115 TAF	1,500 TAF	136 TAF	--
Additional Groundwater Storage	15 TAF/yr	up to 100 TAF/yr (up to 25 TAF/yr for project use)	unknown	--	--	--	up to 50 TAF/yr in lieu use
Feather River Pulse Flows	50 TAF assumed	18 TAF assumed	28 TAF assumed	--	--	--	--
Sacramento River Diversions or Reductions	--	--	--	up to 115 cfs (12 TAF/yr[1]) in diversions @ Freeport	up to 3,900 cfs (60-390 TAF/yr) diversions in excess conditions	--	up to 50 TAF/yr in reduced wastewater discharge
Sacramento River Releases	--	--	--	--	up to 1,000 cfs (243 TAF/yr avg., 116-382 TAF/yr) in balanced conditions	--	--
Delta Exports, Balanced Conditions	export unchanged	export unchanged	unknown	200-300 cfs (58 TAF)	up to 1,000 cfs (243 TAF/yr) from deliveries	some additional due to increased capacity available in San Luis Reservoir	--
Delta Exports, Excess Conditions	--	up to 100 TAF/yr	none	200-300 cfs (69 TAF/yr)	--	some additional due to increased capacity in San Luis Reservoir	--

[1] Freeport diversions would occur during balanced and excess conditions; however, information on Freeport diversions during balanced vs. excess conditions is not available. Therefore, the quantification of Delta exports for balanced and excess conditions include exports for the Old River, Middle River, Rock Slough, and Freeport intakes (i.e., total Delta exports are overestimated by 12 TAF per year).

From: Darin Reintjes [dreintjes@pcwa.net]
Sent: 7/27/2021 9:32:04 AM
To: Alicia Forsythe [aforsythe@sitesproject.org]; Heydinger, Erin [erin.heydinger@hdrinc.com]; Jessica Law [JLaw@waterforum.org]
Subject: RE: SITES Reservoir Project - Reservoir Committee Agenda Items
Attachments: image001.png; image002.jpg; image003.jpg; image004.jpg; image005.jpg; image006.jpg; image007.jpg

Hi Ali,
Thanks for following up.
Much appreciated,
Darin

Sent from my Verizon, Samsung Galaxy smartphone

-------- Original message --------
From: Alicia Forsythe <aforsythe@sitesproject.org>
Date: 7/27/21 6:19 AM (GMT-08:00)
To: Darin Reintjes <dreintjes@pcwa.net>, "Heydinger, Erin" <erin.heydinger@hdrinc.com>, Jessica Law <JLaw@waterforum.org>
Subject: RE: SITES Reservoir Project - Reservoir Committee Agenda Items

Hi Darin and Jessica – The Sites Team hasn't yet had a chance to sit down with Jessica. Things have just been a little crazy in working on the EIR/EIS.

Jessica, I will get a doodle poll out to you later today to get a discussion scheduled.

Also, the Board authorized release of the Revised Draft EIR/Supplemental Draft EIS in advance. We went to them a month early to authorize the Executive Director to release to avoid a last minute rush. We are actually putting the final touches on it now and expect to release late August/early September. So its not quite on the street yet. But close. ☺

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org<mailto:aforsythe@sitesproject.org> | www.SitesProject.org<https://linkprotect.cudasvc.com/url?a=http%3a%2f%2fwww.sitesproject.org%2f&c=E,1,I2su_LLGPemLe51bu9z1z7l31snsJQ0zcVD7TYGhW28-MI-8ea_VFjnbKPJNaReyOSkLZql1rTl3svRQYUSZpbnf2KEpUNCSNBIe6-DrHcTTvMs,&typo=1>

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From: Darin Reintjes <dreintjes@pcwa.net>
Sent: Wednesday, July 21, 2021 10:37 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>
Cc: Jessica Law <JLaw@waterforum.org>
Subject: FW: SITES Reservoir Project - Reservoir Committee Agenda Items

Hi Ali,
I missed the Reservoir Committee meeting last week, but it looks like you may have released the Draft EIR/Supplemental Draft EIS for public review. Following your presentation of the modeling results for the American River we discussed reviewing the results with the Sacramento Water Forum. I believe that you and Jessica may have chatted, but I don't think that a review was ever scheduled. I still would like to provide an overview of the results to Jessica if possible. Can we schedule a time for this?
Regards,

Darin Reintjes, PE | PCWA
Director of Resource Management
(530) 823-4891 (o)
(530) 906-8162 (c)
dreintjes@pcwa.net<mailto:dreintjes@pcwa.net>

From: Joseph, Trevor <TJoseph@roseville.ca.us<mailto:TJoseph@roseville.ca.us>>
Sent: Thursday, July 15, 2021 12:22 PM
To: Larsen. Terri Lyn <larsent@saccounty.net<mailto:larsent@saccounty.net>>; Schmitz. Kerry
<schmitzk@SacCounty.NET<mailto:schmitzk@SacCounty.NET>>; Andy Fecko
<afecko@pcwa.net<mailto:afecko@pcwa.net>>; Tony Firenzi <tfirenzi@pcwa.net<mailto:tfirenzi@pcwa.net>>;
WBusath@cityofsacramento.org<mailto:WBusath@cityofsacramento.org>;
asanger@cityofsacramento.org<mailto:asanger@cityofsacramento.org>; Bigley, Sean
<SBigley@roseville.ca.us<mailto:SBigley@roseville.ca.us>>; Plecker, Richard
<RPlecker@roseville.ca.us<mailto:RPlecker@roseville.ca.us>>; Houdesheldt, Bruce
<BHoudesheldt@roseville.ca.us<mailto:BHoudesheldt@roseville.ca.us>>;
jsharris@cityofsacramento.org<mailto:jsharris@cityofsacramento.org>; Tony Firenzi
<tfirenzi@pcwa.net<mailto:tfirenzi@pcwa.net>>; Andy Fecko <afecko@pcwa.net<mailto:afecko@pcwa.net>>;
Graham Allen <glallen@surewest.net<mailto:glallen@surewest.net>>; Stephanie Kauss
<SKauss@cityofsacramento.org<mailto:SKauss@cityofsacramento.org>>;
RAvitia@cityofsacramento.org<mailto:RAvitia@cityofsacramento.org>; Vibeke Figueroa
<vfigueroa@pcwa.net<mailto:vfigueroa@pcwa.net>>; Peterson. Michael
<petersonmi@SacCounty.NET<mailto:petersonmi@SacCounty.NET>>
Cc: Walsh, Pamela <PWalsh@roseville.ca.us<mailto:PWalsh@roseville.ca.us>>; Brett Ewart
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<bbarker@pcwa.net<mailto:bbarker@pcwa.net>>; Grinstead. Michael
<GrinsteadM@saccounty.net<mailto:GrinsteadM@saccounty.net>>; Huot. Mike
<huotm@saccounty.net<mailto:huotm@saccounty.net>>; Darin Reintjes
<dreintjes@pcwa.net<mailto:dreintjes@pcwa.net>>
Subject: SITES Reservoir Project - Reservoir Committee Agenda Items

Hello all -

There is a reservoir committee meeting this afternoon, which often serves as a precursory and indicator of future Board Authority Meeting agenda items. The Board Authority meeting will be held next Wednesday.

There are a few action items this afternoon

Item 2.1 (page 50) - this first action item today is to seek authorization to release the Revised Draft EIR/Supplemental Draft EIS (RDEIR/SDEIS). This will be a major milestone for this project. The document would be available for public review approximately August 26. From a technical perspective I believe the technical American River Watershed committee staff did not see anything in the analysis that suggested a significant concern to our watershed. It was noted that there might be some perceived impact of increased lower American temperatures but this could be an artifact of logic within the model that prioritized storage versus streamflow in certain cases. We suggested the SITES staff confirm this with the Water Forum staff.

Item 2.2 (page 54) - this action item is to approve a budget policy. Apparently no prior policy was developed and it is suggested that a policy be approved consistent with governing Board expectations.

Item 2.3 - Resume in person meetings starting in September.

Regards,

Trevor Joseph, P.G., C.Hg.
Hydrogeologist
Environmental Utilities
c: (916) 517-2578

Corporation Yard | 2005 Hilltop Circle | Roseville, CA | 95747
[Roseville_logo_RGB_2016-
01]<https://linkprotect.cudasvc.com/url?a=http%3a%2f%2fwww.roseville.ca.us%2feu%2fdefault.asp&c=E,1,DXmZn
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m.com/cityofroseville/>[cid:image006.jpg@01D782AF.4E987160]<https://linkprotect.cudasvc.com/url?a=http%3a
%2f%2fnextdoor.com%2f&c=E,1,AIuckW9XZf4pnMuFJq4XxUKH7NcetGEMPG9haPZhtsFxgR0LGLopbUpGmizwnHjThV73vsIi3uy6u
KBb5a4NE2EE3Qvefj9WNqYuHTcyLZvqDYdtLVzM&typo=1>[cid:image007.jpg@01D782AF.4E987160]<https://www.youtube.c
om/user/CityofRosevilleCa>

From: Alicia Forsythe [aforsythe@sitesproject.org]
Sent: 7/27/2021 11:58:08 AM
To: Okita, David@DWR [David.Okita@water.ca.gov]
CC: Jerry Brown [jbrown@sitesproject.org]; Marcia Kivett [MKivett@sitesproject.org]; Heydinger, Erin [erin.heydinger@hdrinc.com]
Subject: RE: Prop 1 Projects | DWR CEQA Analysis

David – I am thinking that the best thing would be to schedule a call with yourself and maybe the AECOM team along with a few Sites folks. We can get you revised numbers quickly. It's just understanding what numbers the team would like.

How quickly are you looking to wrap this up? Erin, our operations modeling lead, and I are on vacation next week (the drawback of having a small, focused team is when we schedule vacations the same week). It looks like we are available on the following dates/times:

Friday, July 30 – noon to 1 pm or 2 to 3 pm
Tuesday, August 10 – 11 am to noon or 2 to 3 pm
Wednesday, August 11 – 10:30 am to noon
Thursday, August 12 – 10:30 am to 1 PM or 3:30 pm to 5 pm

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Okita, David@DWR <David.Okita@water.ca.gov>
Sent: Tuesday, July 27, 2021 9:15 AM
To: Alicia Forsythe <aforsythe@sitesproject.org>
Cc: Jerry Brown <jbrown@sitesproject.org>; Marcia Kivett <MKivett@sitesproject.org>
Subject: Re: Prop 1 Projects | DWR CEQA Analysis

So what is the best way to get to specific comments. I agree that we want to use the RDEIR/EIS numbers here and we can be more specific about different year types to more accurately show variability.

David Okita, PE
Department of Water Resources
530 902-7588

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Tuesday, July 27, 2021 8:59 AM
To: Okita, David@DWR <David.Okita@water.ca.gov>
Cc: Jerry Brown <jbrown@sitesproject.org>; Marcia Kivett <MKivett@sitesproject.org>
Subject: RE: Prop 1 Projects | DWR CEQA Analysis

David – Jerry asked me to send this to you as he is out of the office this week. Please let Jerry or I know if you have any questions or concerns.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Jerry Brown <jbrown@sitesproject.org>
Sent: Thursday, July 22, 2021 10:56 AM
To: Okita, David@DWR <David.Okita@water.ca.gov>
Cc: Alicia Forsythe <aforsythe@sitesproject.org>
Subject: Re: Prop 1 Projects | DWR CEQA Analysis

Dave – thanks for the opportunity to review this document. Please accept the following as comments from the Sites project. We can discuss any questions on our call later this morning on a similar subject:

- It appears the Sites Project has been characterized based on the April 2020 Value Planning Report, which is fair considering that's the most recent readily available information for the project engineering. We'd like to work with you and your consultant to update based on the RDEIR/SDEIS analysis which is forthcoming for public release next month.

- We are concerned that the analysis appears to use the ranges and averages out of the Value Planning Effort. However, the DWR analysis needs to consider that Sites operations are highly variable from year to year. Using these ranges and averages may not adequately characterize future Sites operations. We'd like to work with you and your consultant to ensure the full range of project operations and potential effects are reviewed consistent with Sites RDEIR/SDEIS analysis.

Jerry

From: "Okita, David@DWR" <David.Okita@water.ca.gov>
Date: Tuesday, June 22, 2021 at 7:08 AM
To: Sylvie Lee <slee@ieua.org>, "Cowin, Mark" <mcowin@geiconsultants.com>, Paul Weghorst <Weghorst@irwd.com>, Marguerite Patil <mpatil@ccwater.com>, Fiona Sanchez <sanchezf@irwd.com>, Jerry Brown <jbrown@sitesproject.org>, Terrie Mitchell <mitchellt@sacsewer.com>, "chakes@valleywater.org" <chakes@valleywater.org>, "mbeuhler@wswaterbank.com" <mbeuhler@wswaterbank.com>, "Young,

Amy@DWR" <Amy.Young@water.ca.gov>, "Yun, Joseph@DWR" <Joseph.Yun@water.ca.gov>, Dave Richardson <drichardson@woodardcurran.com>, "Uttley, Paige@Wildlife" <Paige.Uttley@wildlife.ca.gov>, "Davis-Fadtke, Kristal@Wildlife" <Kristal.Davis-Fadtke@wildlife.ca.gov>
Cc: "Melton, Holly" <hmelton@kcwa.com>, Craig Wallace <cwallace@kcwa.com>, Steve Arakawa <sarakawa@mwdh2o.com>, "Chilmakuri, Chandra@SWC" <cchilmakuri@swc.org>, Brandon Goshi <bgoshi@mwg2o.com>, Dwayne Chisam <dchisam@avek.org>, "Laura J. Hidas (laura.hidas@acwd.com)" <laura.hidas@acwd.com>, Amparo Flores <aflores@zone7water.com>, Cindy Kao <ckao@valleywater.org>, "'Rob Kunde (rkunde@wrmwsd.com)'" <rkunde@wrmwsd.com>
Subject: Re: Prop 1 Projects | DWR CEQA Analysis

Attached is the draft cumulative flow analysis for the WSIP projects. Please review carefully that we have described your project correctly. To save time, we did not have AECOM contact each project directly, we relied on past information and this is the opportunity to make updates and corrections. The challenge is that the projects have evolved since the application stage so we may not have captured the most recent numbers. Our thought was that we would show you the format of the analysis, then seek conformation of the numbers.

Although this is being done through the contract for the CEQA Initial Study for the pulse flow projects and DWR actions on the Emergency Supply WSIP public benefits, it may or may not be used in the Initial Study and subsequent CEQA documents pending further review. We will also make a decision on whether additional flow modeling or analysis is necessary. This is not a cumulative analysis of all impacts of the WSIP projects, just flow impacts to the Feather River, the Sacramento River and the Delta.

Please provide comments by July 23. DWR will be participating in a workshop with the State Water Contractors at the end of July and will be sharing general results of this analysis.

David Okita, PE
Department of Water Resources
530 902-7588

From: Jessica Law [JLaw@waterforum.org]
Sent: 7/27/2021 1:08:34 PM
To: dreintjes [dreintjes@pcwa.net]
CC: Alicia Forsythe [aforsythe@sitesproject.org]; Heydinger, Erin [erin.heydinger@hdrinc.com]; Ana Ayala [AAyala@waterforum.org]; Erica Bishop [ebishop@waterforum.org]
Subject: Re: SITES Reservoir Project - Reservoir Committee Agenda Items

Hi Ali, Excellent - thanks for the update. I'll keep an eye out for the doodle poll.

Ana, cc'd here, can also help get us scheduled.

Best, Jessica

> On Jul 27, 2021, at 9:32 AM, Darin Reintjes <dreintjes@pcwa.net> wrote:
>
> Hi Ali,
> Thanks for following up.
> Much appreciated,
> Darin
>
>
>
> Sent from my Verizon, Samsung Galaxy smartphone
>
>
>
> -------- Original message --------
> From: Alicia Forsythe <aforsythe@sitesproject.org>
> Date: 7/27/21 6:19 AM (GMT-08:00)
> To: Darin Reintjes <dreintjes@pcwa.net>, "Heydinger, Erin" <erin.heydinger@hdrinc.com>, Jessica Law <JLaw@waterforum.org>
> Subject: RE: SITES Reservoir Project - Reservoir Committee Agenda Items
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> Hi Darin and Jessica – The Sites Team hasn't yet had a chance to sit down with Jessica. Things have just been a little crazy in working on the EIR/EIS.
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> Jessica, I will get a doodle poll out to you later today to get a discussion scheduled.
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>
> Ali
>
> ----------
> Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org<mailto:aforsythe@sitesproject.org> | www.SitesProject.org<https://linkprotect.cudasvc.com/url?a=http%3a%2f%2fwww.sitesproject.org%2f&c=E,1,I2su_LLGPemLe51bu9z1z7l31snsJQOzcVD7TYGhW28-MI-8ea_VFjnbKPJNaReyOSkLZql1rTl3svRQYUSZpbnf2KEpUNCSNBIe6-DrHcTTvMs,&typo=1>
>
> CONFIDENTIALITY NOTICE: This communication with its contents may contain confidential and/or legally privileged information. It is solely for the use of the intended recipient(s). Unauthorized interception, review, use or disclosure is prohibited and may violate applicable laws including the Electronic Communications Privacy Act. If you are not the intended recipient, please contact the sender and destroy all copies of the communication.
>
> From: Darin Reintjes <dreintjes@pcwa.net>
> Sent: Wednesday, July 21, 2021 10:37 AM
> To: Alicia Forsythe <aforsythe@sitesproject.org>
> Cc: Jessica Law <JLaw@waterforum.org>
> Subject: FW: SITES Reservoir Project - Reservoir Committee Agenda Items
>
> Hi Ali,
> I missed the Reservoir Committee meeting last week, but it looks like you may have released the Draft EIR/Supplemental Draft EIS for public review. Following your presentation of the modeling results for the American River we discussed reviewing the results with the Sacramento Water Forum. I believe that you and

Jessica may have chatted, but I don't think that a review was ever scheduled. I still would like to provide an overview of the results to Jessica if possible. Can we schedule a time for this?
> Regards,
>
> Darin Reintjes, PE | PCWA
> Director of Resource Management
> (530) 823-4891 (o)
> (530) 906-8162 (c)
> dreintjes@pcwa.net<mailto:dreintjes@pcwa.net>
>
>
>
> From: Joseph, Trevor <TJoseph@roseville.ca.us<mailto:TJoseph@roseville.ca.us>>
> Sent: Thursday, July 15, 2021 12:22 PM
> To: Larsen. Terri Lyn <larsent@saccounty.net<mailto:larsent@saccounty.net>>; Schmitz. Kerry <schmitzk@SacCounty.NET<mailto:schmitzk@SacCounty.NET>>; Andy Fecko <afecko@pcwa.net<mailto:afecko@pcwa.net>>; Tony Firenzi <tfirenzi@pcwa.net<mailto:tfirenzi@pcwa.net>>; WBusath@cityofsacramento.org<mailto:WBusath@cityofsacramento.org>; asanger@cityofsacramento.org<mailto:asanger@cityofsacramento.org>; Bigley, Sean <SBigley@roseville.ca.us<mailto:SBigley@roseville.ca.us>>; Plecker, Richard <RPlecker@roseville.ca.us<mailto:RPlecker@roseville.ca.us>>; Houdesheldt, Bruce <BHoudesheldt@roseville.ca.us<mailto:BHoudesheldt@roseville.ca.us>>; jsharris@cityofsacramento.org<mailto:jsharris@cityofsacramento.org>; Tony Firenzi <tfirenzi@pcwa.net<mailto:tfirenzi@pcwa.net>>; Andy Fecko <afecko@pcwa.net<mailto:afecko@pcwa.net>>; Graham Allen <glallen@surewest.net<mailto:glallen@surewest.net>>; Stephanie Kauss <SKauss@cityofsacramento.org<mailto:SKauss@cityofsacramento.org>>; RAvitia@cityofsacramento.org<mailto:RAvitia@cityofsacramento.org>; Vibeke Figueroa <vfigueroa@pcwa.net<mailto:vfigueroa@pcwa.net>>; Peterson. Michael <petersonmi@SacCounty.NET<mailto:petersonmi@SacCounty.NET>>
> Cc: Walsh, Pamela <PWalsh@roseville.ca.us<mailto:PWalsh@roseville.ca.us>>; Brett Ewart (BEwart@cityofsacramento.org<mailto:BEwart@cityofsacramento.org>) <BEwart@cityofsacramento.org<mailto:BEwart@cityofsacramento.org>>; Benjamin Barker <bbarker@pcwa.net<mailto:bbarker@pcwa.net>>; Grinstead. Michael <GrinsteadM@saccounty.net<mailto:GrinsteadM@saccounty.net>>; Huot. Mike <huotm@saccounty.net<mailto:huotm@saccounty.net>>; Darin Reintjes <dreintjes@pcwa.net<mailto:dreintjes@pcwa.net>>
> Subject: SITES Reservoir Project - Reservoir Committee Agenda Items
>
> Hello all -
>
> There is a reservoir committee meeting this afternoon, which often serves as a precursory and indicator of future Board Authority Meeting agenda items. The Board Authority meeting will be held next Wednesday.
>
> There are a few action items this afternoon
>
> Item 2.1 (page 50) - this first action item today is to seek authorization to release the Revised Draft EIR/Supplemental Draft EIS (RDEIR/SDEIS). This will be a major milestone for this project. The document would be available for public review approximately August 26. From a technical perspective I believe the technical American River Watershed committee staff did not see anything in the analysis that suggested a significant concern to our watershed. It was noted that there might be some perceived impact of increased lower American temperatures but this could be an artifact of logic within the model that prioritized storage versus streamflow in certain cases. We suggested the SITES staff confirm this with the Water Forum staff.
>
> Item 2.2 (page 54) - this action item is to approve a budget policy. Apparently no prior policy was developed and it is suggested that a policy be approved consistent with governing Board expectations.
>
> Item 2.3 - Resume in person meetings starting in September.
>
> Regards,
>
> Trevor Joseph, P.G., C.Hg.
> Hydrogeologist
> Environmental Utilities
> c: (916) 517-2578
>
>
> Corporation Yard | 2005 Hilltop Circle | Roseville, CA | 95747
> [Roseville_logo_RGB_2016-01]<https://linkprotect.cudasvc.com/url?a=http%3a%2f%2fwww.roseville.ca.us%2feu%2fdefault.asp&c=E,1,DXmZnWohVWtHldBzVL26zkSd_nOxxqyxobZXOo1_PpFwsrWZFiBckbVSYiD7b1PBNFSJvzaze_4iNRMnIqUwmo4qahg1HV56zectiLSaNw,,&typo=1>
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om/user/CityofRosevilleCa>
>
>

From: Jessica Law [JLaw@waterforum.org]
Sent: 7/27/2021 1:10:08 PM
To: Alicia Forsythe [aforsythe@sitesproject.org]
CC: dreintjes [dreintjes@pcwa.net]; Heydinger, Erin [erin.heydinger@hdrinc.com]; Spranza, John [john.spranza@hdrinc.com]; steve.micko@jacobs.com; Leaf, Rob/SAC [Rob.Leaf@jacobs.com]; Jim Lecky (jim.Lecky@icf.com) [jim.Lecky@icf.com]; Hendrick, Mike [Mike.Hendrick@icf.com]; Ana Ayala [AAyala@waterforum.org]; Erica Bishop [ebishop@waterforum.org]
Subject: Re: Sites Project - American River Modeling Results and Fisheries Effects

Hi Ali - Thank you! Looking forward to taking soon. Best, Jessica

On Jul 27, 2021, at 6:49 AM, Alicia Forsythe <aforsythe@sitesproject.org> wrote:

Jessica – Thanks for the quick discussion in early June on the Sites Project. As I mentioned on the call, the Sites Team would like to schedule some time to review our modeling results for the American River watershed along with discussing the fisheries impacts of the Project. We are on the verge of releasing our Revised Draft EIR/Supplemental Draft EIS for the Project and wanted to give you and your team a heads up on the effects in the document for the American River watershed.

Below is a doodle poll to schedule this meeting. Please feel free to forward this onto others that should attend.

https://doodle.com/poll/3ffb8ipw3emewwc2?utm_source=poll&utm_medium=link

I am way overdue in scheduling this. And a number of us will be on vacation next week, so the poll dates start in mid-August.

We will send an agenda prior to the meeting.

We look forward to the discussion.

Ali

(Darin, I wasn't sure who else to include from the water district side of things. Can you forward this on as you see fit?)

(Sites Team, please complete the poll also. And feel free to forward to anyone in the team that I missed.)

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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TECHNICAL MEMORANDUM

Sites Project Authority – Sacramento River Intake Fish Screen Operations

PREPARED FOR:	Rob Tull/SAC
PREPARED BY:	James Kapla/SEA Aaron George/SEA
DATE:	25 March 2020
PROJECT NUMBER:	D3205400.A.CS.OE.D1.D1-03-03

Introduction and Purpose

The Sites Reservoir Project is a proposed 1.8 million acre-foot off-stream reservoir intended to divert and store excess Sacramento River streamflows, providing approximately 500,000 acre-feet per year of additional water supply on average. The Project would provide multiple beneficial uses including a reliable water supply for cities and agriculture; dedicated water for fisheries and environmental purposes; increased habitat for migratory birds; and improved flexibility and drought resiliency for the Central Valley Project and the State Water Project.

The purpose of this technical memorandum (TM) is to summarize key operational parameters of three Sacramento River intakes intended to supply water to the proposed Project. This includes estimates of available diversion capacity at various streamflows, given instream flow requirements and pumping capability. The intake facilities under consideration include the following:

1. Tehama-Colusa Canal Authority (TCCA) Red Bluff
2. Glenn-Colusa Irrigation District (GCID) Hamilton City
3. Delevan (Proposed)

The location of each facility is shown in Figure 1. This TM includes the following sections:

- Introduction and Purpose
- Intake Facilities Overview
- Methodology, Assumptions and Limitations
- Red Bluff Facility Operations
- Hamilton City Facility Operations
- Delevan Facility Operations
- References
- Attachments

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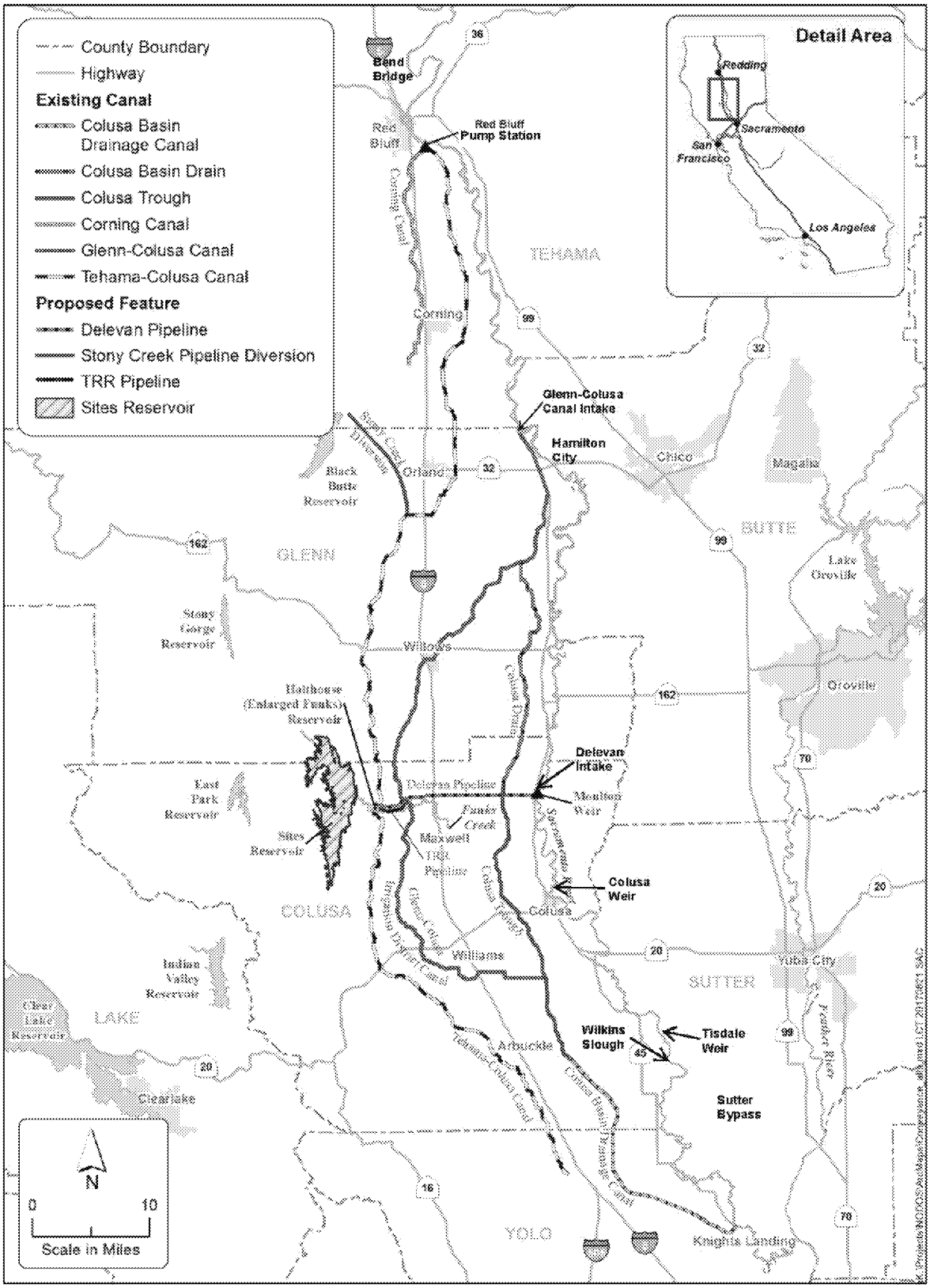

Figure 1. Sites Reservoir Project Facilities

Sites Project Authority – Sacramento River Intake Fish Screen Operations

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Intake Facilities Overview

Table 1. Intake Facilities Overview
Sites Project Authority – Sacramento River Intake Fish Screen Operations

Intake Facility	Location	Screen Configuration	Fish Protection Screen Criteria	Screen Cleaning	Provisions for Fish Protection and Monitoring	Pumping Capability	Diversion Capacity	Operations
TCCA Red Bluff	River mile 244 near Red Bluff, CA.	• Flat plate screens in vertical configuration. • 60 screen bays with a total structure length of approximately 1,118 feet. • Effective screen height of 9.8 feet, from EL 235.83 to EL 245.67 (NAVD88).	• 1.75 mm slot size. • 0.33 fps approach velocity. • Sweeping velocity minimum 2x approach velocity.	• Four mechanical brush cleaners. • Sediment jetting system with one duty and one standby pump: 100 Hp rated at 3,500 gpm.	• Seven fish refuge bays, of which three are located at blowout panel openings. • Refuge bays include ¾-inch round bars with 1-inch clear openings. • Anchorages for fyke net frames located downstream of screen panels.	• Installed capacity of 2,000 cfs. – Pump Nos. 1 and 11: 300 Hp rated at 125 cfs. – Pump Nos. 3 through 9: 600 Hp rated at 250 cfs. • Future capacity of 2,500 cfs. – Future Pump Nos. 2 and 10: 600 Hp rated at 250 cfs. • All pumps are controllable with VFDs.	• Minimum is 80 cfs with all screen bays except 59 and 60 blocked off with solid panels, and maximum VFD turn-down on Pump Nos. 1 or 11. • Sites Reservoir maximum requirement is 2,100 cfs. • Maximum capacity of 2,500 cfs.	• Streamflows per USGS Gage 11377100 Sacramento River above Bend Bridge near Red Bluff, CA. • Existing minimum instream flow requirement of 3,250 cfs below intake for summer operations. • Red Bluff Diversion Dam located immediately downstream is operated with gates out.
GCID Hamilton City	River mile 206 near Hamilton City, CA.	• Flat plate screens in vertical configuration with 5 degree batter. • 87 screen bays with a total structure length of approximately 1,090 feet. • Original structure effective screen height of 11.5 feet, from EL 127.52 to EL 138.99 (NAVD88). • Extended structure effective screen height of 11.5 feet, from EL 126.72 to EL 138.19 (NAVD88).	• 1.75 mm slot size. • 0.33 fps approach velocity. • Sweeping velocity minimum 2x approach velocity.	• Eight mechanical brush cleaners.	• Three bypass bays with internal fish return system (not currently operated).	• Existing capacity of 3,000 cfs. - Pump Nos. 1 and 2: 206 Hp rated at 150 cfs and 10.3 feet TDH. - Pump Nos. 3 through 8: 550 Hp rated at 400 cfs and 10.3 feet TDH. - Pump No. 9: 270 Hp rated at 200 cfs and 10.3 feet TDH. - Pump No. 10: 135 Hp rated at 100 cfs and 10.3 feet TDH. • Diversion by gravity is available starting at an approximate intake afterbay WSEL of 136.0. Maximum gravity diversion rate is approximately 1,000 cfs with an intake afterbay WSEL > 145.0. • Deck at EL 154.8 is overtopped at streamflows greater than approximately 100,000 cfs.	• Minimum is 150 cfs. • Sites Reservoir maximum requirement is 1,800 cfs. • Maximum capacity is 3,000 cfs.	• Streamflows per USGS Gage 11383800 Sacramento River near Hamilton City, CA. • Existing minimum instream flow requirement of 4,000 cfs below intake for summer operations. • Average daily irrigation withdrawals from November 2012 through April 2018 were approximately 293 cfs. Monthly averages for this period were as follows: • November - 671 cfs • December - 336 cfs • January - 90 cfs • February - 51 cfs • March - 103 cfs • April - 513 cfs • Operated with Water Control Structure weir blocks removed.

Intake Facility	Location	Screen Configuration	Fish Protection Screen Criteria	Screen Cleaning	Provisions for Fish Protection and Monitoring	Pumping Capability	Diversion Capacity	Operations
Delevan (Proposed)	River mile 158.5 near Maxwell, CA.	• Flat plate screens in vertical configuration. • 32 screen bays with a total structure length of approximately 560 feet. • Effective screen height of 12.3 feet, from EL 38.33 to EL 50.67 (NGVD29).	• 1.75 mm slot size. • 0.33 fps approach velocity • Sweeping velocity minimum 2x approach velocity.	• Two mechanical brush cleaners. • Sediment jetting system.	• To be determined (TBD)	• Design capacity of 2,000 cfs. - Pump Nos. 1 through 4: rated at 500 cfs. - No VFDs are currently considered.	• Sites Reservoir maximum requirement is 2,000 cfs. • Minimum is 200 cfs (per AECOM). • Adjacent Maxwell ID intake and PS is 200 cfs.	• Streamflows per CA DWR Station BTC, Sacramento River at Butte City, CA. • Proposed minimum instream flow requirement of 5,000 cfs. • Proposed return flow requirement of 1,500 cfs; separate or combined facility TBD.

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Methodology, Assumptions and Limitations

The following provides an overview of the methodology, assumptions and limitations associated with the estimates of available diversion capacity. Some information is common to all three intakes while other information is specific to TCCA Red Bluff, GCID Hamilton City or Delevan.

Common Attributes

Methodology

The analysis utilized the following general methodology at each intake facility location:

1. Identify appropriate Sacramento River streamflow data set, typically a U.S. Geological Survey (USGS) or California Department of Water Resources (CA DWR) stream gage.
2. Develop rating curve for correlating streamflow with water surface elevations (River stage) at the intake location.
3. Evaluate facility configuration and geometry to compare effective screen area with River stage.
4. Consider instream flow requirements, pump capability and other constraints.
5. Develop estimates of available diversion capacity versus streamflow, while maintaining approach velocities in accordance with fisheries design criteria (NMFS, 2018).

Assumptions

- Where river stage water surface elevation information is available at both the upstream and downstream ends of the intake facility, the water surface profile is averaged linearly across the face of the screeens.
- The intake screens are in a clean condition without significant accumulation of sediment and/or debris.
- Porosity controls provide balanced and uniform approach velocities through the intake screens.

Limitations

This memorandum provides high-level estimates of water availability at Project facilities and is intended to support water supply and operations modeling efforts. The estimates are based on recent historical streamflows, rating curves and pumping data. Actual withdrawal rates may be affected by a variety of factors including the following:

- Changing River morphology
- Ground subsidence
- Sediment and debris accumulation
- Non-uniform approach velocities
- Future winter irrigation demands
- Other proposed diversions not quantified herein
- Differing instream flow requirements
- Modifications to existing fisheries design guidelines and criteria

TCCA Red Bluff

Methodology

Historical streamflows for TCCA Red Bluff were obtained from USGS Gage 11377100 Sacramento River above Bend Bridge near Red Bluff, CA. The gage is located approximately 17 miles upstream of the site.

A composite rating curve was developed using data from the November 2009 Design Development Report (CH2M, 2009), including Appendix A, Table A-1 for the low end of rating curve (streamflow 0 cfs

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to 24,999 cfs), and Table A-2 for the high end of rating curve (streamflow 25,000 cfs and greater). This curve was used for the purposes of generating stage-frequency data based on the USGS data set.

Existing estimates of diversion capacity are available in the table "Project Diversion as a Function of River Stage" located in the conformed construction drawings (CH2M, 2009a), as well as another table (Table 2) located in the Design Development Report. The values in the drawing set utilized a slightly lower, more conservative diversion capacity for a given streamflow and were therefore used for the purposes of evaluating diversion capacity.

River stage values interior to the existing rating curve were interpolated at 0.1-foot WSEL intervals, and extended at the upstream and downstream work points as necessary. Diversion rates for the additional data points were then calculated assuming an approach velocity equal to the average approach velocity from existing data. This results in approach velocities that are approximately 3 percent lower than the criteria velocity of 0.33 fps. This was deemed reasonable and appropriately conservative for this type of analysis.

Assumptions

- Instream flow requirement of 3,250 cfs.
- The Red Bluff Diversion Dam located immediately downstream of the Intake is operated with the gates removed.
- The additional water demand associated with the sediment jetting system is intermittent and has negligible impact.
- The minimum diversion of 80 cfs occurs with all screen bays except 59 and 60 blocked off with solid panels, and maximum VFD turn-down on Pump Nos. 1 or 11.
- Future Pump Nos. 2 and 10 are installed.

Limitations

- Additional pumping capacity is required to meet Project objectives (future Pump Nos. 2 and 10).
- Several tributaries including Red Bank Creek and Elder Creek are located between the Bend Bridge gage and the Red Bluff Intake. The tributaries are understood to have substantial streamflows in winter, but such flows were not quantified as part of this analysis. This is assumed to conservatively under-estimate diversion capacity at the intake location.

GCID Hamilton City

Methodology

Historical streamflows for GCID Hamilton City were obtained from USGS Gage 11383800 Sacramento River near Hamilton City, CA. The gage is located approximately 5 miles downstream of the site. The streamflows were adjusted to a location just upstream of the oxbow by adding historical pumping rates from the GCID Main Pump Station. Daily shift records of pump discharge (typically three shifts per day) were averaged to develop average daily pump discharge rates. This information was then correlated and added to the average daily streamflow data.

Water surface elevations were obtained from historical data collected by GCID from 2011 through 2018 at the upstream end of the intake structure, "Screen 85;" the downstream end of the screen structure, "Bypass Channel;" and the intake structure afterbay/pump station forebay, "Forebay." The water surface profile at the face of the screens was linearly averaged between "Screen 85" and "Bypass Channel." Where data was missing, the average differential was assumed in order to facilitate calculation of the profile.

A large data gap in water surface elevation data exists between April 2015 and December 2017. The average differential was 0.63 feet before that time, and 1.01 feet after that time. The cause of the

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change is unknown, but could potentially be attributed to re-calibration of instruments, an increase in the headwater at the Gradient Structure, removal of a hydraulic constriction downstream, and/or some other contributing event. The removal of the weir blocks in the Water Control Structure were ruled out as a cause since this occurred circa 2006. The most recent average water differential value of 1.01 feet was assumed to be representative of current operations and was therefore utilized where necessary for the purposes of this diversion capacity analysis.

Operation of the GCID Main Pump Station impacts the water surface elevations (WSELs) at the screens, and the water surface profile along the screens for a given streamflow in the Sacramento River can vary with pump discharge. A higher pumped flowrate will result in a lower water surface profile through the oxbow as compared to the profile for a lower pumped flowrate – for the same streamflow. Therefore, a series of rating curves were developed for a range of pump station discharges and streamflows to account for the impact of drawdown on the water surface profile in the oxbow.

Table 2. GCID Hamilton City Rating Curves
Sites Project Authority – Sacramento River Intake Fish Screen Operations

Streamflow Above Oxbow (cfs)	Rating Curve Utilized
< 20,000	Low flow curve developed from data where Main Pump Station discharge is >2,500 cfs
20,000 to 30,000	Linear transition assumed between low and high flow curves (0.25 feet per 1,000 cfs)
> 30,000	High flow curve developed from data where Main Pump Station discharge is zero

The curves are based on empirical data and are intended to conservatively estimate water surface elevations in the oxbow over the range of operational conditions, particularly for low streamflows.

The rating curve was tabulated at 0.1-foot intervals (using the average WSEL at the screens) and estimates of available screen area were calculated. Separate calculations were made for the original intake screen structure and the fish screen extension (circa 2001), since the structures are not identical and have different geometry.

Existing estimates of diversion capacity are available in Table 1 of the Designer's Operating Criteria (USBR, 2010) and this information is plotted on the diversion capacity figure for reference. Diversion rates utilizing the developed rating curves were then calculated for both portions of the intake structure assuming an approach velocity of 0.33 fps.

Assumptions

- No other significant diversions or inflows are assumed to occur between the intake facility and the gage location. Therefore, the summation of the Main Pump Station discharge and gage streamflow is assumed to be representative of the Sacramento River streamflow immediately upstream of the oxbow.
- Instream flow requirement of 4,000 cfs.
- Minimum diversion of 150 cfs in accordance with pump capability.
- The bypass bays and internal fish return system are not operated.
- The Water Control Structure weir blocks were removed circa 2006 and are no longer utilized.
- November through April irrigation withdrawals are typically less than approximately 1,200 cfs.

Limitations

- A significant change in average water surface differential across the screens is evident in data before and after the April 2015 to December 2017 time period. This discontinuity is unexplained and associated impacts to diversion capacity are currently unknown.

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- It is understood that gravity flow is possible starting at an afterbay WSEL of approximately 136.0 (streamflow of approximately 5,500 cfs). A review of the available data set indicates that there may be periods when gravity flow is possible (and probable), but the pumped flow is reported as zero. These periods typically occur at streamflows greater than approximately 20,000 cfs. Therefore, the rating curve for streamflows above approximately 20,000 cfs may slightly under-estimate available diversion capacity for certain conditions.

Delevan

Methodology

Historical streamflows were obtained from CA DWR Station BTC, Sacramento River at Butte City, CA. The gage is approximately 10 miles upstream of the site.

The rating curve (Figure 6) from the North of Delta Offstream Storage (NODOS) Sacramento River Fish Screen Facility Feasibility Study (CH2M, 2008) was utilized to inform this analysis. This curve was developed via analysis of existing ratings at the Butte City gage and USGS gage 11389500 Sacramento River at Colusa. The curve includes a River stage of 52.0 feet (NGVD29) at a streamflow of 6,000 cfs. A supporting field measurement of 53.5 feet at 6,212 cfs suggests that the actual stage may be even higher. However, a subsequent analysis by the California Department of Water Resources (CA DWR) recommended that a conservative value of 51.0 feet be used at 6,000 cfs for the purposes of the Feasibility Study.

For the diversion capacity analysis, the curve was adjusted in accordance with the 51.0-foot constraint, and linear interpolation was used to complete interior portions of the curve. River stage values for diversion capacities ranging from 0 cfs to 2,000 cfs were interpolated at 1-foot WSEL intervals.

Assumptions

- Streamflows were not adjusted to account for reach gains or losses (likely negligible) between the gage and intake facility.
- Instream flow requirement of 5,000 cfs.
- Minimum diversion of 200 cfs in accordance with proposed pump capability.

Limitations

- The design low WSEL for the fish screens of 51.0 feet at 6,000 cfs streamflow identified by CA DWR varies from the Figure 6 rating curve (AECOM, 2018 and CH2M, 2008) and measurements taken in the field. It appears that this elevation is conservatively low, and could be refined (raised) during future design. This may result in a slightly shorter intake structure with a reduced footprint.
- Additional water surface elevation measurements were identified in as a potential method to be taken to develop a more detailed rating curve for final design (CH2M, 2008).
- The proposed intake facility may also be required to operate as a flow release / discharge structure under certain scenarios. This analysis does not include consideration of specific fisheries criteria (i.e., exclusion barrier criteria) that would be required to accommodate this mode of operation.

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TCCA Red Bluff Facility Operations

Table 3. TCCA Red Bluff Available Diversion Capacity by Streamflow

Sites Project Authority – Sacramento River Intake Fish Screen Operations

Streamflow at Gage (cfs)	River WSEL at U/S Work Point (feet, NAVD88)	Available Facility Diversion Capacity (cfs)
2,010	241.2	1,417
2,175	241.3	1,445
2,350	241.4	1,472
2,525	241.5	1,500
2,700	241.6	1,527
2,875	241.7	1,554
3,075	241.8	1,582
3,275	241.9	1,609
3,330	241.9	1,617
3,475	242.0	1,637
3,675	242.1	1,664
3,950	242.2	1,692
4,225	242.3	1,719
4,500	242.4	1,746
4,775	242.5	1,774
5,050	242.6	1,801
5,325	242.7	1,829
5,350	242.7	1,835
5,600	242.9	1,900
5,925	243.1	1,904
6,250	243.2	1,938
6,575	243.4	1,973
6,900	243.5	2,000
7,184	243.6	2,034
7,468	243.7	2,062
7,751	243.8	2,089
7,862	243.8	2,100
8,035	243.9	2,117
8,319	244.0	2,130

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8,714	244.1	2,175
9,109	244.3	2,206
9,266	244.4	2,237
9,898	244.5	2,240
10,254	244.6	2,295
10,610	244.7	2,322
10,965	244.8	2,350
11,321	244.9	2,377
11,677	245.0	2,380
12,139	245.1	2,432
12,600	245.2	2,500

Diversions limited by instream flow requirement of 3,250 cfs

Diversions limited by River WSEL and submerged screen area

No restrictions (assumes use of future Pump Nos. 2 and 10)

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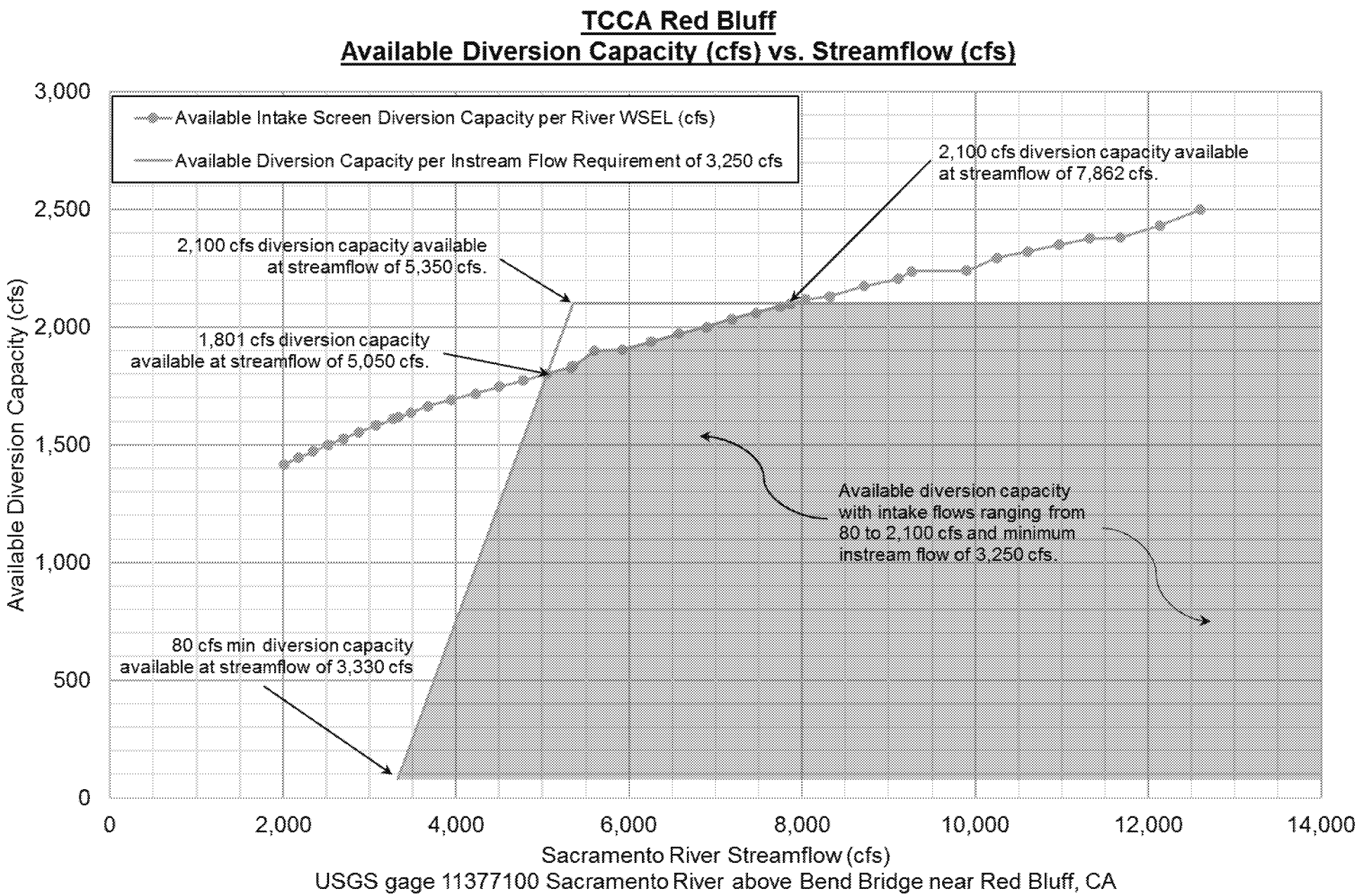
TCCA Red Bluff
Available Diversion Capacity (cfs) vs. Streamflow (cfs)
Available Intake Screen Diversion Capacity per River WSEL (cfs)
Available Diversion Capacity per Instream Flow Requirement of 3,250 cfs
2,100 cfs diversion capacity available at streamflow of 7,862 cfs.
2,100 cfs diversion capacity available at streamflow of 5,350 cfs.
1,801 cfs diversion capacity available at streamflow of 5,050 cfs.
Available diversion capacity with intake flows ranging from 80 to 2,100 cfs and minimum instream flow of 3,250 cfs.
80 cfs min diversion capacity available at streamflow of 3,330 cfs
Available Diversion Capacity (cfs)
3,000
2,500
2,000
1,500
1,000
500
0
0
2,000
4,000
6,000
8,000
10,000
12,000
14,000
Sacramento River Streamflow (cfs)
USGS gage 11377100 Sacramento River above Bend Bridge near Red Bluff, CA

GCID Hamilton City Facility Operations

Table 4. GCID Hamilton City Available Diversion Capacity by Streamflow

Sites Project Authority – Sacramento River Intake Fish Screen Operations

Streamflow Upstream of Oxbow (cfs)	River WSEL at U/S Oxbow (feet, NGVD29)	Available Facility Diversion Capacity (cfs)
900	132.5	1,744
938	132.6	1,777
977	132.7	1,809
1,018	132.8	1,841
1,061	132.9	1,873
1,105	133.0	1,906
1,151	133.1	1,938
1,200	133.2	1,970
1,250	133.3	2,002
2,690	133.4	2,035
2,765	133.5	2,067
2,842	133.6	2,099
2,921	133.7	2,131
3,002	133.8	2,164
3,086	133.9	2,196
3,172	134.0	2,228
3,260	134.1	2,260
3,351	134.2	2,292
3,445	134.3	2,325
3,541	134.4	2,357
3,639	134.5	2,389
3,741	134.6	2,421
3,845	134.7	2,454
3,952	134.8	2,486
4,062	134.9	2,518
4,176	135.0	2,559
4,292	135.1	2,583
4,412	135.2	2,615
4,534	135.3	2,647
4,661	135.4	2,679

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4,791	135.5	2,717
4,924	135.6	2,744
5,061	135.7	2,776
5,203	135.8	2,808
5,348	135.9	2,841
5,497	136.0 (begin possible gravity diversion)	2,874
5,650	136.1	2,905
5,807	136.2	2,937
5,969	136.3	2,969
6,135	136.4	3,002
6,306	136.5	3,031

Diversions limited by instream flow requirement of 4,000 cfs

No restrictions, assuming GCID irrigation withdrawals are less than approximately 1,000 cfs

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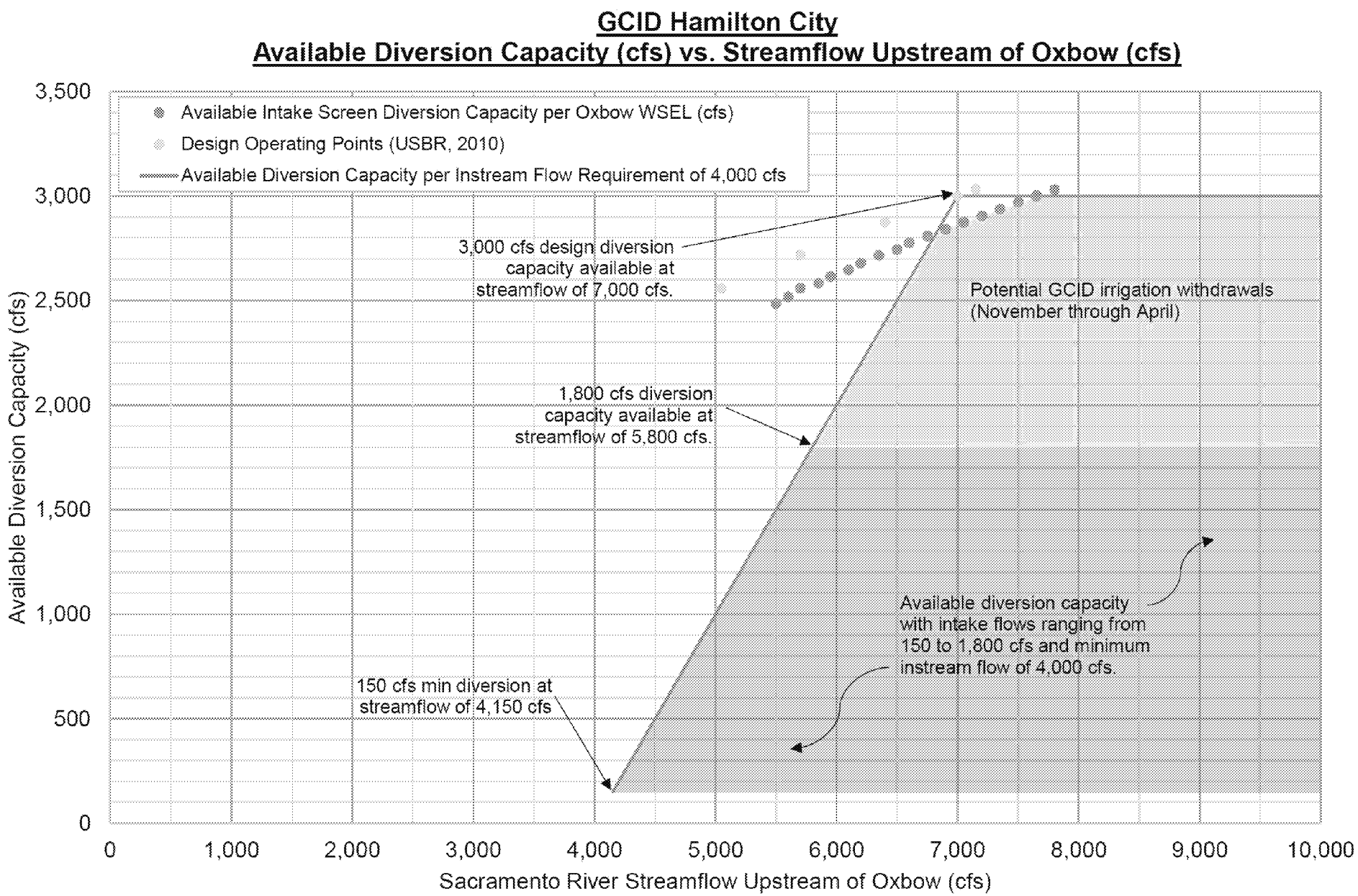
GCID Hamilton City
Available Diversion Capacity (cfs) vs. Streamflow Upstream of Oxbow (cfs)
Available Intake Screen Diversion Capacity per Oxbow WSEL (cfs)
Design Operating Points (USBR, 2010)
Available Diversion Capacity per Instream Flow Requirement of 4,000 cfs
3,000 cfs design diversion capacity available at streamflow of 7,000 cfs.
Potential GCID irrigation withdrawals (November through April)
1,800 cfs diversion capacity available at streamflow of 5,800 cfs.
Available diversion capacity with intake flows ranging from 150 to 1,800 cfs and minimum instream flow of 4,000 cfs.
150 cfs min diversion at streamflow of 4,150 cfs
Available Diversion Capacity (cfs)
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
8,000
9,000
10,000
Sacramento River Streamflow Upstream of Oxbow (cfs)

Delevan Facility Operations

Table 5. Delevan Available Diversion Capacity by Streamflow

Sites Project Authority – Sacramento River Intake Fish Screen Operations

Streamflow at Gage (cfs)	River WSEL at Fish Screens (feet, NGVD29)	Available Facility Diversion Capacity (cfs)
727	38.0	0
909	39.0	154
1,091	40.0	308
1,273	41.0	462
1,455	42.0	615
1,636	43.0	769
1,818	44.0	923
2,000	45.0	1,077
2,571	46.0	1,231
3,143	47.0	1,385
3,714	48.0	1,538
4,286	49.0	1,692
4,857	50.0	1,846
5,429	51.0	2,000

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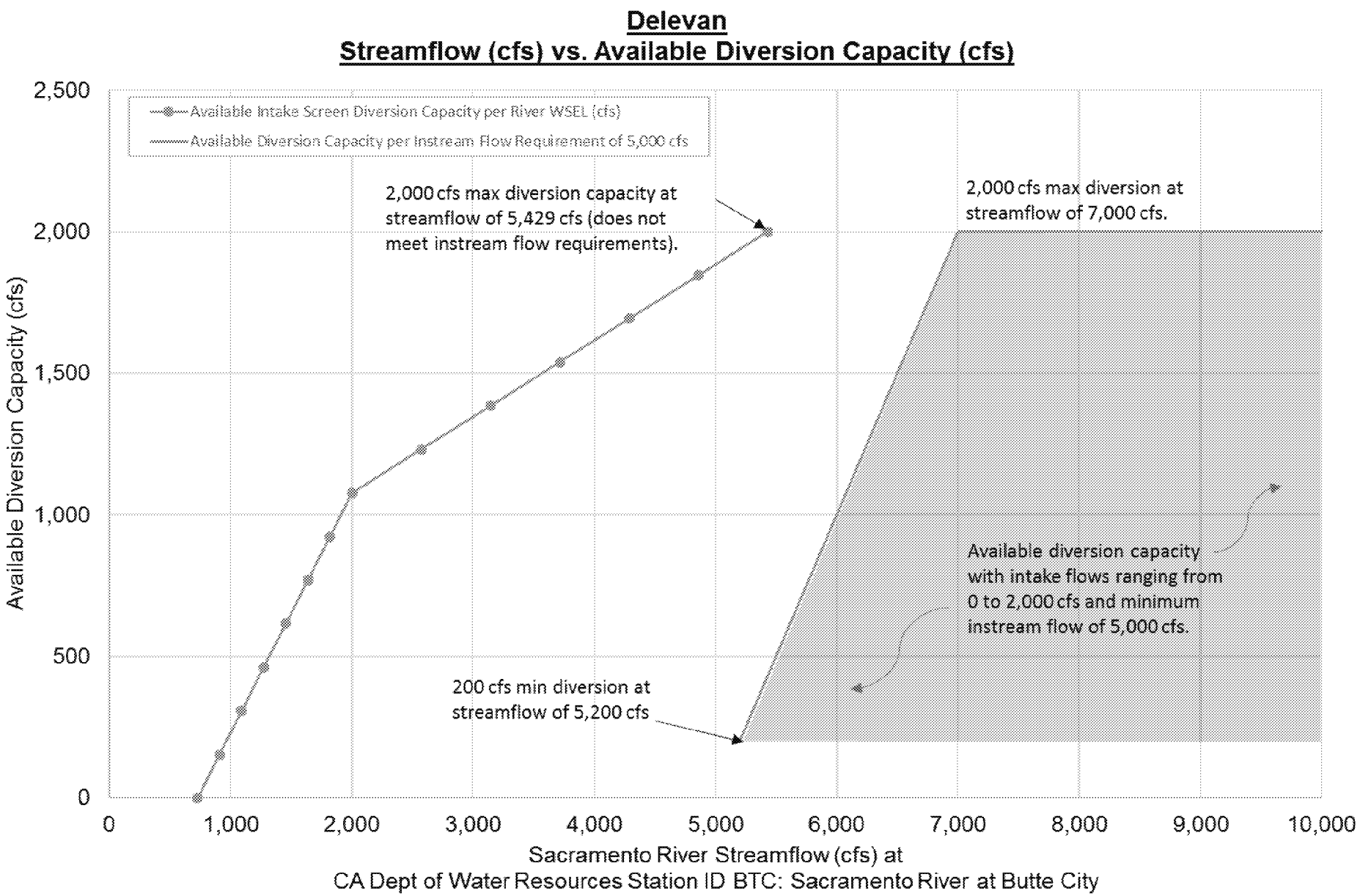
Delevan
Streamflow (cfs) vs. Available Diversion Capacity (cfs)
Available Intake Screen Diversion Capacity per River WSEL (cfs)
Available Diversion Capacity per Instream Flow Requirement of 5,000 cfs
2,000 cfs max diversion capacity at streamflow of 5,429 cfs (does not meet instream flow requirements).
2,000 cfs max diversion at streamflow of 7,000 cfs.
Available diversion capacity with intake flows ranging from 0 to 2,000 cfs and minimum instream flow of 5,000 cfs.
200 cfs min diversion at streamflow of 5,200 cfs
Available Diversion Capacity (cfs)
2,500
2,000
1,500
1,000
500
0
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
8,000
9,000
10,000
Sacramento River Streamflow (cfs) at
CA Dept of Water Resources Station ID BTC: Sacramento River at Butte City

References

Table 6. References.

Sites Project Authority – Sacramento River Intake Fish Screen Operations

Intake Site	Document Number	Document Title	Description and Use
Common to All Three Intakes	1	CH2M. 2017. *Sites Reservoir Project Preliminary Operations Plan Under a Range of Hydrologic Conditions.* August.	Project operations.
	2	NMFS. 2018. National Oceanic and Atmospheric Administration (NOAA) Fisheries *West Coast Region Anadromous Salmonid Passage Design Guidelines, Peer Review Draft*. 16 August.	Fisheries design guidelines and criteria.
	3	URS Group, Inc. 2018. *North-of-the-Delta Offstream Storage Investigation Final Feasibility Study.* Prepared for the U.S. Bureau of Reclamation (USBR), Mid-Pacific Region. 18 October.	Project configuration and operations.
	4	USBR. 2009. Water Resources Technical Publication. *Guidelines for Performing Hydraulic Field Evaluations at Fish Screening Facilities.* Denver, Colorado. April.	Fish screen hydraulics.
Red Bluff	5	USGS Gage 11377100 Sacramento River above Bend Bridge near Red Bluff, CA.	Streamflow data. https://waterdata.usgs.gov/nwis/uv?site_no=11377100

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Red Bluff	6	CH2M. 2009. *Design Development Report, Fish Passage Improvement Project at the Red Bluff Diversion Dam.* Prepared for the Tehama-Colusa Canal Authority and the USBR. November.	Rating Curve: • Appendix A, Table A-1 used to generate low end of rating curve, up to 24,999 cfs • Appendix A, Table A-2 used to generate high end of rating curve, 25,000 cfs and greater Diversion Capacity: • Table 2 provides design capacity at low River streamflow/stage conditions to maintain the maximum 0.33 fps approach velocity; however, this information was not used for purposes of this analysis. Capacity values from a similar table on the construction drawings were used instead since they were deemed to be more conservative (see below).
	7	CH2M. 2009a. *Conformed Construction Drawings for the Red Bluff Pumping Plant and Fish Screen.* Four volumes. Prepared for the Tehama-Colusa Canal Authority and the USBR. 29 October.	Diversion Capacity: • Volume 1, Drawing 602-D-4308, Table "Project Diversion as a Function of River Stage." Provides design capacity at low River streamflow/stage conditions to maintain the maximum 0.33 fps approach velocity (used for this analysis). • Volume 2, various drawings including Drawing 602-D-4390, "Typical Bay Section." Section of fish screen used to confirm design capacity for diversion at various water levels.
	8	USBR. 2018. *Tehama-Colusa Canal Authority Red Bluff Pumping Plant Post-Construction Fish Screen Hydraulic Evaluation.* March.	Post-construction hydraulic monitoring and evaluation.

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GCID Hamilton City	9	Ayres Associates. 1995. *Riverbed Gradient Restoration Structures for the Sacramento River at the Glenn-Colusa Irrigation District Intake, California.* Prepared for the U.S. Army Corps of Engineers (USACE) Sacramento District. 10 July.	Hydraulic analysis of riverbed gradient structure alternatives.
	10	Ayres Associates. 1999. *Gradient Facility Project Report.* Prepared for USACE Sacramento District. June.	Design development of riverbed gradient structure.
	11	Ayres Associates. 2002. *Sacramento River Gradient Facility Post-Construction Evaluation Draft Report.* Prepared for USACE Sacramento District. July	Post construction monitoring and evaluation of riverbed gradient structure.
	12	CA DWR Station ID: HMC, Sacramento River at Hamilton City, CA	Streamflow data. http://cdec.water.ca.gov/dynamicapp/staMeta?station_id=hmc
	13	CH2M. 1985. *Plans for the Construction of Main Pump Station.* Prepared for Glenn-Colusa Irrigation District (GCID).	Record drawings of GCID Main Pump Station.
	14	CH2M. 1993. *Modifications to the CDF&G Fish Screens at the GCID Diversion.* Prepared for GCID. February.	Drawings for installation of screen cleaners and fish bypass. Used in conjunction with original drawings (USBR, 2007) to confirm design capacity for diversion at various water levels while maintaining maximum approach velocity of 0.33 fps.
	15	CH2M. 2008. *Glenn-Colusa Irrigation District Fish Protection Evaluation and Monitoring Program.* Prepared for GCID. January.	Hydraulic monitoring and evaluation.
	16	GCID operational flows and WSEL data.	Historical operations data collected by GCID from January 2011 through December 2018. Provided in numerous Excel files, compiled and processed by Jacobs for this evaluation. Includes Main Pump Station discharge and WSELs for the River, Oxbow (Screen 85), Bypass and Afterbay.
	17	GCID Main Pump Station Data	Pump specifications and pump curves.

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GCID Hamilton City	18	McMillen, LLC. 2013. *Glenn-Colusa Irrigation District Gradient Facility, Sacramento River, CA, Water Data Collection Technical Memorandum.* Prepared for USACE Sacramento District. 21 June.	Water surface elevation data.
	19	USBR. 2010. *Designer's Operating Criteria for Hamilton City Pumping Plant Fish Screen Structure and Downstream Channel Structures.* Prepared for GGCID, California. Technical Service Center, Denver, Colorado. 26 January.	Diversion Capacity: • Table 1 summarizes design capacity for diversion at low river flow conditions to maintain maximum 0.33 fps approach velocity. Note that this table does not contain associated stage information, which was based on the low flow rating curve. • Provides minimum WSEL for full pumped flow of 3,000 cfs (El. 136.5 upstream of the weir)
	20	USBR. 1997. *Drawings for Specification No. 20-C0476.* Fish Screen Structure Extension, Fish Screen Structure Improvement Project, Glenn-Colusa Irrigation District, Central Valley Project Improvement Act. 21 October.	Volume III, various drawings including Drawing 602-D-4095 "Fish Screen Structure Sections." Sections used to confirm design capacity for diversion at various water levels while maintaining maximum approach velocity of 0.33 fps.
Delevan	21	AECOM. Delevan Intake Pumping-Generating Plant and Fish Screen Structure, Site Plan, Authority Project Alternative - D. Prepared for Sites Project Authority. 2018.	Intake and fish screen general arrangement drawing.
	22	CA DWR Station ID: BTC, Sacramento River at Butte City, CA	Streamflow data. http://cdec.water.ca.gov/dynamicapp/staMeta?station_id=btc
	23	CH2M. 2008. *North-of-Delta Offstream Storage – Sacramento River Fish Screen Facility Feasibility Study.* Prepared for California Department of Water Resources. June.	Rating Curve: • Figure 6 rating curve used to generate stage data at the intake based on streamflow. Diversion Capacity: • Fish screen drawings used to confirm design capacity for diversion at various water levels while maintaining maximum approach velocity of 0.33 fps.

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Attachments

1 – TCCA Red Bluff

- November through April flow-duration curve
- Monthly flow-duration curves
- Annual stage-frequency curve
- November through April stage-frequency curve
- Monthly stage-frequency curves

2 – GCID Hamilton City

- Annual flow-duration curve
- November through April flow-duration curve
- Monthly flow-duration curves
- Annual stage-frequency curve
- November through April stage-frequency curve
- Monthly stage-frequency curves

3 – Delevan

- Annual flow-duration curve
- November through April flow-duration curve
- Monthly flow-duration curves
- Annual stage-frequency curve
- November through April stage-frequency curve
- Monthly stage-frequency curves

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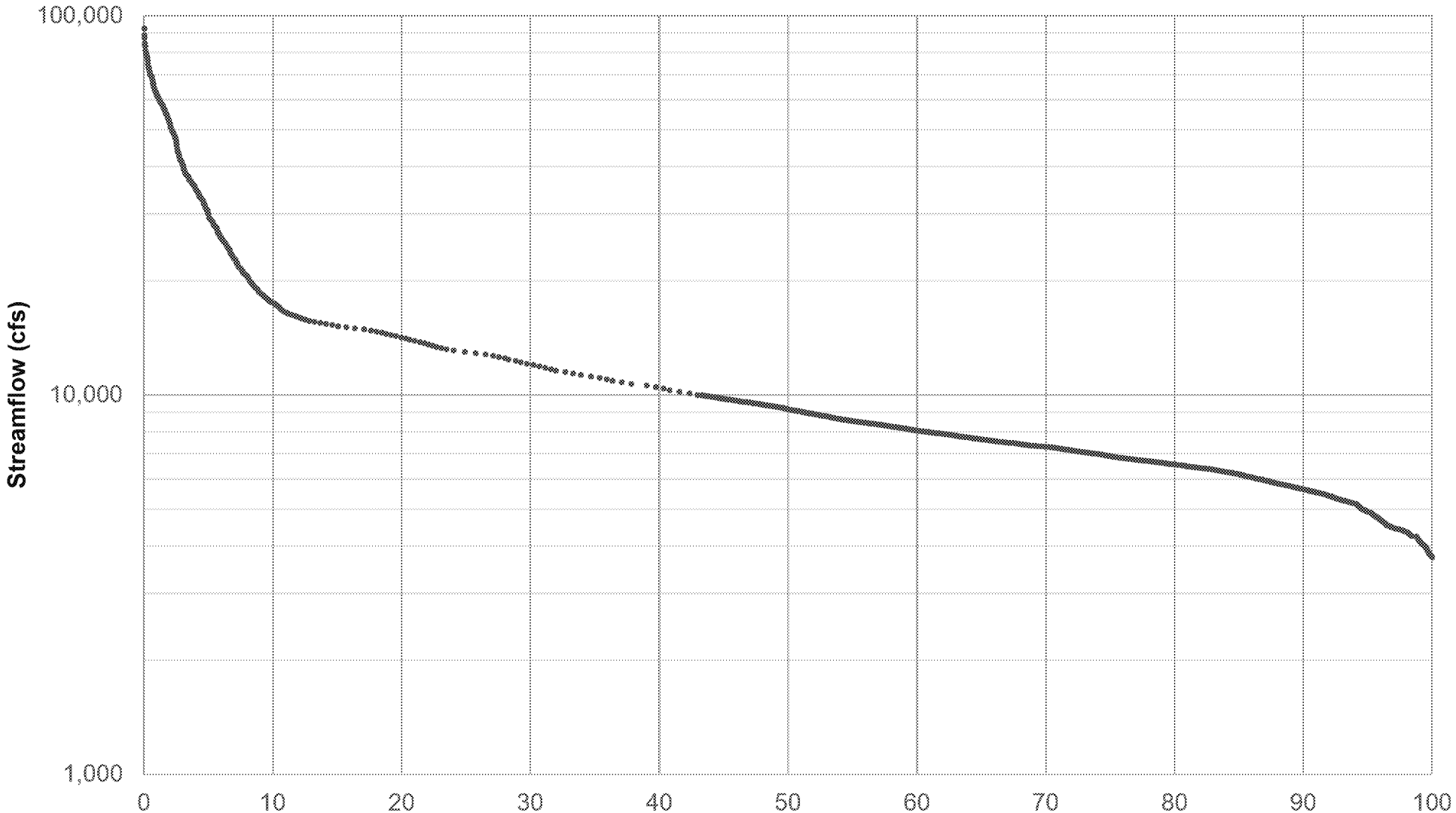
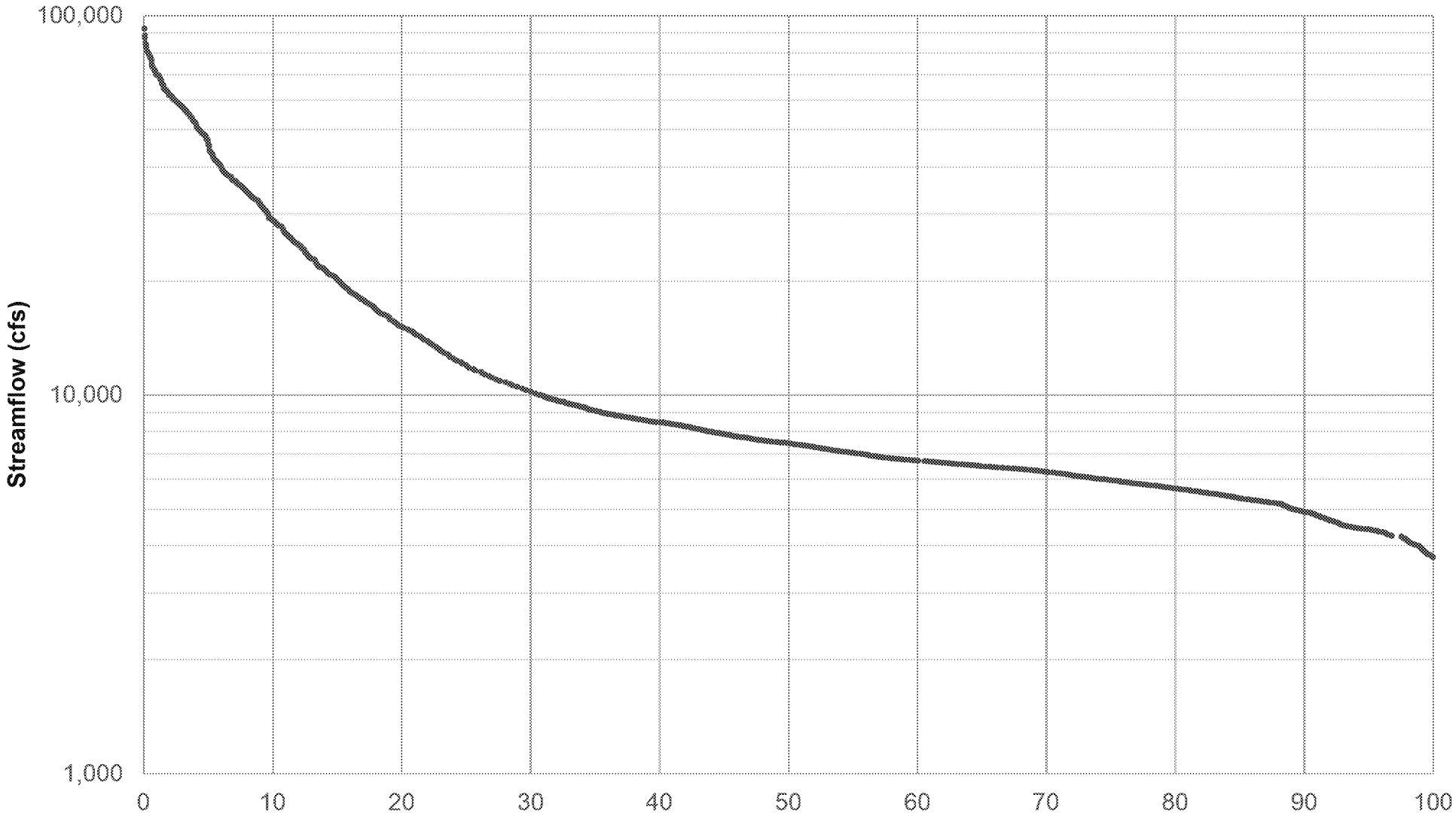
Attachment 1 – TCCA Red Bluff

Flow-Duration Curve - Annual
USGS 11377100 Sacramento River above Bend Bridge near Red Bluff, CA



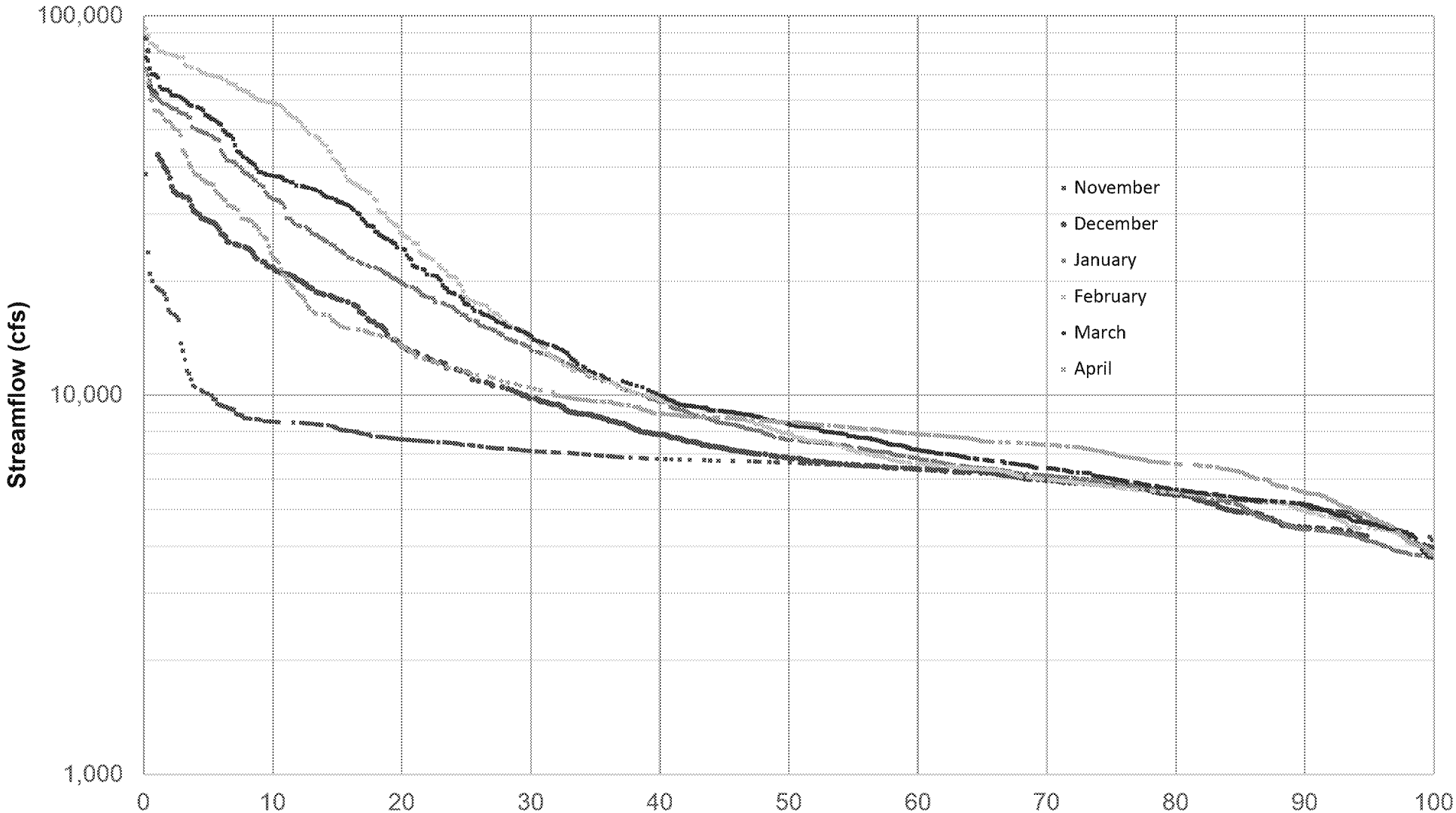
3/25/2020

Flow-Duration Curve - November-April
USGS 11377100 Sacramento River above Bend Bridge near Red Bluff, CA



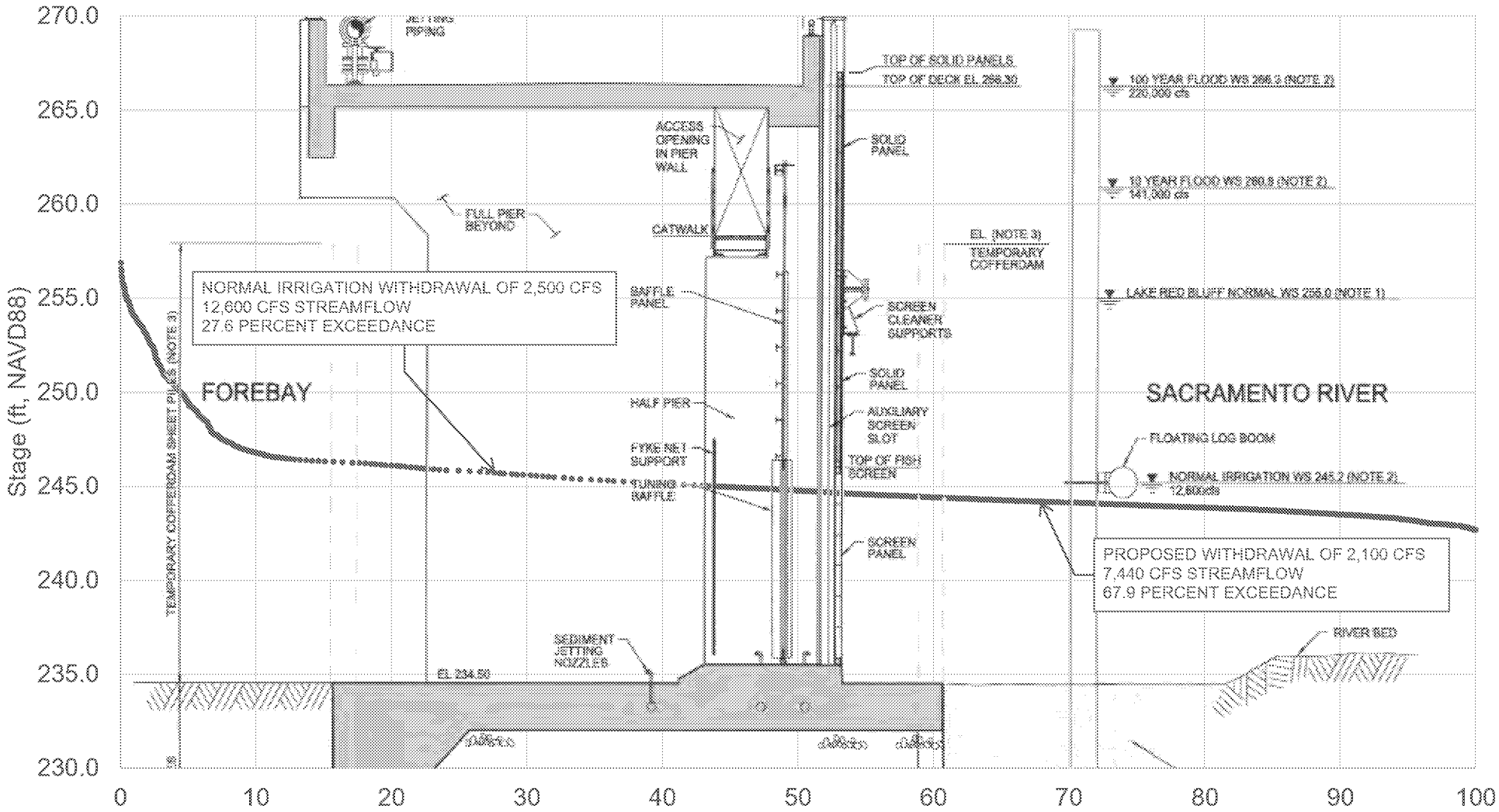
11/14/2019

Monthly Flow-Duration Curves - November-April
USGS 11377100 Sacramento River above Bend Bridge near Red Bluff, CA



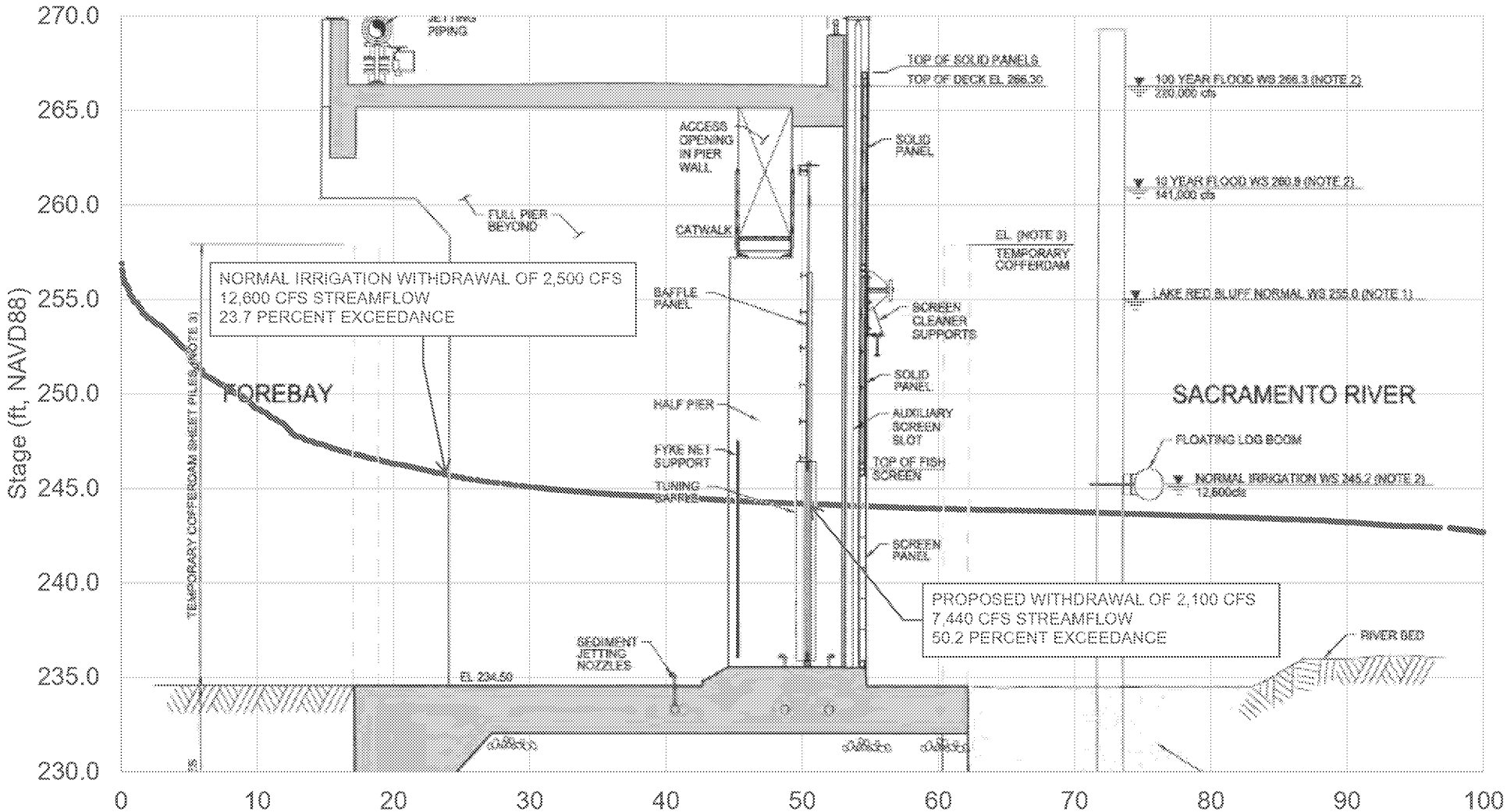
11/14/2019

Stage Frequency Curve - Annual
Sacramento River at Red Bluff Diversion Dam (U/S Work Point)



(USGS Gage 11377100 Sacramento River above Bend Bridge near Red Bluff, CA; Average Daily Data from 1998 to January 2019)

Stage Frequency Curve - November-April
Sacramento River at Red Bluff Diversion Dam (U/S Work Point)



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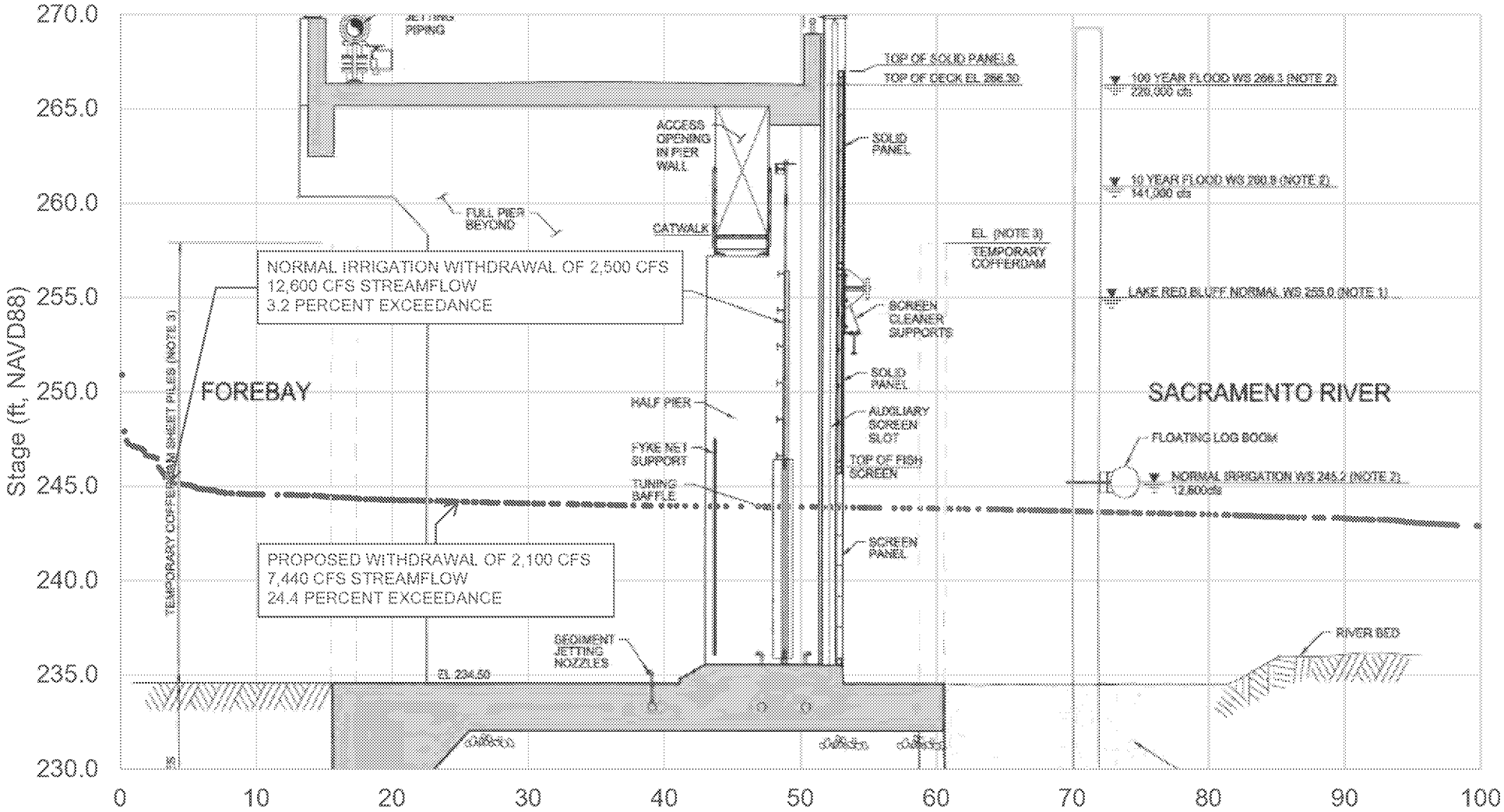
Stage Frequency Curve - November
Sacramento River at Red Bluff Diversion Dam (U/S Work Point)



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Stage Frequency Curve - December
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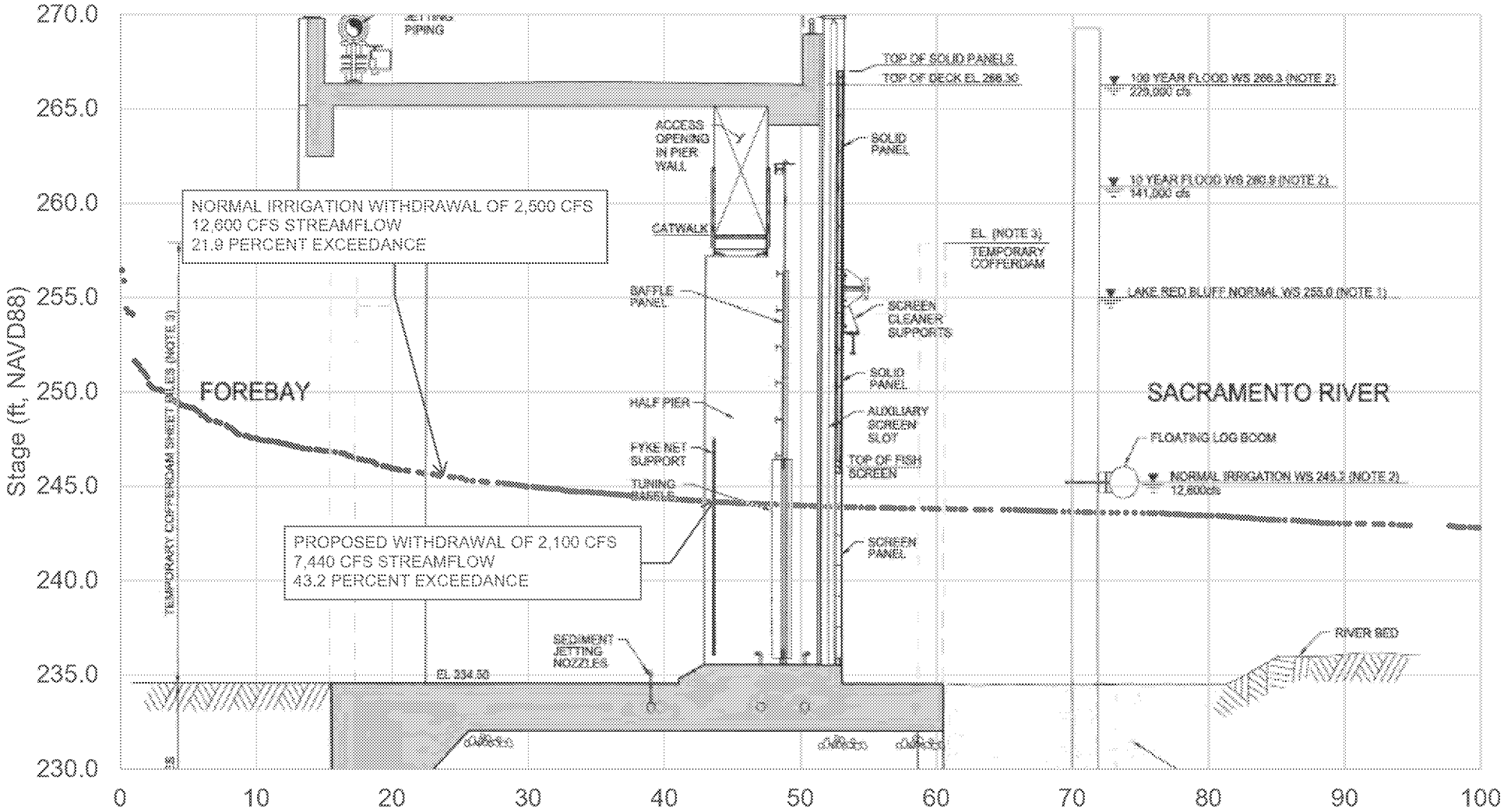
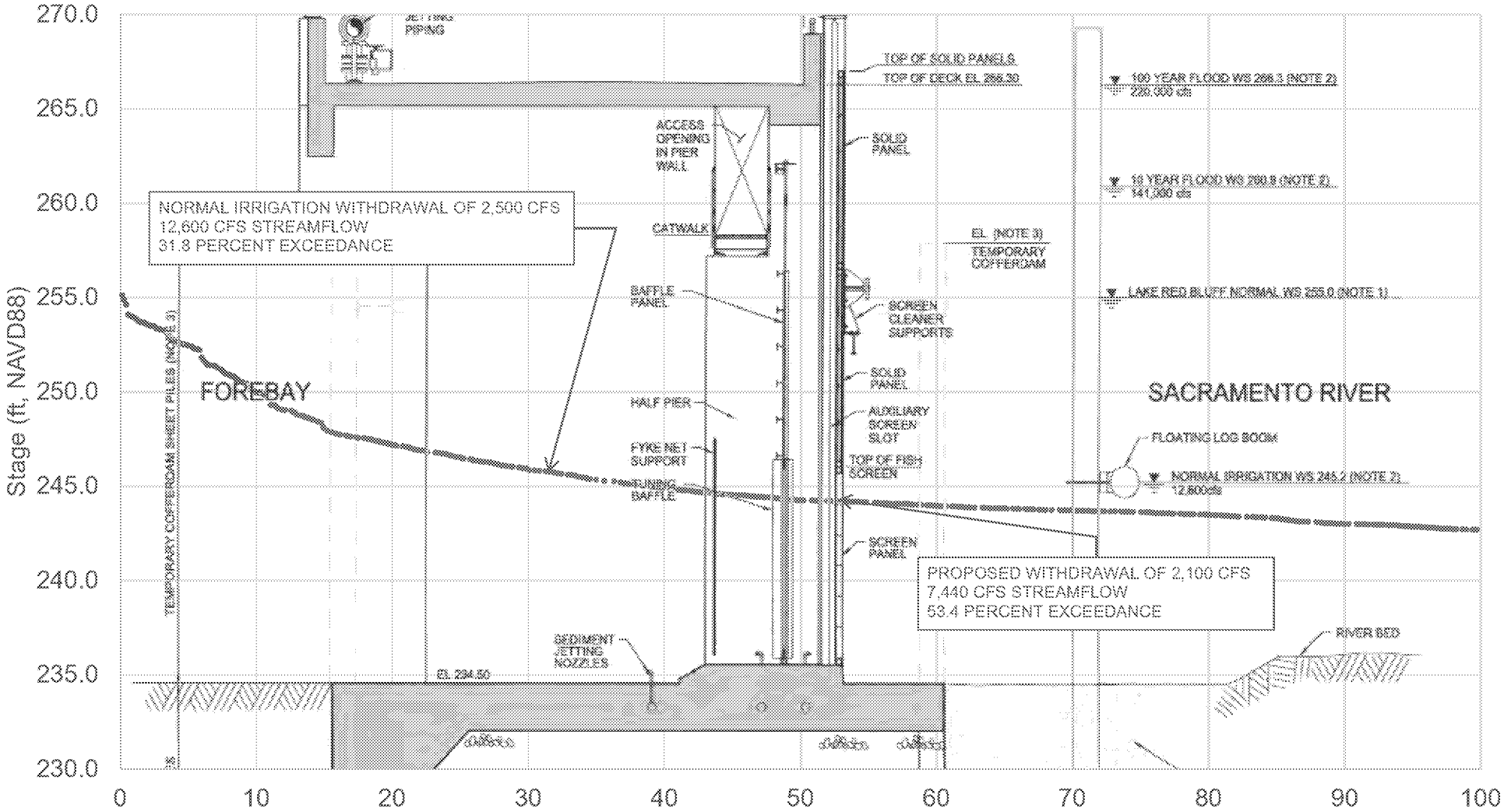


(USGS Gage 11377100 Sacramento River above Bend Bridge near Red Bluff, CA; Average Daily Data from 1998 to 2019)

Stage Frequency Curve - January
Sacramento River at Red Bluff Diversion Dam (U/S Work Point)



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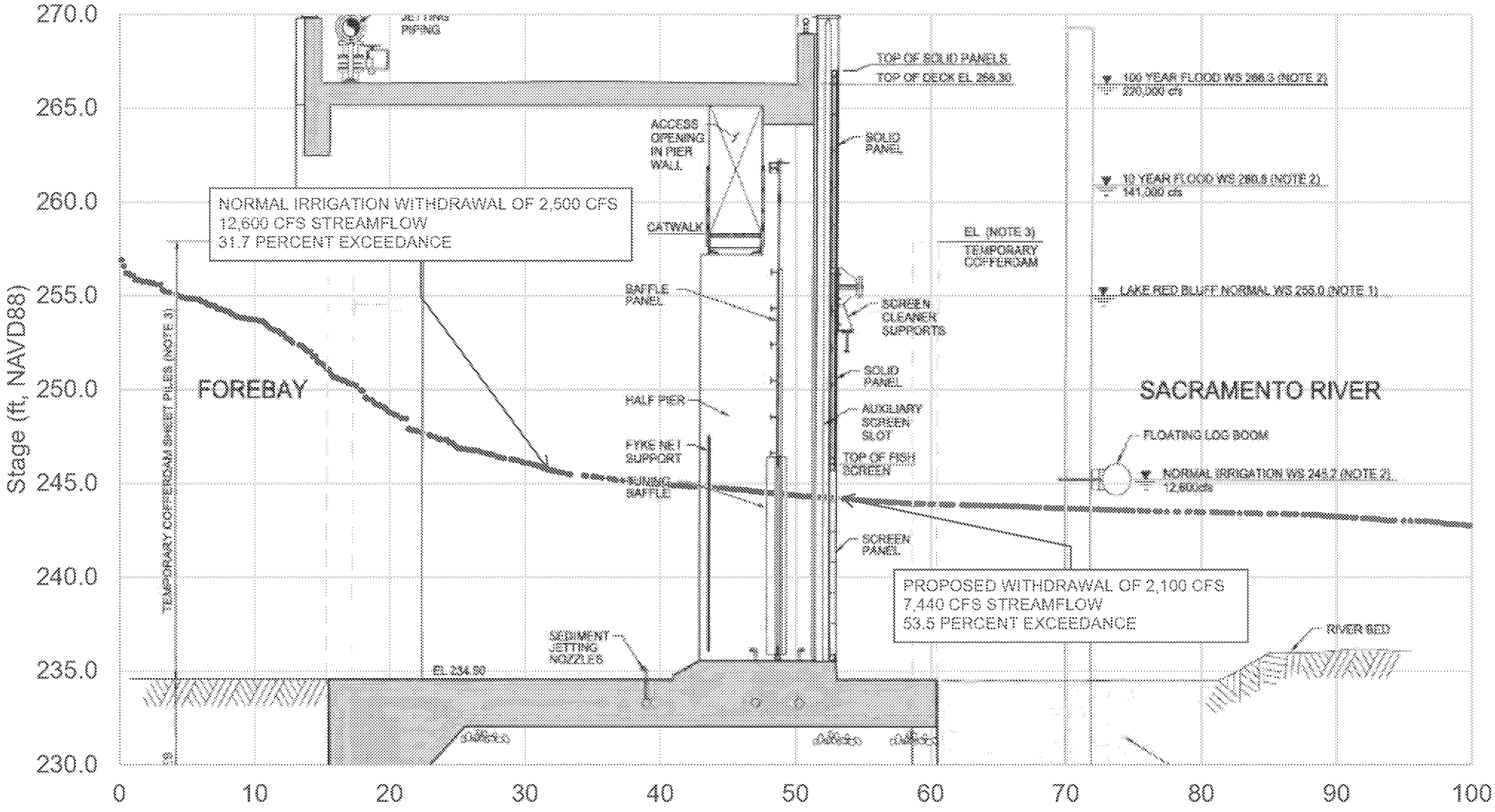
Stage Frequency Curve - February
Sacramento River at Red Bluff Diversion Dam (U/S Work Point)



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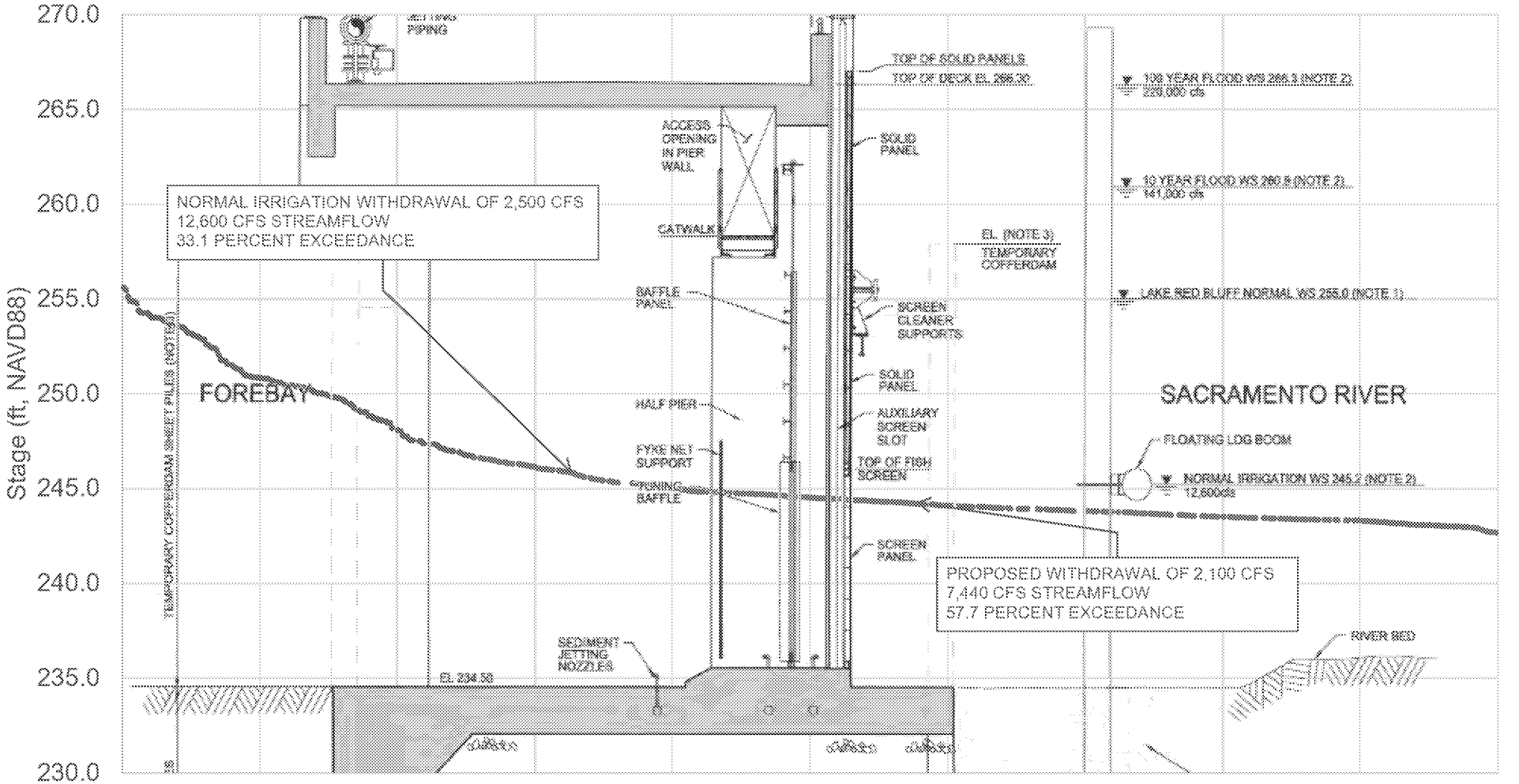
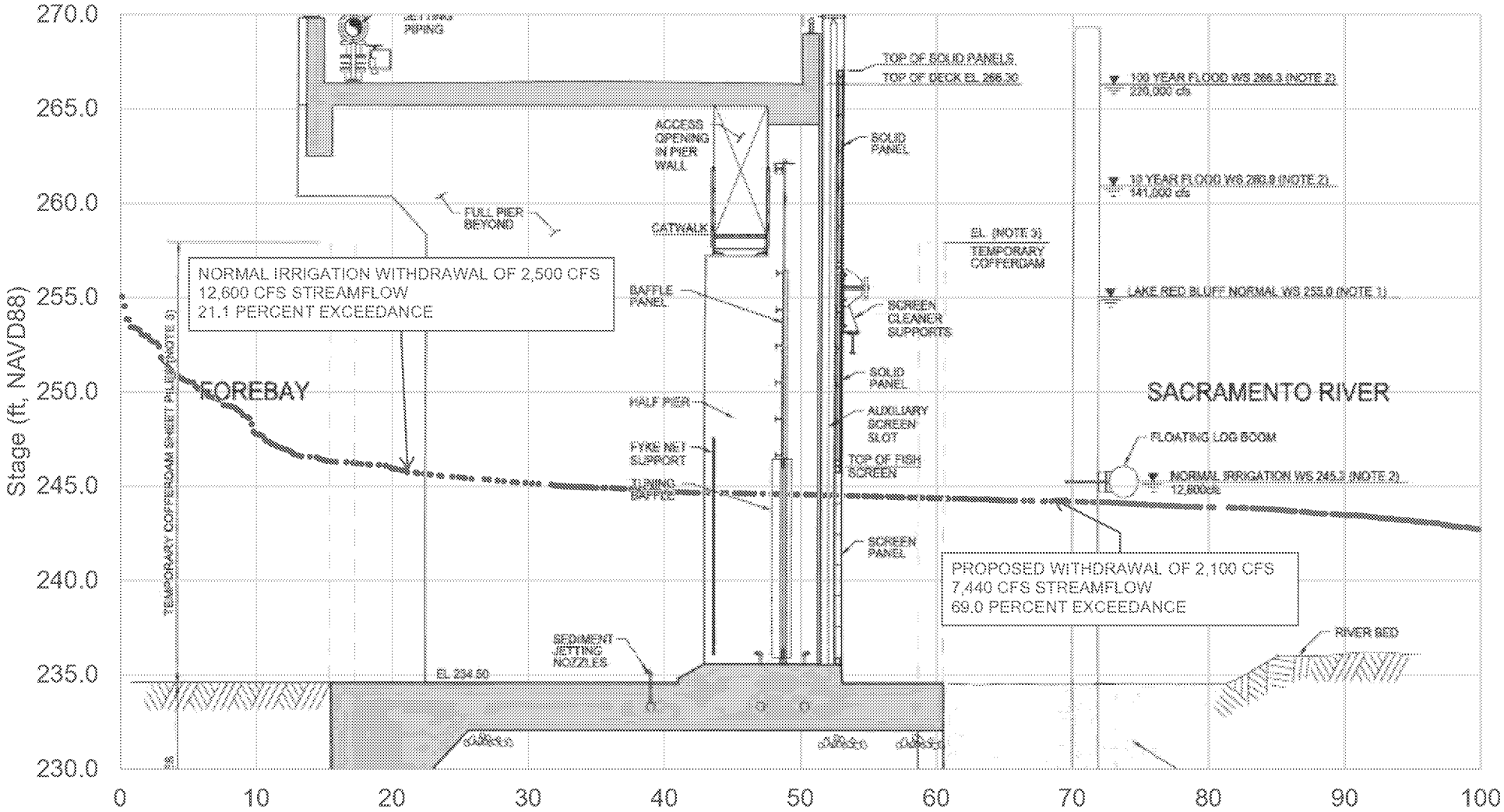
Stage Frequency Curve - March
Sacramento River at Red Bluff Diversion Dam (U/S Work Point)



(USGS Gage 11377100 Sacramento River above Bend Bridge near Red Bluff, CA; Average Daily Data from 1998 to 2019)

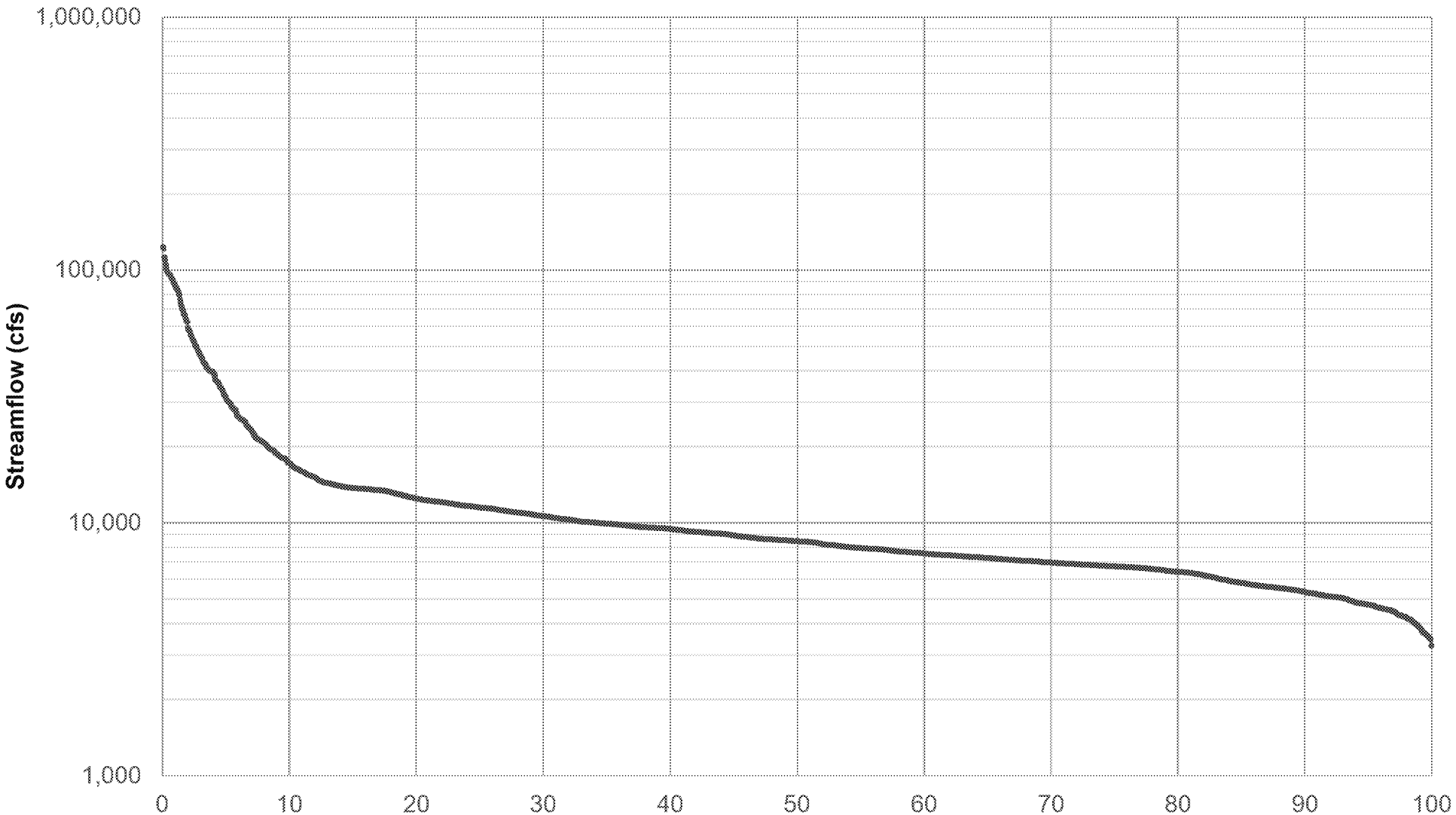
Stage Frequency Curve - April
Sacramento River at Red Bluff Diversion Dam (U/S Work Point)



(USGS Gage 11377100 Sacramento River above Bend Bridge near Red Bluff, CA; Average Daily Data from 1998 to 2019)

Attachment 2 – GCID Hamilton City

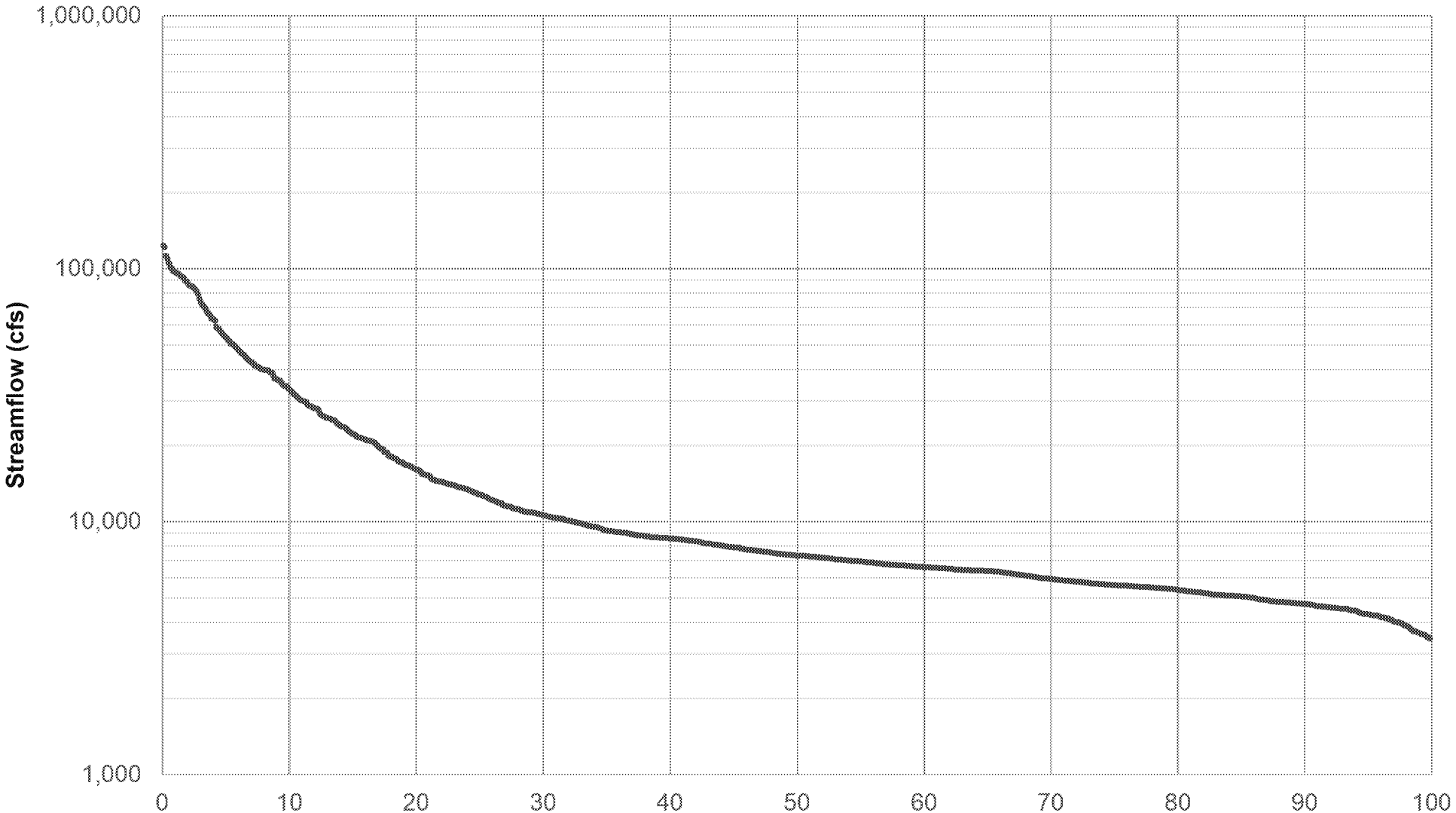
Flow-Duration Curve - Annual
Sacramento River Upstream from Oxbow



(GCID Average Daily Data from 1/1/2011 to 12/31/2018)

8/2/2019

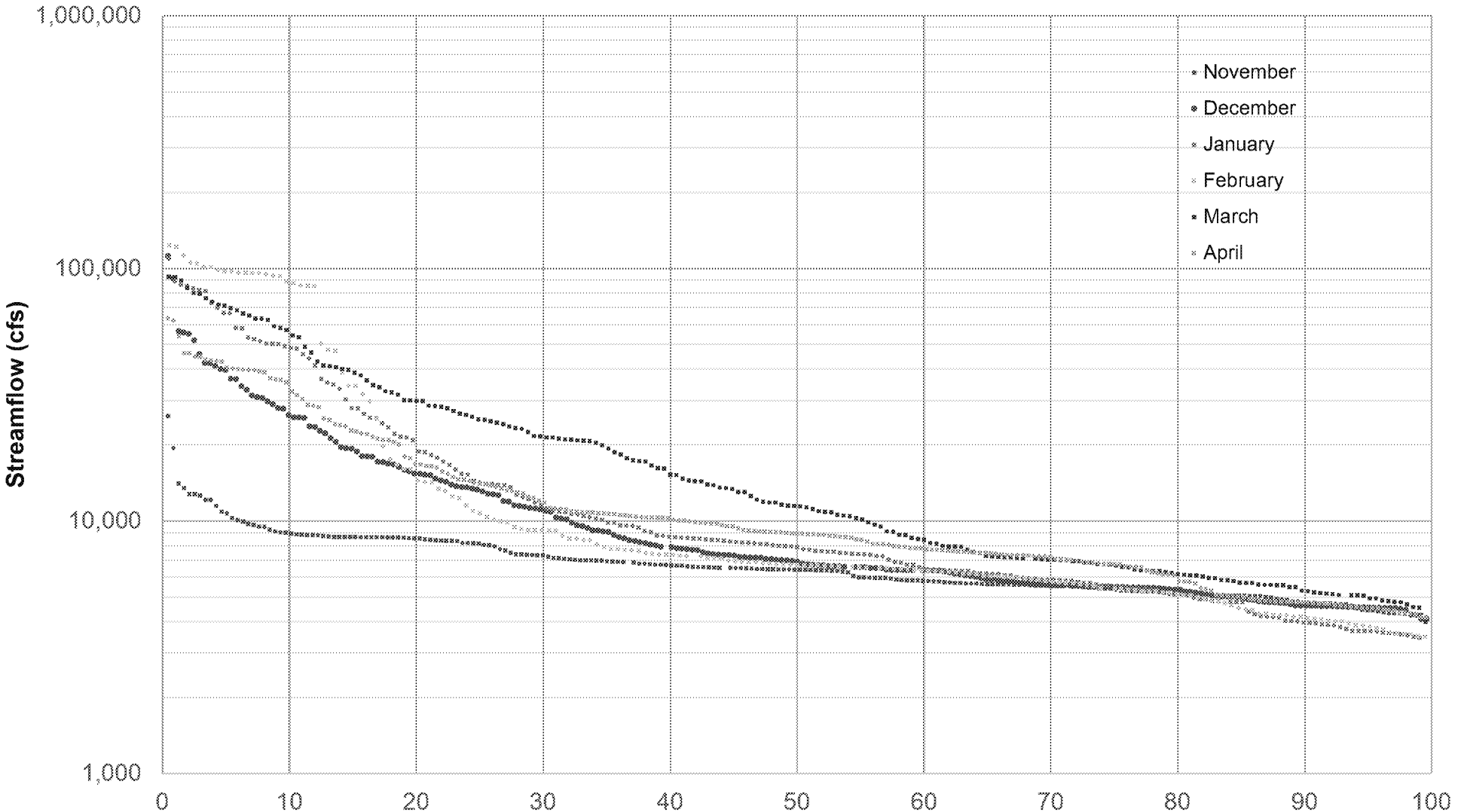
Flow-Duration Curve - November-April
Sacramento River Upstream from GCID Diversion



(GCID Average Daily Data from 1/1/2011 to 12/31/2018)

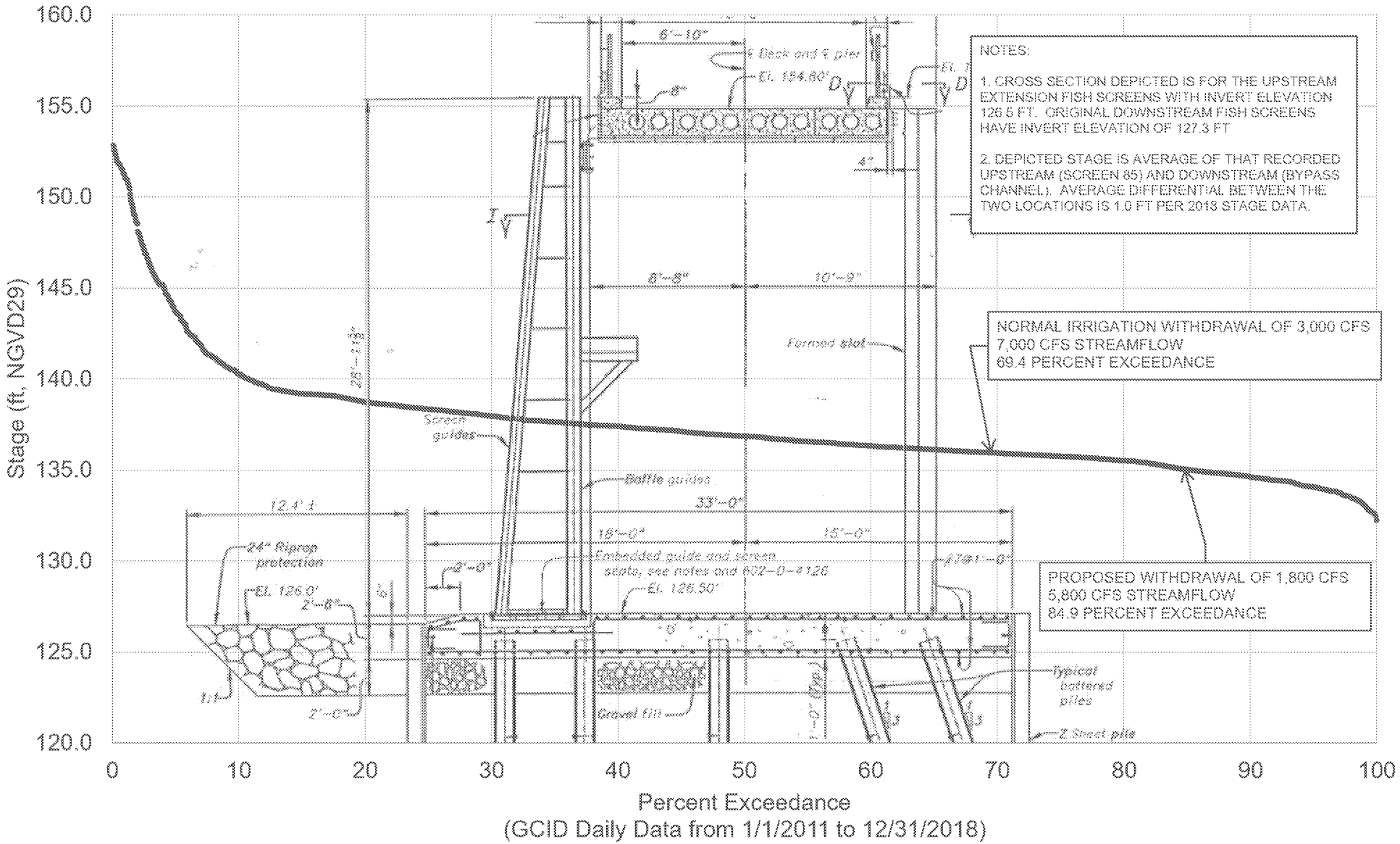
11/14/2019

Monthly Flow-Duration Curves - November-April
Sacramento River Upstream from GCID Diversion



11/14/2019

Stage Frequency Curve - Annual
Sacramento River at GCID Diversion Fish Screens



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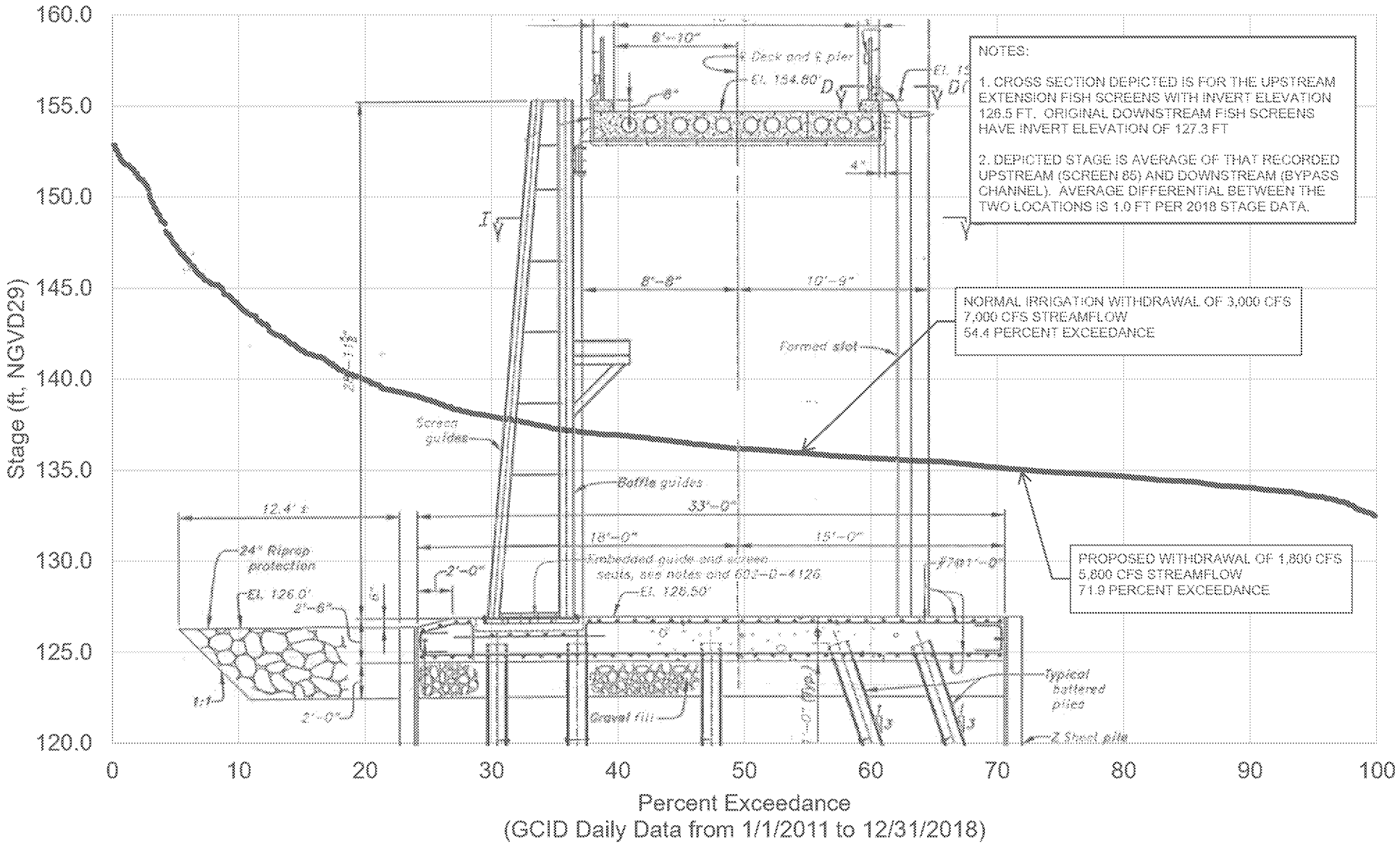
Stage Frequency Curve - November-April
Sacramento River at GCID Diversion Fish Screens



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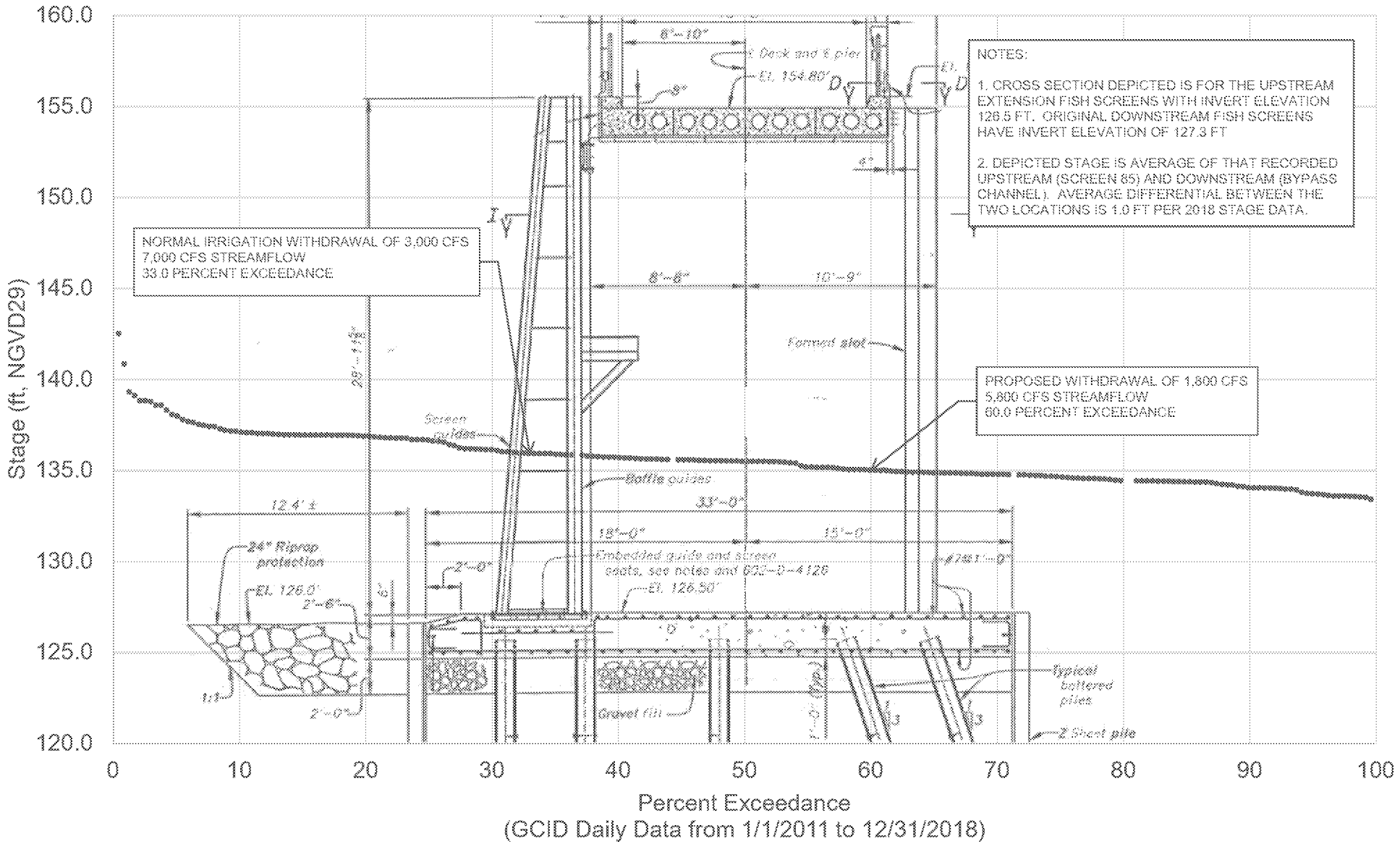
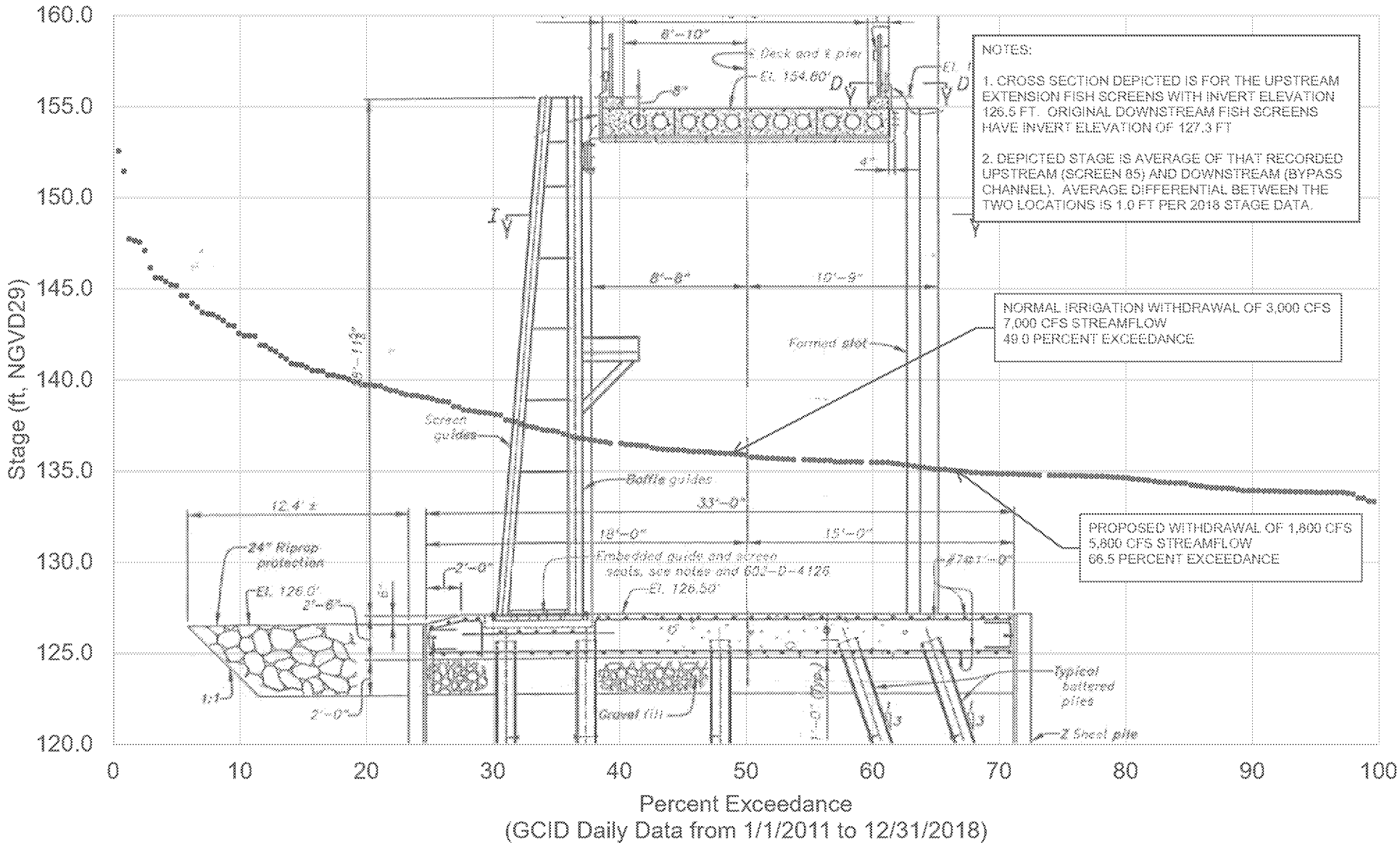
Stage Frequency Curve - November
Sacramento River at GCID Diversion Fish Screens



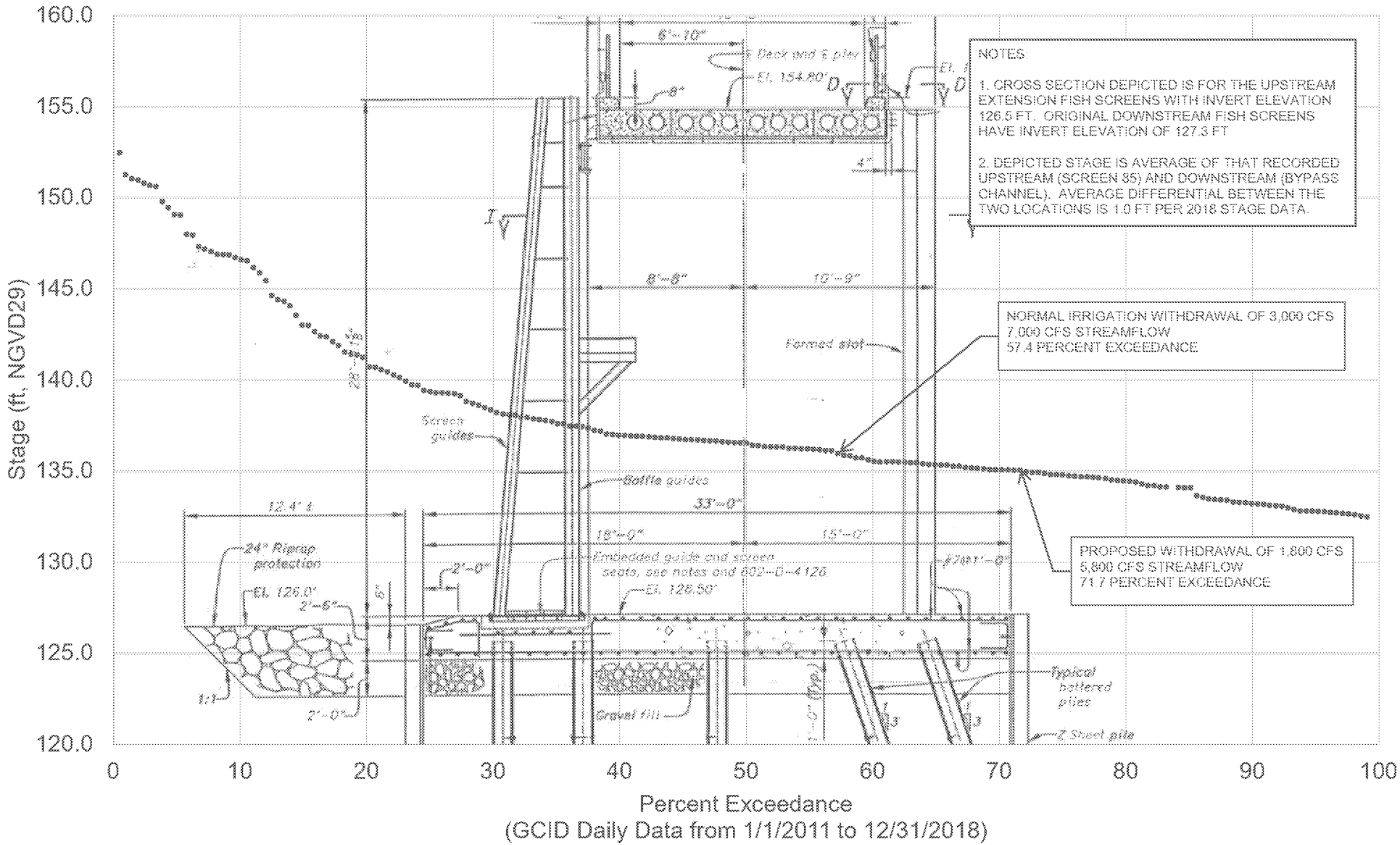
Draft_0011648

Stage Frequency Curve - December
Sacramento River at GCID Diversion Fish Screens



Draft_0011649

Stage Frequency Curve - January
Sacramento River at GCID Diversion Fish Screens



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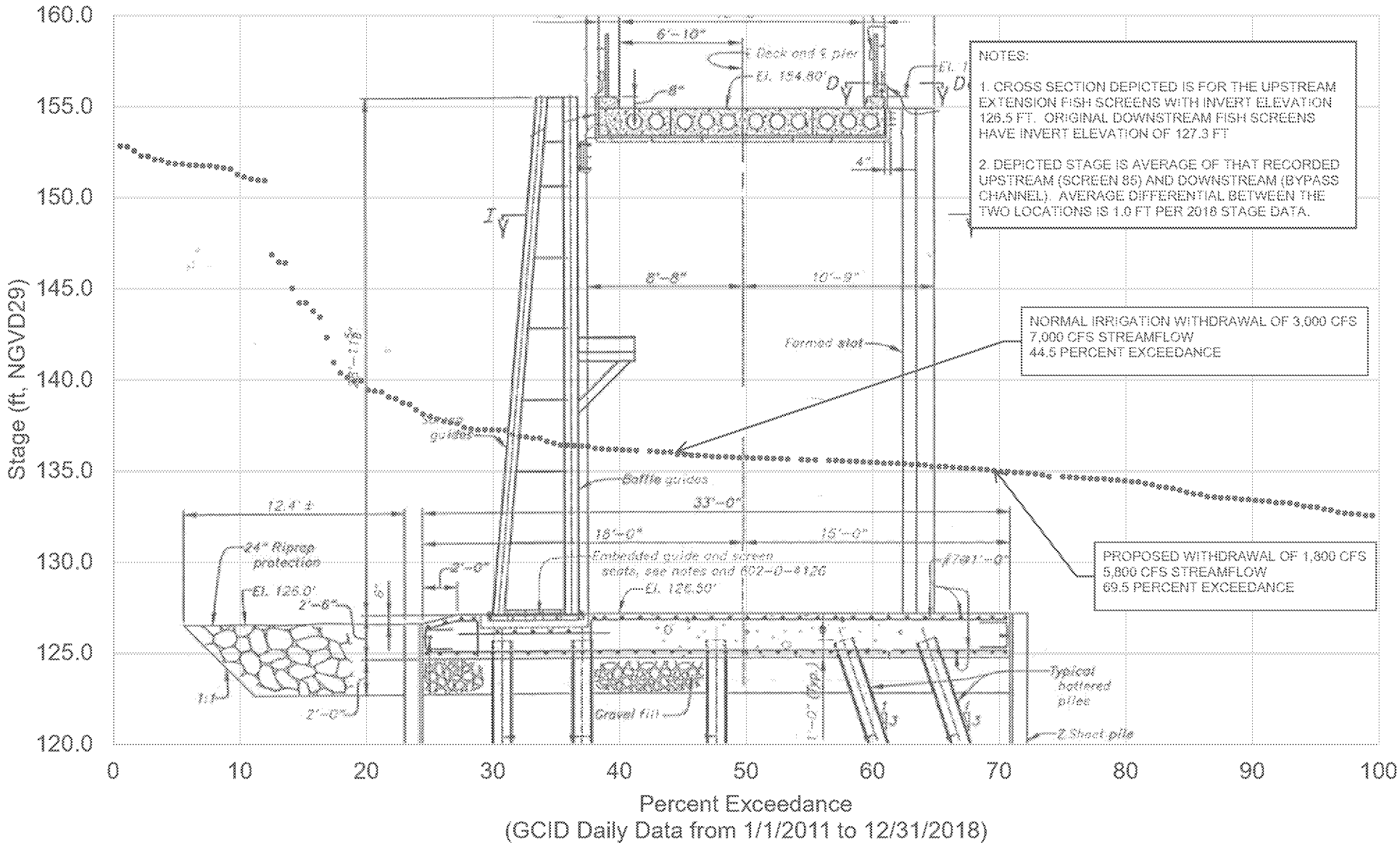
Stage Frequency Curve - February
Sacramento River at GCID Diversion Fish Screens



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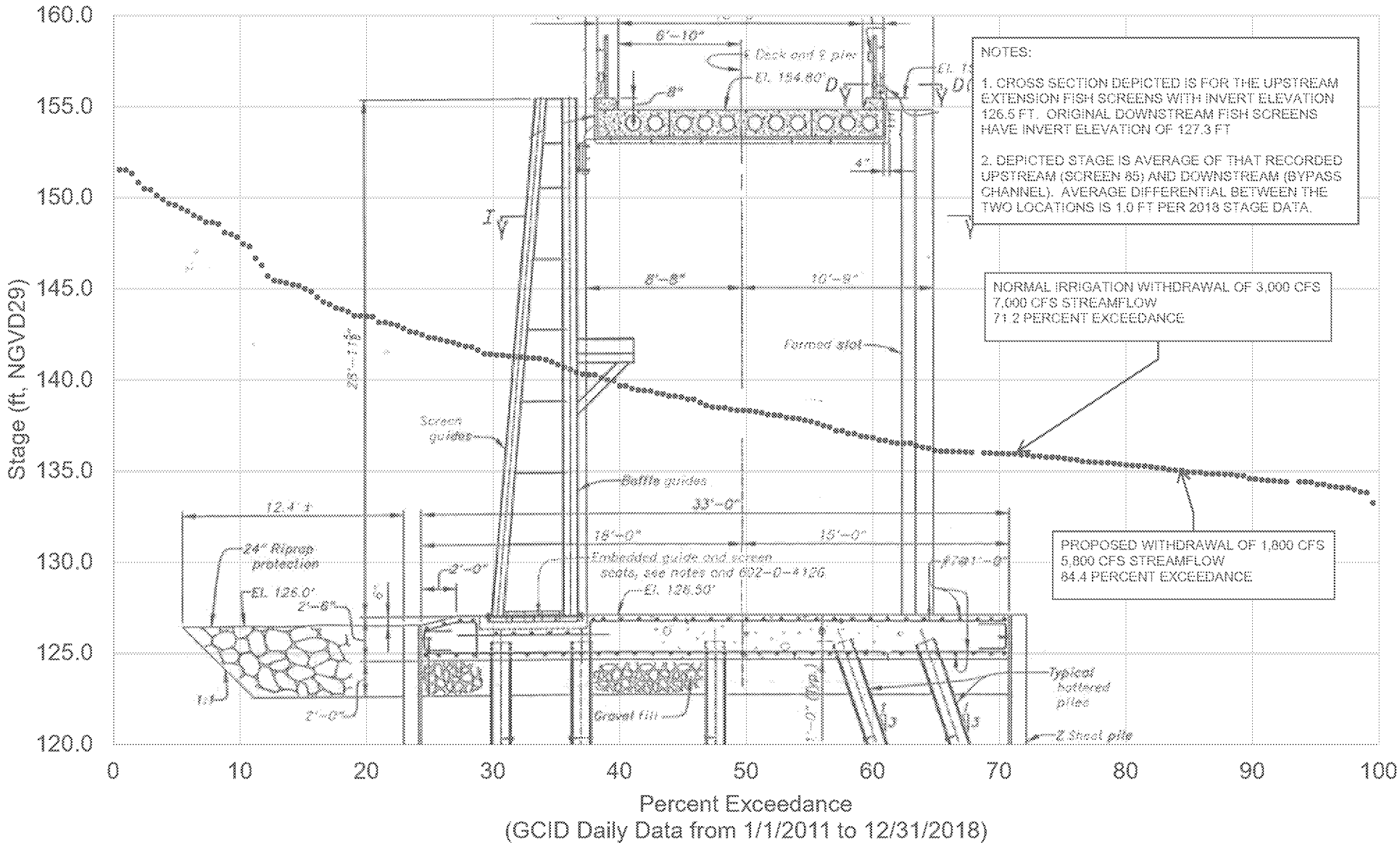
Stage Frequency Curve - March
Sacramento River at GCID Diversion Fish Screens



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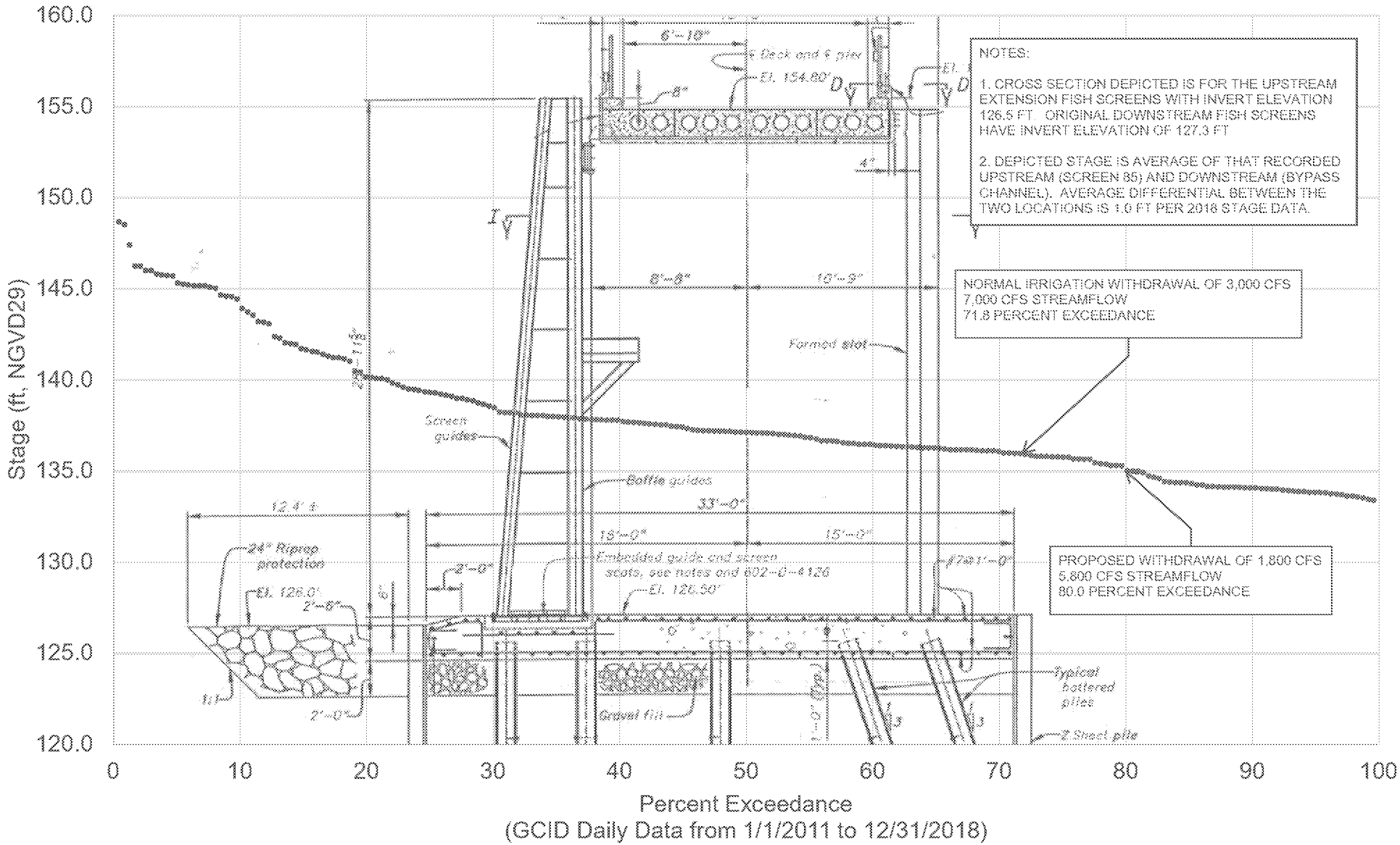
Stage Frequency Curve - April
Sacramento River at GCID Diversion Fish Screens



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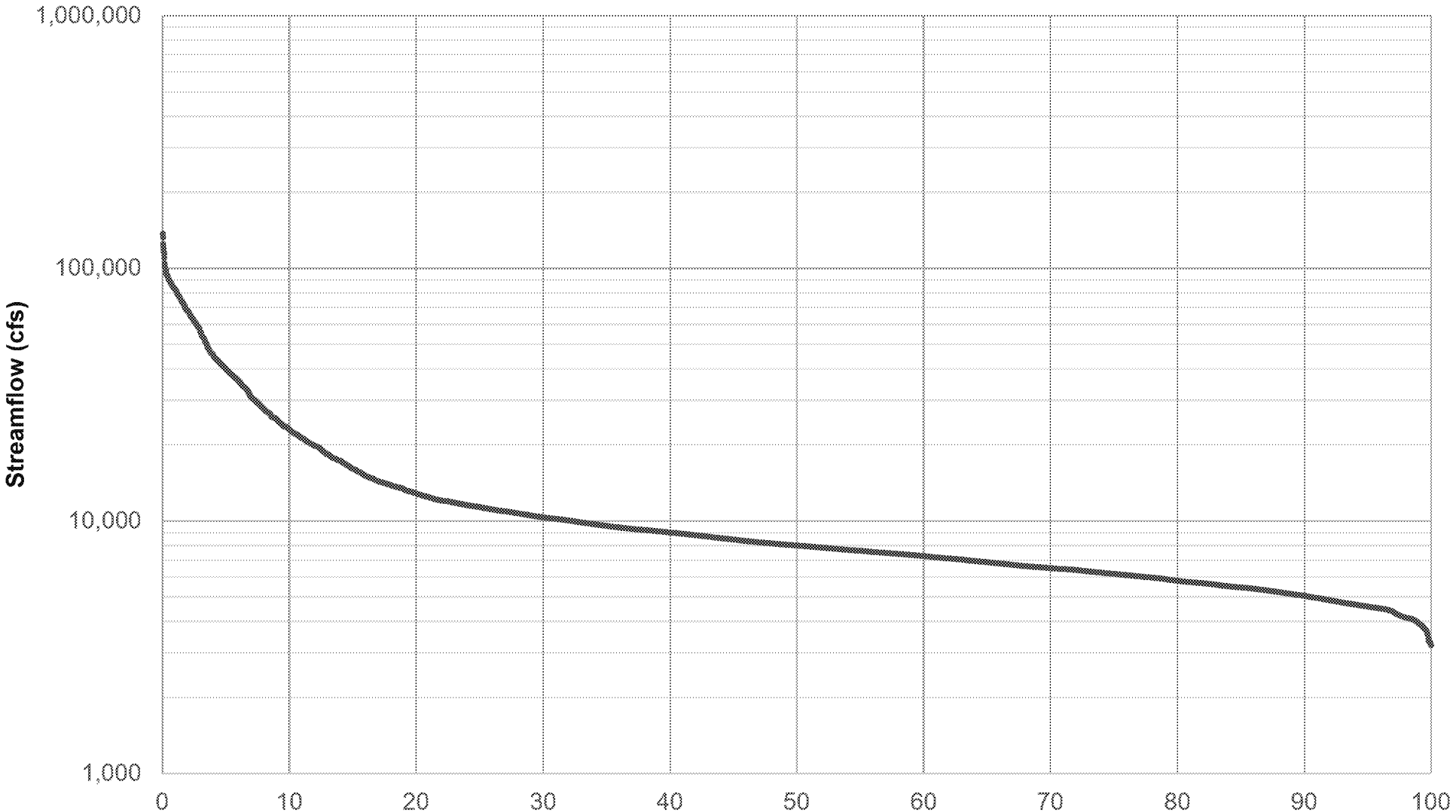
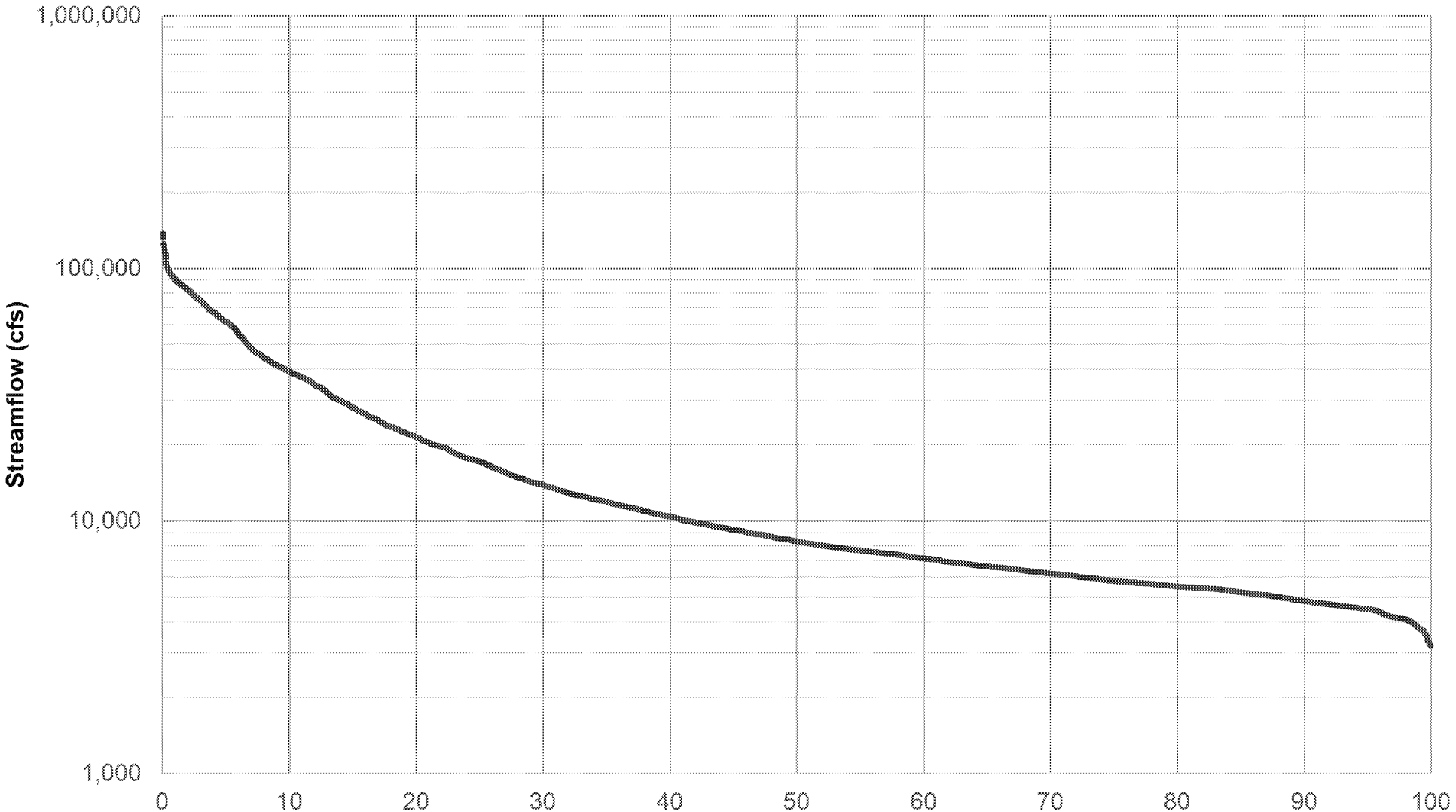
Attachment 3 – Delevan

Flow-Duration Curve - Annual
CA DWR Station ID: BTC; Sacramento River at Butte City



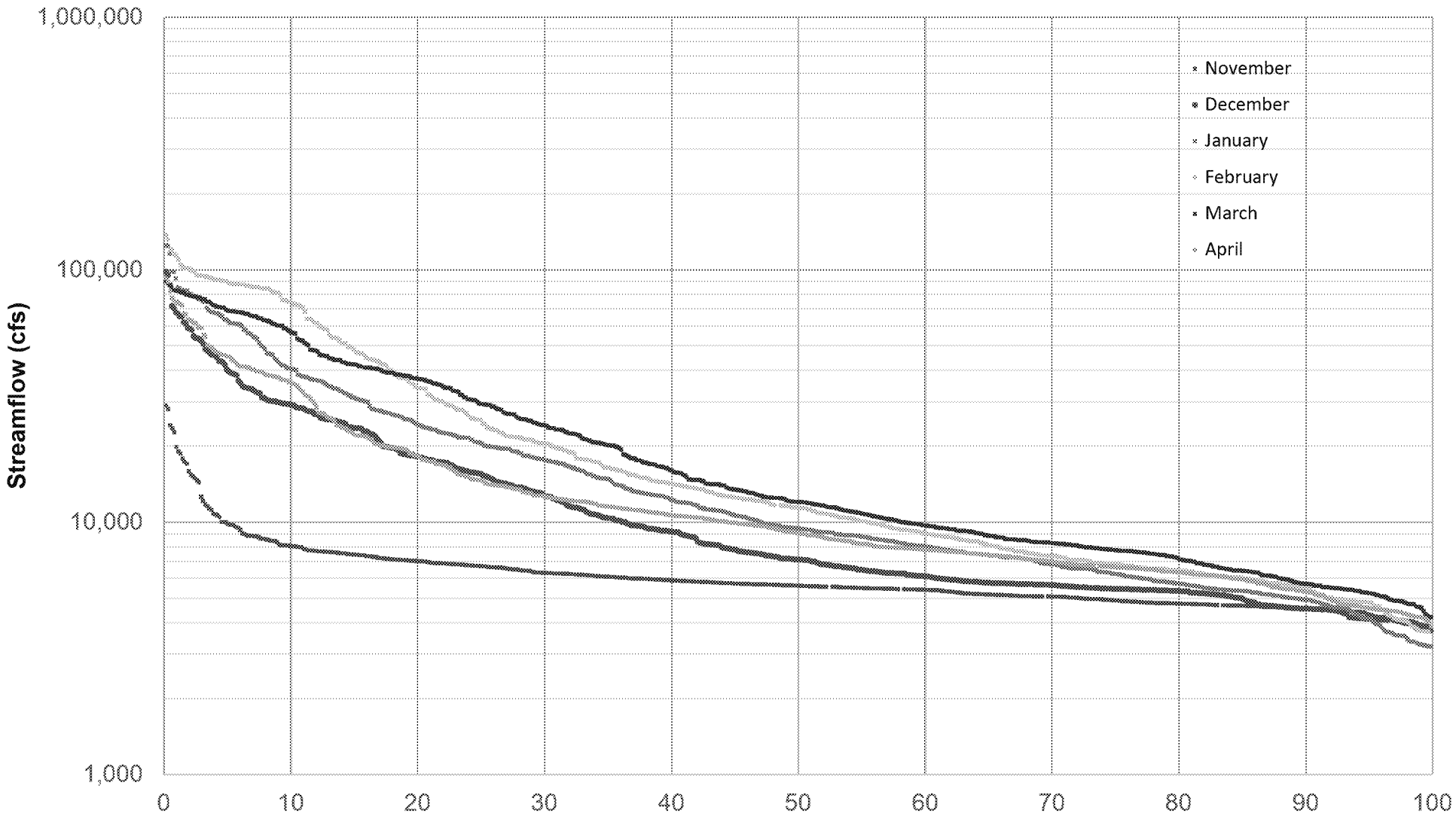
3/25/2020

Flow-Duration Curve - November-April
CA DWR Station ID: BTC; Sacramento River at Butte City



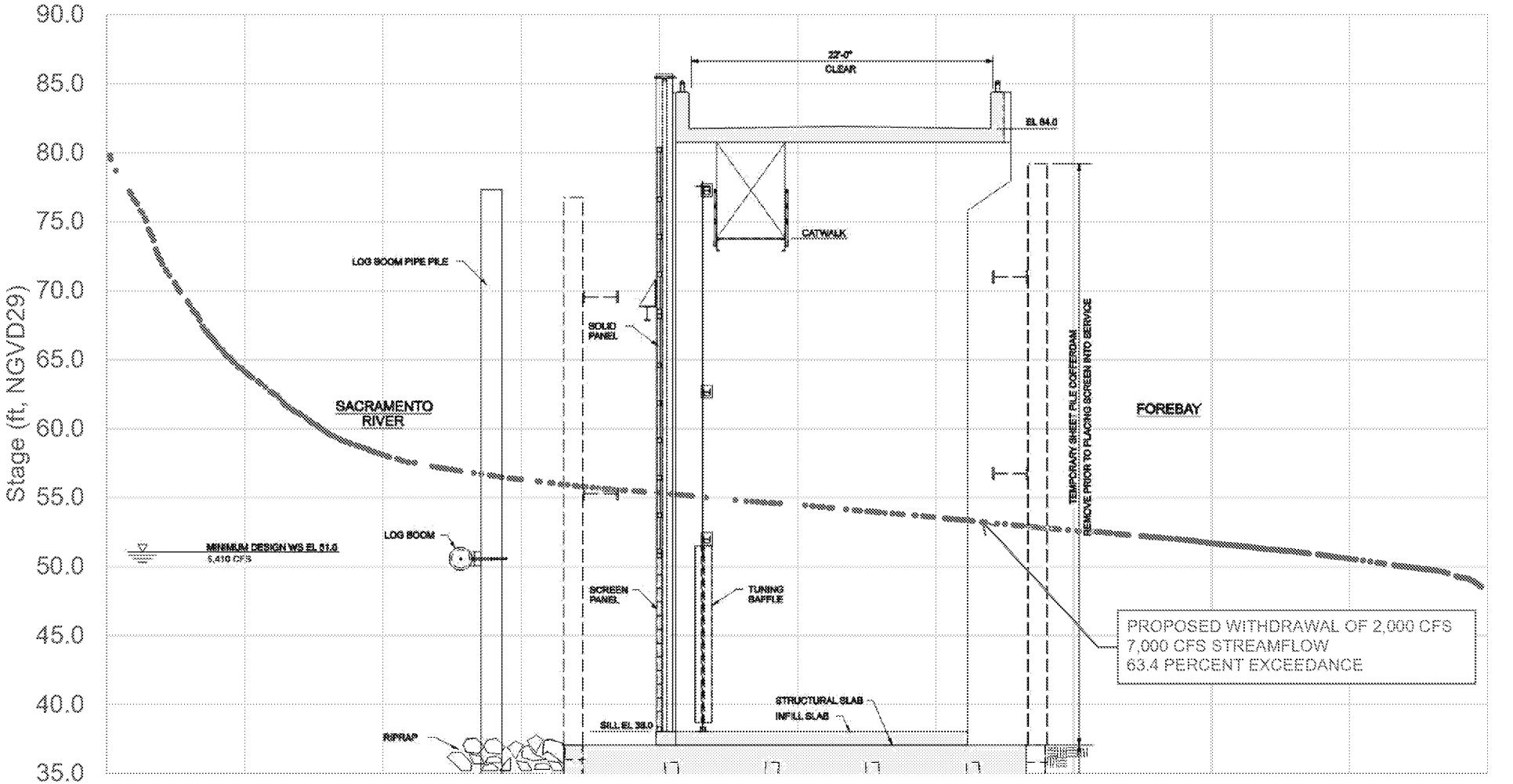
11/14/2019

Monthly Flow-Duration Curves - November-April
CA DWR Station ID: BTC; Sacramento River at Butte City



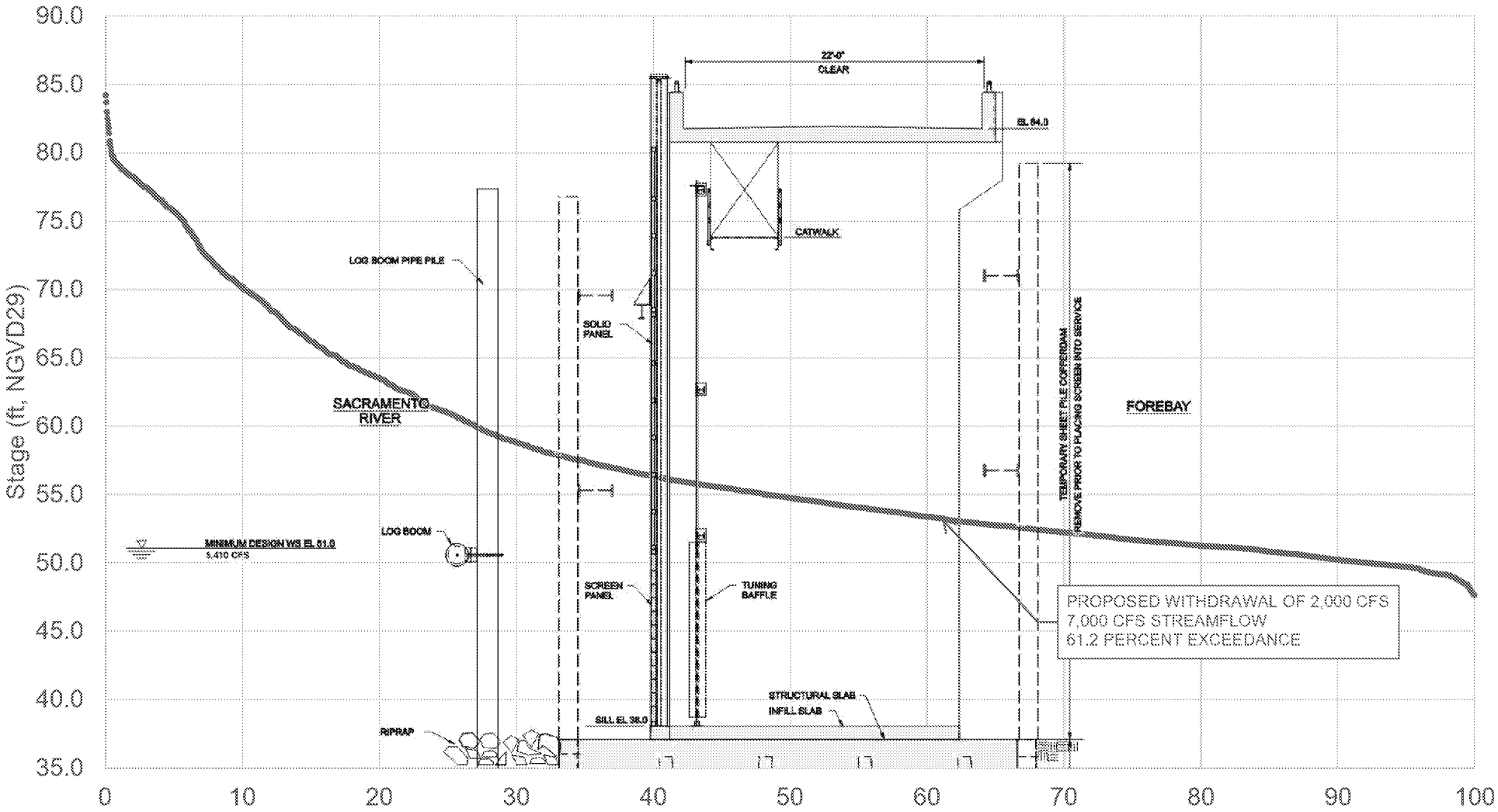
11/14/2019

Stage Frequency Curve - Annual
Sacramento River at Butte City, CA



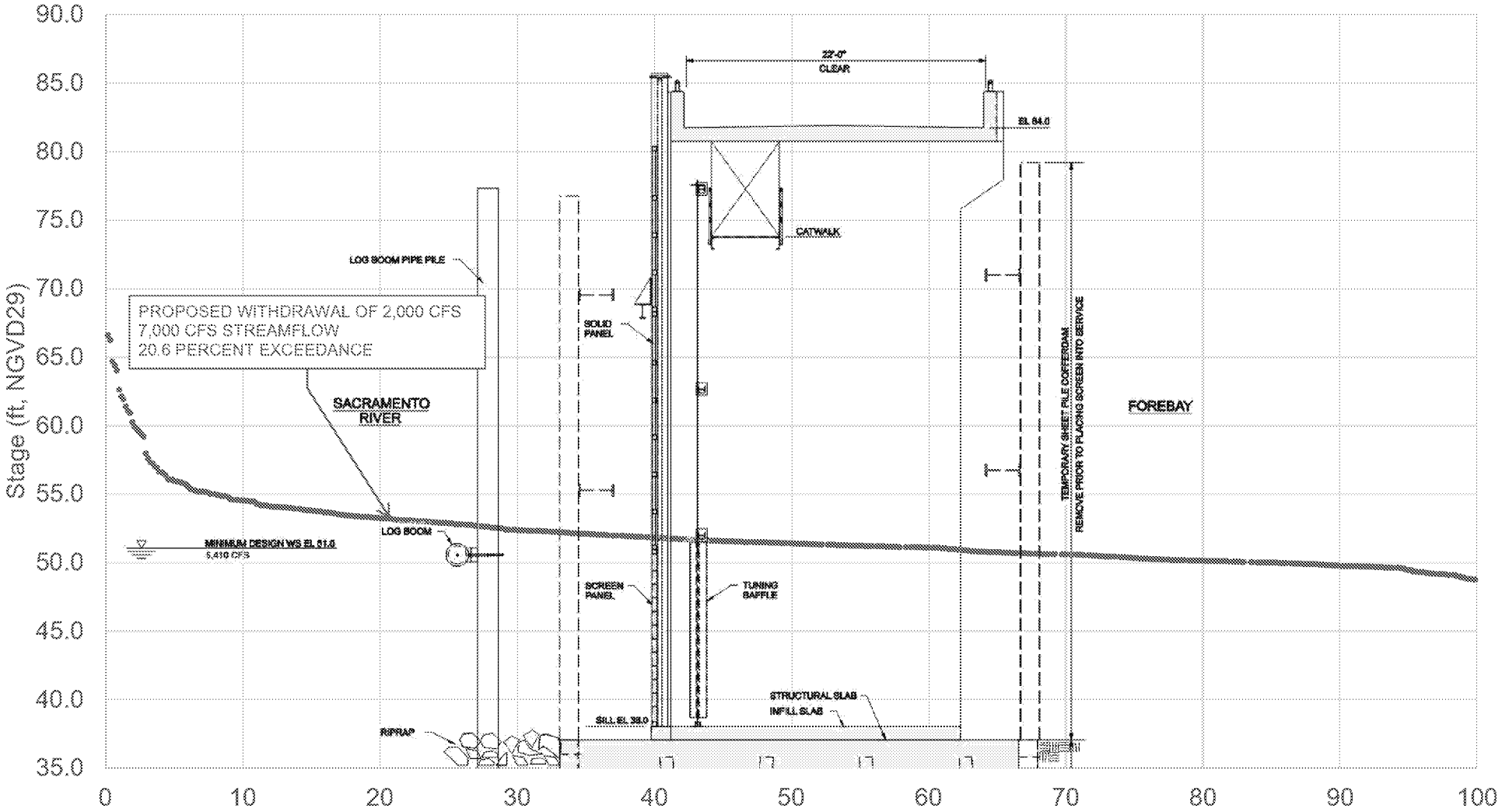
(CA Dept of Water Resources Station ID BTC: SACRAMENTO RIVER AT BUTTE CITY;
Average Daily Data from January 1998 - April 2019)

Stage Frequency Curve - November-April
Sacramento River at Butte City, CA



(CA Dept of Water Resources Station ID BTC: SACRAMENTO RIVER AT BUTTE CITY;
Average Daily Data from January 1998 - April 2019)

Stage Frequency Curve - November
Sacramento River at Butte City, CA



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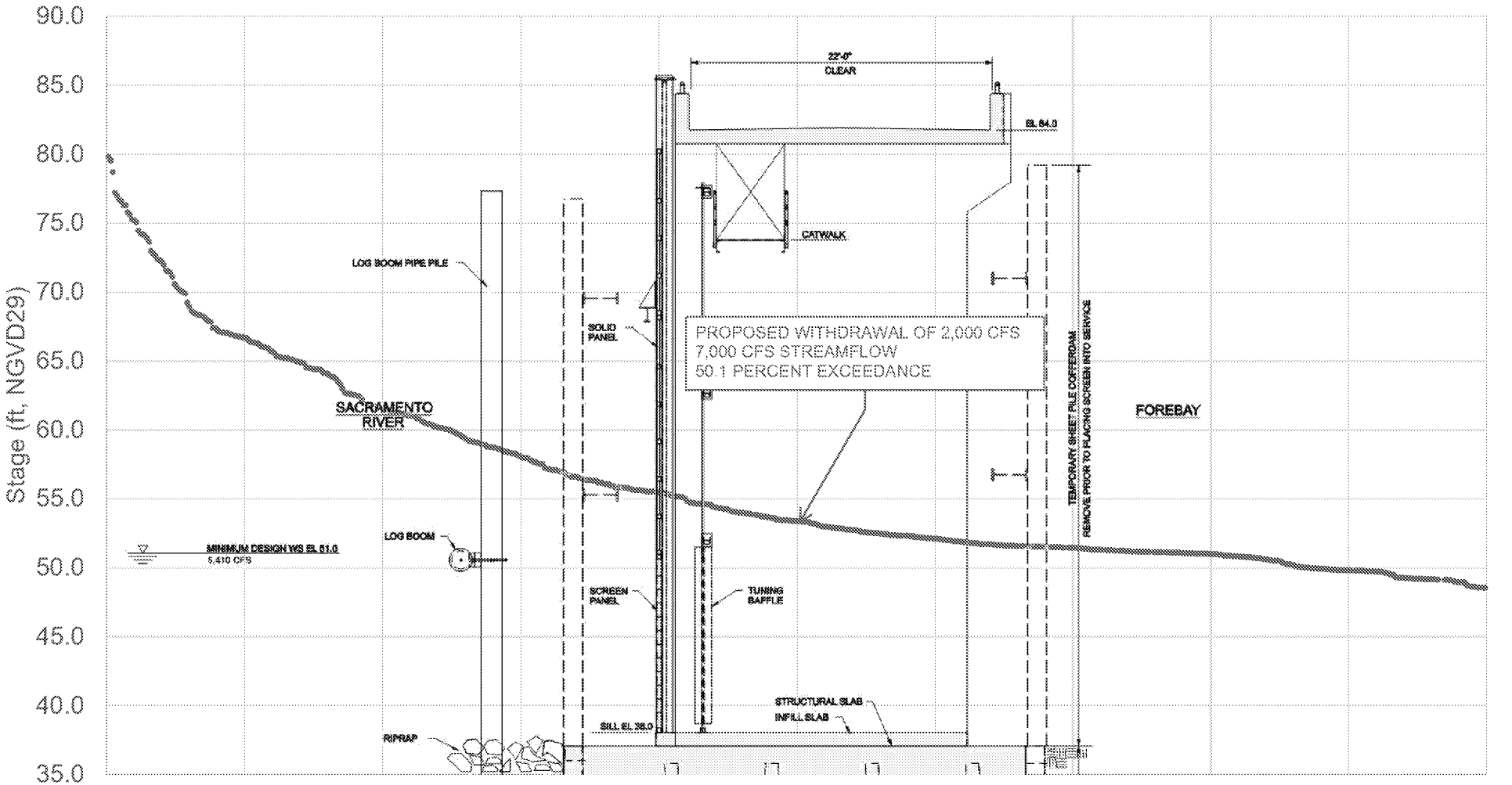
Average Daily Data from January 1998 - April 2019)

Stage Frequency Curve - December
Sacramento River at Butte City, CA



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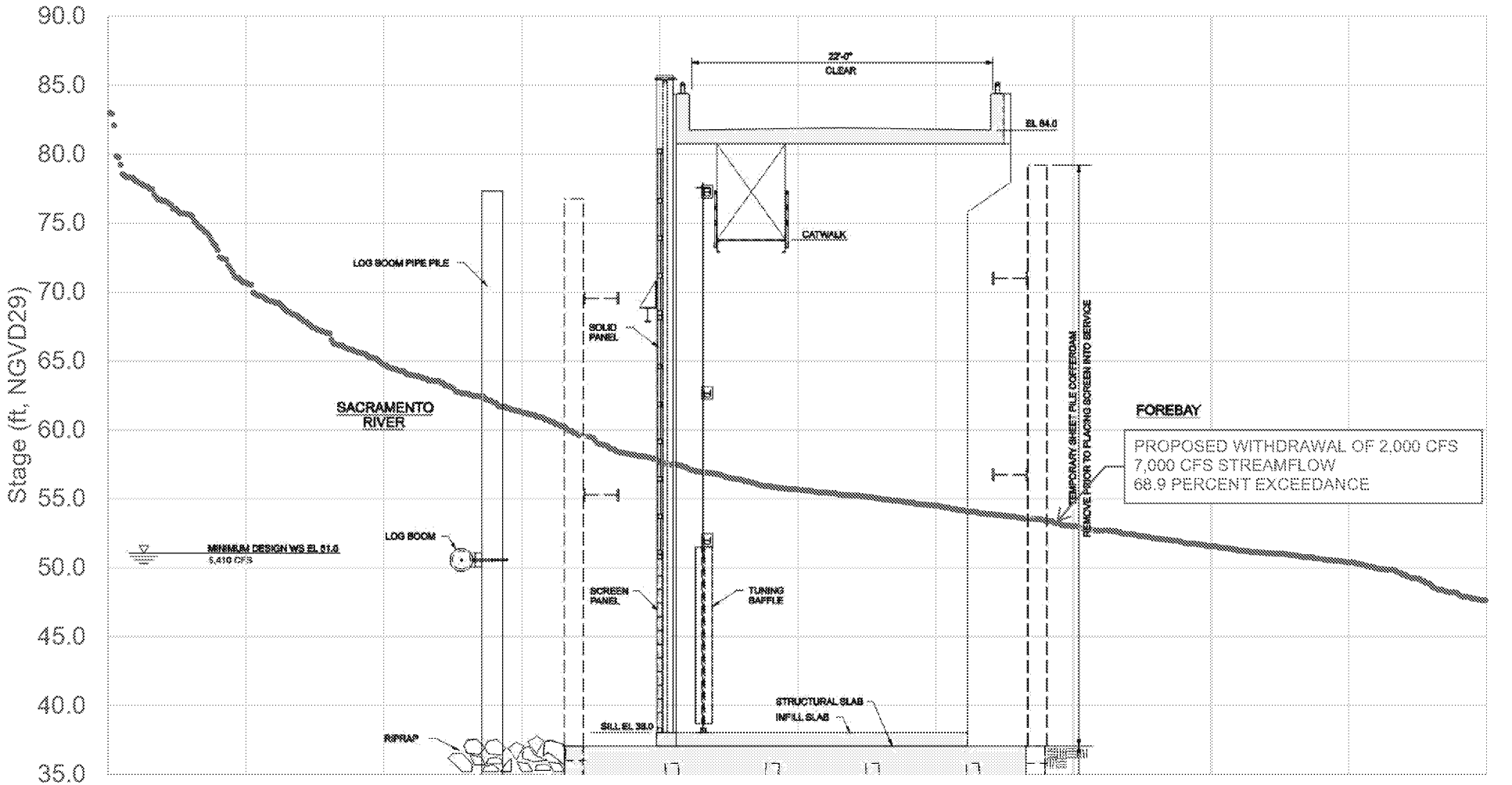
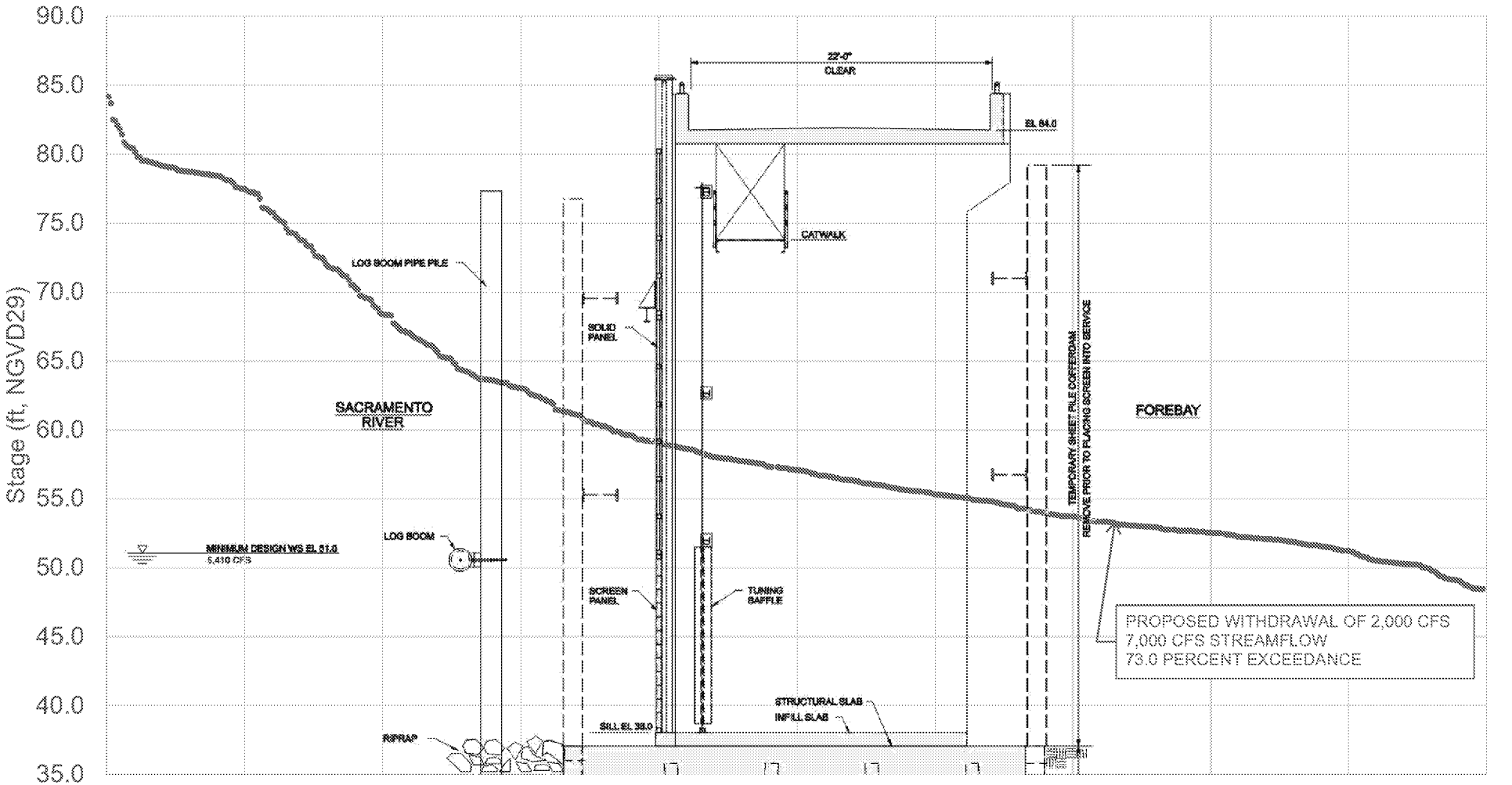
Average Daily Data from January 1998 - April 2019)

Stage Frequency Curve - January
Sacramento River at Butte City, CA



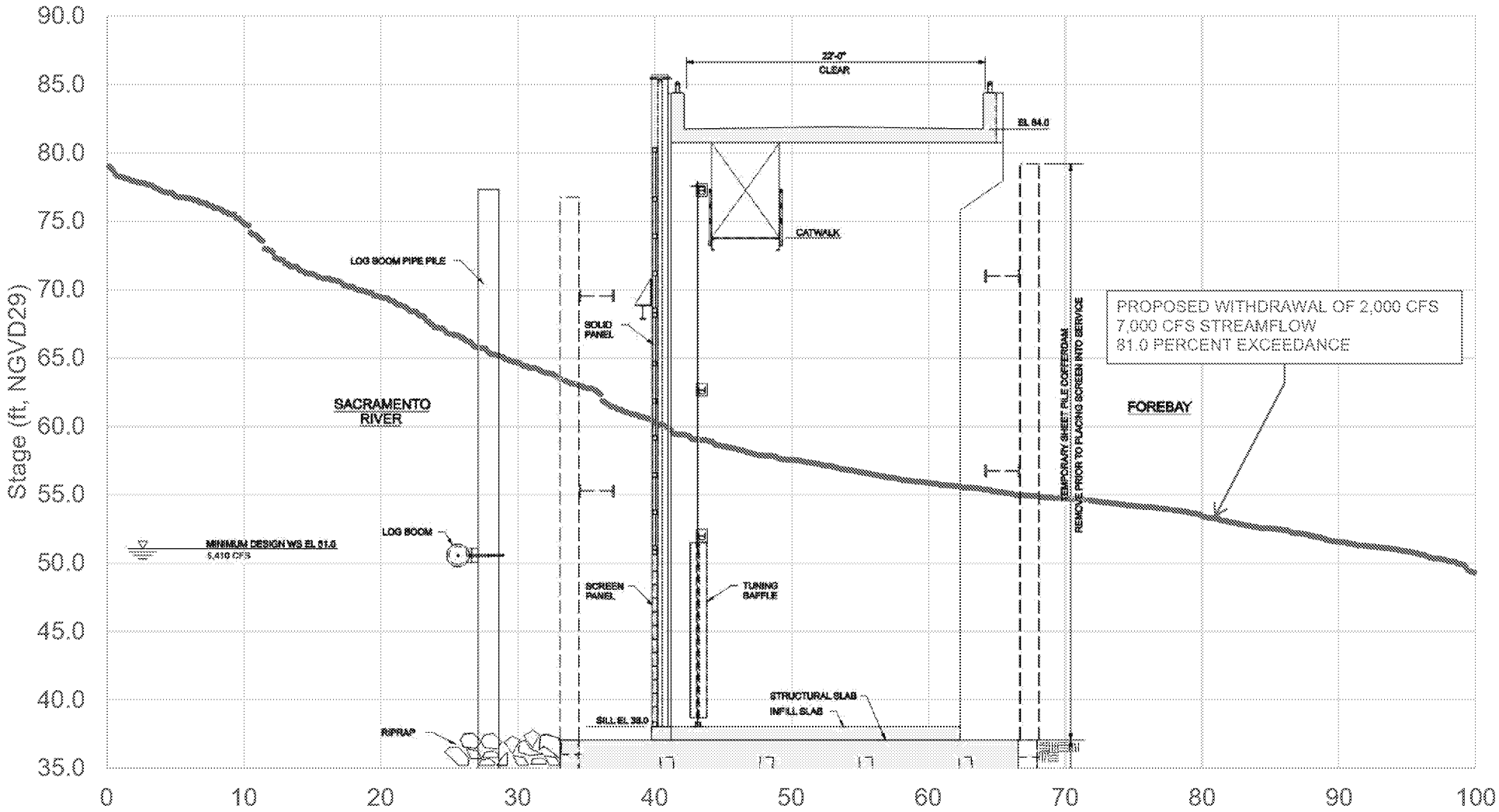
(CA Dept of Water Resources Station ID BTC: SACRAMENTO RIVER AT BUTTE CITY;
Average Daily Data from January 1998 - April 2019)

Stage Frequency Curve - February
Sacramento River at Butte City, CA



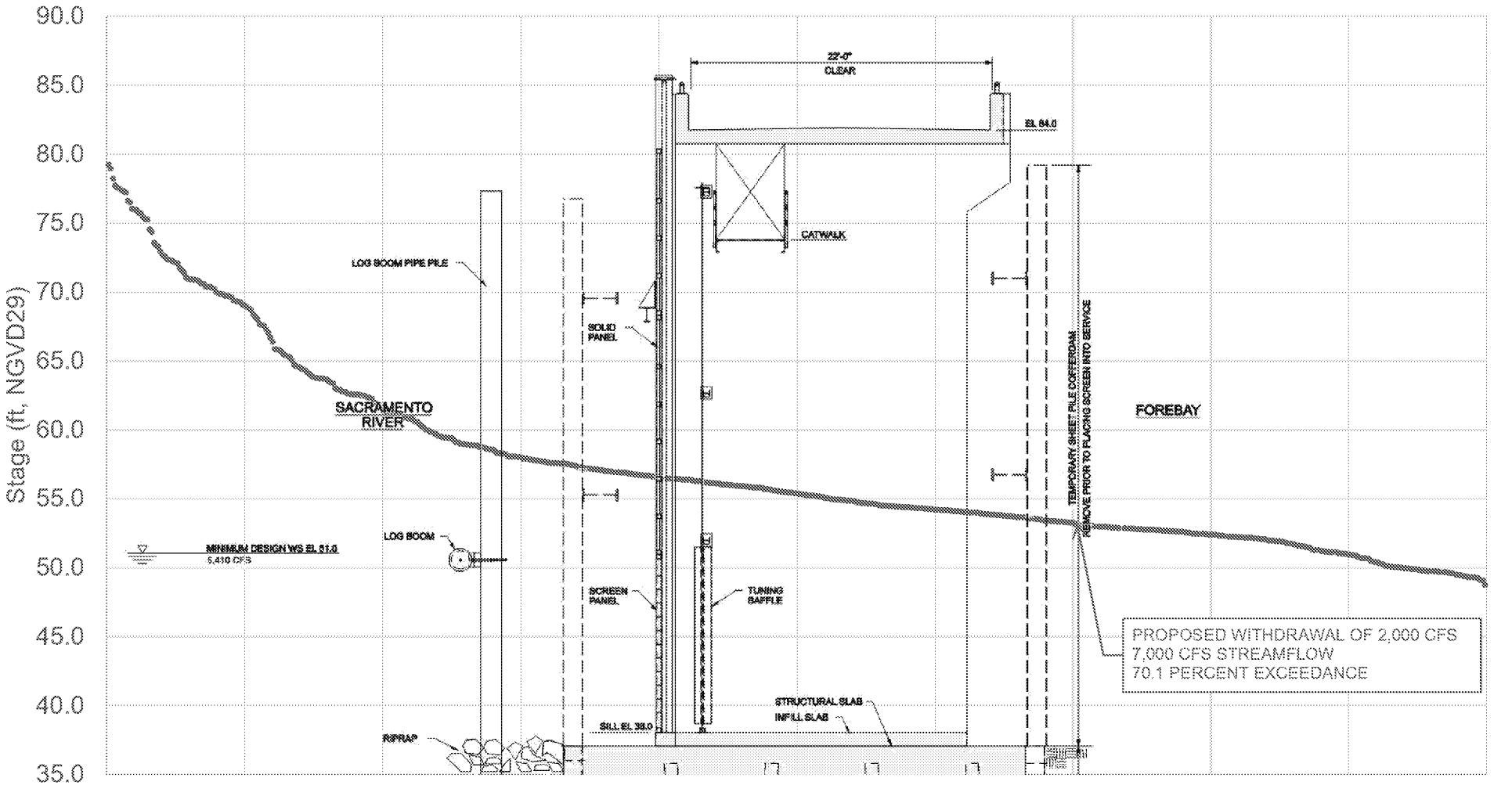
(CA Dept of Water Resources Station ID BTC: SACRAMENTO RIVER AT BUTTE CITY;
Average Daily Data from January 1998 - April 2019)

Stage Frequency Curve - March
Sacramento River at Butte City, CA



(CA Dept of Water Resources Station ID BTC: SACRAMENTO RIVER AT BUTTE CITY;
Average Daily Data from January 1998 - April 2019)

Stage Frequency Curve - April
Sacramento River at Butte City, CA



(CA Dept of Water Resources Station ID BTC: SACRAMENTO RIVER AT BUTTE CITY;
Average Daily Data from January 1998 - April 2019)

From: Laurie Warner Herson [laurie.warner.herson@phenixenv.com]
Sent: 7/28/2021 2:49:52 PM
To: Alicia Forsythe [aforsythe@sitesproject.org]; Spranza, John [john.spranza@hdrinc.com]; Jim Lecky (jim.Lecky@icf.com) [jim.Lecky@icf.com]; Hendrick, Mike [Mike.Hendrick@icf.com]; Hassrick, Jason [Jason.Hassrick@icf.com]
Subject: RE: Sites - Excerpts from Appendix 2D Regarding Fish Studies

Hi Ali,

From a CEQA perspective, the edits look ok to me - remaining text identifies the purpose and intended outcomes of the Fish Monitoring and Technical Studies Plan and provides a list of the potential studies. If this is intended as mitigation or to otherwise support a finding of less than significant impact, we will likely get comments that this is deferral whether the additional detail for each study is included or not.

Laurie

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Wednesday, July 28, 2021 9:52 AM
To: Spranza, John <john.spranza@hdrinc.com>; Jim Lecky (jim.Lecky@icf.com) <jim.Lecky@icf.com>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Hendrick, Mike <Mike.Hendrick@icf.com>; Hassrick, Jason <Jason.Hassrick@icf.com>
Subject: RE: Sites - Excerpts from Appendix 2D Regarding Fish Studies

Team – We made some changes to summarize Appendix 2D fish studies based on what we heard from Holly/Thad and what I expect to hear from Jeff Sutton tomorrow. BTW – I expect Jeff to have stronger feelings tomorrow than what we heard from Holly/Thad.

The revised file is located here:

https://sitesreservoirproject.sharepoint.com/:w:/r/envpermitting/Working%20Documents/PublicDraft_App2D_BMPs_07232021_Revised.docx?d=we4fbe5a5ce354d5188c3084c5e4ce1c0&csf=1&web=1&e=KxsvfP

Can folks take a look at this and we can maybe discuss via email or tonight/tomorrow before our meeting with Jeff tomorrow at 3PM? Sorry for the rush on this.

And I know folks aren't likely super excited about this. I am trying to find the compromise space between TCCA/GCID concerns and our approach in the document. Section 2.5 of our JPA bylaws identify that GCID and TCCA have to approve anything that might result in changes, impacts, direct or indirect effects to their operations before we can take an action. So they have a "veto" power here to actually releasing the document. I will need them to approve the release of the document to get this thing out. So trying to find the happy space between all of us.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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-----Original Appointment-----
From: Alicia Forsythe
Sent: Thursday, July 22, 2021 7:28 AM
To: Alicia Forsythe; Holly Dawley; Thad Bettner (tbettner@gcid.net); John Spranza (john.spranza@hdrinc.com); Jim Lecky (jim.Lecky@icf.com); Laurie Warner Herson; Hendrick, Mike; Hassrick, Jason
Cc: Holly Dawley
Subject: Sites - Excerpts from Appendix 2D Regarding Fish Studies
When: Tuesday, July 27, 2021 10:30 AM-11:30 AM (UTC-08:00) Pacific Time (US & Canada).
Where: Microsoft Teams Meeting

Hi all – Moving up to 10:30 to 11:30. Let me know if this does not work for you.

Microsoft Teams meeting

Join on your computer or mobile app
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+1 916-538-7066,,240416569# United States, Sacramento
Phone Conference ID: 240 416 569#
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From: Spranza, John [John.Spranza@hdrinc.com]
Sent: 7/28/2021 7:27:07 PM
To: Alicia Forsythe [aforsythe@sitesproject.org]; Lecky, Jim [jim.Lecky@icf.com]; Laurie Warner Herson [laurie.warner.herson@phenixenv.com]; Hendrick, Mike [Mike.Hendrick@icf.com]; Hassrick, Jason [Jason.Hassrick@icf.com]
Subject: RE: Sites - Excerpts from Appendix 2D Regarding Fish Studies

I've reviewed it and given Jeff's concerns, am okay with it. I would look to planning for confirmation on the CEQA/NEPA sufficiency component.

John Spranza

D 916.679.8858 M 818.640.2487

From: Alicia Forsythe <aforsythe@sitesproject.org>
Sent: Wednesday, July 28, 2021 7:12 PM
To: Spranza, John <john.spranza@hdrinc.com>; Lecky, Jim <jim.Lecky@icf.com>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Hendrick, Mike <Mike.Hendrick@icf.com>; Hassrick, Jason <Jason.Hassrick@icf.com>
Subject: RE: Sites - Excerpts from Appendix 2D Regarding Fish Studies
Importance: High

CAUTION: [EXTERNAL] This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi all – I am sorry to bug, but I could use any feedback ASAP. I need to get a track changes version of the document out to Jeff ASAP tomorrow to head off concerns. Please let me know if you have any concerns with this summary approach by 10 AM tomorrow.

Ali

Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | www.SitesProject.org

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From: Alicia Forsythe
Sent: Wednesday, July 28, 2021 9:52 AM
To: John Spranza (john.spranza@hdrinc.com) <john.spranza@hdrinc.com>; Jim Lecky (jim.Lecky@icf.com) <jim.Lecky@icf.com>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Hendrick, Mike <Mike.Hendrick@icf.com>; Hassrick, Jason <Jason.Hassrick@icf.com>
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https://sitesreservoirproject.sharepoint.com/:w:/r/envpermitting/Working%20Documents/PublicDraft_App2D_BMPs_07232021_Revised.docx?d=we4fbe5a5ce354d5188c3084c5e4ce1c0&csf=1&web=1&e=KxsvfP

Can folks take a look at this and we can maybe discuss via email or tonight/tomorrow before our meeting with Jeff tomorrow at 3PM? Sorry for the rush on this.

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Ali

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-----Original Appointment-----
From: Alicia Forsythe
Sent: Thursday, July 22, 2021 7:28 AM
To: Alicia Forsythe; Holly Dawley; Thad Bettner (tbettner@gcid.net); John Spranza (john.spranza@hdrinc.com); Jim Lecky (jim.Lecky@icf.com); Laurie Warner Herson; Hendrick, Mike; Hassrick, Jason
Cc: Holly Dawley
Subject: Sites - Excerpts from Appendix 2D Regarding Fish Studies
When: Tuesday, July 27, 2021 10:30 AM-11:30 AM (UTC-08:00) Pacific Time (US & Canada).
Where: Microsoft Teams Meeting

Hi all – Moving up to 10:30 to 11:30. Let me know if this does not work for you.

Microsoft Teams meeting

Join on your computer or mobile app
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+1 916-538-7066,,240416569# United States, Sacramento
Phone Conference ID: 240 416 569#
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From: Janis Offermann
To: "Laverne Bill"
Cc: "Victoria Delgado"; "Rebekah Canavesio"; "Gayle Totton"
Subject: RE: Sites Reservoir meeting
Date: Thursday, July 29, 2021 7:58:00 AM
Attachments: Sites_Mitigation Measures.docx

Good morning, Laverne
We are looking forward to meeting with you this afternoon. In preparation for our discussion, attached are the proposed mitigation measures for the Cultural Resources and Tribal Cultural Resources chapters of the Sites Project EIR for your review. I apologize providing these on such short notice, but hopefully you will have a chance to take a quick review. We understand that you will need more time to fully review and comment on them. However, we are also hoping to get a better idea about how Yocha Dehe would like to handle protecting and treating sites, beyond the mitigation measures.

I also talked with Anecita, at DWR, about the status of providing the site records and I have some positive news to report.

See you at 1pm.
Janis

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

From: Janis Offermann <janis@horizonh2o.com>
Sent: Tuesday, June 29, 2021 9:28 PM
To: Laverne Bill <LBill@yochadehe-nsn.gov>
Cc: Victoria Delgado <VDelgado@yochadehe-nsn.gov>; Rebekah Canavesio <RCanavesio@yochadehe-nsn.gov>; Gayle Totton <GTotton@yochadehe-nsn.gov>
Subject: Re: Sites Reservoir meeting

Hi, Laverne
Do you want to suggest some dates available to you?
Also, I heard from Anecita and she is meeting with legal this week to discuss the site records.
Thanks, janis

On Tue, Jun 29, 2021, 5:02 PM Laverne Bill <LBill@yochadehe-nsn.gov> wrote:

> Good afternoon, Janis. That would be great to have a meeting to address the issues of Cultural Resources and how to protect them. Let schedule some time to have meeting about this topic.
>
> **Laverne Bill**
> *Director of Cultural Resources*
>
> **Yocha Dehe Wintun Nation**
> PO Box 18 | Brooks, CA 95606
> p 530.796.3400 | c 530.723.3891
> f 530.796.2143
> lbill@yochadehe-nsn.gov
> www.yochadehe.org
>
> ---
>
> **From:** Janis Offermann <janis@horizonh2o.com>
> **Sent:** Wednesday, June 23, 2021 8:45 AM
> **To:** Laverne Bill <LBill@yochadehe-nsn.gov>
> **Subject:** Sites Reservoir meeting
>
> **[Warning External Sender]**
>
> Hi, Laverne
> We were able to talk with Anecita shortly after you and I last talked and she is taking up the issue about the site records with DWR legal.?? Under AB 52, DWR is obligated to share such information with you, but she wants to go through legal first so that there are no negative repercussions for anyone.
> ??
> In the meantime, the Authority would like to schedule a meeting to talk about potential ways to address impacts to significant sites?? (like using the GPR to identify burials, etc), and perhaps other ways to develop enhancements that would be important to Yocha Dehe and other tribes such as Colusa.?? We had previously discussed tribal involvement in developing trails, and I am wondering if you would also be interested in developing locations for plants used for basketry or medicinal purposes.??
> ??
> In any case, we would like to continue the conversation while the site records issue gets sorted out.?? If that is OK with you, perhaps you can ask Victoria to find some dates in July; or I can reach out to her, if you???d like.
> Thanks
> janis
> ??
> Janis Offermann
> Cultural Resources Practice Leader
> Horizon Water and Environment
> 400 Capitol Mall, Suite 2500

Sacramento, CA 95814
916.465.8076 ??? office
530.220.4918 ??? mobile
??

Sites Reservoir Project RDEIR/SDEIS Cultural Resources and Tribal Cultural Resources Mitigation Measures
July 2021

CULTURAL RESOURCES CHAPTER MITIGATION MEASURES

Mitigation Measure CUL-2.1: Identify Significant Archaeological Resources

The Authority will identify significant archaeological resources in the study area. The work will be conducted by a Registered Professional Archaeologist. The following will occur as part of the identification.

Relocate and map previously recorded potentially significant archaeological resources. Upon access to previously inaccessible areas, all previously recorded archaeological resources will be located and their boundaries mapped with sub-meter accuracy Global Positioning System (GPS) units to identify their exact location in relation to Project components that have the potential to affect the resources.

Locate and map potentially significant archaeological resources in areas that have not been accessible previously. Upon access to previously inaccessible areas, pedestrian surveys will be conducted to identify potentially significant archaeological resources. The surveys will be conducted using transects spaced no greater than 94 feet (30 meters) apart. All newly identified archaeological resources will be recorded on applicable DPR 523-series forms and resource boundaries, features, and diagnostic artifacts outside of features or concentrations will be recorded using sub-meter accuracy GPS units to identify their exact location in relation to Project components that have the potential to impact the resources.

Evaluate the NRHP/CRHR eligibility of recorded archaeological resources. Once all previously and newly recorded potentially significant archaeological resources have been documented, each resource will be evaluated for NRHP and CRHR eligibility. As discussed in Appendix 4A, Regulatory Requirements, cultural resources are eligible for the NRHP and CRHR if they have integrity and meet one or more of the four criteria as defined in the regulations for the NRHP (Section 4A.18.1.3) and CRHR (Section 4A.18.2.2). Eligibility will be assessed using a combination of (but not limited to) archival, ethnographic, and tribal research, resource condition assessment, subsurface testing, and laboratory analysis. If the resource is evaluated as not eligible, no further action is required and avoidance is preferred.

Assess impacts to significant archaeological resources. Significant archaeological resources (archaeological resources evaluated as eligible for the NRHP or CRHR) will be individually analyzed in relation to the Project components within or near those significant resources. Thresholds of significance identified in Section 22.3.1 will be applied.

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Mitigation Measure CUL-2.2: Avoid Significant Archaeological Resources

The Authority will avoid significant archaeological resources in the study area by performing the tasks listed below. The work will be conducted by a Registered Professional Archaeologist.

The Authority will develop feasible Project design specifications to avoid significant archaeological resources. If Project design allows modification, design changes will be implemented to avoid significant archaeological resources or avoid impacts on significant values of the resources (features, artifacts, or any other elements of the resource which make the resource significant).

The Authority will develop and implement feasible Project construction protocols to avoid significant archaeological resources, including workers' cultural resources sensitivity training. Prior to construction activities in the vicinity of significant archaeological resources, the Authority will require a qualified archaeologist to provide a cultural resources sensitivity training tailboard to all construction personnel working in the vicinity of the resources. The training will identify the sensitivity, nature, and components of the resource, and inform the construction personnel the protocol needed to take in the case of an unanticipated discovery.

The Authority will develop and implement feasible Project operations protocols that avoid significant archaeological resources. Similar to the workers' cultural resources sensitivity training for during construction activities, all personnel in charge of managing the operations will be required to have cultural resources sensitive training for the resources near Project facilities and have a familiarity of the resource locations and identifications so that future operations or changes in operations can avoid those resources.

Mitigation Measure CUL-2.3: Protect Significant Archaeological Resources

The Authority will develop feasible Project protection of significant archaeological resources during construction and operations.

The Authority will develop protections protocols to ensure that qualified staff perform monitoring during Project-related ground disturbance to protect known resources, to identify any unanticipated discoveries, and to implement the Post-Review Discovery Procedure.

The Authority will develop resource-specific protection plans considering at a minimum Environmentally Sensitive Area delineation and physical fencing, and requiring archaeological monitoring where construction or operation would be in the vicinity of a known significant archaeological resource. The resource-specific protection plans will establish the methods and standards for when and how Environmentally Sensitive Area delineations will be required and when archaeological monitoring activities will be conducted for specific types of sites that will need to be protected. The plans will also identify the roles and responsibilities of monitors and construction crews and specify communication protocols and reporting requirements.

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Mitigation Measure CUL-2.4: Significant Archaeological Resources Treatment

The Authority will develop and implement resource-specific treatment plans in consultation with interested parties who are associated with or identify with the resource. The resource-specific archaeological treatment plans will ensure that all significant archaeological resources potentially affected by the Project will be treated according to best practices and professional standards, and that treatment options will include a range of interventions from avoidance and minimization of impacts to mitigation for the loss of the physical resource. Treatment may include, but would not be limited to, data recovery, site capping, analysis of existing artifact collections, or interpretive displays, among other things. Appropriate treatment will be determined based on resource type, resource location, types of impacts to the resource, and results of consultation with tribes, interested parties, and agencies.

Mitigation Measure CUL-3.1: Cemetery Relocation Plan

The Authority will develop a Cemetery Relocation Plan for relocating two known, dedicated cemeteries located in the inundation area. This will be part of Reclamation's Programmatic Historic Properties Management Plan that would be prepared in consultation with SHPO.

Avoidance of the disturbance and/or inundation of two known cemeteries is not expected to be feasible except under the No Project Alternative. The Cemetery Relocation Plan will ensure that all burials in these two cemeteries are treated with respect and in accordance with the wishes of identifiable descendants. The Cemetery Relocation Plan will also ensure that state and county health and safety codes are followed for those interments that are relocated.

Two dedicated cemeteries in the inundation area will be relocated to a site or sites approved for interment of human remains per requirements of the California Health and Safety Code (Sections 7500–7527). This procedure will be developed through consultation and coordination with descendants and other parties with demonstrated interest in the occupants of the cemeteries. The procedure will outline legal requirements, such as acquiring a written order from the local health department or county superior court before human remains may be moved, and other rules and regulations adopted by the board of health or health officer of the county.

Mitigation Measure CUL-3.2: Avoid, Protect, and Treat Human Burials

The Authority will avoid and protect any human remains encountered during pre-construction, construction, post-construction, operations, and maintenance. The Authority will appropriate state guidelines for halting Project activities at the discovery location, contacting the appropriate county coroner to report the discovery, and proceeding with implementation of Project policies regarding Native American consultation or implementation of a burial treatment plan. See Appendix 4A, 4A.18.1 *Federal Policies and Regulations* and 4A.18.2 *State Policies and Regulations*.

The Authority and its qualified contractors will prepare a plan for treating human remains and/or grave goods encountered during archaeological investigations, Project construction, or Project operations. The Burial Treatment Plan will identify ways to avoid or reduce the likelihood of encountering as yet unidentified burials.

The Burial Treatment Plan will ensure that the Authority and its contractors respond to unanticipated discovery of human burials with respect and in accordance with the wishes of identifiable descendants. The Burial Treatment Plan will also ensure that state and county health and safety codes are followed for those interments that are relocated.

This procedure will identify legal requirements and best practices for treating Native American and non-Native historic burials encountered outside of a dedicated cemetery. The Native American portion of the Burial Treatment Plan will be developed in consultation with consulting tribes and may include individual tribes' burial treatment plans.

The Authority and its qualified contractors will complete preparation of the Burial Treatment Plan within 6 months of issuance of the NOD/ROD, adopt the plan prior to selection of the construction contractor, and fully implement the plan prior to any soil disturbance within 500 feet of burials.

TRIBAL CULTURAL RESOURCES CHAPTER MITIGATION MEASURES

Mitigation Measure TCR-1.1: Implement Mitigation Measures Recommended in Public Resources Code Section 21084.3 to Avoid Damaging Effects on Tribal Cultural Resources, When Possible

(1) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

(2) Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

(A) Protecting the cultural character and integrity of the resource.

(B) Protecting the traditional use of the resource.

(C) Protecting the confidentiality of the resource.

(3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

Mitigation Measure TCR-1.2: Tribal Monitoring

Tribal monitors will be permitted to observe all ground-disturbing activities.

Mitigation Measure TCR-1.3: Implement Agreed-upon Protocol for the Treatment of Human Remains and Cultural Items

If human remains or associated grave goods are discovered during or after environmental review, the Authority will provide for the following actions:

Immediately notify the County coroner and cease ground-disturbing activities in that location.

The County coroner will notify the NAHC to establish the most likely descendant and contact the culturally affiliated Tribe.

Allow the designated Tribal member(s) to inspect the site of the discovery and determine how the human remains and grave goods should be treated with appropriate dignity and respect.

The location of a reburial will be recorded with the California Historic Resources Inventory System.

The Authority, its contractors and consultants, and the coroner will not disclose the location of the original burial or reburial site.

Treatment of all cultural items, including ceremonial items and archeological items will reflect the religious beliefs, customs, and practices of the culturally affiliated Tribe. All cultural items, including ceremonial items and archeological items, discovered during Project construction and operation will be turned over to the Tribe for appropriate treatment, unless otherwise ordered by a court or agency of competent jurisdiction. The Authority will waive any and all claims to ownership of Tribal ceremonial and cultural items that may be found.

Work of Tribal monitors and treatment of human remains will proceed in accordance with treatment plans developed in consultation with the most likely descendant of the culturally affiliated Tribe as identified by the NAHC.

The following mitigation measures specified in Chapter 22 would also be implemented and would apply to tribal cultural resources.

Mitigation Measure CUL-2.1: Identify Significant Archaeological Resources

Mitigation Measure CUL-2.2: Avoid Significant Archaeological Resources

Mitigation Measure CUL-2.3: Protect Significant Archaeological Resources

Mitigation Measure CUL-2.4: Significant Archaeological Resources Treatment

Mitigation Measure CUL-3.1: Cemetery Relocation Procedure

Mitigation Measure CUL-3.2: Avoid, Protect, and Treat Human Burials

If non-burial or other significant sites or cultural items are discovered, the Authority will work with the consulting Tribes to determine affiliation and develop appropriate treatment.

If unanticipated discoveries of culturally significant resources occur on federal land, the federal land manager will be immediately contacted and the federal agency will follow its own process for complying with the federal Native American Graves Protection and Repatriation Act and other federal obligations, as directed under Title 43 of Code of Federal Regulations, Part 10.

From: Berryman, Ellen [Ellen.Berryman@icf.com]
Sent: 7/29/2021 9:26:28 AM
To: Alicia Forsythe [aforsythe@sitesproject.org]; Spranza, John [john.spranza@hdrinc.com]
CC: Briard, Monique [Monique.Briard@icf.com]; Jones, Todd [Todd.Jones@icf.com]
Subject: Sites BA: listed plants
Attachments: Unprotected listed plant occurrences.docx

Hi Ali and John,
I did some research yesterday, with the help of Dave Duncan, to ascertain a reasonable impact acreage for each of the 2 listed plant species. See the attached file with the results. Here's my synopsis:

1. Keck's checkermallow: eight potentially extant occurrences do not fall in protected areas. Two are in Colusa County from collections in 2000 and 2008, location not specific, size of population not specified, and the taxonomy of the specimens is uncertain. The remainder are in Napa, Solano, Merced, Fresno, and Tulare Counties. Most have unspecified population size, but one specifies 5 plants (Merced County) and another specifies 60 plants (Fresno County). For this species, the best bet for mitigation would be to locate and protect one of the Colusa County populations. This is assuming the taxonomic issues are resolved. We expect that if the Colusa County populations turn out to be a different species, so would any plants found in the action area. We have no idea what the sizes of these populations are, however, and whether the landowner is willing to have an easement placed on their property if the taxonomy pans out and the plants are still there.

2. Palmate-bracted bird's beak: six potentially extant occurrences do not fall in protected areas. One in Colusa County last seen in 1916, likely extirpated, population size unknown. The remainder are in Madera County, most of which are on a large cattle ranch (Triangle Ranch), and some of the populations on this ranch are possible extirpated. It doesn't look like there are any good protection opportunities for this species.

I told Monique yesterday that with the lack of any solid mitigation opportunities at this point, and the lack of data regarding population sizes in unprotected areas, we aren't able to come up with an impact amount that we can comfortably say is mitigable. Monique agreed for me to write it up as NLAA for the two plants, stating that if the plants are found during surveys, consultation will need to be re-initiated. Our thoughts were that consultation will inevitably need to be re-initiated regardless, and this way we can continue to look for mitigation options to implement in the event the species is found so that would help expedite the reinitiation process, but the lack of known mitigation opportunities will not hold up the current Section 7 process. I've made these changes in tracks in the current draft, with the understanding that we need Ali's approval before moving forward with it.

I'll be traveling over the next couple of days but can be reached by text or call at (530) 798-1945. Feel free to reach out if you need to. Monique and others can make final edits on the plants as needed.

Thanks,
Ellen

From: Janis Offermann [janis@horizonh2o.com]
Sent: 7/29/2021 9:32:14 AM
To: Laverne Bill [LBill@yochadehe-nsn.gov]
CC: Victoria Delgado [VDelgado@yochadehe-nsn.gov]; Rebekah Canavesio [RCanavesio@yochadehe-nsn.gov]; Gayle Totton [GTotton@yochadehe-nsn.gov]; Kevin Spesert [kspesert@sitesproject.org]; Alicia Forsythe [aforsythe@sitesproject.org]; Laurie Warner Herson [laurie.warner.herson@phenixenv.com]
Subject: RE: Sites Reservoir meeting
Attachments: 20210729_Sites-Yocha Dehe AB52_Meeting-Agenda.docx

Hi, Laverne
Here is the agenda for today.
Thanks
janis

From: Janis Offermann <janis@horizonh2o.com>
Sent: Thursday, July 29, 2021 7:59 AM
To: 'Laverne Bill' <LBill@yochadehe-nsn.gov>
Cc: 'Victoria Delgado' <VDelgado@yochadehe-nsn.gov>; 'Rebekah Canavesio' <RCanavesio@yochadehe-nsn.gov>; 'Gayle Totton' <GTotton@yochadehe-nsn.gov>
Subject: RE: Sites Reservoir meeting

Good morning, Laverne
We are looking forward to meeting with you this afternoon. In preparation for our discussion, attached are the proposed mitigation measures for the Cultural Resources and Tribal Cultural Resources chapters of the Sites Project EIR for your review. I apologize providing these on such short notice, but hopefully you will have a chance to take a quick review. We understand that you will need more time to fully review and comment on them. However, we are also hoping to get a better idea about how Yocha Dehe would like to handle protecting and treating sites, beyond the mitigation measures.

I also talked with Anecita, at DWR, about the status of providing the site records and I have some positive news to report.

See you at 1pm.
Janis

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

From: Janis Offermann <janis@horizonh2o.com>
Sent: Tuesday, June 29, 2021 9:28 PM
To: Laverne Bill <LBill@yochadehe-nsn.gov>

Cc: Victoria Delgado <VDelgado@yochadehe-nsn.gov>; Rebekah Canavesio <RCanavesio@yochadehe-nsn.gov>; Gayle Totton <GTotton@yochadehe-nsn.gov>
Subject: Re: Sites Reservoir meeting

Hi, Laverne
Do you want to suggest some dates available to you?
Also, I heard from Anecita and she is meeting with legal this week to discuss the site records.
Thanks, janis

On Tue, Jun 29, 2021, 5:02 PM Laverne Bill <LBill@yochadehe-nsn.gov> wrote:

> Good afternoon, Janis. That would be great to have a meeting to address the issues of Cultural Resources and how to protect them. Let schedule some time to have meeting about this topic.
>
> **Laverne Bill**
> *Director of Cultural Resources*
>
> **Yocha Dehe Wintun Nation**
> PO Box 18 ¦ Brooks, CA 95606
> p 530.796.3400 ¦ c 530.723.3891
> f 530.796.2143
> lbill@yochadehe-nsn.gov
> www.yochadehe.org
>
> **From:** Janis Offermann <janis@horizonh2o.com>
> **Sent:** Wednesday, June 23, 2021 8:45 AM
> **To:** Laverne Bill <LBill@yochadehe-nsn.gov>
> **Subject:** Sites Reservoir meeting
>
> [Warning External Sender]
>
> Hi, Laverne
>
> We were able to talk with Anecita shortly after you and I last talked and she is taking up the issue about the site records with DWR legal.?? Under AB 52, DWR is obligated to share such information with you, but she wants to go through legal first so that there are no negative repercussions for anyone.
>
> ??
>
> In the meantime, the Authority would like to schedule a meeting to talk about potential ways to address impacts to significant sites?? (like using the GPR to identify burials, etc), and perhaps other ways to develop enhancements that would be important to Yocha Dehe and other tribes such as Colusa.?? We had previously discussed tribal involvement in developing trails, and I am wondering if you would also be interested in developing locations for plants used for basketry or medicinal purposes.??
>
> ??
>
> In any case, we would like to continue the conversation while the site records issue gets sorted out.?? If that is OK with you, perhaps you can ask Victoria to find some dates in July; or I can reach out to her, if you???d like.
>
> Thanks
>
> janis

??

Janis Offermann

Cultural Resources Practice Leader

Horizon Water and Environment

400 Capitol Mall, Suite 2500

Sacramento, CA 95814

916.465.8076 ??? office

530.220.4918 ??? mobile

??

Sites Reservoir Project - Yocha Dehe Meeting Agenda

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Meeting Information:

Date:	July 29, 2021	**Location:**	virtual
Start Time:	1:00 p.m.	**Finish Time:**	2:00 p.m.
Purpose:	Ongoing AB 52 Consultation with Representatives of the Yocha Dehe Wintun Nation		

Meeting Participants:

Laverne Bill, Yocha Dehe	Janis Offermann, Horizon	Laurie Warner Herson, Sites Integration
Ali Forsythe, Sites Authority	Kevin Spesert, Sites Authority	

Agenda:

Discussion Topic	Topic Leader	Time Allotted
1. Introductions/Purpose of Meeting	Kevin	5 mins
2. RDEIR/SDEIS Status Update a. Current Status of Project b. RDEIR/SDEIS Release Date	Ali/Laurie	10 min
3. Tribal Cultural Resources a. DWR release of site records b. Proposed mitigation	Janis	15 min
4. Yocha Dehe Questions and Concerns	Laverne	20 mins
5. Next Steps	All	10 min

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From: Janis Offermann [janis@horizonh2o.com]
Sent: 7/29/2021 1:54:29 PM
To: Victoria Delgado [VDelgado@yochadehe-nsn.gov]; Laverne Bill [LBill@yochadehe-nsn.gov]
CC: Rebekah Canavesio [RCanavesio@yochadehe-nsn.gov]; Gayle Totton [GTotton@yochadehe-nsn.gov]; Alicia Forsythe [aforsythe@sitesproject.org]; Kevin Spesert [kspesert@sitesproject.org]; Laurie Warner Herson [laurie.warner.herson@phenixenv.com]
Subject: Sites Reservoir meeting recurring meeting

Hi, Victoria
We just concluded today's meeting for Sites Reservoir and we decided that we would like to set up a recurring meeting for the 3rd Thursday of each month at 1PM. The first meeting would take place on August 19.
Can you, please, set that up for us? Participants would be Laverne, myself, Ali Forsythe, Kevin Spesert and Laurie Warner Herson.

Thanks so much
janis

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

From: Janis Offermann [janis@horizonh2o.com]
Sent: 7/29/2021 2:10:09 PM
To: Victoria Delgado [VDelgado@yochadehe-nsn.gov]; Laverne Bill [LBill@yochadehe-nsn.gov]
CC: Rebekah Canavesio [RCanavesio@yochadehe-nsn.gov]; Gayle Totton [GTotton@yochadehe-nsn.gov]; Alicia Forsythe [aforsythe@sitesproject.org]; Kevin Spesert [kspesert@sitesproject.org]; Laurie Warner Herson [laurie.warner.herson@phenixenv.com]
Subject: RE: Sites Reservoir meeting recurring meeting

Hi, Victoria, I suggest having it recur through June 2022. There is a lot to work on and we can always cancel the meeting if we find we don't need to meet that often as we move down the road. Though I imagine we might eventually have to meet more often for a while at some point in the future. ☺

Thanks
Janis

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

From: Victoria Delgado <VDelgado@yochadehe-nsn.gov>
Sent: Thursday, July 29, 2021 2:07 PM
To: 'Janis Offermann' <janis@horizonh2o.com>; Laverne Bill <LBill@yochadehe-nsn.gov>
Cc: Rebekah Canavesio <RCanavesio@yochadehe-nsn.gov>; Gayle Totton <GTotton@yochadehe-nsn.gov>; Alicia Forsythe <aforsythe@sitesproject.org>; Kevin Spesert <kspesert@sitesproject.org>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>
Subject: RE: Sites Reservoir meeting recurring meeting

Hi Janis,

Of course. Should I set up a meeting for each month up until December 2021?

Kind Regards,
Victoria Delgado
CRD Administrative Assistant

Yocha Dehe Wintun Nation
PO Box 18 | Brooks, CA 95606
p 530.796.0118 | c 530.419.9152 | f 530.796.2143
vdelgado@yochadehe-nsn.gov
www.yochadehe.org

From: Janis Offermann <janis@horizonh2o.com>
Sent: Thursday, July 29, 2021 1:55 PM
To: Victoria Delgado <VDelgado@yochadehe-nsn.gov>; Laverne Bill <LBill@yochadehe-nsn.gov>
Cc: Rebekah Canavesio <RCanavesio@yochadehe-nsn.gov>; Gayle Totton <GTotton@yochadehe-nsn.gov>; Alicia

Forsythe <aforsythe@sitesproject.org>; Kevin Spesert <kspesert@sitesproject.org>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>
Subject: Sites Reservoir meeting recurring meeting

[Warning External Sender]

Hi, Victoria
We just concluded today's meeting for Sites Reservoir and we decided that we would like to set up a recurring meeting for the 3rd Thursday of each month at 1PM. The first meeting would take place on August 19.
Can you, please, set that up for us? Participants would be Laverne, myself, Ali Forsythe, Kevin Spesert and Laurie Warner Herson.

Thanks so much
janis

Janis Offermann
Cultural Resources Practice Leader
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Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date:	September 7, 2021	**Location:**	Join Microsoft Teams Meeting
Start Time:	3:00 p.m.	**Finish Time:**	4:00 p.m.

Purpose: Coordination on near-term priorities. This is a standing bi-weekly meeting.

Meeting Participants:

~~Jerry Brown, Sites~~	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Vince Barbara, Bureau	Sandra Williams, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Gregory Mongano, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Darryl Good, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Levi Johnson, Bureau	Shane Hunt, Bureau	
Luke Davis, Bureau			

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from last meeting: a. Ali to put together water rights process/coordinating with Reclamation. Levi to provide any additional Reclamation comments on Ops Term Sheet (incl Water Rights Annex) to inform the schedule Ali is preparing. b. Richard to send email confirming project is in construction in accordance with WIIN requirements. If not an email, some other form of documentation is needed. (last report – working with solicitor and coordinating with 3 other projects) c. Vanessa to provide write-up describing proposed Alt 3BR		5 min
3. WIIN Appropriations: a. FAA Status		5 min

i. Amended FAA ii. New FAA – seeking Authority Board signature authority Sept 22 b. MOA Status – awaiting written confirmation of WIIN "in construction" has been met	
4. EIS Coordination: a. CDFW Discussion Update – New RDEIR/SDEIS Release Schedule b. Status of Reclamation Edits – Ch 2 (Project Description), Ch 11 (Aquatics) c. Path Forward on ESA Section 7 Consultation for Operations by Reclamation i. Schedule ii. Sites Authority Sept 22 presentation plan d. BA Review/Schedule i. Terrestrial ii. Aquatics	20 min
5. Feasibility and OMB Addendum: a. OMB Addendum – timing relative to EIR and BA preparation	10 min
6. Technical Discussions on Coordination and Potential Investment: a. Carriage Water – Sites is setting up a 3 way meeting early Sept with DWR/Reclamation on the modified annex b. ESA Section 7 Consultation for Operations – path forward established, this item will be tracked through BA preparation c. Water Rights Coordination – Review Coordination Schedule d. Next Steps on Technical Discussions will be scheduled later in September– carriage water, water rights, defining close excess	20 min
7. Review of Action Items	As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date:	September 21, 2021	**Location:**	Join Microsoft Teams Meeting
Start Time:	3:00 p.m.	**Finish Time:**	4:00 p.m.

Purpose: Coordination on near-term priorities. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Vince Barbara, Bureau	Sandra Williams, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Gregory Mongano, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Darryl Good, Bureau	Mark Carper, Bureau	
Mark Morberg, Bureau	Levi Johnson, Bureau	Shane Hunt, Bureau	Austin Olah, Bureau
Luke Davis, Bureau			

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from last meeting: a. Ali to put together water rights process/coordinating with Reclamation. Levi to provide any additional Reclamation comments on Ops Term Sheet (incl Water Rights Annex) to inform the schedule Ali is preparing. b. Richard to send email confirming project is in construction in accordance with WIIN requirements. If not an email, some other form of documentation is needed. c. Vanessa to provide write-up describing proposed Alt 3BR		5 min
3. WIIN Appropriations: a. FAA Status i. Amended FAA		5 min

ii. New FAA – seeking Authority Board signature authority Sept 22 b. MOA Status – awaiting written confirmation of i) WIIN "in construction" has been met and ii) add Section 7 language reflecting Reclamation consultation on construction and operations	
4. EIS Coordination: a. CDFW Discussion Update b. EIR/EIS Schedule Update i. Status of Reclamation Edits – Ch 2 (Project Description), Ch 11 (Aquatics) c. Path Forward on ESA Section 7 Consultation for Operations by Reclamation i. Schedule ii. Sites Authority Sept 22 presentation plan iii. Timing of modeling updates relative to RDEIR/SDEIS public draft release d. BA Review/Schedule i. Terrestrial ii. Aquatics	20 min
5. Feasibility and OMB Addendum: a. OMB Addendum – timing relative to EIR and BA preparation b. CWC State Feasibility Process Update	10 min
6. Technical Discussions on Coordination and Potential Investment: a. COA – Reclamation and DWR to provide Sites with proposal similar to carriage water b. Water Rights Coordination – Review Coordination Schedule c. Next Steps on Technical Discussions - carriage water, water rights, defining close excess. Scheduled for October 14th.	20 min
7. Review of Action Items	As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date:	October 5, 2021	**Location:**	Join Microsoft Teams Meeting
Start Time:	3:00 p.m.	**Finish Time:**	4:00 p.m.

Purpose: Coordination on near-term priorities. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Vince Barbara, Bureau	Sandra Williams, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Gregory Mongano, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Darryl Good, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Levi Johnson, Bureau	Shane Hunt, Bureau	
Luke Davis, Bureau			

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from last meeting: a. Ali to put together water rights process/coordinating with Reclamation. Levi to provide any additional Reclamation comments on Ops Term Sheet (incl Water Rights Annex) to inform the schedule Ali is preparing. b. Urgent Meeting to occur 9/22 to resolve Reclamation concerns related to path forward on ESA Section 7 Consultation and RDEIR/SDEIS c. Reclamation (Stacey) modifying Cost Sharing MOA language to incorporate that Reclamation will be the ESA Section 7 consultation lead for construction and operations.		5 min
3. WIIN Appropriations: a. FAA Status		10 min

i. Amended FAA – done and signed THANK YOU!

ii. New FAA – Authority Board authorized on Sept 22, schedule for completing document?

iii. FY22 Funding CR Status

b. Cost Sharing MOA Status – next steps

4. EIS Coordination: — 20 min
   a. Status of Section 106 PA
   b. EIR/EIS Revisions
      i. Nov 12 public release
      ii. modeling scenarios next steps
   c. Who will fill Dan Cordova's role?
5. CDFW Discussion Update
   a. BA Review/Schedule
      i. Terrestrial
      ii. Aquatics

6. Feasibility and OMB Addendum: — 5 min
   a. CWC State Feasibility Process Update

7. Technical Discussions on Coordination and Potential Investment: — 10 min
   a. Water Rights
      i. next meeting of Sites/Reclamation water rights teams to review and coordinate on upcoming application
      ii. Discussions with other water right holder
   b. Ongoing DWR/Reclamation Technical Discussions - carriage water, water rights, defining close excess. Scheduled for October 14th.
   c. Sites Operations Plan development update

8. Review of Action Items — As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: March 22, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. Vaness to reach out to water rights staff and let Sites team know if any concerns raised by Reclamation staff. b. Ali to prepare flow chart describing anticipated steps leading to decision on level of Reclamation investment. c. Sites team to confirm Authority Board action on adjusted diversion criteria and shift of preferred project from Alt 1 to Alt 3. d. Sites team prepared a table identifying modeling needs that requires feedback from Reclamation.		10 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: April 5, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. none		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: May 31, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	Kevin Jacobs, Bureau

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. None		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: May 17, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	Kevin Jacobs, Bureau

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. None		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: June 14, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	Kevin Jacobs, Bureau

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. Erin to schedule a follow-up contracts review meeting to occur before end of July to get everyone on same page regarding contents and number of Sites/Reclamation contracts needed. A table covering the contracts was reviewed as part of the June 13 DWR/Recl Tech Disc Meeting. b. Erin/Vanessa to develop $80M FAA to cover pre-construction scope only but not imposing new cash call req'ts on local agencies.		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: June 28, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Henry Luu, Sites	Erin Heydinger, Sites	John Spranza, Sites
Ali Forsythe, Sites	Vanessa King, Bureau	Laurie Warner Herson, Sites	Michael Mosley, Bureau
Richard Welsh, Bureau	Gregory Mongano, Bureau	Jobaid Kabir, Bureau	Melissa Dekar, Bureau
Don Bader, Bureau	Darryl Good, Bureau	Stacey Leigh, Bureau	Susanne Manugian, Bureau
Natalie Taylor, Bureau	Levi Johnson, Bureau	Mark Carper, Bureau	Austin Olah, Bureau
Mark Morberg, Bureau	Luke Davis, Bureau	Shane Hunt, Bureau	Kevin Jacobs, Bureau

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. None.		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

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Meeting Participants:

Date: July 12, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Richard Welsh, Bureau	Levi Johnson, Bureau	Luke Davis, Bureau
Ali Forsythe, Sites	Don Bader, Bureau	Jobaid Kabir, Bureau	Michael Mosley, Bureau
Erin Heydinger, Sites	Allison Jacobson, Bureau	Stacey Leigh, Bureau	Melissa Dekar, Bureau
Laurie Warner Herson, Sites	Vanessa King, Bureau	Mark Carper, Bureau	Susanne Manugian, Bureau
John Spranza, Sites	Natalie Taylor, Bureau	Shane Hunt, Bureau	Austin Olah, Bureau
Henry Luu, Sites	Gregory Mongano, Bureau	Darryl Good, Bureau	Kevin Jacobs, Bureau
	Mark Morberg, Bureau		

Discussion Topic	Topic Leader	Time
1. Introductions	All	
2. Follow-up on action items from the last meeting: a. None		1 min
3. EIR/EIS, Permitting, Operations		20 min
4. Financial Assistance		20 min
5. Other Activities		10 min
6. Review of Action Items		As time allows

Bi-Weekly Sites-USBR Coordination Draft Agenda

Affordable Water, Sustainably Managed

Our Core Values – Safety, Trust and Integrity, Respect for Local Communities, Environmental Stewardship, Shared Responsibility and Shared Benefits, Accountability and Transparency, Proactive Innovation, Diversity and Inclusivity
Our Commitment – To live up to these values in everything we do

Meeting Participants:

Date: July 26, 2022 **Location:** Join Microsoft Teams Meeting

Start Time: 3:00 p.m. **Finish Time:** 4:00 p.m.

Purpose: Coordinate activities related to planning and permitting of the Sites Reservoir Project. This is a standing bi-weekly meeting.

Meeting Participants:

Jerry Brown, Sites	Richard Welsh, Bureau	Levi Johnson, Bureau	Luke Davis, Bureau
Ali Forsythe, Sites	Don Bader, Bureau	Jobaid Kabir, Bureau	Michael Mosley, Bureau
Erin Heydinger, Sites	Allison Jacobson, Bureau	Stacey Leigh, Bureau	Melissa Dekar, Bureau
Laurie Warner Herson, Sites	Vanessa King, Bureau	Mark Carper, Bureau	Susanne Manugian, Bureau
John Spranza, Sites	Natalie Taylor, Bureau	Shane Hunt, Bureau	Austin Olah, Bureau
Henry Luu, Sites	Gregory Mongano, Bureau	Darryl Good, Bureau	Kevin Jacobs, Bureau
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Memorandum

To:	Jelica Arsenijevic & John Spranza, HDR
From:	Michael Vondergeest & John Markham, ICF
Date:	7/29/2021
Re:	**Action Items and Meeting Summary for the Sites Reservoir Project Draft LEDPA Memo Live Edit #1**

Meeting Summary

Meeting Date: 7/29/21

Meeting Time: 9am-11am

Attendees:
Jelica Arsenijevic, HDR
Alicia Forsythe, HDR
John Spranza, HDR
Melissa Dekar, Bureau of Reclamation
Vanessa King, Bureau of Reclamation
Monique Briard, ICF
Michael Vondergeest, ICF
John Markham, ICF
Danielle Tannourji, ICF

The first live edit of the draft LEDPA Memo began with an introduction of the LEDPA outline, TOC, structure, and Alternative Analysis numbering. The live edit went through page by page, section by section, referring to HDR comments and ICF responses/edits, which are summarized below. The live edit covered Sections 1.1 through 2.5.3. Discussions of the following edits and several action items are also summarized below.

Section 1.5 Impacts to Waters of the U.S and State

- Table 1 needs a footnote for the ~200 acres of direct impacts from dredging Funks Reservoir. Footnote to explain that this direct impact would not require mitigation.
- John S. also noted that TCCA may be able to do this work under the Clean Water Act maintenance exemption or their current maintenance agreements because removing sediments to restore the original permitted condition is exempt from Clean Water Act permitting.
    - John M. of ICF reminded the group of the "recapture" clause in the USACE's policies and noted that if the exempt activity would trigger formal ESA Section 7 consultation, it could (in certain situations) nullify the CWA maintenance exemption and the work would need to request authorization under the USACE's Nationwide Permit 3 (maintenance). John S. will talk to TCCA about this and get back to the team as Funks Reservoir may be CRLF habitat and GCID may be GGS Habitat and the planned maintenance work may adversely affect these species.

Section 1.6 Proposed Avoidance and Minimization Measures

- Either reference measures in the EIR Appendix or include them here. Make sure they are the most current and approved measures that apply to the Project and not the alternatives described in this memo. For example, some of the measures currently reference CBD Alts 1, 2, and 3. This is not current and not an AMM for the proposed Project.

Section 1.8 Purpose and Need

- Basic Project Purpose is used to determine water dependency. Nancy Haley stated that the project is not water dependent at the Preapplication Meeting
- Overall Project Pursuse can be modified with criteria that may help screen out alternatives as not practicable (i.e., must be located near existing water delivery infrastructure and the Sacramento River, must meet a specific profitability threshold to be feasible)

Section 2.2 Description of Alternatives

- Melissa asked if we need to add NEPA Alt 2 (1.3 MAF Reservoir) and 3 (25% Reclamation investment) here as Alt 2 has different components than the Project that don't allow for a fair impact comparison and Alt 3 would have the same construction impacts as the Project, but it would have different indirect impacts downstream.
    - John M. suggested either wait for Agency input or be proactive and add it but be sure the analysis makes an "apples to apples" comparison of Alt 2 with the Project.
    - John S. to get back to us on a path forward.
- John S. recommends that we add somewhere in the analysis that a benefit of the Project is that it uses existing infrastructure near the Sacramento River. In addition, we need to highlight the cost effectiveness of the Project over Alt 2.
- Jelica added Value Planning report to the share point that has all 7 options evaluated.
- Vanessa noted that the VP cost analysis may be out of date as they are currently tweaking some of their numbers and that they are not consistent with the Authority's estimates.

Section 2.1 Site Selection/Screening Criteria

- Need a blended statement with mention of Authority and BOR on screening criteria including costs, benefits, feasibility.

Section 2.2.3 Onsite Alternatives

- The Group suggested that Table 2 and its discussion may need to be moved down into subsequent section where costs are analyzed. Seems a bit out of place in current location.
- Table 3: TRR discussion as it relates to which East or West and which is most likely to be construction. John to ask engineers and circle back with the team. (HDR Action Item below).
- Onsite Alternative 4 - Reclamation investment up to 25% may go down to 7%. BOR asked "what else does the Corps look at if the direct impacts are the same?" For example, are they only concerned about physical impacts from construction? What about indirect impacts, operational impacts?
    - We may want to ask the USACE what there LEDPA scope of analysis should be.
    - Circle back with John S. on this as he is not so sure yet if both construction and operational impacts should be used to screen alternatives or only construction impacts.. Several things to be discussed with the Authority right now that will dictate what we should include, so check back with John on this in the coming weeks. (ICF Action Item).

Section 1.8 Project Alternative Screening Matrix

- Table 8 - Add intensity to the level of impact – i.e., low, moderate, high. Do this analysis for ESA and other applicable rows like impacts to WoUS in the table.

Section 2.5.3 Evaluation of Available Practicable Alternatives to the Proposed Dredge and Fill Activities

- Jelica asked us to review all descriptions of the alternatives here and make sure to remove the word "currently" from alternatives that are in fact no longer being considered. For example, under

Discharge Pipeline Alternatives, we say that Delevan Pipeline is currently proposed. This is false and needs to be edited to "that were being considered".

- Jelica also would like us to add discussion on the benefits of removing Delevan such as minimizing impacts to an existing USFWS Refuge and the cost effectiveness of Dunnigan vs. Delevan, as Delevan was a much longer pipeline that would have to cross several highways, etc, adding significant costs and requiring additional approvals.

Action Items

HDR

1) Our contact at the Corps, Matthew Roberts, is being deployed again so Jelica has reached out to him today via email to get more information on when and how long Matthew will be deployed and who we should work with in his absence. John S. has concerns about this – we don't want to overwhelm Matthew before he leaves, but we do need to get his feedback on a few big-ticket items.
2) John S. mentioned there are some extensive canal impacts for the proposed TRR inlet/outlets along the GCID canal that he was not previously aware of and that he will send these details out to the group to analyze for permitting.
3) John S. will talk to TCCA about maintenance exemption for dredging at Funks Reservoir and whether or not this work has triggered CRLF permitting in the past.
4) John S. to get back to us on whether or not to include NEPA Alt 2 analysis.
5) John S. Reach out to engineers and find out how probable it would be to construct TRR East. This comment relates to the Alt 2 discussion to make sure we include all the necessary details and make sure we present it so it doesn't seem like we added project elements to exclude it from being the LEDPA.

ICF

1) Be sure to relay to the internal ICF JD Team who are currently talking to the Corps regarding the wetland delineation not to discuss canal jurisdiction. HDR will be meeting with TCCA and GCID in the coming weeks to determine how to move forward with jurisdiction of the TC Canal and the GCID.
2) Circle back with John S. on this as he is not so sure yet if both construction and operational impacts should be discussed herein. Several things to be discussed with the Authority right now that will dictate what we should include, so check back with John on this in the coming weeks.