WATER RECYCLING PROGRAM

SOUTH COUNTY AG PROJECT

Sacramento Regional County Sanitation District

REGIONALSAN

TAKING THE WASTE OUT OF WATER

Sacramento Regional County Sanitation District

Sacramento Regional County Sanitation District's

South Sacramento County Agriculture and Habitat Lands Recycled Water Program

Final Environmental Impact Report

Volume II Responses to Comments | SCH#: 2015022067

JANUARY 2017

Prepared by:

RMC water and environment

Sacramento Regional County Sanitation District South Sacramento County Agriculture & Habitat Lands Recycled Water Program

Final Environmental Impact Report
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SCH#: 2015022067

Sacramento Regional County Sanitation District South Sacramento County Agriculture & Habitat Lands Recycled Water Program Final Environmental Impact Report

CEQA Lead Agency: Sacramento Regional County Sanitation District

The Sacramento Regional County Sanitation District (Regional San) has prepared this Environmental Impact Report (EIR) for the South County Agriculture & Habitat Lands Recycled Water Program (proposed Project). Regional San proposes to provide Title 22 disinfected tertiary treated recycled water for irrigation and groundwater recharge in the southern portion of Sacramento County (South County) and to the Stone Lakes National Wildlife Refuge (NWR) managed wetlands. The EIR considers three action alternatives and the No Project Alternative:

- **Alternative 1, Medium Service Area Alternative -** Convey up to 50,000 acre-feet per year (AFY) of recycled water from the Sacramento Regional Wastewater Treatment Plant to 16,000 acres of irrigated lands in South County including water to farmers, 400 acres of managed wetlands within the South Stone Lake area of the NWR, and to a potential 560-acre irrigation and recharge area. Facilities would include a pump station, and up to 13.8 miles of transmission pipelines and distribution mains, and an undetermined length of service lateral connections.
- **Alternative 2, No Reclamation Funding Alternative -** Same as Alternative 1 (Medium Service Area Alternative), except Bureau of Reclamation would not provide any funding, this alternative is included to facilitate a possible future request for federal funding.
- **Alternative 3, Small Service Area Alternative -** Reduced version of Alternative 1 (Medium Service Area Alternative), with a smaller service area. The managed wetlands at Stone Lakes NWR would continue to be served, and the potential recharge area would be included in order to benefit the Central Sacramento Groundwater Basin.
- **Alternative 4, No Project Alternative -** Assumes that the proposed Project would not be constructed and that recycled water would not be supplied to South County, Stone Lakes NWR, or a potential recharge area.

The EIR assesses potential environmental effects of the South Sacramento County Agriculture & Habitat Lands Recycled Water Program alternatives and a No Project Alternative on resources including: aesthetics, air quality, agriculture, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services and utilities, recreation, transportation, socioeconomics, and environmental justice.

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Chapter 7 Responses to Comments

7.0 Introduction

7.0.1 Project Background

The Sacramento Regional County Sanitation District (Regional San), as CEQA lead agency, prepared a Draft Environmental Impact Report (Draft EIR) for the South Sacramento County Agriculture & Habitat Lands Recycled Water Program (proposed Project). The Draft EIR was developed to provide the public and responsible and trustee agencies reviewing the proposed Project with an analysis of the potential effects on the local and regional environment associated with construction and operation of the Project. The Project would deliver recycled water to irrigated lands in southern Sacramento County and to the Stone Lakes National Wildlife Refuge. The primary purposes of the Project are to meet Regional San's water recycling goal, restore depleted groundwater levels in South Sacramento County through in-lieu recharge, improve regional water supply reliability and improve flows in the Cosumnes River.

7.0.2 Draft EIR Public Review Process

On July 8, 2016, Regional San, as CEQA Lead Agency, released the Draft EIR for the Project for public review, and filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin a 45-day public review period, as required by CEQA (Public Resources Code, Section 21161). Concurrent with issuance of the NOC, the Draft EIR was made available to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft EIR was available for review at the following locations:

Regional San
10060 Goethe Road
Sacramento, CA 95827

Franklin Community Library
10055 Franklin High Road
Elk Grove, CA 95757

During the public review period, a meeting was held on July 25, 2016, at Sacramento County Farm Bureau, 8970 Elk Grove Boulevard, Elk Grove, CA to receive comments on the Draft EIR. The 45-day public review period ended on August 22, 2016.

7.0.3 Purpose of the Final EIR

This document is being issued by Regional San as the Final EIR for the proposed Project. CEQA requires lead agencies that have completed a Draft EIR to consult with and request comments on the environmental document from responsible, trustee and other agencies with jurisdiction over resources that could be affected by the project. The public must also be afforded the opportunity to comment on the Draft EIR. This Final EIR has been prepared to respond to comments on the Draft EIR made by agencies and members of the public.

The Final EIR for the proposed Project consists of the Draft EIR and appendices (Volume I) and this document containing Comment Letters and Responses to Comments, including the Mitigation Monitoring and Reporting Program (Volume II). Regional San will consider the Final EIR before approving or denying the proposed action.

7.0.4 CEQA Requirements

Regional San has prepared this document pursuant to Section 15132 of the CEQA Guidelines, which specify that "*The Final EIR shall consist of:*

a) The draft EIR or a revision of the draft.

b) Comments and recommendations received on the Draft EIR either verbatim or in summary.

c) A list of persons, organizations, and public agencies commenting on the draft EIR.

d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process.

e) Any other information added by the Lead Agency."

7.0.5 Consideration of Recirculation

If significant new information is added to an EIR after public review, the lead agency is required to recirculate the revised document (CEQA Guidelines Section 15088.5). Significant new information includes, for example, a new significant environmental impact or a substantial increase in the severity of an impact. New information is not considered significant unless the document is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or comment on a feasible mitigation measure that the proponent has declined to implement. No new impacts or substantial increase in the severity of impacts has been identified as a result of information brought forward in the comments. Recirculation of the Draft EIR was thus not deemed to be necessary.

7.0.6 Use of Comment Summaries

The full text of all written comments is included in Chapter 8. Each letter is identified by a number and each comment is identified by a comment number in the margin; responses use the same number system. For example, Comment 1 in Letter 1 is designated Comment 1-1. In addition, to facilitate reading the Response to Comments, a summary of each comment is inserted in *italics* just prior to each response. This summary does not substitute for the actual comment; the reader is urged to read the full original text of all comments. The responses are prepared in answer to the full text of the original comment, and not to the abbreviated summary.

7.0.7 Requirements for Certification and Future Steps in Project Approval

The Draft EIR was circulated for review, and opportunities for public and agency review and comments were made available in accordance with CEQA. Pursuant to Section 15088 of the CEQA Guidelines, the Final EIR is being made available to commenters for a minimum 10-day period before its consideration for certification.

Regional San will consider certification of the Final EIR at the regularly scheduled Board Meeting on **February 8, 2017** at the Sacramento County Board of Supervisors' Chambers at 700 H Street, Sacramento, CA 95814. In order to certify the Final EIR, Regional San must find that:

- the Final EIR has been completed in compliance with CEQA;
- the Final EIR was presented to the decision-making body of the lead agency and that the decision-making body reviewed and considered the information contained in the Final EIR prior to selection of a Project; and
- The final EIR reflects the lead agency's independent judgment and analysis (CEQA Guidelines 15090).

Regional San will consider the Final EIR for certification as complete under Section 15090 of the CEQA Guidelines, and will consider approval of the proposed Project. Regional San will consider the information presented in the Final EIR when contemplating approval of the proposed Project, and will prepare and adopt written findings of fact for each significant environmental impact identified in the EIR. Because the project does not have any significant, unavoidable environmental impacts, Regional San will not need to prepare a Statement of Overriding Considerations to be included in the record of project approval (CEQA Guidelines 15093). A Mitigation Monitoring and Reporting Program will be adopted and a Notice of Determination (NOD) can then be filed.

7.0.8 Organization of this Document

The Final EIR consists of the Draft EIR and appendices (Volume I) and Comment Letters and Responses to Comments along with the Mitigation Monitoring and Reporting Program (Volume II).

This document is Volume II of the EIR for the proposed Project. This volume contains one chapter, which presents the responses to comments on the Draft EIR, plus two appendices, which contain the Mitigation Monitoring and Reporting Program and an Antidegradation Analysis that was prepared after publication of the Draft EIR.

This chapter contains each letter or email commenting on the Draft EIR, and includes responses to each comment. Comment letters are reproduced and following each letter, responses are provided to each individual comment as identified by numbers in the margin of each comment letter. Revisions to text of the Draft EIR based on comments are included in these responses. Text revisions in the responses in this chapter are formatted in revision mode for ease of reference: ~~strikeouts~~ indicate removed text and underlines indicate new text.

7.0.9 Comments Received on the Draft EIR

Regional San received 15 comment letters on the Draft EIR during the 45-day public review period, plus two additional comment letters that were received after the end of the review period. Regional San also received correspondence from the State Clearinghouse documenting the completion of the public review period for the Draft EIR. There were no verbal comments made at the meeting held during the public review period. Each comment letter received is listed in **Table 7-1** and identified by number, comment author, and date.

Table 7.0-1: List of Commenters

Letter #	Comment Author	Comment Date
	Federal Agencies	
1	Bureau of Reclamation, Michelle H. Denning, Regional Planning Officer	8/22/16
	State Agencies	
2	State Water Resources Control Board, Cedric Irving, Environmental Scientist	8/22/16
3	State of California, Department of Fish and Wildlife, North Central Region , Tanya Sheya, Environmental Scientist	8/22/16
4	Caltrans District 3, Jacob Buffenbarger, Transportation Planner	8/22/16
5	State of California, Governor's Office of Planning and Research, State Clearinghouse (two letters)	8/23/16 8/24/16
	Regional and Local Agencies	
6	Central Valley Regional Water Quality Control Board, Stephanie Tadlock, Environmental Scientist	8/16/16
7	Sacramento County Water Agency, Michael L. Peterson, Director of Department of Water Resources,	8/17/16
8	Sacramento Environmental Commission, Richard Hunn, Chair	8/18/16
9	Sacramento Local Agency Formation Commission, Donald Lockhart, Assistant Executive Director	8/22/16
10	Sacramento Central Groundwater Authority, Darrell K. Eck, Executive Director	8/24/16
	Organizations	
11	Cosumnes Coalition, Melinda Frost-Hurzel, Cosumnes River Monitoring Coordinator and Mike Eaton, Cosumnes GDE Advisor	8/19/16
12	The Nature Conservancy, Jay Ziegler	8/22/16
13	San Luis & Delta-Mendota Water Authority, submitted through Kronick, Moskovitz, Tiedemann & Girard, Rebecca R. Akroyd	8/22/16
	Individuals	
14	Rick Bettis	8/22/16
	Letters Received after the End of the Comment Period	
15	Sacramento County Department of Transportation, Matthew G. Darrow, P.E., T.E., P.T.O.E, Senior Transportation Engineer	8/24/16
16	Sacramento Municipal Utility District (SMUD), Rob Ferrera, Environmental Specialist	8/29/16

7.1 Comment Letter 1 – Bureau of Reclamation, Michelle H. Denning, Regional Planning Officer

7.1.1 Response to Comment 1-1

Comment Summary: The comment notes that the Draft EIR was revised to address some of Reclamation's previous comments but states that the fish section was not rewritten to add additional detail about each fish species. Reclamation provided suggested edits to the Biological Resources section of the Draft EIR.

Regional San appreciates the additional information provided by Reclamation staff and hereby incorporates those changes in the EIR.

Starting on page 3.5-20 of the Draft EIR, the description under "Fish" is revised as follows:

> *Fish*
>
> Several sensitive fish species that may be impacted by the proposed Project occur in the Sacramento River and Delta regions. These are described below.
>
> **Longfin smelt.** The Longfin smelt (*Spirinchus thaleichthys*) is a small (to about 140 mm Standard Length [SL]), euryhaline fish with a life cycle of approximately two years. Anadromy is often listed for the species, but some populations are known to complete their entire life-cycle in freshwater (USFWS 2012). Habitat includes a wide range of temperature and salinity conditions in coastal waters near shore, bays, estuaries, and rivers. In estuaries Longfin Smelt are usually found in the middle or bottom of the water column (Moyle 2002). Juvenile and adult Longfin Smelt have been found throughout the year in salinities ranging from pure freshwater to pure seawater, although once past the juvenile stage, they are typically collected in waters with salinities ranging from 14 to 28 (parts per thousand) ppt.
>
> Longfin Smelt are thought to be restricted by high water temperatures, with temperatures greater than 22 °C causing a seaward or deeper water movement during the summer months, when water temperatures in the upper San Francisco Estuary and Delta are higher. Within the San Francisco Estuary and Delta, adult Longfin Smelt occupy water temperatures from 16 to 20 °C, with spawning occurring in water with temperatures from 5.6 to 14.5 °C. Longfin smelt generally spawn in freshwater and then move downstream to brackish water to rear (USFWS 2012).
>
> Longfin smelt are generally semelparous, although it is possible that some survive to spawn more than once. Longfin smelt generally spawn after their second year. It has been suggested that some fish spawn after one year and others may spawn in their third year, but the existence and frequency of these alternate life-histories is not well documented. Populations occur along the Pacific Coast of North America north to Prince William Sound, Alaska. The San Francisco Estuary represents the southernmost population and the largest spawning population in California. Longfin smelt are widespread within the San Francisco Estuary and historically they were found seasonally in all of its major open water habitats. Because of their former broad distribution and abundance, Longfin Smelt are believed to be an important integrator of the estuarine food web and a valuable indicator of ecosystem function (Rosenfield 2012).
>
> A petition to list the San Francisco Estuary population as a threatened species under the Endangered Species Act was denied in 1994 because the degree of reproductive and genetic isolation of the population was not deemed biologically significant. The species has been State listed as threatened since 2009. In 2012 the USFWS published a 12-Month finding on a petition to list the San Francisco Estuary population of Longfin Smelt as endangered or threatened, wherein they found the range-wide listing of Longfin Smelt was not warranted at the time, but listing the Bay-Delta distinct population segment of the species was warranted. Listing was

precluded by higher priority actions to amend the Lists of Endangered and Threatened Wildlife and Plants and the San Francisco Estuary population was added to the candidate species list with plans for a proposed rule in the future as priorities allow (USFWS 2012; CDFW 2016).~~,~~

Delta smelt. The Delta smelt (*Hypomesus transpacificus*) is a small (to about 120 mm SL, but generally smaller), euryhaline, short-lived (2 years or less) fish, endemic to the upper San Francisco Estuary and Delta. Delta Smelt are usually listed as an estuary-dependent species with spawning migration occurring in the winter from the low salinity (1-6 ppt) region of the estuary to fresher waters upstream. However, some Delta Smelt are thought to remain year-round in freshwater, suggesting upstream limits of their range may be determined more by tidal action to assist in transportation to favorable habitats.

Delta Smelt are commonly found at temperatures of 10 to 22 °C and are mostly found in water with salinity ranging from 0 to 7 ppt, although they can tolerate higher. Juvenile and sub-adult Delta Smelt are strongly associated with turbid water in spring and summer. Larval Delta Smelt have been shown to feed more efficiently with suspended materials in the water column. Delta Smelt feed mainly on small crustacean zooplankton, particularly copepods.

Spawning largely occurs from late January through June. Spawning habitat and behavior in the wild remains unknown, although they are thought to spawn on shallow sandy beaches. Females may produce multiple clutches of eggs in a season (Moyle et al. 2016). Once widely distributed in the upper estuary and Delta, as Delta Smelt abundance declined and habitat conditions changed, their distribution became more restricted. The rapid decline of the Delta Smelt population led to its listing as federally threatened in 1993 and as state endangered in 2010. Since listing, the population has continued to decline with concerns of an increased threat of extinction (USFWS 1993; CDFW 2016; Moyle et al. 2016).~~, and~~

Sacramentos splittail. The Sacramento splittail (*Pogonichthys macrolepidotus*) is a large (40 + cm) cyprinid fish endemic to the Central Valley of California. Splittail may live for 8–10 years but do not typically live longer than 5 years with the largest and oldest fish being female (Moyle et al. 2004). Splittail live in the slightly brackish and freshwater portions of the upper San Francisco Estuary and western Sacramento–San Joaquin Delta (Moyle et al. 2004). Splittail usually reach sexual maturity by the end of their second year. In typical years, adults begin a gradual upstream migration towards spawning areas sometime between late November and late January, but substantial migration can also occur in spring.

Upstream movement appears to coincide with flow pulses that inundate floodplains and riparian areas in which splittail forage and spawn. Peak spawning occurs from March through April, although records of spawning exist for late January to early July. Spawning success is highly variable among years but is correlated with freshwater outflow and the availability of shallow-water habitat with submerged vegetation (Sommer et al. 2007). In early surveys splittail were found as far up the Sacramento River as Redding, up the Feather River as high as Oroville, and in the American River to Folsom. Archaeological evidence from the San Joaquin River basin indicates that splittail were abundant in two large lakes, where they were harvested by native people. The historic abundance of splittail is not known, but they were abundant enough to be harvested by native peoples and commercial fisheries in the 19th and early 20th centuries (Sommer et al. 2007).

Splittail is the only remaining member of its genus following the extinction of the Clear Lake splittail (Pogonichthys ciscoides) in the early 1970's. Two genetically distinct populations were found to exist within the region; one largely comprised of splittail collected from the Petaluma and Napa Rivers and the second comprised of splittail collected from tributaries in California's Central Valley (Cosumnes, Sacramento, and San Joaquin Rivers) (Baerwald et al. 2007). In 1989 California listed the splittail as a species of special concern. Splittail was listed as threatened

under FESA in 1999 (USFWS 1999). In 2003 the USFWS removed splittail from the list of threatened species (USFWS 2003). This represented the first extant fish to be removed from the federal list of threatened and endangered species (Sommer et al. 2007). In 2010 the USFWS published a 12-month finding that protection for splittail under FESA was not warranted (USFWS 2010). Splittail remain a species of special concern in California (Moyle et al. 2015). ~~are residents of the Bay-Delta and the lower portions of the Sacramento River system. Longfin smelt is a candidate for listing under the FESA and is state listed as threatened. Delta smelt is listed as federal threatened and state endangered. Sacramento splittail is a California species of special concern. Delta smelt critical habitat is designated in the Delta, the lower Sacramento River to I Street Bridge, and the lower San Joaquin River near Vernalis (USFWS 1994).~~

Steelhead, California Central Valley (CCV) Distinct Population Segment (DPS) (federal threatened) ~~**and salmon**~~ are anadromous, spending much of their life-cycle as adults in the ocean, and returning to spawn in their natal freshwater streams and rivers. Over-summering (holding), spawning, incubation, and rearing of CCV steelhead occurs mainly in the colder headwaters of tributaries to the Sacramento River. Adults and smolts primarily use the Sacramento River mainstem as movement habitat to and from tributary streams. CCV steelhead inhabit and spawn in more Sacramento River tributaries than other anadromous species in the watershed. Juvenile CCV steelhead hatch and rear in natal streams, for a period typically less than 2 years, and migrate to the ocean, where they rear as adults for one to three years. Critical habitat for CCV steelhead is designated in the Delta, the Sacramento River mainstem below Keswick Dam, many Sacramento River and San Joaquin River tributaries, and elsewhere (NMFS 2005).

~~**and salmon** are anadromous, spending much of their life-cycle as adults in the ocean, and returning to spawn in their natal freshwater streams and rivers. Over-summering (holding), spawning, incubation, and rearing of **steelhead, California Central Valley (CCV) Distinct Population Segment (DPS)** (federal threatened) and **Chinook salmon, Central Valley spring-run (SRC) Evolutionarily Significant Unit (ESU)** (federal and state threatened) occurs mainly in the colder headwaters of tributaries to the Sacramento River. Adults and smolts primarily use the Sacramento River mainstem as movement habitat to and from tributary streams. For SRC, self-sustaining populations occur in Deer, Mill, and Butte creeks. CCV steelhead inhabit and spawn in more Sacramento River tributaries than do SRC. Juvenile steelhead and SRC migrate to the ocean after hatching and rearing for some time in natal streams (generally less than 1 or 2 years). Critical habitat for CCV steelhead is designated in the Delta, the Sacramento River mainstem below Keswick Dam, many Sacramento River and San Joaquin River tributaries, and elsewhere (NMFS 2005). Critical habitat for SRC is designated on the Sacramento River mainstem and many of its tributaries, and in the Delta (NMFS 2005).~~

Chinook salmon, Central Valley spring-run (SRC) Evolutionarily Significant Unit (ESU) (federal and state threatened), as with CCV steelhead, are anadromous, rearing as adults in the ocean, and returning to spawn in their natal freshwater streams and rivers. Adults return to the Sacramento River from March through September, and spawning typically occurs from late-August through October (Yoshiyama et al. 1998). Holding, spawning, incubation, and rearing occurs mainly in the cooler headwaters of tributaries to the Sacramento River. Fry emergence occurs between November and March and, after less than two years following hatching and rearing in natal streams, juvenile SRC migrate to the ocean. Critical habitat for SRC is designated on the Sacramento River mainstem and many of its tributaries, and in the Delta (NMFS 2005).

Chinook salmon, Sacramento River ESU winter-run…

On page 3.5.57 of the Draft EIR, the following references are added:

Baerwald, M., Bien, V., Feyrer, F. and B. May. 2007. Genetic analysis reveals two distinct Sacramento splittail (Pogonichthys macrolepidotus) populations. Conservation Genetics 8(1):159-167.

California Department of Fish and Wildlife. 2016. State and Federally Listed Endangered and threatened animals of California, July 2016. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109405&inline

Moyle, P.B. 2002. Inland fishes of California. University of California Press.

Moyle, P. B., R. D. Baxter, T. Sommer, T. C. Foin, and S. A. Matern. 2004. Biology and population dynamics of Sacramento splittail (Pogonichthys macrolepidotus) in the San Francisco Estuary: a review. San Francisco Estuary and Watershed Science 2(2): article 4.

Moyle, P.B., R. M. Quiñones, J. V. Katz and J. Weaver. 2015. Fish species of special concern in California, third edition. California Department of Fish and Wildlife. https://www.wildlife.ca.gov/Conservation/SSC/Fishes

Moyle, P.B., Brown, L.R., Durand, J.R. and J.A. Hobbs. 2016. Delta Smelt: Life History and Decline of a Once Abundant Species in the San Francisco Estuary. San Francisco Estuary. San Francisco Estuary and Watershed Science, 14(2).

Rosenfield, J.A. 2010. Life history conceptual model and sub-models for longfin smelt, San Francisco Estuary population. Report submitted to the Sacramento-San Joaquin Delta Regional Ecosystem Restoration Implementation Plan.

Sommer, T.R., Baxter, R.D. and F. Feyrer. 2007. Splittail "delisting": a review of recent population trends and restoration activities. American Fisheries Society Symposium 53:25-38.

U.S. Fish and Wildlife Service. 1993. Endangered and threatened wildlife and plants; Determination of threatened status for the Delta Smelt; Final rule. Federal Register 58(42):12854-12864.

U.S. Fish and Wildlife Service. 1999. Endangered and threatened wildlife and plants; Determination of threatened status for the Sacramento splittail; Final rule. Federal Register 64(25):5963-5981.

U.S. Fish and Wildlife Service. 2003. Endangered and threatened wildlife and plants; notice of remanded determination of threatened status for the Sacramento splittail (Pogonichthys macrolepidotus). Federal Register 68(183):5140–5166.

U.S. Fish and Wildlife Service. 2010. Endangered and threatened wildlife and plants; 12-month finding on a petition to list the Sacramento splittail as endangered or threatened. Federal Register 75(194):62070–62095.

Yoshiyama, R.M., F.W. Fisher, and P.B. Moyle. 1998. Historical abundance and decline of Chinook salmon in the Central Valley Region of California. North American Journal of Fisheries Management 18:487-521.

7.1.2 Response to Comment 1-2

Comment Summary: The comment notes that there are a wide variety of possible future hydrologic conditions in the Sacramento River and that modeling is limited in its ability to predict actual flows, and emphasizes that this variability makes the potential for impacts to fish species with reduced flows in drier water years more apparent.

The Draft EIR recognizes that effects on fish are potentially significant. As stated on page 3.5-54 of the Draft EIR, impacts on fish species are "Potentially significant for all action alternatives." The Draft EIR proposes mitigation that would entail working with resources agencies, including the Bureau of Reclamation to adjust timing of discharge reductions to ensure that adverse effects on fisheries are avoided.

7.1.3 Response to Comment 1-3

Comment Summary: The comment states that the Biological Resources section should address the project's potential impacts to water temperatures in area streams, lakes and rivers.

As noted on page 3.5-53 of the Draft EIR:

> *"Over the 82-year period of record from 1922 to 2003, sequential drought years during the periods 1929-1934 and 1986-1992 created circumstances in the CalSim II model simulation where the Proposed Project would have reduced Shasta storage by up to about 35,000 AF without wintertime irrigation and about 30,000 AF with wintertime irrigation over a worst-case 6-year drought period without changes to retain more cold water at Shasta Lake. This decrease in storage could create thermal impacts to fisheries habitat downstream of Shasta."*

Other than this potential impact associated with decrease in cold water storage, the Project is not expected to increase temperatures. Except for the warmest summer months when effluent temperatures are similar to ambient water temperatures, the temperature of the existing discharge is higher than the ambient temperature of the Sacramento River, so removing some portion of this warm water discharge would reduce the temperature of the river. Based on USGS stream gage data, ambient river temperatures at Freeport range from about 45º F in January to about 79º F in August, and effluent temperatures range from an average of 67º F in January to 79º F in August (Ascent Environmental 2014). In addition to reducing warm water discharges to the Sacramento River, the Project would increase flows in in the Cosumnes River and other Delta tributaries because in-lieu groundwater recharge would increase groundwater levels and allow more water to stay in streams (see detailed discussion on page 3.10-37 of the Draft EIR). Increasing flows would not result in increased water temperature and higher water levels in the Cosumnes River could result in somewhat lower temperatures.

7.1.4 Response to Comment 1-4

Comment Summary: The comment requests that impact BIO-4a address any potential drainage corridors that may drain into the Sacramento River and Delta.

As stated on page 3.5-49 of the Draft EIR Impact BIO-4a addresses "direct impacts to drainage corridors of the project area during construction and operation". It is expected that direct impacts to drainage corridors draining to the Sacramento River and Delta would be limited to the construction period, when

pipelines crossing drainages would be constructed. As noted in the Draft EIR, operation of the project is not projected to have any direct impacts to movement of resident species; once facilities are constructed, irrigation operations would not interfere with migratory corridors for native fish species. Project area drainage corridors that flow into the Sacramento River and Delta are described in the draft EIR beginning on page 3.5-2, and include Ehrhardt Channel, Franklin Creek, and a large unnamed tributary, all of which are shown on Figure 3.5-1 on page 3.5-3 of the Draft EIR.

7.1.5 Response to Comment 1-5

Comment Summary: The comment suggests that if the project increases flows in tributaries to the Sacramento River and Delta, mitigation would be needed to discourage upstream movement into unnatural migration routes and/or habitat modifications.

The project does not include any direct discharges to streams in the project area, and is thus not expected to create any potential unnatural migration routes or unnaturally modify habitats in the project area. Provision of recycled water for irrigation would allow in-lieu recharge of the groundwater basin, and increasing groundwater levels would benefit the Cosumnes River by restoring flows along a portion of the river to a more natural condition that existed before groundwater pumping lowered groundwater levels and converted the Cosumnes River from a "gaining" river to a "losing" river. Increased flows in the lower portion of the Cosumnes River would be a step toward restoring more natural conditions to the river channel. No mitigation is needed because this would be a beneficial impact of the proposed Project.

Provision of surface water to Stone Lakes National Wildlife Refuge is not expected to alter the flow regime of water flowing from the refuge into the Sacramento River. Recycled water would take the place of existing water sources that supply the refuge. As noted on page 3.2-5 of the Draft EIR "The wetlands in the Stone Lakes NWR that would receive recycled water are currently supported by surface water supplies including water pumped from lakes and from riparian sources." It is expected that the U.S. Fish and Wildlife Service would continue to manage the refuge in accordance the Comprehensive Conservation Plan, and that provision of recycled water would not create unnatural migration patterns or adverse habitat modifications.

7.1.6 Response to Comment 1-6

Comment Summary: The comment requests documentation of information regarding the percentage of SRWTP effluent that originates as groundwater.

The source of the information cited on page 3.10-7 of the Draft EIR is cited, and included in the references section. Every year Regional San is required by its NPDES permit to submit an annual water supply characterization report to the Central Valley Regional Water Quality Control Board (CVRWQCB). Data cited in the Draft EIR is from the 2013 report, for which the full reference is listed on page 3.10-49: "Regional San. 2015. *Sacramento Regional Wastewater Treatment Plant's Submittal of the Annual Water Supply Characterization Report for 2013*. As noted in that document, which is part of the Administrative Record for Project and is available from Regional San upon request, Regional San works with the Regional Water Authority to obtain water delivery data from their water purveyors. Each water purveyor reports the quantity of water it obtains from surface water and from groundwater. The quantities vary a bit by year. Table 7-1 below provides data for the year 2010 through 2013.

Table 7.1-1: Summary of Water Deliveries in Regional San Service Area

Year	Surface Water (AF)	Groundwater (AF)	Total (AF)	Percent Surface Water	Percent Groundwater
2010	198,058	146,384	344,442	57.5%	42.5%
2011	200,842	134,241	335,083	59.9%	40.1%
2012	207,981	135,726	343,707	60.5%	39.5%
2013	212,655	148,978	361,633	58.8%	41.2%
Average	204,884	141,332	346,216	59.2%	40.8%

As demonstrated by Table 7.1-1, the project represents only about 14 percent of the total effluent discharged from the Sacramento Regional Wastewater Treatment Plant, of which roughly 40 percent originates as groundwater.

7.1.7 Response to Comment 1-7

Comment Summary: The comment expresses concern about the water rights impacts of the proposed project and states that there are water rights issues that are not adequately addressed by proposed mitigation that is included in the Draft EIR.

Regional San appreciates Reclamation's review of the Draft EIR, and is committed to working with Reclamation staff to address potential project effects on CVP operations.

7.2 Comment Letter 2 – State Water Resources Control Board, Cedric Irving, Environmental Scientist

7.2.1 Response to Comment 2-1

Comment Summary: The comment provides information on the environmental review requirements for the Clean Water State Revolving Fund (CWSRF) Program.

Regional San is aware of the environmental review requirements for the CWSRF Program, and will submit a completed environmental application package, which will address compliance with the Federal Clean Air Act, protection of wetlands, compliance with the Farmland Protection Policy Act, Compliance with the Migratory Bird Treaty Act, and Compliance with the Flood Plain Management Act. The project area is not within a coastal zone and does not affect a wild and scenic river. The Draft EIR analyzes alternatives and Regional San will hold a public meeting when considering certification of the Final EIR.

Requirements for Section 7 Endangered Species Act consultation and compliance with Section 106 of the National Historic Preservation Act are discussed on pages 5-2 and 5-3 of the Draft EIR. Regional San will work with SWRCB to ensure that federal consultation requirements are met.

7.2.2 Response to Comment 2-2

Comment Summary: The comment requests that Regional San contact Dwayne Coffey at the USDA Natural Resources Conservation Service to determine if Form AD1006 must be completed to evaluate farmland impacts.

As discussed on page 3.2-19 of the Draft EIR, the proposed Project would not result in any loss of farmland. All current farmland in the project area, whose owners are participating in the project, would either be irrigated with recycled water in the summertime, or irrigated for passive recharge in the wintertime, or both. Mr. Coffee was contacted on August 23, 2016 and he indicated that completion of Form AD-1006 is not required because there would be no loss of farmland.

7.2.3 Response to Comment 2-3

Comment Summary: The comment requests supporting documentation that demonstrates how potential take was determined for incremental discharge reductions associated with the project.

As summarized on page 3.5-53 of the Draft EIR, under worst-case conditions (at the end of a 6-year drought) the discharge reduction associated with the Project:

> *"has the potential effect of depleting storage in project reservoirs (mainly Shasta Lake), if increased releases are required to meet regulatory requirements. … This decrease in storage could create thermal impacts to fisheries habitat downstream of Shasta. Such thermal impacts could stress temperature-sensitive fish species that spawn in the Sacramento River mainstem, like winter-run Chinook salmon and green sturgeon. The magnitude and importance of Project-related temperature changes associated with a worst-case 5-year drought period have not been modeled."*

As noted on page 3.10-42 of the Draft EIR, although modeling predicts the possibility that the discharge reduction could result in a depletion of cold-water storage, operation of the Central Valley Project and State Water Project is under the discretion of the operators of these two projects, who may manage releases in a manner that is different than what the model predicts. Impacts of discharge reduction may thus be different under real world conditions than are predicted by the model. Regional San has also committed to implementing Mitigation Measure HYD-4, which would require operational changes so as to avoid take of listed species. Potential temperature changes depend on a multitude of conditions, and predictions regarding the number of fish that could be affected would require speculation. Nevertheless, the Draft EIR conservatively assumes the potential for thermal stress to fish and proposes mitigation to

avoid the impact. For these reasons, Regional San has not attempted to quantify any potential take that would result without the implementation of mitigation.

7.2.4 Response to Comment 2-4

Comment Summary: The comment requests identification of any water-quality related recommendations made from the Design-Level Geotechnical Evaluation for unstable soil areas and demonstration of compliance.

Regional San has not yet designed the facilities and thus has not conducted a design-level geotechnical evaluation. As noted on page 3.8-8 of the Draft EIR:

> *"The Project area consists of flat terrain and is not in an area subject to landslides. The Project area is also underlain by soils characterized as clay with little or no swelling potential. Therefore, the proposed Project would have no impact related to landslides or expansive soil conditions….*
>
> *However, seismic events could still result in secondary seismic impacts associated with unstable soils such as lateral spreading, liquefaction, and subsidence. … the geotechnical analysis required as part of the California Building Standards Code would incorporate appropriate standard engineering practices and specifications in facility design to minimize risk of structural failure in a seismic event, and would reduce secondary impacts that may occur as a result. Therefore, impacts would be less than significant."*

The project also includes the following water quality mitigation measures, which are delineated on page 3.10-31 of the Draft EIR:

> ***"Mitigation Measure HYD-1a: Comply with the Construction General Permit (All Action Alternatives)***
>
> *To minimize the impacts to water quality from construction activities, the proposed Project shall implement measures contained in the Construction General Permit including the development of a SWPPP.*
>
> ***Mitigation Measure HYD-1b: Implement BMPs to Control Erosion and Sediment During Construction (All Action Alternatives)***
>
> *The SWPPP shall specify that all construction activities shall implement multiple BMPs to provide effective erosion and sediment control. These BMPs shall be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. BMPs to be implemented as part of this mitigation measure shall include, but are not limited to, the following measures:*
>
> - *Temporary erosion control measures, such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover, shall be employed for disturbed areas;*
> - *Dirt and debris shall be swept from paved streets in the construction zone on a regular basis, particularly before predicted rainfall events;*
> - *Grass or other vegetative cover will be re-established on unpaved areas of the construction site as soon as possible after disturbance. In paved areas, any removed paving will be replaced as soon as possible; and*
> - *Soil stockpiling sites will be located such that they do not drain directly into nearby surface water bodies.*

Multiple BMPs used in combination, properly installed and maintained, can achieve significant sediment removal. BMPs proposed by the project contractor shall be subject to approval Regional San, who shall require that all parties performing construction under the proposed Project incorporate into contract specifications the requirement that the contractor(s) comply with and implement these provisions. The contractor shall also include provisions for monitoring during and after construction activities to verify that these standards are met.

Mitigation Measure HYD-1c: Comply with the General Order for Dewatering or Other Appropriate NPDES Permit (All Action Alternatives)

To minimize the impacts to water quality from dewatering activities, the Regional San shall implement measures contained in the General Order for Dewatering or other appropriate NPDES permit or Waste Discharge Requirement."

These measures will be adopted as part of the Mitigation Monitoring Reporting Program for the Project and implementation would thus be required.

7.2.5 Response to Comment 2-5

Comment Summary: The comment requests copies of any comments or analysis provided by resource agencies regarding the agreement for recycled water in the Stone Lakes NWR and related to discharge reduction.

The California Department of Fish and Wildlife commented on the project during scoping (see their letter in Appendix B of the Draft EIR) and provided comments on the Draft EIR, which are included in this Response to Comments document (see Comment Letter 3). Regional San has discussed with U.S. Fish and Wildlife Service (USFWS) the possibility of providing recycled water to Stone Lakes NWR, but USFWS staff have not provided any written comments or analysis of recycled water use at the refuge or of discharge reduction. It is anticipated that water for the refuge would be evaluated in more detail by USFWS once the early phases of the project are in place and the possibility of obtaining recycled water is more tangible to USFWS.

7.2.6 Response to Comment 2-6

Comment Summary: The comment requests discussion of the cumulative effects of discharge changes in the hydrologic area.

Cumulative impacts are discussed starting on page 3.10-47 of the Draft EIR. The cumulative analysis considers other potential projects that would reduce discharges to the Sacramento River and also considers the cumulative effect of the California WaterFix.

7.2.7 Response to Comment 2-7

Comment Summary: The comment requests that documents applicable to the CEQA process be provided and asks to be notified of any hearing or meetings held regarding environmental review of the project.

A copy of the Draft EIR has already been provided to the SWRCB. Regional San will provide the Final EIR (which will include all comments received during the review period along with responses to each comment); resolution certifying the EIR and making CEQA findings; the adopted MMRP, and Notice of Determination to the SWRCB. Notice of hearings and meetings will also be provided to the SWRCB.

7.3 Comment Letter 3 – California Department of Fish and Wildlife, Tanya Sheya, Environmental Scientist

7.3.1 Response to Comment 3-1

Comment Summary: The comment explains the California Department of Fish and Wildlife (CDFW) role and states that the Project may require a Streambed Alteration Agreement or Incidental Take Permit.

Regional San is aware of permits that would likely be required from CDFW. Permitting requirements for the proposed Project are identified in Table 1-2 on page 1-14 of the Draft EIR, and include a Streambed Alteration Agreement and Incidental Take Permit from CDFW.

7.3.2 Response to Comment 3-2

Comment Summary: The comment summarizes the project description.

The comment's summary of the project description is essentially correct, however the provision of recycled water to the Stone Lakes National Wildlife Refuge is not part of the first phase of the project and is thus evaluated in the Draft EIR at the program level.

7.3.3 Response to Comment 3-3

Comment Summary: The comment states that the Project may require a CESA permit due to possible adverse effects on giant garter snake and recommends habitat replacement.

Overall, the proposed Project is expected to be consistent with the *Revised Draft Recovery Plan for the Giant Garter Snake (Thamnophis gigas)* (USFWS 2015), which calls for actions to "Ensure summer water is available for wetland habitats used by the snake". Over time, the proposed Project would increase groundwater levels and, as a result, would increase streamflows in the Cosumnes, lower Mokelumne and Sacramento Rivers. Please refer to Table 3.5-4 in the Draft EIR which lists average monthly return flows in cfs, and shows flow increases from June to September that average from about 26 to 63 cfs. These increased flows are expected to be beneficial to riparian habitat and to species such as giant garter snake (GGS) that inhabit the riparian corridor.

Potential construction-period impacts to GGS are identified in the Draft EIR and mitigation is proposed. Mitigation measures for giant garter snake are presented on pages 3.5-37 through 3.5-39 of the Draft EIR. Regional San's approach to mitigation emphasizes avoidance as the first step. If possible, Regional San also hopes to address potential impacts to listed species that will be covered by the South Sacramento Habitat Conservation Plan (SSHCP) through the HCP process. Because there is GGS habitat in the project area, once project design has progressed far enough to more precisely identify the project footprint, Regional San will conduct surveys in any areas that have been identified by the HCP as GGS habitat. Regional San will use this information to finalize project design and will avoid GGS habitat to the extent possible. If it is not possible to fully avoid GGS habitat, the Draft EIR identifies a variety of measures to avoid harming GGS during construction. If the proposed Project would adversely affect GGS or their habitat Regional San would also work with CDFW to determine requirements for habitat replacement.

7.3.4 Response to Comment 3-4

Comment Summary: The comment expresses concern about the effects of discharge to Stone Lakes NWR and recommends that discharge from Stone Lakes into Snodgrass Slough be maintained as natural as possible during dry years. The comment further recommends that Regional San provide flexibility to release water to the Sacramento River during droughts.

The project would not have effects relating to discharge into Snodgrass Slough because there is no regular outflow from the Stone Lakes National Wildlife Refuge into Snodgrass Slough. Regional San has been

working with staff at the Stone Lakes National Wildlife Refuge in developing the proposal to provide supplemental water to the refuge, and to ensure that provision of recycled water has no adverse effects on the refuge. Under normal (non-flood) conditions water does not flow out of the refuge into Snodgrass Slough. Water leaves the refuge either by private irrigation use of surface water during the summer, or by evapotranspiration, which occurs year-round. According to the Stone Lakes NWR Refuge Manager, outflow only occurs during periods of substantial flooding, and last occurred in 2006 (personal communication Bart McDermott, USFWS, Stone Lakes National Wildlife Refuge, Refuge Manager, November 15, 2016).

Provision of surface water to Stone Lakes National Wildlife Refuge does not create flows from the refuge into Snodgrass Slough. Recycled water would take the place of existing surface water sources that supply the refuge and would protect wetland habitat when surface water diversions for the refuge are curtailed, but would not create flow into Snodgrass Slough. As noted on page 3.2-5 of the Draft EIR "The wetlands in the Stone Lakes NWR that would receive recycled water are currently supported by surface water supplies including water pumped from lakes and from riparian sources." It is expected that the U.S. Fish and Wildlife Service would continue to manage the refuge in accordance with the refuge's Comprehensive Conservation Plan, and that provision of recycled water would not create unnatural migration patterns for anadromous fish.

Regarding release of water to the Sacramento River during droughts, please refer to **Mitigation Measure HYD-4, Coordinate Operations with Relevant Resource Agencies**, which is presented on page 3.5-54 of the Draft EIR. As noted there, "during critically dry years … Regional San shall work with the Bureau of Reclamation and other relevant resource agencies to make appropriate operational changes in recycled water use and timing of discharge reductions in the spring months". Regional San is committed to operating the proposed Project in a manner that would avoid significant impacts on aquatic resources.

7.3.5 Response to Comment 3-5

Comment Summary: The comment provides information regarding fees that must be payed upon filing of the Notice of Determination and requests written notification of proposed actions.

Regional San is committed to avoiding impacts to biological resources where feasible and minimizing any effects that cannot be avoided, and will notify CDFW regarding proposed actions and decisions regarding the proposed Project. Regional San will pay appropriate fees to CDFW when the Notice of Determination is filed.

7.4 Comment Letter 4 – California Department of Transportation (Caltrans), Jacob Buffenbarger, Transportation Planner

7.4.1 Response to Comment 4-1

Comment Summary: The comment states that the draft EIR incorporated comments from the letter that Caltrans submitted in response to the Notice of Preparation and that there are no additional comments.

Regional San appreciates Caltrans' review of the Draft EIR, and will keep Caltrans informed of relevant project related developments.

7.5 Comment Letters 5a and 5b – State of California, Governor's Office of Planning and Research, State Clearinghouse, Scott Morgan Director

7.5.1 Response to Comment 5-1

Comment Summary: The comment transmits a comment letter from the Central Valley Regional Water Quality Control Board (CVRWQCB) that was received by the end of the Draft EIR review period, and confirms that Regional San has complied with the State Clearinghouse review requirements for draft environmental documents pursuant to the California Environmental Quality Act.

Regional San appreciates the assistance of the State Clearinghouse in complying with CEQA requirements for environmental review. The letter from the CVRWQCB is included in the Final EIR as Letter 6, and responses to comments are provided.

7.5.2 Response to Comment 5-2

Comment Summary: The comment transmits a comment letter from the State Water Resources Control Board (SWRCB) that was received after end of the Draft EIR review period.

The letter from the SWRCB is included in the Final EIR as Letter 2, and responses to comments are provided.

7.6 Comment Letter 6 - Central Valley Regional Water Quality Control Board, Stephanie Tadlock, Environmental Scientist

7.6.1 Response to Comment 6-1

Comment Summary: The comment provides information regarding the Central Valley Basin Plan.

The Draft EIR describes the Basin Plan on page 3.10-17.

7.6.2 Response to Comment 6-2

Comment Summary: The comment describes requirements for conducting antidegradation analysis as part of the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements permitting processes.

The Draft EIR describes the state Antidegradation Policy on page 3.10-20. The project level components of the proposed Project, which entail construction of a transmission pipeline to convey water for irrigation using recycled water, would not require an NPDES permit or Waste Discharge Requirements for land discharge and thus would not require completion of an antidegradation analysis. As noted on page 1-4 of the Draft EIR, irrigation using recycled water would be covered "under the General Waste Discharge Requirements for Recycled Water Use (Statewide Recycled Water Permit, Order WQ 2014-0090-DWQ). Additional permitting would likely be required for implementation of future program elements; discharge of recycled water to the Stone Lakes Wildlife Refuge is expected to require compliance with new or revised waste discharge requirements, and may require completion of an antidegradation analysis.

7.6.3 Response to Comment 6-3

Comment Summary: The comment states that a project with a construction area larger than one acre most obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit).

The Draft EIR acknowledges that the project will need to obtain coverage under the Construction General Permit because the construction area will be more than one acre. The permit is included in the list of approvals in **Table 1-2** on page 1-14 of the Draft EIR. Requirements of the permit are also discussed in greater detail on page 3.10-15 of the Draft EIR, which describes the need for a Storm Water Pollution Prevention Plan.

7.6.4 Response to Comment 6-4

Comment Summary: The comment states that Phase I and II MS4 Permits require Permittees to reduce pollutants and runoff flows from new development using Best Management Practices.

The project does not propose new development and would therefore not require MS4 permits. As noted on page 3.10-27 of the Draft EIR "*The proposed Project, which consists of pipelines and a pump station, would contribute minimal runoff water. The proposed pipelines would be buried underground within public road rights-of-way and would not create or contribute runoff. The proposed pump station would create minimal to no new impervious surfaces, and runoff would be accommodated by the existing storm drainage system at the SRWTP".*

7.6.5 Response to Comment 6-5

Comment Summary: The comment states that storm water discharges associated with industrial sites must comply with the Industrial Storm Water General Permit Order No. 97-03-DWQ.

The majority of the project consists of buried underground pipelines, which would not require coverage under the Industrial Storm Water General Permit. Construction of the new recycled water pump station would take place entirely within the existing Sacramento Regional Wastewater Treatment Plant (SRWTP), where stormwater generated on site is captured and routed through the on-site treatment system.

7.6.6 Response to Comment 6-6

Comment Summary: The comment states that the project would require a Clean Water Act Section 404 Permit if there would be any discharge of dredged or fill materials in navigable waters or wetlands, and that the Department of Fish and Wildlife should be consulted regarding a Streambed Alteration Permit.

The EIR acknowledges that the project will need to obtain a 404 Permit because construction of pipelines would require crossings of waters of the U.S. and jurisdictional wetlands. The permit is included in the list of approvals in **Table 1-2** on page 1-14 of the Draft EIR. Requirements of the permit are also discussed in greater detail on page 3.5-5 of the Draft EIR, which describes the need for a 404 Permit. Impacts to federally protected wetlands are discussed starting on page 3.5-48 of the EIR. **Table 1-2** also identifies the need for a Streambed Alteration Agreement.

7.6.7 Response to Comment 6-7

Comment Summary: The comment states that if a 404 Permit is required, then a 401 Water Quality Certification must be obtained.

The EIR lists federal permits in **Table 1-2**, which notes that a 404 Permit would be required. However, a Section 10 Permit or Section 9 Permit from the United States Coast Guard is not expected to be needed because no structures would be constructed within or beneath a navigable water. The Draft EIR acknowledges that the project would need to obtain a Section 401 Water Quality Certification. The permit is included in the list of approvals in **Table 1-2** on page 1-14 of the Draft EIR. Requirements of the Water Quality Certification are also discussed on page 3.5-49 of the Draft EIR, which describes Section 401 requirements.

7.6.8 Response to Comment 6-8

Comment Summary: The comment states that if only non-jurisdictional waters of the State ("non-federal" waters) are present, the project would require a Waste Discharge Requirements permit.

Based on the evaluation of waters and wetlands in the Project area, the Draft EIR (starting on page 3.5-48) identified that there are jurisdictional waters present in the proposed Project area. A wetland delineation has been prepared and will be submitted to the Corps. It is expected that the Corps will take jurisdiction over any affected waters, but if there are any impacts to waters of the State that are not also under Corps jurisdiction, Regional San would apply for Waste Discharge Requirements.

7.6.9 Response to Comment 6-9

Comment Summary: The comment states that if the project requires discharge to land of construction or groundwater dewatering, a permit would be required and provides options for permit coverage.

Regulations for discharge of dewatering discharges are presented on page 3.10-16, where the Waste Discharge Requirements for Dewatering and Other Low Threat Discharges to Surface Water are described. As noted there, Regional San expects that both dewatering and hydrostatic testing discharges would be covered by this General Order. Discharges to land are not currently anticipated; if land

discharge were proposed, Regional San would obtain coverage under one of the permitting avenues described in the comment.

7.6.10 Response to Comment 6-10

Comment Summary: The comment states that if the property will be used for commercial irrigated agriculture, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program

As described on page 4-3 of the Draft EIR, the project would serve existing agricultural users in South Sacramento County, and would not include development of any new agricultural lands. All of the irrigated lands in the project area already have coverage under the Irrigated Lands Regulatory Program as part of the Sacramento Valley Water Quality Coalition.

7.6.11 Response to Comment 6-11

Comment Summary: The comment states that construction dewatering discharge to surface waters would require coverage under an NPDES Permit, and specifies two General Orders under which coverage could be obtained.

The Draft EIR acknowledges that the project would need to obtain a coverage for dewatering during construction and for pipeline discharges during testing and startup. **Table 1-2** on page 1-14 of the Draft EIR identifies the need to file a Notice of Intent for coverage under the Low-Threat Discharge Order for Dewatering during Construction. Requirements of the Low Threat General Order are also described on page 3.10-16 of the Draft EIR.

7.6.12 Response to Comment 6-12

Comment Summary: The comment states that if the proposed project discharges waste it would require coverage under an NPDES Permit, which would require submittal of a Report of Waste Discharge.

As noted in Response to Comment 6-2, the project level components of the proposed Project, which entail construction of a transmission pipeline to convey water for irrigation using recycled water, would not require an NPDES permit or Waste Discharge Requirements for land discharge. Irrigation using recycled water would be covered under the Statewide Recycled Water Permit. As stated on page 3.10-15, Regional San has an existing NPDES permit and would continue to discharge to the Sacramento River in accordance with that permit. Additional permitting would likely be required for implementation of future program elements; discharge of recycled water to the Stone Lakes Wildlife Refuge is expected to require compliance with new or revised waste discharge requirements, and may require completion of an antidegradation analysis.

7.7 Comment Letter 7 – Sacramento County Water Agency, Michael L. Peterson, Director of Department of Water Resources, Acting as Agency Engineer

7.7.1 Response to Comment 7-1

Comment Summary: The comment states that Regional San's 2025 recycled water goal may not be enough for the Sacramento Region and requests that Regional San continues to partner to the Sacramento County Water Agency (SCWA) to develop additional uses of recycled water even after Regional San's recycled water goal is met.

Regional San will continue to work cooperatively with SCWA to develop projects to provide recycled water throughout Regional San's service area. Regional San does not view the 2025 goal as a maximum target, and will continue to strive to maximize the beneficial use of its recycled water.

7.7.2 Response to Comment 7-2

Comment Summary: The comment requests evaluation of impacts on the Freeport Regional Water Project (FRWP).

The intake for the Freeport Regional Water Project is located about 1 mile upstream from the existing Regional San outfall. As depicted in the Draft EIR/EIS for the FRWP, "when monthly average Sacramento River flow is less than about 7,000 cfs, which occurs very infrequently, tidally induced reverse flows can be large enough to result in the upstream reverse transport of treated SRWWTP wastewater effluent to beyond the Freeport intake facility. However, … the intake facility will be operated to restrict diversions during these periods to avoid diversion of water that may contain treated wastewater from the SRWWTP discharge." Reduction in discharge would reduce the concentration of treated wastewater in the river, and would reduce the potential for impacts on the FRWP intake. The small reduction in discharge (a maximum reduction of 108 cfs in June during periods of peak irrigation demand, which is 2 percent of 7,000 cfs) is not expected to result in a change in the frequency or duration with which reverse flow scenarios could occur. The project is thus not expected to affect the FRWP.

7.7.3 Response to Comment 7-3

Comment Summary: The comment expresses concern about the use of diluent wells to blend with recycled water for groundwater recharge, and states that groundwater should not be pumped to increase streamflows.

The Draft EIR evaluates both "active" and "passive" groundwater recharge components, and only active recharge would require diluent water. As defined on page 2-11 of the Draft EIR, use of groundwater recharge basins is considered active recharge and would require diluent water. Wintertime irrigation, as described on page 2-12 of the Draft EIR, consists of "providing irrigation water to growers in the service area in the non-growing season in order to passively recharge the groundwater basin (as opposed to the active recharge component…", which uses recharge basins. At this time, it is Regional San's intent to use wintertime irrigation for passive recharge (as a program element to be implemented in the future, beyond Phase 1). Therefore, although active groundwater recharge was evaluated in the Draft EIR as a possible future program element, no use of diluent water is currently anticipated as part of the proposed Project or the program.

The pumping of diluent groundwater, if it were used at some point in the future, would be performed to allow for additional recharge of recycled water to groundwater. The use of diluent water would be required for active recharge of recycled water using recharge basins. The interconnected nature of the groundwater and surface water systems would result in increased groundwater levels benefitting surface water in the long-term. However, it must be noted that more water would be recharged (recycled water

plus diluent water) than would be pumped (diluent water). Should active recharge via a recharge basin be pursued, Regional San would perform the appropriate analysis, develop a project-level EIR, and would coordinate with SCWA and other stakeholders to maximize benefits and minimize impacts of the recharge basin.

7.7.4 Response to Comment 7-4

Comment Summary: The comment expresses concern about groundwater quality impacts of irrigation with recycled water.

As noted in the Project Description on page 2-21 of the Draft EIR in the section on Salt and Nutrient Monitoring: "Monitoring of salt and nutrients would occur through regular monitoring of the Groundwater Basin Health Monitoring wells. These wells would be monitored annually for Total Dissolved Solids and Nitrate." The proposed Project would be operated under the Statewide General Permit for Landscape Irrigation Uses of Municipal Recycled Water (see page 2-14 of the Draft EIR). CEQA documentation for the Statewide Permit (SWRCB 2009) found that:

> *"The proposed General Permit establishes terms and conditions of discharge to ensure that the discharge does not unreasonably affect present and anticipated beneficial uses of groundwater and surface water for the following reasons:*
> - *Recycled water will be applied at agronomic rates reflecting the seasonal hydraulic and nutrient requirements of the Use Area;*
> - *The Producer is responsible for ensuring that recycled water meets the quality standards of the General Permit and associated waste discharge requirement order(s) for the WWTP(s); and*
> - *The discharge to surface waters, unless otherwise authorized by an NPDES permit, is prohibited"*

The Initial Study/Mitigated Negative Declaration for the General Permit found that potential groundwater quality impacts of irrigation with recycled water are less than significant.

7.7.5 Response to Comment 7-5

Comment Summary: The comment requests evaluation of all areas where recycled water does not meet phosphorus testing requirements, not just the Stone Lakes National Wildlife Refuge.

As noted above, in Response to Comment 7-4, the Statewide General Permit does not allow discharge to surface waters. Irrigation with recycled water must be conducted in a manner that does not allow runoff from the reuse area. Discharge of recycled water to the Cosumnes River would not be allowed. Levels of phosphorus in the recycled water are estimated to be 4.8 mg/L, which is appropriate for agronomic use and is not expected to result in adverse water quality impacts. Phosphorus in recycled water provides a beneficial nutrient that is used by plants irrigated with recycled water.

Also, as noted on page 3.10-29 of the Draft EIR, "The phosphorus criterion used in the USFWS Rapid Assessment tool is extremely low, and may not be warranted for Stone Lakes, given that existing source water (stormwater runoff into Stone Lakes) has phosphorus concentrations above 0.5 mg/l and appears to cause no water quality concerns. The criterion of phosphorus is conservative because it is based on reference conditions and not on levels determined to affect water quality."

7.8 Comment Letter 8 – Sacramento Environmental Commission, Richard Hunn, Chair

7.8.1 Response to Comment 8-1

Comment Summary: The comment expresses support for efforts to reduce wastewater discharges, but states that while some components can only be addressed at a program level, the project-level components need to have a complete impact analysis with mitigation as needed.

Regional San appreciates the support of the Sacramento Environmental Commission and has addressed specific comments about the adequacy of environmental analysis below.

7.8.2 Response to Comment 8-2

Comment Summary: The comment states that the presence of biological resources and along the pipeline route have not been determined and that there is no information about the presence of species within the APE. The comment further asserts that because impacts are not quantified the proposed mitigation is not sufficiently defined.

The comment is not correct in its contention that biological resources in the project area have not been identified. The Area of Potential Effects (APE) for the proposed Project was conservatively defined to allow identification of biological resources that could be affected both directly by construction and indirectly by disruption of areas adjacent to the construction zone. The project area was surveyed to identify sensitive resources, with emphasis on identification of wetlands and waters of the U.S., which provide habitat for a number of sensitive species in the project area including vernal pool crustaceans, California tiger salamander, western spadefoot, giant garter snake, tricolored blackbird, and most of the plant species of concern. As noted on page 3.5-12 of the Draft EIR, the "survey area included the Project APE (which ranges from 80 to 250 feet wide along the alignment) and a 250-foot buffer on each side of the APE". Protocol-level surveys for species of concern were not conducted because those surveys must be conducted immediately before construction or the results are not useful in identifying the presence or absence of species. For example, a survey conducted in 2015 for Swainson's hawk cannot be used to identify nesting birds that could be affected by construction that would start in 2019 or 2020. The Draft EIR has thus identified those species for which habitat is present in the project area and has included appropriate mitigation, including more detailed pre-construction surveys.

In addition, the construction of the proposed project-level facilities are expected to have fairly minimal effect on biological resources. The proposed pump station would be constructed within Regional San's existing wastewater treatment plant, which is currently the site of the EchoWater Project, a major upgrade of the treatment systems at the plant. The site is identified in the EchoWater EIR as developed land (Ascent Environmental 2014), and no wetlands or other sensitive habitats were identified on the site during surveys conducted for the proposed Project. The pipelines would be constructed within roadways, and direct impacts are expected to be primarily confined to public right-of-way. However, as stated on page 3.5-46 of the Draft EIR, there are sensitive habitats along the pipeline alignment, including "Northern hardpan vernal pool, coastal and valley freshwater marsh, and Great Valley mixed riparian forest natural communities".

Regional San does not agree that the mitigation measures in the Draft EIR are insufficiently defined. While it is correct that Mitigation Measure BIO-1a requires that Regional San avoid impacts to habitats for sensitive species "to the Extent Feasible", at this stage of project development it is not possible to determine if all sensitive species habitats can be completely avoided. Because it may not be possible to totally avoid sensitive habitats, Mitigation Measure BIO-1b contains detailed measures to be implemented in the event that avoidance is not possible. The actions outlined in Mitigation Measure BIO-1b do not rely on "unknown actions that may be required as part of future regulatory permit". Although Regional San is participating in the South Sacramento County Habitat Conservation Plan (SSHCP), and the

proposed Project is a covered activity, Regional San is aware that the SSHCP may not be approved before Project permitting must occur. For this reason, the mitigation specifically includes a commitment that the measures included in Mitigation Measure BIO-1b "would be implemented by Regional San even if the SSHCP is not adopted". Mitigation Measure BIO-1b has detailed compensation commitments for any loss of sensitive habitats or species that provide assurance that any impacts that cannot be avoided would be fully compensated as part of the project. Mitigation for each group of sensitive species includes specific performance standards of either avoidance or, if avoidance is not feasible, compensation at a specified ratio. For example, any loss of vernal pool habitat must be compensated at a 3:1 ratio (2 acres preservation and 1 acre re-establishment/establishment for direct impact and 2:1 for indirect impacts (2 acres preservation) (see page 3.5-31 of the Draft EIR).

7.8.3 Response to Comment 8-3

Comment Summary: The comment disagrees with the criterion that evaluates whether the project would interfere with or require changes to CVP or SWP operations, concluding that those ongoing operations are not an environmental topic as defined by CEQA and that Regional San is not obligated to continue wastewater discharges even if it were to jeopardize ongoing operations. The comment further asserts that if an impact resulted from CVP or SWP operations combined with the proposed reduction in wastewater discharges, it would be incumbent on CVP or SWP operations to be modified accordingly, consistent with State Water Resources Control Board Decision 1485. The comment therefore concludes that Mitigation Measure HYD-4 should not be a mandatory mitigation, but that Regional San might voluntarily agree to modify operations to avoid conflicts with the CVP or SWP.

Regional San agrees that there is no obligation to continue wastewater discharges, given that recycled water can be beneficially reused for irrigation of South Sacramento County agricultural land and to provide habitat enhancement. Mitigation HYD-4 has been proposed because in a worst-case 6-year drought, the Project has the potential to result in a reduction in storage in Shasta Lake, which could reduce the cold water storage, creating thermal effects in the Sacramento River downstream of CVP reservoirs. As noted on page 3.10-42 of the Draft EIR: "there is a potential that the Project would require adjustments in CVP and SWP operations, and the potential for reduction in Shasta storage is considered to be a significant impact, because the reduction in storage, without operational adjustments, could create thermal effects in the Sacramento River downstream of CVP reservoirs." Because the project could have a physical effect on fisheries, mitigation was deemed to be appropriate, even though Regional San does not have an obligation to discharge.

7.9 Comment Letter 9 – Sacramento Local Agency Formation Commission, Donald Lockhart, AICP, Assistant Executive Officer

7.9.1 Response to Comment 9-1

Comment Summary: The comment requests that the Executive Summary of the Draft EIR more clearly note the status of the Elk Grove sphere of influence (SOI) amendment activity with Sacramento Local Agency Formation Commission (LAFCo).

The first line at the top of page ES-5 of the Draft EIR is revised as follows:

> City of Elk Grove's formerly proposed expanded sphere of influence (SOI)[2] area.

The footnote at the bottom of page ES-5 is revised as follows:

> [2] Since completion of the Feasibility Study, ~~the Local Agency Formation Commission (LAFCO) did not approve~~ the City of Elk Grove's ~~s~~ withdrew its request for extension of its SOI.

7.9.2 Response to Comment 9-2

Comment Summary: The comment requests similar clarification regarding the Elk Grove SOI on page 1-6 of the Draft EIR.

The footnote at the bottom of page 1-6 of the Draft EIR is revised as follows:

> [4] Since completion of the Feasibility Study, ~~the Local Agency Formation Commission (LAFCO) did not approve~~ the City of Elk Grove's ~~s~~ withdrew its request for extension of its SOI.

7.9.3 Response to Comment 9-3

Comment Summary: The comment states that the SOI for SRCSD would have to be amended prior to, or concurrently with, any annexation proposal.

In Table 1-2 on page 1-14 of the Draft EIR, the entry for the Local Agency Formation Commission is revised as follows:

Local Agency Formation Commission (LAFCo~~O~~)	Regional San expansion of SOI and annexation of Service Area for recycled water, with services limited to recycled water supply.

7.9.4 Response to Comment 9-4

Comment Summary: The comment corrects information in the housing section to clarify that reduction in unincorporated households was likely more directly affected by the incorporation of Elk Grove and Rancho Cordova, rather than annexations into those communities.

On page 3.17-2 of the Draft EIR the third sentence in the first paragraph under "Housing" is modified as follows:

> Unincorporated Sacramento County's households were reduced by approximately 9,500 from 2000 to 2010 due to the ~~annexations into~~ incorporation of Elk Grove and Rancho Cordova, and Elk Grove's annexation of the Laguna West Community, an approximate 4.5 percent reduction.

7.10 Comment Letter 10 – Sacramento Central Groundwater Authority, Darrell K. Eck, Executive Director

7.10.1 Response to Comment 10-1

Comment Summary: The comment suggests that the Central Groundwater Basin (or Central Sacramento Ground Water Basin) should be identified as the South American Subbasin as defined in State Department of Water Resources Bulletin 118 (Basin 5-21.65)

The nomenclature "Central Groundwater Basin" has been used because this is the name familiar to lay readers in the project area, but it is agreed that future documentation will need to use terminology consistent with the Sustainable Groundwater Management Act of 2014.

The following footnote is added to the fourth bullet on page ES-5:

> Improve regional water supply reliability through the restoration of groundwater levels in the Central Groundwater Basin[1]; and
>
> [1] The Central Groundwater Basin is officially designated by the State Department of Water Resources in Bulleting 118 as the South American Subbasin (Basin 5-21.65).

7.10.2 Response to Comment 10-2

Comment Summary: The comment suggests the estimate of dilution for the proposed recharge area that could come from precipitation is unreasonable and that dilution requirements would be less if the 20 percent rather than 50 percent dilution was required.

As noted in Response to Comment 7-3, Regional San is now considering use of wintertime irrigation for passive recharge (as a program element to be implemented in the future, beyond Phase 1). Therefore, although active groundwater recharge was evaluated in the Draft EIR as a possible future program element, no use of diluent water is currently anticipated as part of the proposed Project or the program.

However, the comment is correct that an incorrect estimate of precipitation was used in the Draft EIR. Evaluation of options in the Facilities Plan for the project included consideration of both a 560-acre recharge area, which is the option that was incorporated in the EIR as a possible future program element, and a 1,000-acre recharge area. The Draft EIR incorrectly included the estimated quantity of precipitation that would occur over 1,000 acres. For a 560-acre recharge area precipitation is estimated to be 887 AFY, not 1,600 AFY.

The seventh sentence in the last paragraph on page 2-11 of the Draft EIR is corrected as follows:

> About ~~3,400~~ 4,113 AFY of the total recharge capacity would need to be provided by diluent water.

Although the comment is correct that dilution requirements would be less if only 20 percent dilution is required, for the proposed Project, a recycled water contribution of 50 percent was assumed for long-term operation, which is consistent with the existing groundwater recharge regulations. This conservative assumption is appropriate for environmental analysis.

7.10.3 Response to Comment 10-3

Comment Summary: The comment asks what groundwater basin equilibrium means in the context of the project.

At full program implementation 50,000 AFY of recycled water would be provided, all of which would benefit the groundwater basin, with 44,500 AFY going to irrigation (both during the growing season and in the wintertime), 500 AFY being used for managed wetlands at the Stone Lakes National Wildlife Refuge and 5,000 AFY being supplied to recharge ponds for active recharge of the groundwater basin.

Because the project provides recycled water that would take the place of groundwater that is currently used in the project area, groundwater in storage would increase and groundwater elevations would increase. Initially, the in-lieu recharge results primarily in increases in groundwater in storage, with small increases in streamflow. Over time, the higher groundwater elevations increasingly interact with rivers and adjacent groundwater basins, resulting in reduced groundwater recharge from rivers (increased streamflow) and reduced inflow from surrounding basins as compared conditions without the proposed Project. Over a very long time frame, it would be expected that the system would reach an equilibrium where there is no additional increase in storage, but the full in-lieu recharge volume results in increases in streamflow.

7.10.4 Response to Comment 10-4

Comment Summary: The comment asks when the state of equilibrium occurs.

Integrated groundwater and surface modeling was performed to simulate changes in groundwater and surface water over an 84-year period. While equilibrium conditions are approached, they are not reached within the 84-year simulation period. However, as described on pages 3.10-32 and 3.10-33 of the Draft EIR at the end of the simulation, "groundwater levels in the Central Basin are projected to increase by approximately 20 to 25 feet in the center of the proposed irrigation area, and groundwater storage would increase by 379,000 AF". The remainder of the recharged groundwater would result in increased streamflows or increased storage in adjacent basins, with only smaller increases in groundwater in storage as the system continues to approach equilibrium.

7.10.5 Response to Comment 10-5

Comment Summary: The comment asks how much of the benefit to the groundwater basin extends to the Cosumnes Subbasin.

As shown in Figure 3.10-6 on page 3.10-34 of the Draft EIR, which is referenced in the comment, ground water levels in the Cosumnes Subbasin are projected to increase by up to 10 feet. Benefits to the Cosumnes Subbasin were evaluated using the SacIWRM groundwater model to develop estimates of the subsurface flow between the South American Subbasin and the Cosumnes Subbasin. Under existing conditions, groundwater pumping in the South American Subbasin generates a gradient that results in water flowing into the South American Subbasin from the Cosumnes Subbasin. With the project, as the South American Subbasin fills up, there would be less water flowing out of the Cosumnes Subbasin, so groundwater levels there would increase. The projected benefit to the Cosumnes Subbasin is a net increase in water volume in the basin of about 9,000 AFY after the project has been in operation for 8 years. Although the effect of the in-lieu recharge that results from the proposed Project is generally a decrease in inflow from the Cosumnes Subbasin to the South American Subbasin, in some years the proposed Project results in a net subsurface outflow from the South American Subbasin to the Cosumnes Subbasin. The orange line in **Figure 7-1** shows the increase in groundwater in the Cosumnes Subbasin.

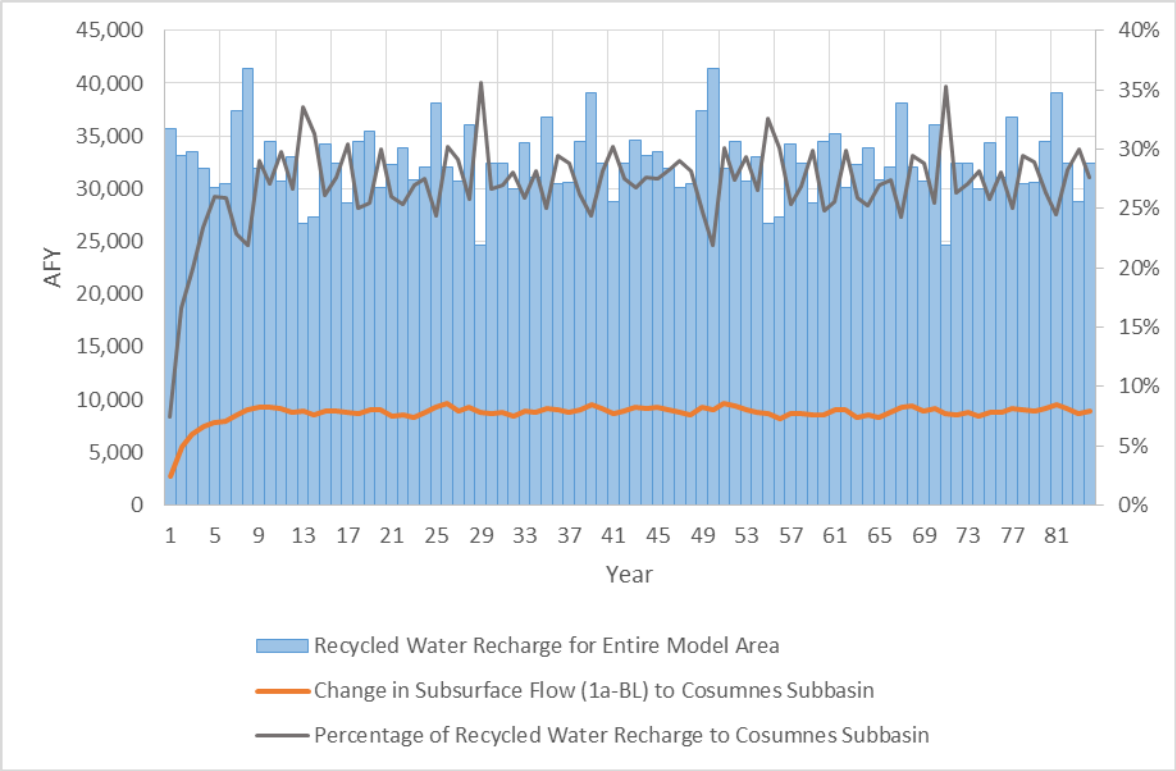

Figure 7-1: Estimate of Benefits to the Cosumnes Subbasin

7.10.6 Response to Comment 10-6

Comment Summary: The comment recommends that the design of the Groundwater Basin Health and Salt and Nutrient Monitoring Program be done in close coordination with the Sacramento Central Groundwater Authority (SCGA) and in accordance with any requirements set forth by the Groundwater Accounting Framework.

Regional San agrees that monitoring would be coordinated with SCGA and is committed to participating with SCGA through the Groundwater Accounting Framework. Regional San will coordinate with SCGA on meeting the Groundwater Accounting Framework requirements once those requirements are in place.

7.10.7 Response to Comment 10-7

Comment Summary: The comment suggests that the South American Subbasin cannot be classified as high priority based solely on the level of groundwater pumping and cites seven other criteria that are applicable.

Page 3.10-9 of the Draft EIR does state that "the South American Subbasin continues to be classified as a high priority basin under the California Statewide Groundwater Elevation Monitoring (CASGEM) Basin Prioritization". Regional San is aware that the prioritization is based on multiple criteria and does not intend to suggest that the priority is based solely on the amount of groundwater pumping.

7.10.8 Response to Comment 10-8

Comment Summary: The comment states that SCGA is not developing a groundwater banking project but is developing a program that describes the operational requirements for banking projects proposed by agencies such as Regional San.

On page 3.10-20 of the Draft EIR the last sentence under "Sustainable Groundwater Management Act" is corrected as follows:

SCGA is ~~considering~~ developing a program that describes the operational requirements for groundwater banking projects that may be proposed in the future.

7.11 Comment Letter 11 – Cosumnes Coalition, Melinda Frost-Hurzel, Cosumnes River Monitoring Coordinator, and Mike Eaton, Cosumnes GDE Advisor

7.11.1 Response to Comment 11-1

Comment Summary: The comment expresses support for the Project but requests that clarification that other projects need to be implemented to assure tangible and durable benefits to the Cosumnes River fishery and riparian forest.

Regional San will continue to work with SCWA, SCGA and appropriate Groundwater Sustainability Agencies to advance projects that will benefit local groundwater basins and groundwater dependent ecosystems.

7.11.2 Response to Comment 11-2

Comment Summary: The comment describes the ecological setting of the Cosumnes watershed and the effects of lowered groundwater levels.

Regional San appreciates the information provided by the Cosumnes Coalition. The information is consistent with the Draft EIR, which notes on page 1-4 that "Groundwater pumping has also been determined to be primarily responsible for a decline in flows in the Cosumnes River and dewatering of the riparian corridor".

7.11.3 Response to Comment 11-3

Comment Summary: The comment expresses concern that the EIR overstates the benefits of the project and contends that the project will not reduce the linear extent of the Cosumnes River's disconnection from groundwater, thus limiting project benefits for streamflow in the spring and fall. The comment also references a Memorandum of Agreement (MOA) between The Nature Conservancy, SCWA and South Sacramento County Agricultural Water Authority (SSCAWA) to implement a flow augmentation program for the Cosumnes River, which has not been implemented. The comment encourages Regional San to work with SCWA, SCGA SSCAWA and others on improvements for groundwater dependent ecosystems.

Regional San did not intend to suggest that the proposed Project would eliminate the need for other programs to benefit the Cosumnes River, and does not believe that the description of the benefits in the Draft EIR implies that no other actions are necessary. However, Regional San disagrees that the project fails to reduce the linear extent of the river's disconnection from groundwater. The project does reduce the magnitude of losing conditions along the Cosumnes River in and near the project area and provides improved streamflow conditions and riparian habitat conditions. It is agreed that the project does not fully resolve the losing conditions associated with current and historical groundwater production in the region that occur farther upstream on the Cosumnes. Because those upstream losses still exist, the project benefits to streamflow are generally limited to periods when Cosumnes flows reach the area of project benefit. Other projects, such as the full utilization of the Vineyard Surface Water Treatment Plant, may improve upstream conditions on the Cosumnes River and increase the overall streamflow benefits of the project by allowing more frequent Cosumnes River flows in the project area. There are also opportunities for other projects to improve streamflow conditions on the Cosumnes, allowing the project to be a piece in a broader effort to improve streamflow conditions.

Regional San intends to work cooperatively with other agencies in the region, but implementation of other programs to achieve implementation of the MOA referenced in the comment is outside the scope of the Draft EIR for the South Sacramento County Agriculture & Habitat Lands Recycled Water Program.

7.11.4 Response to Comment 11-4

Comment Summary: The comment requests supporting detail regarding project benefits including locational maps and before-and-after groundwater elevations transects of the forest blocks listed as potentially benefitting from the project

Figure 7-2 provides the requested map of forest blocks that could benefit from the proposed Project. Although elevations transects similar to Figure 2-6 have not been developed, **Figure 7-3** through **Figure 7-7** show simulated groundwater elevations at each forest location with and without the project. These figures reflect current conditions and modeled future conditions as projected using the SacIWRM groundwater model.

7.11.5 Response to Comment 11-5

Comment Summary: The comment states that project communications should acknowledge the benefits and limitation so of the project and identify complimentary actions needed to benefit fisheries, and the EIR should include a discussion of how upstream actions by others are needed to realize significant benefits to the Cosumnes fishery. The comment expresses interest in working cooperatively with Regional San.

As noted in Response to Comment 11-3, Regional San intends to work cooperatively with other agencies in the region.

To clarify project benefits the fourth bullet on page 1-4 of the Draft EIR is revised to include a footnote regarding project benefits:

- Helps protect and restore the Delta by providing benefits to endangered species in the Delta ecosystem and its tributaries, including the Cosumnes River[1], Sacramento River and Mokelumne River;

[1] The proposed project would establish a foundation for future actions that would benefit the Cosumnes River fishery, but additional projects, such as the flow augmentation discussed in the Memorandum of Agreement for the Management for Water and Environmental Resources Associated with the Lower Cosumnes River, are still needed to improve conditions for native fish.

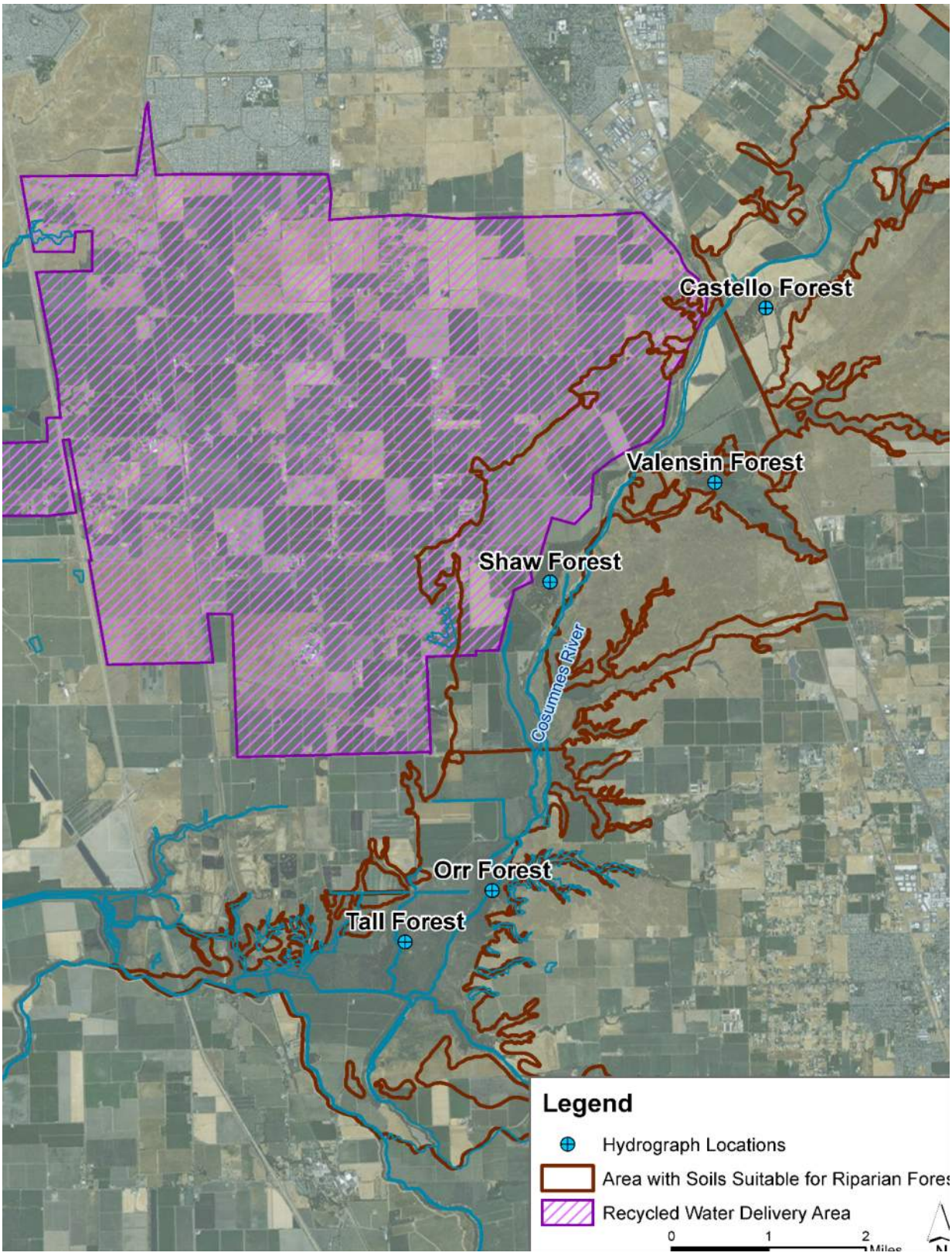

Figure 7-2: Forest Blocks along Cosumnes River

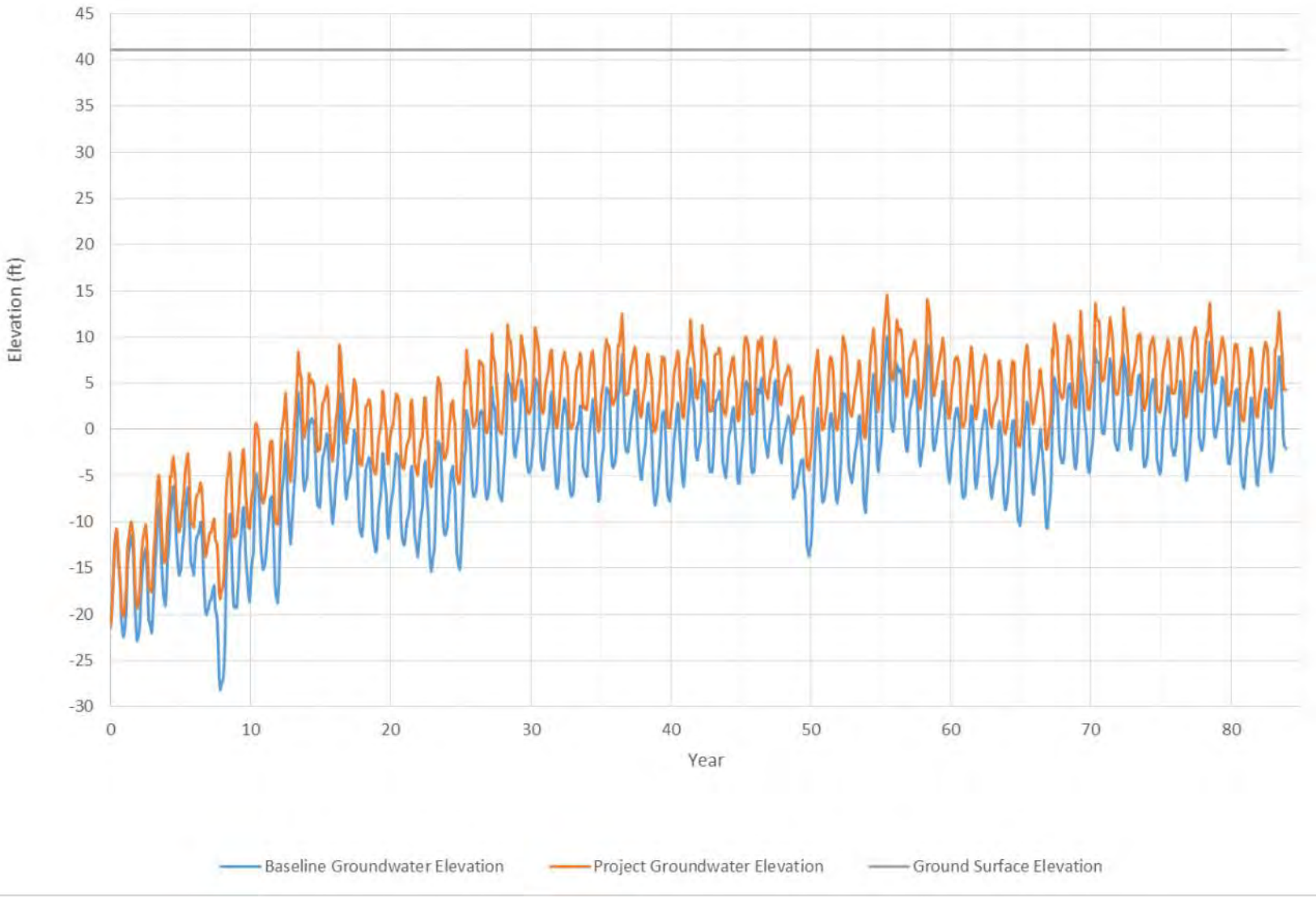

Figure 7-3: Groundwater Elevations Castello Forest

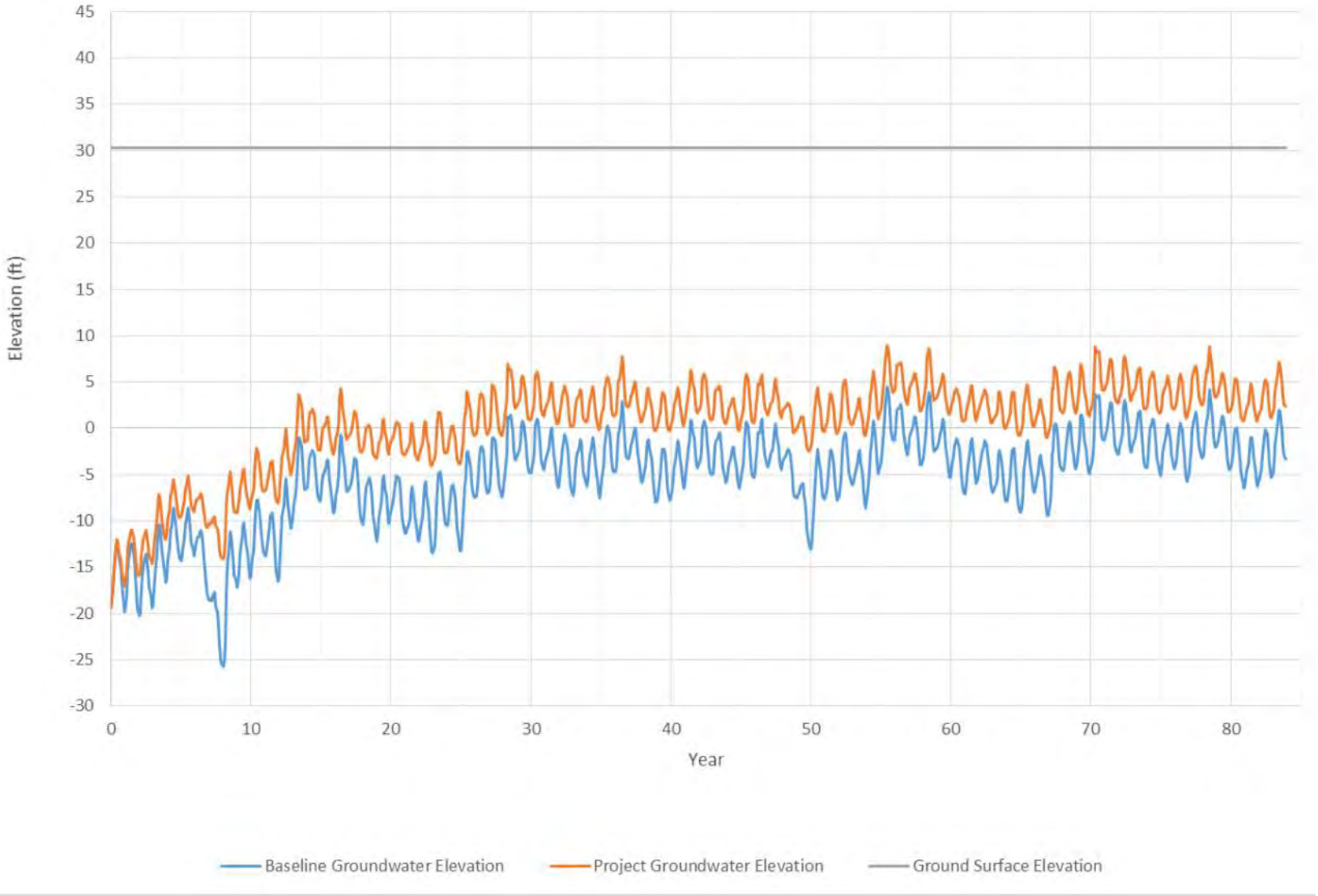

Figure 7-4: Groundwater Elevations Valensin Forest

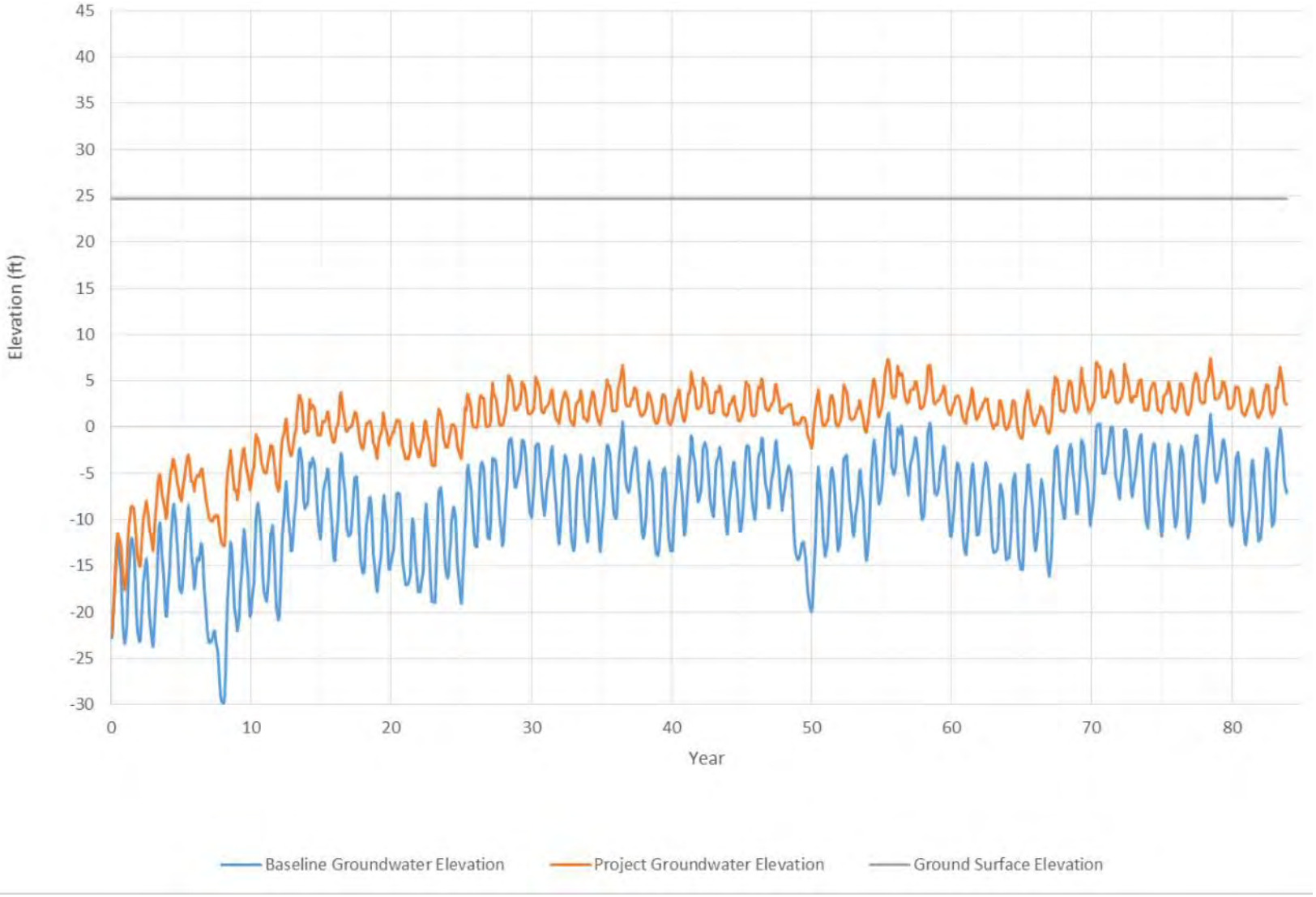

Figure 7-5: Groundwater Elevations Shaw Forest

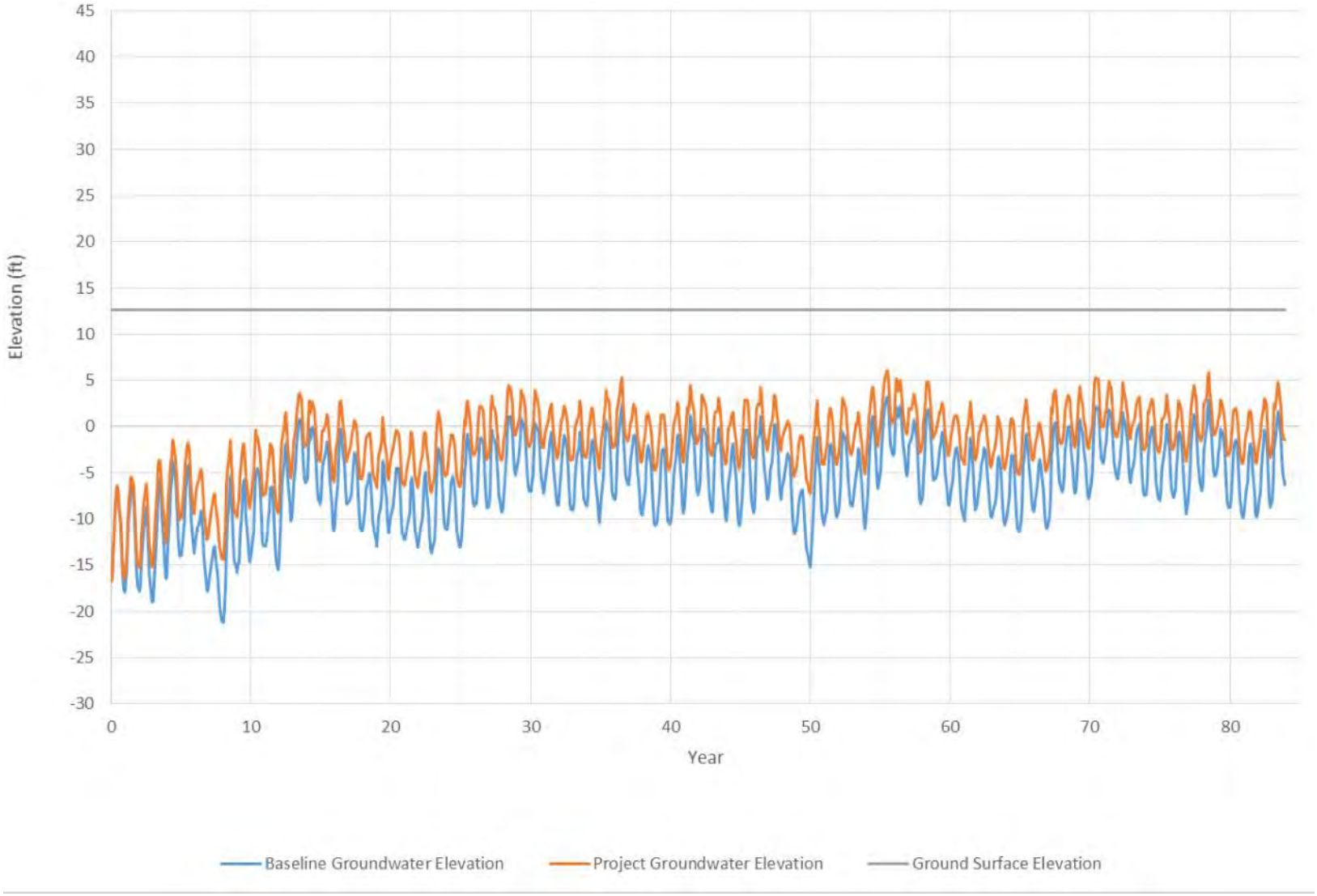

Figure 7-6: Groundwater Elevations Orr Forest

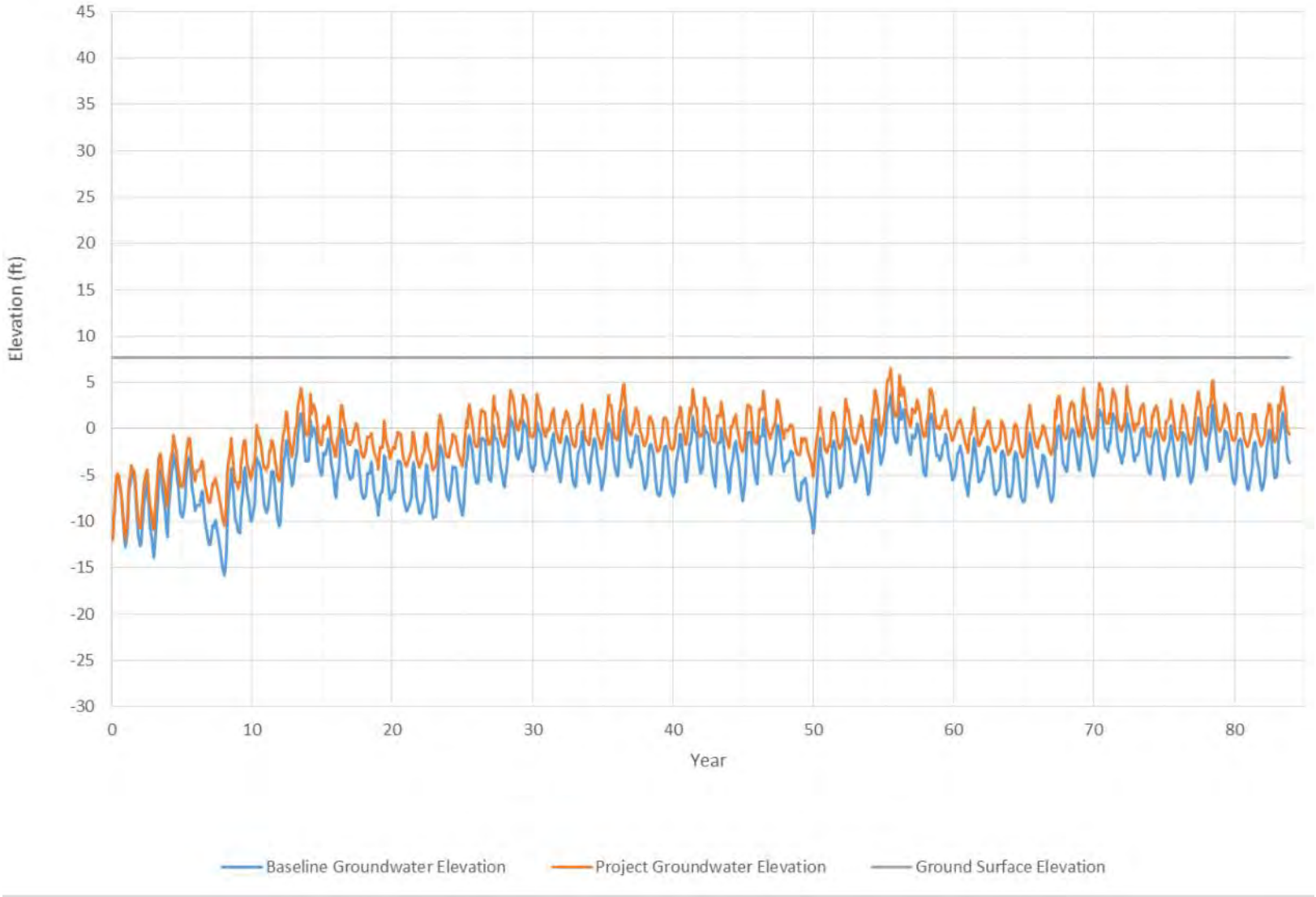

Figure 7-7: Groundwater Elevations Tall Forest

7.12 Comment Letter 12 – The Nature Conservancy, Jay Ziegler, Director of External Affairs & Policy

7.12.1 Response to Comment 12-1

Comment Summary: The comment states that the Project has the potential to provide significant ecological benefits and that The Nature Conservancy looks forward to continuing to work with Regional San.

Regional San appreciates support for the Project and will continue to work collaboratively with The Nature Conservancy (TNC).

7.12.2 Response to Comment 12-2

Comment Summary: The comment states that the Project provides a good foundation, but could be significantly enhanced in the context of basin-wide restoration efforts.

Regional San agrees that other restoration efforts for the Cosumnes River are still needed. Regional San intends to work cooperatively with other agencies in the region, but implementation of other programs to achieve implementation of the MOA referenced in the comment is outside the scope of the Draft EIR for the South Sacramento County Agriculture & Habitat Lands Recycled Water Program.

7.12.3 Response to Comment 12-3

Comment Summary: The comment requests information about long-term use of recycled water and how it will be managed in the future, including the potential for future banking scenarios.

As noted on page 1-16 of the Draft EIR, a "precise framework for a groundwater banking program, … is not included within the scope of this EIR. If Regional San implements a future groundwater banking program, additional project-specific CEQA environmental review would be conducted to assess the impacts of that program." The Draft EIR further notes on page 2-20 in regard to the description of the Project that "Regional San is not proposing at this time to operate it [the Project] within an administrative accounting framework such that the water savings over the life of the proposed Project would be accrued and reserved (groundwater banking) for other uses in the future." Regional San is thus not able to provide any further information about possible future banking scenarios, but anticipates collaborating with TNC and other on future groundwater basin management.

7.12.4 Response to Comment 12-4

Comment Summary: The comment requests monitoring in each of the five forest blocks that are mentioned in the Draft EIR because current modeling may not provide adequate analysis of surface groundwater interactions in the Cosumnes River due to a lack of information on perched aquifer zones and lack of understanding of how riparian trees access groundwater. The comment also recommends monitoring of ecosystem health via vegetation monitoring.

As described on page 2-20 of the Draft EIR, "Riparian corridor health would be monitored through groundwater elevation measurements and riparian vegetation surveys. A monitoring program acceptable to Regional San and the Nature Conservancy would be developed. … Wells would be focused within the Cosumnes River corridor and specifically near critical areas such as Castello Forest, Valensin Forest, Shaw Forest, Orr Forest, and Tall Forest." Regional San believes that this monitoring framework is consistent with the program requested in the comment and will continue to work with The Nature Conservancy to develop the program.

7.13 Comment Letter 13 – San Luis & Delta-Mendota Water Authority, submitted through Kronick, Moskowvitz, Tidemann & Girard, Rebecca R. Akroyd

7.13.1 Response to Comment 13-1

Comment Summary: The comment contends that the Draft EIR does not consider the fact that Regional San has limited rights to the wastewater it produces because Reclamation provides Central Valley Project (CVP) water to water districts in Regional San's service area and thus has the right to seepage and return flow from that water.

Section 1210 of the California Water Code specifies that "The owner of a waste water treatment plant operated for the purpose of treating wastes from a sanitary sewer system shall hold the exclusive right to the treated waste water as against anyone who has supplied the water discharged into the waste water collection and treatment system, including a person using water under a water service contract, unless otherwise provided by agreement." Regional San does not have an agreement with Reclamation, and thus has rights to treated wastewater produced at the Sacramento Regional Wastewater Treatment Plant.

Additionally, only a portion of the wastewater treated by Regional San originates as CVP water. Please refer to Response to Comment 1-6 which provides documentation of information regarding the percentage of Regional San's effluent that originates as groundwater. An average of 140,000 acre-feet per year (AFY) of wastewater originates as groundwater, to which Reclamation does not hold a right. The proposed Project would use a maximum of 50,000 AFY of recycled water, and thus would not be rely on any water to which Reclamation might claim a right.

7.13.2 Response to Comment 13-2

Comment Summary: The comment references the evaluation of impacts of discharge reduction and the discussion of the benefit of groundwater recharge leading to increased surface water flows over time, but claims that although the Draft EIR notes that stream flows would not increase until the groundwater basin reaches long-term balance the timeframe to achieve that balance is not identified. The comment further contends that it is not clear whether increased flows from higher groundwater would occur in the same areas affected by discharge reduction.

The comment is not correct that stream flows would not increase until groundwater levels reach a long-term balance. As shown in Figure 3.10-5 on page 3.10-33 of the Draft EIR the project would increase groundwater storage fairly rapidly, with an increase in storage of 200,000 AF after 10 years. Figure 3.10-7 on page 3.10-38 of the Draft EIR, demonstrates the effect of this groundwater storage on surface waters and shows a substantial benefit to surface waters (shown as a reduction in the amount of water that flows from river and streams into the groundwater basin) after 10 years.

Groundwater storage will continue to increase over a fairly long time frame; as shown in Figure 3.10-5 of the Draft EIR, the storage quantities level off after about 70 years, but do not reach a long-term balance. Integrated groundwater and surface modeling was performed to simulate changes in groundwater and surface water over an 84-year period. Equilibrium conditions are approached but not fully realized within the 84-year simulation period. However, as described on pages 3.10-32 and 3.10-33 of the Draft EIR at the end of the simulation, "groundwater levels in the Central Basin are projected to increase by approximately 20 to 25 feet in the center of the proposed irrigation area, and groundwater storage would increase by 379,000 AF". The remainder of the recharged groundwater would result in increased streamflows or increased storage in adjacent basins.

The Draft EIR does acknowledge the fact that the increased streamflows that result from increased groundwater levels primarily benefit the Cosumnes River and tributaries. As a result, as stated on page

3.10-38 of the Draft EIR, "Because these flows enter the system downstream of the SRWTP discharge location, there would still be lower flows in the stretch of the Sacramento River below Freeport, but the overall effect of the project on Delta outflows is substantially reduced by the groundwater-induced increased streamflows that result from the project." Please refer to the discussion beginning on page 3.5-53 of the Draft EIR for a discussion of the effect of these flow reductions on listed species. As noted there, "water project operations would respond to these nominal reductions in flows by making reservoir releases, resulting in no net change in Sacramento River flows below Freeport." The primary impact of concern for listed species is the potential for a reduction in cold water storage at Shasta Lake, which could result in thermal impacts to fisheries habitat downstream of Shasta Lake. This impact would only occur over an extended drought. The Draft EIR acknowledges that this impact is potentially significant and has thus proposed Mitigation Measure HYD-4 to reduce effects on Shasta storage (cold water pool storage) to ensure that sensitive species are not adversely affected.

7.13.3 Response to Comment 13-3

Comment Summary: The comment says that impact analysis improperly relies on Reclamation and Department of Water Resources (DWR) mitigating impacts of the project by making releases of water from CVP and SWP reservoirs, and requests that the EIR explain how impacts to Delta outflows would affect X2, Reclamation's operations to meet X2 requirements and the biological resources potentially affected by the location of X2.

Regional San does not agree that it is improper to evaluate impacts based on how the CVP and SWP are actually operated. The Draft EIR recognizes that the reduction in discharge would require Reclamation and DWR to modify their operations to meet requirements for the western Delta (X2). The evaluation of Impact HYD-4, Interfere with or Require Changes to CVP or SWP Operations, starts on page 3.10-37 of the Draft EIR and concludes that "there is a potential that the Project would require adjustments in CVP and SWP operations". Please refer to the detailed discussion presented in Impact HYD-4 for a description of how CVP operations would likely need to be changed as a result of the project. CalSim II modeling that was performed for the project included an evaluation of any changes in the X2 position (the distance in kilometers from the Golden Gate Bridge at which a salinity of 2 practical salinity units occurs) and found that X2 does not change at all in wet, normal or below normal years. Modeling of dry and critically dry years shows almost no effect, with X2 unchanged for 11 months of the year and a 0.1% change (reflecting a change in X2 position of only 100 meters) in January of dry years and December of critically dry years (CH2M Hill 2016).

Under State Water Resources Control Board (SWRCB) Decision 1641, the X2 position is regulated during spring months (February to June). Furthermore, the 2008 U.S. Fish and Wildlife Service (USFWS) Biological Opinion Reasonable and Prudent Action 4 requires sufficient Delta outflow to maintain average X2 for September and October no greater (more eastward) than 74 kilometers in the fall following wet years and 81 kilometers in the fall following above normal years. In addition, following these periods, in November, the inflow to CVP/SWP reservoirs in the Sacramento Basin is required to be added to reservoir releases to provide an added increment of Delta inflow and to augment Delta outflow up to the fall X2 target. In addition to the X2 requirements under SWRCB Decision 1641, the CalSimII model includes increased Delta outflows to meet monthly average X2 requirements for September and October and subsequent November reservoir release actions in wet and above normal years as required by the USFWS Biological Opinion.

No changes to X2 are thus projected during the spring (February to June) or fall (September to November) time periods, and minor changes in December and January are not expected to be meaningful. This barely measureable change is not expected to have any effect on biological resources.

7.13.4 Response to Comment 13-4

Comment Summary: The comment requests that the Draft EIR include modeling of Project-related temperature changes and suggests that the EIR assumes that Reclamation can easily modify CVP operations to avoid thermal impacts.

Regional San agrees that it is not easy for Reclamation to modify CVP operations, and the Draft EIR acknowledges this. The Draft EIR concludes that project effects on CVP operations are potentially significant and proposes mitigation to address those impacts. Please refer to Mitigation Measure HYD-4 on page 3.10-46 of the Draft EIR, which calls for Regional San to "work with the Bureau of Reclamation and other relevant resource agencies to make appropriate operational changes in recycled water use and timing of discharge reductions" so as to avoid adverse impacts to CVP operations and to avoid thermal impacts. Temperature modeling is not infeasible, but is more appropriately done as part of the ongoing coordination with Reclamation staff that would occur as part of Mitigation Measure HYD-4, which specifically requires that "Regional San will coordinate with Central Valley Operations staff to reduce deliveries of recycled water in April and May if needed to avoid thermal impacts to the Sacramento River below Lake Shasta, as determined by the Sacramento River Temperature Model being utilized by Reclamation in the given year." Because the Draft EIR provides substantial evidence and analysis to support its determination that thermal impacts may be significant, and provides mitigation that includes a measurable performance standard to avoid those impacts, more detailed modeling of temperature effects is not considered necessary.

7.13.5 Response to Comment 13-5

Comment Summary: The comment states that it is unclear if the Draft EIR recognizes as significant the changes to CVP operations that may be required as a result of the project, and asserts that if the Project requires Reclamation to modify CVP operations that would constitute a significant impact.

As discussed in Response to Comment 13-3, the Draft EIR does evaluate impacts on CVP operations. Please refer to Impact HYD-4, Interfere with or Require Changes to CVP or SWP Operations, starting on page 3.10-37 of the Draft EIR. The Draft EIR includes a detailed evaluation of project effects on CVP and SWP operations, determines this impact to be significant, and proposes mitigation to reduce the impact to less than significant.

7.13.6 Response to Comment 13-6

Comment Summary: The comment states that impacts from reduction of CVP exports would not likely be evenly distributed because certain CVP contractors have borne the brunt of reduced exports and requests that the EIR more specifically address which CVP purposes are likely affected by reductions in CVP exports.

CalSimII provides some identification of effects on types of contractors, but does not allow an evaluation of effects on individual contractors, which it appears the comment is requesting. Effects on CVP and SWP contract deliveries are described on page 3.10-42 of the Draft EIR, which notes that the worst case reduction would be expected to be for south-of-Delta CVP agricultural contracts:

- "CVP and SWP contract deliveries – reduced CVP deliveries on average by 2,000 AFY in Below Normal, Dry and Critically Dry years (D1641 40-30-30 year types); reduced SWP deliveries on average by 2,000 AFY in Dry years (D1641 40-30-30 year type). Effects at the start of operations (year 0) are potentially greater with total deliveries reduced by up to 9,000 AFY. At start of

operations, SWP exports would be reduced by 4,000 AFY (0.2 percent of the 2,600,000 AFY exports that would occur without the Project); CVP exports would be reduced by 5,000 AFY (0.2 percent of the 2,300,000 AFY exports that would occur without the proposed Project). The worst-case reduction would be for south-of-Delta CVP agricultural contracts, which would be reduced by 0.4 percent (a 5,000 AFY reduction from the 1,170,000 AFY deliveries without the proposed Project)."

Page 3.10-42 of the Draft EIR further notes that "reservoir releases for Delta inflows to support Delta outflow requirements and Delta export objectives, are under the discretion of the operators of these two projects, who can reduce allocations to contractors. While is it is observed through the model results that Regional San discharge reductions could potentially impact the CVP and SWP project operations, it is up to the operators of these two projects to control how any such impact is manifested."

It is reasonable to assume that Reclamation has the ability to release stored water to avoid any reduction in exports, and it is foreseeable that CVP water contractors would advocate for such a result. However, it is unlikely that any project-related CVP supply reductions would be borne by any single contractor. Whether and how Reclamation would allocate the predicted miniscule reduction in total supplies (predicted to range between 0.2 and 0.4 percent) among its many south of Delta CVP contractors would require speculation. The Draft EIR determines that "the predicted worst-case reduction in exports would be extremely small, and not substantial, and as such would have a less than significant impacts on the water supply aspect of CVP and SWP operations." However, Mitigation Measure HYD-4, which would be implemented to minimize potential thermal impacts during critically dry years, would also minimize project effects on export. For these reasons Regional San thus does not agree that it is necessary or feasible to more specifically address whether any specific CVP purposes would be affected by project-related reductions in CVP exports.

7.14 Comment Letter 14 – Rick Bettis

7.14.1 Response to Comment 14-1

Comment Summary: The comment states that the EIR meets CEQA requirements and provides a basis for moving forward on the project, but suggests that future studies should consider stronger water conservation programs.

Regional San appreciates the support for the project, and is fully in agreement that water conservation is an important part of management of water resources in Sacramento County.

7.14.2 Response to Comment 14-2

Comment Summary: The comment states that climate change should be considered because it may affect both natural recharge to the basin and available water supplies that are planned for use in the conjunctive use program for the area.

The proposed Project would provide a source of water that is reliable even in the event of climate change, and would help reduce reliance on groundwater. Design of the project would not need to consider sea level rise because the project is far outside of any area that would be affected by higher sea levels.

7.14.3 Response to Comment 14-3

Comment Summary: The comment states that it is known that Elk Gove plans expansion.

Regional San will continue to coordinate with the City of Elk Grove regarding its proposed plans.

7.14.4 Response to Comment 14-4

Comment Summary: The comment states that future studies should consider result of planned studies of critical habitats in the county, and that the effect of the "Southeast County Habitat Conservation plan" should be given consideration.

The South Sacramento Habitat Conservation Plan (SSHCP) is described on page 3.5-9 of the Draft EIR, and as noted there, the proposed Project is a covered activity with the SSHCP. Because the proposed Project is structured both to provide water for agricultural uses and to provide water for habitat enhancement Regional San does not expect any conflicts with the SSHCP or other future studies of critical habitats in Sacramento County.

7.14.5 Response to Comment 14-5

Comment Summary: The comment suggests that recycled water for urban landscaping such as Delta Shores should be given serious consideration in future planning.

Regional San is pursuing projects that provide recycled water for urban landscaping, including Delta Shores. As described on page 1-7 of the Draft EIR under the heading of "Other Recycling Projects", Regional San is implementing the SPA Cogen project, and "Future phases of this project could include construction of laterals extending from the main pipeline to the cogeneration plant to serve additional users such as the Bartley Cavanaugh Golf Course, Bill Conlin Youth Sports Complex, and parks within Delta Shores."

7.15 Comment Letter 15 – Sacramento County Department of Transportation, Matthew G. Darrow, P.E., T.E., P.T.O.E., Senior Transportation Engineer

7.15.1 Response to Comment 15-1

Comment Summary: The comment references the wastewater change petition for the South Sacramento County Agriculture & Habitat land Recycled Water Program and expresses agreement with the mitigation measure that requires preparation of a transportation management plan and requests that Regional San work with the County when developing the plan.

Although the comment was submitted in response to the Wastewater Change Petition, it references mitigation that is included in the Draft EIR and is being treated as a late comment on the EIR. Regional San will continue coordination with the Sacramento County Department of Transportation.

7.15.2 Response to Comment 15-2

Comment Summary: The comment requests that Regional San enter into a maintenance agreement for damage to pavement along haul routes.

Regional San will consider the request for the maintenance agreement and, as noted above, will continue coordination with the Sacramento County Department of Transportation.

7.16 Comment Letter 16 – Sacramento Municipal Utility District (SMUD), Rob Ferrera, Environmental Specialist

7.16.1 Response to Comment 16-1

Comment Summary: The comment provides information on SMUD electrical lines in the project area, and provides information about requirements for work near transmission facilities.

Regional San appreciates the information provided by SMUD regarding the location of overhead transmission lines. It is not expected that relocation of electrical lines would be required and no new facilities are expected to be needed to serve the proposed Project. Regional San will coordinate with SMUD regarding work near transmission facilities. Detailed engineering drawing are not yet available, as the project facilities have only been developed at a conceptual level. When plans and specifications are developed Regional San will ensure that design and construction of facilities is done in a manner that is consistent with SMUD's easements and that requirements for construction near transmission lines are addressed.

7.17 Staff Initiated Text Changes

After publication of the Draft EIR, Regional San identified minor corrections and clarifications to the Draft EIR, which are identified here.

Executive Summary

Executive Summary, page ES-9 of the Draft EIR, Table ES-1 incorrectly summarizes the conclusion regarding Impact GEO-2 that is presented on page 3.8-8 and 3.8-9 of the Draft EIR. The text of Section 3.8 of the Draft EIR correctly reflects the fact that CEQA requires consideration of the potential impacts of a project on the environment, not the effect of the environment on the project. The entry in Table ES-1 for Impact GEO-2 is corrected as follows:

	Level of Significance Before Mitigation				Mitigation Measure	Level of Significance After Mitigation			
Impact Statement	1-Medium Service Area	2-No Reclamation Funding	3-Small Service Area	No Project		1-Medium Service Area	2-No Reclamation Funding	3-Small Service Area	No Project
GEO-2: Exacerbates existing environmental hazards or conditions, resulting in a substantial risk of loss, injury, or death ~~Be Located on a Geologic Unit or Soil that is Unstable, or that Would Become Unstable as a Result of the Project, and Potentially Result in On- or Off-site Landslide, Lateral Spreading, Subsidence, Soil Expansion, Liquefaction or Collapse~~	LTS ~~PS~~	LTS ~~PS~~	LTS ~~PS~~	NI	No mitigation necessary ~~GEO-2: Perform Design-Level Geotechnical Evaluation for Unstable Soils and Incorporate Recommendations (Alternatives 1, 2, 3)~~	LTS ~~LTSM~~	LTS ~~LTSM~~	LTS ~~LTSM~~	NI

Introduction

Table 1-2 on page 1-14 of the Draft EIR, the following permit is added to the list of potential approvals that may be needed for the project.

Table 1-2: Responsible and Trustee Agencies and Coordination

Agency	Type of Approval
STATE	
Central Valley Regional Water Quality Control Board (CVRWQCB)	401 Water Quality Certification (required for 404 Permit)
CVRWQCB	Possible NPDES Permit, or modification of existing NPDES Permit for discharge to Stone Lakes National Wildlife Refuge

Project Description

Chapter 2, page 2-6 of the Draft EIR, Table 2-1 is revised as follows to be consistent with information provided in the Wastewater Change Petition filed by Regional San:

Table 2-1: Estimated Recycled Water Use Included in Alternative 1 (Medium Service Area Alternative)

Program Area	Area (acres)	Average Annual Recycled Water Use (AFY)	Average Annual Recycled Water Use (mgd)	Peak Month Recycled Water Demand (mgd)
Agriculture	16,560 ~~000~~	32,500	29	70
Stone Lakes Wetlands	400	500	0.5	-
Recharge Area/ Wintertime Irrigation	16,560 ~~000~~	17,000	15.2	-
Total	**16,960 ~~400~~**	**50,000**	**44.7**	**70**

Note: The recharge area acreage (560 acres) is within the 16,560 ~~000~~ acres of agriculture acreage and would reduce agriculture acreage total by a like amount when it is functioning as a recharge basin. Wintertime irrigation, which is a potential future program element, could occur in the same areas as the agricultural acreage identified for irrigation during the growing season. In dry years irrigation during the growing season could be up to about 37,000 AFY because additional irrigation could occur during dry spring and/or dry fall months (based upon historic hydrology).

Section 3.4 Air Quality and Greenhouse Gas Emissions

Based on consultation with the Sacramento Metropolitan Air Quality Management District, it was determined that the estimate of construction emissions was overly conservative and corrected numbers have been developed.

Section 3.4, page 3.4-19 of the Draft EIR, Tables 3.4-6 and 3.4-7 are revised as follows:

Table 3.4-6: Maximum Daily Construction Emissions (lbs/day) of Criteria Air Pollutants and Precursors

	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Pipeline	3.35 ~~3.61~~	29.55 ~~35.85~~	27.80 ~~29.03~~	-	3.40 ~~3.66~~	1.74 ~~1.89~~
Pump Station (~7000 hp)	0.95	9.09	9.20	0.01	0.89	0.52
Total	4.29 ~~4.56~~	38.64 ~~44.94~~	37.01 ~~38.23~~	0.01	4.29 ~~4.55~~	2.27 ~~2.41~~
SMAQMD Thresholds[1]	-	85	-	-	80	82
Significant Construction Emissions	NA	No	NA	NA	No	No

Notes:

Air quality modeling inputs and outputs are available from Regional San upon request.

1. SMAQMD 2014, 2015a

Table 3.4-7: Overall Annual Construction Emissions (tons/year) of Criteria Air Pollutants and Precursors

	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Pipeline	0.85 ~~0.91~~	7.48 ~~9.07~~	7.03 ~~7.34~~	-	0.59 ~~0.65~~	0.38 ~~0.42~~
Pump Station	0.95	9.09	9.20	0.01	0.89	0.52
Total	1.79 ~~1.86~~	16.57 ~~18.16~~	16.24 ~~16.55~~	1.47E-02	1.48 ~~1.54~~	0.91 ~~0.94~~
SMAQMD	-	-	-	-	-	-
Federal General Conformity *de minimis* Thresholds[1]	25	25	100	100	100	100
Significant Construction Emissions	No	No	No	No	No	No

Estimates of GHGs generated during construction have also been updated.

Section 3.4, page 3.4-36 of the Draft EIR, the last sentence of the first paragraph is revised as follows:

> The construction phase of the project would use a variety of construction equipment and emit a maximum of ~~114~~ 922 MT CO_2e/year, or approximately ~~346~~ 1,636 MT CO_2e for the entire construction period.

In addition, the last paragraph on page 3.4-36 is revised as follows:

> As shown in **Table 3.4-11**, construction activities would result in a total of ~~346~~ 1,636 MT CO_2e, or approximately ~~7~~ 33 MT CO_2e per year when amortized across the proposed Project's operational life of 50 years. Operation of the proposed Project would result in 745 MT CO_2e per year, and the combination of operational emissions and amortized construction emissions would result in a net increase of ~~752~~ 778 MT CO_2e per year during the operational life of the project. The increase in GHG emissions associated with the proposed Project would not exceed the 10,000 MT CO_2e per year threshold, therefore impacts would be less than significant.

Table 3.4-11 on page 3.4-37 is revised as follows:

Table 3.4-11: Greenhouse Gas Emissions Associated with the Project (Tons of CO_2e/year)

	CO_2e
Construction-Related GHG Emissions	**Entire Construction Period (MT)**
Alternative 1 (Medium Service Area Alternative)	1,636 ~~346~~
Alternative 2 (No Reclamation Funding Alternative)	1,636 ~~346~~
Alternative 3 (Small Service Area Alternative)	<1,636 ~~346~~
Operational-Related GHG Emissions	**MT/year**
Alternative 1 (Medium Service Area Alternative)	745
Alternative 2 (No Reclamation Funding Alternative)	745
Alternative 3 (Small Service Area Alternative)	<745
Project Totals	**MT/year**
Alternative 1 – Construction Amortized (50 years operational life) + Yearly Operational Emissions	778 ~~752~~
Alternative 2 – Construction Amortized (50 years operational life) + Yearly Operational Emissions	778 ~~752~~
Alternative 3 – Construction Amortized (50 years operational life) + Yearly Operational Emissions	<778 ~~752~~

On page 3.4-37, the first sentence in the first paragraph is revised as follows:

> Construction of the proposed distribution pipelines, lateral and turnouts, would entail similar types of construction and could occur in 2020 through 2041; construction emissions, amortized over the 50-year project live would not be projected to be substantially greater than the ~~7~~ 33 MT CO_2e per year estimated for construction of project facilities.

None of the revisions in emissions estimates results in changes in the conclusions regarding significance and all impacts remain less than significant.

Section 3.5 Biological Resources

On page 3.5-36, the third sentence in the first paragraph is revised as follows to correct a typographical error in the mitigation measure regarding western pond turtle:

> Construction and ground-disturbing activities will be initiated after May 1 and will end ~~commence~~ prior to September 15.

This change corrects the intent of the mitigation measure and does not result in a change in the conclusion that the impact can be reduced to less than significant.

Chapter 8 Comment Letters

The comment letters received on the Draft EIR are included in this chapter.

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United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825-1898

IN REPLY REFER TO:

AUG 22 2016

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VIA ELECTRONIC MAIL ONLY

Jose Ramirez
Sacramento Regional Sanitation District
10060 Goethe Road
Sacramento, CA 95827-3553

Subject: Sacramento Regional County Sanitation District Draft Environmental Impact Report (DEIR) for the South County Agriculture & Habitat Lands Recycled Water Program

Dear Mr. Ramirez:

Attached are the Bureau of Reclamation's comments on and suggested edits for the South County Agriculture & Habitat Lands Recycled Water Program (Project) DEIR.

If you have any questions, please contact Ms. Vanessa Emerzian at vemerzian@usbr.gov or 916-978-5083.

Sincerely,

Michelle H. Denning
Regional Planning Officer

Enclosures – 2

The Bureau of Reclamation has reviewed the South County Agriculture & Habitat Lands Recycled Water Program (Project) DEIR and offers the following comments regarding impacts to biological resources, and hydrology and water quality.

Biological Resources

It is noted that in response to previous comments made by Reclamation, information regarding fish species' critical habitat and the specificity of distinct population segments or evolutionarily significant units has been added to the fish section of the Biological Resources chapter. Other earlier comments made by Reclamation staff have not been addressed. Among these were to rewrite the fish section with more detail and cited sources. Each fish species needs its own section – as was done with the terrestrial species – and a statement regarding their presence in the vicinity of the project impacts. Inclusion in Table 3.5-1 is not sufficient given the sensitivity of fish species to projects that impact Delta waterways.

1-1

Reclamation staff has composed suggested text for individual fish species sections in the attached track changes document. Reclamation asks that Regional San include potential impacts to fish in these sections.

Much modeling and analysis has been done to determine potential impacts of this project to hydrologic conditions, both to in-stream flows and groundwater. Though these tools are used to estimate future conditions, it is not possible to accurately predict future conditions. The natural variability of precipitation patterns in California creates a wide range of potential future conditions. See the table below for a comparison of actual – against modeled – Sacramento River flow information just upstream of Regional San's Freeport outfall. The time period covered is from January 1980 to the beginning of May 2016.

Month	Avg. Monthly Flows in cfs		Lowest Recorded Flows in cfs		Highest Recorded Flows in cfs	
	Modeled	Actual	Daily	Monthly Avg	Daily	Monthly Avg
January	31,181	31,567	5,343	6,511	112,811	87,116
February	36,575	35,006	6,291	8,216	115,000	81,170[1]
March	32,255	35,961	5,811	7,875	102,522	78,290
April	23,207	25,478	3,865	6,308	93,700	76,580
May	19,130	21,192	3,928	5,645	88,522	64,101[2]
June	16,530	18,686	6,108	6,716	69,762	54,643[3]
July	19,272	17,900	6,462	7,550	46,530	31,000
August	14,480	16,173	6,052	7,556	27,200	25,039
September	18,560	15,208	7,191	7,865	28,682	24,857
October	11,282	11,617	5,139	6,342	26,200	21,148
November	15,649	14,068	5,467	6,323	86,600	48,820
December	23,120	25,279	6,029	8,352	98,300	74,513

1-2

As expected, most of the modeled average monthly flows are closely aligned with the approximated 36-year averages, with the notable exception of September which shows a nearly 20% over-estimate of modeled average flows compared to actual average flows. Add to this the natural variability observable

[1] February 1998 – two days of data missing.
[2] May 1995 – one day of data missing.
[3] June 1998 – one day of data missing.

in the lowest and highest recorded flow columns, and the potential for impacts to fish species with reduced flows in drier water years becomes more apparent. 1-2 Cont'd

Given the sensitivity of fish species and other aquatic organisms to changes in water temperature, this section should also address the project's potential impacts to water temperatures in area streams, lakes, and rivers. 1-3

The following comments pertain to impact analyses within Section 3.5. Within Impact BIO-4a please include any potential drainage corridors that may drain into the Sacramento River and Delta. 1-4

Related to this, within Impact BIO-4b, if any project operations have the potential to establish new, or increase existing, water inputs connecting with the Sacramento River and Delta, please include any necessary mitigation needed to discourage upstream movement into unnatural migration routes and or habitat modifications. 1-5

Hydrology and Water Quality

Sacramento Regional County Sanitation District (SRCSD) waste water discharge at Freeport represents 85% of all waste water discharge to the Sacramento River downstream of Shasta Dam. Currently, this water becomes part of the supply used by Reclamation's Central Valley Project (CVP) and California's Department of Water Resources State Water Project (SWP) to meet water demands and to provide necessary inflows to the Delta to meet Delta water quality control plan requirements. The proposed project would divert a substantial amount of the total SRCSD discharge, including during months when CVP and SWP demands are highest. 1-6

Reclamation (and the CVP) has rights to this discharge to the extent that the source of the water entering the treatment plant is "native" to the Sacramento River (i.e., such as water that is diverted from the river), and is available for appropriation by others (including Reclamation). CVP contracts stipulate that the CVP retains the right to return flows from CVP deliveries. On page 3.10-7 of the DEIR, under the heading *SRWTP Effluent Sources,* it is stated that 40 to 50% of the effluent originates as groundwater. Inclusion of additional information in the DEIR about how this estimate was attained would be helpful in assisting Reclamation and the Department of Water Resources in determining how much water supply they could lose to the proposed project.

In addition to reduced flows from Freeport to the Delta, the project would require additional cold water storage releases from Reclamation storage facilities to make up for the reduction in Delta outflows caused by the project. Therefore, this project as proposed reduces Reclamation water supplies through both the reduction in effluent at Freeport and reduced cold water storage in upstream reservoirs.

In regards to this impact, the draft EIR states that:

> "It should be noted that CVP and SWP Delta exports, and by connection CVP and SWP upstream reservoir releases for Delta inflows to support Delta outflow requirements and Delta export objectives, are under the discretion of the operators of these two projects, who can reduce allocations to contractors. While is it is observed through the model results that Regional San discharge reductions could potentially impact the CVP and SWP project operations, it is up to the operators of these two projects to control how any such impact is manifested. In any event, the predicted worst-case reduction in exports would be extremely small, and not substantial, and as such would have a less than significant impact on the water supply aspect of CVP and SWP operations." 1-7

1-7 cont'd

Though Reclamation encourages grey water use to stretch water supplies of the state, Reclamation does not view the water rights impacts of this proposed project as less than significant. There are still water rights issues that are not adequately resolved by mitigation measures listed in this Draft EIR. Mitigation Measure HYD-4 (Coordinate with Relevant Resource Agencies) which states that Regional San would work with Reclamation and other resource agencies to make appropriate operational changes in recycled water use in April and May to reduce impacts to the Sacramento River is a good start.

Contents

Tables

Figure

3.5 Biological Resources

This section describes the environmental setting for biological resources at and near the Project area, and discusses the potential for occurrence of sensitive or important natural resources in the Project area. Relevant regulatory laws and requirements are discussed. Potential impacts are evaluated, and mitigation measures are identified where appropriate to avoid or lessen significant impacts.

The California Natural Diversity Database (CNDDB) Florin and Bruceville quadrangles (USGS 7.5-minute series) were queried to identify sensitive species and important natural communities that have historically been detected in the vicinity of the proposed Project (CNDDB 2015). Ten additional quadrangles[1] adjacent to the Florin and Bruceville quadrangles were also queried to understand the broader historic occurrences of these resources, and of other sensitive resources not captured in the narrower two-quad query. A query of the USFWS Information for Planning and Conservation (IPaC) database was also conducted to supplement the CNDDB query effort (USFWS 2016). Field reconnaissance visits and focused wetland delineation efforts were completed to supplement the CNDDB queries and to provide detailed, site-specific information for a Wetland Delineation Study and Biological Assessment prepared in association with this Project. In addition, a project coordination meeting was conducted on May 25, 2015 with RMC, CH2M, and California Department of Fish and Wildlife (CDFW) staff to discuss CDFW's written comments on the EIR Notice of Preparation, and to better understand CDFW's initial concerns regarding potential impacts of the proposed Project.

The "Project area" evaluated in this section includes the approximately 13.8-mile-long pipeline alignment from the SRWTP southward to the intersection of Bruceville Road and Twin Cities Road. A uniform 250-foot-wide corridor was assumed for the pipeline construction corridor width[2]. A disturbance area of 10,000 square feet was also considered for a new pump station near the existing SRWTP. Sensitive resources may be directly and/or indirectly impacted by the proposed Project within this defined Project area. In this section, the Project area is also referred to on occasion as the alignment. Elements of the Project that are outside of this defined Project area are discussed at a program-level.

Potential indirect effects to Sacramento River resources (primarily to fish species) resulting from reduced return flows to the Sacramento River are also evaluated in this section. Areas outside of the defined Project area, including the Sacramento River, are not expected to be directly impacted by the proposed Project. Indirect impacts to areas outside of the alignment are anticipated to be nominal, as described later in this section.

[1] The ten adjacent 7.5-minute series quadrangles are: Carmichael, Clarksburg, Courtland, Elk Grove, Galt, Isleton, Lodi North, Sacramento East, Sacramento West, and Thornton.
[2] An Area of Potential Effect (APE) was established within the cultural resources investigations completed for the proposed Project. The APE varies between 80 and 250 feet wide for the extent of the pipeline alignment.

3.5.1 Environmental Setting

The defined Project area generally crosses through or is adjacent to four different land use types in a north to south direction: 1) disturbed/ruderal vacant lands, 2) dense, urban/residential development, 3) relatively intact vernal pool/vernal swale grassland complexes and large drainage features, and 4) active agricultural lands. These are described below. **Figure 3.5-1** provides an aerial view of the Project area, showing areas of development, major drainage features and areas of agriculture/open space.

Disturbed/Ruderal Lands. Vacant, disturbed grasslands dominate the land cover within the northernmost 2-mile segment of the alignment from the SRWTP southward to approximately the Big Horn Boulevard intersection with Franklin Boulevard. Scattered relict vernal pool features are evident in this area, but past agricultural practices (as evidenced by furrowing) have severely disturbed these currently-vacant and fallowed lands. A wetland delineation report prepared for the proposed Project shows very few aquatic features in this section of the alignment (CH2M HILL 2015). Drainage features (agricultural drains and canals) present in this area were dry during summer 2015 site reconnaissance work. These presumably were constructed to serve historic agricultural land uses, but appear abandoned at present. Several appear to convey seasonal stormwater only. Native and natural vegetation is scarce in this section of the alignment.

Urban Development. From the intersection of Big Horn Boulevard and Franklin Boulevard, proceeding southward for a distance of approximately 2 miles to the intersection of Elk Grove Boulevard with Franklin Boulevard, dense residential housing has been developed at the southern portion of the City of Elk Grove. Natural features and habitats/land cover types of biological importance do not exist in this segment.

Vernal Pool/Vernal Swale Grassland Complexes and Large Drainage Features. Beginning at the intersection of Franklin Boulevard and Elk Grove Boulevard, and proceeding southward along Franklin Boulevard for a distance of about 3 miles (to about 0.7-mile south of Hood Franklin Road), protected conservation lands are located west of the alignment, while dense residential housing of Elk Grove and active agricultural land uses dominate the land cover east of Franklin Boulevard Extensive vernal pool complexes west of Franklin Boulevard are conserved within the Stone Lakes NWR Wetland Preserve Unit. Most vernal swale features located in this portion of the NWR are tributary to North Stone Lake. Hundreds of vernal pools and features are located in the NWR preserve lands. Potential impacts to vernal features and sensitive species they may support are described later in this section.

Natural watercourses occur infrequently in this section of the alignment and, where present, have been highly modified. Most watercourses in this section were constructed, presumably to convey agricultural water (supply or drainage) or surface-water runoff from urban development. The Ehrhardt Channel is a large drainage corridor located about 0.1-mile south of Elk Grove Boulevard and east of Franklin Boulevard. It is a graded, unlined trapezoidal channel that conveys residential runoff from Elk Grove westward beneath Franklin Boulevard to join a natural drainage pathway through Stone Lakes NWR, ultimately joining North Stone Lake. Historically named the "Shed A Channel", this constructed drainage channel (east of Franklin

Figure 3.5-1: Aerial Photograph of Project Area

Boulevard) was renamed Ehrhardt Channel by the Elk Grove City Council in 2012 to better reflect its value as a community amenity. Franklin Creek, located about 0.5-mile north of Hood Franklin Road is another large, constructed drainage corridor (unlined trapezoidal channel east of Franklin Boulevard) that primarily captures residential runoff from the southern-most portion of the City of Elk Grove and conveys runoff westward to I-5 in the Stone Lakes NWR and, ultimately, North Stone Lake. Franklin Creek, when originally constructed, was named the "Shed B Channel". It also was renamed in 2012 by the Elk Grove City Council to better reflect its community value as an amenity. Both the Ehrhardt Channel and Franklin Creek appear to support only ephemeral flows.

A large and unnamed natural watercourse crosses beneath Franklin Boulevard about 0.7-mile south of Hood Franklin Road. The corridor has been heavily channelized east of the alignment and is currently impounded and used by a dairy farm as a settling basin. Outflow from the basin flows westward to a realigned natural channel that meanders through NWR lands and ultimately is tributary to South Stone Lake. The drainage appears to support perennial surface flows. The remaining watercourses in this section of the alignment are generally agricultural supply canals and drains. Potential impacts to drainage courses and sensitive species they may support are described later in this section.

Active Agriculture. The remaining portion of the alignment, from south of the natural watercourse described in the previous paragraph to the Project area terminus at the intersection of Bruceville Road and Twin Cities Road, traverses active or idled agricultural lands. Surface water features in this approximately 7-mi long section are largely limited to agricultural canals and drains, with some of these impounded and used for irrigation supply basins. A few undeveloped parcels supporting relict vernal pools and vernal swales are located in this section. Prior to urban and residential development in this portion of Sacramento County, the entirety of the Project area vicinity likely consisted of extensive complexes of vernal pools and swales. Currently, these natural, high-habitat-value features are largely restricted to Stone Lakes NWR.

3.5.2 Regulatory Framework

This section summarizes federal, state, and local laws, policies, and regulations that may be relevant to the proposed Project. Additional permitting and approval processes other than those listed below may be applicable.

Federal Policies and Regulations

Endangered Species Act

The 1973 Endangered Species Act (FESA) (16 USC 1531-1544) as amended provides for the conservation of ecosystems (both through federal action and by encouraging the establishment of state programs) upon which threatened and endangered species of fish, wildlife, and plants depend. The FESA is enforced by the USFWS (with jurisdiction over plants, wildlife, and resident fish) and by National Marine Fisheries Service (NMFS) (with jurisdiction over anadromous fish and marine fish and mammals).

Section 9 of the FESA and federal regulations prohibit the take of fish and wildlife species listed as endangered or threatened (16 USC 1538 (19)). The term ''take'' means to harass, harm,

pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct (16 USC 1532). "Harm" includes significant habitat modification or degradation that actually kills or injures listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, and sheltering (50 CFR 17.3 (c)). NMFS defines "harm" to include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering.

Section 7 of the FESA mandates that all federal agencies consult with the USFWS and NMFS if they determine that a proposed project may result in take of a listed species or designated critical habitat. Section 10 of the FESA provides a permitting avenue for non-federal actions and applicants to secure incidental take permission. Section 10 requires the preparation of a Habitat Conservation Plan (discussed below).

Migratory Bird Treaty Act
The Migratory Bird Treaty Act of 1918 (MBTA; 16 United States Code 703-712) makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 Code of Federal Regulations (CFR) Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Disturbance that causes nest abandonment or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered a "take" and is potentially punishable by fines and imprisonment. Incidental take permits are not issued for the MBTA. Any proposed project must take measures to avoid the take of any migratory birds, nests, or eggs. The proposed Project will need to demonstrate compliance with the MBTA, and will develop avoidance and minimization measures as needed to avoid take as defined under the MBTA

Clean Water Act-Section 404
The federal Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 404 of the CWA is administered by the United States Army Corps of Engineers (USACE), which has jurisdiction over fill materials in essentially all water bodies, including wetlands. Section 404 established a permit program to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. The proposed Project will require Section 404 permit from USACE for regulated dredge and fill activities within jurisdictional waters of the U.S.

Clean Water Act-Section 401
Section 401 of the CWA requires that an applicant for a federal license or permit (e.g. 404 permit) that allows activities resulting in a discharge to waters of the U.S. must obtain a state certification that the discharge complies with other provisions of the CWA. The Regional Water Quality Control Boards (RWQCB) administer the certification program in California. The proposed Project will require a Section 401 certification, or waiver thereof, from the RWQCB for dredge and fill activities within the Project area.

State Policies and Regulations

California Endangered Species Act (CESA)
Section 2080 of the California Fish and Game Code prohibits the take of any species that the California Fish and Game Commission determines to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California Endangered Species Act (CESA) allows for take incidental to otherwise lawful activities. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project-caused losses of listed species' populations and their essential habitats. If the project cannot avoid take of species listed under the CESA, the applicant may need to consult with CDFW under Section 2081 for an incidental take permit. Avoidance measures are commonly developed and implemented by a project proponent to avoid the need for a CESA permit.

California Fish and Game Code
The CDFW Streambed Alteration Program regulates activities that would "substantially divert or obstruct the natural flow of, or substantially change the bed, channel, or bank of, or use material from the streambed of a natural watercourse" that supports wildlife resources. Project activities within a streambed would require a Streambed Alteration Agreement from CDFW pursuant to Fish and Game Code Section 1600.

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors, including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal or disturbance caused by project construction or other activities that cause the adults to abandon the nest, resulting in loss of eggs and/or young.

Sections 3505, 3511, 3513, 3800, 4700, 5050, and 5515 of the California Fish and Game Code pertain to fully protected wildlife species and strictly prohibit the take of fully protected species. With certain exceptions, the California Department of Fish and Wildlife (CDFW) cannot issue a take permit for fully protected species and avoidance measures are typically implemented to avoid take. Avoidance and minimization measures will be developed and implemented to comply with various sections of the California Fish and Game Code.

Local Policies and Regulations

Sacramento County General Plan

Conservation Element
The Sacramento County General Plan Conservation Element (Sacramento County 2011) includes the following goals, objectives, and policies relevant to the proposed Project:

- **GOAL**: Preserve and manage natural habitats and their ecological functions throughout Sacramento County.

- **Objective**: Mitigate and restore for natural habitat and special status species loss.
- Policy CO-58: Ensure no net loss of wetlands, riparian woodlands, and oak woodlands.
- Policy CO-59: Ensure mitigation occurs for any loss or modification to the following types of acreage and habitat function: vernal pools, wetlands, riparian, native vegetative habitat, and special status species habitat.
- Policy CO-60: Mitigation should be directed to lands identified on the Open Space Vision Diagram.
- Policy CO-61: Mitigation should be consistent with Sacramento County-adopted habitat conservation plans.
- Policy CO-62: Permanently protect land required as mitigation.
- **GOAL**: Preserve, protect, and enhance natural open space functions of riparian, stream, and river corridors.
- **Objective**: Protect and restore natural stream functions.
- Policy CO-107: Maintain and protect natural function of channels in developed, newly developing, and rural areas.
- **GOAL**: Sacramento County vegetative habitats preserved, protected, and enhanced.
- **Objective**: Heritage and landmark tree resources preserved and protected for their historic, economic, and environmental functions.
- Policy CO-138: Protect and preserve non-oak native trees along riparian areas if used by Swainson's hawk, as well as landmark and native oak trees measuring a minimum of 6 inches in diameter or 10 inches aggregate for multi-trunk trees at 4.5 feet above ground.
- Policy CO-139: Native trees other than oaks, which cannot be protected through development, shall be replaced with in-kind species in accordance with established tree planting specifications, the combined diameter of which shall equal the combined diameter of the trees removed.
- Policy CO-140: For projects involving native oak woodlands, oak savannah, or mixed riparian areas, ensure mitigation through the methods described.

City of Elk Grove General Plan

Guiding and Focused Goals

The following guiding and focused goals from the City of Elk Grove General Plan are relevant to the proposed Project (City of Elk Grove 2015):

- Guiding Goal 3: Protection of the Natural Environment
  - Focused Goal 3-1: Development that recognizes environmental constraints and is designed and operated to minimize impacts on the environment.
- Guiding Goal 4: Preservation and Enhancement of Elk Grove's Unique Historic and Natural Features
  - Focused Goal 4-2: Preservation of the large oak and other tree species that are an important part of the City's historic and aesthetic character.

Conservation and Air Quality Element
The following policies from the Conservation and Air Quality Element of the City of Elk Grove General Plan (City of Elk Grove 2015) are relevant to the proposed Project:

- Policy CAQ-8: Large trees (both native and non-native) are an important aesthetic (and, in some cases, biological) resource. Trees that function as an important part of the City's or a neighborhood's aesthetic character or as natural habitat should be retained to the extent possible during the development of new structures, roadways, parks, drainage channels, and other uses and structures. If trees cannot be preserved onsite, offsite mitigation or payment of an in-lieu fee may be required. Trees that cannot be protected shall be replaced either onsite or offsite as required by the City.
- Policy CAQ-9: Wetlands, vernal pools, marshland, and riparian areas are considered to be important resources. Impacts to these resources shall be avoided unless shown to be technically infeasible. The City shall seek to ensure that no net loss of wetland area occurs, which may be accomplished by avoidance, revegetation, and restoration onsite or creation of riparian habitat corridors.
- Policy CAQ-11: The City shall seek to preserve areas, where feasible, where special-status plant and animal species and critical habitat areas are known to be present or potentially occurring that may be adversely affected by public or private development projects. Where preservation is not possible, appropriate mitigation shall be included in the public or private project.

Bufferlands Master Plan
Regional San manages the SRWTP Bufferlands consistent with management objectives and policies described in the Bufferlands Master Plan. The principle objectives of Bufferlands management are to maintain the function of the Bufferlands, allowing continued SRWTP operation and expansion; provide and maintain extensive areas of open space, high-quality wildlife habitat, and other valuable natural resources; provide areas to mitigate environmental impacts associated with Regional San projects; minimize conflicts and develop beneficial relationships with the local community; promote public enjoyment and appreciation through educational outreach; and generate lease revenues. Consistent with the Sacramento County General Plan, the Bufferlands Master Plan contains policies for the preservation and management of natural habitats and their ecological functions including avoiding, minimizing, and mitigating impacts to special-status species.

Sacramento County Swainson's Hawk Ordinance
Chapter 16.130 of Title 16 of the Sacramento County Code addresses the reduction in Swainson's hawk foraging habitat within unincorporated Sacramento County. Participating in the County's Swainson's hawk Mitigation Program, which is voluntary, is one option for mitigating the loss of foraging habitat within unincorporated areas of the County. Under this program, mitigation for impacts less than 40 acres can be achieved by paying a mitigation fee or providing replacement habitat (title or easement to suitable Swainson's hawk mitigation lands on a per-acre basis); mitigation for impacts of 40 acres or greater can be achieved only by providing replacement habitat under this program. Another option for permitting impacts to Swainson's

hawk is participation in Sacramento County's South Sacramento Habitat Conservation Plan, discussed in detail later in this section.

Sacramento County Tree Preservation Ordinance

The Sacramento County Tree Preservation Ordinance provides protection for trees within the designated urban area of the unincorporated area of Sacramento County. The Tree Preservation Ordinance applies only to the designated urban area, except for projects that require a discretionary land use entitlement, such as a parcel map. The main facilities portion of the project area is within a designated urban area ("public and quasi-public") and subject to the Tree Preservation Ordinance. The tree preservation ordinance applies to trees meeting the following specifications:

- native oak trees with a diameter at breast height (DBH) of 6 inches or greater;
- heritage oak trees, which are defined as California oak trees native to Sacramento County with a DBH of 19 inches (or circumference of 60 inches) or greater; and
- public trees, which are defined as any tree with one-half of its crown diameter (drip line) overlapping public property; and landmark trees, which are defined as especially prominent or stately trees.

No person shall trench, grade or fill within the dripline of any tree or destroy, kill or remove any tree as defined, in the designated urban area of the unincorporated area of Sacramento County, on any property, public or private, without a tree permit, or unless authorized as a condition of a discretionary project approval by the Board of Supervisors, County Planning Commission, Zoning Board of Appeals, the Zoning Administrator or the Subdivision Review Committee. The Tree Coordinator is responsible for administration of the Tree Preservation Ordinance. The ordinance protects all oak trees unless they are specifically designated for removal as part of an approved project. When oaks are removed they must be replaced with the same tree species equaling in sum the diameter of the tree lost. Any person may pay a fee of $325.00 per inch diameter to remove oaks when their replacement is not possible due to site constraints (Sacramento County 2011).

South Sacramento Habitat Conservation Plan

Sacramento County and its Plan Partners are currently drafting a Habitat Conservation Plan (HCP) to secure permission to incidentally take Covered Species. Covered Species are species that will be listed on the CESA and federal ESA Incidental Take Permits issued by the two Wildlife Agencies (USFWS and CDFW). The South Sacramento HCP (SSHCP), anticipated to be completed and adopted in spring 2017 (Sacramento County, 2016), includes and analyzes projects and activities and estimates the effects from each activity on Covered Species currently identified in the Plan. Projects and activities described in the SSHCP are referred to as "covered activities". HCP-covered activities are conditionally afforded coverage from prohibitions (namely, "take" of Covered Species) if they are implemented in a manner that is consistent with the expectations of and commitments within the HCP.

The proposed Project would be a covered activity within the SSHCP. As such, FESA consistency and permitting requirements will be facilitated by demonstrating consistency with

and satisfying requirements of the SSHCP. Incidental take of state-listed species would be permitted under the California Endangered Species Act (CESA) through a process being completed in conjunction with the SSHCP. Although the SSHCP has not yet been approved, Sacramento County intends to approve the HCP before permitting and construction of the proposed Project is scheduled to start.

The SSHCP establishes an Urban Development Area (UDA) within which most future development is anticipated to occur during the permit term. Outside of the UDA a limited amount of incidental take is requested for specific infrastructure projects (such as this one) and to provide for species conservation activities Near the proposed Project alignment, the UDA boundary is located near the intersection of Franklin Boulevard with Kammerer Road: north of this junction is within the UDA, and south of this junction is outside of the UDA. HCP conditions for covered activities developed in the HCP Plan Area are different within and outside of the UDA. Mitigation ratios are applied to directly impacted and to indirectly impacted high-value resources (e.g., vernal pools).

Consistency with the SSHCP is demonstrated on a project-by-project basis. Jurisdictional delineations are completed by applicants and results of these project-specific efforts are compared with mapping efforts of the SSHCP. If differences are noted, project delineations are provided to Sacramento County so that they may update the GIS files and information in the SSHCP. If projects-specific impact calculations (based on land cover types) are consistent with the estimates included in the SSHCP, the project would provide compensatory mitigation per the terms and conditions of the SSHCP. In this manner, several different permits and approval processes (e.g., CWA section 404 and 401, FESA, CESA, and Lake and Streambed Alteration Agreements under section 1600 of the Fish and Game Code) are intended to be facilitated by the SSHCP.

The SSHCP's Conservation Strategy is based on the concepts of conservation biology and landscape ecology, biological goals and objectives for the covered species, and the nature, quality, and geographical distribution of the suitable habitats in the HCP Plan Area. The strategy includes requirements to:

- Create an integrated Preserve System that conserves the natural land covers, certain Cropland, and Irrigated Pasture–Grassland in the Plan Area. The Preserve System will preserve at least 33,796 acres for the benefit of the SSHCP Covered Species, and the natural communities, biological diversity, and ecosystem function of the Plan Area.
- Provide for the continued persistence of Covered Species in the Plan Area.
- Protect remaining natural segments of Elder Creek, Frye Creek, Gerber Creek, Morrison Creek, Paseo Central, Sun Creek, and their first and second order tributaries within the Urban Development Area (UDA) portion of the Plan Area.
- Protect all of the Laguna Creek Corridor within the Plan Area.
- Manage preserved lands to enhance populations of Covered Species and maintain biological diversity within the Preserve System.
- Maintain existing watershed functions in the Plan Area to benefit wetlands (aquatic land cover types), and to support aquatic Covered Species and their habitats.

- Re-establish Vernal Pool land cover to ensure the Plan meets County of Sacramento (County), state, and federal requirements for "no-net-loss" of waters and wetlands and to offset impacts to vernal pool Covered Species.
- Re-establish riparian and other aquatic land cover to ensure the Plan meets County, state, and federal requirements for "no-net-loss" of waters and wetlands and to offset impacts to riparian Covered Species.

In short, SSHCP participants implementing covered activities agree to complete specific habitat-level and species-level actions for the benefit of HCP-covered species. Sacramento County will collect development fees from projects (based on impact to habitat ratios, by habitat type) to accomplish the SSHCP's conservation goals and objectives, and assemble a network of conservation areas.

3.5.3 Special-Status Resources

Special-status resources evaluated in this EIR include both sensitive habitats and plant communities, and sensitive species. These are defined below.

Special-Status Natural Communities

Special-status natural communities include important habitats or plant associations considered by the CDFW as communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status species or their habitat. Nomenclature for these communities was originally established by Holland (1986), but has been modified through time to reflect the current understanding of vegetation associations and their distributions (e.g., Sawyer Keeler-Wolf 1995). Sensitive natural communities are tracked and reported by the California Natural Diversity Database (CNDDB) along with sensitive species.

A CNDDB query of the Florin and Bruceville quadrangles and their 10 adjacent quadrangles identified seven special-status natural communities in the vicinity of the Project area (**Table 3.5-1**). Three of these seven natural communities are intersected by the defined Project area. These are coastal and valley freshwater marsh, Great Valley mixed riparian forest, and northern hardpan vernal pool.

Coastal and valley freshwater marsh (CVFWM). This natural community is dominated by perennial emergent monocots like cattails (*Typha* spp.) and tules (*Schoenoplectus acutus*). Locations supporting CVFWMs are often permanently flooded by freshwater and lack significant currents. Prolonged saturation often allows the formation of peaty soils. Historically, the community was extensively distributed in the Central Valley, but is currently much reduced due to land development and reclamation actions. CVFWM was documented at six locations totaling 4.6 acres in the defined wetland survey area of the wetland delineation report prepared for the proposed Project (CH2M, 2015).

Great Valley mixed riparian forest. This community is characterized by tall, dense, winter-deciduous and broad-leafed species including Fremont cottonwood (*Populus fremontii*), California sycamore (*Platanus racemosa*), California black walnut (*Juglans hindsii*), Goodding's

willow (*Salix gooddingii*), red willow (*S. laevigata*), yellow willow (*S. lasiandra*), and box elder (*Acer negundo*). Soils supporting this community are typically fine-textured alluvial materials from historic or active river channels, with overbank flooding common. Formerly extensive in the Sacramento and north San Joaquin valleys, this community has been reduced substantially by land clearing for agricultural, flood control, and urban expansion. The wetland delineation report prepared for the proposed Project reports nine locations where forested/scrub-shrub wetlands occur in the defined wetland survey area, totaling 4.4 acres.

Northern hardpan vernal pool. This natural community type is typically characterized by small-statured annual herbs and grasses. Germination and growth of vegetation begins with winter rains that fill pool features when collected water perches on the soil hardpan. Rising spring temperatures evaporate the ponded surface waters, leaving bands of vegetation that circle the drying pools. Once extensive in the Central Valley between Tulare and Fresno counties, northward to Shasta County, northern hardpan vernal pools have been reduced by land conversion such as agriculture and urban development. As described in the wetland delineation report prepared for the proposed Project (CH2M Hill 2015), vernal pools are extensively distributed in the Stone Lakes NWR lands near the northern portion of the alignment, west of Franklin Boulevard. The wetland delineation reports 48 vernal pools/swales within the defined wetland survey area totaling 20.2 acres.

Potential impacts to these special status natural communities are described later in this section. The remaining four special-status natural communities shown in **Table 3.5-1** do not occur in the Project area, and these are not discussed further in this EIR.

Wetlands and Other Waters of the U.S.
Most types of wetlands and riparian communities are considered special status natural communities due to their limited distribution in California. These natural communities often contain special status plants such as those described above. As describe previously in this section, certain activities within wetlands and other waters of the U.S. are regulated by the USACE under the federal Clean Water Act. The CDFW may regulate activities in wetlands and aquatic areas under Fish and Game Code section 1600 and section 2081, among other sections of code.

A wetland delineation report has been prepared for the proposed Project to document aquatic features within and near the Project area (CH2M HILL 2015), and to support future permitting needs. The wetland delineation report established a wetland survey area within which all aquatic features were identified and quantified (enumerated and areas measured). The wetland survey area included the Project APE (which ranges from 80 to 250 feet wide along the alignment) and a 250-foot buffer on each side of the APE.

Within the defined wetland survey area, the following aquatic feature types and areas were identified: vernal pools and vernal swales (20.2 acres), seasonal wetlands (1.2 acres), freshwater marshes (4.6 acres), scrub-shrub and forested wetlands (4.4 acres), constructed basins (6.4 acres), natural watercourses (0.6-acre), and constructed watercourses (10.4 acres). At the time of writing

this section, the wetland delineation report had not yet been reviewed and verified by the USACE, and these total areas should therefore be considered provisional.

Forested and scrub-shrub wetlands occur in the Project area in association with natural watercourses and constructed watercourses. Most of these habitats are fragmented and likely represent just a fraction of their historic distribution and areal extent. These vegetated communities are more fully developed and in better condition when the associated watercourses are consistently wetted, either perennially or intermittently. Watercourses with ephemeral hydrology rarely support forested or scrub-shrub wetlands in the Project area.

Constructed basins included dairy and agricultural tailwater ponds or settling basins, though some basins appeared to be constructed for irrigation supply sources (based on the associated presence of large water pumps). Freshwater marsh areas in the Project area are located where water sources are perennial, usually near the outlets of constructed basins or at the margins of agricultural supply canals. Seasonal wetlands are uncommon in the Project area and, like vernal pools, are only seasonally wetted.

Special-Status Species

Special-status species are defined as species that are legally protected or that are otherwise considered sensitive by Federal, State, or local resource agencies. Special-status species are species, subspecies, or varieties that fall into one or more of the following categories, regardless of their legal or protection status:

- Species officially listed under the CESA or the FESA as endangered, threatened, or rare;
- Species identified as a candidate for CESA or FESA listing as endangered, threatened, or rare;
- Species identified by CDFW as Species of Special Concern;
- Species listed as Fully Protected under the California Fish and Game Code;
- Species considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR) of 1 or 2. Ranks 1 and 2 include:
    - Rank 1A – Plants presumed to be extinct in California;
    - Rank 1B – Plants that are rare, threatened, or endangered in California and elsewhere;
    - Rank 2 – Plants that are rare, threatened, or endangered in California but more common elsewhere;

All plants with a CRPR are considered "special plants" by CDFW. The term "special plants" is a broad term used by CDFW to refer to all of the plant taxa inventoried in CDFW's CNDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, and 2 may qualify as endangered, rare, or threatened species within the definition of State CEQA Guidelines CCR Section 15380. CDFW recommends, and local governments may require, that CRPR 1A, 1B, and 2 species be addressed in CEQA projects.

The term "California Species of Special Concern" is applied by CDFW to animals not listed under the CESA, but that are considered to be declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. CDFW's Fully Protected status was California's first attempt to identify and protect animals that were rare or facing extinction. Most species listed as fully protected were eventually listed as threatened or endangered under CESA; however, some species remain listed as fully protected but do not have simultaneous listing under CESA. Fully protected species may not be taken or possessed at any time and no take permits can be issued for these species except for scientific research purposes or for relocation to protect livestock.

A CNDDB query of the Florin and Bruceville quadrangles (which completely contain the proposed Project elements) and their 10 adjacent quadrangles (which in total contain all Project and program elements) identified 51 special-status species historically detected in the vicinity of the Project area (**Table 3.5-1**). A query of the USFWS IPaC database added one rare plant to this CNDDB list. Suitable habitat for 31 of these 52 species (13 plants, 3 invertebrates, 4 amphibians/reptiles, and 5 birds) occurs in or near the defined Project area. Conversely, suitable habitat for 21 of the 52 species does not exist in the Project area, and/or their database records are suspect for one or more reasons. These 21 species are not discussed further in this EIR. Additionally, based on site-specific information, loggerhead shrike is known to occur in the Project area. The potential for occurrence of the 32 species for which suitable habitat does occur in or near the defined Project area is discussed below.

While sensitive fish species do not occur in the Project area, a reduction in Sacramento River flows may adversely affect species in that system. For this reason, species profiles for several fish species that may be affected by the Proposed Project or its action alternatives are included in this section.

Plants

Review of relevant literature and presence of suitable habitat in the Project area suggests that 13 sensitive plant species may potentially occur in the proposed Project area. These are described below.

Bristly sedge. Bristly sedge is a perennial, rhizomatous herbaceous species typically found along the edges of marshes and within riparian understories, but also within wet areas of grasslands. Bristly sedge may associate with freshwater marsh species such as cattails and tules, and occurs from sea level to 650 meters above sea level. It blooms from May through September, and the CNDDB reports 10 occurrences of this species from the Bruceville quad, with most of these from the southern Stone Lakes area and the lower Mokelumne River area. This CRPR 2B.1 species has a moderate potential to occur in the Project area in association with freshwater marshes and ditch features that are regularly and consistently wetted.

Dwarf downingia. Dwarf downingia is a small annual and herbaceous vernal pool associate that blooms from March to May. It may also be found in association within mesic grasslands. The CNDDB reports a 2010 occurrence (of over 1,000 plants) within vernal pools near the Elk Grove Boulevard intersection with I-5. This CRPR 2B.2 species has a moderate potential to occur

within the Project area where it intersects vernal pools or vernal swales. Dwarf downingia is a covered species in the SSHCP.

Boggs Lake hedge-hyssop. Boggs Lake hedge-hyssop is an annual herbaceous vernal pool associate that grows at elevations from 10 to 2400m above sea level. It may also associate with freshwater marshes and swamps. The CNDDB does not report this species within the Bruceville or Florin quads. Five occurrences are reported from vernal pools in adjacent quadrangles (Elk Grove and Carmichael quads). This CRPR 1B.2 and CESA-listed endangered species has a low potential to occur within the Project area where it intersects vernal pools or vernal swales. Boggs Lake hedge hyssop is a covered species in the SSHCP.

Woolly rose-mallow. Woolly rose-mallow is a perennial, herbaceous species found in association with freshwater marshes and swamps, and sometimes growing within the riprap of drainage levees, from sea level to 120 meters above sea level. It blooms from June through September. The CNDDB reports nine occurrences of this species within the Florin and Bruceville quads, most of which include the lower Cosumnes River and Snodgrass Slough areas. This CRPR 1B.2 species has a low potential to occur in the Project area in association with perennially wetted drainage features.

Northern California black walnut. Northern California black walnut is a large, deciduous, perennial tree species that typically is found in riparian settings. The CNDDB reports a single occurrence of this species in the Bruceville quad, along the Sacramento River near Walnut Grove. However, this species is well-represented along the major riverfronts in the Sacramento area, but not recorded in the CNDDB. This CRPR 1B.1 species has a moderate potential to occur in the Project area along perennially wetted ditches with established and mature riparian vegetation.

Ahart's dwarf rush. Ahart's dwarf rush is a small-statured rush species found in vernal pools and mesic grassland areas from 30 to 229 meters above sea level. This annual herb blooms from March through May. The CNDDB does not report this species from the Florin or Bruceville quads, but does report a single occurrence from a vernal pool complex at Mather AFB in 2006. This CRPR 1B.1 species has a low potential for occurrence with the Project area's vernal pool features. This is a covered species in the SSHCP.

Delta tule pea. Delta tule pea is a perennial, herbaceous species that associates with freshwater and brackish water marshes and swamps near sea level (0 to 5 meters above sea level). It blooms from May through September. The CNDDB reports four occurrences of this species in the Florin and Bruceville quads, with most of these near the tidally-influenced Snodgrass Slough. This CRPR 1B.1 species has a low potential for Project area occurrence in association with freshwater marsh habitats.

Legenere. Legenere is an annual, herbaceous vernal pool associate found from sea level to 880 meters above sea level. It blooms from April through June. The CNDDB reports five occurrences of this species from the Florin and Bruceville quads, one of which (in 1995) is located near the Regional San Bufferlands, near the northern portion of the alignment. This

CRPR 1B.1 species has a moderate potential for occurrence in association with Project area vernal pools and swales. Legenere is a covered species in the SSHCP.

Heckard's pepper-grass. Heckard's pepper-grass is an annual, herbaceous species that blooms from March through May and ranges from sea level to 200 meters above sea level. This plant is a California endemic known only from five California counties, including Sacramento County. The CNDDB reports only two historic occurrences of this species from the 12-quad search area, one of which (in 2010) was located in association with a seasonal wetland pool south of Stone Lake. Heckard's pepper-grass typically associates with alkaline flats in grassland habitats. This CRPR 1B.2 species has a low potential to occur in the Project area in association with seasonal wetland or vernal pool/swale habitats.

Sanford's arrowhead. Sanford's arrowhead is a perennial herbaceous species associated with marshes and ponded areas, and in ditches with slow-moving water, occurring from sea level to 650 meters above sea level. It blooms from May through November. The CNDDB reports 18 occurrences of this species within the Florin and Bruceville quads. Most occurrences are along marshy creeksides near the southern portion of the Project area. This CRPR 1B.2 species has a moderate potential for occurrence in the Project area in association with consistently wetted ditch features. Sanford's arrowhead is a covered species in the SSHCP.

Marsh skullcap. Marsh skullcap is a perennial herbaceous species found in association with marshes and swamps, seeps, mesic meadows, and lower montane coniferous forests. It is commonly found growing on logs. This species blooms from June through September and is found from sea level to 1,950 meters above sea level. The CNDDB reports two occurrences of this species in the Florin and Bruceville quads, both at Snodgrass Slough near the Twin Cities Road crossing. This CRPR 2B.2 species has a low potential for occurrence in the Project area where slow moving or ponded waters are persistent.

Side-flowering skullcap. Side-flowering skullcap is a perennial herbaceous species found in association with marshes and swamps, seeps, and mesic meadows. This species blooms from July through September, ranges in elevation from sea level to 500 meters above sea level, and is also commonly found growing on logs. It is known from only three California counties, one of which includes Sacramento County. The CNDDB reports five occurrences of side-flowering skullcap from the Florin and Bruceville quads, all of which are at Snodgrass Slough. This CRPR 2B.2 species has a low potential for occurrence in the Project area where slow moving or ponded waters are persistent.

Saline clover. Saline clover is an annual herbaceous species associated with marshes and swamps, mesic and alkaline valley and foothill grasslands, and vernal pools. It blooms from April through June and ranges in elevation from sea level to 300 meters above sea level. The CNDDB reports four occurrences of this species from the Florin and Bruceville quads, all of which were found in association with vernal pools in the Stone Lakes NWR. This CRPR 1B.2 species has a low potential for occurrence in vernal pools of the Project area.

Invertebrates

Review of relevant literature and presence of suitable habitat in the Project area suggest that three sensitive invertebrate species may occur in the Project area. These are described below.

Vernal pool fairy shrimp. The vernal pool fairy shrimp (VPFS) is currently found in 28 counties across the Central Valley and coastal ranges of California (and in Jackson County of southern Oregon). The species occupies a variety of vernal pool habitats and is distributed more widely than most other fairy shrimp species, but it is generally uncommon throughout its range, and is rarely abundant (USFWS 2005). VPFS are documented by the CNDDB to occur in the Stone Lakes NWR Wetland Preserve Unit to the west of the Project area, and this species has a moderate potential for occurrence in the Project area where the alignment crosses vernal pool or vernal swale features. VPFS is listed as a threatened species under the FESA, and is an SSHCP covered species.

Valley elderberry longhorn beetle. Valley elderberry longhorn beetle (VELB) are obligate associates with their larval host plant, elderberry (*Sambucus* spp.) - typically blue elderberry (*S. mexicana*). Elderberry is a common component of the remaining riparian forests and adjacent upland habitats of California's Central Valley. Use of elderberry by adult VELB, a wood borer, is rarely apparent. Instead, the only exterior evidence of VELB presence is an exit hole created by larvae. The life cycle takes one or two years to complete. This insect species spends most of its life in the larval stage, living within the stems of an elderberry plant. Adult emergence is from late March through June, about the same time the elderberry produces flowers. The adult stage is short-lived (USFWS 1999). The CNDDB reports only a single occurrence of VELB in the Bruceville or Florin quads along the Cosumnes River corridor. Where large elderberry bushes occur in the Project area, VELB has a moderate potential for occurrence. This species is listed as threatened under the FESA and is an SSHCP covered species.

Vernal pool tadpole shrimp. The vernal pool tadpole shrimp (VPTS) is currently distributed across the Central Valley of California and in the San Francisco Bay area. The species' distribution has been greatly reduced over time as a result of widespread destruction and conversion of vernal pool habitat. VPTS are uncommon even where vernal pool habitats occur (USFWS 2005). VPTS are documented by the CNDDB to occur in the Stone Lakes NWR Wetland Preserve Unit to the west of the Project area, and this species has a moderate potential for occurrence in the Project area where the alignment crosses higher-value, relatively intact vernal pool features. VPTS is listed as endangered under the FESA, and is an SSHCP covered species.

Amphibians and Reptiles

Review of relevant literature and presence of suitable habitat in the Project area suggests that two sensitive reptile species and two sensitive amphibian species may occur in the Project area. These are described below.

Western pond turtle. The western pond turtle is uncommon to common in suitable aquatic habitat throughout California, which includes permanent to semi-permanent waters of slow moving rivers and streams, ponds, and lakes. Pond turtles require basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks. The CNDDB reports five

occurrences of this species in the Florin and Bruceville quads, with most from Stone Lakes NWR. A ditch occurrence is also reported north of Franklin near the Franklin Boulevard intersection with the Western Pacific Railroad alignment. This species is listed as SSC by the CDFW, and is an SSHCP-covered species. Pond turtles have a moderate potential for occurrence in the Project area at locations where permanent slow-moving waters occur.

California tiger salamander. California tiger salamander (CTS) habitat includes vernal pools, seasonal and perennial ponds, and surrounding upland areas in grassland, oak savannah, edges of mixed hardwood-conifer woodland and low elevation coniferous forest plant communities from sea level to about 1,067 meters. Adult CTS emerge from their upland refugia at night to feed and migrate to breeding ponds when fall or winter rains start. Eggs are layed in ephemeral ponds (like vernal pools), where juveniles rear and metamorphose before ponds dry up in the spring. Juveniles move out and away from breeding ponds into the surrounding uplands, where they live continuously for several years. Upon reaching sexual maturity, most individuals return to their natal (birth) pond to breed, while others disperse to other ponds. A CTS breeding site is defined as a location where CTS are able to successfully breed in years of normal rainfall and persist during the dry months of the year. Therefore, suitable habitat includes both suitable wetlands and surrounding upland habitats. The CNDDB does not report this species in either the Florin or Bruceville quads, and only reports a single, very dated (1914) occurrence in the Galt quad. Nevertheless, suitable CTS habitat exists in the vast vernal pool complex habitats associated with the Stone Lakes NWR west of the Project area. This species is listed as threatened under both the FESA and CESA, and is an SSHCP covered species. CTS has a low potential for occurrence in the Project area.

Western spadefoot (toad). The western spadefoot associates with ephemeral pools in grasslands and valley-foothill hardwood woodlands throughout the Central Valley and adjacent Sierra foothills. Adults remain in underground burrows during most of the year, but the first rains of fall usually initiate surface movements. Breeding activities in pools normally conclude by the end of March. Tadpoles transform during late spring and juveniles disperse after spending a few hours or days near the breeding pond margins. The CNDDB does not report this species in either the Florin or Bruceville quads, but reports two occurrences near Mather AFB. Similar to CTS, suitable spadefoot habitat exists in the vernal pool complex habitats associated with the Stone Lakes NWR west of the Project area. Spadefoot is a CDFW SSC and an SSHCP covered species, and has a low potential for occurrence in the Project area.

Giant garter snake. The giant garter snake (GGS) is usually found in marshes, sloughs, ponds, small lakes, low gradient streams, irrigation and drainage canals, and rice fields. Upland habitat is used for cover during the snake's active season and for refuge from flood waters during its dormant season. The geographic distribution of GGS is generally limited to wetlands within the Central Valley floor. The CNDDB reports 10 occurrences of GGS within the Florin and Bruceville quads, many of which are somewhat dated. Locations of occurrence include Elk Grove Creek, Laguna Creek, Beach Lake in Stone Lakes NWR, and a 1976 detection within a ditch near the intersection of Franklin Boulevard and Hood-Franklin Road. This last detection suggests that GGS have a moderate to high likelihood of occurring in the Project area where

suitable habitat exists. GGS is list threatened under both the CESA and FESA, and is an SSHCP covered species.

Birds

Review of relevant literature and presence of suitable habitat in the Project area suggests that six sensitive bird species may occur in the Project area. These are described below.

Tricolored blackbird. Tricolored blackbirds are highly colonial and typically establish nests in and near freshwater marshes dominated by cattails and bulrushes, and in grain fields in the San Joaquin Valley, especially fields that have relatively large amounts of invasive mustards or mallows. Nesting occurs typically from April through July. The CNDDB reports 10 occurrences from the Franklin and Bruceville quads, with a number of these very near the defined Project area. However, most occurrences are fairly dated, likely reflecting the accelerated decline of this species since the mid-1980s. On 10 December 2015, the California Fish and Game Commission designated the tricolored blackbird as a candidate for protection under CESA. The species is protected under CESA while the Commission considers full listing. The USFWS is also evaluating a petition to list the species under the FESA; the review period began on 17 November 2015, although, unlike the CESA, additional protections will not go into effect until a decision on listing is announced (the "12-month review period" sometimes takes longer than a year). Tricolored blackbird is an SSHCP covered species. This species has a moderate-potential for occurrence in the Project area where freshwater marsh habitat exists or where large stands of Himalayan blackberry provide potential nesting habitat.

Western burrowing owl. Burrowing owls are ground-dwelling residential or migratory species that exhibit high site fidelity to the ground squirrel (or other mammal) burrows they typically adopt and occupy. Burrowing owls are typically found in short-grass grasslands, open scrub habitats, and a variety of open, human-altered environments, such as the edges of canals or roadways, ditches, and drains along agricultural fields. The CNDDB reports 16 occurrences within the Florin and Bruceville quads, with several of these from the Regional San Bufferlands, Stone Lakes NWR, and near the Cosumnes River corridor south of the Project area. This species in considered a SSC species by CDFW, and is an SSHCP covered species. Burrowing owl is unlikely to occupy burrows within the defined Project area, but has a moderate potential to occupy nearby grasslands.

Swainson's hawk. Swainson's hawks are migratory, arriving in the Central Valley in late-February to early-March, with nesting typically occurring in April through June. By September, most Swainson's hawk have left California for South America, where they overwinter. Swainson's hawks require large, open grasslands with abundant prey in association with suitable nest trees. Suitable foraging areas include native grasslands or lightly grazed pastures, alfalfa and other hay crops, and certain grain and row croplands. Swainson's hawks often nest in proximity to riparian systems as well as using lone trees or groves of trees in agricultural fields. CNDDB reports 80 occurrences of Swainson's hawk from the Florin and Bruceville quads, many of which are near the proposed Project area. Swainson's hawk is listed under the CESA as threatened and is an SSHCP covered species. This species has a high potential to nest in or relatively near the Project area where suitable nest trees occur.

White-tailed kite. White-tailed kite is a year-round resident of California typically found in savanna, open woodlands, marshes, desert grassland, partially cleared lands, and cultivated fields. They hunt over lightly grazed or ungrazed fields where there may be larger prey populations than in more heavily grazed areas. This species nests in the upper portion of trees that may be 10–160 feet tall. These can be open-country trees growing in isolation, or at the edge of or within a forest. The nesting season typically ranges from February through October. The CNDDB reports only a single occurrence of this species in the Florin and Bruceville quads: within the Regional San Bufferlands property, but it is likely that nesting is more widespread than reported. White-tailed kite is an SSHCP covered species, and is considered SSC and fully-protected by the CDFW. It has a moderate potential to nest in or near the Project area.

Loggerhead shrike. Loggerhead shrike is a common resident and winter visitor in lowlands and foothills throughout California. It prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. The highest densities occur in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and Joshua tree habitats. Loggerhead shrikes typically avoid completely treeless and shrubless areas and urbanized and densely wooded areas. In California, loggerhead shrikes nest from March into May, with young fledging in July or August. Nests are built on stable branches in shrubs or trees, usually well-concealed. The CNDDB does not report this species from the query area, but it is known to occur at the Bufferlands. Loggerhead shrike is an SSHCP Covered Species and is listed as SSC by the CDFW. It has a moderate potential to nest in Project area trees and shrubs where they abut open grasslands.

Song sparrow (Modesto pop.). Formerly referred to as the Modesto song sparrow and afforded subspecies status (*M. m. mailliardi*), the Modesto Population of song sparrow is a year-round resident of California that is distributed only in the north-central portion of the Central Valley, with highest densities known from the Butte Sink area of the Sacramento Valley and in the Sacramento-San Joaquin River Delta. Nesting occurs from March to June (peaking in May) in freshwater marshes and riparian thickets. CNDDB reports 10 occurrences of this species within the Florin and Bruceville quads, most of which are from the Sacramento River and Snodgrass Slough areas. This species is listed as SSC by the CDFW. It has a moderate potential for occurrence in the Project area within freshwater marsh and riparian habitats.

Fish

Several sensitive fish species that may be impacted by the proposed Project occur in the Sacramento River and Delta regions. These are described below.

Longfin Ssmelt. The Longfin Smelt (*Spirinchus thaleichthys*) is a small (to about 140 mm Standard Length [SL]), euryhaline fish with a life cycle of approximately two years. Anadromy is often listed for the species, but some populations are known to complete their entire life-cycle in freshwater (USFWS 2012). Habitat includes a wide range of temperature and salinity conditions in coastal waters near shore, bays, estuaries, and rivers. In estuaries Longfin Smelt are usually found in the middle or bottom of the water column (Moyle 2002). Juvenile and adult Longfin Smelt have been found throughout the year in salinities ranging from pure freshwater to

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pure seawater, although once past the juvenile stage, they are typically collected in waters with salinities ranging from 14 to 28 (parts per thousand) ppt.

Longfin Smelt are thought to be restricted by high water temperatures, with temperatures greater than 22 °C causing a seaward or deeper water movement during the summer months, when water temperatures in the upper San Francisco Estuary and Delta are higher. Within the San Francisco Estuary and Delta, adult Longfin Smelt occupy water temperatures from 16 to 20 °C, with spawning occurring in water with temperatures from 5.6 to 14.5 °C. Longfin smelt generally spawn in freshwater and then move downstream to brackish water to rear (USFWS 2012).

Longfin smelt are generally semelparous, although it is possible that some survive to spawn more than once. Longfin smelt generally spawn after their second year. It has been suggested that some fish spawn after one year and others may spawn in their third year, but the existence and frequency of these alternate life-histories is not well documented. Populations occur along the Pacific Coast of North America north to Prince William Sound, Alaska. The San Francisco Estuary represents the southernmost population and the largest spawning population in California. Longfin smelt are widespread within the San Francisco Estuary and historically they were found seasonally in all of its major open water habitats. Because of their former broad distribution and abundance, Longfin Smelt are believed to be an important integrator of the estuarine food web and a valuable indicator of ecosystem function (Rosenfield 2012).

A petition to list the San Francisco Estuary population as a threatened species under the Endangered Species Act was denied in 1994 because the degree of reproductive and genetic isolation of the population was not deemed biologically significant. The species has been State listed as threatened since 2009. In 2012 the USFWS published a 12-Month finding on a petition to list the San Francisco Estuary population of Longfin Smelt as endangered or threatened, wherein they found the range-wide listing of Longfin Smelt was not warranted at the time, but listing the Bay-Delta distinct population segment of the species was warranted. Listing was precluded by higher priority actions to amend the Lists of Endangered and Threatened Wildlife and Plants and the San Francisco Estuary population was added to the candidate species list with plans for a proposed rule in the future as priorities allow (USFWS 2012; CDFW 2016).~~5~~

Delta smelt~~7~~. The Delta Smelt (*Hypomesus transpacificus*) is a small (to about 120 mm SL, but generally smaller), euryhaline, short-lived (2 years or less) fish, endemic to the upper San Francisco Estuary and Delta. Delta Smelt are usually listed as an estuary-dependent species with spawning migration occurring in the winter from the low salinity (1-6 ppt) region of the estuary to fresher waters upstream. However, some Delta Smelt are thought to remain year-round in freshwater, suggesting upstream limits of their range may be determined more by tidal action to assist in transportation to favorable habitats.

Delta Smelt are commonly found at temperatures of 10 to 22 °C and are mostly found in water with salinity ranging from 0 to 7 ppt, although they can tolerate higher. Juvenile and sub-adult Delta Smelt are strongly associated with turbid water in spring and summer. Larval Delta Smelt have been shown to feed more efficiently with suspended materials in the water column. Delta Smelt feed mainly on small crustacean zooplankton, particularly copepods.

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Commented [A3]: California Department of Fish and Wildlife. 2016. State and Federally Listed Endangered and threatened animals of California, July 2016. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109405&inline

Moyle, P.B. 2002. Inland fishes of California. University of California Press.

Rosenfield, J.A. 2010. Life history conceptual model and sub-models for longfin smelt, San Francisco Estuary population. Report submitted to the Sacramento-San Joaquin Delta Regional Ecosystem Restoration Implementation Plan.

Spawning largely occurs from late January through June. Spawning habitat and behavior in the wild remains unknown, although they are thought to spawn on shallow sandy beaches. Females may produce multiple clutches of eggs in a season (Moyle et al. 2016). Once widely distributed in the upper estuary and Delta, as Delta Smelt abundance declined and habitat conditions changed, their distribution became more restricted. The rapid decline of the Delta Smelt population led to its listing as federally threatened ~~under CESA and FESA~~ in 1993 and ~~listed~~ as state endangered in 2010. Since listing, the population has continued to decline with concerns of an increased threat of extinction (USFWS 1993; CDFW 2016; Moyle et al. 2016).

~~and~~ **Sacramento ~~s~~Splittail**. The Sacramento Splittail (*Pogonichthys macrolepidotus*) is a large (40 + cm) cyprinid fish endemic to the Central Valley of California. Splittail may live for 8–10 years but do not typically live longer than 5 years with the largest and oldest fish being female (Moyle et al. 2004). Splittail live in the slightly brackish and freshwater portions of the upper San Francisco Estuary and western Sacramento–San Joaquin Delta (Moyle et al. 2004). Splittail usually reach sexual maturity by the end of their second year. In typical years, adults begin a gradual upstream migration towards spawning areas sometime between late November and late January, but substantial migration can also occur in spring.

Upstream movement appears to coincide with flow pulses that inundate floodplains and riparian areas in which Splittail forage and spawn. Peak spawning occurs from March through April, although records of spawning exist for late January to early July. Spawning success is highly variable among years but is correlated with freshwater outflow and the availability of shallow-water habitat with submerged vegetation (Sommer et al. 2007). In early surveys Splittail were found as far up the Sacramento River as Redding, up the Feather River as high as Oroville, and in the American River to Folsom. Archaeological evidence from the San Joaquin River basin indicates that splittail were abundant in two large lakes, where they were harvested by native people. The historic abundance of Splittail is not known, but they were abundant enough to be harvested by native peoples and commercial fisheries in the 19th and early 20th centuries (Sommer et al. 2007).

Splittail is the only ~~extantexist~~remaining member of its genus following the extinction of the Clear Lake Splittail (Pogonichthys ciscoides) in the early 1970's~~.~~. Two genetically distinct populations were found to exist within the region; one largely comprised of Splittail collected from the Petaluma and Napa Rivers and the second comprised of Splittail collected from tributaries in California's Central Valley (Cosumnes, Sacramento, and San Joaquin Rivers) (Baerwald et al. 2007). In 1989 California listed the Splittail as a species of special concern. Splittail was listed as threatened under FESA in 1999 (USFWS 1999). In 2003 the USFWS removed Splittail from the list of threatened species (USFWS 2003). This represented the first extant fish to be removed from the federal list of threatened and endangered species (Sommer et al. 2007). In 2010 the USFWS published a 12-month finding that protection for Splittail under FESA was not warranted (USFWS 2010). Splittail remain a species of special concern in California (Moyle et al. 2015). ~~are residents of the Bay-Delta and the lower portions of the Sacramento River system. Longfin smelt is a candidate for listing under the FESA and is state listed as threatened. Delta smelt is listed as federal threatened and state endangered. Sacramento~~

Commented [A4]: California Department of Fish and Wildlife. 2016. State and Federally Listed Endangered and threatened animals of California, July 2016. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109405&inline

Moyle, P.B., Brown, L.R., Durand, J.R. and J.A. Hobbs. 2016. Delta Smelt: Life History and Decline of a Once Abundant Species in the San Francisco Estuary. San Francisco Estuary. San Francisco Estuary and Watershed Science, 14(2).

U.S. Fish and Wildlife Service. 1993. Endangered and threatened wildlife and plants; Determination of threatened status for the Delta Smelt; Final rule. Federal Register 58(42):12854-12864.

Commented [A5]: Baerwald, M., Bien, V., Feyrer, F. and B. May. 2007. Genetic analysis reveals two distinct Sacramento splittail (Pogonichthys macrolepidotus) populations. Conservation Genetics 8(1):159-167.

Moyle, P. B., R. D. Baxter, T. Sommer, T. C. Foin, and S. A. Matern. 2004. Biology and population dynamics of Sacramento splittail (Pogonichthys macrolepidotus) in the San Francisco Estuary: a review. San Francisco Estuary and Watershed Science 2(2):article 4.

Moyle, P.B., R. M. Quiñones, J. V. Katz and J. Weaver. 2015. Fish species of special concern in California, third edition. California Department of Fish and Wildlife. https://www.wildlife.ca.gov/Conservation/SSC/Fishes

Sommer, T.R., Baxter, R.D. and F. Feyrer. 2007. Splittail "delisting": a review of recent population trends and restoration activities. American Fisheries Society Symposium 53:25-38.

U.S. Fish and Wildlife Service. 1999. Endangered and threatened wildlife and plants; Determination of threatened status for the Sacramento splittail; Final rule. Federal Register 64(25):5963-5981.

U.S. Fish and Wildlife Service. 2003. Endangered and threatened wildlife and plants; notice of remanded determination of threatened status for the Sacramento splittail (Pogonichthys macrolepidotus). Federal Register 68(183):5140–5166.

U.S. Fish and Wildlife Service. 2010. Endangered and threatened wildlife and plants; 12-month finding on a petition to list the Sacramento splittail as endangered or threatened. Federal Register 75(194):62070–62095.

~~splittail is a California species of special concern. Delta smelt critical habitat is designated in the Delta, the lower Sacramento River to I Street Bridge, and the lower San Joaquin River near Vernalis (USFWS 1994).~~

Steelhead, California Central Valley (CCV) Distinct Population Segment (DPS) (federal threatened) ~~**and salmon**~~ are anadromous, spending much of their life-cycle as adults in the ocean, and returning to spawn in their natal freshwater streams and rivers. Over-summering (holding), spawning, incubation, and rearing of CCV steelhead ~~**steelhead, California Central Valley (CCV) Distinct Population Segment (DPS)** (federal threatened) and **Chinook salmon, Central Valley spring-run (SRC) Evolutionarily Significant Unit (ESU)** (federal and state threatened)~~ occurs mainly in the colder headwaters of tributaries to the Sacramento River. Adults and smolts primarily use the Sacramento River mainstem as movement habitat to and from tributary streams. ~~For SRC, self-sustaining populations occur in Deer, Mill, and Butte creeks.~~ CCV steelhead inhabit and spawn in more Sacramento River tributaries than other anadromous species in the watershed~~do SRC~~. Juvenile CCV steelhead ~~and SRC migrate to the ocean after~~ hatch~~hatching~~ and ~~rearing~~rear in natal streams, for a period typically less than 2 years, and migrate to the ocean, where they rear as adults for one to three years~~for some time in natal streams (generally less than 1 or 2 years)~~. Critical habitat for CCV steelhead is designated in the Delta, the Sacramento River mainstem below Keswick Dam, many Sacramento River and San Joaquin River tributaries, and elsewhere (NMFS 2005). ~~Critical habitat for SRC is designated on the Sacramento River mainstem and many of its tributaries, and in the Delta (NMFS 2005).~~

Chinook salmon, Central Valley spring-run (SRC) Evolutionarily Significant Unit (ESU) (federal and state threatened), as with CCV steelhead, are anadromous, rearing as adults in the ocean, and returning to spawn in their natal freshwater streams and rivers. Adults return to the Sacramento River from March through September, and spawning typically occurs from late-August through October (Yoshiyama et al. 1998). Holding, spawning, incubation, and rearing occurs mainly in the cooler headwaters of tributaries to the Sacramento River. Fry emergence occurs between November and March and, after less than two years following hatching and rearing in natal streams, juvenile SRC migrate to the ocean. Critical habitat for SRC is designated on the Sacramento River mainstem and many of its tributaries, and in the Delta (NMFS 2005).

Commented [A6]: Yoshiyama, R.M., F.W. Fisher, and P.B. Moyle. 1998. Historical abundance and decline of Chinook salmon in the Central Valley Region of California. North American Journal of Fisheries Management 18:487-521.

Chinook salmon, Sacramento River ESU winter-run (federal and state endangered), unlike Central Valley steelhead and Central Valley spring-run Chinook, spawn in the mainstem of the Sacramento River from Keswick Dam downstream to approximately Tehama. Adults return to the Sacramento River from November through May or June, with spawning occurring from late-April through mid-August, and peak spawning in May and June. Fry emergence occurs from mid-June through mid-October. Fry typically emerge beginning in July, with juveniles dispersing to rearing habitats shortly after emergence. Juveniles rear from July through March, and emigrate to the ocean peaking in March and April. Winter-run Chinook salmon are particularly sensitive to excessive water temperatures. Recommended temperatures by life-stage are: migrating adults (<65 F), holding adults (<60 F), spawning (53 to 57.5 F), egg incubation (<55 F), juvenile rearing (53 to 57.5 F), and smoltification (<64 F) (Reclamation 2008). Critical

habitat for WRC is designated on the Sacramento River mainstem below Keswick Dam, and in the Bay-Delta (NMFS 1993).

Green sturgeon, southern DPS (federal threatened, SSC) are also anadromous. Adults move up the Sacramento River in March and April, spawning in the mainstem between Hamilton City and Keswick Dam between April and June. Eggs adhere to and between rocky substrates. Hatchlings rear in the same area as spawned for 1 to 2 months. Incubating and rearing green sturgeon are sensitive to water temperature, with 63-64 F the upper limit of optimal temperature for embryos, and 66-75 F optimal for rearing juveniles. Incubating eggs died when water temperature reached 73-79 F (Reclamation 2008). Juveniles rear from 1 to 4 years in freshwater and estuarine habitats, with ocean residence taken up thereafter (Reclamation 2008). Critical habitat for green sturgeon is designated within the Bay-Delta, the Sacramento River mainstem below Keswick Dam, the lower Yuba and Feather rivers, and elsewhere (NMFS 2009). .

Table 3.5-1: Potential for Occurrence of Sensitive Natural Community Types and Sensitive Species in Project Area and Vicinity

Resource/ Common Name	Scientific Name	Status Fed/CA/CNPS	General Habitat Description	Potential for Occurrence in Project /Action Area
Communities				
Coastal and valley freshwater marsh	N/A	N/A	Permanently to regularly flooded wetland areas dominated by herbaceous emergent species like cattails and bulrushes	Occurs. Patchily distributed in association with drainages that cross alignment. Mapped in wetland delineation report.
Elderberry savanna	N/A	N/A	Open to moderately-closed stands of elderberry (*Sambucus* spp.) on floodplains, generally reflecting past disturbance and lack of flood flows.	Does not Occur. Community not present along alignment. May be present in association with natural drainage corridors to south and west.
Great Valley cottonwood riparian forest	N/A	N/A	Community dominated by medium to tall (to 100 feet), broad-leaved winter-deciduous trees including Fremont cottonwood and valley oak.	Does not Occur. Community not present along alignment. May be present in association with natural drainage corridors to south and west.
Great Valley mixed riparian forest	N/A	N/A	Community composed of medium to tall, broad-leaved winter-deciduous trees including Fremont cottonwood, California sycamore, California black walnut, Goodding's willow, red willow, yellow willow, and box elder.	Occurs. Remnant stands patchily located in association with drainages that cross alignment. Mapped in wetland delineation report.
Great Valley valley oak riparian forest	N/A	N/A	Historically occurred extensively along the highest parts of floodplains. Dominated by valley oak, Oregon ash, and California sycamore.	Does not Occur. Community not present along alignment. May be present in association with natural drainage corridors to south and west.
Northern hardpan vernal pool	N/A	N/A	Hummocky complexes that form on old alluvial fans on acidic, iron-silica hardpans. Usually in grassland matrices.	Occurs. Widespread and abundant near northern portion of alignment in Stone Lakes NWR lands. Mapped in wetland delineation report.
Valley oak woodland	N/A	N/A	Valley oak woodlands vary from open savannahs to closed canopy forests. Dense stands occur along natural drainages in deep soils.	Does not Occur. Community not present along alignment. May be present in association with natural drainage corridors to south and west.
Plants				
Large-flowered fiddleneck	*Amsinckia grandiflora*	FE/CE/1B.1	Cismontane woodland and valley and foothill grasslands at 275-550 meter elevation.	Unlikely. Known from fewer than 5 natural occurrences at moderate elevations of east-facing slopes of the coast range in the northern San Joaquin Valley. Not reported from the project area vicinity.

Resource/ Common Name	Scientific Name	Status Fed/CA/CNPS	General Habitat Description	Potential for Occurrence in Project /Action Area
Ferris' milk-vetch	*Astragalus tener* var. *ferrisiae*	—/—/1B.1	Vernally mesic meadows and seeps, and sub-alkaline flats in valley and foothill grasslands. 2-75 meter elevation.	Unlikely. Suitable habitat not present in Project area. CNDDB reports a single, dated (1954) occurrence from 10-quad query area (in the Yolo Bypass). Not reported from the Project area vicinity.
watershield	*Brasenia schreberi*	—/—/2B.3	Freshwater marshes and swamps. 30-2,200 meter elevation.	Unlikely. Out of range. Single dated record in CNDDB from personal collection. Not field verified.
bristly sedge	*Carex comosa*	—/—/2B.1	Marshes and swamps. 0-650 meter elevation.	May Occur. Suitable habitat exists in Project area. CNDDB reports several occurrences near Stone Lakes.
Bolander's water hemlock	*Cicuta maculata* var. *bolanderi*	—/—/2B.1	Coastal freshwater or brackish water marshes and swamps. 0-200 meter elevation.	Unlikely. Out of range. Single dated record in CNDDB from personal collection. Not field verified.
Peruvian dodder	*Cuscuta obtusiflora* var. *glandulosa*	—/—/2B.2	Freshwater marshes and swamps. 15-280 meter elevation. Parasitic plant.	Unlikely. Out of range. Single dated record in CNDDB from personal collection. Not field verified.
dwarf downingia	*Downingia pusilla*	—/—/2B.2	Vernal pools in valley and foothill grasslands. 1-445 meter elevation.	May Occur. Suitable habitat exists in Project area. SSHCP-covered species
Boggs Lake hedge-hyssop	*Gratiola heterosepala*	—/CE/1B.2	Vernal pools, freshwater marshes and swamps. 10-2,400 meter elevation.	May Occur. Suitable habitat exists in Project area. SSHCP-covered species.
woolly rose-mallow	*Hibiscus lasiocarpos* var. *occidentalis*	—/—/1B.2	Freshwater marshes and swamps. Often in riprap on sides of levees. 30-2,200 meter elevation.	May Occur. Suitable habitat exists in Project area.
northern California black walnut	*Juglans hindsii*	—/—/1B.1	Riparian forest and riparian woodland. 0-440 meter elevation.	May Occur. Suitable habitat exists in Project area.
Ahart's dwarf rush	*Juncus leiospermus* var. *ahartii*	—/—/1B.2	Valley and foothill grasslands. 30-230 meter elevation.	May Occur. Suitable habitat exists in Project area. SSHCP-covered species
Delta tule pea	*Lathyrus jepsonii* var. *jepsonii*	—/—/1B.2	Freshwater and brackish water marshes/swamps. 0-5 meter elevation.	May Occur. Suitable habitat exists in Project area.
legenere	*Legenere limosa*	—/—/1B.1	Vernal pools. 1-880m elev.	May Occur. Suitable habitat exists in Project area. SSHCP-covered species
Heckard's pepper-grass	*Lepidium latipes* var. *heckardii*	—/—/1B.2	Alkaline flats in valley and foothill grasslands. 2-200 meter elevation.	May Occur. Suitable habitat exists in Project area.
Mason's lilaeopsis	*Lilaeopsis masonii*	—/CR/1B.1	Marshes and swamps (brackish or freshwater), and riparian scrub. 0-10 meter elevation. Typically in low elevation portions of Delta.	Unlikely. Suitable habitat not present in Project area.

Resource/ Common Name	Scientific Name	Status Fed/CA/CNPS	General Habitat Description	Potential for Occurrence in Project /Action Area
Delta mudwort	*Limosella australis*	—/—/2B.1	Mud banks of marshes, swamps, and riparian scrub. 0-3 meter elevation. Typically in low elevation portions of Delta.	Unlikely. Suitable habitat not present in Project area.
slender Orcutt grass	*Orcuttia tenuis*	FT/SE/1B.1	Vernal pools; particularly gravelly-based. 35-760 meter elevation.	Unlikely. Suitable habitat not present in Project area. Range is primarily north of the Project area. SSHCP-covered species
Sacramento Orcutt grass	*Orcuttia viscida*	FE/SE/1B.1	Vernal pools. 30-100 meter elevation.	Unlikely. Out of range. Single dated record in CNDDB from personal collection. Not field verified. SSHCP-covered species
Sanford's arrowhead	*Sagittaria sanfordii*	—/—/1B.2	Shallow freshwater marshes and swamps. 0-650 meter elevation.	May Occur. Suitable habitat exists in Project area. SSHCP-covered species
marsh skullcap	*Scutellaria galericulata*	—/—/2B.2	Lower montane coniferous forest, meadows and seeps (mesic), marshes and swamps. 0-2,100 meter elevation.	May Occur. Suitable habitat exists in Project area.
side-flowering skullcap	*Scutellaria lateriflora*	—/—/2B.2	Meadows and seeps (mesic), marshes and swamps from 0-500 meter elevation.	May Occur. Suitable habitat exists in project area.
Suisun Marsh aster	*Symphyotrichum lentum*	—/—/1B.2	Brackish and freshwater marshes and swamps. 0-3 meter elevation.	Unlikely. Out of range.
saline clover	*Trifolium hydrophilum*	—/—/1B.2	Marshes and swamps, valley and foothill grassland (mesic, alkaline), vernal pools. 0-300 meter elevation.	May Occur. Suitable habitat exists in Project area.
Invertebrates				
vernal pool fairy shrimp	*Branchinecta lynchi*	FT/—	All life stages associated with a variety of artificial and natural vernal pools and ephemeral swales in grassland communities.	May Occur. Suitable habitat exists in Project area. SSHCP-covered species
valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	FT/—	All life stages associated with elderberry trees (*Sambucus* spp.) in the Central Valley. Found in riparian communities along rivers and streams.	May Occur. May occur where host plants are located within alignment corridor. SSHCP-covered species
vernal pool tadpole shrimp	*Lepidurus packardi*	FE/—	All life stages associated with a variety of artificial and natural vernal pools in grassland communities.	May Occur. Suitable habitat exists in Project area. SSHCP-covered species
Fish				
Sacramento perch	*Archoplites interruptus*	—/SSC	Historically found in sloughs, slow-moving rivers, and lakes of the Central Valley. Extant relict populations exist in Clear Lake and near Alameda Creek in gravel ponds.	Unlikely. Out of range, and suitable habitat not present in Project area. Not known from any of the Stone Lakes NWR lakes/ponds.

Resource/ Common Name	Scientific Name	Status Fed/CA/CNPS	General Habitat Description	Potential for Occurrence in Project /Action Area
green sturgeon, southern Distinct Population Segment (DPS)	*Acipenser medirostris*	FT/SSC	Anadromous. Spawns in Sacramento River mainstem below Keswick Dam.	Occurs. In Bay, Delta, and Sacramento River mainstem.
Southern DPS green sturgeon critical habitat				Designated in the San Francisco Bay-Delta, the Sacramento River mainstem below Keswick Dam, several Sacramento River tributaries, and elsewhere.
Delta smelt	*Hypomesus transpacificus*	FT/SE	Endemic to the upper delta region of the Sacramento-San Joaquin River system.	Occurs. In Bay, Delta, and lower Sacramento River system.
Delta smelt critical habitat				Designated in the Delta, the lower Sacramento River mainstem below I Street Bridge, and elsewhere.
steelhead: California Central Valley DPS	*Oncorhynchus mykiss*	FT/—	Anadromous. Spawns in Sacramento River and some San Joaquin River tributaries	Occurs. In Bay, Delta, and Sacramento River tributaries.
CCV steelhead critical habitat				Designated in the Delta, the Sacramento River mainstem below Keswick Dam, many Sacramento River tributaries, and elsewhere.
Chinook salmon: Central Valley spring-run Evolutionarily Significant Unit (ESU)	*Oncorhynchus tshawytscha*	FT/ST	Anadromous. Spawns in Sacramento River tributaries	Occurs. In Bay, Delta, and Sacramento River tributaries.
CVSRC ESU critical habitat				Designated in the Delta, the Sacramento River mainstem below Keswick Dam, and many Sacramento River tributaries.
Chinook salmon: Sacramento River winter-run ESU	*Oncorhynchus tshawytscha*	FE/SE	Anadromous. Spawns in the Sacramento River mainstem below Keswick Dam.	Occurs. In Bay, Delta, and Sacramento River mainstem.
WRC SR ESU critical habitat				Designated in the San Francisco Bay-Delta and the Sacramento River mainstem below Keswick Dam, and elsewhere.
Sacramento splittail	*Pogonichthys macrolepidotus*	—/SSC	Found in slow-moving river sections, dead-end sloughs, and marshes of the Delta, Suisun Bay, and associated marshes. Requires flooded vegetation for spawning and juvenile foraging.	Occurs. In Delta, and lower Sacramento River system.
longfin smelt	*Spirinchus thaleichthys*	FC/ST	Typically found in open waters of estuaries (e.g., Bay-Delta) in salinities of 15-30 ppt. Ranges upstream in the Sacramento River mainstem to near Sacramento International Airport.	Occurs. In Bay, Delta, and lower Sacramento River system.

Resource/ Common Name	Scientific Name	Status Fed/CA/CNPS	General Habitat Description	Potential for Occurrence in Project /Action Area
Amphibians and Reptiles				
western pond turtle	*Actinemys marmorata*	—/SSC	Highly aquatic and associated with riparian habitat including streams, rivers, sloughs, ponds, and artificial water bodies with deep pools, basking sites, and aquatic vegetation.	May Occur. May occur in larger drainage ditches with consistent ponded water and aquatic vegetation. SSHCP-covered species
California tiger salamander	*Ambystoma californiense*	FT/ST	Require mammal burrows or crevices in winter, and nearby seasonal water sources (i.e., vernal pools) for reproduction.	May Occur. Suitable habitat exists in Project area. SSHCP-covered species
foothill yellow-legged frog	*Rana boylii*	—/SSC	Partly-shaded shallow streams with cobble substrate and at least 15 weeks of consistent (contiguous) water to allow metamorphosis.	Unlikely. Suitable habitat not present in Project area. CNDDB reports a single occurrence in 1958 5 mi north of Lodi in association with the Mokelumne River corridor.
western spadefoot (toad)	*Spea hammondii*	—/SSC	Require seasonal water sources (e.g., vernal pools) in grasslands and valley and foothill hardwood woodlands.	May Occur. Suitable habitat exists in Project area. SSHCP-covered species
giant garter snake	*Thamnophis gigas*	FT/ST	Endemic to the Central Valley. Highly aquatic and occurs in drainages with vegetated pools and banks. May also be found in artificial situations such as flooded rice fields. Use mammal burrows or crevices for hibernation and cover.	May Occur. Suitable habitat exists in Project area. SSHCP-covered species
Birds				
tricolored blackbird	*Agelaius tricolor*	—/SC	Colonial species found throughout the Central Valley in wetland areas with dense vegetation such as cattails, tules, and bulrushes, as well as Himalayan blackberry, milk thistle, and stinging nettle. Forage on insects in grassland and agricultural fields.	May Occur. Suitable habitat exists in Project area. SSHCP-covered species
golden eagle	*Aquila chrysaetos*	—/CFP	Nest in cliff-walled canyons and large trees near rolling foothills and mountain areas.	Unlikely. Nesting habitat not present in Project area. CNDDB reports foraging observation only in 1991. Winter visitor to Bufferlands, Stone Lakes NWR, and Cosumnes Preserve lands.
western burrowing owl	*Athene cunicularia*	—/SSC	Require burrows in/near open grassland foraging areas.	May Occur. Suitable habitat exists in Project area. SSHCP-covered species

Resource/ Common Name	Scientific Name	Status Fed/CA/CNPS	General Habitat Description	Potential for Occurrence in Project /Action Area
Swainson's hawk	*Buteo swainsoni*	—/ST	Nests primarily in riparian or isolated trees adjacent to pasture, grassland, and agricultural areas.	May Occur. Suitable habitat exists in Project area. SSHCP-covered species
western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FT/SE	Nests in dense riparian forests along broad, flood-bottoms of larger rivers.	Unlikely. Suitable nesting habitat not present in Project area. CNDDB reports 2009 occurrence near Snodgrass Slough.
white-tailed kite	*Elanus leucurus*	CFP	Dense-topped trees next to meadows, marshes, or grasslands.	May Occur. Suitable habitat exists in Project area. SSHCP-covered species
loggerhead shrike	*Lanius ludovicianus*	—/SSC	Nests mainly in shrublands or open woodlands near open grassland foraging areas.	Regional San notes this species is present in Project area. SSHCP-covered species
song sparrow (Modesto pop)	*Melospiza melodia*	—/SSC	Nests in riparian scrub-shrub and wetland habitat of the north-central portion of the Central Valley. Most abundant in wetlands of the Delta and the Butte Sink area.	May Occur. Suitable habitat exists in Project area.
purple martin	*Progne subis*	—/SSC	Cavity nester in low-elevation coniferous forests. Nests in weep holes under bridges in Sacramento.	Unlikely. Suitable nesting habitat not present in Project area. Not reported by the CNDDB within the Florin or Bruceville quads. CNDDB reports 9 occurrences, all of which are associated with roadway bridges.
bank swallow	*Riparia riparia*	—/ST	Colonial nester. Requires vertical cliffs and stream banks of fine-textured sands near water.	Unlikely. Nesting habitat not present in Project area. CNDDB reports two occurrences in the American River Parkway.
least Bell's vireo	*Vireo bellii pusillus*	FE/SE	Migratory. Summer resident of low riparian scrub in southern California.	Unlikely. Out of range. CNDDB reports two occurrences near the Yolo Bypass. Also recorded at Bufferlands and Cosumnes River Preserve.
yellow-headed blackbird	*Xanthocephalus xanthocephalus*	—/SSC	Nests in freshwater emergent wetlands with dense vegetation and deep water, often along borders of lakes or ponds. In California, resident of San Joaquin Valley and Colorado River Valley areas.	Unlikely. CNDDB reports single occurrence from 1899 in Florin and Bruceville quads (near Freeport). No other occurrences reported by the CNDDB within the broad 10 quad query region. Rare visitor to SLNWR, Bufferlands, Cosumnes River Preserve.

Resource/ Common Name	Scientific Name	Status Fed/CA/CNPS	General Habitat Description	Potential for Occurrence in Project /Action Area
Mammals				
western red bat	*Lasiurus blossevillii*	—/SSC	Roosts in foliage of trees and shrubs, commonly near water. Known primarily from the San Francisco Bay area, and also the Central Valley and surrounding foothills.	Unlikely. Suitable roosting habitat not present in Project area. SSHCP-covered species
riparian brush rabbit	*Sylvilagus bachmani riparius*	FE/SE	Riparian habitat with thick understory vegetation associated with San Joaquin River in northern Stanislaus County.	Out of range. CNDDB reports a single occurrence at the White Slough Wildlife Area along the Mokelumne River.
American badger	*Taxidea taxus*	—/SSC	Typically found in open grasslands and rangelands with friable soils and rodents for prey.	Unlikely. Suitable habitat not present in the Project area. Badgers may occur in grassland habitats west of the Project area near the Regional San Bufferlands and the Stone Lakes NWR. CNDDB reports a single, dated (1938) occurrence within the Florin and Bruceville quads. SSHCP-covered species

Notes:
Key to Status Codes:
CRPR - California Rare Plant Rank:
1A – May be extirpated in California
1B.1 – rare throughout its range and seriously threatened in California
1B.2 – rare throughout its range and moderately threatened in California
2B.1—rare and seriously threatened in California, but more common elsewhere
2B.2 – rare and moderately threatened in California, but more common elsewhere
2B.3—rare but not very threatened in California, but more common elsewhere

CFP – California Fully Protected
CH – Critical Habitat
FE – Federal Endangered
FT – Federal Threatened
SC – State Candidate
SE – State Endangered
SR – State Rare
ST – State Threatened
SSC – State Species of Special Concern

3.5.4 Impact Analysis

This section describes potential impacts that could occur with implementation of the proposed Project alternatives.

Thresholds of Significance

Consistent with the thresholds of significance identified in Sacramento County's Initial Study Checklist, an impact would be considered significant if the proposed Project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Impacts and Mitigation Measures

Impact BIO-1 Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Alternative 1 (Medium Service Area Alternative) and Alternative 2 (No Reclamation Funding Alternative)

Project Elements. A number of sensitive species (plants, invertebrates, amphibians and reptiles, birds) have the potential to occur in or near the Project area. Construction of the proposed Project could kill or injure individuals, particularly during ground-disturbing activities such as grubbing, grading, and excavating. Construction related equipment and storage/moving of construction materials could also impact sensitive species. Habitat for sensitive species could also be adversely affected by Project construction, and this could indirectly impact sensitive species. Substantial impacts to sensitive species, either directly, or indirectly through habitat impacts, may occur, and this would be a potentially significant impact. Most sensitive species

and their habitats with the potential to occur in the Project area are covered species and conserved habitats in the SSHCP. Although the SSHCP has not yet been approved, it is thought that the HCP may be approved before construction of the proposed Project is scheduled to start. It was thus deemed appropriate to propose mitigation that would be consistent with the SSHCP. If the SSHCP is not approved before the start of construction, Regional San is committed to implementing the mitigation actions that are included in the Draft SSHCP, though, permitting agencies may require additional or different mitigation than measures prescribed in the SSHCP.

As such, four mitigation approaches have been identified: **Mitigation Measure BIO-1a** is applicable to habitats for all sensitive species, regardless of whether they are covered in the SSHCP; this mitigation thus addresses avoidance of habitats and land cover types for sensitive species covered and not-covered by the SSHCP. **Mitigation measures under BIO-1b** address compensation for any unavoidable effects on sensitive habitats and land cover types included in the SSHCP; because those habitats are used by both SSHCP-covered and non-SSHCP-covered species this measure addresses impacts to all sensitive species in the Project area. **Mitigation measures under BIO-1c** address sensitive species covered in the SSHCP. **Mitigation measures under BIO-1d** address sensitive species not covered in the SSHCP. Implementation of **Mitigation Measures BIO-1a, BIO-1b, BIO-1c, and BIO-1d** would reduce impacts to sensitive species and their habitats to less than significant.

Program Elements. The same sensitive species and their habitats that have the potential to occur in the defined Project area also likely occur in the areas that would support development of the distribution mains, service connection laterals, turnouts, groundwater recharge area, diluent wells, and Stone Lakes NWR habitat areas. Impacts to species and their habitats in these program element areas would be similar to those in the Project element area. Implementation of **Mitigation Measures BIO-1a, BIO-1b, BIO-1c, and BIO-1d** would reduce impacts to sensitive species and their habitats to less than significant.

Alternative 3 (Small Service Area Alternative)
Project and Program Elements. Construction impacts of the Small Service Area Alternative would be similar to the proposed Project, but less extensive because less construction would be required. Implementation of **Mitigation Measures BIO-1a, BIO-1b, BIO-1c, and BIO-1d** would reduce impacts to sensitive species and their habitats to less than significant.

Alternative 4 (No Project Alternative)
Sensitive species or their habitats would not be impacted by the No Project Alternative. Therefore no impacts to sensitive species and their habitats would occur.

Significance Determination before Mitigation.
Potentially Significant for all action alternatives. No impact for Alternative 4 (No Project Alternative).

Mitigation Measures

Mitigation Measure BIO-1a: Avoid Impacts (Both Permanent and Temporary) to the Extent Feasible to Habitats and Land Cover Types Used by HCP-Covered and Non-HCP-Covered Sensitive Species (All Action Alternatives).

Regional San and its contractors will avoid and minimize permanent and temporary impacts to habitats and land cover types used by sensitive species potentially occurring in the Project Area (**Table 3.5-1**). Avoidance and minimization of habitat areas will be accomplished during Project design work, and/or during construction by implementing best management practices, including establishment of buffer zones, installation of fencing around sensitive habitats, and implementation of a storm water pollution prevention plan (SWPPP) to reduce the potential for sediments or contaminants to enter sensitive habitats.

Mitigation Measure BIO-1b: Mitigate Impacts to Habitats and Land Cover Types Used by HCP-Covered and Non-HCP-Covered Sensitive Species (All Action Alternatives)

To mitigate unavoidable losses to habitats used by sensitive species (both SSHCP-covered and non-SSHCP-covered) in the Project area, Regional San shall participate in and comply with the habitat-level conservation measures identified in the SSHCP. Conservation commitments of the SSHCP summarized below are presented as mitigation measures, and would be implemented by Regional San even if the SSHCP is not adopted. Details for implementation of these measures can be referenced in Section 7.3.2 of the draft SSHCP. As noted previously, if the SSHCP is not approved prior to the project permitting phase, regulatory and permitting agencies may require mitigation that is different from measures prescribed in the SSHCP. In this circumstance, Sacramento County would not manage implementation of the SSHCP and would not receive monies from SSHCP participants to implement the SSHCP. Applicants would likely work directly with federal and state permitting agencies to secure necessary environmental permits. This section assumes SSHCP participation.

- To mitigate impacts to vernal pool associated species, provide funding to compensate for unavoidable losses of vernal pool habitat at the following ratios: 3:1 (2 acres preservation and 1 acre re-establishment/establishment) for direct impacts; 2:1 for indirect impacts (2 acres preservation). Provide funding to compensate for unavoidable losses of direct impacts to swale habitat at a 2:1 ratio (1 acre preservation and 1 acre re-establishment/establishment) and a 1:1 ratio (1 acre preservation) for indirect impacts.
- To mitigate impacts to seasonal wetland associated species, provide funding to compensate for unavoidable losses of seasonal wetland, seasonal swale, and seasonal impoundment habitat at a 2:1 ratio (1 acre preservation and 1 acre re-establishment/ establishment).
- To mitigate impacts to open water associated species, provide funding to compensate for unavoidable losses of this habitat at a 2:1 ratio (1 acre preservation and 1 acre re-establishment/establishment).
- To mitigate impacts to freshwater marsh associated species, provide funding to compensate for unavoidable losses of this habitat at a 2:1 ratio (1 acre preservation and 1 acre re-establishment/establishment).
- To mitigate impacts to species associated with streams and creeks, provide funding to compensate for unavoidable losses of these habitats at a 2:1 ratio (1 acre preservation and 1 acre re-establishment/establishment).

- To mitigate impacts to species associated with mixed riparian woodland and mixed riparian scrub habitat, provide funding to compensate for unavoidable losses of these habitats at a 2:1 ratio (1 acre preservation and 1 acre re-establishment/establishment) ratio.
- To mitigate impacts to species associated with croplands and valley grassland habitats, provide funding to compensate for unavoidable losses of these land cover types at a 1:1 ratio (1 acre preservation).

Mitigation Measure BIO-1c: Mitigate Impacts to HCP-Covered Species (All Action Alternatives). Regional San shall participate in and comply with the species-specific conservation measures identified in the SSHCP for SSHCP-covered species. Conservation commitments of the SSHCP listed below are presented as mitigation measures, and would be implemented by Regional San even if the SSHCP is not adopted. The following species-specific measures have been taken directly from the SSHCP. Where "Implementing Entity" is used below, it refers to Sacramento County or the SSHCP implementing agency.

- **Sacramento Orcutt Grass and Slender Orcutt Grass:** Due to their rarity, take of either of these species is not permitted under the SSHCP, with the exception of take related to Preserve management and monitoring (see SSHCP Section 5). If a project site is located within 1 mile of the Mather Core Recovery Area and the site contains vernal pools, the project site will be surveyed for Sacramento and slender Orcutt grass by an approved biologist following California Department of Fish and Wildlife (CDFW) rare plant survey protocols or most recent CDFW guidelines to determine if Sacramento and/or slender Orcutt grass is present. An approved biologist will conduct the field investigation to identify and map occurrences.

  Where known or new Sacramento or slender Orcutt grass occurrences are found, they will be protected within an SSHCP Preserve that is at least 50 acres. The occurrence will be located interior to the Preserve at a distance of no less than 300 feet from the edge of the Preserve boundary. If Regional San encounters a previously undiscovered occurrence of Sacramento or slender Orcutt grass at the project site, Regional San will contact the SSHCP Implementing Entity or Land Use Authority Permittee with authority over the project (under the HCP), who will coordinate with the Wildlife Agencies for written concurrence of avoidance to ensure that the project does not cause take of the species.

- **California Tiger Salamander (CTS).** The SSHCP has modeled CTS habitat in the SSHCP Plan Area. Ground-disturbing activities within California tiger salamander modeled habitat will occur outside the breeding and dispersal season (occur after July 31 and before October 15), to the maximum extent practicable. If Covered Activities must be implemented in mapped, modeled habitat during the breeding and dispersal season (after October 15 and before July 31), construction activities will not start until 30 minutes after sunrise and must be complete 30 minutes prior to sunset.

  If an activity must be implemented in modeled habitat during the breeding and dispersal season (after October 15 and before July 31), exclusion fencing will be installed around

the project footprint before October 15. Temporary high-visibility construction fencing will be installed along the edge of work areas, and exclusion fencing will be installed immediately outside of the temporary high-visibility construction fencing to exclude California tiger salamanders from entering the construction area or becoming entangled in the construction fencing. Exclusion fencing will be at least 1 foot tall and be buried at least 6 inches below the ground to prevent salamanders from going under the fencing. Fencing will remain in place until all construction activities within the construction area are complete. No project activities will occur outside the delineated project footprint. An approved biologist must inspect the exclusion fencing and project site every morning before 7:00 a.m. for integrity and for any entrapped California tiger salamanders. However, the SSHCP Implementing Entity may, with approval of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), determine that it is appropriate for an activity to not erect fencing for certain long and linear projects if it appears that the exclusion fencing will likely trap individuals or cause more take of California tiger salamander than it would prevent.

If activities must be implemented in modeled habitat, an approved biologist experienced with California tiger salamander identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place, and will inspect the project site for California tiger salamander every morning before 7:00 a.m., or prior to construction activities. The approved biologist will also train construction personnel on the required California tiger salamander avoidance procedures, exclusion fencing, and correct protocols in the event that a California tiger salamander enters an active construction zone.

If activities must be implemented in modeled habitat, all excavated steep-walled holes or trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes or trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within California tiger salamander modeled habitat will be inspected for California tiger salamanders by the approved biologist prior to being moved.

If a California tiger salamander is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately (California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS)). Construction activities will be suspended in a 100-foot radius of the animal until the animal is relocated by an approved biologist with appropriate handling permits from the Wildlife Agencies. Prior to relocation, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the salamander, within 1 business day to the

Wildlife Agencies. The biologist will report any take of listed species to USFWS and CDFW immediately. Any worker who inadvertently injures or kills a California tiger salamander or who finds dead, injured, or entrapped California tiger salamander(s) must immediately report the incident to the approved biologist.

If erosion control is implemented within California tiger salamander modeled habitat, non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure that salamanders are not trapped (no monofilament). Coconut coir matting and fiber rolls with burlap are examples of acceptable erosion control materials. This limitation will be communicated to the contractor through use of special provisions included in the bid solicitation package.

If project activities are within SSHCP-mapped California tiger salamander modeled habitat, rodent control will be allowed only in developed portions of a project site. Where rodent control is allowed, the method of rodent control will comply with the methods of rodent control discussed in the 4(d) Rule published in the U.S. Fish and Wildlife Service's (2004) final listing rule for tiger salamander.

- **Western Spadefoot Toad (WST)**: The SSHCP has modeled WST habitat in the SSHCP Plan Area. Ground-disturbing activities within western spadefoot mapped, modeled habitat will occur outside the breeding and dispersal season (after May 15 and before October 15), to the maximum extent practicable.

  If activities must be implemented in modeled habitat after October 15 and before May 15, exclusion fencing will be installed around the project footprint before October 15, and the project site must be monitored by an approved biologist following rain events. Temporary high-visibility construction fencing will be installed along the edge of work areas, and silt fencing will be installed immediately behind the temporary high-visibility construction fencing to exclude western spadefoot from entering the construction area. Fencing will remain in place until all construction activities within the construction area are completed. No project activities will occur outside the delineated project footprint.

  If activities must be implemented in mapped, modeled habitat in the breeding and dispersal season (after October 15 and before May 15), an approved biologist experienced with western spadefoot identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place, and will inspect the project site daily for western spadefoot prior to construction activities. The approved biologist will also train construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a western spadefoot enters an active construction zone.

  If an activity occurs in western spadefoot modeled habitat, all excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar

material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within western spadefoot modeled habitat will be inspected for western spadefoot by the approved biologist prior to being moved.

If erosion control is implemented within western spadefoot modeled habitat, non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure that western spadefoots are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.

If activities must be implemented in modeled habitat during the breeding and dispersal season (after October 15 and before May 15), and a western spadefoot is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately. Construction activities will be suspended in a 100-foot radius of the animal until the animal leaves the project site on its own volition. If necessary, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the western spadefoot within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife immediately. Any worker who inadvertently injures or kills a western spadefoot or who finds dead, injured, or entrapped western spadefoot(s) must immediately report the incident to the approved biologist.

- **Western Pond Turtle (WPT):** The SSHCP has modeled WPT habitat in the SSHCP Plan Area. If modeled habitat for western pond turtle is present within a project footprint or within 300 feet of a project footprint, then an approved biologist will conduct a field investigation to delineate western pond turtle aquatic habitat within the project footprint and within 300 feet of the project footprint. Western pond turtle aquatic habitat includes, but is not limited to, low-gradient streams and creeks, open water, freshwater marsh, and rice fields. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Regional San will map all existing or potential sites and provide those maps to the Local Land Use Permittees and the SSHCP Implementing Entity. Locations of delineated western pond turtle habitat must also be noted on plans that are submitted to a Local Land Use Permittee. Regional San will use this information to finalize project design. Project activities may occur throughout the year as long as western pond turtle habitat is identified and fully avoided. Otherwise, Regional San will implement the following additional measures:

Maintenance and improvements to existing structures may occur throughout the year as long as western pond turtle habitat is identified and avoided, and movement of equipment is confined to existing roads. Otherwise, construction and ground-disturbing activities must be conducted outside of western pond turtle's active season. Construction and ground-disturbing activities will be initiated after May 1 and will commence prior to September 15. If it appears that construction activities may go beyond September 15, Regional San will contact the Local Land Use Permittee and the Implementing Entity as soon as possible, but not later than September 1, to determine if additional measures are necessary to minimize take**.**

If a project activity is occurring in western pond turtle modeled habitat, an approved biologist experienced with western pond turtle identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place in aquatic habitat or within 300 feet of aquatic habitat, and will inspect the project site daily for western pond turtle prior to construction activities. The approved biologist will also training construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a western pond turtle enters an active construction zone.

If construction activities will occur in western pond turtle aquatic habitat, aquatic habitat for the turtle will be dewatered and then remain dry and absent of aquatic prey (e.g., crustaceans and other aquatic invertebrates) for 15 days prior to the initiation of construction activities. If complete dewatering is not possible, the Implementing Entity will be contacted to determine what additional measures may be necessary to minimize effects to western pond turtle. After aquatic habitat has been dewatered 15 days prior to construction activities, exclusion fencing will be installed extending a minimum of 300 feet into adjacent uplands to isolate both the aquatic and adjacent upland habitat. Exclusionary fencing will be erected 36 inches above ground and buried at least 6 inches below the ground to prevent turtles from attempting to burrow or move under the fence into the construction area. In addition, high-visibility fencing will be erected to identify construction limits and to protect adjacent habitat from encroachment of personnel and equipment. Western pond turtle habitat outside construction fencing will be avoided by all construction personnel. The fencing and work area will be inspected by the approved biologist to ensure that the fencing is intact and that no turtles have entered the work area before the start of each work day. Fencing will be maintained by the contractor until completion of the project. If, after exclusion fencing and dewatering, western pond turtles are found within the project footprint or within 300 feet of the project footprint, Regional San will discuss the next best steps with the Implementing Entity and Wildlife Agencies.

If a project activity occurs within western pond turtle modeled habitat, all excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction

pipes, culverts, similar structures, construction equipment, and construction debris left overnight within western pond turtle modeled habitat will be inspected for western pond turtle by the approved biologist prior to being moved.

If erosion control is implemented within western pond turtle modeled habitat, non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure that turtles are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.

Construction and maintenance vehicles will observe a 20-mile-per-hour speed limit within western pond turtle modeled upland habitat.

If a western pond turtle is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately. Construction activities will be suspended in a 100-foot radius of the animal until the animal leaves the project site on its own volition. If necessary, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the turtle, within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to the U.S. Fish and Wildlife Service immediately. Any worker who inadvertently injures or kills a western pond turtle or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist.

After completion of ground-disturbing activities, Regional San will remove any temporary fill and construction debris and will restore temporarily disturbed areas to pre-project conditions. Restoration work includes such activities as re-vegetating the banks and active channels with a seed mix similar to pre-project conditions. Appropriate methods and plant species used to re-vegetate such areas will be determined on a site-specific basis in consultation with the Implementing Entity. Restoration work may include replanting emergent aquatic vegetation and placing appropriate artificial or natural basking areas in waterways and wetlands. A photo documentation report showing pre- and post-project conditions will be submitted to the Implementing Entity 1 month after implementation of the restoration.

- **Giant Garter Snake (GGS):** The SSHCP has modeled GGS habitat in the SSHCP Plan Area. If modeled habitat for giant garter snake is present within the project footprint or within 300 feet of the project footprint, then an approved biologist will conduct a field investigation to delineate giant garter snake aquatic habitat within the project footprint and adjacent areas within 300 feet of the project footprint. Giant garter snake aquatic habitat includes, but is not limited to, low-gradient streams and creeks, open water, freshwater marsh, agricultural ditches, and rice fields. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Regional San will map all existing or potential sites and provide these

maps to the Local Land Use Permittees and the Implementing Entity. Locations of delineated giant garter snake habitat must also be noted on plans that are submitted to a Local Land Use Permittee. Regional San will use this information to finalize project design. Project activities may occur throughout the year as long as giant garter snake habitat is identified and fully avoided. Otherwise, Regional San will implement the following additional measures:

Project activities that do not fully avoid giant garter snake modeled habitat will be conducted during the snake's active season. Construction and ground-disturbing activities will be initiated after May 1 and will end prior to September 15. If it appears that construction activities may go beyond September 15, Regional San will contact the Local Land Use Permittee and the Implementing Entity as soon as possible, but not later than September 1. The Local Land Use Permittee and the Implementing Entity will discuss with the Wildlife Agencies additional measures necessary to minimize take.

If a project activity is occurring in giant garter snake modeled habitat, an approved biologist experienced with giant garter snake identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place in aquatic habitat or within 300 feet of aquatic habitat, and will inspect the project site daily for giant garter snake prior to construction activities. The approved biologist will also train construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a giant garter snake enters an active construction zone.

If construction activities will occur in giant garter snake aquatic habitat, aquatic habitat will be dewatered and then remain dry and absent of aquatic prey (e.g., fish and tadpoles) for 15 days prior to initiation of construction activities. If complete dewatering is not possible, the Implementing Entity will be contacted to determine what additional measures may be necessary to minimize effects to giant garter snake. After aquatic habitat has been dewatered 15 days prior to construction activities, exclusion fencing will be installed extending a minimum of 300 feet into adjacent uplands to isolate both the aquatic and adjacent upland habitat. Exclusionary fencing will be erected 36 inches above ground and buried at least 6 inches below the ground to prevent snakes from attempting to move under the fence into the construction area. In addition, high-visibility fencing will be erected to identify the construction limits and to protect adjacent habitat from encroachment of personnel and equipment. Giant garter snake habitat outside construction fencing will be avoided by all construction personnel. The fencing and the work area will be inspected by the approved biologist to ensure that the fencing is intact and that no snakes have entered the work area before the start of each work day. The fencing will be maintained by the contractor until completion of the project.

If an activity occurs in giant garter snake modeled habitat, all excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first.

All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within giant garter snake modeled habitat will be inspected for giant garter snake by the approved biologist prior to being moved.

If erosion control is implemented within giant garter snake modeled habitat, non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure snakes are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.

If a giant garter snake is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately. Construction activities will be suspended in a 100-foot radius of the animal until the animal leaves the project site on its own volition. If necessary, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the giant garter snake within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to the U.S. Fish and Wildlife Service immediately. Any worker who inadvertently injures or kills a giant garter snake or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist.

After completion of ground-disturbing activities, Regional San will remove any temporary fill and construction debris and will restore temporarily disturbed areas to pre-project conditions. Restoration work includes such activities as re-vegetating the banks and active channels with a seed mix similar to pre-project conditions. Appropriate methods and plant species used to re-vegetate such areas will be determined on a site-specific basis in consultation with the Implementing Entity. Restoration work may include replanting emergent aquatic vegetation. Refer to the U.S. Fish and Wildlife Service's (USFWS) Guidelines for the Restoration and/or Replacement of Giant Garter Snake Habitat (USFWS 1997), or the most current USFWS guidelines at the time of the activity. A photo documentation report showing pre- and post-project conditions will be submitted to the Implementing Entity 1 month after implementation of the restoration.

- **Tricolored Blackbird (TCBB):** The SSHCP has modeled TCBB habitat in the SSHCP Plan Area. If modeled habitat for tricolored blackbird is present within a project footprint or within 500 feet of a project footprint, then an approved biologist will conduct a field investigation to determine if existing or potential nesting or foraging sites are present within the project footprint and adjacent areas within 500 feet of the project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Within the SSHCP Plan Area, potential tricolor blackbird nest sites are often associated with freshwater marsh and seasonal wetlands, or in thickets of willow, blackberry, wild rose, thistle, and other

thorny vegetation. Tricolored blackbirds are also known to nest in crops associated with dairy farms. Foraging habitat is associated with annual grasslands, wet and dry vernal pools and other seasonal wetlands, agricultural fields (such as large tracts of alfalfa and pastures with continuous haying schedules and recently tilled fields), cattle feedlots, and dairies. Regional San will map all existing or potential nesting or foraging sites and provide these maps to the Local Land Use Permittees and Implementing Entity.

Pre-construction surveys will be required to determine if active nests are present within a project footprint or within 500 feet of a project footprint if existing or potential nest sites were found during design surveys and construction activities will occur during the breeding season (March 1 through September 15). An approved biologist will conduct pre-construction surveys within 30 days and within 3 days of ground-disturbing activities, and within the proposed project footprint and 500 feet of the proposed project footprint to determine the presence of nesting tricolored blackbird. Pre-construction surveys will be conducted during the breeding season (March 1 through August 31). Surveys conducted in February (to meet pre-construction survey requirements for work starting in March) must be conducted within 14 days and 3 days in advance of ground-disturbing activities. If a nest is present, the approved biologist will inform the Land Use Authority Permittee and the Implementing Entity of species locations, and they in turn will notify the Wildlife Agencies.

If active TCBB nests are found within the project footprint or within 500 feet of any project-related activity, Regional San will establish a 500-foot temporary buffer around the active nest until the young have fledged.

If nesting tricolored blackbirds are present within the project footprint or within 500 feet of any project-related activity, then an approved biologist experienced with tricolored blackbird behavior will be retained by Regional San to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist will be on site daily while construction-related activities are taking place near the disturbance buffer. Work within the nest disturbance buffer will not be permitted. If the approved biologist determines that tricolored blackbirds are exhibiting agitated behavior, construction will cease until the buffer size is increased to a distance necessary to result in no harm or harassment to the nesting tricolored blackbirds. If the biologist determines that the colonies are at risk, a meeting with Regional San, the Implementing Entity, and Wildlife Agencies will be held to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a tricolored blackbird flies into an active construction zone.

On SSHCP Agricultural Preserves, pesticides (including herbicides) will not be applied from January 1 through July 15.

- **Burrowing Owl (BUOW):** The SSHCP has modeled BUOW habitat in the SSHCP Plan Area. Surveys within modeled habitat are required for both the breeding and non-

breeding season. If the project site falls within modeled habitat, an approved biologist will survey the project site and map all burrows, noting any burrows that may be occupied. Occupied burrows are often (but not always) indicated by tracks, feathers, egg shell fragments, pellets, prey remains, and/or excrement. Surveying and mapping will be conducted by the approved biologist while walking transects throughout the entire project site plus all accessible areas within a 250-foot radius from the project site. The centerline of these transects will be no more than 50 feet apart and will vary in width to account for changes in terrain and vegetation that can preclude complete visual coverage of the area. For example, in hilly terrain with patches of tall grass, transects will be closer together, and in open areas with little vegetation, they can be 50 feet apart. This methodology is consistent with current survey protocols for this species. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. If suitable habitat is identified during the initial survey, and if the project does not fully avoid the habitat, pre-construction surveys will be required. Burrowing owl habitat is fully avoided if project-related activities do not impinge on a 250-foot buffer established by the approved biologist around suitable burrows.

Prior to any ground disturbing activity, an approved biologist will conduct pre-construction surveys in all areas that were identified as suitable habitat during the initial surveys. The purpose of the pre-construction surveys is to document the presence or absence of burrowing owls on the project site, particularly in areas within 250 feet of construction activities. To maximize the likelihood of detecting owls, the pre-construction survey will last a minimum of 3 hours. The survey will begin 1 hour before sunrise and continue until 2 hours after sunrise (3 hours total), or begin 2 hours before sunset and continue until 1 hour after sunset. Additional time may be required for large project sites. A minimum of two pre-construction surveys will be conducted (if owls are detected on the first survey, a second survey is not needed). All owls observed will be counted and their location will be mapped. Surveys will conclude no more than 2 calendar days prior to construction. Therefore, Regional San must begin surveys no more than 4 days prior to construction (2 days of surveying plus up to 2 days between surveys and construction). To avoid last-minute changes in schedule or contracting that may occur if burrowing owls are found, Regional San may also conduct a preliminary survey up to 15 days before construction. This preliminary survey may count as the first of the two required surveys as long as the second survey concludes no more than 2 calendar days in advance of construction.

If western burrowing owl or evidence of western burrowing owl is observed on the project site or within 250 feet of the project site during pre-construction surveys, then the following will occur:

During Breeding Season: If the approved biologist finds evidence of western burrowing owls within a project site during the breeding season (February 1 through August 31), all project-related activities will avoid nest sites during the remainder of the breeding season or while the nest remains occupied by adults or young (nest occupation includes individuals or family groups foraging on or near the site following fledging). Avoidance

is establishment of a minimum 250-foot buffer zone around nests. Construction and other project-related activities may occur outside of the 250-foot buffer zone. Construction and other project-related activities may be allowed inside of the 250-foot non-disturbance buffer during the breeding season if the nest is not disturbed, and Regional San develops an avoidance, minimization, and monitoring plan that is approved by the Implementing Entity and Wildlife Agencies prior to project construction based on the following criteria:

- The Implementing Entity and Wildlife Agencies approve of the avoidance and minimization plan provided by the project applicant.
- An approved biologist monitors the owls for at least 3 days prior to construction to determine baseline nesting and foraging behavior (i.e., behavior without construction).
- The same approved biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities.
- If there is any change in owl nesting and foraging behavior as a result of construction activities, the approved biologist will have authority to shut down activities within the 250-foot buffer. Construction cannot resume within the 250-foot buffer until any owls present are no longer affected by nearby construction activities, and with written concurrence from the Wildlife Agencies.
- If monitoring by the approved biologist indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use, the non-disturbance buffer zone may be removed if approved by the Wildlife Agencies. The approved biologist will excavate the burrow in accordance with the latest California Department of Fish and Wildlife guidelines for burrowing owl to prevent reoccupation after receiving approval from the Wildlife Agencies.
- The Implementing Entity and Wildlife Agencies will respond to a request from Regional San to review the proposed construction monitoring plan within 21 days.

During Non-Breeding Season: During the non-breeding season (September 1 through January 31), the approved biologist will establish a minimum 250-foot non-disturbance buffer around occupied burrows. Construction activities outside of this 250-foot buffer will be allowed. Construction activities within the non-disturbance buffer will be allowed if the following criteria are met to prevent owls from abandoning over-wintering sites:

- An approved biologist monitors the owls for at least 3 days prior to construction to determine baseline foraging behavior (i.e., behavior without construction).
- The same approved biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities.
- If there is any change in owl foraging behavior as a result of construction activities, the approved biologist will have authority to shut down activities within the 250-foot buffer.
- If the owls are gone for at least 1 week, Regional San may request approval from the Implementing Entity and Wildlife Agencies that an approved biologist excavate usable burrows and install one-way exclusionary devices to prevent owls

from re-occupying the site. After all usable burrows are excavated, the buffer zone will be removed and construction may continue.

- Monitoring must continue as described above for the non-breeding season as long as the burrow remains active.

During construction activities, 250-foot construction buffer zones will be established and maintained around any occupied burrow. An approved biologist will monitor the site to ensure that buffers are enforced and owls are not disturbed. The approved biologist will also train construction personnel on avoidance procedures, buffer zones, and protocols in the event that a burrowing owl flies into an active construction zone.

Passive relocation is not allowed without the express written approval of the Wildlife Agencies. Passive owl relocation may be allowed on a case-by-case basis on project sites during the non-breeding season (September 1 through January 31) with the written approval of the Wildlife Agencies if the other measures described in this condition preclude work from continuing. Passive relocation must be done in accordance with the latest California Department of Fish and Wildlife guidelines for burrowing owl. Passive relocation will only be proposed if the burrow needing to be removed or with the potential to collapse from construction activities is the result of a Covered Activity. If passive relocation is approved by the Wildlife Agencies, an approved biologist can passively exclude birds from their burrows during the non-breeding season by installing one-way doors in burrow entrances. These doors will be in place for 48 hours to ensure that owls have left the burrow, and then the biologist will excavate the burrow to prevent reoccupation. Burrows will be excavated using hand tools only. During excavation, an escape route will be maintained at all times. This may include inserting an artificial structure into the burrow to avoid having materials collapse into the burrow and trap owls inside. Other methods of passive relocation, based on best available science, may be approved by the Wildlife Agencies over the 50-year SSHCP Permit Term.

All activities adjacent to existing or planned SSHCP Preserves, Preserve Setbacks, or Stream Setback areas will be seasonally timed, when safety permits, to avoid or minimize adverse effects on occupied burrows.

Rodent control will be allowed only in developed portions of a project site within western burrowing owl modeled habitat. Where rodent control is allowed, the method of rodent control will comply with the methods of rodent control discussed in the 4(d) Rule published in the U.S. Fish and Wildlife Service's (2004) final listing rule for tiger salamander.

- **Swainson's Hawk (SWHA):** The SSHCP has modeled SWHA habitat in the SSHCP Plan Area. If modeled habitat for Swainson's hawk is present within a project footprint or within 0.25 mile of a project footprint, then an approved biologist will conduct a survey

to determine if existing or potential nesting sites are present within the project footprint and adjacent areas within 0.25 mile of the project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Nest sites are often associated with riparian land cover, but also include lone trees in fields, trees along roadways, and trees around structures. Nest trees may include, but are not limited to, Fremont's cottonwood (*Populus fremontii*), oaks (*Quercus* spp.), willows (*Salix* spp.), walnuts (*Juglans* spp.), eucalyptus (*Eucalyptus* spp.), pines (*Pinus* spp.), and Deodar cedar (*Cedrus deodara*). Regional San will map all existing and potential nesting sites and provide these maps to the Local Land Use Permittees and Implementing Entity. Nesting sites must also be noted on plans that are submitted to a Local Land Use Permittee.

Pre-construction surveys will be required to determine if active nests are present within a project footprint or within 0.25 mile of a project footprint if existing or potential nest sites were found during initial surveys and construction activities will occur during the breeding season (March 1 through September 15). An approved biologist will conduct pre-construction surveys within 30 days and 3 days of ground-disturbing activities to determine presence of nesting Swainson's hawk. Pre-construction surveys will be conducted during the breeding season (March 1 through September 15). The approved biologist will inform the Land Use Authority Permittee and Implementing Entity of species locations, and they in turn will notify the Wildlife Agencies.

If active nests are found within the project footprint or within 0.25 mile of any project-related activity, Regional San will establish a 0.25 mile disturbance buffer around the active nest until the young have fledged, with concurrence from the Wildlife Agencies.

If nesting Swainson's hawks are present within the project footprint or within 0.25 mile of any project-related Covered Activity, then an approved biologist experienced with Swainson's hawk behavior will be retained by Regional San to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist will be on site daily while construction-related activities are taking place within the buffer. Work within the temporary nest disturbance buffer can occur with the written permission of the Implementing Entity and Wildlife Agencies. If nesting Swainson's hawks begin to exhibit agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, the approved biologist will have the authority to shut down construction activities. If agitated behavior is exhibited, the biologist, Regional San, Implementing Entity, and Wildlife Agencies will meet to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a Swainson's hawk flies into an active construction zone

- **Other Covered Raptor Species.** To avoid direct and indirect effects of Covered Activities on covered raptor species, the following measures will be implemented. for Cooper's hawk (*Accipiter cooperii*), loggerhead shrike (*Lanius ludovicianus*), northern

harrier (*Circus cyaneus*), and white-tailed kite (*Elanus leucurus*). The following measures do not apply to ferruginous hawk (*Buteo regalis*), as they do not nest in the Plan Area. The following measures also do not apply to Swainson's hawk or burrowing owl, as specific measures have been developed for these covered raptor species.

The SSHCP has modeled habitat for "other Covered raptors" in the SSHCP Plan Area. If modeled habitat for a covered raptor species is present within a project footprint or within 0.25 mile of a project footprint, then an approved biologist will conduct a field investigation to determine if existing or potential nesting sites are present within the project footprint and adjacent areas within 0.25 mile of the project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Regional San will map all existing or potential nesting sites and provide these maps to the Local Land Use Permittees and Implementing Entity. Nesting sites must also be noted on plans that are submitted to a Local Land Use Permittee.

Pre-construction surveys will be required to determine if active nests are present with a project footprint or within 0.25 mile of a project footprint if existing or potential nest sites are found during initial surveys and construction activities will occur during the raptor breeding season. An approved biologist will conduct pre-construction surveys within 30 days and 3 days of ground-disturbing activities within the proposed project footprint and within 0.25 mile of the proposed project footprint to determine presence of nesting covered raptor species. Pre-construction surveys will be conducted during the raptor breeding season.

If active nests are found within the project footprint or within 0.25 mile of any project-related Covered Activity, Regional San will establish a 0.25 mile temporary nest disturbance buffer around the active nest until the young have fledged.

If project-related activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season, then an approved biologist experienced with raptor behavior will be retained by Regional San to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist will be on site daily while construction-related activities are taking place within the disturbance buffer. Work within the temporary nest disturbance buffer can occur with the written permission of the Implementing Entity and Wildlife Agencies. If nesting raptors begin to exhibit agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, the approved biologist/monitor will have the authority to shut down construction activities. If agitated behavior is exhibited, the biologist, Regional San, Implementing Entity, and Wildlife Agencies will meet to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a covered raptor species flies into an active construction zone.

Mitigation Measure BIO-1d: Mitigate Impacts to Sensitive Non-HCP-Covered Species (All Action Alternatives)

Several sensitive species with a low- to moderate potential to occur in or near the Project area are not included as covered species in the SSHCP. For these species, Regional San shall implement the following mitigation measures:

- **Non-SSHCP-Covered Sensitive Plants.** Prior to construction-related disturbance of natural community types and land covers in the Project area, a botanical survey(s) will be completed to determine if sensitive plant species occur in the Project area. Surveys will be conducted during the appropriate time of the year to facilitate detections and identifications. Sensitive non-SSHCP-covered plant species detected in the Project area will be avoided as feasible. If impacts to sensitive non-covered plant species cannot be feasible avoided, Regional San will coordinate with Sacramento County and the resource agencies (CDFW and/or USFWS) as appropriate to determine the course of action, which may include relocation of plants to the SSHCP Preserve System or another conserved location.
- **Non-SSHCP-Covered Birds:** Song sparrow (Modesto population) or other sensitive, non-SSHCP-covered bird species may occur in the Project area. Prior to disturbance of natural community or land covers, Regional San or its contractors will conduct nesting bird surveys to determine if active nesting is occurring in the Project area. All active nests will be avoided to the extent feasible and a 25-foot buffer will be established and maintained around each active nest until such time that the nest is vacated.

Significance after Mitigation

Less than significant for all action alternatives.

Impact BIO-2 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service

Alternative 1 (Medium Service Area Alternative) and Alternative 2 (No Reclamation Funding Alternative)

Project Elements. Construction of the proposed Project could substantially and adversely affect riparian habitat or other sensitive natural communities known to occur in the Project area (CH2M HILL 2015). Impacts would occur where ground-clearing, grading, and excavating activities are implemented. Riparian habitat has been mapped by Regional San at several locations in the Project area (CH2M HILL 2015) that may be impacted by the proposed Project or its action alternatives. Northern hardpan vernal pool, coastal and valley freshwater marsh, and Great Valley mixed riparian forest natural communities, all considered sensitive community types, occur in the Project area. Implementation of **Mitigation Measures BIO-1a, BIO-1b and BIO-2** would reduce impacts to riparian habitats and other sensitive natural communities to less than significant.

Program Elements. Riparian habitats and sensitive natural communities that occur in the defined Project area also assumed to occur in the areas that would support development of the distribution mains, service connection laterals, turnouts, groundwater recharge area, diluent

wells, and Stone Lakes NWR habitat areas. Impacts to habitats and communities in these Program areas would be similar to those in the Project area. Implementation of **Mitigation Measure BIO-2** would reduce impacts to riparian habitats and other sensitive natural communities to less than significant.

Alternative 3 (Small Service Area Alternative)
Project and Program Elements. Impacts to riparian habitat and other sensitive natural communities would be similar under Alternative 3 (Small Service Area Alternative) to Alternative 1 (Medium Service Area Alternative) since necessary facilities to be constructed are very similar. Fewer distribution mains and laterals associated with the lower volume of recycled water would require less construction and impacts to habitats and communities would be less than Alternative 1 (Medium Service Area Alternative). Implementation of **Mitigation Measures BIO-1a, BIO-1b and BIO-2** would reduce impacts to riparian habitats and other sensitive natural communities to less than significant.

Alternative 4 (No Project Alternative)
No riparian habitat or sensitive natural community would be adversely affected under the No Project Alternative.

Significance Determination before Mitigation
Potentially significant for all action alternatives. No Impact for Alternative 4 (No Project Alternative)

Mitigation Measures
Implement **Mitigation Measures BIO-1a and BIO-1b**, and the following:

Mitigation Measure BIO-2: Secure Regulatory Permits to Impact Riparian Habitat and other Sensitive Natural Communities (All Action Alternatives)
Regional San has delineated and described riparian habitats and other sensitive natural communities (as identified by the CDFW, and summarized in Table 3.5-1) in the Project area. These habitats and communities are described earlier in this section, and are quantified in the wetland delineation report prepared for the proposed Project (CH2M HILL 2015). Regional San shall obtain all necessary permits and approvals required to impact riparian habitat and sensitive natural communities, to the extent that these impacts may occur with development of any of the action alternatives. Necessary permits and approvals will include Clean Water Act permits (section 404 and 401), FESA and CESA permits, and CDFW Lake and Streambed Alteration Agreement, and would include measures to avoid, minimize and compensate for any impacts so as to avoid any net loss in habitat value. Mitigation would include restoration of any habitats that were affected temporarily during construction, and could include purchase of credits from a mitigation bank if there are any permanent impacts to sensitive natural communities.

Significance after Mitigation
Less than significant for all action alternatives.

Impact BIO-3 Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means

Alternative 1 (Medium Service Area Alternative) and Alternative 2 (No Reclamation Funding Alternative)

Project Elements. Construction of Alternative 1 (Medium Service Alternative) and Alternative 2 (No Reclamation Funding Alternative) would potentially impact federally-protected wetlands in the Project area. Surface water quality could also be impacted with implementation of the alternatives. The specific magnitudes and locations of impacts to federally protected wetlands have not been finalized, but total impacts to Waters of the U.S. are anticipated to be less than 0.5 acre. Operational delivery of irrigation water to the service area would likely supplement hydrology to aquatic features (including federally-protected wetlands) within the Project area, increasing the reliability, frequency, and volume of water supply currently available to federally protected wetlands and other aquatic features in the Project area. This would be a beneficial effect. Impacts to wetlands are thus expected to be confined to temporary construction impacts, and implementation of **Mitigation Measures BIO-1a, BIO-1b, BIO-2,** and **BIO 3** would ensure restoration of any wetlands that were affected during construction.

Program Elements. The Project would deliver treated water to Stone Lakes NWR to supplement irrigation water for high-value natural communities and sensitive habitats (including federally-protected wetlands), and the species that use these communities and habitats. This is also a beneficial effect. Some federally-regulated wetlands could be impacted during construction of water conveyance facilities under the program elements of the Project. . Implementation of **Mitigation Measures BIO-1a, BIO-1b, BIO-2,** and **BIO 3** would reduce impacts to federally protected wetlands to less than significant.

Alternative 3 (Small Service Area Alternative)

Project and Program Elements. Impacts to federally-protected wetlands would likely be less than impacts associated with Alternative 1 (Medium Service Area Alternative) and Alternative 2 (No Reclamation Funding Alternative) because less construction would be needed for Alternative 3 (Small Service Area Alternative). The same amount water would still be delivered to Stone Lakes NWR under this alternative; therefore beneficial effects would be the same as under Alternative 1 (Medium Service Area Alternative). Implementation of **Mitigation Measures BIO-1a, BIO-1b, BIO-2,** and **BIO 3** would reduce impacts to federally protected wetlands to less than significant.

Alternative 4 (No Project Alternative)

Under the No Project alternative, federally protected wetlands would not be impacted by Project construction activities. Irrigation water would not be provided to Stone Lakes NWR and its high-value resources, including federally-protected wetlands.

Significance Determination before Mitigation

Potentially significant for all action alternatives. No impact for Alternative 4 (No Project Alternative).

Mitigation Measures

Implement **Mitigation Measures BIO-1a, BIO-1b, and BIO-2** and the following:

Mitigation Measure BIO-3: Secure Clean Water Act Permits/Approvals (All Action Alternatives)

Regional San has prepared a wetland delineation report to identify and characterize aquatic resources within the vicinity of the Project area (CH2M HILL 2015) and will use this information to avoid wetlands and waters of the U.S. to the extent feasible. Once verified by the USACE, the delineation will be used to secure permits/approvals under sections 404 and 401 of the Clean Water Act. The wetland delineation report will also be used to demonstrate consistency with the SSHCP and its terms and conditions for CWA and Endangered Species Act compliance. Compliance with SSHCP habitat-level conservation measures is assumed to satisfy mitigation requirements under Section 404 permitting, and conservation measures would be implemented by Regional San even if the SSHCP is not adopted. As stated earlier in this section, Regional San may be required to work directly with the U.S. Army Corps of Engineers to satisfy Section 404 permitting needs for project impacts to wetlands and other waters of the U.S. if permitting associated with the SSHCP is not finalized at the time of the project permitting phase.

Mitigation may include restoration of affected jurisdictional areas to ensure no net loss of wetland functions and values. Mitigation may also include preservation or enhancement of existing wetland habitat, or creation of wetland habitat.

Significance Determination after Mitigation

Less than significant for all action alternatives.

Impact BIO-4 Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

Two impacts are evaluated under Impact BIO-4: direct impacts to drainage corridors of the Project area during construction and operation activities (Impact BIO-4a), and indirect impacts to the Sacramento River and Delta resulting from Project operation (Impact BIO-4b).

Impact BIO-4a Impact movement of native resident species in drainage corridors of the Project area.

Alternative 1 (Medium Service Area Alternative), Alternative 2 (No Reclamation Funding Alternative), and Alternative 3 (Small Service Area Alternative)

Project and Program Elements. Project area drainage features with fragmented and disturbed riparian vegetation may be impacted during construction activities. Previous and existing intensive land uses within the Project area have resulted in degraded conditions such that no intact, high-value drainage corridors or riparian vegetation occur in the Project area. Drainage corridors associated with the Ehrhardt Channel, Franklin Creek, and the unnamed tributary to Stone Lake south of Hood Franklin Road (discussed earlier in this section) are highly degraded and likely function poorly as migratory corridors for native resident species. Direct impacts to drainage corridors would be limited to the construction phase of the Project, as these features would be available for use as movement corridors following construction.

Alternative 4 (No Project Alternative)
Under No Project Alternative, there would be no impact to native species movement within existing drainage corridors or elsewhere in the Project area.

Significance Determination before Mitigation
Less than significant for all action alternatives. No impact for Alternative 4 (No Project Alternative).

Mitigation Measures
No mitigation measures are required.

Impact BIO-4b Impact movement or reproduction of sensitive or important fish species in the Sacramento River or Delta region

Alternative 1 (Medium Service Area Alternative) and Alternative 2 (No Reclamation Funding Alternative)
Project and Program Elements. By reclaiming and delivering for irrigation, recharge and wetland use at full Project buildout, a maximum of 50,000 acre-feet per year (TAFY) of treated wastewater that otherwise would be discharged to the Sacramento River, the proposed Project and No Reclamation Funding Alternative would reduce flows in the Sacramento River at Freeport by up to 108 cfs during periods of peak irrigation demand. Flows would be redirected (withheld from discharge) during every month on the pattern shown in **Table 3.5-2**, with the largest reduction from expected future return discharges occurring during the irrigation season of May through September. Without implementation of wintertime irrigation, the proposed Project is expected to use an average of 32,572 AFY, with discharge reductions in each month as shown in **Table 3.5-3**.

Table 3.5-2: Monthly Reduction in Discharges from SRWTP under Alternative 1 (Medium Service Area Alternative) and Alternative 2 (No Reclamation Funding Alternative) at full Project Buildout, including Wintertime Irrigation

Month	Maximum Monthly Reduction in AF	Maximum Monthly Reduction in cfs
January	3,492	56.8
February	3,492	62.3
March	3,567	58.0
April	2,195	36.9
May	6,088	99.0
June	6,428	108.0
July	6,428	104.5
August	6,425	104.5
September	3,875	65.1
October	1,018	16.6
November	3,495	58.7
December	3,493	56.8
TOTAL ANNUAL	50,000	

Table 3.5-3: Monthly Reduction in Discharges from SRWTP under Alternative 1 (Medium Service Area Alternative) and Alternative 2 (No Reclamation Funding Alternative) without Wintertime Irrigation

Month	Maximum Monthly Reduction in AF	Maximum Monthly Reduction in cfs
January	7	0.1
February	7	0.1
March	81	1.3
April	2,195	36.9
May	6,088	99.0
June	6,428	108.0
July	6,428	104.5
August	6,425	104.5
September	3,875	65.1
October	1,018	16.6
November	10	0.2
December	8	0.1
TOTAL ANNUAL	32,572	

Although reductions in discharges from the SRWTP would reduce flows at Freeport, the Project would lead to increases in groundwater recharge that would benefit the groundwater basin, and higher groundwater levels would result in increased flows in the Cosumnes, lower Mokelumne, and Sacramento rivers because more water would remain in those rivers instead of recharging the groundwater basin. Once the groundwater basin reaches approaches a long-term balance, the Project is expected to increase streamflows by about 45,000 AFY with implementation of wintertime irrigation. Before wintertime irrigation can be implemented, and irrigation is only occurring during the growing season, the Project is projected to increase streamflows by over 28,000 AFY. These return flows are shown in **Table 3.5-4** and **Table 3.5-5.**

Table 3.5-4: Groundwater-Induced Increases in Streamflows with Implementation of Wintertime Irrigation

Month	Average monthly return flows in AF	Average monthly return flows in CFS
January	5,155	83.8
February	5,125	91.5
March	5,810	94.5
April	5,032	84.6
May	4,579	74.5
June	3,779	63.5
July	3,024	49.2
August	2,064	33.6
September	1,575	26.5
October	1,905	31.0
November	2,982	50.1
December	4,164	67.7
TOTAL ANNUAL	45,194	

Table 3.5-5: Groundwater-Induced Increases in Streamflows without Wintertime Irrigation

Month	Average monthly return flows in AF	Average monthly return flows in CFS
January	3,263	53.1
February	3,215	57.4
March	3,587	58.3
April	3,147	52.9
May	2,981	48.5
June	2,536	42.6
July	1,993	32.4
August	1,288	21.0
September	937	15.7
October	1,156	18.8
November	1,840	30.9
December	2,625	42.7
TOTAL ANNUAL	28,569	

As storage in the groundwater basin increases, the net effect of the discharge reduction is substantially reduced. These benefits are not fully realized until the groundwater system reaches a new balance with the surface water system. At the end of the simulation period modeling projects that the net change in annual flows is a reduction of about 4,000 AF without wintertime irrigation and about 4,800 AF with wintertime irrigation. Due to return flows produced by higher groundwater levels, and because those flows are larger in winter months when contractors are not taking as much water, the Project is expected to result in virtually no change in Delta outflows (an increase of 2.1 TAFY without wintertime irrigation or an increase of 0.9 TAFY with wintertime irrigation).

As described in *Section 3.10, Hydrology and Water Quality* section of this EIR, the maximum impact of this discharge reduction when it occurs during "balanced" conditions (when CVP and SWP [collectively, water project] reservoirs are releasing stored water) is to require the additional release of stored water from reservoirs to maintain water quality standards. Conversely, the maximum impact of this discharge reduction when it occurs during "excess" conditions (when there is adequate Delta outflow and water project reservoirs are not releasing stored water) is to reduce flows through the Delta and out to San Francisco Bay.

Impacts during "Excess" Operational Conditions. "Excess" operational conditions typically occur in wetter water year types (SWRCB D-1641 40-30-30 Index wet and above normal year types). During excess operational conditions, water project reservoirs are generally not making releases of stored water from reservoirs. Excess operational conditions generally occur 50 percent of the time during the period of time in which the Project-related discharge reductions would occur. Excess conditions occur specifically 95 percent of the time in April, 84 percent in May, 40 percent in June, 11 percent in July, 20 percent in August, 54 percent in September, and 89 percent in October. If all months and all years were considered, excess conditions would occur 70 percent of the time.

The discharge reductions shown by month in **Table 3.5-2** would result in reduced Sacramento River flows from Freeport to the Delta during excess operational conditions. Reductions of the magnitude and pattern shown in Table 3.5-2 represent decreases in river flow of, on average: -0.2

percent in April, -0.6 percent in May, -0.6 percent in June, -0.6 percent in July, -0.7 percent in August, -0.6 percent in September, and -0.2 percent in October, considering the 82-year period of record from 1922 to 2003 at Freeport using the CalSim II model. Project-related reductions in Sacramento River flows for other months range from -0.2 percent in February to -0.5 percent in November. For these reasons, impacts of Alternative 1 (Medium Service Area Alternative) and Alternative 2 (No Reclamation Funding Alternative) would be negligible to Sacramento River flows, water temperatures and to Delta salinity gradients during excess operational conditions, and the impacts to sensitive fish species using the reach of the Sacramento River below Freeport, and the Delta, are also anticipated to be negligible under these conditions.

Impacts during "Balanced" Operational Conditions. During balanced operational conditions, water project reservoirs are generally making releases to meet demands lower in the system, and to meet Delta flow and salinity requirements and Delta exports. Balanced operational conditions generally occur 50 percent of the time during the period of time in which Project-related reductions would occur. Balanced conditions occur 5 percent of the time in April, 16 percent in May, 60 percent in June, 89 percent in July, 80 percent in August, 46 percent in September, and 11 percent in October. Project-related proportional reductions during balanced operational conditions typically occur in drier water year types (SWRCB D-1641 40-30-30 Index critically dry and dry year types) and in the summer months (June, July, August). During balanced operational conditions, a discharge reduction of flow at Freeport has the potential effect of depleting storage in project reservoirs (mainly Shasta Lake), if increased releases are required to meet regulatory requirements.

Reductions of the magnitude and pattern shown in **Table 3.5-2** represent proportional decreases (during balanced conditions) of on average -0.4 percent in April, -1.1 percent in May, -0.9 percent in June, -0.6 percent in July, -0.8 percent in August, -0.3 percent in September, and -0.2 percent in October, considering the 82-year period of record from 1922 to 2003 at Freeport using the CalSim II model. Sacramento River flows are unchanged in February, March, and December, and are decreased by -0.5 percent in January. During balanced conditions, water project operations would respond to these nominal reductions in flows by making reservoir releases, resulting in no net change in Sacramento River flows below Freeport.

Over the 82-year period of record from 1922 to 2003, sequential drought years during the periods 1929-1934 and 1986-1992 created circumstances in the CalSim II model simulation where the Proposed Project would have reduced Shasta storage by up to about 35,000 AF without wintertime irrigation and about 30,000 AF with wintertime irrigation over a worst-case 6-year drought period without changes to retain more cold water at Shasta Lake. This decrease in storage could create thermal impacts to fisheries habitat downstream of Shasta. Such thermal impacts could stress temperature-sensitive fish species that spawn in the Sacramento River mainstem, like winter-run Chinook salmon and green sturgeon. The magnitude and importance of Project-related temperature changes associated with a worst-case 6-year drought period have not been modeled. Implementation of **Mitigation Measure HYD-4** would ensure that discharge reductions during balanced operational conditions are timed to reduce impacts associated with reduced Shasta storage to less than significant.

Alternative 3 (Small Service Area Alternative)
Alternative 3 (Small Service Area Alternative) would result in smaller reductions to discharges to the Sacramento River as compared to Alternative 1 (Medium Service Area Alternative) and Alternative 2 (No Reclamation Funding Alternative). As such, potential impacts to fish resources in the Sacramento River would be less than those potentially occurring under Alternatives 1 and 2. Implementation of **Mitigation Measure HYD-4** would ensure that discharge reductions during balanced operational conditions are timed so as to reduce impacts associated with reduced Shasta storage to less than significant.

Alternative 4 (No Project Alternative)
With no Project, there would be no reduction in discharges to the Sacramento River and therefore No Impact to sensitive fish resources of the Sacramento River and Delta.

Significance Determination before Mitigation
Less than significant for all action alternatives under excess operational conditions.

Potentially significant for all action alternatives under balanced conditions. Spawning green sturgeon and spawning winter-run Chinook salmon in the Sacramento River mainstem below Keswick Dam could be impacted by incremental and serial depletions of Shasta Lake cold water storage.

No impact for Alternative 4 (No Project Alternative) under both excess operational and balanced operational conditions.

Mitigation Measures
Mitigation Measure HYD-4: Coordinate Operations with Relevant Resource Agencies (All Action Alternatives).
To minimize potential thermal impacts to the Sacramento River downstream of Lake Shasta during critically dry years due to losses of cold water storage from reduced treated wastewater discharges, Regional San shall work with the Bureau of Reclamation and other relevant resource agencies to make appropriate operational changes in recycled water use and timing of discharge reductions in the spring months when the cold water pool in Shasta is critical. In critically dry years when storage in Lake Shasta falls below 2,400,000 AF in April, Regional San will coordinate with Central Valley Operations staff to reduce deliveries of recycled water to farmers in April and May if needed to avoid thermal impacts to the Sacramento River below Lake Shasta, as determined by the Sacramento River Temperature Model being utilized by Reclamation in the given year.

Significance Determination after Mitigation
Less than significant for all action alternatives under excess or balanced operational conditions.

Impact BIO-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

Alternative 1 (Medium Service Area Alternative), Alternative 2 (No Reclamation Funding Alternative), and Alternative 3 (Small Service Area Alternative)
Project and Program Elements. Sacramento County General Plan, Bufferlands Master Plan, and City of Elk Grove General Plan policies regarding habitat and species preservation would be addressed by complying with Mitigation Measures BIO-1(a through d) and BIO-2 above. No additional plan inconsistencies would occur. Some trees may need to be trimmed or removed to accommodate construction and installation of the proposed Project. Sacramento County has a Tree Preservation Ordinance that protects various species and sizes of trees within its jurisdiction. Regional San would participate in and comply with the terms and conditions of this ordinance. Compliance with Mitigation Measure BIO-5 would reduce impacts from tree trimming or removal to less than significant.

Alternative 4 (No Project Alternative)
No trees would be trimmed or removed under the No Project Alternative. Therefore no impact to trees would occur.

Significance Determination before Mitigation
Potentially significant for all action alternatives. No impact for Alternative 4 (No Project Alternative).

Mitigation Measures
Mitigation Measure BIO-5: Comply with Sacramento County Tree Preservation Ordinance (All Action Alternatives)
Regional San shall participate in and comply with the terms and conditions of the Sacramento County Tree Preservation Ordinance. Native oak trees with a DBH of six inches or greater, street or public trees, and landmark trees shall not be destroyed, killed, or removed without a permit. The ordinance protects all oak trees unless they are specifically designated for removal as part of an approved project. When oaks are removed they must be replaced with the same tree species equaling in sum the diameter of the tree lost.

Significance after Mitigation
Less than significant for all action alternatives.

Impact BIO-6 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

Alternative 1 (Medium Service Area Alternative), Alternative 2 (No Reclamation Funding Alternative), and Alternative 3 (Small Service Area Alternative)
Project and Program Elements. The SSHCP is currently being drafted and, as such, has not been formally adopted. There is no other adopted HCP, NCCP, or other approved conservation plan guiding development in the Project area. Regional San anticipates that the SSHCP will be completed and formally adopted prior to Project permitting. The recycled water pipeline Project

is an SSHCP-covered activity, and Regional San intends to participate in the SSHCP and comply with terms and conditions of the SSHCP to gain regulatory permits and approvals necessary for completion of the proposed Project. For these reasons the action alternatives would have no impact on consistency with relevant conservation plans.

Alternative 4 (No Project Alternative)
Under The No Project Alternative, there would be no Project or Action and therefore no need for conservation plan consistency.

Significance Determination
There would be no impact under all action alternatives and the No Project Alternative.

Cumulative Impact Analysis
The geographic scope of potential operational impacts on aquatic biological resources extends to the entire Sacramento River watershed. As noted in the discussion of Impact BIO-4b, the evaluation of effects on aquatic resources was based on modeling using CalSim II. Modeling of Project impacts was thus done in the context of ongoing operations of other projects that divert water from the system, and considers cumulative effects. Even when considering other potential diversions in the communities of Colusa, Woodland and Biggs (as identified in **Table 3.0-1)**, cumulative impacts to aquatic species are expected to be less than significant with implementation of **Mitigation Measure HYD-4**.

For terrestrial resources, impacts of the proposed Project are confined to Sacramento County, where past development has resulted in a substantial loss of native habitat to other uses. Future projects proposed in the vicinity of the Project area, including development projects in Sacramento County and the City of Elk Grove (see **Table 3.0-1**) would be required to mitigate significant impacts on terrestrial biological resources, in compliance with CEQA, the Federal ESA, CESA, and other State, local, and Federal statutes. Significant and unavoidable impacts to species that are protected under ESA or CESA would not be permitted under law. Both of these acts require that any take of species is minimized and fully mitigated. The development of the proposed SSCHCP, and its implementation if approved, aims to ensure that cumulative development within the County would not substantially affect special-status species. However, the SSCHCP is currently undergoing environmental review and is not an adopted plan.

As described above, the proposed Project has the potential to affect sensitive species and habitats. **Mitigation Measures BIO-1a through 1d, BIO-2, BIO-3** and **BIO-5** include provisions to reduce, avoid, and/or compensate for impacts in accordance with the requirements of ESA and CESA and other regulatory programs that protect habitats, such as CWA Section 404, and in compliance with Sacramento County General Plan goals and policies for resource protection. Through full implementation of the mitigation measures, potential Project-related impacts would be avoided, reduced, or compensated to such an extent that they are not expected to not result in a considerable contribution to a cumulative impact. Therefore, the Project would not result in a cumulatively considerable contribution to a cumulatively significant biological resource impact; the cumulative impact would be **less than significant**.

Significance Determination before Mitigation
Potentially significant.

Mitigation Measures
See **Mitigation Measures BIO-1a through 1d, BIO-2, BIO-3, HYD-4** and **BIO-5**.

Significance Determination after Mitigation
Less than significant.

3.5.5 References

CH2M HILL. 2015. Wetland delineation for the Sacramento Regional County Sanitation District Recycled Water Project. Prepared for RMC Water and Environment. September.

CNDDB (California Natural Diversity Database). 2015. Rarefind 5. Queries of USGS 7.5-minute series quadrangles: Bruceville, Carmichael, Clarksburg, Courtland, Elk Grove, Florin, Galt, Isleton, Lodi North, Sacramento East, Sacramento West, and Thornton. Query completed on: November 13, 2015.

Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California. The Resources Agency, Department of Fish and Game. Non-game Heritage Program. October.

NMFS (National Marine Fisheries Service). 1993. Designated Critical Habitat; Sacramento River winter-run Chinook salmon. Federal Register 58: 33212-33219.

NMFS (National Marine Fisheries Service). 2005. Endangered and Threatened Species; Designation of critical habitat for seven Evolutionarily Significant Units of Pacific Salmon and Steelhead in California; Final Rule. Federal Register 70: 52488-52627.

NMFS (National Marine Fisheries Service). 2009b. Endangered and Threatened Wildlife and Plants; Final Rulemaking to Designate Critical Habitat for the Threatened Southern Distinct Population Segment of North American Green Sturgeon. Federal Register 74: 52300-52351.

Sacramento County. 2016. South Sacramento Habitat Conservation Plan fact sheet. Informational website available at: http://www.southsachcp.com/. Accessed on May 26, 2016.

Sawyer, J.O., and T. Keeler-Wolf. 1995. A manual of California vegetation. California Native Plant Society, Sacramento, California. 471 pages.

USFWS (U.S. Fish and Wildlife Service). 1994. Endangered and Threatened Wildlife and Plants; Critical Habitat Determination for the Delta Smelt. Federal Register 59: 65256-65278.

USFWS (U.S. Fish and Wildlife Service). 1997. Guidelines for the Restoration and/or Replacement of Giant Garter Snake Habitat

USFWS (U.S. Fish and Wildlife Service). 1999. Conservation guidelines for the valley elderberry longhorn beetle. United States Department of the Interior. Sacramento Fish and Wildlife Office. July.

USFWS. (U.S. Fish and Wildlife Service). 2004. Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the California Tiger Salamander; and Special Rule Exemption for Existing Routine Ranching Activities; Final Rule. 50 CFR 17. Federal Register, August 4, 2004.

USFWS (U.S. Fish and Wildlife Service). 2005. Recovery plan for vernal pool ecosystems of California and Southern Oregon. Region 1. Portland, Oregon.

USFWS (U.S. Fish and Wildlife Service). 2016. Online query of the IPaC (Information for Planning and Conservation) resource database, available at https://ecos.fws.gov/ipac. Queried on June 27, 2016.

U.S. Bureau of Reclamation (Reclamation). 2008. Biological Assessment on the continued long-term operations of the Central Valley Project and the State Water Project. U.S. Department of the Interior. Bureau of Reclamation. Mid-Pacific Region. Sacramento, California. August.

CALIFORNIA Water Boards

Edmund G. Brown Jr.
Governor

Matthew Rodriquez
Secretary for
Environmental Protection

State Water Resources Control Board

Jose Ramirez
Sacramento Regional County Sanitation District
10060 Goethe Road
Sacramento, CA 95827

Dear Mr. Ramirez:

DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR SACRAMENTO REGIONAL COUNTY SANITATION DISTRICT (DISTRICT); SOUTH SACRAMENTO COUNTY AGRICULTURE AND HABITAT LANDS RECYCLED WATER PROGRAM (PROJECT); SACRAMENTO COUNTY; CALIFORNIA CLEARINGHOUSE NO. 2015022067

We understand that the District is pursuing Clean Water State Revolving Fund (CWSRF) financing for this Project. As a funding agency and a state agency with jurisdiction by law to preserve, enhance, and restore the quality of California's water resources, the State Water Resources Control Board (State Water Board) is providing the following information on the EIR to be prepared for the Project.

The State Water Board, Division of Financial Assistance, is responsible for administering the CWSRF Program. The primary purpose for the CWSRF Program is to implement the Clean Water Act and various state laws by providing financial assistance for wastewater treatment facilities necessary to prevent water pollution, recycle water, correct nonpoint source and storm drainage pollution problems, provide for estuary enhancement, and thereby protect and promote health, safety and welfare of the inhabitants of the state. The CWSRF Program provides low-interest funding equal to one-half of the most recent State General Obligation Bond Rates with a 30-year term. Applications are accepted and processed continuously. Please refer to the State Water Board's CWSRF website at: www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/index.shtml. 2-1

The CWSRF Program is partially funded by the United States Environmental Protection Agency and requires additional "California Environmental Quality Act (CEQA)-Plus" environmental documentation and review. Three enclosures are included that further explain the CWSRF Program environmental review process and the additional federal requirements. For the complete environmental application package please visit: http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/srf_forms.shtml. The State Water Board is required to consult directly with agencies responsible for implementing federal environmental laws and regulations. Any environmental issues raised by federal agencies or their representatives will need to be resolved prior to State Water Board approval of a CWSRF financing commitment for the proposed Project. For further information on the CWSRF Program, please contact Mr. Ahmad Kashkoli, at (916) 341-5855.

It is important to note that prior to a CWSRF financing commitment, projects are subject to provisions of the Federal Endangered Species Act (ESA), and must obtain Section 7 clearance from the United States Department of the Interior, Fish and Wildlife Service (USFWS), and/or the United States Department of Commerce National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) for any potential effects to special-status species.

Please be advised that the State Water Board will consult with the USFWS, and/or the NMFS regarding all federal special-status species that the Project has the potential to impact if the Project is to be financed by the CWSRF Program. The District will need to identify whether the Project will involve any direct effects from construction activities, or indirect effects such as growth inducement, that may affect federally listed threatened, endangered, or candidate species that are known, or have a potential to occur in the Project site, in the surrounding areas, or in the service area, and to identify applicable conservation measures to reduce such effects.

In addition, CWSRF projects must comply with federal laws pertaining to cultural resources, specifically Section 106 of the National Historic Preservation Act (Section 106). The State Water Board has responsibility for ensuring compliance with Section 106, and must consult directly with the California State Historic Preservation Officer (SHPO). SHPO consultation is initiated when sufficient information is provided by the CWSRF applicant. If the District decides to pursue CWSRF financing, please retain a consultant that meets the Secretary of the Interior's Professional Qualifications Standards (http://www.nps.gov/history/local-law/arch_stnds_9.htm) to prepare a Section 106 compliance report. 2-1 cont'd

Note that the District will need to identify the Area of Potential Effects (APE), including construction and staging areas, and the depth of any excavation. The APE is three-dimensional and includes all areas that may be affected by the Project. The APE includes the surface area and extends below ground to the depth of any Project excavations. The records search request should extend to a ½-mile beyond project APE. The appropriate area varies for different projects but should be drawn large enough to provide information on what types of sites may exist in the vicinity.

Other federal environmental requirements pertinent to the Project under the CWSRF Program include the following (for a complete list of all federal requirements please visit: http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/docs/forms/application_environmental_package.pdf):

A. An alternative analysis discussing environmental impacts of the project in either the CEQA document (Negative Declaration, Mitigated Negative Declaration or Environmental Impact Report) or in a separate report.

B. A public hearing or meeting for adoption/certification of all projects except for those with little or no environmental impacts.

C. Compliance with the Federal Clean Air Act: (a) Provide air quality studies that may have been done for the Project; and (b) if the Project is in a nonattainment area or attainment area subject to a maintenance plan; (i) provide a summary of the estimated emissions (in tons per year) that are expected from both the construction and operation of the Project for each federal criteria pollutant in a nonattainment or maintenance area, and indicate if the nonattainment designation is moderate, serious, or severe (if applicable); (ii) if emissions are above the federal de minimis levels, but the Project is sized to meet only the needs of current population projections that are used in the approved State Implementation Plan for air quality, quantitatively indicate how the proposed capacity increase was calculated using population projections.

D. Compliance with the Coastal Zone Management Act: Identify whether the Project is within a coastal zone and the status of any coordination with the California Coastal Commission.

E. Protection of Wetlands: Identify any portion of the proposed Project area that should be evaluated for wetlands or United States waters delineation by the United States Army Corps of Engineers (USACE), or requires a permit from the USACE, and identify the status of coordination with the USACE. 2-1 cont'd

F. Compliance with the Farmland Protection Policy Act: Identify whether the Project will result in the conversion of farmland. State the status of farmland (Prime, Unique, or Local and Statewide Importance) in the Project area and determine if this area is under a Williamson Act Contract.

G. Compliance with the Migratory Bird Treaty Act: List any birds protected under this act that may be impacted by the Project and identify conservation measures to minimize impacts.

H. Compliance with the Flood Plain Management Act: Identify whether or not the Project is in a Flood Management Zone and include a copy of the Federal Emergency Management Agency flood zone maps for the area.

I. Compliance with the Wild and Scenic Rivers Act: Identify whether or not any Wild and Scenic Rivers would be potentially impacted by the Project and include conservation measures to minimize such impacts.

Following are specific comments on the District's draft EIR:

1. Farmland impacts. Please contact Dwayne Coffey of the USDA Natural Resources Conservation Service Elk Grove Service Center at (916) 714-1104 ext. 108. If applicable, please coordinate the completion of Form AD-1006 for the Project. If any additional mitigation/conservation measures are recommended provide a copy to the State Water Board and consider adopting these measures to reduce impacts. 2-2

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2. Mitigation Measure HYD-4 will be implemented to reduce the effects of discharge reduction, which demonstrates a potential impact to aquatic and associated riparian species protected by the federal ESA. Please provide supporting documentation or studies that demonstrate how potential take was determined for the incremental discharge reductions. 2-3

---

3. Please specify any water quality-related recommendations made from the Design-Level Geotechnical Evaluation for unstable soils areas, and demonstrate compliance. 2-4

2-5 4. Please provide any comments or analysis provided by resource agencies (such as the USFWS or the California Department of Fish and Wildlife) regarding the agreement for recycled water in the Stone Lakes NWR, and related to water discharge reductions to reservoirs and/or streams.

2-6 5. Please discuss the cumulative effects of discharge changes in the hydrologic area.

2-7 Please provide us with the following documents applicable to the proposed Project following the District's CEQA process: (1) one copy of the draft and final EIR, (2) the resolution certifying the EIR and making CEQA findings, (3) all comments received during the review period and the District's response to those comments, (4) the adopted Mitigation Monitoring and Reporting Program (MMRP), and (5) the Notice of Determination filed with the Sacramento County Clerk and the Governor's Office of Planning and Research, State Clearinghouse. In addition, we would appreciate notices of any hearings or meetings held regarding environmental review of any projects to be funded by the State Water Board.

Thank you for the opportunity to review the District's draft EIR. If you have any questions or concerns, please feel free to contact me at (916) 341-6983, or by email at Cedric.Irving@waterboards.ca.gov, or contact Ahmad Kashkoli at (916) 341-5855, or by email at AKashkoli@waterboards.ca.gov.

Sincerely,

Cedric Irving
Environmental Scientist

Enclosures (3)

1. Clean Water State Revolving Fund Environmental Review Requirements
2. Quick Reference Guide to CEQA Requirements for State Revolving Fund Loans
3. Basic Criteria for Cultural Resources Reports

cc: State Clearinghouse
(Re: SCH# 2015022067)
P.O. Box 3044
Sacramento, CA 95812-3044

Ramirez. Jose (SDA)

From: Sheya, Tanya@Wildlife <Tanya.Sheya@wildlife.ca.gov>
Sent: Monday, August 22, 2016 2:59 PM
To: Ramirez. Jose (SDA)
Cc: Baer, Isabel@Wildlife; Wildlife R2 CEQA; Mulloy, Lauren@Wildlife; McKibbin, Chris@Wildlife; Cantrell, Scott@Wildlife; Amrhein, Brandon@Wildlife; Starr, Jim@Wildlife
Subject: RE: Comments on the Draft EIR for the South Sacramento County Agriculture & habitat Lands Recycled Water Program

Dear Mr. Ramirez,

The California Department of Fish and Wildlife (CDFW) received and reviewed the Draft EIR for the South Sacramento County Agriculture & habitat Lands Recycled Water Program pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines. Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW's Role

CDFW is California's Trustee Agency for fish and wildlife resources, and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources. 3-1

CDFW is also submitting comments as a Responsible Agency under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required. CDFW also administers the Native Plant Protection Act, Natural Community Conservation Program, and other provisions of the Fish and Game Code that afford protection to California's fish and wildlife resources.

Project Description

The proposed Project would deliver up to approximately 33,000 acre-feet per year of Title 22 disinfected tertiary treated recycled water to about 16,000 acres of irrigated lands in southern Sacramento County for agricultural and urban landscape uses and to the Stone Lakes National Wildlife Refuge. At full implementation of all project and program elements, the proposed Project could also provide an additional 17,000 acre-feet per year of recycled water for groundwater recharge and for wintertime irrigation, for a total recycled water delivery of up to 50,000 acre-feet per year, which equates to an annualized average of almost 45 million gallons per day (mgd), with seasonal deliveries varying from 24 to 70 mgd. 3-2

CDFW offers the comments and recommendations below to assist Lead Agency in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. CDFW is primarily concerned with the project impacts to aquatic resources and giant garter snake (*Thamnophis gigas*).

3-3

Giant Garter Snake

The EIR states that the giant garter snake has potential to occur within the project boundaries and may be affected by the project. Giant garter snake is listed as a threated species under CESA and as such it is afforded full protection under the act. It is unlawful to take a State-listed endangered or threatened species (Fish & G. Code §2050 et seq.). Take is defined as "hunt, pursue, catch, capture or kill or attempt to hunt, pursue, catch, capture or kill" (Fish & G. Code §86). CESA take

authorization, should be obtained if the proposed project has the potential to result in take of a State-listed plant or wildlife species and if the project occurs before the completion of the South Sacramento Habitat Conservation Plan.

Issuance of a CESA permit is subject to CEQA documentation; therefore the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the proposed Project will impact CESA listed species, early consultation is encouraged, as significant modification to the proposed Project and mitigation measures may be required in order to obtain a CESA permit. A CESA permit may only be obtained if the impacts of the authorized take of the species are minimized and fully mitigated and adequate funding has been ensured to implement the mitigation measures. CDFW may only issue a CESA permit if the CDFW determines that issuance of the permit does not jeopardize the continued existence of the species. CDFW will make this determination based on the best scientific information available, and shall include consideration of the species' capability to survive and reproduce, including the species known population trends and known threats to the species. Issuance of a CESA permit may take up to 180 days from receipt of an application from the applicant.

3-3 cont'd

Due to the likely significant adverse effects to giant garter snake, the Department recommends habitat replacement in the form of payment of the fee to a CDFW-approved mitigation back, or fee title acquisition with a conservation easement to protect similar or higher quality giant garter snake habitat.

Anadromous Fish

Although the EIR proposes Mitigation Measure HYD-4 to reduce impacts to movement or reproduction of sensitive or important fish species
in the Sacramento River or Delta region, CDFW is still concerned about the impacts to anadromous fisheries populations cause by the discharge of water to the Stone Lakes NWR. The Department recommends that during dry years, water discharge flows from Stone Lakes into Snodgrass slough are maintained as natural as possible. Furthermore, the Department recommends that the District, provides some flexibility or maintains the ability to release water into the Sacramento River during drought periods.

3-4

General

The proposed project will have an impact to fish and/or wildlife habitat and should be evaluated in such a manner to reduce its impacts to biological resources. Assessment of fees under Public Resources Code §21089 and as defined by FGC §711.4 is necessary. Fees are payable by the project applicant upon filing of the Notice of Determination by the lead agency.

3-5 Pursuant to Public Resources Code §21092 and §21092.2, the Department requests written notification of proposed actions and pending decisions regarding the proposed project. Written notifications shall be directed to: California Department of Fish and Wildlife North Central Region, 1701 Nimbus Road, Rancho Cordova, CA 95670.

Thank you for considering our concerns for the proposed project and providing the opportunity to comment on the MND. I am available for consultation regarding biological resources and strategies to minimize impacts. If you have questions please contact me by e-mail at Tanya.Sheya@wildlife.ca.gov or by phone at (916) 358-2953.

Sincerely,

Tanya Sheya
Environmental Scientist

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE

North Central Region | Habitat Conservation
1701 Nimbus Road | Rancho Cordova, CA 95670
Phone 916.358.2953 | Fax 916.358.2912
Tanya.Sheya@wildlife.ca.gov

Ramirez. Jose (SDA)

From: Buffenbarger, Jacob@DOT <Jacob.Buffenbarger@dot.ca.gov>
Sent: Monday, August 22, 2016 1:33 PM
To: Ramirez. Jose (SDA)
Cc: Scott Morgan
Subject: DEIR for the South Sacramento County Agriculture and Habitat Lands Recycled Water Program - Caltrans Comments

Mr. Jose Ramirez,

This email will serve as Caltrans District 3's comments on Sacramento Regional County Sanitation District's DEIR for the South Sacramento County Agriculture and Habitat Lands Recycled Water Program, SCH #2015022067.

Caltrans previously commented on the project's NOP on March 23, 2015.

After reviewing this DEIR, we have determined that it successfully incorporated all of our comments from the aforementioned letter. Thank you for your cooperation in these matters. 4-1

We look forward to working with you in the future. Please keep us updated with any project related developments.

Please contact me with any questions.

Thank you,

Jacob Buffenbarger
Transportation Planner
Caltrans District 3 - Division of Planning and Local Assistance
Office: (916) 263-1625
Mobile: (415) 747-9938
Email: Jacob.Buffenbarger@dot.ca.gov

***Caltrans Mission**: Provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability.*

***Caltrans Vision:** A performance-driven, transparent, and accountable organization that values its people, resources and partners, and meets new challenges through leadership, innovation, and teamwork.*

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

August 23, 2016

Jose Ramirez
Sacramento Regional Sanitation District
10060 Goethe Road
Sacramento, CA 95827-3553

Subject: Sacramento Regional County Sanitation District South Sacramento County Agriculture & Habitat Lands Recycled Water Program
SCH#: 2015022067

Dear Jose Ramirez:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on August 22, 2016, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

5-1

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearimghouse

Enclosures
cc: Resources Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2015022067
Project Title Sacramento Regional County Sanitation District South Sacramento County Agriculture & Habitat Lands Recycled Water Program
Lead Agency Sacramento Regional Sanitation District

Type EIR Draft EIR

Description The Sacramento Regional County Sanitation District proposes to provide Title 22 disinfected tertiary treated recycled water for irrigation and groundwater recharge in the southern portion of Sacramento County and to the Stone Lakes National Wildlife Refuge managed wetlands.

Lead Agency Contact

Name Jose Ramirez
Agency Sacramento Regional Sanitation District
Phone 916 879 6059 **Fax**
email
Address 10060 Goethe Road
City Sacramento **State** CA **Zip** 95827-3553

Project Location

County Sacramento
City Elk Grove, Galt
Region
Lat / Long 38° 26' 52.59" N / 121° 27' 45.56" W
Cross Streets
Parcel No. Regional
Township 7N **Range** 4E **Section** 23 **Base** MD

Proximity to:

Highways I-5 and SR 99
Airports Franklin Field, Borges Clarksbur
Railways UPRR
Waterways Sacramento River, Laguna Creek, Delta, Stone Lakes
Schools multiple
Land Use Regional project with varied land use. Rural, ag land.

Project Issues Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Growth Inducing; Landuse; Cumulative Effects; Aesthetic/Visual; Forest Land/Fire Hazard; Economics/Jobs; Sewer Capacity

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 2; Department of Parks and Recreation; Department of Water Resources; Caltrans, District 3 S; Regional Water Quality Control Bd., Region 5 (Sacramento); State Water Resources Control Board, Division of Drinking Water, District 9; State Water Resources Control Board, Divison of Financial Assistance; Native American Heritage Commission

Date Received 07/08/2016 **Start of Review** 07/08/2016 **End of Review** 08/22/2016

Note: Blanks in data fields result from insufficient information provided by lead agency.

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

August 24, 2016

Jose Ramirez
Sacramento Regional Sanitation District
10060 Goethe Road
Sacramento, CA 95827-3553

Subject: Sacramento Regional County Sanitation District South Sacramento County Agriculture & Habitat Lands Recycled Water Program
SCH#: 2015022067

Dear Jose Ramirez:

The enclosed comment (s) on your Draft EIR was (were) received by the State Clearinghouse after the end of the state review period, which closed on August 22, 2016. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document. 5-2

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project.

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (2015022067) when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

16 August 2016

Jose Ramirez
Sacramento Regional County Sanitation District
10060 Goethe Road
Sacramento, CA 95827

CERTIFIED MAIL
91 7199 9991 7035 8422 2737

COMMENTS TO REQUEST FOR REVIEW FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, SOUTH SACRAMENTO COUNTY AGRICULTURE & HABITAT LANDS RECYCLED WATER PROGRAM PROJECT, SCH# 2015022067, SACRAMENTO COUNTY

Pursuant to the State Clearinghouse's 8 July 2016 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Draft Environment Impact Report* for the South Sacramento County Agriculture & Habitat Lands Recycled Water Program Project, located in Sacramento County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38. 6-1

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases,

the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

6-1 cont'd

For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website: http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/.

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Policy is available on page IV-15.01 at: http://www.waterboards.ca.gov/centralvalleywater_issues/basin_plans/sacsjr.pdf

In part it states:

> *Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.*
>
> *This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.*

6-2

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan

6-3

(SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml. 6-3 cont'd

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process. 6-4

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at: 6-5
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water 6-6

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

6-6 cont'd

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

6-7

Waste Discharge Requirements – Discharges to Waters of the State

If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

6-8

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

6-9

For more information regarding the Low Risk General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2013-0145_res.pdf

6-9 cont'd

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml; or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.

6-10

2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100**. Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently $1,084 + $6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

6-11

6-11 cont'd

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

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NPDES Permit

6-12

If the proposed project discharges waste that could affect the quality of the waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit.

For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit3.shtml

If you have questions regarding these comments, please contact me at (916) 464-4644 or Stephanie.Tadlock@waterboards.ca.gov.

Stephanie Tadlock

Stephanie Tadlock
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

Department of Water Resources
Michael L. Peterson, Director

SACRAMENTO COUNTY
WATER AGENCY

Including service to the Cities of
Elk Grove and Rancho Cordova

August 17, 2016

Jose Ramirez, Project Manager
Sacramento Regional County Sanitation District
10060 Goethe Road
Sacramento, CA 95827

Dear Mr. Ramirez,

The Sacramento County Water Agency (SCWA) is pleased to review the South Sacramento County Agriculture and Habitat Lands Recycle Water Program Draft Environmental Impact Report and appreciates the opportunity to comment. SCWA supports recycled water use in the region and believes it is an important component to sustaining water supplies in this region, long term. SCWA is a signatory of the Water Forum Agreement and has heavily invested in conjunctive use, which includes surface water, ground water, and recycled water.

SCWA is a partner with Sacramento Regional County Sanitation District (Regional San) in delivering recycled water to the Phase 1 Demonstration Project, serving Laguna West, Lakeside, and Stone Lakes communities in the City of Elk Grove. Regional San and SCWA are also planned to partner in the Phase 2 Demonstration Project, anticipated to serve the communities of East Franklin and Laguna Ridge in the City of Elk Grove. Additionally, SCWA is developing a feasibility Study for recycled water use (Feasibility Study) in its service area. This Feasibility Study is being developed in collaboration with Regional San and will consider the South Sacramento County Agriculture and Habitat Lands Recycle Water Program (South County Ag Program) as a resource for the analysis. 7-1

The draft Environmental Impact Report raises several technical and policy issues. Our main concerns are in the following areas.

1. Acknowledge that Regional San's 2025 recycled water goal may not be enough for the Sacramento Region

Along with other existing projects, the South County Agriculture and Habitat Lands Recycled Water Program will meet Regional San's 2025 recycled water goal. It is the hope of SCWA that although Regional San will meet this goal Regional San will continue to be partners with SCWA while SCWA explores the feasibility of other uses for recycled water. SCWA wants to continue to receive Regional San support for additional uses of recycled water even though Regional San's recycled water use goal is met.

2. Evaluate impacts to the Freeport Regional Water Project

The joint SCWA/East Bay Freeport Regional Water Project intake structure is approximately 7,000 feet upstream of the Regional San outfall in the Sacramento River. The impact to the structure of decreased water from the outflow of Regional San needs to be described such as any effect on a "reverse flow" scenario that could adversely affect the ability to operate the intake structure. 7-2

3. Quantify benefits of recharging the groundwater basin from the diluent wells

7-3 SCWA is concerned about using diluent wells to blend recycled water to recharge the groundwater basin. The analysis shows 88% of the recycled water used for agricultural irrigation increases stream flows over the long term. This analysis should be expanded to quantify the benefits using the operation of the diluent wells, which will use 5,000 Acre Feet per Year (AFY) of recycled water and 3,400 AFY of groundwater. Ultimately, groundwater should not be pumped to directly increase streamflows.

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4. Evaluate groundwater quality from recycle water use in agricultural irrigation

7-4 SCWA is concerned about groundwater quality in the Basin. Potential groundwater quality on the agricultural land, crops, and biological systems from recycled water use in agricultural irrigation is not covered. Special attention should be paid to TDS, Nitrates, phosphorous, and constituents of emerging concern. The vast majority of the recycled water use in this project will be used for Agricultural Irrigation and potential water quality impacts in the groundwater basin due to this activity should be mitigated. The Hydrology and Water Quality mitigation measure HYD1e should also be expanded to include deep percolation of agricultural irrigation water.

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5. Analyze all areas where recycle water does not meet phosphorous testing requirements, not just the Stone Lakes National Wildlife Refuge

If the recycled water does not meet the United States Fish and Wildlife Service Rapid Assessment test for phosphorous, there could be potential issues with runoff water from agricultural fields or to the Cosumnes River. The water quality discussion should expand to other areas outside of the Stone Lakes National Wildlife Refuge.

7-5 Thank you again for the opportunity to comment on the draft EIR. We look forward to working with Regional San on water recycling. Recycled water is a critical component of our water portfolio and we support your desire to champion recycled water for our region.

If you have any questions about these comments, we would be happy to discuss. Please call Mike Huot at (916) 874-7199.

Sincerely

Michael L. Peterson
Director of Department of Water Resources,
Acting as Agency Engineer
Sacramento County Water Agency

SACRAMENTO ENVIRONMENTAL COMMISSION

August 18, 2016

Jose Ramirez, Project Manager
Sacramento Regional County Sanitation District
10060 Goethe Road
Sacramento, CA 95827

Subject: Sacramento Environmental Commission (SEC) Comments on the Sacramento Regional County Sanitation District South Sacramento County Agriculture & Habitat Lands Recycled Water Program Draft Environmental Impact Report (Draft EIR) SCH#: 2015022067

Dear Mr. Ramirez,

The purpose of this correspondence is for the Sacramento Environmental Commission (SEC) to provide comments on the Sacramento Regional County Sanitation District South Sacramento County Agriculture & Habitat Lands Recycled Water Program Draft Environmental Impact Report (Draft EIR) SCH#: 2015022067. The SEC is a joint County/City appointed commission chartered in part, to recommend to County Departments upon request, measures which will promote environmental health. The Draft EIR presented for comment is one such request. We appreciate the opportunity to submit comments on the South Sacramento County Agriculture & Habitat Lands Recycled Water Program Draft EIR. 8-1

Background

The SEC supports your efforts to reduce treated wastewater discharges to surface waterways and the Sacramento-San Joaquin Delta and to increase wastewater recycling for beneficial use by local agricultural users and environmental resources. We recognize that this program could establish a precedent for future similar projects that may be proposed by SRCSD or other entities.

The SEC reviewed and discussed the contents of the Draft EIR at our August 15, 2016 public meeting and developed the following comments for your consideration.

We understand that components of the proposed project are yet to be defined and can only be addressed at a program level at this time. However, the components that are being addressed at a project-level of detail need to have a complete impact analysis and mitigation identified where appropriate.

8-1 cont'd

Biological Resources

We noted that the presence of biological resources found at the proposed new pump station and along the 250 foot-wide recycled water transmission pipeline area of potential effect (APE), has not been determined. There is no information explaining the location or area of habitat and associated species that are present in the APE. Therefore, while an impact to biological resources is identified as potentially significant, there is no discussion of the severity or magnitude of the potential impact to sensitive biological resources that may occur with project implementation.

8-2

Because the Draft EIR does not characterize the potential impacts to these biological resources, Mitigation Measures BIO-1a and BIO-1b are not sufficiently defined to determine if they are adequate to mitigate impacts to affected habitat and species. The Draft EIR has deferred the definition of these mitigation measures to a future date. Specifically, on page 3.5-31, the Draft EIR limits the implementation of Mitigation Measure BIO-1a to feasible efforts, while Mitigation Measure BIO-1b relies on unknown actions that may be required as part of future regulatory permit.

It is not known whether these measures will fully mitigate potential impacts, and therefore, cannot be relied upon as mitigation to conclude that a less-than-significant impact can be attained. At a minimum, it is recommended that mitigation performance standards be defined to determine the measures' effectiveness to mitigate impacts.

Hydrology and Water Quality

Our second comment is on the discussion of Hydrology and Water Quality impacts starting on page 3.10-24 of the Draft EIR. We noted that interference or changes to Central Valley Project (CVP and State Water Project (SWP) operations is identified as an impact threshold. Because of this impact threshold, Mitigation Measure HYD-4 is identified to avoid potential conflict and a significant effects.

8-3

The SEC concludes that this threshold is not appropriate because: 1) ongoing operations of the CVP and SWP are not environmental topics as defined by § 21060.5 of the California Environmental Quality Act (CEQA); and 2) the SRCSD is not obligated to continue treated wastewater discharges even if it were to jeopardize ongoing CVP and SWP operations.

If an cumulative environmental impact occurs as a result of continued CVP and SWP operations combined with the proposed reduced treated wastewater discharges, including impacts to water quality, aquatic species habitat, or conflicts with an applicable water quality control plan, it would be incumbent on the CVP and SWP to modify their operations accordingly, consistent with State Water Resources Control Board Decision 1485 and other requirements.

Therefore, Mitigation Measure HYD-4 may not be appropriate as a mandatory measure required to mitigate the identified conflict. In addition, this measure may set a precedence for future recycled water projects that reduce treated wastewater discharge to the Sacramento-San Joaquin River system.

However, if the SRCSD objective or policy is to avoid potential conflict with ongoing CVP and SWP operations, the SEC advises that the limits identified by Mitigation Measure HYD-4 could be achieved as a voluntary commitment and incorporated into the project description. Such a voluntary commitment would avoid establishing a precedent that may be imposed on future similar recycled water projects. 8-3 cont'd

The SEC appreciates the opportunity to submit these comments on the SRCSD South Sacramento County Agriculture & Habitat Lands Recycled Water Program Draft EIR. If you have any questions regarding these comments, please feel free to contact SEC Secretary Jill Koehn at (916) 875-8584.

Sincerely,

Richard Hunn

Richard Hunn, Chair
Sacramento Environmental Commission

Letter 9

SACRAMENTO LOCAL AGENCY FORMATION COMMISSION
1112 I Street, Suite 100 • Sacramento, CA 95814 • (916) 874-6458 • Fax (916) 874-2939

August 22, 2016 22

Jose Ramirez, Project Manager
Sacramento Regional County Sanitation District
10060 Goethe Road
Sacramento, CA 95827
(Via e-mail ramirezj@sacsewer.com)

Subject: South Sacramento County Agriculture & Habitat Lands Recycled Water Program - Draft Environmental Impact Report (SCH#215022067)

Dear Mr. Ramirez,

Thank you for providing the Draft Environmental Impact Report (DEIR) for the Sacramento Regional County Sanitation District (SRCSD) South Sacramento County Agriculture & Habitat Lands Recycled Water Program to the Sacramento Local Agency Formation Commission (LAFCo) for review and comment. As described in the DEIR, SRCSD proposes to provide Title 22 disinfected tertiary treated recycled water for irrigation and groundwater recharge in the southern portion of Sacramento County (South County) and to the Stone Lakes National Wildlife Refuge (NWR) managed wetlands.

We offer the following comments to clarify previous Commission proceedings in the project area.

Pages ES-4&5
The study area evaluated in the Feasibility Study encompasses approximately 15,000 acres in South Sacramento County, 18,000 acres in the Stone Lakes NWR, and 9,000 acres within the City of Elk Grove's former sphere of influence (SOI)2 area. 9-1

Footnote 2: Since completion of the Feasibility Study, the Local Agency Formation Commission (LAFCO) did not approve the City of Elk Grove's request for extension of its SOI.

Comment:
The discussion above should more clearly note the status of the earlier City of Elk Grove SOI amendment activity with Sacramento LAFCo.

The City of Elk Grove was incorporated in 2000. The current Sphere of Influence (SOI) is coterminous with the City limits. In 2008, the City of Elk Grove submitted an application for a Sphere of Influence Amendment to add approximately 7,869 acres, which included a portion of this subject territory. However, the City *withdrew* its application in 2013.

Page 1-6
1.1.3 The study area evaluated in the Feasibility Study encompasses approximately 15,000 acres in South Sacramento County, 18,000 acres in the Stone Lakes NWR, and 9,000 acres within the City of Elk Grove's formerly proposed sphere of influence (SOI)4.
Footnote 4 Since completion of the Feasibility Study, the Local Agency Formation Commission did not approve the City of Elk Grove's request for extension of its SOI.

9-2

Comment:
The discussion above should more clearly note the status of the earlier City of Elk Grove activity with Sacramento LAFCo.

The City of Elk Grove was incorporated in 2000. The current Sphere of Influence (SOI) is coterminous with the City limits. In 2008, the City of Elk Grove submitted an application for a Sphere of Influence Amendment to add approximately of 7,869 acres, which included a portion of this subject territory. However, the City *withdrew* its application in 2013.

Page 1-14
Table 1-2: Responsible and Trustee Agencies and Coordination

Agency
Local Agency Formation Commission *(LAFCo~~O~~)*

9-3 **Type of Approval**
Regional San annexation of Service Area for recycled water, with service limited to recycled water supply.

Comment:
The SOI for SRCSD would be required to be amended prior to, or concurrently, with any annexation proposal.

Page 3.17-2
Housing
Household growth trends tend to mirror the population trends in Sacramento County. The entire County saw an increase in households by 13.3 percent between 2000 and 2010. Unincorporated Sacramento County's households were reduced by approximately 9,500 from 2000 to 2010 due to the annexations into Elk Grove and Rancho Cordova, an approximate 4.5 percent reduction. Elk Grove experienced the most growth with a 60.6 percent increase in households from 2000 to 2010 (Sacramento County 2013).

9-4

Comment

The reduction in unincorporated households may have more directly been affected by the *incorporation* of Elk Grove in 2000, and Rancho Cordova in 2003. Since incorporation, LAFCo approved the 2003 Elk Grove annexation of the existing Laguna West community, with an estimated population of 13,400. Since incorporation, LAFCo approved the 2009 Rancho Cordova annexation of the *uninhabited* Sunrise SOI area.

Please do not hesitate to contact me if there are any questions regarding our comments.

Thank you for the opportunity to review and provide comments regarding this innovative project.

SACRAMENTO LOCAL AGENCY FORMATION COMMISSION

Sincerely,

Donald Lockhart, AICP
Assistant Executive Officer
Sacramento LAFCo

Letter 10

Sacramento Central Groundwater Authority
Managing Groundwater Resources in Central Sacramento County

827 7th St, Rm 301
Sacramento, CA 95814

Tel: (916) 874-6851
Fax: (916) 874-5698
www.scgah2o.org

August 24, 2016

To: José R. Ramírez, P.E.
Senior Civil Engineer
Regional San | Policy and Planning Department
10060 Goethe Road, Sacramento, CA 95827

Dear Mr. Ramirez:

Thank you for the opportunity to review and comment on the South Sacramento County Agriculture & Habitat Lands Recycled Water Program.

As a general comment it is suggested that rather than referring to the Central Groundwater Basin (or Central Sacramento Ground Water Basin) the report identify the groundwater basin as the South American Subbasin as defined in State Department of Water Resources Bulletin 118 (Basin 5-21.65). Identification as the South American Subbasin is consistent with the nomenclature of the Sustainable Groundwater Management Act of 2014 and this is how the "Central Basin" will be referred to in the future. 10-1

The section on Potential Recharge Area (Section 2.2.3 beginning on p. 2-11) states that an up to 560-acre groundwater recharge area would be included as part of the project. This recharge area is said to have a recharge capacity of 10,000 acre-feet per year. This capacity is comprised of 5,000 acre-feet per year of recycled water, about 3,400 acre-feet per year of diluent water extracted from the groundwater basin with an additional 1,600 acre-feet of diluent water coming from precipitation (assuming a 10,000 acre-foot capacity). 1,600 acre-feet of precipitation over the proposed 560-acre groundwater recharge area seems to be unreasonable in this area. This section also mentions that dilution requirements range from 20 to 50 percent. If 10-2

10-2 cont'd

5,000 acre-feet were the amount to be recharged then the diluent water requirement would only be between 1,000 and 2,500 acre-feet rather than the 3,400 acre-feet suggested.

10-3

In Section 2.3.1 the draft EIR states that the proposed Project would reduce discharge to the Sacramento River by up to 50,000 AFY at full program implementation. The draft EIR further states that, "Once the groundwater basin reaches equilibrium the Project is expected to increase streamflows by about 45,000 AFY with implementation of wintertime irrigation." This same section states that, "The average annual recycled water delivered to potential irrigation customers under Alternative 1... at full program implementation (including winter irrigation) would be up to 44,500 AFY." In the context of the Project what does "equilibrium" mean relative to the groundwater basin? Additionally, these statements seem to imply that recharge of the groundwater basin from the Cosumnes and Sacramento River would be reduced by 45,000 AFY, offsetting the projected reduction of discharge to the Sacramento River. It is assumed that this condition occurs when the aforementioned state of groundwater basin equilibrium occurs.

10-4

Figure 3.10-5 seems to convey this information relative to the projected increase in groundwater storage. What is not clear from this figure is when this state of equilibrium occurs. It is also not clear as to the extent of the benefit (i.e., how much of this benefit extends into the Cosumnes Subbasin – see Figure 3.10-6). See also Section 3.5.4 – Impact Analysis, pages 3.5-51 and 3.5-52.

10-5

10-6

Section 2.3.3 describes a monitoring program related to the Groundwater Basin Health and Salt and Nutrient Monitoring. It is recommended that the design of this program be done in close coordination with the Sacramento Central Groundwater Authority and in accordance with any requirements set forth by the Groundwater Accounting Framework.

10-7

Section 3.10.1 Environmental Setting suggests that the South American Subbasin is classified as a high priority basin under the California Statewide Groundwater Elevation Monitoring (CASGEM) Basin Prioritization solely because of the level of groundwater pumping (see p. 3.10-9). According to the California Water Code this prioritization is based on eight criteria: 1) Overlying population, 2) Projected growth of overlying population, 3) Public supply wells, 4) Total wells, 5) Overlying irrigated acreage, 6) Reliance on groundwater as the primary source of water, 7) Impacts on the

groundwater; including overdraft, subsidence, saline intrusion, and other water quality degradation; and 8) Any other information determined to be relevant by the Department.

10-7 cont'd

Section 3.10.1 also indicates that, "SCGA is considering developing a groundwater banking project in the future." SCGA is not developing a groundwater banking project but is developing a program that describe the operational requirements for banking projects proposed by agencies such as Regional San.

10-8

If you should have any questions please feel free to contact me at 916-874-5039.

Darrell K. Eck
Executive Director

August 19, 2016

Jose Ramirez
Project Manager
Sacramento Regional County Sanitation District (Regional San)
10060 Goethe Road
Sacramento, CA 95827
e-mail: ramirezj@sacsewer.com

Sent via E-mail

Subject: Cosumnes Coalition Comments on the Draft Environmental Impact Report for the Sacramento Regional County Sanitation District's South County Agriculture and Habitat Lands Recycled Water Project

Dear Mr. Ramirez:

Trout Unlimited (TU) and its partners in the Cosumnes Coalition appreciate this opportunity to comment on Regional San's South County Agriculture and Habitat Lands Recycled Water Project. The Cosumnes Coalition is a group of partners formed to restore and preserve the ecological, cultural, recreational, municipal, and agricultural values of the Cosumnes Watershed. The partners include Trout Unlimited, American River Conservancy, Cosumnes Culture and WaterWays, Fishery Foundation, and Landmark Environmental Consultants. We are very interested in the proposed project given the well-defined impacts of ground water levels on both the timing of the re-connection of flows of the Cosumnes River with the Mokelumne River, and the groundwater dependent ecosystems (GDE's) such as riparian forests.

The Coalition supports the Recycled Water Project and looks forward to working with District staff and other parties to implement the Project along with other projects that together provide tangible and durable benefits to the fishery of the Cosumnes River and the riparian forests of the lower Cosumnes watershed. Our primary concern is that a casual reader of the DEIR and other project documentation may be left with the impression that the Project alone will provide these benefits. We believe this not to be the case as detailed below, and we encourage District staff to work with other parties, including the Sacramento County Water Agency (SCWA), Sacramento County Groundwater Authority (SCGA), and other Groundwater Sustainability Agencies (GSA's) forming in the Cosumnes Sub-Basin, to identify the package of measures necessary to assure the health of the affected GDE's and to advance those measures in parallel so that the benefits of each can be fully realized. 11-1

Ecological Setting

Historically, the Cosumnes River was a "gaining" river – it received a contribution to its flow from groundwater. Ground water levels along some of its course were higher than the low point of 11-2

the channel. Over the past 80 years, the river has made the transition from a "gaining" to a "losing" river, as the ground water table has steadily declined as a result of withdrawals for agricultural and municipal use. Today, the ground water table under the river itself is so low that the river is "disconnected" through most of the reach that flows through alluvial sediments. Sediments underlying the river itself are dry - no longer saturated with water.

Lowered groundwater levels pose two fundamental ecological challenges. First, disconnection has substantially altered the timing of flow in the river. Because early fall flows in the river from the first rains are now largely absorbed by the dry alluvium, the river connects to the tidal zone of the lower river within the Delta later in time than it did historically. Similarly, loss of flow to ground water means that the river ceases to experience connected flow earlier in the late spring/early summer. This matters for the salmon fishery of the Cosumnes because in-migrating adults require flows beginning in the October-November period to reach their spawning areas, and out-migrating smolts require flows through the late spring in order to reach the ocean.

11-2 cont'd

Secondly, ground water pumping has substantially lowered the water table under the riparian forests of the lower Cosumnes watershed, leading to seasonal soil moisture conditions that are drier than they were historically and inhibiting the "recruitment" (survival to maturity) of seedling valley oaks and other riparian forest species. While this issue has not been sufficiently studied to reach definitive conclusions, there are observed signs of stress within the riparian forest community and expert scientists have identified this as a major concern.

Limits of the proposed project and the need for additional activities

We are concerned that the DEIR and companion documents overstate the actual benefits of the project on its own. As examples, the DEIR states that the project will: "Improve flows in the Cosumnes River through restoration of groundwater levels along the corridor from Highway 99 to I-5" (pg.1-4); "benefits to endangered species in the delta ecosystem and its tributaries, including the Cosumnes River, Sacramento River and Mokelumne River" (pg.1-4); "result in substantially higher groundwater levels and increased Cosumnes River flows (RMC, 2015)" (pg. 1-9); "Enhanc[e] the riparian corridor" (pg. 1-9); "Reduc[e] streamflow losses ... during critical fall periods ..." (pg. 1-9). Similarly, the Water Storage Investment Program Concept Paper states that the project "would raise groundwater levels to better support groundwater dependent ecosystems (GDEs) along the Cosumnes River" and "Enhances streamflow" (pg. 2).

These statements (and others) encourage the reader to conclude that the project on its own will provide broader benefits for native fish than the project in isolation would actually deliver. It is important to recognize that because of the river's disconnection from groundwater, and because the project will not reduce the linear extent of disconnection, project benefits for stream flow will be limited in both the spring and fall. What the project will accomplish – importantly – is to establish a foundation for additional actions that will benefit the fishery, and it is likely that these additional actions can be accomplished with less dollar cost and less allocation of water with the project in place.

11-3

Water supply planners in the region have long recognized the problems caused by groundwater overdraft in and adjacent to the river corridor; the issue was extensively assessed during environmental reviews of the Master Plan and specific new facilities associated with Sacramento County's "Zone 40" water supply entity. Stakeholder negotiations at the time, hosted by the Water Forum, resulted in an agreement for improvements centered on the concept of "flow augmentation," the introduction of water to the Cosumnes River at the Folsom South Canal crossing to "pre-wet" the channel and enable the more rapid establishment of connected natural flow in the mid-fall

period. A detailed Memorandum of Agreement executed in 2005 committed the three signatory parties – the Sacramento County Water Agency, The Nature Conservancy, and the South Sacramento County Agricultural Water Authority (SSCAWA) – to implementing the flow augmentation program and an associated broad research and monitoring program. The MOA commitments were explicitly envisioned as mitigating for the Water Forum's decision to increase to 273,000 acre-feet per year in order to serve additional urban development.

Unfortunately, except for a trial flow augmentation in October 2005, the MOA has not been implemented, although it has continued to be cited in environmental documents for new urban growth and water supply as an ongoing mitigation measure. Despite this failure, the Coalition is hopeful that the 2005 MOA will provide a template for future actions to address impacts on GDE's as the SCWA, SCGA, SSCAWA, and Cosumnes Sub-Basin GSA's move forward to meet their responsibilities under the Sustainable Groundwater Management Act (SGMA). Because the MOA is a key component of the Water Forum agreements that led to the creation of SCGA, we assume that both SCGA and SCWA will welcome the opportunity to collaborate with Regional San on improvements for GDE's, despite a decade of delay. 11-3 cont'd

"Flow augmentation" remains, in our view, an essential strategy for improving conditions for native fish. We encourage Regional San staff to work with SCGA, SCWA, SSCAWA, and the Cosumnes GSA's to assure that the projects move forward in parallel, that they are fully coordinated, and that associated research, monitoring and adaptive management activities are effectively coordinated for maximum benefit.

With respect to the potential benefits of the Project for riparian forests, the Coalition concurs that the project provides significant potential benefits. It would be helpful if the EIR presented this issue with more supporting detail, including locational maps for the forest blocks listed as potentially benefitting and before-and-after groundwater elevation transects (analagous to figure 2-6 at pg. 2-19 for the river corridor itself) reflecting current conditions and modeled future conditions. This additional detail will help establish a foundation for a future comprehensive plan for research, monitoring and adaptive management focused on this important issue. 11-4

Specific recommendations

1. Project communications should acknowledge the benefits and limitations of the project, and identify the complimentary actions necessary to secure benefits to the fishery.

2. In the interest of complete information, include a discussion of how upstream actions by others, such as the flow augmentation described in the 2005 MOA, are necessary to realize significant benefits to Cosumnes salmon and other native fish. 11-5

Conclusion

The ecosystems of the Cosumnes watershed are of global significance, as reflected by the over $100 million in public investment in conservation and restoration since 1984. As entities within the Sacramento region contemplate major investments to implement SGMA and respond to increasingly strict water quality standards, it is important that they do so in a manner that is coordinated, comprehensive, based on best available science, and include the complementary objectives of groundwater banking and supporting GDE's. We look forward to continuing to work with you toward those ends.

Please direct correspondence to Melinda Frost-Hurzel at rhurzel@saber.net and Mike Eaton at michaelreaton@fastmail.com.

Respectfully submitted,

Melinda Frost-Hurzel
Cosumnes River Monitoring Coordinator
Trout Unlimited/Cosumnes Coalition

Mike Eaton
Cosumnes GDE Advisor
Trout Unlimited/Cosumnes Coalition

Cc: Terrie Mitchell, SRCSD
Cc: Kerrie Schmitz, SCWA
Cc: Darrell Eck, SCGA
Cc: Mike Wackman, SSCAWA
Cc: Isabel Baer, CDFW

Elena De Lacy
Stewardship Director
American River Conservancy

Kimberly Petree
Executive Director
Cosumnes Culture and WaterWays

Trevor Kennedy
Executive Director
Fishery Foundation of California

Karen Quidachay
President
Landmark Environmental Inc

Memorandum of Agreement for the Management for Water and Environmental Resources Associated with the Lower Cosumnes River

A Collaboration of the

Sacramento County Water Agency, The Nature Conservancy, and

Southeast Sacramento County Agricultural Water Authority

This Memorandum of Agreement is entered into among the Sacramento County Water Agency (SCWA), the Nature Conservancy (TNC), and the Southeast Sacramento County Agricultural Water Authority (SSCAWA), collectively referred to as the "Parties" or "Coalition Partners."

IT IS HEREBY AGREED By and Among the Parties, as follows:

1.0 Background

1.1 The Sacramento County groundwater system is part of the larger Sacramento Valley groundwater basin. Within Sacramento County three separate groundwater subbasins have been identified: North Area (area north of the American River), Central Area (roughly the area between the American and Cosumnes River), and South Area (generally the area south of the Cosumnes River). Historical groundwater use in each subbasin has resulted in the development of three regional cones of depression.

1.2 Sacramento County Water Agency was created by a special legislative act of the State of California to make water available for any beneficial use of lands or inhabitants within Sacramento County. The Sacramento County Water Agency Act provides SCWA the authority to establish groundwater management zones, in part, for the purpose of distributing surface water to replenish the groundwater basin and to stabilize groundwater levels. To date, SCWA's primary focus has been on the development of a comprehensive water management plan for the Central Area, which includes conservation and the conjunctive use of groundwater and surface water within Zone 40.

1.3 The Nature Conservancy has been a principal partner in the preservation of important riparian habitats, freshwater marsh and large tracts of valley oak woodland supported by the Cosumnes River through the establishment of the Cosumnes River Preserve. Habitat conservation strategies employed by TNC rely heavily upon long-term partnerships with farmers and ranches.

1.4 The Southeast Sacramento County Agricultural Water Authority includes as its members the Omochumne-Hartnell Water District, Galt Irrigation District and Clay Water

District. The SSCAWA, in partnership with TNC, is taking a leading role in developing and evaluating conjunctive use of surface water and groundwater in the South Area.

1.5 The Water Forum process brought together a diverse group of stakeholders to evaluate available water resources and the future water needs of the Sacramento Metropolitan area while protecting the American River. The process resulted in an agreement that was adopted by the participants. Through the Water Forum Agreement ("WFA") definitions of the sustainable yield for each geographic subbasin of the Sacramento County groundwater basin were developed. SCWA, TNC and SSCWA acknowledge that comprehensive water management plans for each subbasin must recognize the groundwater sustainable yield specified in the WFA.

1.6 The Sacramento County General Plan is a comprehensive statement of the goals and objectives of Sacramento County. The Conservation Element of the General Plan establishes as a major goal the management and protection of natural resources for the use and enjoyment of present and future generations while maintaining the long-term ecological health and balance of the environment. The Water Resources section of the Conservation Element addresses the County's objectives with respect to the use of groundwater and surface water for residential, commercial and agricultural purposes[1].

1.7 SCWA has taken a number of actions to implement the purposes of the WFA and the Sacramento County General Plan. These activities include but are not limited to: protecting the significant natural resources of the American River by participating with East Bay Municipal Utilities District ("EBMUD") in the development of the Freeport Regional Water Project, which will allow both SCWA and EBMUD to divert surface water from the Sacramento River; contracting for surface water supplies to be used conjunctively with groundwater; negotiating for the capture and use of remediated groundwater that would otherwise be lost to the groundwater basin; providing funding for the development of a South Sacramento Habitat Conservation Plan by Sacramento County; continuing participation in and support for the Central Sacramento County Groundwater Forum; performing extensive groundwater modeling to facilitate a more complete understanding of the groundwater basin, the interrelationships between subbasins and the relationship between groundwater and surface water, and the importance of the hydraulic connection with the larger river sources for the sustainability of the groundwater supply; and adoption of the Zone 40 groundwater management plan.

1.8 The SSCAWA has and continues to take the lead role in developing a groundwater management plan for the South Area. The activities undertaken by the SSCAWA include, but are not limited to: developing and adopting a groundwater management plan for the lands within the boundaries of the member districts; initiating the evaluation of potential groundwater recharge projects and potential local and regional partners for those projects; and

[1] While the broad goals and objectives of the 1993 General Plan are by and large applicable, the 1993 General Plan does not reflect updated information regarding the sustainable yield of the groundwater basins or the more specific objectives adopted as part of the WFA.

evaluating the possibility of expanding the existing Joint Powers Authority to include the City of Galt, Rancho Murieta Community Service District, Sloughhouse Resource Conservation District, and TNC to form a regional partnership for the management of groundwater, surface water and environmental resources in the South Area.

1.9 SCWA, TNC, and SSCAWA recognize the importance of the agricultural, fishery, riparian forest, and perennial marsh resources of the Cosumnes River corridor to meeting their respective goals in the Central and South subbasin areas. This MOA reflects those organizations' desire to work together to restore and/or sustain these values through the appropriate allocation and management of water within the Cosumnes River corridor and through ongoing research, monitoring, and adaptive management. The Parties further acknowledge through this MOA their support for the activities of SCWA that implement elements of a groundwater management plan for Zone 40 which lays the foundation for a broader, more integrated regional water management plan. The Parties further acknowledge the activities of the SSCAWA in implementing a surface water and groundwater conjunctive use program for the South Area.

2.0 Goals:

The goals of the MOA, are to restore and maintain key functions of the Cosumnes River corridor and to further conjunctive use within the Central and South Areas. These goals will be accomplished though the development of a groundwater – surface water conjunctive use program that provides for the long-term economic viability of the agricultural sector surrounding the Cosumnes River and its tributaries; that promotes the goals of providing a reliable and safe water supply within Zone 40; and that also incorporates natural resources management objectives along the Cosumnes River. The specific objectives of this program are described below. The Parties will coordinate their respective actions to ensure their compatibility with an integrated regional water management plan for the Central and South Areas.

2.1. The ecological objectives for the Cosumnes River include:

A. Maintain a viable Cosumnes salmon population by providing a pattern of fall flows that mimics historical conditions (prior to aquifer depletion).

B. Determine, through appropriate research, the soil moisture and groundwater conditions required to ensure regeneration and expansion of riparian forest (valley oaks and associated shrub and tree species); identify, through technical analyses including groundwater-surface water modeling, measures to achieve the desired conditions; and identify programs for implementing, monitoring, and adaptively managing these measures toward achievement of this objective.

C. Determine, through appropriate research, the seasonal water conditions required to sustain historic giant garter snake (GGS) population levels in the Badger Slough marshes; as appropriate, expand existing groundwater-surface water models and develop additional information about groundwater withdrawal impacts to these GGS

populations; identify programs for implementing, monitoring, and adaptively managing these measures toward achievement of this objective.

2.2. The objectives promoting a reliable and safe water supply within the Central Area and Zone 40 include:

A. Maintain groundwater elevations that result in a net benefit to groundwater users through implementation of Zone 40 Water Supply Master Plan;

B. Investigate the implementation of potential direct groundwater recharge programs and preserve opportunities for recharge in the vicinity of the Cosumnes River. Potential recharge programs could include the direct discharge of water to the Cosumnes River to recharge the aquifers underlying the Central Basin, injection wells, preservation of lands adjacent to Cosumnes River or spreading basins within the Cosumnes River floodplain; and

C. Implement a groundwater management plan for Zone 40 that allows for integrated regional management planning in the Central and South Areas to meet environmental needs and water demands.

2.3. The objectives providing for protection of groundwater resources, and the various water interests, in the South Area include:

A. Maintain groundwater elevations that result in a net benefit to groundwater users through the development and implementation of South Area conjunctive use program;

B. Obtaining supplemental surface water supplies that can be used to reduce groundwater pumping in targeted areas and/or provide for groundwater recharge by using natural features, constructed basins, or in-lieu irrigation exchanges or other mechanisms;

C. Evaluate the potential for direct groundwater recharge programs and preserve opportunities for recharge along the Cosumnes River and its tributaries. Potential recharge programs could include direct discharge to natural waterways to recharge the aquifers underlying the South Basin and the development, enhancement and protection of groundwater recharge areas including spreading basins within the Cosumnes River floodplain; and

D. Develop a governance structure that promotes the local control of surface and ground - water resources and the distinct interest of water users in the South Area while allowing for integrated regional management planning with the Central Area.

3.0 Program Elements:

The goals of this MOA will be accomplished, in part, through the following program elements.

3.1 Cosumnes River Flow Augmentation Project. The Parties assume that the most efficient way to restore historic fall flow patterns (necessary for upstream migration of Chinook salmon) is to add water in the early fall to pre-wet the Cosumnes River channel. While this program element would be targeted to flow augmentation, it would also achieve conjunctive use objectives and may contribute to achieving Objective 2.2.A. and 2.3.A. In discussion, the Parties have agreed that the source of water for the flow program will be the Aerojet settlement water released to the Cosumnes River channel from the Folsom-South Canal. However, this option is not intended to preclude other options as necessary or available.

3.2 Conjunctive Use. The Parties are committed to a conjunctive use program in Central and South Areas, focused on the Cosumnes River corridor and associated agricultural lands, and that assists in meeting environmental and water supply objectives (including Zone 40 requirements). As this program is being designed, the Parties will evaluate opportunities to advance program objectives by obtaining supplemental surface water supplies that can be used to reduce groundwater pumping in targeted areas and/or provide for groundwater recharge by using natural features, constructed basins, or in-lieu irrigation exchanges or other mechanisms. The WFA allows for the use of up to 35,000 ac-ft of water from the American River for use by south county agricultural interests. The WFA discussed 15,000 ac-ft of SMUD's CVP entitlement as currently available for either short-term or permanent transfer to south Sacramento County agricultural interests. The SMUD water will be the primary source of water considered for conjunctive use within the South Area, but will not preclude the development of other potential water supplies that could utilize the Folsom South Canal, the proposed Freeport Project, or be developed from available supplies on the Cosumnes River.

3.3. Reclaimed Water Reuse. The Parties are committed to maximizing the use of reclaimed water as a means of reducing existing groundwater pumping and maximizing the potential for habitat friendly agriculture in the Cosumnes River corridor.

A. Sacramento Regional County Sanitation District Recycled Water Program ("Title 22" water). The Parties agree that to minimize O&M and capital costs and maximize ecological benefits, it may be appropriate to dedicate a significant component of Title 22 water for use in the agricultural sector as supply for in-lieu recharge in coordination with both the Zone 40 and SSCAWA conjunctive use programs and in locations targeted for optimal benefit to the river corridor. The Parties agree to work with SRCSD to explore opportunities to use Title 22 water consistent with the objectives of this MOA.

B. The City of Galt Recycled Water Program. The City of Galt currently provides a portion of their treated effluent for irrigation of agricultural lands. As the City's population grows the City is evaluating alternatives for meeting increasingly stringent discharge requirements. The City has engaged both the SSCAWA and TNC to evaluate the potential of developing a zero discharge program where all effluent would be made available for agricultural irrigation and environmental purposes, such as wetlands.

The Parties agree to work with the City to explore opportunities to maximize the use of recycled water consistent with the objectives of this MOA.

3.4 Comprehensive Science and Monitoring Program. The Parties understand that a surface flow and groundwater monitoring program that provides "real-time" feedback is necessary to adaptively manage supplemental flow releases to the Cosumnes River for salmon migration and other groundwater recharge activities in south Sacramento County. In addition, the Science Program will:

A. Investigate the impacts of lowered groundwater levels on riparian forest health and develop measures to mitigate identified impacts;

B. Assess impacts of groundwater withdrawal on critical giant garter snake (GGS) habitats south of the Cosumnes River and develop measures to mitigate identified impacts;

C. Develop a basin-wide groundwater-monitoring network that provides reliable real-time data on groundwater conditions that can be used to monitor the effects of surface water and groundwater management activities to the regional groundwater aquifer; and

D. Continue investigation and model development of surface water – groundwater interactions in the South Area and particularly along the Cosumnes River and its tributaries, Badger and Laguna creeks.

3.5 The Parties understand the need for a mechanism through which the environment and water resource values of the Cosumnes River can be integrated with water supply planning and management actions (i.e. within the framework of governance now being developed for the Central Groundwater Basin) and agree to work together to achieve this objective. The Parties agree to inform each other of their respective actions to facilitate partnering opportunities.

3.6 An ***Integrated Regional Water Management Plan.*** The Parties agree that an IRWMP is the appropriate framework for integrating environmental protection and restoration with water supply, groundwater management, flood management, and conjunctive use objectives to accomplish the goals stated. The Parties will work together to develop an IRWMP that coordinates the activities in both the Central and South Areas and will also engage important additional entities such as Rancho Murieta, the City of Galt, and the Sloughhouse RCD. The IRWMP will identify objectives of each of the Parties and areas of common interest. Potential projects will be identified, along with the appropriate mix of local partners that could be forwarded for funding consideration by state or federal agencies.

3.7 A window for significant IRWMP funding through Proposition 50 is likely to open soon; therefore, the Parties agree to collaborate and mutually support each other in the

development of a funding proposal for IRWMP development and implementation, which includes comprehensively the objectives of the program described herein.

4.0 Proposed Responsibilities of the Parties

4.1 Sacramento County Water Agency – Program partner through its role as manager of water resources in Sacramento County, participant in the Freeport Project, and operator of the Zone 40 groundwater supply and conjunctive management program. SCWA will fund and participate in specific components of the IRWMP, including the Cosumnes River Flow Augmentation Project, develop opportunities for direct groundwater recharge in the Central Area based, in part, on information obtained through implementation of the Flow Augmentation Project, provide initial coordination and development of an IRWMP for the South Area leading to integration with the Central Basin IRWMP, and partial support of the Comprehensive Science and Monitoring Program. The level of funding is described below.

4.2 SSCAWA – Program partner and liaison to agricultural community. SSCAWA will continue to develop external funding for specific program elements and take the lead role in implementing the Cosumnes River Flow Augmentation Project, IRWMP development, as well and develop groundwater recharge pilot projects. The SSCAWA will provide funding for the Cosumnes River Flow Augmentation Pilot Project and the IRWMP, as described below. The SSCAWA will coordinate its efforts in the South Area with groundwater management efforts in the Central Area. SSCAWA agrees to support SCWA in its efforts toward achieving conjunctive use in the Central Sacramento County Groundwater Basin. For purposes of this MOA, SCWA's efforts are those described in the 2002 Zone 40 Water Supply Master Plan, the Freeport Regional Water Project Environmental Impact Report and related planning and environmental documents. By this MOA, SSCAWA is committing to support future actions of SCWA, which are consistent with those described in the above-referenced documents.

4.3 The Nature Conservancy – Program partner through its role as steward of the Cosumnes River corridor. TNC will provide oversight (with UCD) of science and adaptive management programs and will take the lead on developing the fall flow profile restoration program. The TNC will coordinate its activities in both the Central and South Areas to facilitate collaboration in meeting the objectives of the MOA. TNC agrees to support SCWA in its efforts toward achieving conjunctive use in the Central Sacramento County Groundwater Basin. For purposes of this MOA, SCWA's efforts are those described in the 2002 Zone 40 Water Supply Master Plan, the Freeport Regional Water Project Environmental Impact Report and related planning and environmental documents. By this MOA, TNC is committing to support future actions of SCWA, which are consistent with those described in the above-referenced documents. TNC also will continue to make best efforts to develop external funding to reduce needs for direct County funding of program activities. TNC will provide the level of funding identified below.

4.4 Proposed Cost-Sharing

A. Cosumnes River Flow Augmentation Project

The Parties agree that a Pilot Project is the first step towards determining the viability of a long-term Cosumnes River Flow Augmentation Project. The Pilot Project will provide valuable information necessary for evaluating surface water and groundwater interactions critical to understanding groundwater recharge capabilities of the Cosumnes River and for the protection of aquatic and riparian resources associated with the Cosumnes River. The long-term Cosumnes River Flow Augmentation Project will be developed based on an evaluation of the Pilot Project. The information obtained in Cosumnes River Flow Augmentation Project will also assist the SCWA and SSCAWA in maximizing its opportunities for conjunctive use under the Zone 40 Water Supply Master Plan and the South Area conjunctive use program, respectively. Accordingly, the SCWA agrees to take the lead responsibility in obtaining a water source for the Cosumnes River Flow Augmentation Project, including the Pilot Project and in developing any related environmental water supply or conveyance agreements. The SSCAWA and TNC agree to take the lead responsibility in implementing the Pilot Project, including obtaining any regulatory approvals from the appropriate resource agencies, construction of facilities, and managing flow releases. All Parties agree to work together to secure the funding required to implement the project.

The Cosumnes River Flow Augmentation Project will be funded in-part by the SCWA and through grant funds. The SCWA will provide the 5,000 ac-ft water supply required using remediated groundwater from the Aerojet groundwater extraction and treatment project or through the contribution of a reasonable amount of capital towards the purchase of an alternative supply. SCWA would reserve its right to use the 5,000 ac-ft of remediated water for other purposes in any year that water is not required to fulfill the objectives of the Cosumnes River Flow Augmentation Project. The Coalition Partners agree to aggressively pursue grant funding for all tasks in this project to minimize the funding burden on the SCWA. In the event that no grant funds are available to fund the project, SCWA will only be responsible to fund tasks 1a,b, and c, 3, 6 and 7. The Coalition Partners will work together to submit a grant applications for this project under the California Bay Delta Authority Environmental Restoration Program grant program in the spring of 2005.

The major tasks of the Cosumnes River Flow Augmentation Project, along with the estimated cost of each task, are identified in the table below.

Task #	Task Description	Estimated Project Costs	
		Initial Project Costs	Total Project Costs
1	Water Supply Agreements		
1a	Water Supply	0 - $250,000[1]	0 - $1,340,617[2]
1b	Water Conveyance	$30,000[3]	$97,688[4]
1c	Environmental Permitting	$50,000[5]	$70,000[6]
2	Facilities Improvements	$25,000	$200,000
3	Flow Release Scheduling and Management	$90,000	$80,000
4	Salmon Escapement and Out-migration Monitoring	$65,000	$65,000
5	Groundwater – Surface Water Interaction Monitoring	$122,000	$100,000
6	Project Reporting	$30,000	$30,000
7	Project Management	$32,000	$32,000
	ESTIMATED TOTAL PROJECT COST:	$417,000 - $667,000	$674,688 - $2,015,305

Notes: 1. Assumes a range of costs for 5,000 AFA based on the cost of remediated water to a market rate of $50/AF.
2. Assumes a range of costs for 5000 AFA based on the cost for remediated water to an initial market rate of $50/AF, escalated @ 3.5%/year.
3. Assumes 5000 AFA at the USBR Ag. Conveyance rate of $6/AF.
4. Assumes 5000 AFA at an initial USBR Ag. Conveyance rate of $6/AF, escalated @ 3.5%/year.
5. Assumes a mitigated negative declaration is sufficient.
6. Assumes a mitigated negative declaration is sufficient with annual monitoring costs of $5000/yr for the project.

B. Integrated Regional Water Management Planning

The SSCAWA will lead the coordination and development of an IRWMP focused on the South Area with the goal of developing a plan that can be coordinated with Central Sacramento County planning and management programs (Zone 40 Water Supply Master Plan and Central Sacramento Groundwater Forum planning and governance structure). The IRWMP for the South Area would include:

- Developing a governance structure and framework agreement for the local participants.
- Updating the existing SSCAWA Groundwater Management Plan to include local partners and increased level of detail.
- Perform Resources Assessments to clearly identify areas of common interest.
- Outline a Conjunctive Use Program.

- Recommend Integrated Management Actions.
- Develop funding proposals.

The SCWA will provide funding to the SSCAWA in the amount of $50,000 per year over three years, beginning in 2005. Other sources of funds will also be sought from local partners, such as the City of Galt and the Rancho Murieta Community Service District, in the amount of approximately $50,000 per year over three years. The SSCAWA and the TNC will contribute up to $50,000 per year in the form of in-kind services, supported through existing Integrated Resource Planning projects associated with the Cosumnes River.

Initial coordination and development efforts will target the preparation of a Proposition 50 – Integrated Regional Water Management Plan Grant Program application. This application will either be prepared in conjunction with SCWA, to incorporate Central Sacramento County planning, or as an independent application. Depending on the progress of coordination and development efforts in the South Area the Prop. 50 applications could be postponed until the 2005 funding cycle.

In the event that a Prop. 50 grant is awarded, those grant funds will constitute cost-share contributions to an expanded IRWMP program. The contributions represent the maximum extent to which each participant will be expected to cost-share regardless of the contribution or participation of those other entities listed.

C. Comprehensive Science and Monitoring Program

The Comprehensive Science and Monitoring Program will be jointly led by TNC and the SSCAWA. TNC will oversee science and research efforts in coordination with the UC Davis, Center for Integrated Watershed Science and Management, while the SSCAWA will lead all surface water and groundwater monitoring efforts.

5.0 Term of Agreement

5.1 The Parties agree that this agreement will become effective upon execution by all the Parties.

5.2 The Parties agree that the provisions of this agreement regarding the development and implementation of a pilot project to evaluate implementation of a long-term Cosumnes River Flow Augmentation project shall remain in effect for a period of five years commencing with the full implementation of the pilot project.

5.3 The Parties agree that no later than the fourth year of this agreement, the Parties will initiate negotiations for a renewal of this agreement taking into account any additional program elements and new Coalition Partners that may have been identified during the process of implementing the agreement. Provided the Parties have entered into good faith negotiations

regarding renewal of this agreement, all terms of this agreement other than as set forth in Section 5.2, above, shall remain in continued force and effect unless and until a revised or renewed agreement is executed by the Parties.

6.0 Amendment

6.1 Only a written instrument duly executed by the Parties may amend this agreement.

7.0 Entirety of Agreement

7.1 This agreement contains the entire understanding of the Parties related to their interest, obligations and rights in connection with the subject matter set forth herein. All prior communications, negotiations, stipulations and understandings, whether oral or written, are of no force and effect and are superceded, except as referenced herein.

8.0 Assignment of Agreement

8.1 This Agreement shall be binding upon and inure to the benefit of the assigns or successors-in-interest of the Parties herein. No assignment shall be made without the prior written consent of the other Parties. Such consent shall not be unreasonably withheld.

9.0 Termination of Agreement

9.1 The Parties may terminate this agreement by mutual written agreement.

10. Indemnification

10.1 Except for damage or loss resulting from willful misconduct or gross negligence, or breach of fiduciary obligation in connection with this agreement, no party to this agreement, their members, directors, officers, agents or employees shall be liable to any other party for any loss or damage in connection with this agreement. Each party shall be responsible for the consequences of its own willful misconduct, gross negligence and/or breach of fiduciary obligation in connection with this agreement, and in connection with any work undertaken in accordance with this agreement, and shall indemnify, defend, and hold harmless the other Parties, their members, directors, officers, agents, and employees from the consequences thereof to the extent allowed by law.

11. Notice

11.1 Notices: All oral, email and facsimile transmissions of notices, schedules, or requests made in connection with this agreement shall be confirmed in writing and shall be

deemed properly served if delivered in person or sent by registered United States mail, postage prepaid. All notices, schedules or requests shall be sent to:

SCWA:
Keith DeVore, Director
Department of Water Resources
County of Sacramento
827 – 7th Street, Room 301
Sacramento, CA 95814

TNC:
Michael R. Eaton
Senior Project Director
Delta/San Joaquin Valley
The Nature Conservancy
13501 Franklin Boulevard
Galt, CA 95632

SSCAWA:
Ronald R Lowry, Chairman
Southeast Sacramento County Agricultural
Water Authority
P O. Box 445
Herald, CA 95638

SACRAMENTO COUNTY WATER AGENCY

DATED: February 8, 2005

By _____
Chair, Board of Directors

THE NATURE CONSERVANCY

DATED: ~~February~~ March 8, 2005

By _____
Michael R. Eaton

SOUTHEAST SACRAMENTO COUNTY
AGRICULTURAL WATER AUTHORITY

DATED: ~~February~~ MARCH 10, 2005

By _____
Ronald R. Lowry

The foregoing is a correct copy of a resolution adopted by the Board of Directors, Sacramento County, California.
On February 8, 2005
Dated February 10, 2005
Clerk of Said Board of Directors
By Faye Rowe
Deputy Clerk

SACRAMENTO COUNTY WATER AGENCY
RESOLUTION NO. WA-2578

BE IT RESOLVED AND ORDERED that the Chair of the Board of Directors be and is hereby authorized and directed to execute the *Memorandum of Agreement for the Management for Water and Environmental Resources Associated with the Cosumnes River Corridor*, on behalf of the SACRAMENTO COUNTY WATER AGENCY, a district organized under the laws of the State of California, and to do and perform everything necessary to carry out the purpose of this Resolution.

ON A MOTION by Director Collin, and seconded by Director Nottoli, the foregoing resolution was passed and adopted by the Board of Directors of the Sacramento County Water Agency, State of California, this 8th day of February, 2005 by the following vote, to wit:

AYES: Directors, Collin, MacGlashan, Nottoli, Peters, Dickinson

NOES: Directors, None

ABSENT: Directors, None

ABSTAIN: Directors, None

Roger Dickinson
Chair of the Board of Directors of the Sacramento County Water Agency, a district organized under the laws of the State of California

In accordance with Section 25103 of the Government Code of the State of California a copy of the document has been delivered to the Chairman on FEB 0 8 2005
By: Faye Rowe
Deputy Clerk, Board of Directors

ATTEST: Cindy H. Turner
Clerk of the Board of Supervisors of Sacramento County, California and Ex officio Secretary of the Board of Directors of the Sacramento County Water Agency

FILED
FEB 0 8 2005
BOARD OF DIRECTORS
By Cindy H. Turner
Clerk of the Board

The Nature Conservancy
Protecting nature. Preserving life.

Sacramento Field Office
555 Capitol Mall, Suite 1290
Sacramento, California 95814

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fax [916] 442-2377
nature.org/california

August 22, 2016

Jose Ramirez, Project Manager
Sacramento Regional County Sanitation District
10060 Goethe Road
Sacramento, CA 95827
ramirezj@sacsewer.com

RE: Draft Environmental Impact Report (EIR), SCH# 2015022067

Dear Mr. Ramirez,

Thank you for the opportunity to provide comments on the Sacramento Regional County Sanitation District's (Regional San) Draft Environmental Impact Report (DEIR) for the South Sacramento County Agriculture & Habitat Lands Recycled Water Program (Project). Groundwater modeling done on behalf of The Nature Conservancy (Conservancy) and as part of the Project's Feasibility Study shows potential for the Project to have important ecological benefits for the habitats and species dependent on the adjacent Cosumnes River Preserve (Preserve) if implemented appropriately. To this end, TNC has had an active dialogue with Regional San related to this project and its potential to help restore and protect groundwater dependent ecosystems (GDEs).

12-1

The Preserve is managed as a partnership among eleven federal, state, local and non-profit partners, including the Conservancy. We have been active for over 30 years in preserving this area due to its exceptional ecological values, which include both natural areas such as riparian forests, wetlands and grasslands and working lands in grazing or wildlife friendly agriculture. Agriculture, both in the Preserve and in the Project area, provides important habitat for a variety of native and listed species including greater sandhill cranes, Swainson's hawks and giant garter snakes.

The Conservancy has long recognized the importance of groundwater in protecting the conservation values of the Preserve. Beginning with the 1993 Water Forum Agreement and continuing to the 2007 MOU to develop Groundwater Management Plans and governance structures for the Central and South Sacramento Groundwater Basins, and most recently in 2011 with the Sacramento Water Recycling Coalition, we have supported regional planning that balances water supply and environmental needs.

The cities, small communities, and irrigated agriculture in the vicinity of the Project largely rely on local groundwater for their water supplies. Their withdrawals have resulted in large areas

where groundwater levels have been considerably lowered as compared with pre-development levels. Such areas, referred to as regional cones of depression, have developed both north and south of the Cosumnes River (Mount et al. 2001, Fleckenstein et al. 2004). As a result, the river loses flow to the groundwater along most of its lower reaches and the river goes dry every summer and fall when the leakage to groundwater exceeds the river flow coming from the mountains. This is damaging to salmon, as flows are often insufficient in the fall to allow for successful escapement and spawning in the gravel reaches upstream of Rancho Murrieta on the Cosumnes. In addition, the riparian forests of the Cosumnes River Preserve developed in conditions of perennially high groundwater levels, and the lowered groundwater levels leave the riparian forests dependent on intermittent high flows of the Cosumnes or uncertain local water supplies, threatening their long-term viability.

12-1 cont'd

Multiple studies have assessed the impacts of lowered groundwater levels, and methods of mitigating these impacts. Based on the 2001 study by Mount et al., the Conservancy initiated the Cosumnes River Flow Augmentation to pre-wet the channel. We undertook this effort in the early fall of 2005 to determine whether the pre-wetting of the channel would allow for earlier connection of instream flows between the Delta and upstream spawning gravels. In 2011, the Conservancy completed a study that showed the groundwater, ecological and integrated water management benefits of bringing additional surface water into the basin as an in-lieu irrigation water supply.

There is potential for significant ecological benefits from Project implementation by providing alternative water supplies, thereby reversing declining groundwater levels and improving conditions for riparian forest, wetlands, in-stream flows and agriculture. There are also areas where the Project and the assessment of its benefits could be improved. We look forward to continuing to work with Regional San to ensure the Project deliver multiple benefits for people, the regional agricultural economy, and the environment.

We offer the following general comments on the Draft EIR:

12-2

1. The project should be viewed as a measure that can provide a foundation for wider basin groundwater and ecosystem restoration strategies. This is an important point as the prescribed project may have limited ecological restoration potential, but could be significantly enhanced in the context of basin wider restoration efforts. The 2005 multi-party MOA may provide helpful context into consideration of regional objectives.

12-3

2. From a planning perspective, it would also be beneficial to understand the long-term usage of all recycled water to better understand how this resource will be managed in the future. We recognize that there may be multiple options under consideration, but it would be helpful to understand the potential for the use of all of the recycled water to better discern how water may be used and applied in future “banking” scenarios and how the in lieu project will ultimately deliver on meeting the objectives of groundwater dependent ecosystems.

We offer the following specific comments on the Draft EIR:

The monitoring section of the Draft EIR should include the installation and monitoring of groundwater levels in each of the five forest blocks. This level of monitoring will be necessary to ground truth desired benefits of increasing groundwater levels along the Cosumnes River Preserve as a result of proposed in-lieu recharge efforts. We believe current level of modeling may lack adequate analysis of the surface-groundwater interactions in the Cosumnes River for two reasons:

1) We lack an understanding of where the perched aquifer zones are located; and
2) Need to better understand how the forest blocks are accessing groundwater (via perched groundwater or unconfined aquifer groundwater).

12-4

In addition to monitoring groundwater levels in the forest blocks, we believe that it is necessary to monitor ecosystem health in the forest blocks via vegetation monitoring (species richness, seedlings, saplings, mortality, native/invasive species).

Thank you for consideration of these comments.

Sincerely,

Jay Ziegler

KRONICK
MOSKOVITZ TIEDEMANN & GIRARD

400 Capitol Mall, 27th Floor
Sacramento, CA 95814

T | 916.321.4500
F | 916.321.4555

Rebecca R. Akroyd
rakroyd@kmtg.com

August 22, 2016

VIA E-MAIL AND U.S. MAIL

Jose Ramirez, Project Manager
Sacramento County Sanitation District
10060 Goethe Road
Sacramento, CA 95827
E-Mail: ramirezj@sacsewer.com

Re: Comments on South Sacramento County Agriculture & Habitat Lands Recycled Water Program - Draft Environmental Impact Report

Dear Mr. Ramirez:

The San Luis & Delta-Mendota Water Authority ("Water Authority") appreciates the opportunity to comment on the Draft Environmental Impact Report ("Draft EIR") for Sacramento Regional County Sanitation District's ("Regional San") South Sacramento County Agriculture and Habitat Lands Recycled Water Program ("Project"). The Water Authority is a joint powers agency based in Los Banos, California. Its members include 28 local public agencies, 26 of which hold contracts for water supply provided by the Central Valley Project ("CVP"). The primary water supply for the members of the Water Authority is conveyed through the Sacramento-San Joaquin Delta ("Delta") and pumped at the C.W. "Bill" Jones Pumping Plant, located near Tracy, California.

The Water Authority appreciates the effort by Regional San to provide information regarding the effects of the proposed Project on environmental resources. However, the Water Authority writes to express its concerns regarding the adequacy of the Draft EIR's analysis. An inadequate analysis may mask true impacts of the Project, and possible injury to environmental resources; revisions to the Draft EIR are therefore warranted. 13-1

1. The Draft EIR Fails to Recognize the Limited Rights of Regional San to the Wastewater

The Draft EIR does not consider the limited right of Regional San to certain wastewater. The service area of Regional San includes areas served water appropriated by the United States Bureau of Reclamation ("Reclamation") through the CVP. Under the terms of long-term water service agreements, Reclamation provides CVP water to water districts delivering water within Regional San's service area. In those agreements, Reclamation explicitly "reserves the right to all seepage and return flow water derived from [w]ater [d]elivered . . . which escapes or is discharged" by the water districts. (See, e.g., Contract Between the United States and San Juan Water District, Article 11(c), a copy of which is attached.) The Draft EIR, and in particular, the proposed Project, must reflect Reclamation's reserved right. The Draft EIR must ensure that the proposed Project excludes wastewater derived from the CVP.

2. The Draft EIR Inadequately Analyzes Impacts to Biological Resources

The proposed Project involves a reduction of up to 50,000 acre-feet of treated wastewater discharged by Regional San to the Sacramento River. Section 3.5 of the Draft EIR purports to address potential impacts to biological resources in and near the Project area. However, the analysis in section 3.5 is lacking.

First, the Draft EIR identifies the potential for reduced flows into the Sacramento River and Delta from implementation of the Project, but fails to effectively assess impacts from the same. (Draft EIR, pp. 3.5-49 – 3.5-50.) The Draft EIR references potential "indirect impacts" resulting from the reduction in the amount of treated wastewater that would otherwise be discharged into the Sacramento River. (*Ibid*.) However, the Draft EIR appears to discount potential impacts from reduced discharge by noting that "the Project would lead to increases in groundwater recharge that would benefit the groundwater basin, and higher groundwater levels would result in increased flows in the Cosumnes, lower Mokelumne, and Sacramento rivers because more water would remain in those rivers instead of recharging the groundwater basin." (*Id*., 3.5-51.) The Draft EIR itself notes that increased streamflow is not expected until the groundwater basin reaches long-term balance. (*Ibid*.) The Draft EIR does not appear to identify the timeframe for this balance, or assess the significance of impacts in the interim. Nor does it appear to identify whether the increased flows from higher groundwater levels will occur in the same areas affected by the known reduction in discharges, or to assess whether any such increased flows will reduce impacts from the reduction in discharges to listed species. Further information should be added to the final EIR to ensure impacts are accurately assessed.

13-2

Second, the Draft EIR notes the potential for a small reduction in Delta outflows from implementation of the Project, but the small reduction in impacts depends on an improper assumption. Section 3.5 refers the reader to section 3.10 for consideration of impacts from reduced outflows. (Draft EIR, 3.5-52.) In Section 3.10, the Draft EIR describes reduced outflows of "generally less than one percent." (*Id*., 3.10-41.) This conclusion improperly relies upon Reclamation and the Department of Water Resources ("DWR") mitigating for the true impacts of the proposed Project – that Reclamation and DWR will make additional releases of stored water from CVP and SWP reservoirs to maintain water quality objectives. (See *id*., 3.5-52 – 3.5-53.) Further, the discussion regarding Delta outflows lacks context. Regional San acknowledges the estuarine habitat objectives for Suisun Bay and the western Delta ("X2") that Reclamation is required to meet in its operation of the CVP. (See *id*., 3.10-18.) The final EIR should explain how impacts to Delta outflows will affect X2, Reclamation's operation of the CVP to meet requirements regarding the same, and biological resources potentially affected by the location of X2.

13-3

Third, even if it were proper for the Draft EIR to rely upon releases from storage to mitigate for the proposed Project reducing outflow, more detailed analysis of impacts to biological resources is required. The Draft EIR describes circumstances where the proposed Project would reduce storage in Shasta Reservoir by up to about 30-35,000 acre-feet. (Draft EIR, 3.5-53.) It acknowledges that "[t]his decrease in storage could create thermal impacts to fisheries habitat downstream of Shasta," and that such impacts "could stress temperature-sensitive fish species that spawn in the Sacramento River mainstem." (*Ibid*.) Yet, the Draft EIR states that "[t]he

13-4

magnitude and importance" of such Project-related temperature changes "have not been modeled." (*Ibid.*) Modeling should be performed, or if it is not possible, the final EIR must explain why that is the case. The Draft EIR's assumption that Reclamation can easily modify CVP operations to avoid thermal impacts is not a fair one, given recent issues with temperature management on the Sacramento River. 13-4 cont'd

2. The Draft EIR Inadequately Analyzes Impacts to Hydrology and Water Quality

Similar problems are present in the Draft EIR's Hydrology and Water Quality section. The Draft EIR appears to acknowledge that the proposed Project may reduce the amount of water available to Reclamation for CVP purposes. But it is unclear whether the Draft EIR recognizes as significant changes to CVP operations resulting from the Project that may be necessary to meet water quality standards. At page 3.10-26, the Draft EIR identifies significant impacts if the Project would "*[v]iolate* any water quality standards or waste discharge requirements." (Emphasis added.) The Water Authority asserts that if the proposed Project requires Reclamation to modify CVP operations in order to *meet* water quality objectives or waste discharge requirements, that may also constitute a significant impact. Such a potential impact should be addressed in the final EIR. 13-5

The final EIR should more fully address all potential impacts to CVP operations. For example, the Draft EIR acknowledges a possible reduction of 5,000 acre-feet per year in CVP exports at the start of operations, and thereafter for south-of-Delta CVP agricultural contracts, but it fails to discuss the real world impacts of this reduction. (Draft EIR, p. 3.10-42.) Although 5,000 acre-feet may not be a large quantity of water compared to the total amount of CVP deliveries, it is unlikely that the impacts from any reduction of CVP exports would be evenly distributed. Certain groups of CVP contractors have borne the brunt of reduced exports more than others. And the impacts from serial reductions in CVP exports could be significant. The final EIR should more specifically address which CVP purposes are likely affected by reductions in CVP exports. 13-6

Conclusion

In sum, the Water Authority requests Regional San to revise the analysis of environmental impacts in the final EIR to address the comments explained above. Thank you for the opportunity to comment on the Draft EIR.

Regards,

KRONICK, MOSKOVITZ, TIEDEMANN & GIRARD
A Professional Corporation

REBECCA R. AKROYD

cc: Jason Peltier
Jon Rubin

M&I Only
Contract No.
6-07-20-W1373-LTR1

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
Central Valley Project, California

LONG-TERM RENEWAL CONTRACT BETWEEN THE UNITED STATES AND SAN JUAN WATER DISTRICT PROVIDING FOR PROJECT WATER SERVICE FROM THE AMERICAN RIVER DIVISION

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
Central Valley Project, California

LONG-TERM RENEWAL CONTRACT BETWEEN THE UNITED STATES
AND
SAN JUAN WATER DISTRICT
PROVIDING FOR PROJECT WATER SERVICE
FROM THE AMERICAN RIVER DIVISION

THIS CONTRACT, made this 28 day of February, 2006, in pursuance generally of the Act of June 17, 1902 (32 Stat. 388), and acts amendatory or supplementary thereto, including, but not limited to, the Acts of August 26, 1937 (50 Stat. 844), as amended and supplemented, August 4, 1939 (53 Stat. 1187), as amended and supplemented, June 21, 1963 (77 Stat. 68), October 12, 1982 (96 Stat. 1263), October 27, 1986 (100 Stat. 3050), as amended, November 3, 1990 (104 Stat. 2087), as amended, and Title XXXIV of the Act of October 30, 1992 (106 Stat. 4706), all collectively hereinafter referred to as Federal Reclamation law, between THE UNITED STATES OF AMERICA, hereinafter referred to as the United States, and SAN JUAN WATER DISTRICT, hereinafter referred to as the Contractor, a public agency of the State of California, duly organized, existing, and acting pursuant to the laws thereof;

WITNESSETH, That:

EXPLANATORY RECITALS

[1st] WHEREAS, the United States has constructed and is operating the Central Valley Project (Project), California, for diversion, storage, carriage, distribution and beneficial use, for flood

control, irrigation, municipal, domestic, industrial, fish and wildlife mitigation, protection and restoration, generation and distribution of electric energy, salinity control, navigation and other beneficial uses, of waters of the Sacramento River, the American River, the Trinity River, and the San Joaquin River and their tributaries; and

[2nd] WHEREAS, the United States constructed Folsom Dam and Reservoir, hereinafter collectively referred to as the American River Division facilities, which will be used in part for the furnishing of water to the Contractor pursuant to the terms of this Contract; and

[3rd] WHEREAS, the rights to Project Water were acquired by the United States pursuant to California law for operation of the Project; and

[3.1] WHEREAS, the Contractor succeeded to the rights of the North Fork Ditch Company as set forth in Contract No. DA-04-167-eng-610, dated April 12, 1954, between the United States and the Company, which contract is separate and apart from Contract 14-06-200-152A and remains in full force and effect by its own terms; and

[3.2] WHEREAS, Contract No. DA-04-167-eng-610 provides, among other things for the delivery to the Contractor by the United States of not to exceed 33,000 acre-feet of water each Calendar Year, referred to as the Contractor's Water Rights Water; and

[4th] WHEREAS, the Contractor and the United States entered into Contract No. 14-06-200-152A, dated June 19, 1962, as amended, which established terms for the delivery to the Contractor of Project Water from the American River Division from June 19, 1962, through February 28, 1995; and

[4.1] WHEREAS, both Contract No. 14-06-200-152A and Contract No. DA-04-167-eng-610 provide that Project Water and the Contractor's Water Rights Water, respectively, be delivered to Hinkle Reservoir; and

[5th] WHEREAS, the Contractor and the United States have pursuant to subsection 3404(c)(1) of the Central Valley Project Improvement Act (CVPIA), subsequently entered into interim renewal contract(s) identified as Contract No(s). 14-06-200-152A-IR1, 14-06-200-152A-IR2, 14-06-200-152A-IR3, 14-06-200-152A-IR4, 14-06-200-152A-IR5, 14-06-200-152A-IR6, 14-06-200-152A-IR7, and 14-06-200-152A-IR8, the last of which is hereinafter referred to as the Existing Contract, which provided for the continued water service to the Contractor from March 1, 2004, through February 28, 2006; and

[5.1] Omitted; and

[5.2] WHEREAS, the Contractor and the United States entered into Contract No. 6-07-20-W1373, dated April 8, 1999, pursuant to Section 206(b) of Public Law 101-514 (104 Stat. 2087), which provides for the delivery to the Contractor of up to 13,000 acre-feet per year of Project Water from Folsom Reservoir, hereinafter referred to as the P. L. 101-514 CVP Contract.

[5.3] WHEREAS, the P. L. 101-514 CVP Contract provides that, at the time of the long-term renewal of this Contract, the P. L. 101-514 CVP Contract would be amended to conform to the provisions of this Contract. The United States and the Contractor desire to facilitate contract administration by combining the quantity of Project Water provided for in the P. L. 101-514 Project Contract with the quantity of Project Water in the Existing Contract, so that this Contract would be the sole long-term contract for Project Water service between the United States and the Contractor superseding and replacing the P. L. 101-514 Project Contract.

[6th] WHEREAS, Section 3404(c) of the CVPIA provides for long-term renewal of the Existing Contract following completion of appropriate environmental documentation, including a programmatic environmental impact statement (PEIS) pursuant to the National Environmental Policy Act (NEPA), analyzing the direct and indirect impacts and benefits of implementing the CVPIA and the potential renewal of all existing contracts for Project Water; and

[6.1] Omitted; and

[7th] WHEREAS, the United States has completed the PEIS and all other appropriate environmental review necessary to provide for long-term renewal of the Existing Contract; and

[8th] WHEREAS, the Contractor has requested the long-term renewal of the Existing Contract, pursuant to the terms of the Existing Contract, Federal Reclamation law, and the laws of the State of California, for water service from the Project; and

[9th] WHEREAS, the United States has determined that the Contractor has fulfilled all of its obligations under the Existing Contract and under the P. L. 101-514 Project Contract; and

[10th] WHEREAS, the Contractor has demonstrated to the satisfaction of the Contracting Officer that the Contractor has utilized the Project Water supplies available to it for reasonable and beneficial use and/or has demonstrated projected future demand for water use such that the Contractor has the capability and expects to utilize fully for reasonable and beneficial use the quantity of Project Water to be made available to it pursuant to this Contract; and

[11th] WHEREAS, water obtained from the Project has been relied upon by urban areas within California for more than 50 years, and is considered by the Contractor as an essential portion of its water supply; and

[12th] WHEREAS, the economies of regions within the Project, including the Contractor's, depend upon the continued availability of water, including water service from the Project; and

[12.1] WHEREAS, in the California Bay-Delta Program (CALFED) Programmatic Record of Decision, dated August 28, 2000, the United States and the State of California adopted a general target of continuously improving Delta water quality for all uses. The CALFED Agencies' target for

providing safe, reliable, and affordable drinking water in a cost-effective way, is to achieve either: "(a) average concentrations at Clifton Forebay and other southern and central Delta drinking water intakes of 50 ug/L bromide and 3.0 mg/L total organic carbon, or (b) an equivalent level of public health protection using a cost-effective combination of alternative source waters, source control and treatment technologies;" and

[13th] WHEREAS, the Secretary of the Interior (Secretary) intends through coordination, cooperation, and partnerships to pursue measures to improve water supply, water quality, and reliability of the Project for all Project purposes; and

[13.1] WHEREAS, the Contractor and the water users in its Service Area have improved and will continue to improve water use efficiency through water conservation, water reclamation, and other Best Management Practices; however, implementing these measures has reduced and will continue to reduce the ability of the Contractor and the water users in its Service Area to withstand a Condition of Shortage; and

[14th] WHEREAS, the mutual goals of the United States and the Contractor include: to provide for reliable Project Water supplies; to control costs of those supplies; to achieve repayment of the Project as required by law; to guard reasonably against Project Water shortages; to achieve a reasonable balance among competing demands for use of Project Water; and to comply with all applicable environmental statutes, all consistent with the legal obligations of the United States relative to the Project; and

[15th] WHEREAS, the parties intend by this Contract to develop a more cooperative relationship in order to achieve their mutual goals; and

[15.1] WHEREAS, the Contractor is a signatory to the Water Forum Agreement, dated April 14, 2000, which has the co-equal objectives to (1) provide a reliable and safe water supply for the Sacramento region's economic health and planned development through the year 2030, and (2) preserve the fishery, wildlife, recreational and aesthetic values of the lower American River; and

[15.2] WHEREAS, the Contracting Officer is in support of the co-equal objectives of the Water Forum Agreement and intends to work cooperatively with the Contractor to investigate actions that they could take to implement the objectives of the Water Forum Agreement, which, if agreed to, would be the subject of a separate agreement between them; and

[15.3] WHEREAS, the Contractor now requires that the water provided pursuant to the above said contracts be delivered to a higher elevation at its Sidney N. Peterson Water Treatment Plant (hereinafter referred to as the Contractor's Water Treatment Plant); and

[15.4] WHEREAS, in *San Juan Suburban Water District v. United States*, Civ. No. S-83-1621-LKK (E.D. Cal.), the District Court ruled that the United States was not obligated to deliver Project Water or the Contractor's Water Rights Water to the higher elevation at the Contractor's Water Treatment Plant; and

[16th] WHEREAS, the United States and the Contractor are willing to enter into this Contract pursuant to Federal Reclamation law with the delivery of both Project Water and the Contractor's Water Rights Water to the Contractor's Water Treatment Plant on the terms and conditions set forth below;

NOW, THEREFORE, in consideration of the mutual and dependent covenants herein contained, it is hereby mutually agreed by the parties hereto as follows:

DEFINITIONS

1. When used herein unless otherwise distinctly expressed, or manifestly incompatible with the intent of the parties as expressed in this Contract, the term:

(a) "Calendar Year" shall mean the period January 1 through December 31, both dates inclusive;

(b) "Charges" shall mean the payments required by Federal Reclamation law in addition to the Rates and Tiered Pricing Component specified in this Contract as determined annually by the Contracting Officer pursuant to this Contract;

(c) "Condition of Shortage" shall mean a condition respecting the Project during any Year such that the Contracting Officer is unable to deliver sufficient water to meet the Contract Total;

(d) "Contracting Officer" shall mean the Secretary's duly authorized representative acting pursuant to this Contract or applicable Federal Reclamation law or regulation;

(e) "Contract Total" shall mean the maximum amount of water to which the Contractor is entitled under subdivision (a) of Article 3 of this Contract;

(f) "Contractor's Service Area" shall mean the area to which the Contractor is permitted to provide Project Water under this Contract as described in Exhibit "A" attached hereto, which may be modified from time to time in accordance with Article 35 of this Contract without amendment of this Contract;

(g) "CVPIA" shall mean the Central Valley Project Improvement Act, Title XXXIV of the Act of October 30, 1992 (106 Stat. 4706);

(h-i) Omitted;

(j) "Full Cost Rate" shall mean an annual rate, as determined by the Contracting Officer that shall amortize the expenditures for construction properly allocable to the Project irrigation or municipal and industrial (M&I) functions, as appropriate, of facilities in service including all operation and maintenance (O&M) deficits funded, less payments, over such periods as may be required under Federal Reclamation law, or applicable contract provisions. Interest will accrue on both the construction expenditures and funded O&M deficits from October 12, 1982, on costs outstanding at that date, or from the date incurred in the case of costs arising subsequent to October 12, 1982, and shall be calculated in accordance with subsections 202(3)(B) and (3)(C) of the Reclamation Reform Act of 1982 (RRA). The Full Cost Rate includes actual operation, maintenance, and replacement costs consistent with Section 426.2 of the Rules and Regulations for the RRA;

(k–l) Omitted;

(m) "Irrigation Water" shall mean water made available from the Project that is used primarily in the production of agricultural crops or livestock, including domestic use incidental thereto, and watering of livestock;

(n) Omitted;

(o) "Municipal and Industrial Water" or "M&I Water" shall mean Project Water, other than Irrigation Water, made available to the Contractor. M&I Water shall include water used for human use and purposes such as the watering of landscaping or pasture for animals (e.g., horses) which are kept for personal enjoyment or water delivered to land holdings operated in units of less than five acres unless the Contractor establishes to the satisfaction of the Contracting Officer that the use of water delivered to any such landholding is a use described in subdivision (m) of this Article;

(p) "M&I Full Cost Water Rate" shall mean the Full Cost Rate applicable to the delivery of M&I Water;

(q) "Operation and Maintenance" or "O&M" shall mean normal and reasonable care, control, operation, repair, replacement (other than capital replacement), and maintenance of Project facilities;

(r) Omitted;

(s) "Project" shall mean the Central Valley Project owned by the United States and managed by the Department of the Interior, Bureau of Reclamation;

(t) "Project Contractors" shall mean all parties who have water service contracts for Project Water from the Project with the United States pursuant to Federal Reclamation law;

(u) "Project Water" shall mean all water that is developed, diverted, stored, or delivered by the Secretary in accordance with the statutes authorizing the Project and in accordance with the terms and conditions of water rights acquired pursuant to California law;

(v) "Rates" shall mean the payments determined annually by the Contracting Officer in accordance with the then-current applicable water ratesetting policies for the Project, as described in subdivision (a) of Article 7 of this Contract;

(w) "Recent Historic Average" shall mean the most recent five-year average of the final forecast of Water Made Available to the Contractor pursuant to this Contract or its preceding contract(s);

(x) "Secretary" shall mean the Secretary of the Interior, a duly appointed successor, or an authorized representative acting pursuant to any authority of the Secretary and through any agency of the Department of the Interior;

(y) "Tiered Pricing Component" shall be the incremental amount to be paid for each acre-foot of Water Delivered as described in subdivision (j) of Article 7 of this Contract;

(z) "Water Delivered" or "Delivered Water" shall mean Project Water diverted for use by the Contractor at the point(s) of delivery approved by the Contracting Officer;

(aa) "Water Made Available" shall mean the estimated amount of Project Water that can be delivered to the Contractor for the upcoming Year as declared by the Contracting Officer, pursuant to subdivision (a) of Article 4 of this Contract;

(bb) "Water Scheduled" shall mean Project Water made available to the Contractor for which times and quantities for delivery have been established by the Contractor and Contracting Officer, pursuant to subdivision (b) of Article 4 of this Contract; and

(cc) "Year" shall mean the period from and including March 1 of each Calendar Year through the last day of February of the following Calendar Year.

TERM OF CONTRACT

2. (a) This Contract shall be effective March 1, 2005, through February 28, 2045, and supersedes the Existing Contract. In the event the Contractor wishes to renew this Contract beyond February 28, 2045, the Contractor shall submit a request for renewal in writing to the Contracting Officer no later than two years prior to the date this Contract expires.

(b) Omitted.

(c) This Contract shall be renewed for successive periods of up to 40 years each, which periods shall be consistent with the then-existing Bureau of Reclamation-wide policy, under terms and conditions mutually agreeable to the parties and consistent with Federal and State law. The Contractor shall be afforded the opportunity to comment to the Contracting Officer on the proposed adoption and application of any revised policy applicable to the delivery of M&I Water that would limit the term of any subsequent renewal contract with the Contractor for the furnishing of M&I Water to less than 40 years.

(d) The Contracting Officer shall make a determination ten years after the date of execution of this Contract, and every five years thereafter during the term of this Contract, of whether a conversion to a contract under subsection 9(c)(1) of Section 9 of the Reclamation Project Act of 1939 can be accomplished. The Contracting Officer anticipates that during the term of this Contract, all authorized Project construction expected to occur will have occurred, and on that basis the Contracting Officer agrees upon such completion to allocate all costs that are properly assignable to the Contractor, and agrees further that, at any time after such allocation is made, and subject to satisfaction of the conditions set out in this subdivision of this Article, this Contract shall, at the request of the Contractor, be converted to a contract under subsection 9 (c)(1) of the Reclamation Project Act of 1939, subject to applicable Federal law and under stated terms and conditions mutually agreeable to the Contractor and the Contracting Officer. A condition for such conversion to occur shall be a determination by the Contracting Officer that, account being taken of the amount credited to return by the Contractor as provided for under Federal Reclamation law, the remaining amount of construction costs assignable for ultimate return by the Contractor can probably be repaid to the United States within the term of a contract under said subsection (c)(1) of Section 9. If the remaining amount of costs that are properly assignable to the Contractor cannot be determined during the term of this Contract, the Contracting Officer shall notify the Contractor, and provide the reason(s) why such a determination could not be made. Further, the Contracting Officer shall make such a

determination as soon thereafter as possible so as to permit, upon request of the Contractor and satisfaction of the conditions set out above, conversion to a contract under subsection (c)(1) of Section 9. In the event such determination of costs has not been made at a time which allows conversion of this Contract during the term of this Contract or the Contractor has not requested conversion of this Contract within such term, the parties shall incorporate in any subsequent renewal contract as described in subdivision (c) of this Article a provision that carries forth in substantially identical terms the provisions of this subdivision.

WATER TO BE MADE AVAILABLE AND DELIVERED TO THE CONTRACTOR

3. (a) During each Year, consistent with all applicable State water rights, permits, and licenses, Federal law, and subject to the provisions set forth in Articles 3(b), 11, and 12 of this Contract, the Contracting Officer shall make available for delivery to the Contractor 24,200 acre-feet of Project Water for M&I purposes. Water Delivered to the Contractor in accordance with this subdivision shall be scheduled and paid for pursuant to the provisions of Articles 4 and 7 of this Contract.

(b) Because the capacity of the Project to deliver Project Water has been constrained in recent years and may be constrained in the future due to many factors including hydrologic conditions and implementation of Federal and State laws, the likelihood of the Contractor actually receiving the amount of Project Water set out in subdivision (a) of this Article in any given Year is uncertain. The Contracting Officer's modeling referenced in the PEIS projected that the Contract Total set forth in this Contract will not be available to the Contractor in many years. During the most recent five years, the Recent Historic Average of Water Made Available to the Contractor was 10,864 acre-feet (based on the non-P. L. 101-514 CVP Contract total of 11,200 acre feet). Nothing in subdivision (b) of this Article shall affect the rights and obligations of the parties under any provision of this Contract.

(c) The Contractor shall utilize the Project Water in accordance with all applicable legal requirements.

(d) The Contractor shall make reasonable and beneficial use of all water furnished pursuant to this Contract. Ground-water recharge programs (direct, indirect, or in lieu), ground-water banking programs, surface water storage programs, and other similar programs utilizing Project Water, Contractor's Water Rights Water, or other water furnished pursuant to this Contract conducted within the Contractor's Service Area which are consistent with applicable State law and result in use consistent with Federal Reclamation law will be allowed; Provided, That any direct recharge program(s) is (are) described in the Contractor's water conservation plan submitted pursuant to Article 26 of this Contract; Provided, further, That such water conservation plan demonstrates sufficient lawful uses exist in the Contractor's Service Area so that using a long-term average, the quantity of Delivered Water is demonstrated to be reasonable for such uses and in compliance with Federal Reclamation Law. Ground-water recharge programs, ground-water banking programs, surface water storage programs, and other similar programs utilizing Project Water, Contractor's Water Rights Water, or other water furnished pursuant to this Contract conducted outside the Contractor's Service Area may be permitted upon written approval of the Contracting Officer, which approval will be based upon environmental documentation, Project Water rights, and Project operational concerns. The Contracting Officer will address such concerns in regulations, policies, or guidelines.

(e) The Contractor shall comply with requirements applicable to the Contractor in biological opinion(s) prepared as a result of a consultation regarding the execution of this Contract undertaken pursuant to Section 7 of the Endangered Species Act of 1973 (ESA), as amended, that are within the Contractor's legal authority to implement. The Existing Contract, which evidences in excess of 40 years of diversions for M&I purposes of the quantities of water provided in subdivision (a) of Article 3 of this Contract, will be considered in developing an appropriate baseline for the biological assessment(s) prepared pursuant to the ESA, and any other needed environmental review. Nothing herein shall be construed to prevent the Contractor from challenging or seeking judicial relief

in a court of competent jurisdiction with respect to any biological opinion or other environmental documentation referred to in this Article.

(f) Following the declaration of Water Made Available under Article 4 of this Contract, the Contracting Officer will make a determination whether Project Water, or other water available to the Project, can be made available to the Contractor in addition to the Contract Total under Article 3 of this Contract during the Year without adversely impacting other Project Contractors. At the request of the Contractor, the Contracting Officer will consult with the Contractor prior to making such a determination. If the Contracting Officer determines that Project Water, or other water available to the Project, can be made available to the Contractor, the Contracting Officer will announce the availability of such water and shall so notify the Contractor as soon as practical. The Contracting Officer will thereafter meet with the Contractor and other Project Contractors capable of taking such water to determine the most equitable and efficient allocation of such water. If the Contractor requests the delivery of any quantity of such water, the Contracting Officer shall make such water available to the Contractor in accordance with applicable statutes, regulations, guidelines, and policies.

(g) The Contractor may request permission to reschedule for use during the subsequent Year some or all of the Water Made Available to the Contractor during the current Year referred to as "carryover." The Contractor may request permission to use during the current Year a quantity of Project Water which may be made available by the United States to the Contractor during the subsequent Year referred to as "preuse." The Contracting Officer's written approval may permit such uses in accordance with applicable statutes, regulations, guidelines, and policies.

(h) The Contractor's right pursuant to Federal Reclamation law and applicable State law to the reasonable and beneficial use of Water Delivered pursuant to this Contract during the term thereof and any subsequent renewal contracts, as described in Article 2 of this Contract, during the terms thereof shall not be disturbed so long as the Contractor shall fulfill all of its obligations under this Contract and any renewals thereof. Nothing in the preceding sentence shall affect the

Contracting Officer's ability to impose shortages under Article 11 or subdivision (b) of Article 12 of this Contract or applicable provisions of any subsequent renewal contracts.

(i) Project Water furnished to the Contractor pursuant to this Contract may be delivered for purposes other than those described in subdivision (o) of Article 1 of this Contract upon written approval by the Contracting Officer in accordance with the terms and conditions of such approval.

(j) The Contracting Officer shall make reasonable efforts to protect the water rights necessary for the Project and to provide the water available under this Contract. The Contracting Officer shall not object to participation by the Contractor, in the capacity and to the extent permitted by law, in administrative proceedings related to the Project Water rights; Provided, That the Contracting Officer retains the right to object to the substance of the Contractor's position in such a proceeding; Provided further, That in such proceedings the Contracting Officer shall recognize the Contractor has a legal right under the terms of this Contract to use Project Water.

TIME FOR DELIVERY OF WATER

4. (a) On or about February 20 of each Calendar Year, the Contracting Officer shall announce the Contracting Officer's expected declaration of the Water Made Available. Such declaration will be expressed in terms of both Water Made Available and the Recent Historic Average and will be updated monthly, and more frequently if necessary, based on then-current operational and hydrologic conditions and a new declaration with changes, if any, to the Water Made Available will be made. The Contracting Officer shall provide forecasts of Project operations and the basis of the estimate, with relevant supporting information, upon the written request of the Contractor. Concurrently with the declaration of the Water Made Available, the Contracting Officer shall provide the Contractor with the updated Recent Historic Average.

(b) On or before each March 1 and at such other times as necessary, the Contractor shall submit to the Contracting Officer a written schedule, satisfactory to the Contracting Officer, showing the monthly quantities of Project Water and Contractor's Water Rights Water to be delivered

by the United States to the Contractor pursuant to this Contract for the Year commencing on such March 1. The Contracting Officer shall use all reasonable means to deliver Project Water and Contractor's Water Rights Water according to the approved schedule for the Year commencing on such March 1.

(c) The Contractor shall not schedule Project Water and/or Contractor's Water Rights Water in excess of the quantity of such waters the Contractor intends to put to reasonable and beneficial use within the Contractor's Service Area or to sell, transfer, or exchange pursuant to Article 9 of this Contract during any Year.

(d) Subject to the conditions set forth in subdivision (a) of Article 3 of this Contract, the United States shall deliver Project Water and Contractor's Water Rights Water to the Contractor in accordance with the initial schedule submitted by the Contractor pursuant to subdivision (b) of this Article, or any written revision(s), satisfactory to the Contracting Officer, thereto submitted within a reasonable time prior to the date(s) on which the requested change(s) is/are to be implemented.

POINT OF DIVERSION AND RESPONSIBILITY FOR DISTRIBUTION OF WATER

5. (a) Project Water scheduled pursuant to subdivision (b) of Article 4 of this Contract and the Contractor's Water Rights Water shall be delivered to the Contractor at the Contractor's Water Treatment Plant and any additional point or points of delivery either on Project facilities or another location or locations mutually agreed to in writing by the Contracting Officer and the Contractor.

(b) Omitted.

(c) The Contractor shall not deliver Project Water to land outside the Contractor's Service Area unless approved in advance by the Contracting Officer.

(d) All Water Delivered to the Contractor pursuant to this Contract shall be measured and recorded with equipment furnished, installed, operated, and maintained by the United States, or other appropriate entity as designated by the Contracting Officer at the point or points of

delivery established pursuant to subdivision (a) of this Article. Upon the request of either party to this Contract, the Contracting Officer shall investigate, or cause to be investigated, the accuracy of such measurements and shall take any necessary steps to adjust any errors appearing therein. For any period of time when accurate measurements have not been made, the Contracting Officer shall consult with the Contractor prior to making a final determination of the quantity delivered for that period of time.

(e) The Contracting Officer shall not be responsible for the control, carriage, handling, use, disposal, or distribution of Water Delivered and/or Contractor's Water Rights Water Delivered to the Contractor pursuant to this Contract beyond the delivery points specified in subdivision (a) of this Article. The Contractor shall indemnify the United States, its officers, employees, agents, and assigns on account of damage or claim of damage of any nature whatsoever for which there is legal responsibility, including property damage, personal injury, or death arising out of or connected with the control, carriage, handling, use, disposal, or distribution of such Water Delivered and/or Contractor's Water Rights Water Delivered beyond such delivery points, except for any damage or claim arising out of: (i) acts or omissions of the Contracting Officer or any of its officers, employees, agents, or assigns with the intent of creating the situation resulting in any damage or claim; (ii) willful misconduct of the Contracting Officer or any of its officers, employees, agents, or assigns; (iii) negligence of the Contracting Officer or any of its officers, employees, agents, or assigns; or (iv) damage or claims resulting from a malfunction of facilities owned and/or operated by the United States.

(f) Solely for the purposes of accounting required by this Contract, if the total amount of water delivered to the Contractor in a given day is 149 acre-feet or less, all such water, not to exceed 33,000 acre-feet per Calendar Year, shall be considered to be the Contractor's Water Rights Water and shall not be subject to the Rates and Charges defined in this Contract except those charges provided for in subdivision (n) of Article 7 of this Contract. All water delivered to the Contractor in a

given day in excess of 149 acre-feet shall be considered to be Delivered Water and shall be subject to the Rates and Charges provided for in Article 7 hereof.

MEASUREMENT OF WATER WITHIN THE SERVICE AREA

6. (a) The Contractor has established an measuring program satisfactory to the Contracting Officer, the Contractor shall ensure that all surface water delivered for M&I purposes is measured at each M&I service connection. The water measuring devices or water measuring methods of comparable effectiveness must be acceptable to the Contracting Officer. The Contractor shall be responsible for installing, operating, and maintaining and repairing all such measuring devices and implementing all such water measuring methods at no cost to the United States. The Contractor shall use the information obtained from such water measuring devices or water measuring methods to ensure its proper management of the water, to bill water users for water delivered by the Contractor; and, if applicable, to record water delivered for M&I purposes by customer class as defined in the Contractor's water conservation plan provided for in Article 26 of this Contract. Nothing herein contained, however, shall preclude the Contractor from establishing and collecting any charges, assessments, or other revenues authorized by California law. The Contractor shall include a summary of all its annual surface water deliveries in the annual report described in subdivision (c) of Article 26.

(b) To the extent the information has not otherwise been provided, upon execution of this Contract, the Contractor shall provide to the Contracting Officer a written report describing the measurement devices or water measuring methods being used or to be used to implement subdivision (a) of this Article and identifying the M&I service connections or alternative measurement programs approved by the Contracting Officer, at which such measurement devices or water measuring methods are being used, and, if applicable, identifying the locations at which such devices and/or methods are not yet being used including a time schedule for implementation at such locations. The Contracting Officer shall advise the Contractor in writing within 60 days as to the adequacy of, and necessary modifications, if any, of the measuring devices or water measuring methods identified in

the Contractor's report and if the Contracting Officer does not respond in such time, they shall be deemed adequate. If the Contracting Officer notifies the Contractor that the measuring devices or methods are inadequate, the parties shall within 60 days following the Contracting Officer's response, commence to negotiate in good faith how, and the earliest practicable date by which, the Contractor shall modify said measuring devices and/or measuring methods as required by the Contracting Officer to ensure compliance with subdivision (a) of this Article.

(c) All new surface water delivery systems installed within the Contractor's Service Area after the effective date of this Contract shall also comply with the measurement provisions described in subdivision (a) of this Article.

(d) The Contractor shall inform the Contracting Officer and the State of California in writing by April 30 of each Year of the monthly volume of surface water delivered within the Contractor's Service Area during the previous Year.

(e) The Contractor shall inform the Contracting Officer on or before the 20th calendar day of each month of the quantity of M&I Water taken during the preceding month.

RATES AND METHOD OF PAYMENT FOR WATER

7. (a) The Contractor shall pay the United States as provided in this Article for all Delivered Water at Rates, Charges, and the Tiered Pricing Component established in accordance with: (i) the Secretary's then-existing ratesetting policy for M&I Water, which ratesetting policies shall be amended, modified, or superseded only through a public notice and comment procedure; (ii) applicable Federal Reclamation law and associated rules and regulations, or policies; and (iii) other applicable provisions of this Contract. Payments shall be made by cash transaction, electronic funds transfer, or any other mechanism as may be agreed to in writing by the Contractor and the Contracting Officer. The Rates, Charges, and Tiered Pricing Component applicable to the Contractor upon execution of this Contract are set forth in Exhibit "B," as may be revised annually.

(b) The Contracting Officer shall notify the Contractor of the Rates, Charges, and Tiered Pricing Component as follows:

(1) Prior to July 1 of each Calendar Year, the Contracting Officer shall provide the Contractor an estimate of the Charges for Project Water that will be applied to the period October 1, of the current Calendar Year, through September 30, of the following Calendar Year, and the basis for such estimate. The Contractor shall be allowed not less than two months to review and comment on such estimates. On or before September 15 of each Calendar Year, the Contracting Officer shall notify the Contractor in writing of the Charges to be in effect during the period October 1 of the current Calendar Year, through September 30, of the following Calendar Year, and such notification shall revise Exhibit "B."

(2) Prior to October 1 of each Calendar Year, the Contracting Officer shall make available to the Contractor an estimate of the Rates and Tiered Pricing Component for Project Water for the following Year and the computations and cost allocations upon which those Rates are based. The Contractor shall be allowed not less than two months to review and comment on such computations and cost allocations. By December 31 of each Calendar Year, the Contracting Officer shall provide the Contractor with the final Rates and Tiered Pricing Component to be in effect for the upcoming Year, and such notification shall revise Exhibit "B."

(c) At the time the Contractor submits the initial schedule for the delivery of Project Water and/or Contractor's Water Rights Water for each Year pursuant to subdivision (b) of Article 4 of this Contract, the Contractor shall make an advance payment to the United States equal to the total amount payable pursuant to the applicable Rate(s) set under subdivision (a) of this Article, for the Project Water and/or Contractor's Water Rights Water scheduled to be delivered pursuant to this Contract during the first two calendar months of the Year. Before the end of the first month and before the end of each calendar month thereafter, the Contractor shall make an advance payment to the United States, at the Rate(s) set under subdivision (a) of this Article, for the Water Scheduled to be delivered pursuant to this Contract during the second month immediately following. Adjustments between advance payments for Water Scheduled and payments at Rates due for Water Delivered shall be made before the end of the following month; Provided, That any revised schedule submitted by the

Contractor pursuant to Article 4 of this Contract which increases the amount of Water Delivered pursuant to this Contract during any month shall be accompanied with appropriate advance payment, at the Rates then in effect, to assure that Project Water and/or Contractor's Water Rights Water is not delivered to the Contractor in advance of such payment. In any month in which the quantity of Water Delivered to the Contractor pursuant to this Contract equals the quantity of Water Scheduled and paid for by the Contractor, no additional Project Water and/or Contractor's Water Rights Water shall be delivered to the Contractor unless and until an advance payment at the Rates then in effect for such additional Project Water and/or Contractor's Water Rights Water is made. Final adjustment between the advance payments for the Water Scheduled and payments for the quantities of Water Delivered during each Year pursuant to this Contract shall be made as soon as practicable but no later than April 30th of the following Year, or 60 days after the delivery of Project Water carried over under subdivision (f) of Article 3 of this Contract if such water is not delivered by the last day of February.

(d) The Contractor shall also make a payment in addition to the Rate(s) in subdivision (c) of this Article to the United States for Water Delivered, at the Charges and the appropriate Tiered Pricing Component then in effect, before the end of the month following the month of delivery. The payments shall be consistent with the quantities of M&I Water Delivered as shown in the water delivery report for the subject month prepared by the Contracting Officer. The water delivery report shall be deemed a bill for the payment of Charges and the applicable Tiered Pricing Component for Water Delivered. Adjustment for overpayment or underpayment of Charges shall be made through the adjustment of payments due to the United States for Charges for the next month. Any amount to be paid for past due payment of Charges and the Tiered Pricing Component shall be computed pursuant to Article 20 of this Contract.

(e) The Contractor shall pay for any Water Delivered under subdivision (a), (f), or (g) of Article 3 of this Contract as determined by the Contracting Officer pursuant to applicable statutes, associated regulations, any applicable provisions of guidelines or ratesetting policies;

Provided, That the Rate for Water Delivered under subdivision (f) of Article 3 of this Contract shall be no more than the otherwise applicable Rate for M&I Water under subdivision (a) of this Article.

(f) Payments to be made by the Contractor to the United States under this Contract may be paid from any revenues available to the Contractor.

(g) All revenues received by the United States from the Contractor relating to the delivery of Project Water or the delivery of non-Project water through Project facilities shall be allocated and applied in accordance with Federal Reclamation law and the associated rules or regulations, and the then-current Project ratesetting policy for M&I Water.

(h) The Contracting Officer shall keep its accounts pertaining to the administration of the financial terms and conditions of its long-term contracts, in accordance with applicable Federal standards, so as to reflect the application of Project costs and revenues. The Contracting Officer shall, each Year upon request of the Contractor, provide to the Contractor a detailed accounting of all Project and Contractor expense allocations, the disposition of all Project and Contractor revenues, and a summary of all water delivery information. The Contracting Officer and the Contractor shall enter into good faith negotiations to resolve any discrepancies or disputes relating to accountings, reports, or information.

(i) The parties acknowledge and agree that the efficient administration of this Contract is their mutual goal. Recognizing that experience has demonstrated that mechanisms, policies, and procedures used for establishing Rates, Charges, and Tiered Pricing Components, and/or for making and allocating payments, other than those set forth in this Article may be in the mutual best interest of the parties, it is expressly agreed that the parties may enter into agreements to modify the mechanisms, policies, and procedures for any of those purposes while this Contract is in effect without amending this Contract.

(j) (1) Beginning at such time as deliveries of Project Water in a Year exceed 80 percent of the Contract Total, then before the end of the month following the month of delivery the Contractor shall make an additional payment to the United States equal to the applicable Tiered

Pricing Component. The Tiered Pricing Component for the amount of Water Delivered in excess of 80 percent of the Contract Total, but less than or equal to 90 percent of the Contract Total, shall equal one-half of the difference between the Rate established under subdivision (a) of this Article and the M&I Full Cost Water Rate. The Tiered Pricing Component for the amount of Water Delivered which exceeds 90 percent of the Contract Total shall equal the difference between (i) the Rate established under subdivision (a) of this Article and (ii) the M&I Full Cost Water Rate.

(2) Omitted.

(3) For purposes of determining the applicability of the Tiered Pricing Component pursuant to this Article, Water Delivered shall include Project Water that the Contractor transfers to others but shall not include Project Water transferred to the Contractor, nor shall it include the additional water provided to the Contractor under the provisions of subdivision (f) of Article 3 of this Contract.

(k) For the term of this Contract, Rates under the respective ratesetting policies will be established to recover only reimbursable O&M (including any deficits) and capital costs of the Project, as those terms are used in the then-current Project ratesetting policies, and interest, where appropriate, except in instances where a minimum Rate is applicable in accordance with the relevant Project ratesetting policy. Changes of significance in practices which implement the Contracting Officer's ratesetting policies will not be implemented until the Contracting Officer has provided the Contractor an opportunity to discuss the nature, need, and impact of the proposed change.

(l) Except as provided in subsections 3405(a)(1)(B) and 3405(f) of the CVPIA, the Rates for Project Water transferred by the Contractor shall be the Contractor's Rates adjusted upward or downward to reflect the changed costs, if any, incurred by the Contracting Officer in the delivery of the transferred Project Water to the transferee's point of delivery in accordance with the then-applicable Project ratesetting policy.

(m) Omitted.

(n) The Contractor shall be responsible for the payment for all incremental power required to pump Project Water and the Contractor's Water Rights Water to the Contractor's Water Treatment Plant in lieu of Hinkle Reservoir. Each month, the Contracting Officer will determine the quantity of said incremental power used during the preceding month and provide the number of kilowatt-hours so used to the supplier of the incremental power and the Contractor.

(o) With respect to the Rates for M&I water, the Contractor asserts that it is not legally obligated to pay any Project deficits claimed by the United States to have accrued as of the date of this Contract or deficit-related interest charges thereon. By entering into this Contract, the Contractor does not waive any legal rights or remedies that it may have with respect to such disputed issues. Notwithstanding the execution of this Contract, and payments made hereunder, the Contractor may challenge in the appropriate administrative or judicial forums: (1) the existence, computation, or imposition of any deficit charges accruing during the term of the Existing Contract and any preceding interim renewal contracts, if applicable; (2) interest accruing on any such deficits; (3) the inclusion of any such deficit charges or interest in the Rates; (4) the application by the United States of payments made by the Contractor under its Existing Contract and any preceding interim renewal contract, if applicable; and (5) the application of such payments in the Rates. The Contracting Officer agrees that the Contractor shall be entitled to the benefit of any administrative or judicial ruling in favor of any other Project M&I contractor on any of these issues, and credits for payments heretofore made, Provided, That the basis for such ruling is applicable to the Contractor.

(p) The Contractor and the Contracting Officer concur that, as of the effective date of this Contract, there is no O&M deficit under the P. L. 101-514 Project Contract.

8. Omitted.

SALES, TRANSFERS, OR EXCHANGES OF WATER

9. (a) The right to receive Project Water provided for in this Contract may be sold, transferred, or exchanged to others for reasonable and beneficial uses within the State of California if such sale, transfer, or exchange is authorized by applicable Federal and State laws, and applicable

guidelines or regulations then in effect; Provided, That the portion of the Contract Total originally attributable to the P. L. 101-514 Project Contract (13,000 acre-feet) may only be sold, transferred, or exchanged to others for reasonable and beneficial uses within the Counties of Sacramento and El Dorado, State of California. No sale, transfer, or exchange of Project Water under this Contract may take place without the prior written approval of the Contracting Officer, except as provided for in subdivision (b) of this Article, and no such sales, transfers, or exchanges shall be approved absent all appropriate environmental documentation, including but not limited to documents prepared pursuant to NEPA and ESA. Such environmental documentation should include, as appropriate, an analysis of ground-water impacts and economic and social effects, including environmental justice, of the proposed water transfers on both the transferor and transferee.

(b) In order to facilitate efficient water management, among Project Contractors located within the same geographical area, by means of water transfers and to allow the Contractor to participate in an accelerated water transfer program during the term of this Contract, the Contracting Officer shall prepare, as appropriate, all necessary environmental documentation including, but not limited to documents prepared pursuant to NEPA and ESA analyzing annual transfers within such geographical areas and the Contracting Officer shall determine whether such transfers comply with applicable law. Following the completion of the environmental documentation, such transfers addressed in such documentation shall be conducted with advance notice to the Contracting Officer, but shall not require prior written approval by the Contracting Officer. Such environmental documentation and the Contracting Officer's compliance determination shall be reviewed every five years and updated, as necessary, prior to the expiration of the then-existing five-year period. All subsequent environmental documentation shall include an alternative to evaluate not less than the quantity of Project Water historically transferred within the same geographical area.

(c) For a water transfer to qualify under subdivision (b) of this Article, such water transfer must: (i) be for irrigation purposes for lands irrigated within the previous three years, or to be delivered to established cropland, wildlife refuges, ground-water basins, or M&I use; (ii) occur within

a single Year; (iii) occur between a willing seller and a willing buyer; (iv) convey water through existing Project facilities with no new construction or modifications to Project facilities and be between existing Project Contractors and/or the Contractor and the United States, Department of the Interior; and (v) comply with all applicable Federal, State, and local or tribal laws and requirements imposed for protection of the environment and Indian Trust Assets, as defined under Federal law. Such water transfers must not lead to land conversion.

(d) Solely for the purpose of determining whether Section 3405(a)(1)(M) of the CVPIA applies to the Contractor as a transferor or transferee of Project Water, the Contracting Officer acknowledges that the Contractor is within a county, watershed, or other area of origin, as those terms are utilized under California law, of water that constitutes the natural flow of the American River and its tributaries above the confluence of the American and Sacramento Rivers.

APPLICATION OF PAYMENTS AND ADJUSTMENTS

10. (a) The amount of any overpayment by the Contractor of the Contractor's O&M, capital, interest, and deficit (if any) obligations for the Year shall be applied first to any current liabilities of the Contractor arising out of this Contract then due and payable. Overpayments of more than $1,000 shall be refunded at the Contractor's request. In lieu of a refund, any amount of such overpayment, at the option of the Contractor, may be credited against amounts to become due to the United States by the Contractor. With respect to overpayment, such refund or adjustment shall constitute the sole remedy of the Contractor or anyone having or claiming to have the right to the use of any of the Project Water supply provided for herein. All credits and refunds of overpayments shall be made within 30 days of the Contracting Officer obtaining direction as to how to credit or refund such overpayment in response to the notice to the Contractor that it has finalized the accounts for the Year in which the overpayment was made.

(b) All advances for miscellaneous costs incurred for work requested by the Contractor pursuant to Article 25 of this Contract shall be adjusted to reflect the actual costs when the work has been completed. If the advances exceed the actual costs incurred, the difference will be

refunded to the Contractor. If the actual costs exceed the Contractor's advances, the Contractor will be billed for the additional costs pursuant to Article 25.

TEMPORARY REDUCTIONS--RETURN FLOWS

11. (a) Subject to: (i) the authorized purposes and priorities of the Project and the requirements of Federal law and (ii) the obligations of the United States under existing contracts, or renewals thereof, providing for water deliveries from the Project, the Contracting Officer shall make all reasonable efforts to optimize Project Water deliveries to the Contractor as provided in this Contract.

(b) The Contracting Officer may temporarily discontinue or reduce the quantity of Water Delivered to the Contractor as herein provided for the purposes of investigation, inspection, maintenance, repair, or replacement of any of the Project facilities or any part thereof necessary for the delivery of Project Water and/or Contractor's Water Rights Water to the Contractor, but so far as feasible the Contracting Officer will give the Contractor due notice in advance of such temporary discontinuance or reduction, except in case of emergency, in which case no notice need be given; Provided, That the United States shall use its best efforts to avoid any discontinuance or reduction in such service. Upon resumption of service after such reduction or discontinuance, and if requested by the Contractor, the United States will, if possible, deliver the quantity of Project Water and/or Contractor's Water Rights Water which would have been delivered hereunder in the absence of such discontinuance or reduction.

(c) The United States reserves the right to all seepage and return flow water derived from Water Delivered to the Contractor hereunder which escapes or is discharged beyond the Contractor's Service Area; Provided, That this shall not be construed as claiming for the United States any right to seepage or return flow being put to reasonable and beneficial use pursuant to this Contract within the Contractor's Service Area by the Contractor or those claiming by, through, or under the Contractor.

CONSTRAINTS ON THE AVAILABILITY OF WATER

12. (a) In its operation of the Project, the Contracting Officer will use all reasonable means to guard against a Condition of Shortage in the quantity of water to be made available to the Contractor pursuant to this long-term renewal Contract. In the event the Contracting Officer determines that a Condition of Shortage appears probable, the Contracting Officer will notify the Contractor of said determination as soon as practicable.

(b) If there is a Condition of Shortage because of errors in physical operations of the Project, drought, other physical causes beyond the control of the Contracting Officer or actions taken by the Contracting Officer to meet legal obligations then, except as provided in subdivision (a) of Article 18 of this Contract, no liability shall accrue against the United States or any of its officers, agents, or employees for any damage, direct or indirect, arising therefrom.

(c) Omitted.

(d) Project Water furnished under this Contract will be allocated in accordance with the then-existing Project M&I Water Shortage Policy. Such policy shall be amended, modified, or superseded only through a public notice and comment procedure.

13. Omitted.

RULES AND REGULATIONS

14. The parties agree that the delivery of M&I water or use of Federal facilities pursuant to this Contract is subject to Federal Reclamation law, as amended and supplemented, and the rules and regulations promulgated by the Secretary under Federal Reclamation law.

WATER AND AIR POLLUTION CONTROL

15. The Contractor, in carrying out this Contract, shall comply with all applicable water and air pollution laws and regulations of the United States and the State of California, and shall obtain all required permits or licenses from the appropriate Federal, State, or local authorities.

QUALITY OF WATER

16. (a) Project facilities used to deliver Project Water to the Contractor pursuant to this Contract shall be operated and maintained to enable the United States to deliver Project Water to the Contractor in accordance with the water quality standards specified in subsection 2(b) of the Act of August 26, 1937 (50 Stat. 865), as added by Section 101 of the Act of October 27, 1986 (100 Stat. 3050), or other existing Federal laws. The United States is under no obligation to construct or furnish water treatment facilities to maintain or to improve the quality of Water Delivered to the Contractor pursuant to this Contract. The United States does not warrant the quality of Water Delivered to the Contractor pursuant to this Contract.

(b) The O&M of Project facilities shall be performed in such manner as is practicable to maintain the quality of raw water made available through such facilities at the highest level reasonably attainable as determined by the Contracting Officer. The Contractor shall be responsible for compliance with all State and Federal water quality standards applicable to surface and subsurface agricultural drainage discharges, if any, generated through the use of Federal or Contractor facilities or Project Water provided by the Contractor within the Contractor's Service Area.

(c) The Contracting Officer and the Contractor shall communicate, coordinate, and cooperate with each other with respect to the O&M of the Project by the United States in accordance with Articles 11 and 19 of this Contract.

WATER ACQUIRED BY THE CONTRACTOR OTHER THAN FROM THE UNITED STATES

17. (a) Omitted.

(b) Water or water rights now owned or hereafter acquired by the Contractor, other than from the United States may be stored, conveyed, and/or diverted through Project facilities, subject to the completion of appropriate environmental documentation, with the approval of the Contracting Officer and the execution of any contract determined by the Contracting Officer to be necessary, consistent with the following provisions:

(1) The Contractor may introduce non-Project water into Project facilities and deliver said water to lands within the Contractor's Service Area, subject to payment to the United States of an appropriate rate as determined by the applicable Project ratesetting policy and the Project use power policy, if such Project use power policy is applicable, each as amended, modified,or superseded from time to time. In addition, if electrical power is required to pump non-Project water through the facilities, the Contractor shall be responsible for obtaining the necessary power and paying the necessary charges therefor.

(2) Delivery of such non-Project water in and through Project facilities shall only be allowed to the extent such deliveries do not: (i) interfere with other Project purposes as determined by the Contracting Officer; (ii) reduce the quantity or quality of water available to other Project contractors; (iii) interfere with the delivery of contractual water entitlements to any other Project contractors; or (iv) interfere with the physical maintenance of the Project facilities; Provided, That nothing in this Article is intended to preclude the United States from passing the Contractor's Water Rights Water through Project storage facilities to the extent required to satisfy the Contractor's water rights that are senior to those of the Project under the applicable provisions of California water law. Provided further, That the United States has determined that the delivery of non-Project water in and through Project facilities pursuant to Warren Act Contract No. 6-07-20-W1315 between the United States and the Contractor, as it now exists and as it may be amended, extended, or renewed in the future, satisfies the requirements of this Article.

(3) The United States shall not be responsible for control, care, or distribution of the non-Project water before it is introduced into or after it is delivered from the Project facilities. The Contractor hereby releases and agrees to defend and indemnify the United States and their respective officers, agents, and employees, from any claim for damage to persons or property, direct or indirect, resulting from the acts of the Contractor, its officers', employees, agents, or assigns, act in (i) extracting or diverting non-Project water from any source, or (ii) diverting such non-Project water into Project facilities.

(4) Diversion of such non-Project water into Project facilities shall be consistent with all applicable laws, and if involving groundwater, consistent with any applicable ground-water management plan applicable to the Contractor for the area from which it was extracted.

(5) After Project purposes are met, as determined by the Contracting Officer, the United States and the Contractor shall share priority to utilize the remaining capacity of the facilities declared to be available by the Contracting Officer for conveyance and transportation of non-Project water prior to any such remaining capacity being made available to non-Project Contractors.

OPINIONS AND DETERMINATIONS

18. (a) Where the terms of this Contract provide for actions to be based upon the opinion or determination of either party to this Contract, said terms shall not be construed as permitting such action to be predicated upon arbitrary, capricious, or unreasonable opinions or determinations. Both parties, notwithstanding any other provisions of this Contract, expressly reserve the right to seek relief from and appropriate adjustment for any such arbitrary, capricious, or unreasonable opinion or determination. Each opinion or determination by either party shall be provided in a timely manner. Nothing in subdivision (a) of Article 18 of this Contract is intended to or shall affect or alter the standard of judicial review applicable under Federal law to any opinion or determination implementing a specific provision of Federal law embodied in statute or regulation.

(b) The Contracting Officer shall have the right to make determinations necessary to administer this Contract that are consistent with the provisions of this Contract, the laws of the United States and of the State of California, and the rules and regulations promulgated by the Secretary. Such determinations shall be made in consultation with the Contractor to the extent reasonably practicable.

COORDINATION AND COOPERATION

19. (a) In order to further their mutual goals and objectives, the Contracting Officer and the Contractor shall communicate, coordinate, and cooperate with each other, and with other

affected Project Contractors, in order to improve the O&M of the Project. The communication, coordination, and cooperation regarding operations and management shall include, but not be limited to, any action which will or may materially affect the quantity or quality of Project Water supply, the allocation of Project Water supply, and Project financial matters including, but not limited to, budget issues. The communication, coordination, and cooperation provided for hereunder shall extend to all provisions of this Contract. Each party shall retain exclusive decision making authority for all actions, opinions, and determinations to be made by the respective party.

(b) Within 120 days following the effective date of this Contract, the Contractor, other affected Project Contractors, and the Contracting Officer shall arrange to meet with interested Project Contractors to develop a mutually agreeable, written Project-wide process, which may be amended as necessary separate and apart from this Contract. The goal of this process shall be to provide, to the extent practicable, the means of mutual communication and interaction regarding significant decisions concerning Project O&M on a real-time basis.

(c) In light of the factors referred to in subdivision (b) of Article 3 of this Contract, it is the intent of the Secretary to improve water supply reliability. To carry out this intent:

(1) The Contracting Officer will, at the request of the Contractor, assist in the development of integrated resource management plans for the Contractor. Further, the Contracting Officer will, as appropriate, seek authorizations for implementation of partnerships to improve water supply, water quality, and reliability.

(2) The Secretary will, as appropriate, pursue program and project implementation and authorization in coordination with Project Contractors to improve the water supply, water quality, and reliability of the Project for all Project purposes.

(3) The Secretary will coordinate with Project Contractors and the State of California to seek improved water resource management.

(4) The Secretary will coordinate actions of agencies within the Department of the Interior that may impact the availability of water for Project purposes.

(5) The Contracting Officer shall periodically, but not less than annually, hold division level meetings to discuss Project operations, division level water management activities, and other issues as appropriate.

(d) Without limiting the contractual obligations of the Contracting Officer under the other Articles of this Contract, nothing in this Article shall be construed to limit or constrain the Contracting Officer's ability to communicate, coordinate, and cooperate with the Contractor or other interested stakeholders or to make decisions in a timely fashion as needed to protect health, safety, or the physical integrity of structures or facilities.

CHARGES FOR DELINQUENT PAYMENTS

20. (a) The Contractor shall be subject to interest, administrative, and penalty charges on delinquent installments or payments. When a payment is not received by the due date, the Contractor shall pay an interest charge for each day the payment is delinquent beyond the due date. When a payment becomes 60 days delinquent, the Contractor shall pay an administrative charge to cover additional costs of billing and processing the delinquent payment. When a payment is delinquent 90 days or more, the Contractor shall pay an additional penalty charge of six percent per year for each day the payment is delinquent beyond the due date. Further, the Contractor shall pay any fees incurred for debt collection services associated with a delinquent payment.

(b) The interest charge rate shall be the greater of the rate prescribed quarterly in the Federal Register by the Department of the Treasury for application to overdue payments, or the interest rate of one-half of one percent per month prescribed by Section 6 of the Reclamation Project Act of 1939 (Public Law 76-260). The interest charge rate shall be determined as of the due date and remain fixed for the duration of the delinquent period.

(c) When a partial payment on a delinquent account is received, the amount received shall be applied, first to the penalty, second to the administrative charges, third to the accrued interest, and finally to the overdue payment.

EQUAL OPPORTUNITY

21. During the performance of this Contract, the Contractor agrees as follows:

(a) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer;

recruitment or recruitment advertising; layoff or termination, rates of payment or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.

(b) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without discrimination because of race, color, religion, sex, or national origin.

(c) The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Contracting Officer, advising the said labor union or workers' representative of the Contractor's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(e) The Contractor will furnish all information and reports required by said amended Executive Order and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Contracting Officer and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(f) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended, in whole or in part, and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in said amended Executive Order, and such other sanctions may be imposed and remedies invoked as provided in said Executive Order, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(g) The Contractor will include the provisions of paragraphs (a) through (g) in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of said amended Executive Order, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

GENERAL OBLIGATION--BENEFITS CONDITIONED UPON PAYMENT

22. (a) The obligation of the Contractor to pay the United States as provided in this Contract is a general obligation of the Contractor notwithstanding the manner in which the obligation may be distributed among the Contractor's water users and notwithstanding the default of individual water users in their obligations to the Contractor.

(b) The payment of charges becoming due hereunder is a condition precedent to receiving benefits under this Contract. The United States shall not make water available to the Contractor through Project facilities during any period in which the Contractor may be in arrears in the advance payment of water rates due the United States. The Contractor shall not furnish water made available pursuant to this Contract for lands or parties which are in arrears in the advance payment of water rates levied or established by the Contractor.

(c) With respect to subdivision (b) of this Article, the Contractor shall have no obligation to require advance payment for water rates which it levies.

COMPLIANCE WITH CIVIL RIGHTS LAWS AND REGULATIONS

23. (a) The Contractor shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), Section 504 of the Rehabilitation Act of 1975 (P.L. 93-112, as amended), the Age Discrimination Act of 1975 (42 U.S.C. 6101, et seq.) and any other applicable civil rights laws, as well as with their respective implementing regulations and guidelines imposed by the U.S. Department of the Interior and/or Bureau of Reclamation.

(b) These statutes require that no person in the United States shall, on the grounds of race, color, national origin, handicap, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving financial assistance from the Bureau of Reclamation. By executing this Contract, the Contractor agrees to immediately take any measures necessary to implement this obligation, including permitting officials of the United States to inspect premises, programs, and documents.

(c) The Contractor makes this agreement in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property discounts, or other Federal financial assistance extended after the date hereof to the Contractor by the Bureau of Reclamation, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Contractor recognizes and agrees that such Federal assistance will be extended in reliance on the representations and agreements made in this Article, and that the United States reserves the right to seek judicial enforcement thereof.

24. Omitted.

CONTRACTOR TO PAY CERTAIN MISCELLANEOUS COSTS

25. In addition to all other payments to be made by the Contractor pursuant to this Contract, the Contractor shall pay to the United States, within 60 days after receipt of a bill and detailed statement submitted by the Contracting Officer to the Contractor for such specific items of direct cost incurred by the United States for work requested by the Contractor associated with this Contract plus indirect costs in accordance with applicable Bureau of Reclamation policies and procedures. All such amounts referred to in this Article shall not exceed the amount agreed to in writing in advance by the Contractor. This Article shall not apply to costs for routine contract administration.

WATER CONSERVATION

26. (a) Prior to the delivery of water provided from or conveyed through Federally-constructed or Federally-financed facilities pursuant to this Contract, the Contractor shall be implementing an effective water conservation and efficiency program based on the Contractor's water conservation plan that has been determined by the Contracting Officer to meet the conservation and efficiency criteria for evaluating water conservation plans established under Federal law. The water conservation and efficiency program shall contain definite water conservation objectives, appropriate economically feasible water conservation measures, and time schedules for meeting those objectives. Continued Project Water delivery pursuant to this Contract shall be contingent upon the Contractor's continued implementation of such water conservation program. In the event the Contractor's water conservation plan or any revised water conservation plan completed pursuant to subdivision (d) of Article 26 of this Contract have not yet been determined by the Contracting Officer to meet such criteria, due to circumstances which the Contracting Officer determines are beyond the control of the Contractor, water deliveries shall be made under this Contract so long as the Contractor diligently works with the Contracting Officer to obtain such determination at the earliest practicable date, and thereafter the Contractor immediately begins implementing its water conservation and efficiency program in accordance with the time schedules therein.

(b) Should the amount of M&I Water delivered pursuant to subdivision (a) of Article 3 of this Contract equal or exceed 2,000 acre-feet per Year, the Contractor shall implement the Best Management Practices identified by the time frames issued by the California Urban Water Conservation Council for such M&I Water unless any such practice is determined by the Contracting Officer to be inappropriate for the Contractor.

(c) The Contractor shall submit to the Contracting Officer a report on the status of its implementation of the water conservation plan on the reporting dates specified in the then existing conservation and efficiency criteria established under Federal law.

(d) At five-year intervals, the Contractor shall revise its water conservation plan to reflect the then-current conservation and efficiency criteria for evaluating water conservation plans established under Federal law and submit such revised water management plan to the Contracting Officer for review and evaluation. The Contracting Officer will then determine if the water conservation plan meets Bureau of Reclamation's then-current conservation and efficiency criteria for evaluating water conservation plans established under Federal law.

(e) If the Contractor is engaged in indirect ground-water recharge, such activity shall be described in the Contractor's water conservation plan.

EXISTING OR ACQUIRED WATER OR WATER RIGHTS

27. Except as specifically provided in Article 17 of this Contract, the provisions of this Contract shall not be applicable to or affect non-Project water or water rights now owned or hereafter acquired by the Contractor or any user of such water within the Contractor's Service Area. Any such water shall not be considered Project Water under this Contract. In addition, this Contract shall not be construed as limiting or curtailing any rights which the Contractor or any water user within the Contractor's Service Area acquires or has available under any other contract pursuant to Federal Reclamation law.

28. Omitted.

CONTINGENT ON APPROPRIATION OR ALLOTMENT OF FUNDS

29. The expenditure or advance of any money or the performance of any obligation of the United States under this Contract shall be contingent upon appropriation or allotment of funds. Absence of appropriation or allotment of funds shall not relieve the Contractor from any obligations under this Contract. No liability shall accrue to the United States in case funds are not appropriated or allotted.

BOOKS, RECORDS, AND REPORTS

30. (a) The Contractor shall establish and maintain accounts and other books and records pertaining to administration of the terms and conditions of this Contract, including: the Contractor's financial transactions, water supply data, and Project land and right-of-way agreements; water use data; and other matters that the Contracting Officer may require. Reports thereon shall be furnished to the Contracting Officer in such form and on such date or dates as the Contracting Officer may require. Subject to applicable Federal laws and regulations, each party to this Contract shall have the right during office hours to examine and make copies of the other party's books and records relating to matters covered by this Contract.

(b) Notwithstanding the provisions of subdivision (a) of this Article, no books, records, or other information shall be requested from the Contractor by the Contracting Officer unless such books, records, or information are reasonably related to the administration or performance of this Contract. Any such request shall allow the Contractor a reasonable period of time within which to provide the requested books, records, or information.

(c) Omitted.

ASSIGNMENT LIMITED--SUCCESSORS AND ASSIGNS OBLIGATED

31. (a) The provisions of this Contract shall apply to and bind the successors and assigns of the parties hereto, but no assignment or transfer of this Contract or any right or interest therein shall be valid until approved in writing by the Contracting Officer.

(b) The assignment of any right or interest in this Contract by either party shall not interfere with the rights or obligations of the other party to this Contract absent the written concurrence of said other party.

(c) The Contracting Officer shall not unreasonably condition or withhold approval of any proposed assignment.

SEVERABILITY

32. In the event that a person or entity who is neither (i) a party to a Project contract, nor (ii) a person or entity that receives Project Water from a party to a Project contract, nor (iii) an association or other form of organization whose primary function is to represent parties to Project contracts, brings an action in a court of competent jurisdiction challenging the legality or enforceability of a provision included in this Contract and said person, entity, association, or organization obtains a final court decision holding that such provision is legally invalid or unenforceable and the Contractor has not intervened in that lawsuit in support of the plaintiff(s), the parties to this Contract shall use their best efforts to (i) within 30 days of the date of such final court decision identify by mutual agreement the provisions in this Contract which must be revised and (ii) within three months thereafter promptly agree on the appropriate revision(s). The time periods specified above may be extended by mutual agreement of the parties. Pending the completion of the actions designated above, to the extent it can do so without violating any applicable provisions of law, the United States shall continue to make the quantities of Project Water and/or Contractor's Water Rights Water specified in this Contract available to the Contractor pursuant to the provisions of this Contract which were not found to be legally invalid or unenforceable in the final court decision.

RESOLUTION OF DISPUTES

33. Should any dispute arise concerning any provisions of this Contract, or the parties' rights and obligations thereunder, the parties shall meet and confer in an attempt to resolve the dispute. Prior to the Contractor commencing any legal action, or the Contracting Officer referring any matter to Department of Justice, the party shall provide to the other party 30 days' written notice of the intent to take such action; Provided, That such notice shall not be required where a delay in commencing an action would prejudice the interests of the party that intends to file suit. During the 30-day notice period, the Contractor and the Contracting Officer shall meet and confer in an attempt

to resolve the dispute. Except as specifically provided, nothing herein is intended to waive or abridge any right or remedy that the Contractor or the United States may have.

OFFICIALS NOT TO BENEFIT

34. No Member of or Delegate to Congress, Resident Commissioner, or official of the Contractor shall benefit from this Contract other than as a water user or landowner in the same manner as other water users or landowners.

CHANGES IN CONTRACTOR'S SERVICE AREA

35. (a) While this Contract is in effect, no change may be made in the Contractor's Service Area, by inclusion or exclusion of lands, dissolution, consolidation, merger, or otherwise, except upon the Contracting Officer's written consent.

(b) Within 30 days of receipt of a request for such a change, the Contracting Officer will notify the Contractor of any additional information required by the Contracting Officer for processing said request, and both parties will meet to establish a mutually agreeable schedule for timely completion of the process. Such process will analyze whether the proposed change is likely to: (i) result in the use of Project Water contrary to the terms of this Contract; (ii) impair the ability of the Contractor to pay for Project Water furnished under this Contract or to pay for any Federally-constructed facilities for which the Contractor is responsible; and (iii) have an impact on any Project Water rights applications, permits, or licenses. In addition, the Contracting Officer shall comply with the NEPA and ESA. The Contractor will be responsible for all costs incurred by the Contracting Officer in this process, and such costs will be paid in accordance with Article 25 of this Contract.

FEDERAL LAWS

36. By entering into this Contract, the Contractor does not waive its rights to contest the validity or application in connection with the performance of the terms and conditions of this Contract of any Federal law or regulation; Provided, That the Contractor agrees to comply with the terms and conditions of this Contract unless and until relief from application of such Federal law or

regulation to the implementing provision of the Contract is granted by a court of competent jurisdiction.

NOTICES

37. Any notice, demand, or request authorized or required by this Contract shall be deemed to have been given, on behalf of the Contractor, when mailed, postage prepaid, or delivered to the Area Manager, Bureau of Reclamation, 7794 Folsom Dam Road, Folsom, California 95630-1799, and on behalf of the United States, when mailed, postage prepaid, or delivered to the Board of Directors of the San Juan Water District, 9935 Auburn Folsom Road, Granite Bay, California 95746. The designation of the addressee or the address may be changed by notice given in the same manner as provided in this Article for other notices.

CONFIRMATION OF CONTRACT

38. The Contractor, after the execution of this Contract, shall furnish to the Contracting Officer evidence that pursuant to the laws of the State of California, the Contractor is a legally constituted entity, and the Contract is lawful, valid, and binding on the Contractor. This Contract shall not be binding on the United States until such evidence has been provided to the Contracting Officer's satisfaction.

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of the day and year first above written.

THE UNITED STATES OF AMERICA

APPROVED AS TO LEGAL FORM AND SUFFICIENCY
James E Turner
OFFICE OF REGIONAL SOLICITOR
DEPARTMENT OF THE INTERIOR

By: _____
Regional Director, Mid-Pacific Region
Bureau of Reclamation

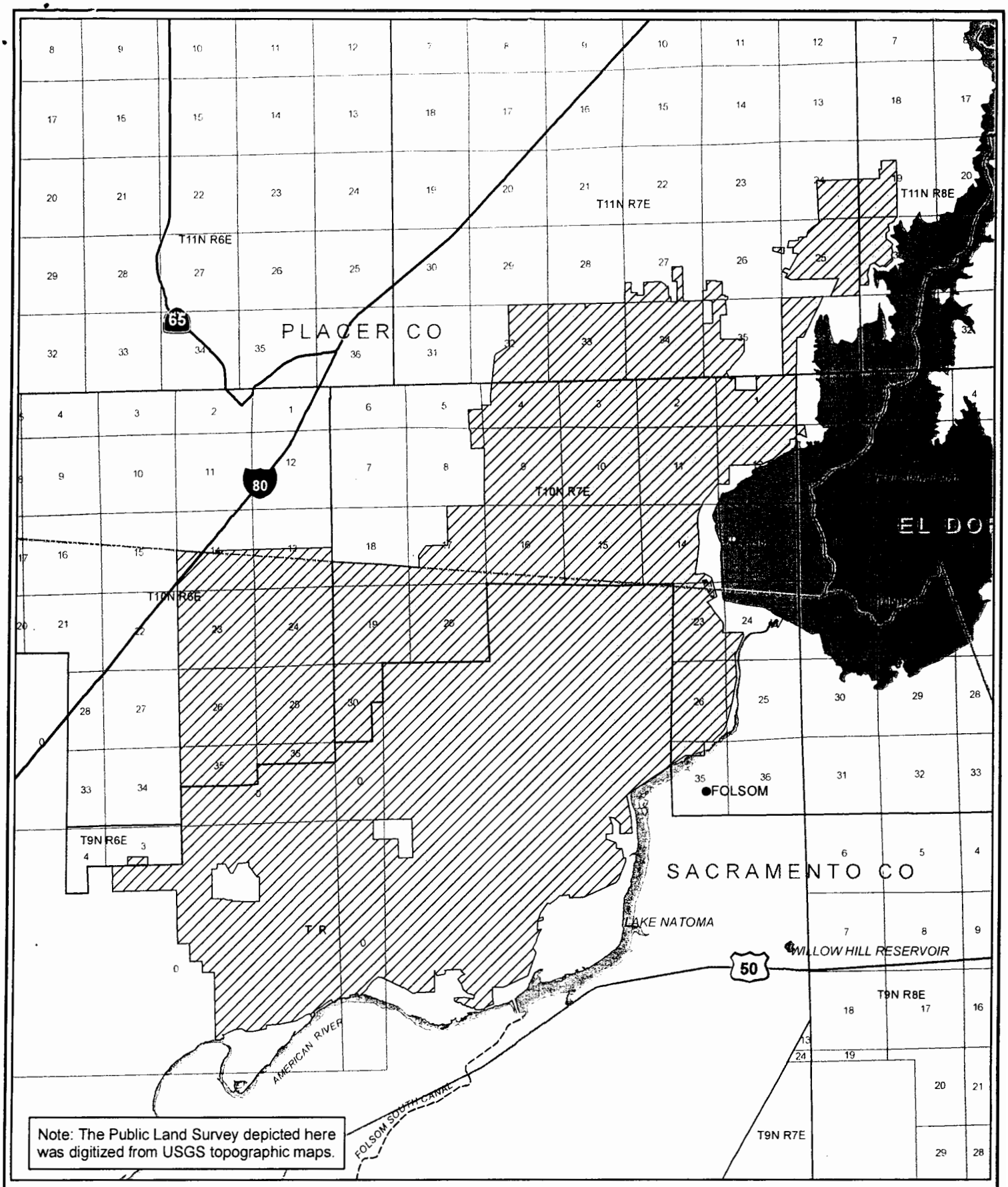
(SEAL)

SAN JUAN WATER DISTRICT

By: _____
President of the Board of Directors

Attest:

By: _____
Secretary of the Board of Directors



San Juan Water District

Contract No. 6-07-20-W1373-LTR1

Exhibit A

Contractor's Service Area

District Boundary

Date: October 13, 2004

File Name: N:\districts\contracts\san_juan\san_juan.mxd

0 1.5 3 Miles

647-208-222

EXHIBIT B
SAN JUAN WATER DISTRICT – FOLSOM LAKE

Note: These are 2004 rates and charges. 2005 water rates will be furnished when available.

	2004 Water Rates Per Acre-Foot
COST-OF-SERVICE RATES:	M&I Water
Capital Rates:	$6.01
O&M Rates:	
Water Marketing	$5.01
Storage	$6.38
Conveyance	$0.00
Direct Pumping	$0.00
Deficit Rates:	
Non-Interest Bearing	$0.00
Interest Bearing	$0.00
CFO/PFR Adj. Rate: *	$5.24
CONTRACT RATE:	$22.64
Tiered Pricing Component>80%<=90% of Contract Total (Full Cost Rate – COS Rate)/2)	$1.87
Tiered Pricing Component>90% of Contract Total (Full Cost Rate – COS Rate)	$3.74
SURCHARGES UNDER P.L. 102-575 TO RESTORATION FUND**	
M&I Surcharge	$32.58
Restoration Payments [3407(d)(2)(A)]	$15.64

* Rate represents the Chief Financial Officer adjustment and Provision for Replacement credit for option 2 cost deferment to be distributed over a 5-year period beginning with 2003 water rates.

** The surcharges are payments in addition to the water rates and were determined pursuant to Title XXXIV of Public Law 102-575. Restoration fund surcharges under P.L. 102-575 are on a fiscal year basis (10/1-9/30).

Ramirez. Jose (SDA)

From: Rick Bettis <rckbettis40@gmail.com>
Sent: Monday, August 22, 2016 5:22 PM
To: Ramirez. Jose (SDA)
Cc: Dorn. Linda (SDA)
Subject: Comments on DEIR Sacramento Regional Sanitation District's South county Agriculture and habitat lands Recycled Water Project

Dear Mr. Ramirez

I am pleased to see the subject move forward towards implementation. I am familiar with this project, having participated in the Sacramento Water Recycling Coalition representing the League of Women Voters of Sacramento County and the Sierra Club Sacramento Group. I also have served as a volunteer member of the Board of Directors of the Central Sacramento Groundwater Management Authority representing the Conservation Landowners and on the Water forum for the League of Women voters. However these comments are being submitted as an individual and not in behalf of any of the organizations referenced above.

I believe the subject DEIR does meet all the requirements of the CEQA and provides an adequate basis for moving forward on this project.

I would suggest that future studies should consider the potential for stronger water conservation programs in the area. Currently only the areas served by established water supply agencies and investor owned companies are required under state law to practise meaningful water conservation. the self supplied entities in the area, including agriculture, rural or agriculture residential, self supplied industrial ,and self supplied public agencies use the largest share of groundwater in the South American and Cosumnes River groundwater basins. The Central Sacramento Groundwater Management Plan calls for water conservation by all entities in the area. However, this programs has not yet been implemented. I believe when the Groundwater Sustainability Agencies are formed and are operational such conservation practises should be implemented as required by the Groundwater Sustainability Management Act 14-1

Climate change will result in changes of the hydrology of the area. Significant runoff producing storms will likely be more intense and shorter in duration. I believe this should be considered in the advanced planning, design of the project. Climate change may affect both the natural recharge to the basin and the available water supplies form the Sacramento river that are planned for use in the conjunctive use program for the area. 14-2

Although the SOI expansion of Elk Grove has been withdraw for now it is general known that the city does plan expansion of a smaller but still significant magnitude. 14-3

t is understood that the Sacramento Area Council of Governments is planning to initiate a more detailed study of critical habitats in the this area. Future studies should consider tho e results of this work when available. 14-4

14-4 cont'd *Sacramento County is moving toward the implementation of the Southeast County Habitat Conservation plan which may have some affect on water requirements for the area that should be given more consideration.*

---

i believe that providing recycled water to for urban landscaping for future projects such as the nearly Delta Shores Development should be given serious consideration in future planning.

14-5 *Thank you for your consideration and I look forward to the expedited implementation of this and future recycled water projects.*

Sincerely,
Rick Bettis
1716 P Street
Sacramento, California 95811

Department of Transportation
Michael J. Penrose, Director

Divisions
Administration
Maintenance & Operations
Engineering & Planning

County of Sacramento

August 24, 2016

ATTN: Jose R. Ramirez, Senior Civil Engineer
Sacramento County Regional Sanitation District
10060 Goethe Road
Sacramento, CA 95827
RamirezJ@sacsewer.com

SUBJECT: COMMENTS ON THE NOTICE OF WASTEWATER CHANGE PETITION (WW0092) OF SACRAMENTO COUNTY REGIONAL SANITIATION DISTRICT FOR THE SOUTH SACRAMENTO COUNTY AGRICULTURE HABITAT LANDS RECYCLED WATER PROGRAM

Mr. Ramirez:

We have received the notice of wastewater change petition for the South Sacramento County Agriculture Habitat Lands Recycled Water Program. We appreciate the opportunity to review this document. We have the following comments to offer at this time:

15-1

1. We agree with the mitigation measure in the document that calls for a transportation management plan. Please work with the County when developing this plan.

2. We request that the Applicant enter into a maintenance agreement for maintenance and damage to pavement along the construction haul routes. The maintenance agreement may designate approved haul routes and the Applicant may be required to submit an annual evaluation of the structural integrity of the pavement on the haul routes to the County. The agreement should identify a method for repairing damage to roadways caused by heavy vehicle operation. The Applicant's maintenance responsibility for the haul routes shall continue throughout the construction portion of the project.

15-2

If you have any questions, please contact me at (916) 874-7052.

Sincerely,

Matthew G. Darrow, P.E., T.E., P.T.O.E.
Senior Transportation Engineer
Department of Transportation

MGD

Cc: Mike Penrose, DOT
Dan Shoeman, DOT
Dean Blank, DOT
Kamal Atwal, DOT
Rizaldy Mananquil, DOT
Hardeep Sidhu, DOT

Powering forward. Together.

SMUD™

August 29, 2016

Jose Ramirez
Sacramento Regional County Sanitation District
10060 Goethe Road
Sacramento, CA 95827

Subject: Environmental Impact Report (EIR), Regional San's South Sacramento County Agriculture & Habitat Lands Recycled Water Program

Dear Mr. Ramirez,

The Sacramento Municipal Utility District (SMUD) appreciates the opportunity to provide comments on the EIR for the Regional San's South Sacramento County Agriculture & Habitat Lands Recycled Water Program. SMUD is the primary energy provider for Sacramento County and the proposed project area. SMUD's vision is to empower our customers with solutions and options that increase energy efficiency, protect the environment, reduce global warming, and lower the cost to serve our region. As a Responsible Agency, SMUD aims to ensure that the proposed project limits the potential for significant environmental effects on SMUD facilities, employees, and customers.

SMUD has overhead electrical distribution, subtransmission, and transmission lines and an underground transmission gas pipeline in the project area that could be impacted during construction of the pipeline for this project. SMUD assumes any impact on our facilities due to construction of this project from either relocation of our facilities or new facilities needed to serve this project is addressed in your EIR. 16-1

Please view the following link on smud.org for more information regarding transmission encroachment: https://www.smud.org/en/do-business-with-smud/real-estate-services/transmission-right-of-way.htm

SMUD has the following comments as it relates to work in and around our transmission facilities:

1. Please provide detailed engineering drawings for any improvements that are proposed within SMUD's transmission line easement. SMUD engineering will review the plans and provide comments as required.

2. Prior to any grading or construction within SMUD's easements, the project applicant shall obtain rights from SMUD's real estate department.

3. SMUD reserves the right to construct new or move existing facilities as necessary within its legal easement. Any developments installed by owner or

assignees within this easement may need to be removed or modified as a result of the new or existing installed facilities.

4. SMUD reserves the right to use any portion of its easement and shall not be responsible for any damages to the developed property within said easement.

5. Project Owner or contractor is responsible for assessing any impacts (including but not limited to induced voltage and current effects) to its facilities as a result of constructing and operating their facilities within close proximity to SMUD's high voltage transmission lines.

6. Project Owner or contractor is responsible for ensuring that any subcontractor performing work in the subject right of way is aware and abides by these conditions.

16-1 cont'd

7. Any proposed SMUD transmission facilities modifications/relocations by the project owner shall be performed under an executed cost recovery agreement. Project owner shall provide 18 months' timeframe to allow for design and construction of identified facilities.

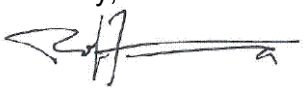
8. There shall be no storage of fuel or combustibles and no fueling of vehicles within the SMUD easement.

9. There shall be no long term staging or storage of construction materials within the SMUD easement, such materials shall be removed from the easement at the completion of the project.

SMUD would like to be involved with discussing the above areas of interest as well as discussing any other potential issues. We aim to be partners in the efficient and sustainable delivery of the proposed project. Please ensure that the information included in this response (including the attachment) is conveyed to the project planners and the appropriate project proponents.

Environmental leadership is a core value of SMUD and we look forward to collaborating with you on this project. Again, we appreciate the opportunity to provide input on this EIR for the Regional San's South Sacramento County Agriculture & Habitat Lands Recycled Water Program. If you have any questions regarding this letter, please contact Emily Bacchini, SMUD Environmental Specialist at 916-732-6334 or emily.bacchini@smud.org.

Sincerely,



Rob Ferrera
Environmental Specialist
Environmental Management
Workforce and Enterprise Services
Sacramento Municipal Utility District

Attachment: Project Review Comments from Wenjie Chen

Cc: Emily Bacchini
Rob Ferrera
Wenjie Chen
Jose Bodipo-Memba
Pat Durham
Joseph Schofield

SMUD® PROJECT REVIEW COMMENTS

PROJECT TITLE: Sacramento Regional County District South Sacramento County Agriculture & Habitat Lands Recycled Water Program

PROJECT LOCATION: Elk Grove

DRAWING STATUS: Environmental Impact Report

PROJECT OWNER: Sacramento Regional County Sanitation District

LOCAL JURISDICTION: City of Elk Grove and South Sacramento County

SMUD REVIEW DEPARTMENT: Transmission Line Engineering

SMUD REVIEW BY: Wenjie Chen

SMUD REVIEW DATE: 8/12/2016

Please respond to each of the listed requirements in writing.

1. SMUD has two sets of three phase 230kV overhead transmission lines and structures located in the immediate vicinity of the project area. Please see the approximate locations of transmission lines and structures shown in the area outlined in red on the exhibits of page two.

2. Project owner shall provide detailed engineering drawings for any improvements that are proposed within the SMUD transmission line easement. SMUD engineering will review the plans and provide comments as required.

3. Under no circumstance shall any grading or construction activities be permitted within SMUD's transmission line easements without the conveyance of rights from SMUD's real estate department. Should applicant be found performing unapproved improvements, the applicant will be responsible for returning the property to its original condition at their expense.

4. SMUD reserves the right to construct new or move existing facilities as necessary within its legal easement. Any developments installed by owner or assignees within this easement may need to be removed or modified as a result of the new or existing installed facilities.

5. SMUD reserves the right to use any portion of its easement and shall not be responsible for any damages to the developed property within said easement.

Exhibits

6. Project Owner or contractor is responsible for assessing any impacts (including but not limited to induced voltage and current effects) to its facilities as a result of constructing and operating their facilities within close proximity to SMUD's high voltage transmission lines.

7. Project Owner or contractor is responsible for ensuring that any subcontractor performing work in the subject right of way is aware and abides by these conditions.

8. Any proposed SMUD transmission facilities modifications/relocations by the project owner shall be performed under an executed cost recovery agreement. Project owner shall provide 18 months' timeframe to allow for design and construction of identified facilities.

9. There shall be no storage of fuel or combustibles and no fueling of vehicles within the SMUD easement.

10. There shall be no long term staging or storage of construction materials within the SMUD easement, such materials shall be removed from the easement at the completion of the project.

11. All boom-operated construction equipment within SMUD's easement corridor shall be equipped with a mechanical lock-out device to prevent the boom from extending above the Cal-OSHA required clearance distance to SMUD's energized high voltage lines and fiber optic communication lines.

12. Add the following note to drawings:
WARNING – SMUD OVERHEAD TRANSMISSION LINES ARE LIVE – Electrocution Potential. Project owner or Contractor shall take all appropriate safety measures when working near or under lines, including placement of OSHA-required warning signage. On-site SMUD inspection required when working within 25 feet of SMUD facilities. Contractor shall contact SMUD's Ricky Plaza at (916) 732-5905 or (916) 799-5733 to schedule inspection. 72-hour advance notice is required. Project owner or Contractor shall protect SMUD facilities during construction and notify SMUD immediately if facilities are damaged. Any damage to existing facilities shall be repaired at the project owner or contractor's expense.

13. Any deviations or revisions to the plans as submitted shall be brought to the attention of SMUD's Real Estate department.

For additional information please visit our website and review our Guide for Transmission Encroachment

https://www.smud.org/assets/documents/pdf/Guide-for-Transimssion-Encroachment.pdf

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Appendix C – Mitigation Monitoring and Reporting Program

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Appendix C

Mitigation Monitoring and Reporting Plan

The Sacramento Regional County Sanitation District (Regional San) is proposing to implement the South Sacarmento County Agricultural & Habitat Lands Recycled Water Program (project). Regional San is the CEQA lead agency for completion of the Environmental Impact Report. After considering the environmental analysis provided in the Draft EIR and public comments submitted on the Draft EIR, Regional San has determined that the project would not have a significant effect on the environment with implementation of the mitigation measures identified in the Mitigation Monitoring and Reporting Plan (MMRP). This MMRP provides a plan for implementation of mitigation measures that pertain to the Medium Service Area Alternative, which has been selected as the preferred alternative.

The MMRP contains all of the mitigation measures that were presented in the Draft EIR. Mitigation numbers are tied to the impact numbers in the Draft EIR, therefore mitigation is not numbered consecutively. Some impacts that were determined to be less than significant do not require mitigation, and thus some mitigation numbers are skipped. For example, Impact AES-1 was determined to be less than significant, so there is no Mitigation Measure AES-1. Impact AES-2 was determined to be less than significant with mitigation, and would require Mitigation Measure AES-2. The table is organized by Mitigation Measure and because some measures address several different impacts, multiple impacts may be listed in the Impact Statement, where applicable.

Mitigation measures have been included in the project to reduce or avoid potential environmental impacts associated with project construction and operation. Section 21081.6 of the California Public Resources Code requires a CEQA lead or responsible agency that approves or carries out a project where an EIR has identified measures to mitigate significant environmental effects to adopt a "reporting monitoring program for adopted or required changes to mitigate or avoid significant environmental effects." In accordance with Section 21081.6 of the Public Resources Code, this MMRP has been prepared.

Impact Statement	Mitigation Measure (Exact Text)	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation	Verification: Status/ Date Completed/ Initials
Aesthetics						
AES-2: Create a New Source of Substantial Light, Glare, or Shadow	**AES-2: Nighttime Construction Lighting**: If nighttime construction lighting is required, the construction contractor shall shield and orient lighting downward and directed away from any nearby receptors to minimize effects. Lighting shall be directed toward active construction areas only, and shall have the minimum brightness necessary to ensure worker safety.	Regional San	Regional San	1. Confirm that lighting measures are included in contract documents 2. Monitor construction activities to verify that measures are implemented during construction. Document compliance and retain in the project file.	1. Design 2. Construction	1._____ 2._____
Land Use & Agriculture						
LUA-2: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance or Area Containing Prime Soils to Uses Not Conducive to Agricultural Production, Conflict with Any Existing Williamson Act Contract, or Introduce Incompatible Uses in the Vicinity of Existing Agricultural Uses	**LUA-2: Stockpile Soil**: Regional San and/or its contractors shall stockpile topsoil removed during construction for later reuse. The soil shall be stored in a clear area of the construction site where it would not have the potential to affect agricultural or biological resources. Stockpiled soil shall be covered with a tarp at all times to prevent generation of fugitive dust. Following pipeline construction, soil shall be backfilled into the trench and restored to an appropriate level of compaction.	Regional San	Regional San	1. Confirm that soil stockpiling requirements are included in contract specifications 2. Monitor construction activities to verify that measures are implemented during construction. Document compliance and retain in the project file.	1. Design 2. Construction	1._____ 2._____

Impact Statement	Mitigation Measure (Exact Text)	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation	Verification: Status/ Date Completed/ Initials
Biological Resources						
BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service BIO-3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means	**BIO-1a: Avoid Impacts (Both Permanent and Temporary) to the Extent Feasible to Habitats and Land Cover Types Used by HCP-Covered and Non-HCP-Covered Sensitive Species**: Regional San and its contractors will avoid and minimize permanent and temporary impacts to habitats and land cover types used by sensitive species potentially occurring in the Project Area (as listed in Table 3.5 1 of the EIR for the Project). Avoidance and minimization of habitat areas will be accomplished during Project design work, and/or during construction by implementing best management practices, including establishment of buffer zones, installation of fencing around sensitive habitats, and implementation of a storm water pollution prevention plan (SWPPP) to reduce the potential for sediments or contaminants to enter sensitive habitats.	Regional San	Regional San	1. Confirm that locations of facilities avoid sensitive habitats to the extent feasible through siting and use of buffers. Document compliance and retain in the project file.	1. Design	1._____

Impact Statement	Mitigation Measure (Exact Text)	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation	Verification: Status/ Date Completed/ Initials
BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service BIO-3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means	**BIO-1b Mitigate Impacts to Habitats and Land Cover Types Used by HCP-Covered and Non-HCP-Covered Sensitive Species**: To mitigate unavoidable losses to habitats used by sensitive species (both SSHCP-covered and non-SSHCP-covered) in the Project area, Regional San shall participate in and comply with the habitat-level conservation measures identified in the SSHCP. Conservation commitments of the SSHCP summarized below are presented as mitigation measures, and would be implemented by Regional San even if the SSHCP is not adopted. Details for implementation of these measures can be referenced in Section 7.3.2 of the draft SSHCP. As noted previously, if the SSHCP is not approved prior to the project permitting phase, regulatory and permitting agencies may require mitigation that is different from measures prescribed in the SSHCP. In this circumstance, Sacramento County would not manage implementation of the SSHCP and would not receive monies from SSHCP participants to implement the SSHCP. Applicants would likely work directly with federal and state permitting agencies to secure necessary environmental permits. This section assumes SSHCP participation. • To mitigate impacts to vernal pool associated species, provide funding to compensate for unavoidable losses of vernal pool habitat at the following ratios: 3:1 (2 acres preservation and 1 acre re-establishment/establishment) for direct impacts; 2:1 for indirect impacts (2 acres preservation). Provide funding to compensate for unavoidable losses of direct impacts to swale habitat at a 2:1 ratio (1 acre preservation and 1 acre re-establishment/establishment) and a 1:1 ratio (1 acre preservation) for indirect impacts. • To mitigate impacts to seasonal wetland associated species, provide funding to compensate for unavoidable losses of seasonal wetland, seasonal swale, and seasonal impoundment habitat at a 2:1 ratio (1 acre preservation and 1 acre re-establishment/ establishment). • To mitigate impacts to open water associated species, provide funding to compensate for unavoidable losses of this habitat at a 2:1 ratio (1 acre preservation and 1 acre re-establishment/establishment). • To mitigate impacts to freshwater marsh associated species, provide funding to compensate for unavoidable losses of this habitat at a 2:1 ratio (1 acre preservation and 1 acre re-establishment/establishment). • To mitigate impacts to species associated with streams and creeks, provide funding to compensate for unavoidable losses of these habitats at a 2:1 ratio (1 acre preservation and 1 acre re-establishment/establishment). • To mitigate impacts to species associated with mixed riparian woodland and mixed riparian scrub habitat, provide funding to compensate for unavoidable losses of these habitats at a 2:1 ratio (1 acre preservation and 1 acre re-establishment/establishment) ratio. • To mitigate impacts to species associated with croplands and valley grassland habitats, provide funding to compensate for unavoidable losses of these land cover types at a 1:1 ratio (1 acre preservation).	Regional San	Regional San, South Sacramento Conserva-tion Agency	1. Confirm provision of funding as compensation at the specified ratios for any unavoidable losses. 2. Confirm acreage estimates before start of construction and provide additional funding for mitigation if needed. 3. Monitor construction activities to verify that no additional habitat is affected during construction and provide additional funding if needed.	1. Design 2. Pre-construction 3. Construction	1._____ 2._____ 3._____
BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service	**BIO-1c: Mitigate Impacts to HCP-Covered Species**: Regional San shall participate in and comply with the species-specific conservation measures identified in the SSHCP for SSHCP-covered species. Conservation commitments of the SSHCP listed below are presented as mitigation measures, and would be implemented by Regional San even if the SSHCP is not adopted. The following species-specific measures have been taken directly from the SSHCP. Where "Implementing Entity" is used below, it refers to Sacramento County or the SSHCP implementing agency.	Regional San	Regional San	1. Confirm that surveys are conducted as required if work takes place in modeled habitat. 2. Confirm that various requirements for protection of species during construction are included in specifications. 3. Monitor construction activities to verify that measures are implemented during construction. 4. Verify restoration of habitat at the completion of construction and	1. Pre-construction 2. Design 3. Construction 4. At completion of construction	1._____ 2._____ 3._____ 4._____

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	• **Sacramento Orcutt Grass and Slender Orcutt Grass**: Due to their rarity, take of either of these species is not permitted under the SSHCP, with the exception of take related to Preserve management and monitoring (see SSHCP Section 5). If a project site is located within 1 mile of the Mather Core Recovery Area and the site contains vernal pools, the project site will be surveyed for Sacramento and slender Orcutt grass by an approved biologist following California Department of Fish and Wildlife (CDFW) rare plant survey protocols or most recent CDFW guidelines to determine if Sacramento and/or slender Orcutt grass is present. An approved biologist will conduct the field investigation to identify and map occurrences. Where known or new Sacramento or slender Orcutt grass occurrences are found, they will be protected within an SSHCP Preserve that is at least 50 acres. The occurrence will be located interior to the Preserve at a distance of no less than 300 feet from the edge of the Preserve boundary. If Regional San encounters a previously undiscovered occurrence of Sacramento or slender Orcutt grass at the project site, Regional San will contact the SSHCP Implementing Entity or Land Use Authority Permittee with authority over the project (under the HCP), who will coordinate with the Wildlife Agencies for written concurrence of avoidance to ensure that the project does not cause take of the species. • **California Tiger Salamander (CTS)**. The SSHCP has modeled CTS habitat in the SSHCP Plan Area. Ground-disturbing activities within California tiger salamander modeled habitat will occur outside the breeding and dispersal season (occur after July 31 and before October 15), to the maximum extent practicable. If Covered Activities must be implemented in mapped, modeled habitat during the breeding and dispersal season (after October 15 and before July 31), construction activities will not start until 30 minutes after sunrise and must be complete 30 minutes prior to sunset. If an activity must be implemented in modeled habitat during the breeding and dispersal season (after October 15 and before July 31), exclusion fencing will be installed around the project footprint before October 15. Temporary high-visibility construction fencing will be installed along the edge of work areas, and exclusion fencing will be installed immediately outside of the temporary high-visibility construction fencing to exclude California tiger salamanders from entering the construction area or becoming entangled in the construction fencing. Exclusion fencing will be at least 1 foot tall and be buried at least 6 inches below the ground to prevent salamanders from going under the fencing. Fencing will remain in place until all construction activities within the construction area are complete. No project activities will occur outside the delineated project footprint. An approved biologist must inspect the exclusion fencing and project site every morning before 7:00 a.m. for integrity and for any entrapped California tiger salamanders. However, the SSHCP Implementing Entity may, with approval of the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), determine that it is appropriate for an activity to not erect fencing for certain long and linear projects if it appears that the exclusion fencing will likely trap individuals or cause more take of California tiger salamander than it would prevent. If activities must be implemented in modeled habitat, an approved biologist experienced with California tiger salamander identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place, and will inspect the project site for California tiger salamander every morning before 7:00 a.m., or prior to construction activities. The approved biologist will also train construction personnel on the required California tiger salamander avoidance procedures, exclusion fencing, and correct protocols in the event that a California tiger salamander enters an active construction zone.			provide documentation showing pre- and post-project conditions to the Implementing Entity, as required. Document compliance and retain in the project file.		

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	If activities must be implemented in modeled habitat, all excavated steep-walled holes or trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes or trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within California tiger salamander modeled habitat will be inspected for California tiger salamanders by the approved biologist prior to being moved. If a California tiger salamander is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately (California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS)). Construction activities will be suspended in a 100-foot radius of the animal until the animal is relocated by an approved biologist with appropriate handling permits from the Wildlife Agencies. Prior to relocation, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the salamander, within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to USFWS and CDFW immediately. Any worker who inadvertently injures or kills a California tiger salamander or who finds dead, injured, or entrapped California tiger salamander(s) must immediately report the incident to the approved biologist. If erosion control is implemented within California tiger salamander modeled habitat, non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure that salamanders are not trapped (no monofilament). Coconut coir matting and fiber rolls with burlap are examples of acceptable erosion control materials. This limitation will be communicated to the contractor through use of special provisions included in the bid solicitation package. If project activities are within SSHCP-mapped California tiger salamander modeled habitat, rodent control will be allowed only in developed portions of a project site. Where rodent control is allowed, the method of rodent control will comply with the methods of rodent control discussed in the 4(d) Rule published in the U.S. Fish and Wildlife Service's (2004) final listing rule for tiger salamander. • **Western Spadefoot Toad (WST)**: The SSHCP has modeled WST habitat in the SSHCP Plan Area. Ground-disturbing activities within western spadefoot mapped, modeled habitat will occur outside the breeding and dispersal season (after May 15 and before October 15), to the maximum extent practicable. If activities must be implemented in modeled habitat after October 15 and before May 15, exclusion fencing will be installed around the project footprint before October 15, and the project site must be monitored by an approved biologist following rain events. Temporary high-visibility construction fencing will be installed along the edge of work areas, and silt fencing will be installed immediately behind the temporary high-visibility construction fencing to exclude western spadefoot from entering the construction area. Fencing will remain in place until all construction activities within the construction area are completed. No project activities will occur outside the delineated project footprint. If activities must be implemented in mapped, modeled habitat in the breeding and dispersal season (after October 15 and before May 15), an approved biologist experienced with western spadefoot identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place, and will inspect the project site daily for western spadefoot prior to construction activities. The approved biologist will also train construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a western spadefoot enters an active construction zone.					

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	If an activity occurs in western spadefoot modeled habitat, all excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within western spadefoot modeled habitat will be inspected for western spadefoot by the approved biologist prior to being moved. If erosion control is implemented within western spadefoot modeled habitat, non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure that western spadefoots are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials. If activities must be implemented in modeled habitat during the breeding and dispersal season (after October 15 and before May 15), and a western spadefoot is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately. Construction activities will be suspended in a 100-foot radius of the animal until the animal leaves the project site on its own volition. If necessary, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the western spadefoot within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife immediately. Any worker who inadvertently injures or kills a western spadefoot or who finds dead, injured, or entrapped western spadefoot(s) must immediately report the incident to the approved biologist. • **Western Pond Turtle (WPT):** The SSHCP has modeled WPT habitat in the SSHCP Plan Area. If modeled habitat for western pond turtle is present within a project footprint or within 300 feet of a project footprint, then an approved biologist will conduct a field investigation to delineate western pond turtle aquatic habitat within the project footprint and within 300 feet of the project footprint. Western pond turtle aquatic habitat includes, but is not limited to, low-gradient streams and creeks, open water, freshwater marsh, and rice fields. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Regional San will map all existing or potential sites and provide those maps to the Local Land Use Permittees and the SSHCP Implementing Entity. Locations of delineated western pond turtle habitat must also be noted on plans that are submitted to a Local Land Use Permittee. Regional San will use this information to finalize project design. Project activities may occur throughout the year as long as western pond turtle habitat is identified and fully avoided. Otherwise, Regional San will implement the following additional measures: Maintenance and improvements to existing structures may occur throughout the year as long as western pond turtle habitat is identified and avoided, and movement of equipment is confined to existing roads. Otherwise, construction and ground-disturbing activities must be conducted outside of western pond turtle's active season. Construction and ground-disturbing activities will be initiated after May 1 and will <u>end</u> ~~commence~~ prior to September 15. If it appears that construction activities may go beyond September 15, Regional San will contact the Local Land Use Permittee and the Implementing Entity as soon as possible, but not later than September 1, to determine if additional measures are necessary to minimize take.					

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	If a project activity is occurring in western pond turtle modeled habitat, an approved biologist experienced with western pond turtle identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place in aquatic habitat or within 300 feet of aquatic habitat, and will inspect the project site daily for western pond turtle prior to construction activities. The approved biologist will also training construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a western pond turtle enters an active construction zone. If construction activities will occur in western pond turtle aquatic habitat, aquatic habitat for the turtle will be dewatered and then remain dry and absent of aquatic prey (e.g., crustaceans and other aquatic invertebrates) for 15 days prior to the initiation of construction activities. If complete dewatering is not possible, the Implementing Entity will be contacted to determine what additional measures may be necessary to minimize effects to western pond turtle. After aquatic habitat has been dewatered 15 days prior to construction activities, exclusion fencing will be installed extending a minimum of 300 feet into adjacent uplands to isolate both the aquatic and adjacent upland habitat. Exclusionary fencing will be erected 36 inches above ground and buried at least 6 inches below the ground to prevent turtles from attempting to burrow or move under the fence into the construction area. In addition, high-visibility fencing will be erected to identify construction limits and to protect adjacent habitat from encroachment of personnel and equipment. Western pond turtle habitat outside construction fencing will be avoided by all construction personnel. The fencing and work area will be inspected by the approved biologist to ensure that the fencing is intact and that no turtles have entered the work area before the start of each work day. Fencing will be maintained by the contractor until completion of the project. If, after exclusion fencing and dewatering, western pond turtles are found within the project footprint or within 300 feet of the project footprint, Regional San will discuss the next best steps with the Implementing Entity and Wildlife Agencies. If a project activity occurs within western pond turtle modeled habitat, all excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within western pond turtle modeled habitat will be inspected for western pond turtle by the approved biologist prior to being moved. If erosion control is implemented within western pond turtle modeled habitat, non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure that turtles are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials. Construction and maintenance vehicles will observe a 20-mile-per-hour speed limit within western pond turtle modeled upland habitat. If a western pond turtle is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately. Construction activities will be suspended in a 100-foot radius of the animal until the animal leaves the project site on its own volition. If necessary, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the turtle, within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to the U.S. Fish and Wildlife Service immediately. Any worker who inadvertently injures or kills a western pond turtle or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist.					

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	After completion of ground-disturbing activities, Regional San will remove any temporary fill and construction debris and will restore temporarily disturbed areas to pre-project conditions. Restoration work includes such activities as re-vegetating the banks and active channels with a seed mix similar to pre-project conditions. Appropriate methods and plant species used to re-vegetate such areas will be determined on a site-specific basis in consultation with the Implementing Entity. Restoration work may include replanting emergent aquatic vegetation and placing appropriate artificial or natural basking areas in waterways and wetlands. A photo documentation report showing pre- and post-project conditions will be submitted to the Implementing Entity 1 month after implementation of the restoration. • **Giant Garter Snake (GGS)**: The SSHCP has modeled GGS habitat in the SSHCP Plan Area. If modeled habitat for giant garter snake is present within the project footprint or within 300 feet of the project footprint, then an approved biologist will conduct a field investigation to delineate giant garter snake aquatic habitat within the project footprint and adjacent areas within 300 feet of the project footprint. Giant garter snake aquatic habitat includes, but is not limited to, low-gradient streams and creeks, open water, freshwater marsh, agricultural ditches, and rice fields. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Regional San will map all existing or potential sites and provide these maps to the Local Land Use Permittees and the Implementing Entity. Locations of delineated giant garter snake habitat must also be noted on plans that are submitted to a Local Land Use Permittee. Regional San will use this information to finalize project design. Project activities may occur throughout the year as long as giant garter snake habitat is identified and fully avoided. Otherwise, Regional San will implement the following additional measures: Project activities that do not fully avoid giant garter snake modeled habitat will be conducted during the snake's active season. Construction and ground-disturbing activities will be initiated after May 1 and will end prior to September 15. If it appears that construction activities may go beyond September 15, Regional San will contact the Local Land Use Permittee and the Implementing Entity as soon as possible, but not later than September 1. The Local Land Use Permittee and the Implementing Entity will discuss with the Wildlife Agencies additional measures necessary to minimize take. If a project activity is occurring in giant garter snake modeled habitat, an approved biologist experienced with giant garter snake identification and behavior will monitor the project site, including the integrity of any exclusion fencing. The approved biologist will be on site daily while construction-related activities are taking place in aquatic habitat or within 300 feet of aquatic habitat, and will inspect the project site daily for giant garter snake prior to construction activities. The approved biologist will also train construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a giant garter snake enters an active construction zone. If construction activities will occur in giant garter snake aquatic habitat, aquatic habitat will be dewatered and then remain dry and absent of aquatic prey (e.g., fish and tadpoles) for 15 days prior to initiation of construction activities. If complete dewatering is not possible, the Implementing Entity will be contacted to determine what additional measures may be necessary to minimize effects to giant garter snake. After aquatic habitat has been dewatered 15 days prior to construction activities, exclusion fencing will be installed extending a minimum of 300 feet into adjacent uplands to isolate both the aquatic and adjacent upland habitat. Exclusionary fencing will be erected 36 inches above ground and buried at least 6 inches below the ground to prevent snakes from attempting to move under the fence into the construction area. In addition, high-visibility fencing will be erected to identify the construction limits and to protect adjacent habitat from encroachment of personnel and equipment. Giant garter snake habitat outside construction fencing will be avoided by all construction personnel. The fencing and the work area will be inspected by the approved biologist to ensure that the fencing is intact and that no snakes have entered the work area before the start of each work day. The fencing will be maintained by the contractor until completion of the project.					

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	If an activity occurs in giant garter snake modeled habitat, all excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches will be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within giant garter snake modeled habitat will be inspected for giant garter snake by the approved biologist prior to being moved. If erosion control is implemented within giant garter snake modeled habitat, non-entangling erosion control material will be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure snakes are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials. If a giant garter snake is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately. Construction activities will be suspended in a 100-foot radius of the animal until the animal leaves the project site on its own volition. If necessary, the approved biologist will notify the Wildlife Agencies to determine the appropriate procedures related to relocation. If the animal is handled, a report will be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect the giant garter snake within 1 business day to the Wildlife Agencies. The biologist will report any take of listed species to the U.S. Fish and Wildlife Service immediately. Any worker who inadvertently injures or kills a giant garter snake or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist. After completion of ground-disturbing activities, Regional San will remove any temporary fill and construction debris and will restore temporarily disturbed areas to pre-project conditions. Restoration work includes such activities as re-vegetating the banks and active channels with a seed mix similar to pre-project conditions. Appropriate methods and plant species used to re-vegetate such areas will be determined on a site-specific basis in consultation with the Implementing Entity. Restoration work may include replanting emergent aquatic vegetation. Refer to the U.S. Fish and Wildlife Service's (USFWS) Guidelines for the Restoration and/or Replacement of Giant Garter Snake Habitat (USFWS 1997), or the most current USFWS guidelines at the time of the activity. A photo documentation report showing pre- and post-project conditions will be submitted to the Implementing Entity 1 month after implementation of the restoration. • **Tricolored Blackbird (TCBB)**: The SSHCP has modeled TCBB habitat in the SSHCP Plan Area. If modeled habitat for tricolored blackbird is present within a project footprint or within 500 feet of a project footprint, then an approved biologist will conduct a field investigation to determine if existing or potential nesting or foraging sites are present within the project footprint and adjacent areas within 500 feet of the project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Within the SSHCP Plan Area, potential tricolor blackbird nest sites are often associated with freshwater marsh and seasonal wetlands, or in thickets of willow, blackberry, wild rose, thistle, and other thorny vegetation. Tricolored blackbirds are also known to nest in crops associated with dairy farms. Foraging habitat is associated with annual grasslands, wet and dry vernal pools and other seasonal wetlands, agricultural fields (such as large tracts of alfalfa and pastures with continuous haying schedules and recently tilled fields), cattle feedlots, and dairies. Regional San will map all existing or potential nesting or foraging sites and provide these maps to the Local Land Use Permittees and Implementing Entity.					

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	Pre-construction surveys will be required to determine if active nests are present within a project footprint or within 500 feet of a project footprint if existing or potential nest sites were found during design surveys and construction activities will occur during the breeding season (March 1 through September 15). An approved biologist will conduct pre-construction surveys within 30 days and within 3 days of ground-disturbing activities, and within the proposed project footprint and 500 feet of the proposed project footprint to determine the presence of nesting tricolored blackbird. Pre-construction surveys will be conducted during the breeding season (March 1 through August 31). Surveys conducted in February (to meet pre-construction survey requirements for work starting in March) must be conducted within 14 days and 3 days in advance of ground-disturbing activities. If a nest is present, the approved biologist will inform the Land Use Authority Permittee and the Implementing Entity of species locations, and they in turn will notify the Wildlife Agencies. If active TCBB nests are found within the project footprint or within 500 feet of any project-related activity, Regional San will establish a 500-foot temporary buffer around the active nest until the young have fledged. If nesting tricolored blackbirds are present within the project footprint or within 500 feet of any project-related activity, then an approved biologist experienced with tricolored blackbird behavior will be retained by Regional San to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist will be on site daily while construction-related activities are taking place near the disturbance buffer. Work within the nest disturbance buffer will not be permitted. If the approved biologist determines that tricolored blackbirds are exhibiting agitated behavior, construction will cease until the buffer size is increased to a distance necessary to result in no harm or harassment to the nesting tricolored blackbirds. If the biologist determines that the colonies are at risk, a meeting with Regional San, the Implementing Entity, and Wildlife Agencies will be held to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a tricolored blackbird flies into an active construction zone. On SSHCP Agricultural Preserves, pesticides (including herbicides) will not be applied from January 1 through July 15. • **Burrowing Owl (BUOW)**: The SSHCP has modeled BUOW habitat in the SSHCP Plan Area. Surveys within modeled habitat are required for both the breeding and non-breeding season. If the project site falls within modeled habitat, an approved biologist will survey the project site and map all burrows, noting any burrows that may be occupied. Occupied burrows are often (but not always) indicated by tracks, feathers, egg shell fragments, pellets, prey remains, and/or excrement. Surveying and mapping will be conducted by the approved biologist while walking transects throughout the entire project site plus all accessible areas within a 250-foot radius from the project site. The centerline of these transects will be no more than 50 feet apart and will vary in width to account for changes in terrain and vegetation that can preclude complete visual coverage of the area. For example, in hilly terrain with patches of tall grass, transects will be closer together, and in open areas with little vegetation, they can be 50 feet apart. This methodology is consistent with current survey protocols for this species. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. If suitable habitat is identified during the initial survey, and if the project does not fully avoid the habitat, pre-construction surveys will be required. Burrowing owl habitat is fully avoided if project-related activities do not impinge on a 250-foot buffer established by the approved biologist around suitable burrows.					

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	Prior to any ground disturbing activity, an approved biologist will conduct pre-construction surveys in all areas that were identified as suitable habitat during the initial surveys. The purpose of the pre-construction surveys is to document the presence or absence of burrowing owls on the project site, particularly in areas within 250 feet of construction activities. To maximize the likelihood of detecting owls, the pre-construction survey will last a minimum of 3 hours. The survey will begin 1 hour before sunrise and continue until 2 hours after sunrise (3 hours total), or begin 2 hours before sunset and continue until 1 hour after sunset. Additional time may be required for large project sites. A minimum of two pre-construction surveys will be conducted (if owls are detected on the first survey, a second survey is not needed). All owls observed will be counted and their location will be mapped. Surveys will conclude no more than 2 calendar days prior to construction. Therefore, Regional San must begin surveys no more than 4 days prior to construction (2 days of surveying plus up to 2 days between surveys and construction). To avoid last-minute changes in schedule or contracting that may occur if burrowing owls are found, Regional San may also conduct a preliminary survey up to 15 days before construction. This preliminary survey may count as the first of the two required surveys as long as the second survey concludes no more than 2 calendar days in advance of construction. If western burrowing owl or evidence of western burrowing owl is observed on the project site or within 250 feet of the project site during pre-construction surveys, then the following will occur: ***During Breeding Season***: If the approved biologist finds evidence of western burrowing owls within a project site during the breeding season (February 1 through August 31), all project-related activities will avoid nest sites during the remainder of the breeding season or while the nest remains occupied by adults or young (nest occupation includes individuals or family groups foraging on or near the site following fledging). Avoidance is establishment of a minimum 250-foot buffer zone around nests. Construction and other project-related activities may occur outside of the 250-foot buffer zone. Construction and other project-related activities may be allowed inside of the 250-foot non-disturbance buffer during the breeding season if the nest is not disturbed, and Regional San develops an avoidance, minimization, and monitoring plan that is approved by the Implementing Entity and Wildlife Agencies prior to project construction based on the following criteria: o The Implementing Entity and Wildlife Agencies approve of the avoidance and minimization plan provided by the project applicant. o An approved biologist monitors the owls for at least 3 days prior to construction to determine baseline nesting and foraging behavior (i.e., behavior without construction). o The same approved biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities. o If there is any change in owl nesting and foraging behavior as a result of construction activities, the approved biologist will have authority to shut down activities within the 250-foot buffer. Construction cannot resume within the 250-foot buffer until any owls present are no longer affected by nearby construction activities, and with written concurrence from the Wildlife Agencies. o If monitoring by the approved biologist indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use, the non-disturbance buffer zone may be removed if approved by the Wildlife Agencies. The approved biologist will excavate the burrow in accordance with the latest California Department of Fish and Wildlife guidelines for burrowing owl to prevent reoccupation after receiving approval from the Wildlife Agencies. o The Implementing Entity and Wildlife Agencies will respond to a request from Regional San to review the proposed construction monitoring plan within 21 days.					

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	During Non-Breeding Season: During the non-breeding season (September 1 through January 31), the approved biologist will establish a minimum 250-foot non-disturbance buffer around occupied burrows. Construction activities outside of this 250-foot buffer will be allowed. Construction activities within the non-disturbance buffer will be allowed if the following criteria are met to prevent owls from abandoning over-wintering sites: o An approved biologist monitors the owls for at least 3 days prior to construction to determine baseline foraging behavior (i.e., behavior without construction). o The same approved biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities. o If there is any change in owl foraging behavior as a result of construction activities, the approved biologist will have authority to shut down activities within the 250-foot buffer. o If the owls are gone for at least 1 week, Regional San may request approval from the Implementing Entity and Wildlife Agencies that an approved biologist excavate usable burrows and install one-way exclusionary devices to prevent owls from re-occupying the site. After all usable burrows are excavated, the buffer zone will be removed and construction may continue. o Monitoring must continue as described above for the non-breeding season as long as the burrow remains active. During construction activities, 250-foot construction buffer zones will be established and maintained around any occupied burrow. An approved biologist will monitor the site to ensure that buffers are enforced and owls are not disturbed. The approved biologist will also train construction personnel on avoidance procedures, buffer zones, and protocols in the event that a burrowing owl flies into an active construction zone. Passive relocation is not allowed without the express written approval of the Wildlife Agencies. Passive owl relocation may be allowed on a case-by-case basis on project sites during the non-breeding season (September 1 through January 31) with the written approval of the Wildlife Agencies if the other measures described in this condition preclude work from continuing. Passive relocation must be done in accordance with the latest California Department of Fish and Wildlife guidelines for burrowing owl. Passive relocation will only be proposed if the burrow needing to be removed or with the potential to collapse from construction activities is the result of a Covered Activity. If passive relocation is approved by the Wildlife Agencies, an approved biologist can passively exclude birds from their burrows during the non-breeding season by installing one-way doors in burrow entrances. These doors will be in place for 48 hours to ensure that owls have left the burrow, and then the biologist will excavate the burrow to prevent reoccupation. Burrows will be excavated using hand tools only. During excavation, an escape route will be maintained at all times. This may include inserting an artificial structure into the burrow to avoid having materials collapse into the burrow and trap owls inside. Other methods of passive relocation, based on best available science, may be approved by the Wildlife Agencies over the 50-year SSHCP Permit Term. All activities adjacent to existing or planned SSHCP Preserves, Preserve Setbacks, or Stream Setback areas will be seasonally timed, when safety permits, to avoid or minimize adverse effects on occupied burrows. Rodent control will be allowed only in developed portions of a project site within western burrowing owl modeled habitat. Where rodent control is allowed, the method of rodent control will comply with the methods of rodent control discussed in the 4(d) Rule published in the U.S. Fish and Wildlife Service's (2004) final listing rule for tiger salamander.					

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	• **Swainson's Hawk (SWHA)**: The SSHCP has modeled SWHA habitat in the SSHCP Plan Area. If modeled habitat for Swainson's hawk is present within a project footprint or within 0.25 mile of a project footprint, then an approved biologist will conduct a survey to determine if existing or potential nesting sites are present within the project footprint and adjacent areas within 0.25 mile of the project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Nest sites are often associated with riparian land cover, but also include lone trees in fields, trees along roadways, and trees around structures. Nest trees may include, but are not limited to, Fremont's cottonwood (*Populus fremontii*), oaks (*Quercus spp.*), willows (*Salix spp.*), walnuts (*Juglans spp.*), eucalyptus (*Eucalyptus spp.*), pines (*Pinus spp.*), and Deodar cedar (*Cedrus deodara*). Regional San will map all existing and potential nesting sites and provide these maps to the Local Land Use Permittees and Implementing Entity. Nesting sites must also be noted on plans that are submitted to a Local Land Use Permittee. Pre-construction surveys will be required to determine if active nests are present within a project footprint or within 0.25 mile of a project footprint if existing or potential nest sites were found during initial surveys and construction activities will occur during the breeding season (March 1 through September 15). An approved biologist will conduct pre-construction surveys within 30 days and 3 days of ground-disturbing activities to determine presence of nesting Swainson's hawk. Pre-construction surveys will be conducted during the breeding season (March 1 through September 15). The approved biologist will inform the Land Use Authority Permittee and Implementing Entity of species locations, and they in turn will notify the Wildlife Agencies. If active nests are found within the project footprint or within 0.25 mile of any project-related activity, Regional San will establish a 0.25 mile disturbance buffer around the active nest until the young have fledged, with concurrence from the Wildlife Agencies. If nesting Swainson's hawks are present within the project footprint or within 0.25 mile of any project-related Covered Activity, then an approved biologist experienced with Swainson's hawk behavior will be retained by Regional San to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist will be on site daily while construction-related activities are taking place within the buffer. Work within the temporary nest disturbance buffer can occur with the written permission of the Implementing Entity and Wildlife Agencies. If nesting Swainson's hawks begin to exhibit agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, the approved biologist will have the authority to shut down construction activities. If agitated behavior is exhibited, the biologist, Regional San, Implementing Entity, and Wildlife Agencies will meet to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a Swainson's hawk flies into an active construction zone • **Other Covered Raptor Species**. To avoid direct and indirect effects of Covered Activities on covered raptor species, the following measures will be implemented. for Cooper's hawk (*Accipiter cooperii*), loggerhead shrike (*Lanius ludovicianus*), northern harrier (*Circus cyaneus*), and white-tailed kite (*Elanus leucurus*). The following measures do not apply to ferruginous hawk (*Buteo regalis*), as they do not nest in the Plan Area. The following measures also do not apply to Swainson's hawk or burrowing owl, as specific measures have been developed for these covered raptor species.					

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	The SSHCP has modeled habitat for "other Covered raptors" in the SSHCP Plan Area. If modeled habitat for a covered raptor species is present within a project footprint or within 0.25 mile of a project footprint, then an approved biologist will conduct a field investigation to determine if existing or potential nesting sites are present within the project footprint and adjacent areas within 0.25 mile of the project footprint. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. Regional San will map all existing or potential nesting sites and provide these maps to the Local Land Use Permittees and Implementing Entity. Nesting sites must also be noted on plans that are submitted to a Local Land Use Permittee. Pre-construction surveys will be required to determine if active nests are present with a project footprint or within 0.25 mile of a project footprint if existing or potential nest sites are found during initial surveys and construction activities will occur during the raptor breeding season. An approved biologist will conduct pre-construction surveys within 30 days and 3 days of ground-disturbing activities within the proposed project footprint and within 0.25 mile of the proposed project footprint to determine presence of nesting covered raptor species. Pre-construction surveys will be conducted during the raptor breeding season. If active nests are found within the project footprint or within 0.25 mile of any project-related Covered Activity, Regional San will establish a 0.25 mile temporary nest disturbance buffer around the active nest until the young have fledged. If project-related activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season, then an approved biologist experienced with raptor behavior will be retained by Regional San to monitor the nest throughout the nesting season and to determine when the young have fledged. The approved biologist will be on site daily while construction-related activities are taking place within the disturbance buffer. Work within the temporary nest disturbance buffer can occur with the written permission of the Implementing Entity and Wildlife Agencies. If nesting raptors begin to exhibit agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, the approved biologist/monitor will have the authority to shut down construction activities. If agitated behavior is exhibited, the biologist, Regional San, Implementing Entity, and Wildlife Agencies will meet to determine the best course of action to avoid nest abandonment or take of individuals. The approved biologist will also train construction personnel on the required avoidance procedures, buffer zones, and protocols in the event that a covered raptor species flies into an active construction zone.					
BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service	**BIO-1d: Mitigate Impacts to Sensitive Non-HCP-Covered Species**: Several sensitive species with a low- to moderate potential to occur in or near the Project area are not included as covered species in the SSHCP. For these species, Regional San shall implement the following mitigation measures: • **Non-SSHCP-Covered Sensitive Plants.** Prior to construction-related disturbance of natural community types and land covers in the Project area, a botanical survey(s) will be completed to determine if sensitive plant species occur in the Project area. Surveys will be conducted during the appropriate time of the year to facilitate detections and identifications. Sensitive non-SSHCP-covered plant species detected in the Project area will be avoided as feasible. If impacts to sensitive non-covered plant species cannot be feasible avoided, Regional San will coordinate with Sacramento County and the resource agencies (CDFW and/or USFWS) as appropriate to determine the course of action, which may include relocation of plants to the SSHCP Preserve System or another conserved location. • **Non-SSHCP-Covered Birds:** Song sparrow (Modesto population) or other sensitive, non-SSHCP-covered bird species may occur in the Project area. Prior to disturbance of natural community or land covers, Regional San or its contractors will conduct nesting bird surveys to determine if active nesting is occurring in the Project area. All active nests will be avoided to the extent feasible and a 25-foot buffer will be established and maintained around each active nest until such time that the nest is vacated.	Regional San	Regional San, CDFW, USFWS	1. Confirm that surveys are conducted as required. 2. Confirm that various requirements for protection of species during construction are included in specifications. 3. Monitor construction activities to verify that measures are implemented during construction. 4. For plant species confirm successful relocation, if needed. Document compliance and retain in the project file.	1. Pre-construction 2. Design 3. Construction 4. At completion of construction	1._____ 2._____ 3._____ 4._____

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BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service BIO-3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means	**BIO-2: Secure Regulatory Permits to Impact Riparian Habitat and other Sensitive Natural Communities:** Regional San shall obtain all necessary permits and approvals required to impact riparian habitat and sensitive natural communities, to the extent that these impacts may occur with development of any of the action alternatives. Necessary permits and approvals will include Clean Water Act permits (Section 404 and 401), FESA and CESA permits, and CDFW Lake and Streambed Alteration Agreement, and would include measures to avoid, minimize and compensate for any impacts so as to avoid any net loss in habitat value. Mitigation would include restoration of any habitats that were affected temporarily during construction, and could include purchase of credits from a mitigation bank if there are any permanent impacts to sensitive natural communities.	Regional San	Regional San, USACE, RWQCB, CDFW, USFWS	1. Confirm permit requirements are included in contract documents. 2. Confirm permit has been obtained. 3. Confirm mitigation required by permit has been implemented. Document compliance and retain in the project file.	1. Design 2. Pre-construction 3. Pre-construction for credit purchase, post-construction for restoration.	1._____ 2._____ 3._____
BIO-3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means	**BIO-3: Secure Clean Water Act Permits/Approvals**: Regional San has prepared a wetland delineation report to identify and characterize aquatic resources within the vicinity of the Project area and will use this information to avoid wetlands and waters of the U.S. to the extent feasible. Once verified by the U.S. Army Corps of Engineers (USACE), the delineation will be used to secure permits/approvals under Sections 404 and 401 of the Clean Water Act. The wetland delineation report will also be used to demonstrate consistency with the SSHCP and its terms and conditions for CWA and Endangered Species Act compliance. Compliance with SSHCP habitat-level conservation measures is assumed to satisfy mitigation requirements under Section 404 permitting, and conservation measures would be implemented by Regional San even if the SSHCP is not adopted. As stated earlier in this section, Regional San may be required to work directly with the USACE to satisfy Section 404 permitting needs for project impacts to wetlands and other waters of the U.S. if permitting associated with the SSHCP is not finalized at the time of the project permitting phase. Mitigation may include restoration of affected jurisdictional areas to ensure no net loss of wetland functions and values. Mitigation may also include preservation or enhancement of existing wetland habitat, or creation of wetland habitat.	Regional San	Regional San, USACE, RWQCB	1. Confirm permit requirements are included in contract documents. 2. Confirm permit has been obtained. 3. Confirm mitigation required by permit has been implemented. Document compliance and retain in the project file.	1. Design 2. Pre-construction 3. Pre-construction for credit purchase, post-construction for restoration.	1._____ 2._____ 3._____
BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	**BIO-5: Comply with Sacramento County Tree Preservation Ordinance**: Regional San shall participate in and comply with the terms and conditions of the Sacramento County Tree Preservation Ordinance. Native oak trees with a diameter at breast height (DBH) of six inches or greater, street or public trees, and landmark trees shall not be destroyed, killed, or removed without a permit. The ordinance protects all oak trees unless they are specifically designated for removal as part of an approved project. When oaks are removed they must be replaced with the same tree species equaling in sum the diameter of the tree lost.	Regional San	Regional San, Sacramento County	1. Confirm permit requirements are included in contract documents. 2. Confirm permit has been obtained. 3. Confirm mitigation required by permit has been implemented. Document compliance and retain in the project file.	1. Design 2. Pre-construction 3. Pre-construction for credit purchase, post-construction for restoration.	1._____ 2._____ 3._____

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Cultural Resources						
CR-1: Potential to result in a substantial adverse change in the significance of a historical, archaeological or paleontological resource	**CR-1a: Discovery of Previously Unknown Historic or Archaeological Resources during Construction**: If during excavation or earth moving activities, potential historic or archaeological resources are encountered, the County or local jurisdiction shall be notified and a professional archaeologist meeting the minimum qualifications in archaeology as set forth in the Secretary of the Interior's Standards and Guidelines shall be contracted by Regional San and dispatched to assess the nature and significance of the find in the following manner: • All excavation and/or grading within 20 meters of the discovery area shall cease immediately. The responding archaeologist may, after analyzing the discovery, authorize an alternate (or reduced) buffer around the materials to ensure adequate evaluation and protection of potential historic and/or archaeological resource(s) during continued construction operations. • Additional evaluation of the historic and/or archaeological resource(s) shall be conducted and significance of the materials determined. If the discovery is considered significant, the archaeologist shall develop and implement a late-discovery mitigation strategy in conjunction with Regional San, to minimize and/or avoid the impact through preparation and implementation of an avoidance, evaluation, or recovery plan that Regional San will implement. Such a plan may involve resource avoidance (preservation in place), or could include recovery and archival research (e.g., excavation, documentation, curation, data recovery, or other appropriate measures).	Regional San	Regional San	1. Confirm that the contract documents include measures requiring appropriate handling of inadvertent discoveries 2. Confirm that construction personnel have attended training. Retain sign-in sheet in project file 3. Confirm that on-call archaeologist has been retained. 4. If cultural resources are discovered, confirm that construction is halted and appropriate measures are taken. Document compliance and retain in the project file.	1. Design 2. Pre-construction 3. Pre-construction 4. Construction	1._____ 2._____ 3._____ 4._____
CR-1 Potential to result in a substantial adverse change in the significance of a historical, archaeological or paleontological resource	**CR-1b: Note on Construction Plans**: Regional San shall require the inclusion of a note on all construction plans specifying that construction, excavation, and earthwork shall cease immediately if historical, archaeological, or paleontological resources are discovered to enable a professional archaeologist to assess, evaluate, and mitigate or avoid the potential impacts to resources as appropriate.	Regional San	Regional San	1. Confirm note is included on plans	1. Design	1._____
CR-1 Potential to result in a substantial adverse change in the significance of a historical, archaeological or paleontological resource	**CR-1c: Discovery of Paleontological Resources During Construction**: If paleontological resources are discovered during earth moving activities, the construction crew shall immediately cease work near the find. A qualified paleontologist shall assess the nature and importance of the find and if the resource is determined to be significant, prepare an avoidance, evaluation, or recovery plan, which Regional San will implement. Such a plan may involve resource avoidance (preservation in place), or could include recovery and archival research, (e.g., excavation, documentation, curation, data recovery, or other appropriate measures) as well as additional monitoring.	Regional San	Regional San	1. If resources are found confirm work is stopped and appropriate measures are taken.	1. Construction .	1._____
CR-2: Development of the Project and the off-site infrastructure has the potential to disturb human remains, including those interred outside of formal cemeteries	**CR-2: Discovery of Human Remains**: If human remains are encountered during the construction of the Project site or the off-site infrastructure corridor, California Health and Safety Code Section 7050.5 requires that all disturbance at the site cease immediately within a 100 foot radius of the discovery, the County Coroner be notified, and a determination of origin and disposition provided by the Coroner pursuant to Public Resource Code Section 5097.98. If the remains are determined to be prehistoric, the Coroner shall notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.	Regional San	Regional San, County Coroner, NAHC	1. Confirm appropriate notifications have occurred if human burials are encountered. 2. Confirm human remains have been accorded appropriate treatment. Document compliance and retain in the project file.	1. Construction 2. Construction	1._____ 2._____

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Hazards and Hazardous Materials						
HAZ-1: Expose the Public or Environment to a Substantial Hazard through Reasonably Foreseeable Upset Conditions Involving the Release of Hazardous Materials into the Environment	**HAZ-1: Conduct Phase I Study along Transmission Pipeline:** Prior to the start of construction, a Phase I hazardous waste/hazardous materials study for soil and groundwater contamination shall be completed for the transmission pipeline. The recommendations set forth in the Phase I assessment shall be implemented to the satisfaction of applicable agencies before construction begins. If Phase I assessments indicate the potential for contamination within the construction zone of the pipelines, Phase II studies shall be completed before construction begins. Phase II studies will include soil and groundwater sampling and analysis for anticipated contaminants. The Phase II sampling is intended to identify how to dispose of any potentially harmful material from excavations, and to determine if construction workers need specialized personal protective equipment while constructing the pipeline through that area. If soil or groundwater contaminated by potentially hazardous materials is exposed or encountered during construction that was not identified in the Phase I assessment, the appropriate hazardous materials agencies shall be notified. Any contaminated soil that is encountered during construction shall be disposed of in accordance with applicable regulations, at an approved landfill.	Regional San	Regional San	1. Confirm Phase I study is completed 2. If needed, confirm Phase II study is performed. 3. Confirm recommendations of Phase I and/or Phase II are implemented. 4. Confirm that if hazardous materials are encountered appropriate notification occur, and material is disposed of properly. Document compliance and retain in the project file.	1. Pre-construction 2. Pre-construction 3. Pre-construction 4. Construction	1._____ 2._____ 3._____ 4._____
Hydrology and Water Quality						
HYD-1: Violate Water Quality Standards or Waste Discharge Requirements, Create Substantial Sources of Polluted Runoff or Otherwise Substantially Degrade Water Quality	**HYD-1a: Comply with the Construction General Permit**: To minimize the impacts to water quality from construction activities, the proposed Project shall implement measures contained in the Construction General Permit including the development of a SWPPP.	Regional San	Regional San	1. Confirm requirement for SWPPP is included in the contract documents 2. Confirm preparation of SWPPP	1. Design 2. Pre-construction	1._____ 2._____
HYD-1: Violate Water Quality Standards or Waste Discharge Requirements, Create Substantial Sources of Polluted Runoff or Otherwise Substantially Degrade Water Quality	**HYD-1b: Implement BMPs to Control Erosion and Sediment During Construction**: The SWPPP shall specify that all construction activities shall implement multiple BMPs to provide effective erosion and sediment control. These BMPs shall be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. BMPs to be implemented as part of this mitigation measure shall include, but are not limited to, the following measures: • Temporary erosion control measures, such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover, shall be employed for disturbed areas; • Dirt and debris shall be swept from paved streets in the construction zone on a regular basis, particularly before predicted rainfall events; • Grass or other vegetative cover will be re-established on unpaved areas of the construction site as soon as possible after disturbance. In paved areas, any removed paving will be replaced as soon as possible; and • Soil stockpiling sites will be located such that they do not drain directly into nearby surface water bodies.. Multiple BMPs used in combination, properly installed and maintained, can achieve significant sediment removal. BMPs proposed by the project contractor shall be subject to approval Regional San, who shall require that all parties performing construction under the proposed Project incorporate into contract specifications the requirement that the contractor(s) comply with and implement these provisions. The contractor shall also include provisions for monitoring during and after construction activities to verify that these standards are met.	Regional San	Regional San	1. Review and approve SWPPP 2. Confirm implementation of BMPs Document compliance and retain in the project file.	1. Pre-construction 2. Construction	1._____ 2._____

Impact Statement	Mitigation Measure (Exact Text)	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation	Verification: Status/ Date Completed/ Initials
HYD-1: Violate Water Quality Standards or Waste Discharge Requirements, Create Substantial Sources of Polluted Runoff or Otherwise Substantially Degrade Water Quality	**HYD-1c: Comply with the General Order for Dewatering or Other Appropriate NPDES Permit**: To minimize the impacts to water quality from dewatering activities, the Regional San shall implement measures contained in the General Order for Dewatering or other appropriate NPDES permit or Waste Discharge Requirement.	Regional San	Regional San	1. Confirm requirement for permit is included in the contract documents 2. Confirm permit obtained Document compliance and retain in the project file.	1. Design 2. Pre-construction	1._____ 2._____
HYD-1: Violate Water Quality Standards or Waste Discharge Requirements, Create Substantial Sources of Polluted Runoff or Otherwise Substantially Degrade Water Quality	**HYD-1d: Ensure Adequate Water Quality for Stone Lakes NWR:** To avoid adverse impacts to Stone Lakes NWR, Regional San shall work with USFWS to ensure that recycled water is of suitable quality before water is provided to the Refuge. Recycled water shall not be supplied to the Refuge until water quality concerns are addressed. If needed and desired by USFWS, water quality enhancement could be provided through a treatment wetland (a constructed wetland designed to remove nutrients from recycled water before discharge to the Refuge), which would be located in the Refuge.	Regional San	Regional San, USFWS	1. Confirm concurrence from USFWS regarding water quality	1. Pre-Design 2. Pre-construction	1._____ 2._____
HYD-1: Violate Water Quality Standards or Waste Discharge Requirements, Create Substantial Sources of Polluted Runoff or Otherwise Substantially Degrade Water Quality	**HYD-1e: Perform Detailed Analysis of Groundwater Impacts from Recharge Area and Diluent Wells:** As established by SWRCB Resolution No. 68-16, Regional San would complete a two-step process to comply with the policy. The first step would be to determine if the discharge (groundwater recharge with recycled water) would degrade high quality water. If there is no degradation, then the project is allowed. If there is an anticipated degradation, the discharge may be allowed if any change in water quality (1) will be consistent with maximum benefit to the people of the State, (2) will not unreasonably affect present and anticipated beneficial use of such water, and (3) will not result in water quality less than that prescribed in state policies (e.g. water quality objectives in Water Quality Control Plans). The second step of the anti-degradation analysis would be to document any activities that result in discharges to such high quality waters and demonstrate that these discharges utilize the best practicable treatment or control of the discharge necessary to avoid a pollution or nuisance and to maintain the highest water quality consistent with the maximum benefit to the people of the State. The antidegradation analysis and groundwater evaluation would be conducted at the time the recharge element is defined, and the groundwater recharge element would only be implemented if recharge can be accomplished without substantially degrading groundwater quality.	Regional San	Regional San, RWQCB	1. Confirm completion of antidegradation analysis	1. Pre-Design	1._____
HYD-4: Interfere with or Require Changes to CVP or SWP Operations BIO-4b: Impact movement or reproduction of sensitive or important fish species in the Sacramento River or Delta region (balanced operational conditions)	**HYD-4: Coordinate Operations with Relevant Resource Agencies:** To minimize potential thermal impacts to the Sacramento River downstream of Lake Shasta during critically dry years due to losses of cold water storage from reduced treated wastewater discharges, Regional San shall work with the Bureau of Reclamation and other relevant resource agencies to make appropriate operational changes in recycled water use and timing of discharge reductions in the spring months when the cold water pool in Shasta is critical. In critically dry years when storage in Lake Shasta falls below 2,400,000 AF in April, Regional San will coordinate with Central Valley Operations staff to reduce deliveries of recycled water to farmers in April and May if needed to avoid thermal impacts to the Sacramento River below Lake Shasta, as determined by the Sacramento River Temperature Model being utilized by Reclamation in the given year.	Regional San	Regional San, Reclamation, CDFW, SWRCB	1. Confirm agreement has been reached regarding operating parameters; it is expected that agreement will be developed through the water rights process and issuance of the water rights permit would confirm that agreement has been reached.	1. Pre-Design	1._____

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Noise						
NOI-1: Result in Exposure of Persons to, or Generation of, Noise Levels in Excess of Standards Established by the Local General Plan, Noise Ordinance or Applicable Standards of Other Agencies and Result in a Substantial Temporary Increase in Ambient Noise Levels in the Project Vicinity (Construction)	**NOI-1: Noise Reduction Measures**: To reduce the impact of noise from construction activities the following measures shall be implemented to the extent feasible: • Heavy equipment and impact equipment use shall be restricted to daytime hours (7 a.m. to 7 p.m.). • Construction staging areas shall be located as far as possible from existing residences. • The project contractor shall be required to use impact tools (e.g., jack hammers, pavement breakers, and rock drills) that are hydraulically or electrically powered wherever possible, to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used, along with external noise jackets on the tools, which could reduce noise levels by as much as 10 dBA. • Construction equipment noise shall be minimized during project construction by muffling and shielding intakes and exhaust on construction equipment per the manufacturers' specifications and by shrouding or shielding impact tools. All equipment shall have sound-control devices no less effective than those provided by the manufacturer. • All stationary noise generating construction equipment shall be placed as far away as possible from sensitive receptors in an orientation minimizing noise impacts (e.g. behind barriers or storage piles).	Regional San	Regional San	1. Confirm noise reduction measures are included in the contract documents 2. Confirm measures are implemented during construction Document compliance and retain in the project file.	1. Design 2. Construction	1._____ 2._____
Transportation						
TR-1: Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit TR-2: Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways TR-3: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	**TR-1: Traffic Management Plan (TMP)**: Implementation of the Project shall include a TMP that would minimize impacts on traffic as a result of construction activities. The TMP shall be prepared in accordance with the *California Manual of Uniform Traffic Control Devices* (California MUTCD) and all applicable requirements of Caltrans, the Sacramento County Department of Transportation and the City of Elk Grove Department of Public Works. The TMP shall be approved by the affected jurisdictions prior to construction and complied with at all times during construction of the project. The TMP shall be prepared by a qualified transportation engineer and would include but not be limited to the following measures: • Definition of location and timing of any temporary lane or roadway closures; • Obtain permits and identify oversize and overweight load haul routes. Transport of oversized loads on state, county, and city roads will require oversize/overload permits from Caltrans, Sacramento County and the City of Elk Grove. Transporters will follow state and county regulations for transportation of oversized and overweight loads. Such regulations typically include provisions for time of day, pilot cars, law enforcement escorts, speed limits, flaggers, and warning lights, which will be detailed in the respective oversized-load permits. • Prepare Temporary Traffic Control (TTC) Plans for each site location. The construction contractor will submit any applicable pedestrian or traffic detour plans, to the satisfaction of the City/County Engineer, for any lane or sidewalk closures. The detour plan shall comply with Part 6, Temporary Traffic Control, of the California MUTCD, and standard construction practices. The TTC Plans will identify the need for flaggers for directing traffic, temporary signage, lighting, and traffic control devices, if required. • Identify and provide for circumstances requiring the use of temporary traffic control measures, such as flag persons, warning signs, lights, barricades, and cones to provide safe work areas in the vicinity of the project site or along the haul routes, including for narrow roadway segments, and to warn, control, protect, and expedite vehicular, bicycle, and pedestrian traffic and access by emergency responders. • Schedule deliveries of heavy equipment and construction materials during periods of minimum traffic flow. The timing of deliveries shall be coordinated with Sacramento County and the City of Elk Grove.	Regional San	Regional San, Sacramento County Department of Transporta-tion, City of Elk Grove Department of Public Works, Caltrans	1. Confirm requirement for TMP is included in the contract documents 2. Review and approve TMP, and confirm submittal to Sacramento County Department of Transportation, City of Elk Grove Department of Public Works and Caltrans 3. Confirm measures are implemented during construction Document compliance and retain in the project file.	1. Design 2. Pre-construction 3. Construction	1._____ 2._____ 3._____

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TR-4: Result in inadequate emergency access TR-5: Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities REC-1: Result in Direct Alteration of an Existing Recreational Facility or Disruption of Recreational Use HAZ-3: Impair Implementation of or Physically Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan	• Determine the need to schedule construction workforce arrival and departure times outside peak traffic periods. • Determine the need for construction scheduling outside of legal holidays and special events. • Identify vehicle safety procedures for entering and exiting site access roads and staging areas. • Notify and coordinate potential road closures with emergency responders prior to construction. • Ensure access for emergency vehicles to and around the Project area. • Identify procedures for construction area evacuation in the case of an emergency declared by county or other local authorities • Maintain access to adjacent properties. The construction contractor will notify residential and commercial occupants of property adjacent to the construction site of the hours of construction activity which may impact the area. This notification will be provided one week in advance of the start of the extended construction activity. • Notify and coordinate potential road closures with transit operators prior to construction. • Maintain access to transit, bicycle, and pedestrian facilities along the project route(s). • Notify and coordinate potential road closures with mail service and waste haulers prior to construction.					

Agency Abbreviations: CDFW=California Department of Fish and Wilidfe, NAHC=Native American Heritage Commission, RWQCB=Regional Water Quality Control Board, SWRCB=State Water Resources Control Board, USFWS=U.S. Fish and Wildlife Services, USACE=U.S. Army Corps of Engineers

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