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VIA ELECTRONIC MAIL

Draft EIR/EIS Comments
Sites Project Authority
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To: Draft EIR/EIS Comments

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT FOR THE SITES RESERVOIR PROJECT, GLENN AND COLUSA COUNTIES.

Thank you for the opportunity to comment on the draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for construction and operation of the Sites Reservoir Project and associated facilities near the town of Maxwell, California. The mission of the State Water Resources Control Board (State Water Board) and the 9 Regional Water Quality Control Boards throughout the state (Regional Boards) is to preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations. The State Water Board administers water rights in California and the State and Regional Boards have primary authority over the protection of the State's water quality. The Sites Project will require both water right and water quality approvals from the State Water Board and Central Valley Regional Board (collectively Water Boards). Accordingly, the Water Boards are responsible agencies for the project pursuant to the California Environmental Quality Act (CEQA). As responsible agencies under CEQA, the Water Boards must review and consider the environmental effects of the project identified in the EIR/EIS that are within their purview and reach their own conclusions on whether and how to approve the project. (Cal. Code Regs. tit. 14 section 15096, subd. (a).) Accordingly, the Water Boards submit these joint comments.

Permits and Certifications Needed for the Project from the Water Boards

The Sites Project will require various approvals from the Water Boards, including water right and water quality approvals. To facilitate these approvals, the CEQA document must analyze the impacts of the project on water quality and beneficial uses and identify feasible alternatives and appropriate mitigation measures. The Sites Project Authority (Authority) should fully evaluate the need for approvals for the project from the Water Boards and begin the application process early as the permits are often time consuming to acquire. Permits that may be required are discussed below. A well written and thorough CEQA document that includes specific mitigation measures and monitoring and evaluation provisions will be needed for these permitting processes.

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Water Rights

The draft EIR/EIS states that Sites Reservoir will be filled entirely with Sacramento River water diverted at two to three locations, depending on the project alternative under consideration. The draft EIR/EIS further states that the Authority intends to file an application to appropriate water by permit with the State Water Board to seek authorization for these proposed diversions, and that any application filed would likely be consistent with the project described in State Water Right Filing A025517.

Two initial findings are required before a permit can be issued: (1) unappropriated water is available to supply the applicant, and (2) the applicant's appropriation is in the public interest. If the proposed appropriation does not meet these criteria, conditions may be imposed to ensure they are satisfied or the application may be denied. A permit may only allow diversion and use of that amount of water that the applicant has demonstrated is necessary for the proposed purpose for as long a time as the project is deemed reasonable and is diligently pursued. For State Water Right Filings, the board must also make other findings related to consistency with the original intention of the state filed application and determine that the diversion is not in conflict with water quality objectives. A water right hearing is also required for State Water Right Filings and to resolve unresolved protests against water right applications. In all likelihood, the Sites Project water right permitting process will require an evidentiary State Water Board hearing. The water right hearing process can be very time consuming depending on the number of parties and issues and the other hearing proceedings currently before the board. A thorough environmental analysis with appropriate mitigation and monitoring will be essential to that process.

Water Availability

The draft EIR/EIS estimates that the amount of Sacramento River water available for appropriation by the proposed project each year would range from zero in critical and dry years to 1 million acre-feet (MAF) in wetter years, with the average annual diversion amount ranging from 480 to over 540 thousand acre-feet (TAF). The draft EIR/EIS states that these estimates are based on historic hydrologic data, senior water right demands, existing regulatory flow requirements, and certain assumptions regarding proposed project operations and associated diversion limitations necessary to maintain and protect anadromous fish and water quality in the San Francisco Bay and Sacramento-San Joaquin Delta (Bay-Delta).

State Water Board staff will consider the hydrologic analyses, diversion limitations, and water availability findings included in the final EIR/EIS when processing any water right application filed for the proposed project. However, the State Water Board is required to make its own, independent findings on the availability of unappropriated water to supply the proposed project as a prerequisite to any water right permitting decision. In determining the amount of water available for appropriation, the State Water Board must take into consideration the public interest and the amounts of water required for recreation, preservation and enhancement of fish and wildlife resources, and water quality. Additional hydrologic analysis may be required during the water right permitting process to inform and support these findings per the below comments related to necessary bypass flows for the project. The additional analysis may ultimately lead to water availability findings and associated diversion restrictions that differ from those presented in the draft EIR/EIS.

Clean Water Act (CWA) Section 401, Water Quality Certification

Discharge of dredged or fill material to waters of the United States requires a Clean Water Act (CWA) Section 401 Water Quality Certification (Water Quality Certification). Typical activities include any modifications to these waters, such as stream crossings, stream bank modifications,

filling wetlands, etc. Water Quality Certifications are issued in combination with CWA Section 404 Permits issued by the United States Army Corps of Engineers. Both the Section 404 Permit and Water Quality Certification must be obtained prior to site disturbance, because this project involves a water right activity, the application for a Water Quality Certification should be submitted to the State Water Board who will coordinate with the Regional Board on its processing.

Isolated Wetlands and Other Waters Not Covered by the Federal Clean Water Act

Some wetlands and other waters are considered “geographically isolated” from navigable waters and are not within the jurisdiction of the CWA (e.g., isolated wetlands, vernal pools, or stream banks above the ordinary high water mark). Discharge of dredged or fill material to these waters may require either individual or general waste discharge requirements from the Regional Board. If the U.S. Army Corps of Engineers determines that isolated wetlands or other waters exist at the project site, and the project impacts, or has the potential to impact, these non-jurisdictional waters, a Report of Waste Discharge and filing fee must be submitted to the Regional Board. The Regional Board will consider the information provided and either issue or waive Waste Discharge Requirements.

Any person discharging dredge or fill materials to waters of the State must file a report of waste discharge pursuant to Sections 13376 and 13260 of the California Water Code. Both the requirements to submit a report of waste discharge and apply for a Water Quality Certification may be met using the same application form, found at:

http://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/wqc_application.pdf

General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (CGP)

Construction activity, including demolition, resulting in a land disturbance of one acre or more must obtain coverage under the CGP. The Sites Reservoir Project must be conditioned to implement storm water pollution controls during construction and post-construction as required by the CGP. To apply for coverage under the CGP the property owner must submit Permit Registration Documents electronically prior to construction. Detailed information on the CGP can be found on the State Water Board website:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/gen_const.shtml

Wastewater Application/Report of Waste Discharge

The current project design includes a number of potential recreational areas which may require onsite sewage treatment and disposal systems. Additionally, the project proposes the construction of one or more power generation facilities associated with the construction of dams. CWC Section 13260 requires that, anyone who initiates a discharge of waste that could affect the quality of waters of the state must submit a report of waste discharge to the Regional Board. The discharges of wastes from sewage systems and power generation facilities including but not limited to floor drains, sumps, and turbine lubrication infrastructure to surface water(s) or land may require a permit (Waste Discharge Requirements, or WDRs) from the Regional Board. A complete application for WDRs (referred to as a Report of Waste Discharge, or ROWD) must be submitted at least 140 days prior to discharging waste. The applicant should contact Regional Board staff to discuss this process.

Bypass Flows and Diversion Rates

The draft EIR/EIS indicates that diversions from the Sacramento River for the Sites Project could occur during any month of the year but would occur most frequently between December and March of wet and above normal years. The maximum proposed diversion rate is 5,900 cubic-feet per second (cfs) with an annual average diversion amount of about half a MAF. These diversions would result in a corresponding decrease in Sacramento River inflow and Delta outflow in winter and spring (Appendix 12C). The draft EIR/EIS identifies proposed Sacramento River bypass flows at Red Bluff, Hamilton City, and Wilkins Slough based on existing minimum flow requirements. The draft EIR/EIS also identified proposed bypass flows at Freeport on the Sacramento River based on month that range between 11,000 and 15,000 cfs that the EIR/EIS indicates “were designed to protect and maintain existing downstream water uses and water quality in the Delta” (page 3-106).

As part of the Phase II update to the Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta (Bay-Delta Plan), the State Water Board is currently considering new and modified Sacramento River inflow, Delta outflow, and cold water habitat objectives, as well as other requirements to ensure the reasonable protection of fish and wildlife beneficial uses. In support of this effort, the State Water Board released a final science report identifying the science upon which Phase II changes to the Bay-Delta Plan will be based, as well as the conceptual basis for those changes this fall. The final science report is available at:

https://www.waterboards.ca.gov/water_issues/programs/peer_review/docs/scientific_basis_phase_ii/201710_bdphaseII_sciencereport.pdf.

While the State Water Board has not completed the update to the Bay-Delta Plan, and its findings may ultimately differ from the conclusions in the science report, the timing and volume of bypass flows are an important issue in the Bay-Delta Plan and other regulatory processes. Thus, it would be prudent for the draft EIR/EIS to include a broader range of bypass flows so that it can be used for future permits and other regulatory approvals.

The science report documents the current ecological crisis in the Bay-Delta watershed and the associated population declines of multiple native aquatic species to historic low levels. The science report concludes that present Sacramento River inflow, Delta outflow, and cold water habitat management requirements are inadequate for the protection of these species. In particular, on average, annual outflow from the Delta into the Bay has been reduced by more than half and sometimes by much greater quantities at critical times for native species, according to the report. Additionally, because existing Bay-Delta Plan flow requirements are far below current flow levels most of the time, the report indicates that additional regulatory requirements are needed to prevent flows from being substantially reduced in the future. The report states that the January to June time period is one of the most impaired seasons with current median Delta inflow and outflow being less than half of unimpaired flows. Loss of functional flows in this winter and spring time period reduces potential recruitment opportunities and the viability of native aquatic species communities, including listed species. The report concludes that higher winter and spring Sacramento River inflow and Delta outflow requirements are necessary to increase the recruitment of these species. Higher Sacramento inflows also increase the magnitude, duration and frequency of flooding in the Yolo and Sutter Bypasses, important habitat for juvenile salmonids and Sacramento splittail.

The proposed Sites Reservoir Project Freeport bypass flows are lower than existing median flow levels during the sensitive winter and spring period and substantially less than existing flows from January through March (see science report page 2-22). The proposed bypass flows

are also less than the flows that the Phase II science report indicates are needed for the restoration of native fish and wildlife (see science report page 3-48). Accordingly, we recommend that the draft EIR/EIS include a detailed justification for the proposed Freeport and upstream bypass flows (including the magnitude and timing). In addition, in order to inform the State Water Board's future decisions related to this project, the draft EIR/EIS should analyze a range of bypass flows and lower diversion rates that are consistent with the Phase II science report regarding needed measures for the protection of fish and wildlife. Further, specific pulse flows that improve migration conditions for native species, natural geomorphic processes and other important ecological functions should also be evaluated and proposed.

Delta Smelt and Other Important Native Fish and Invertebrate Species in the Bay-Delta Estuary

The 2015 Interagency Ecological Program Delta Smelt Management Analysis and Synthesis Team (MAST) report found that there was a positive relationship between Delta outflow in February-June and the index (20 - millimeter) of larval Delta smelt after 2003. The outflow abundance relationship became statistically stronger when the index was standardized by the number of sub-adult smelt in the previous year's fall midwater trawl index suggesting that the number of available spawners (stock recruitment index) and the magnitude of spring outflow are both important for determining larval abundance. Yet the draft EIR/EIS states that there is no known correlation between Delta outflow and Delta smelt abundance (Appendix 12B-13). The Sites Project will reduce baseline Delta outflows between January and March (Appendix 12C), which could negatively impact Delta smelt. This potential impact should be evaluated and any appropriate mitigation should be identified.

In addition, the draft EIR/EIS did not evaluate the impact of the project on Starry flounder, California bay shrimp, and important zooplankton food species for native juvenile fish species, including *Neomysis mercedis*, *Eurytemora affinis* and *Pseudodiaptomus forbesi*. Decreases in these zooplankton species are likely to result in decreases in recruitment of native larval fish. The abundance of all three zooplankton species and Starry flounder increase with increasing Delta outflow in winter and spring. The EIR/EIS should evaluate the impacts of the project on Starry flounder and the three zooplankton species and the effect of the reduction in secondary zooplankton production on recruitment of native fish and propose any appropriate mitigation measures.

Entrainment Losses of Native Fish

The Sites Project will increase the amount of water available for export at the Central Valley Project and State Water Project (Project) pumping facilities. The Project facilities divert water from the southern Delta causing reverse flows on Old and Middle Rivers (OMR). The magnitude of reverse OMR flows is affected by the magnitude of Project pumping. OMR reverse flows result in the entrainment of multiple native species into the southern Delta. The U.S. Fish and Wildlife Service (USFWS) has determined that entrainment at the Project facilities remains a significant ongoing threat to the Delta smelt population. The draft EIR/EIS used the Kimmerer regression model (see Appendix 12G-1) to estimate Delta smelt entrainment losses; however, the regression model does not include prescreen losses in southern Delta channels. The draft EIR/EIS also did not evaluate Project-induced entrainment losses for white and green sturgeon and Sacramento splittail. All three species are salvaged at Project facilities. The EIR/EIS should evaluate these potential impacts and propose any appropriate mitigation measures.

Fish Screens

The Sites Project will divert most of its water during the winter and spring when smaller weaker swimming juvenile emigrating salmonids will be in the Sacramento River rather than during the late spring and summer when agricultural diversions currently occur at the existing points of diversion. The effectiveness of the fish screens that are part of the project at avoiding entrainment of these sensitive life stages of native species should be evaluated, including the direct loss of larval fish that might pass through the louvers and be entrained into Sites Reservoir or the indirect loss of fish that are impinged on the screens, disoriented, and later consumed by predators. The EIR/EIS should also evaluate the potential for the diversion facility to become a predator hotspot and propose any appropriate mitigation.

Funks Creek and Stone Corral Creek Diversions and Associated Instream Flow Releases

The draft EIR/EIS initially states that Sites Reservoir will be filled entirely with water from points of diversion on the Sacramento River, but goes on to describe how water would also be diverted to Sites Reservoir from Funks and Stone Corral Creeks via the proposed Golden Gate Dam (Stone Corral Creek) and Sites Dam (Funks Creek) (Page 6-51). Text on Pages 6-51 and 9-20 seems to suggest that water diverted at these locations would be held in Sites Reservoir for the sole purpose of flood control, and not for storage and beneficial use at a later date pursuant to an appropriative water right. Ultimately, the intent of these diversions is not clear. The EIR/EIS should clarify the intent of the proposed diversions at Funks and Stone Corral Creeks and the proposed instream flow releases for these creeks below Sites Reservoir including the rate, timing, duration, and amount of proposed minimum instream flow releases as well as the underlying basis and/or supporting rationale for each.

- On Page 6-51, the draft EIR/EIS states that a minimum instream flow release of up to 10 cfs would be maintained in both streams year-round. No rationale or scientific basis for this instream flow prescription is provided, although text on Page 3-52 indicates that it is based on a recommendation from the California Department of Fish and Wildlife and is intended to replace existing seepage flow from Funks Dam.
- On Page 15-21, the draft EIR/EIS states that it would operate Sites and Golden Gate Dams to release stream maintenance flows of up to 10 cfs from October through May to mimic the ephemeral nature of Funks and Stone Corral Creeks. Again, no rational or scientific basis for this 10 cfs instream flow prescription is provided, and the proposed October-May release period is different than the year-round release period described above.
- On Page 9-20, the draft EIR/EIS states that Sites and Golden Gate Dams would be operated to match pre-project flows (other than flood flows) through the reservoir inlet/outlet works. This is different than the minimum instream flow and maintenance flow prescriptions described above (10 cfs) in that historic flow data presented on Page 6-32 indicates that (non-flood) flows in Stone Corral Creek and Funks Creek typically exceed 10 cfs during the winter and early spring.

Diversions on Funks and Stone Corral Creeks

The draft EIR/EIS does not address the effects of the proposed Funks Creek (Golden Gate Dam) and Stone Corral Creek (Sites Dam) diversions on geomorphic conditions and processes downstream of Sites Reservoir (e.g., gravel recruitment and channel maintenance). The associated environmental impact analysis for aquatic resources also does not fully evaluate the

potential effects of these diversions on special status species known to exist in both waterbodies. The analysis is limited to fish passage (Page 12-86), and concludes that the diversions on Funks Creek and Stone Corral Creek would have a less-than-significant impact on fish movement without providing information on fish migration under existing conditions or the fish passage conditions that would exist under the post-construction instream flow regime that would be controlled almost entirely by flow releases from Sites and Golden Gate Dams. The report also does not provide information on spawning and rearing opportunities before and after construction of the facility. Chapter 8 (Geomorphology) and Chapter 12 (Aquatic Resources) of the EIR/EIS should include a thorough description of existing conditions in these stream reaches, and the conditions that would exist under the proposed post-construction instream flow regime and propose any appropriate mitigation for potential impacts.

Methylmercury Production and Bioaccumulation

New impoundments often develop elevated levels of methylmercury in water and fish tissue after construction as naturally occurring terrestrial vegetation decays in the reservoir. In addition, methylmercury will be in water released from the reservoirs. Mercury sources to reservoirs include source water, atmospheric deposition, mercury mines in the watershed, and geologic formations. Elevated methylmercury in fish tissue poses a health risk for people and wildlife consuming the fish. Fish in the lower Sacramento River and Delta are already impaired by methylmercury and additional methylmercury loads from the Sites Reservoir Project may increase methylmercury levels in these fish. Black Butte Reservoir, Stony Gorge Reservoir, East Park Reservoir, Indian Valley Reservoir and Colusa Basin Drain are near the proposed Sites Reservoir and have fish advisories recommending limited human consumption of fish and are also on the 303(d) list for mercury. These water bodies, like Sites Reservoir, receive coast range runoff and/or Sacramento River water. The EIR/EIS should evaluate the potential for the construction and operation of the Sites Reservoir Project to methylate mercury and its subsequent bioaccumulation in reservoir fish. In addition, the EIS/EIR should evaluate potential increases in fish methylmercury levels in the Sacramento River and Delta due to methylmercury in reservoir water releases. Since these may be significant impacts, the EIS/EIR should propose mitigation measures and methylmercury monitoring in water and fish to monitor the Project's effects both within and downstream of the reservoir.

Cyanobacterial Blooms

Cyanobacterial blooms can release toxins that are hazardous for human and wildlife health. Other shallow nearby coast range impoundments including Clear Lake and Black Butte Reservoir regularly experience cyanobacteria blooms. Cyanobacteria cells have also been observed in nearby Stony Gorge Reservoir and East Park Reservoir although concentrations were not at toxic levels. The frequency and magnitude of cyanobacterial blooms are expected to increase in California with global warming. Diverted storm-water flows from the Sacramento River will carry elevated concentrations of nitrogen, phosphorous and other nutrients into Sites Reservoir. When these waters warm in summer they may produce algal blooms, including cyanobacteria and associated toxins. The EIR/EIS should evaluate the potential for blue green algal blooms and hazardous levels of toxins to occur in Sites Reservoir and propose any appropriate mitigation. Due to the increased risk of cyanobacterial blooms and potential impacts, mitigation, monitoring and public response procedures for ensuring protection of public health and minimization of environmental impacts must be considered in the EIR/EIS. Regional Board staff is available to share the most recent reservoir monitoring data and discuss successful monitoring and remediation strategies.

Temperature Effects

The EIR/EIS states that: *“The design of the reservoir facility would include the ability to release water from proposed outlet structures at nine depths. This operation would pull water from various levels of the reservoir (it is assumed that the reservoir would become stratified like all larger reservoirs throughout the Central Valley), with warming in the upper layer of the reservoir occurring in the summer months. Given the Project’s operational objective of matching the temperature of released water at the Delevan Pipeline Intake/Discharge Facilities to temperatures in the Sacramento River, or otherwise using the release to protect downstream water temperature for aquatic species, operations of the Delevan Pipeline Intake/Discharge Facilities would involve withdrawing water at suitable depths to manage temperatures”* (page 3-102). Given that the reservoir would be constructed on the Valley floor where temperatures are warmer and the reservoir would not be filled with snowmelt runoff like other Central Valley reservoirs and the effects of climate change, it is not clear that such operations would be possible. The basis for assuming that such operations are possible should be explained. Appropriate monitoring and mitigation should also be proposed to ensure that temperature impacts do not result from the project, including appropriate temperature modeling to guide reservoir operations. A thorough description of how the project would operate in conjunction with Shasta Reservoir and other reservoirs to provide the indicated temperature benefits and avoid impacts should also be provided.

Benefit of Temperature Control

The draft EIR/EIS states: *“The CALSIM II model results are used as inputs to the water temperature models, including the Upper Sacramento River Water Quality Model (USRWQM), Reclamation’s Temperature Model, the Folsom Reservoir CE-QUAL-W2 Temperature Model, and the Sites Reservoir Discharge Temperature Model...it was determined that incremental changes of 0.5° F in mean monthly water temperatures would be within model uncertainty...changes of 0.5° F or less are considered to be not substantially different, or “similar” in this comparative analysis.”* However, throughout the draft EIR/EIS and the modeling Appendices there are indicated temperature benefits that average 0.38 degrees that are within the stated confidence limits of the models. It is not clear that these benefits should be indicated given the uncertainty of the modeling. This issue should be clarified.

Thank you again for the opportunity to provide comments on the draft EIR/EIS. Water Boards staff are available to work with the Authority on the above comments and on referenced permitting processes. Scott Frazier is available to coordinate on matters before the State Water Board and can be contacted at (916) 341-5289 or Scott.Frazier@waterboards.ca.gov. George Low is available to coordinate on matters before the Regional Board and is available at (530) 224-4205 or George.Low@waterboards.ca.gov.

Sincerely,

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