BUREAU OF RECLAMATION

Environmental Assessment

Sacramento Regional County Sanitation District's Harvest Water Program California-Great Basin Region

U.S. Department of the Interior
Interior Region 10 · California-Great Basin
Bureau of Reclamation

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Mission Statements

The Department of the Interior (DOI) conserves and manages the Nation's natural resources and cultural heritage for the benefit and enjoyment of the American people, provides scientific and other information about natural resources and natural hazards to address societal challenges and create opportunities for the American people, and honors the Nation's trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities to help them prosper.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Cover Photo: View of project area in south Sacramento County. (Ascent Environmental)

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Acronyms and Abbreviations

APE	area of potential effects
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CVP	Central Valley Project
CY	cubic yard
DAC	disadvantaged community
Draft SSHCP	Draft South Sacramento Habitat Conservation Plan
EA	Environmental Assessment
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
I-5	Interstate 5
IS	Initial Study
ITA	Indian Trust Assets
MMRP	Mitigation Monitoring and Reporting Program
NCIC	North Central Information Center
NEPA	National Environmental Policy Act
NO_X	oxides of nitrogen
NWR	National Wildlife Refuge
PM_{10}	particulate matter 10 microns or less in diameter
Program EIR	Environmental Impact Report for the Harvest Water Program
Reclamation	Bureau of Reclamation
Regional San	Sacramento Regional County Sanitation District
ROG	reactive organic gases
ROW	rights-of-way
SHPO	State Historic Preservation Officer
SMAQMD	Sacramento Metropolitan Air Quality Management District

SRF	State Revolving Fund
SRWTP	Sacramento Regional Wastewater Treatment Plant
SSCA	South Sacramento Conservation Agency
SSHCP	South Sacramento Habitat Conservation Plan
SWP	State Water Project
VOC	volatile organic compounds
WIIN	Water Infrastructure Improvements for the Nation
WSGP	WaterSMART Grant Program

1 Introduction

1.1 Background

The Bureau of Reclamation (Reclamation) provides 50/50 cost share funding to irrigation and water districts, Tribes, States and other entities with water or power delivery authority through the WaterSMART Grant Program (WSGP). These projects are intended to conserve and use water more efficiently, increase the use of renewable energy, protect endangered species, or facilitate water markets, and are selected through a competitive process. The focus of the WSGP is on projects that can be completed within 24 months that will help foster sustainable water supplies in the western United States. As the federal funding agency, Reclamation is responsible for compliance with federal laws and regulations, including the National Environmental Policy Act (NEPA) of 1969 (42 United States Code section 4321–5327), the Council on Environmental Quality regulations implementing NEPA (40 Code of Federal Regulations [CFR] Parts 1500–1508), and the Department of the Interior regulations (43 CFR Part 46).

The South Sacramento County Agriculture & Habitat Lands Recycled Water Project (the South County Ag Program, which is now known as Harvest Water) is proposed by the Sacramento Regional County Sanitation District (Regional San). Harvest Water includes expanding the recycled water system to serve the South County, and consists of pumping Title 22 tertiary-treated, disinfected recycled water from the Sacramento Regional Wastewater Treatment Plant (SRWTP) through new pipelines to potential customers. The total capital costs for Harvest Water are currently estimated to be around $364 million. Of this amount, up to $20 million may be funded by existing and future Reclamation Tittle XVI/Water Infrastructure Improvements for the Nation (WIIN) program grants. The non-Federal portion is estimated to be $344 million.

In 2012, Reclamation awarded a $110,000 WaterSMART grant to Regional San to help develop a Title XVI Feasibility Study for Harvest Water. Recently, Reclamation selected Harvest Water to receive a $4,184,192 planning grant through the Title XVI/WIIN program. The WIIN program is closely related to the WaterSMART Program. The $4,184,192 grant is for project construction. Additional federal funding may be appropriated up to $20 million.

Regional San intends to pursue further funding for Harvest Water through Round 4 of the Title XVI/WIIN grant program. Pending the satisfaction of all federal requirements, this grant would provide Regional San with a portion of the funding required to construct several elements of Harvest Water. The Proposed Action consists of providing partial funding through a Title XVI/WIIN grant for construction of a pump station, transmission pipeline (approximately 14 miles), and distribution mains (approximately 27 miles), primarily within public road rights-of-way (further information on the Proposed Action is provided in Chapter 2, "Alternatives Including the Proposed Action").

Reclamation has prepared this Environmental Assessment (EA) to evaluate the potential effects associated with Reclamation providing WIIN funding to Regional San for construction of the proposed pump station and pipelines.

1.2 Previous Environmental Documents

The Proposed Action underwent previous environmental review and regulatory compliance under the California Environmental Quality Act (CEQA). In March 2017, Regional San certified an Environmental Impact Report (EIR) for the Harvest Water Program (Program EIR) (State Clearinghouse No. 2015022067) that was prepared to meet CEQA Plus requirements, so as to allow eligibility for State Revolving Fund (SRF) funding (Regional San 2017). The Program EIR addressed all of the elements of the program, but only evaluated two elements at a project level: the proposed pump station at the SRWTP and the transmission pipeline from the pump station to Twin Cities Road.

The following Program elements were evaluated at a programmatic level:

- Distribution mains, service connection laterals, and turnouts to connect to individual agricultural users;
- Recharge area and diluent wells, or stormwater capture facilities, if needed for recharge area;
- Stone Lakes managed wetlands; and
- Wintertime irrigation.

The Program EIR evaluated the following environmental resources: aesthetics, land use and agriculture, recreation, air quality and greenhouse gas emissions, biological resources, cultural resources, energy resources, geology and soils, hazards and hazardous materials, hydrology and water quality, Indian Trust Assets, noise, public services and utilities, traffic and transportation, environmental justice, socioeconomics, and population and housing. All of the resources analyzed in the Program EIR were found to either have no impact, less than significant impact, or less than significant impact with mitigation measures incorporated. The Program EIR includes mitigation measures for aesthetics, land use and agriculture, recreation, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, and traffic and transportation. No significant and unavoidable impacts associated with the Project were identified.

As stated above, the Program EIR included both program- and project-level analyses depending on the level of detail available at the time for each program element. Since certification of the Program EIR, the distribution mains, service connection laterals, and turnouts have undergone supplemental CEQA documentation to provide project level authorization for these Harvest Water components. Evaluated as the "Lateral Pipelines and On-Farm Connections Project," this program element includes the installation of new distribution mains, service connection laterals, and appurtenant facilities that would connect the transmission pipeline to individual customers. These facilities were evaluated in a project-level CEQA review Initial Study (IS) Checklist tiering from the Program EIR (Regional San 2020). In October 2020 Regional San made a determination, based on the Initial Study Checklist, that the evaluated Harvest Water components were within the scope of the certified Program EIR and no subsequent or supplemental environmental documentation is required.

Reclamation performed an independent review of the above-referenced CEQA documents and determined that they would be sufficient to meet NEPA requirements for the Proposed Action. The EIR and its record (including the IS Checklist) are incorporated by reference and are available at: https://www.regionalsan.com/harvest-water.

This EA provides additional discussion of potential effects on air quality conformity with applicable standards, Indian Trust Assets, Indian Sacred Sites, Environmental Justice, cultural resources, threatened and endangered species as required by Department of the Interior Regulations, Sacramento River flows and net changes of discharge in the Delta, Executive Orders, and Reclamation guidelines when preparing environmental documentation. This EA also includes an evaluation of potential cumulative effects on Central Valley Project (CVP) and State Water Project (SWP) operations, incorporating new information since the Program EIR was certified.

1.3 Need for the Proposed Action

Regional San's purpose in proposing the Harvest Water is to:

- meet Regional San's goal of recycling 30 to 40 million gallons per day of its treated wastewater by 2025;
- support California's recycling goal of 2 million acre-feet per year by 2030;
- restore depleted groundwater levels in the South Sacramento County area through in-lieu use and recharge of recycled water for irrigation as a replacement for and supplement to groundwater;
- improve regional water supply reliability through the restoration of groundwater levels in the Central Groundwater Basin; and
- improve flows in the Cosumnes River and improve the riparian corridor along the Cosumnes River through restoration of groundwater levels along the corridor from Highway 99 to Interstate 5 (I-5).

Groundwater use in the Central Sacramento Ground Water Basin has resulted in development of a cone of depression. 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. Regional planning efforts have identified the need to use recycled water as an element of regional water supply.

Harvest Water would deliver recycled water to irrigated lands in southern Sacramento County for agricultural and urban landscape uses and to the Stone Lakes National Wildlife Refuge (NWR) and the Cosumnes River Preserve and could also provide recycled water for groundwater recharge. Harvest Water would benefit or help accomplish the following:

- increases regional self-reliance and integrated water management across all levels of government; this project has been ranked as a high priority project in the American River Basin Integrated Regional Water Management Plan;
- helps achieve the Delta Reform Act and Delta Plan's co-equal goals of water supply reliability and ecosystem protection;
- addresses the Governor's Drought Proclamation and Water Action Plan with a long-term solution to provide additional water supplies for future drought conditions. The project helps the region manage and prepare for dry periods;

- helps protect and restore the Delta by providing benefits to endangered species in the Delta ecosystem and its tributaries, including the Cosumnes River, Sacramento River, and Mokelumne River;
- expands water storage capacity and improves groundwater management; and
- helps achieve the State Water Board's statewide goal for water recycling by providing up to 50,000 AFY of recycled water.

The various regional, local, and Regional San policies and planning efforts that have contributed to development of the purpose and need for the Project are discussed further in the Program EIR (Regional San 2017).

2 Alternatives Including the Proposed Action

2.1 No Action

Under the No Action Alternative, Reclamation would not award grant funding for a portion of the costs for Regional San to construct the Project. The No Action Alternative assumes Regional San would proceed with the Project absent Reclamation funding. Often a No Action Alternative involves a project not being implemented, and therefore, the existing physical conditions at the project site do not change. However, in this case, Regional San will proceed with the project whether or not Reclamation takes the federal action of providing grant funding. The Program EIR considered potential Reclamation funding for Harvest Water and evaluated an alternative where no Reclamation funding was provided, identified as "Alternative 2, No Reclamation Funding Alternative." The Program EIR also identified that the proposed project would proceed whether or not funding from Reclamation was available, and also identified that Alternative 2, No Reclamation Funding Alternative would be "exactly the same" as the proposed project "with the exception of funding sources."

2.2 Proposed Action

2.2.1 Proposed Action Area

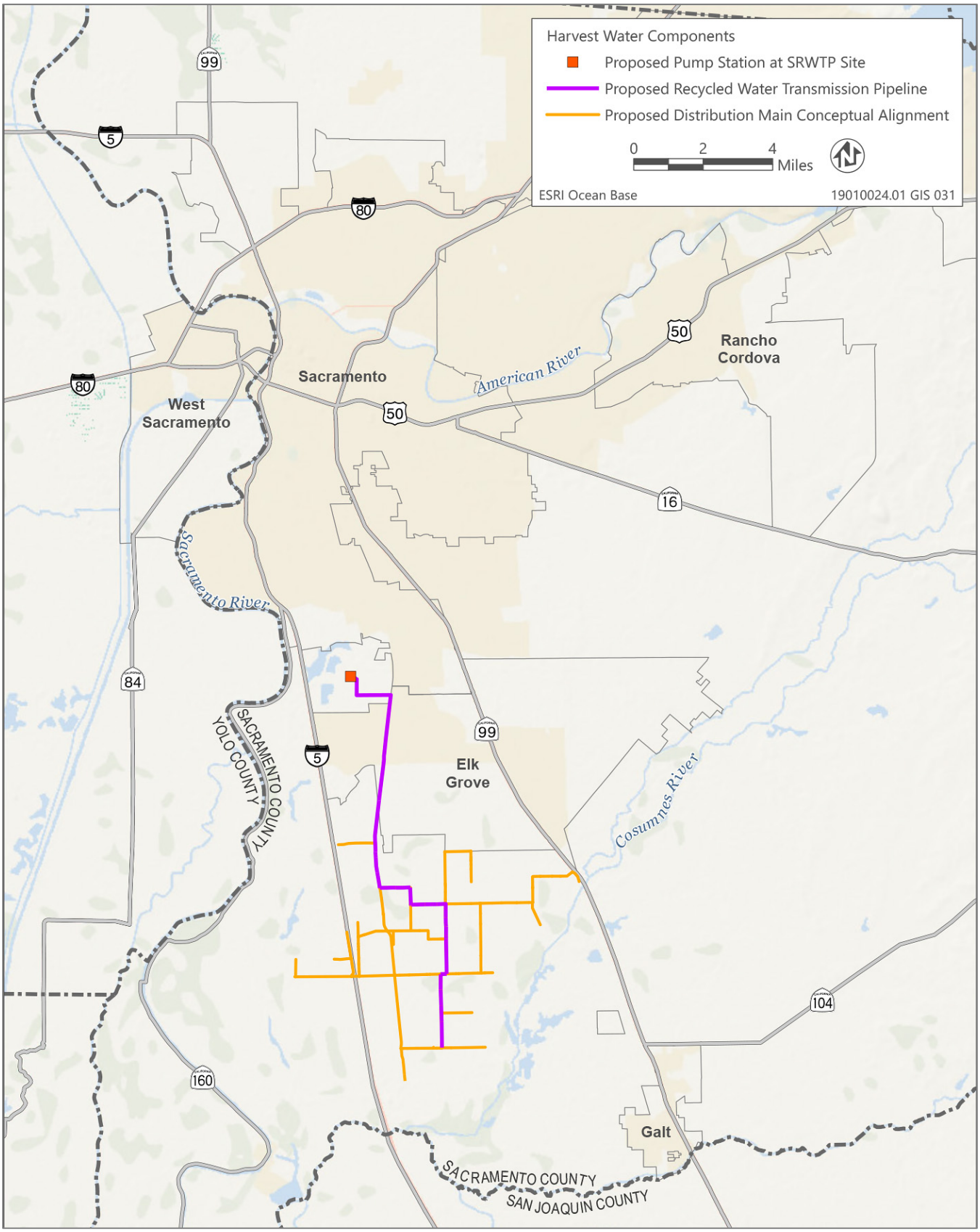
The Project Area is the area that would be affected by implementing the Proposed Action. The Proposed Action is located within Sacramento County, within portions of the City of Elk Grove, unincorporated Sacramento County, and portions of the Stone Lakes NWR and the Cosumnes River Preserve (Figure 2-1). The approximate boundaries of Harvest Water are Interstate 5 (I-5) to the west, Highway 99 and the Cosumnes River to the east, Bilby Road to the north, and the Cosumnes River Preserve to the south (Figure 2-2). A portion of the Proposed Action Area is located west of I-5 and is comprised of the Stone Lakes NWR and lands between the refuge and I-5. A portion of the Proposed Action Area is also located north of Bilby Road where a distribution pipeline passes through the City of Elk Grove to connect to the proposed pump station at the Sacramento Regional Wastewater Treatment Plant (SRWTP).

Proposed facilities include a pump station, recycled water transmission pipeline, and recycled water distribution mains. As stated above, the pump station would be located at the SRWTP. The transmission pipeline and distribution mains would be located on County and city streets and rural roads, primarily within public road rights-of-way (ROW), although some distribution mains may also be constructed on private agricultural lands. Additionally, approximately 0.6 mile of pipeline would be located on the Cosumnes River Preserve.

Figure 2-2 shows the pump station location and the conceptual alignments for the proposed pipelines that make up the Proposed Action.

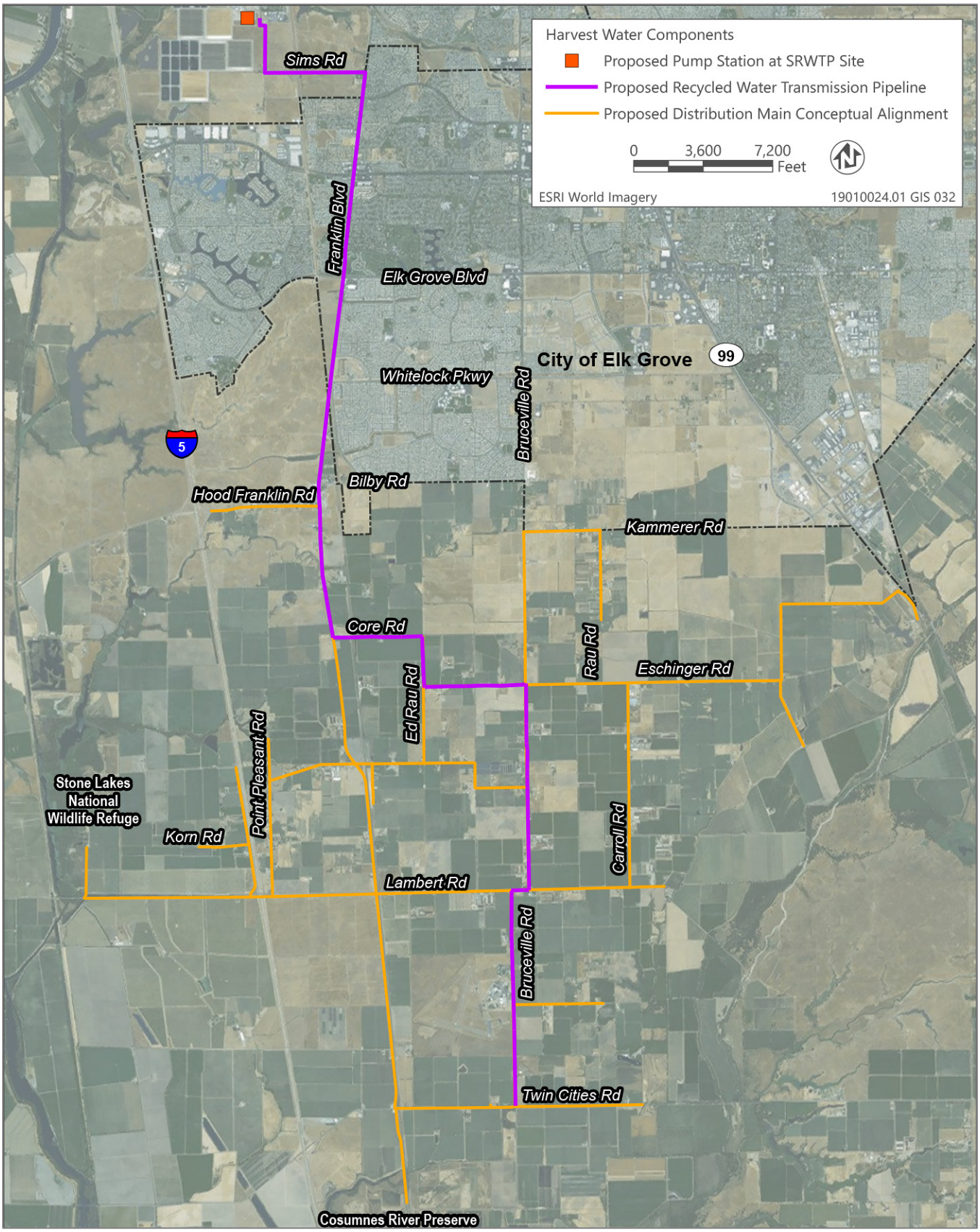
2.2.2 Overview of the Proposed Action

Harvest Water (formerly, the South Sacramento County Agriculture and Habitat Lands Recycled Water Program or, for short, the South County Ag Program) is a program proposed by Regional San that would provide Title 22 disinfected, tertiary-treated, recycled water for irrigation, reduce groundwater pumping, and would support habitat enhancement efforts in the southern portion of Sacramento County. The program consists of constructing new recycled water facilities to serve the South County, and pumping the Title 22 tertiary-treated, disinfected recycled water from the SRWTP through new pipelines to potential customers.



Source: Data received from Woodard & Curran in 2019 and 2020; adapted by Ascent Environmental in 2021

Figure 2-1 Regional Location



Source: Data received from Woodard & Curran in 2019 and 2020; adapted by Ascent Environmental in 2021

Figure 2-2 Project Area

The first components of Harvest Water to be designed and constructed will be the pump station, transmission pipeline, and distribution mains. As described in Chapter 1, Regional San is requesting grant funding from Reclamation to assist with the costs of constructing these elements. The provision of this funding and the construction of the pump station, transmission pipeline, and distribution mains constitute the Proposed Action (Table 2-1).

Table 2-1 Proposed Action Components

Proposed Action Component	Location	Details
Pump station	SRWTP	1 pump station, 7,000 horsepower
Transmission pipeline	SRWTP; County, City, and rural roads (public rights-of-way) from proposed pump station to Twin Cities Road	Approximately 72,800 feet (14 miles) of 18- to 66-inch diameter pipeline
Distribution mains	County, City, and rural roads (public rights-of-way); private dirt roads; and other private lands	Approximately 142,000 feet (27 miles) of 12- to 42-inch diameter pipeline

The pump station would be located within the SRWTP site on the eastern portion of a parcel (Figure 2-2) between Reclamation Way and South Landfill Way, west of Canal Street.

The transmission pipeline would be located along the following roads: Sims Road, Franklin Boulevard, Core Road, Eschinger Road, Bruceville Road, and Lambert Road, as shown in Figure 2-2. The 18- to 66-inch diameter transmission pipeline would extend approximately 14 miles from the new pump station at the SRWTP to Twin Cities Road. Each segment of the alignment and its characteristics are shown in Table 2-2. The transmission pipeline alignment would cross railroad tracks; Franklin Creek; several unnamed ditches and drainages; high pressure gas lines; areas of underground utilities; and several major, heavily traveled roadways, including Laguna Boulevard and Elk Grove Boulevard. Where feasible, pipeline appurtenances (e.g., air valves, blowoffs) would be located below ground so that it would be possible to re-construct a roadway on top of them, with appropriate venting through the pavement surface using a structure similar to a manhole.

Table 2-2 Transmission Pipeline Segments

Reach	Segment (from / to)	Total Length (linear feet)	Crossings	Construction Method
A1	Harvest Water Pump Station to City of Elk Grove Limits	26,300	UPRR (2x) PG&E (high-pressure gas) Laguna Boulevard Elk Grove Boulevard Large Drainage	Primarily open cut with trenchless construction at crossings
A2	City of Elk Grove Limits to Intersection of Bruceville Road and Twin Cities Road	46,500	UPRR (1x) PG&E (high pressure gas) Franklin Creek Unnamed creek/ drainages	Primarily open cut with trenchless construction at crossings

Source: Adapted from Table 2-3 in the Program EIR (Regional San 2017)

Approximately 27 miles of distribution mains would connect the transmission pipeline to the various areas where recycled water is planned for delivery. Distribution mains would range from 12 inches to 42 inches in diameter.

2.2.3 Construction of the Proposed Action

This section outlines the pipeline installation techniques under consideration for the project. The precise construction methods are yet to be determined but work is anticipated to follow the broad methods outlined in the following sections.

Pipeline construction would occur within public roadways or other public ROW and private dirt roads. An access agreement may be required for railroad crossings. Pipeline installation would be accomplished using open-cut construction, except at specific sensitive crossings (e.g., stream/river/sensitive biological resources, railroad crossings, canal/ditch, busy intersections, areas with dense utilities), where trenchless construction techniques could be employed. Specifically, trenchless construction (e.g., bore and jack, horizontal directional drilling [HDD]) would occur at I-5, if needed. If possible, the connection to lands west of I-5 would be made via undercrossing of I-5 and a trenchless crossing would be avoided. If trenchless construction is required for crossing of I-5, construction pits would be located outside the California Department of Transportation (Caltrans) ROW.

A total of approximately 41 miles of pipelines would be installed in public ROW with an assumed roughly 200 feet of daily pipeline advancement (per crew) with open-cut construction. Up to two crews are anticipated to be conducting pipeline installation during the construction periods. The construction phases for the advancement of the pipeline include site preparation/asphalt removal, trench excavation, pipeline installation/trench refilling, compaction, and asphalt repair.

A portion of spoil (soil and rock) excavated during construction would be reused on site for backfilling and a portion would be disposed of off-site following all applicable laws and regulations. Any material that would not be reused as backfill would be stabilized and stored temporarily at a construction staging area until characterized and then hauled away to a permitted disposal site (e.g., landfill). Potential for reuse of spoil from a trenchless installation would depend on the trenchless method selected because some methods remove spoil using slurry (i.e., the material is mixed with water or drilling fluid) and for those methods it is not practical to reuse excavated spoil.

2.2.3.1 Construction Timing

Construction of the Proposed Action is estimated to begin as early as 2022 and continue for approximately three to four years (Table 2-3). Please note that this construction schedule is subject to change.

Table 2-3 Summary of Harvest Water Projects and Associated Construction Schedules

Package Number	Package Name	Notice to Proceed	Construction Start Date	Construction Closeout Date
1	Harvest Water Pumping Station	1/2023	4/2023	10/2024
2	Elk Grove Transmission Pipeline	12/2022	3/2023	6/2024
3	Franklin/Eschinger Distribution Mains	2/2023	6/2023	9/2024
4	Central/South Distribution Mains	8/2023	11/2023	3/2025
5	West Distribution Mains	12/2023	3/2024	5/2025

Note: This construction schedule is subject to change
Source: Provided by Regional San in 2021

Construction would typically be limited to those hours consistent with the noise ordinance of the affected jurisdictions. Typical work hours would be Monday through Friday from 7:00 a.m. to 7:00 p.m. (construction noise is exempt from noise ordinances between 6 a.m. and 8 p.m. on weekdays within Sacramento County and the City of Elk Grove). However, construction might take place during weekends and nighttime, if necessary, for example, if connection of new pipelines to existing pipelines needs to take place in a heavy vehicle traffic area. Any weekend or nighttime construction would need to be approved by the affected jurisdictions. The project construction contractor would be responsible for obtaining the necessary permits to conduct weekend and nighttime activities.

2.2.3.2 Staging Areas

Equipment, material, and vehicle staging would be accommodated at the SRWTP and along the proposed pipelines. Spoil would not be located within Caltrans ROW (along I-5). As the planning and execution of project construction proceeds, there is the potential that new locations may be added to the construction disturbance area such as temporary staging areas, spoil storage areas, and temporary access roads. Regional San must provide authorization for the use of any lands outside the already authorized and permitted construction area. Any additions to the construction disturbance area must be in locations that would not result in significant adverse effects to biological, cultural, or other sensitive resources; or result in the need for new permit authorizations from the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, or the U.S. Army Corps of Engineers. Ideally, uses such as temporary staging areas, spoil storage areas, and temporary access roads will be located on existing developed or disturbed areas such as paved areas, graded and compacted or graveled lots or roads, or lands already serving similar functions such as existing vehicle and equipment storage areas. Lands supporting ruderal vegetation or agricultural lands may also be used if it is verified that sensitive resources such as wetlands would not be adversely affected. Regional San will be given at least 10 business days' notice to review any contractor requested expansions of the construction area prior to use of the new area. Regional San will evaluate the requested area for compliance with the criteria above. The area cannot be used to support construction activities until Regional San has provided written authorization.

2.2.3.3 Pump Station Construction

The new pump station would require site preparation (e.g., removal of vegetation, if any), excavation and shoring, installation of the slab on grade, and construction/placement of the structure. Dewatering equipment would likely not be required to maintain the groundwater level below the bottom of excavation because EchoWater Project[1] work at the treatment plant will be ongoing at the time of the pump station construction, and SRWTP-wide dewatering will be ongoing for that project. The pump station will be installed on two new concrete pads. The first pad will support seven vertical turbine pumps. Each pump will be set in an individual "pump can" extending through the concrete pad to approximately 28 feet below grade. The concrete pad itself will be approximately 32 feet wide, 88 feet long, and 1.5 feet thick. The second concrete pad will support above ground surge control tanks that provide protection against system over pressurization. This pad will be approximately 40 foot wide, 60 foot long, and 1.5 feet thick. Excavations for both concrete slabs will extend to approximately 2-3 feet below the ground surface. A new electrical building supporting the new pump station will provide a location for the switchgear, variable frequency drives, and system controls. Conduits and cables will be installed to connect the new pump station and the new electrical building. Placement of pavement, restoration of the work site, and testing would be conducted prior to the start of operations. Equipment would be accommodated adjacent to the actual facility footprint during construction. Because the construction is anticipated to be done concurrently with the EchoWater Project work, only an incremental expansion of the overall construction area is required for the Harvest Water pump station work. The incremental construction

[1] The EchoWater Project consists of improvements at the SRWTP to construct and operate new facilities to improve treated effluent water quality. These facilities are currently under construction.

zone, including the footprint of the pump station, would be approximately 300 feet by 150 feet to provide clearance for excavation, temporary storage of construction materials, and equipment access.

2.2.3.4 Pipeline Construction

Open-Cut Construction Open-cut construction (also referred to as open trench with shoring or cut-and-cover) is the proposed option for installing the majority of the pipeline along existing roadways and within private agricultural lands. Generally, the open-cut trench would be approximately 2 feet wider than the diameter of the pipe being installed and 6 feet deeper than the pipe diameter. With anticipated project pipe diameters ranging from 12 inches to 66 inches, trench widths would range from approximately 3 feet to 7.5 feet and depths would range from approximately 7 feet to 11.5 feet. Trench widths and depths may also vary in response to existing utility locations, pipe bedding requirements, and other factors. Shoring may be required to provide trench stability and to protect existing improvements.

Open-cut construction would involve saw-cutting and removing pavement in existing paved areas where needed. Asphalt would be cut using large saw blades mounted on a cart that would be pushed by a construction laborer. The asphalt would be lifted in large chunks and slabs from the cut area by a front-end loader or backhoe into a dump truck for off-hauling. The saw cutting operation would be relatively fast, with several hundred feet typically being cut within a few hours. Where possible, the pipelines would be installed under the shoulder of the roads to minimize paving and traffic disruption.

Installation of dewatering wells may be required in some areas before the start of excavation depending on the soil type and groundwater level. Water pumped from the excavation area must be properly disposed to nearby storm and irrigation ditches or impoundments. Dewatering pumps could run continuously (24 hours per day) in the open trench areas while excavation is taking place, to maintain the groundwater level below the bottom of trench. After the pipeline is installed and backfilled, the dewatering pumps would be removed and relocated to the next segment of pipeline construction.

Heavy equipment for excavation typically involves continuous use of an excavator to fill dump trucks, which would make intermittent trips to an off-site disposal area. Typically, two or more dump trucks would be used to allow continuous offloading from the excavator. In addition, dump trucks hauling imported material from off-site sources for pipeline bedding and backfill would make semi-continuous trips to the site as pipe is being installed. A tracked excavator would be used to lift pipe segments from a flat-bed delivery truck or the pipe string along the road and position the pipe in the trench. Temporary trench plates would be installed over the trench at the end of each workday. Final paving and marking typically would be done for the entire pipeline length after installation.

To accommodate construction equipment and work area, the entire construction corridor (active work area including the trench) would be 45 feet wide for pipelines up to 24 inches in diameter, 60 feet wide for larger pipelines (30-inch to 42-inch), and up to 80 feet wide for the largest diameter pipelines (60 to 66 inches). Because of the limited width of the existing roads and the size of the trench and construction zone, it is expected that construction may require full road closures unless temporary access for construction equipment can be provided along the shoulders of the road and/or adjacent property. If access can be provided along the roadway shoulders and adjacent property, only partial road closures with appropriate traffic control would be required. Otherwise, segments of the affected roadway would be closed during pipeline installation activities. Traffic control operations would be publicly noticed at the location of the temporary traffic restrictions a week in advance of any road work that impedes the flow of traffic (i.e., closes the road, closes a traffic lane, or closes the road shoulder).

It is expected that open trench construction within paved roadways would proceed at the rate of approximately 150 to 200 feet per day per crew. Excavated trench materials would be side cast within approved work areas and reused as appropriate for backfill. Excess material would be hauled off for disposal

at an approved disposal site (e.g., landfill). Upon completion of pipeline installation, affected roadways would be repaved per the requirements of the affected jurisdiction.

Open-cut construction would also be used within private farmland areas. Some of the lands are fallowed while others are cultivated. Open-cut construction proposed for cultivated areas may require selective removal of the crop, depending on the crop and time of year. Temporary and permanent easements would be obtained from individual property owners and growers as needed and coordinated to minimize the removal of crops.

Trenchless Pipeline Construction Trenchless construction methods would be used for specific crossings. These methods are used to minimize the area of surface disruption required for pipeline installation or where open-cut construction is not practical or not allowed. The exact types of trenchless methods to be employed have not yet been defined, but could consist of HDD, microtunneling, or jacking and boring (sometimes known as jack-and-bore construction) using either open-shield pipe jacking or auger boring. Table 2-4 provides a summary of anticipated crossings and trenchless method and Figure 2-3 shows the locations. Final methodology will be determined by the contractor; however, work areas including the locations of launch and receiving pits have already been defined.

Table 2-4 Summary of Trenchless Crossings

#	Crossing Name	Location	Approx. Carrier Pipe Diameter	Approx. Casing Pipe Diameter	Preliminary Anticipated Trenchless Method	Approx. Crossing Length
1	UPRR @ Sims Road	1,400' E of Sims Road / Dwight Road	66"	84"	Microtunneling	500'
2	Laguna Boulevard	Franklin Boulevard / Laguna Boulevard	66"	*	Open-Shield Pipejacking	250'
3	Elk Grove Boulevard	Franklin Boulevard / Elk Grove Boulevard	66"	*	Open-Shield Pipejacking	300'
4	Ehrhardt Channel	700' S of Franklin Boulevard / Elk Grove Boulevard	66"	*	Microtunneling	175'
5	Whitelock Parkway	Franklin Boulevard / Whitelock Parkway	66"	*	Open-Shield Pipejacking	400'
6	UPRR @ Willard Parkway	1,600' S of Franklin Boulevard / Whitelock Parkway	66"	84"	Open-Shield Pipejacking	150'
7	Franklin Creek	1,500' N of Franklin Boulevard / Bilby Road	66"	*	Microtunneling	300'
8	Stone Lake Creek - North Fork	3,200' N of Franklin Boulevard / Core Road	66"	*	Microtunneling	200'
9	UPRR @ Core Road	1,000' E of Franklin Boulevard / Core Road	60"	78"	Microtunneling	250'
10	Stone Lake Creek - South Fork	2,700' N of Franklin Boulevard / Point Pleasant Road	48"	*	Microtunneling	150'
11	Lambert Canal @ Franklin Boulevard	100' N of Franklin Boulevard / Lambert Road	42"	*	Microtunneling	250'
12	UPRR @ Lambert Road	100' E of Franklin Boulevard / Lambert Road	30"	48"	Microtunneling	275'
13	UPRR @ Twin Cities Road	200' E of Franklin Boulevard / Twin Cities Road	24"	42"	Auger Boring	200'

#	Crossing Name	Location	Approx. Carrier Pipe Diameter	Approx. Casing Pipe Diameter	Preliminary Anticipated Trenchless Method	Approx. Crossing Length
14	Drainage @ Twin Cities Road	400' W of Bruceville Road / Twin Cities Road	24"	*	Horizontal Directional Drilling	800'
15	UPRR @ Point Pleasant Road	500' E of Franklin Boulevard / Point Pleasant Road	18"	36"	Auger Boring	200'
16	Lambert Canal @ Kestrel Lake Road	100' N of Lambert Road / Kestrel Lake Road	18"	*	Microtunneling	150'
17	Lambert Canal @ Point Pleasant Road	100' N of Lambert Road / Point Pleasant Road	18"	*	Microtunneling	150'
18	Drainage @ Bruceville Road	2,900' N of Bruceville Road / Eschinger Road	16"	*	Horizontal Directional Drilling	500'
19	Franklin Boulevard @ Cosumnes River Preserve	Franklin Boulevard 3,150′ S of Twin Cities Road	16"	*	Horizontal Directional Drilling	900′

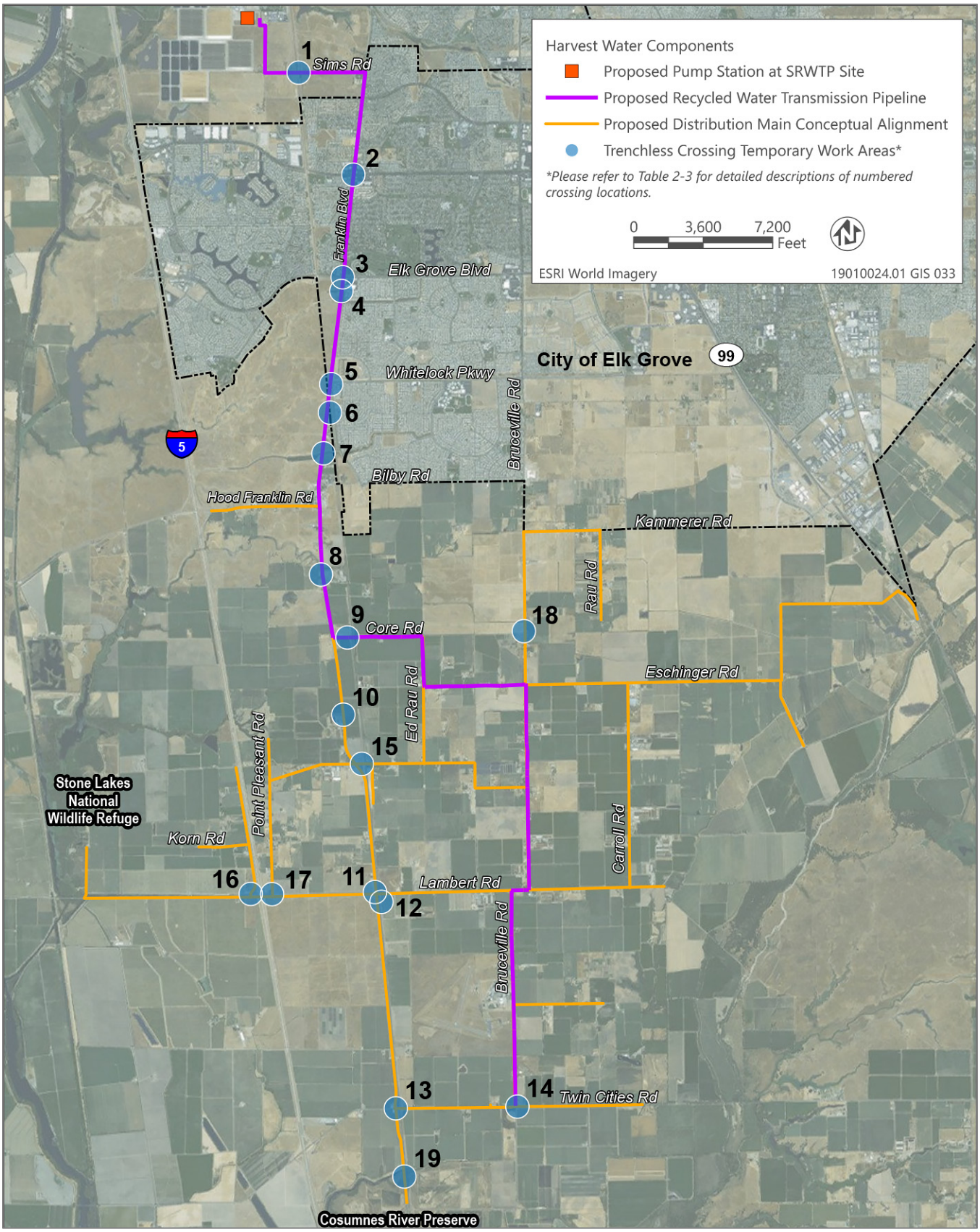
Note: *Casing not required, pending method selection and carrier pipe material. Minimum recommended casing diameter is 18 inches larger than nominal carrier pipe inner diameter, if casing is used.
Source: Regional San 2020b

Horizontal Directional Drilling. HDD is a trenchless pipeline installation method that can be used for crossing major roadway intersections and waterways. HDD crossings are installed between an entry and exit area. HDD involves the use of a drill rig tilted at an angle, typically in the range of 8 to 12 degrees from horizontal. A small diameter (4- to 8-inch diameter) pilot hole is first drilled along a pre-determined horizontal and vertical alignment from the entry to exit area. This pilot hole can be guided using electromagnetic readings transmitted from the drill bit back to the drill rig. Excavation takes place by introducing pressurized slurry (a thin mixture of water and clay) through a drill string to the bit. The slurry pressure in combination with a rotating drill bit excavates the material, which is then transported back to the entry area with the exiting slurry along the outside of the drill string. In some cases, a larger diameter wash pipe may be rotated around the drill string to prevent sticking of the steerable string.

A slurry collection area is required at the entry and exit sides of each crossing. These areas are approximately 50 to 100 feet square by approximately 5 feet deep, and are used as the collection point for the fluid material removed during drilling, which is a mixture of the drilling slurry and spoil. This fluid is then pumped to a slurry separation plant to separate the spoil from the fluid so that the fluid can be reused. Once the pilot hole is complete, it is then enlarged by pulling larger reamers from the pilot exit back towards the drilling rig. After one or more reaming passes, the pipeline is then pulled into place behind the last reamer.

The entry side requires a work area of approximately 1,500 to 3,000 square feet for the drill rig, slurry separation plant, material storage and other support equipment. The exit side requires a work area of about 1,000 to 1,500 square feet for the pullback. This area is exclusive of the area needed for the pipe assembly and laydown area. Typically, a corridor about 15 feet wide by the length of the pipe is needed for the buildup and laydown.

Pipes would be installed at varying depths depending on features being avoided, the existing underlying utilities, soil types, environmental constraints, entry and exit constraints, and bend radius of the installed product and drill pipe. Although the exact depths of the pits and drilling have not been defined as design has not yet been completed, for the purpose of this analysis, it is assumed that the depth of construction would vary from 20 to 40 feet under Franklin Boulevard and other roads, railroad, and canals.



Source: Data received from ESA in 2021; adapted by Ascent Environmental in 2021

Figure 2-3 Harvest Water Pipeline System Trenchless Crossings

Jack and Bore Construction. Jack and bore is a method that is often used for pipeline crossings of major roadway intersections and railroads where crossings are generally less than 300 feet long and above the groundwater level. Jack and bore would require two pits that are excavated at each end of the pipeline to be installed. A boring machine is inserted into one pit to bore the soil using an auger to remove material, a casing is pushed forward as material is removed until it reaches the receiving pit, and the pipe is inserted in the casing. The term "Auger Boring" in Table 2-4 refers to a jack and bore excavation where an auger is the form of boring machine used to excavate through the soil. The term "Open-Shield Pipejacking" in Table 2-4 refers to a jack and bore method where a digging tool other than an auger, such as a rotating cutting head, is placed in the casing to break up the soil in front of the casing as it advances.

The jacking pit (i.e., entry point) is excavated (and shored) with typical dimensions of 8 to 12 feet wide and 45 to 50 feet long depending on the casing length selected. The depth would depend on the feature to be avoided, existing utilities, or separation requirements. The exact depths of the pits and drilling have not been defined because design has not yet been completed; however, for the purpose of this analysis, it is assumed that the depth of construction would be on the order of 15 to 20 feet deep for railroad and highway crossings. Jack and bore typically has very limited steering control and it is not the method of choice if precise line and grade control is required.

Shoring, appropriate to the pit depth, would be used to support the excavation. In addition, the back wall of the jacking pit would need to be constructed to withstand the reactive forces from the jacking frame. An additional area of about 1,500 to 2,000 square feet would be needed around the pit for temporary storage of pipe sections and for loading material removed from the bore. The receiving pit at the other end of the crossing would be smaller, encompassing approximately 100 square feet. Pits and work areas would be located within existing ROW and along streets, where appropriate. Crossings of roadways would typically take three weeks (with one week for mobilization, one week for installation, and one week for demobilization and backfill). After pipeline construction and installation is complete, the work area would be restored to preconstruction conditions.

Microtunneling. Microtunneling is a remotely controlled pipe jacking process that can be used in saturated areas below the groundwater level. The microtunneling boring machine is advanced through the ground by incrementally adding jacking pipe segments to the end of the pipe string and advancing the pipe string from a jacking pit to a receiving pit on the opposite side of the crossing. A cutting head excavates material at the face as the machine is jacked forward. The excavated material is mixed with clean slurry and pumped to the surface for separation and muck removal.

Jacking pits for microtunneling are typically 10 to 14 feet wide. The length is dictated by the pipe segment length that would be installed. Ten-foot segments require a pit about 15 feet long and 20-foot pipe segments require a pit about 25 feet long. Receiving pits are typically 12 to 16 feet square. Pit depths would vary depending on the feature being avoided, existing utilities, and the presence of soil layers that are more favorable to tunnel through than others. The exact depths of the pits and drilling have not been defined because design has not yet been completed. A microtunnel operation requires a work area (including the area of the pit) of approximately 2,000 to 3,000 square feet at the jacking pit. The work area at the receiving pit can be smaller, but is typically a minimum of 1,000 square feet. Off-site staging areas can be used to reduce work areas.

2.2.3.5 Construction Equipment and Crew Size

One crew of up to ten workers would be needed to construct the pump station. It is anticipated that two to three separate crews would each work simultaneously to install the pipelines. Two crews are anticipated to install the transmission pipeline and additional crews would install the distribution mains. Each crew would implement all four phases of construction (asphalt removal, trench excavation, pipe installation/trench refilling, and asphalt repair).

Equipment required for installation of the pump station and transmission pipeline would include, but is not limited to, the following: excavator, backhoe, front-end loaders, pavement saw, dump trucks, diesel generator(s), crane for lifting large diameter pipe, water tank, water truck, flat-bed truck, drill rig, compactors, double transfer trucks for soil hauling, concrete trucks, dewatering equipment and paving equipment. Pipe sizes for the transmission pipeline would vary, with the largest diameter pipe being 60 to 66 inches. It is assumed that two crews of up to 40 workers would be installing the transmission pipeline at any one time.

For installation of the distribution mains in road ROW, construction equipment would include a saw cutting machine, loaders, a skidsteer loader, a backhoe, large and small excavators, roller compactors (walk behind and riding), a water truck, a mobile soil-cement mixer, and an asphalt paver. Pipe sizes for the distribution mains installed in the paved road ROW would vary, with the largest diameter pipe being 42 inches. It is assumed that one crew of up to 12 workers would be installing the distribution mains at any one time.

2.2.3.6 Construction Spoil and Trip Generation

For the new pump station, the spoil generated from excavation would be approximately 600 cubic yards (CY), resulting in about 60 truck trips.

For the pipelines, the amount of spoil generated would depend on the construction methods selected. Table 2-5 shows estimated CY of spoil from pipeline construction.

Table 2-5 Spoil Generated by Pipeline Construction

Construction Method	Spoil Quantity (CY)	Number of Truck Trips[1]
Transmission Pipeline		
Open trench construction	152,900	9,500
Trenchless construction	1,300	80
Subtotal	154,200	9,580
Distribution Mains		
Open trench construction	198,000	12,375
Trenchless construction	21,000	1,315
Pipeline to Cosumnes River Preserve (Open trench and Trenchless)	8,800	550
Subtotal	227,800	14,240
Total	382,000	23,820

Notes: CY = cubic yards

[1] It is assumed that each truck would have a hauling capacity of 16 cubic yards of spoil per truckload.

Source: Adapted from Table 2-6 in the Program EIR (Regional San 2017) and Table 3-2 in the Lateral Pipelines Initial Study Checklist (Regional San 2020a)

As shown in Table 2-5, approximately 382,000 CY of spoil material would be generated from pipeline construction. The spoil would consist of material excavated from the pipeline trench and not re-used to cover the pipeline, and material taken out of the hole when using trenchless construction methods. Assuming a hauling truck capacity of 16 CY per truckload, up to 23,820 truck trips (round trips) total would be generated by spoil removal.

In addition to equipment and material delivery, a total of 86 worker trips (round trips) would be generated per day, assuming each individual drives separately and half of the workers travel for lunch.

2.2.3.7 Construction-Related Water Requirements

Water, from water trucks, would be used during construction activities for dust control purposes. Water generated from the trench dewatering operations may also be usable for dust control. Any excess water not used for dust control would be disposed of likely via land application, which would require construction easements and property owner approval. Water would also be required to manufacture drilling slurry during trenchless construction operations. This water would be obtained from municipal or private water sources in the area.

2.2.3.8 Surface Restoration

Repaving of disturbed roadway areas would occur after pipeline installation and testing. New asphalt or concrete pavement would be placed to match the surrounding road type. For asphalt repaving, a temporary asphalt material may be installed to allow traffic to use the roadway immediately after pipeline construction with permanent repaving near completion of the project. A repaving crew would follow the installation crew and prepare the road surface for repaving. Final repaving to restore all disturbed roadways would be done after pipeline installation and testing is completed. In some cases, such as for trenchless construction work areas outside of road rights-of-way, surface restoration will include revegetation to return the site to its pre-construction condition.

2.2.4 Facility Maintenance

Maintenance of project facilities would primarily involve regular visual inspections of all above ground facilities (estimated to be weekly), and physical inspection of the pipelines and appurtenances, which would occur on a regular basis (approximately annually, but to be determined based upon asset management program standards). Regional San operations and maintenance staff, or its representatives, would conduct maintenance activities.

2.3 Environmental Commitments

The following environmental commitments are incorporated into the Proposed Action. These commitments are consistent with the CEQA mitigation measures described in the Program EIR and were adopted by Regional San when the Final EIR was certified in March 2017. The full text of these environmental commitments is provided in Appendix A of this EA. Mitigation Measures BIO-1b and BIO-1c involved utilizing and complying with the South Sacramento Habitat Conservation Plan (SSHCP) to avoid, minimize, and compensate for impacts to habitats and sensitive plant and wildlife species. These measures were developed based on the Draft SSHCP and have since been superseded by compliance with the SSHCP including implementing applicable avoidance and minimization measures (AMMs). SSHCP AMMs applicable to implementation of the Proposed Action have been incorporated as appropriate in the Mitigation Monitoring and Reporting Program for Harvest Water provided in Appendix A as part of the suite of environmental commitments.

2.3.1 Aesthetics

Mitigation Measure AES-2: Nighttime Construction Lighting

2.3.2 Agriculture and Forestry Resources

Mitigation Measure LUA-2: Stockpile Topsoil

2.3.3 Biological Resources

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

SSHCP AMMs – BMPs and General Measures to Minimize Impacts to Sensitive Species and their Habitat

- BMP-7 Biological Monitor
- BMP-8 Training of Construction Staff
- CDFW ITP Condition 6.1 CNDDB Observations
- CDFW ITP Condition 7.2 Compliance Monitoring

SSHCP AMMs for Utilities to Minimize Impacts to Sensitive Species and their Habitat

- UTILITY-1 Avian Collision Avoidance
- UTILITY-2 Utility Maintenance on Preserves
- UTILITY-3 Trenchless Construction Methods
- UTILITY-4 Siting of Entry and Exit Location

SSHCP AMMs – General Measures to Minimize Impacts to Sensitive Species and their Habitat

- SPECIES-1 Litter Removal Program
- SPECIES-2 No Pets in Construction Areas
- SPECIES-3 Take Report
- SPECIES-4 Post-Construction Compliance Report

SSHCP AMMs – Species-specific Measures to Minimize Impacts to Sensitive Species and their Habitat

- PLANT-1 Rare Plant Surveys
- PLANT-2 Rare Plant Protection
- CDFW ITP Condition 8.8.1.3 Annual Plant Surveys
- ORCUTT-1 Orcutt Grass Surveys
- ORCUTT-2 Orcutt Grass Protection
- CTS-1 California Tiger Salamander Daily Construction Schedule
- CTS-2 California Tiger Salamander Exclusion Fencing
- CTS-3 California Tiger Salamander Monitoring
- CTS-4 Avoid California Tiger Salamander Entrapment
- CTS-5 California Tiger Salamander Encounter Protocol

- CRS-6 Erosion Control Materials in California Tiger Salamander Habitat
- CTS-7 Rodent Control
- WS-1 Western Spadefoot Work Window
- WS-2 Western Spadefoot Exclusion Fencing
- WS-3 Western Spadefoot Monitoring
- WS-4 Avoid Western Spadefoot Entrapment
- WS-5 Erosion Control Materials in Western Spadefoot Habitat
- WS-6 Western Spadefoot Encounter Protocol
- GGS-1 Giant Gartersnake Surveys
- GGS-2 Giant Gartersnake Work Window
- GGS-3 Giant Gartersnake Monitoring
- GGS-4 Giant Gartersnake Habitat Dewatering and Exclusion
- GGS-5 Avoid Giant Gartersnake Entrapment
- GGS-6 Erosion Control Materials in Giant Gartersnake Habitat
- GGS-7 Giant Gartersnake Encounter Protocol
- GGS-8 Giant Gartersnake Post-Construction Restoration
- CDFW ITP Condition 8.3.1.9 [GGS] Relocation Plan
- CDFW ITP Condition 8.3.1.10 Pre-Construction Surveys [*for GGS*]
- WPT-1 Western Pond Turtle Surveys
- WPT-2 Western Pond Turtle Work Window
- WPT-3 Western Pond Turtle Monitoring
- WPT-4 Western Pond Turtle Habitat Dewatering and Exclusion
- WPT-5 Avoid Western Pond Turtle Entrapment
- WPT-6 Erosion Control Materials in Western Pond Turtle Habitat
- WPT-7 Western Pond Turtle Modeled Habitat Speed Limit
- WPT-8 Western Pond Turtle Encounter Protocol
- WPT-9 Western Pond Turtle Post-Construction Restoration
- TCB-1 Tricolored Blackbird Surveys
- TCB-2 Tricolored Blackbird Pre-Construction Surveys

- TCB-3 Tricolored Blackbird Nest Buffer
- TCB-4 Tricolored Blackbird Nest Buffer Monitoring
- CDFW ITP Condition 8.4.1.7 Mixed Riparian Scrub
- SWHA-1 Swainson's Hawk Surveys
- SWHA-2 Swainson's Hawk Pre-Construction Surveys
- SWHA-3 Swainson's Hawk Nest Buffer
- SWHA-4 Swainson's Hawk Nest Buffer Monitoring

CDFW ITP Condition 8.5.1.5 SWHA Nest Tree Avoidance

- GSC-1 (Greater Sandhill Crane Surveys)
- GSC-2 (Greater Sandhill Crane Pre-Construction Surveys)
- GSC-3 (Greater Sandhill Crane Roosting Buffer)
- GSC-4 (Greater Sandhill Crane Visual Barrier)
- GSC-5 (Greater Sandhill Crane Roosting Buffer Monitoring)
- WBO-1 Western Burrowing Owl Surveys
- WBO-2 Western Burrowing Owl Pre-Construction Surveys
- WBO-3 Burrowing Owl Avoidance
- WBO-4 Burrowing Owl Construction Monitoring
- WBO-5 Burrowing Owl Passive Relocation
- WBO-6 Burrowing Owl Timing of Maintenance Activities
- WBO-7 Rodent Control
- RAPTOR-1 Raptor Surveys
- RAPTOR-2 Raptor Pre-Construction Surveys
- RAPTOR-3 Raptor Nest/Roost Buffer
- RAPTOR-4 Raptor Nest/Roost Buffer Monitoring
- BAT-1 (Maternity Roost Surveys)
- BAT-2 (Maternity Roost Pre-Construction Surveys)
- BAT-3 (Maternity Roost Buffer)
- BAT-4 (Bat Eviction Methods for Non-Maternity and Non-Hibernaculum Roosts)
- USFWS ITP Condition S.1. [VELB Avoidance and Minimization]

- USFWS ITP Condition S.2 [In part] [VELB Transplanting]

Mitigation Measure BIO-1d: Mitigate Impacts to Sensitive Non-HCP-Covered Species

Mitigation Measure BIO-2: Secure Regulatory Permits to Impact Riparian Habitat and other Sensitive Natural Communities

Mitigation Measure BIO-3: Secure Clean Water Act Permits/Approvals

Mitigation Measure BIO-5: Comply with Sacramento County Tree Preservation Ordinance

2.3.4 Cultural Resources

Mitigation Measure CR-1a: Discovery of Previously Unknown Historic or Archaeological Resources during Construction

Mitigation Measure CR-1b: Note on Construction Plans

Mitigation Measure CR-1c: Discovery of Paleontological Resources During Construction

Mitigation Measure CR-2: Discovery of Human Remains

Commitment to Cultural Resources Assessments for Service Connection Laterals and Turnouts in Areas of High Archaeological Sensitivity identified in the project-level CEQA review IS Checklist tiering from the Program EIR for the Lateral Pipelines and On-Farm Connections Project (Regional San 2020a).

2.3.5 Hazards and Hazardous Materials

Mitigation Measure HAZ-1: Conduct Phase I Study along Transmission Pipeline

2.3.6 Hydrology and Water Quality

Mitigation Measure HYD-1a: Comply with the Construction General Permit

Mitigation Measure HYD-1b: Implement BMPs to Control Erosion and Sediment During Construction

Mitigation Measure HYD-1c: Comply with the General Order for Dewatering or Other Appropriate NPDES Permit

Mitigation Measure HYD-4: Coordinate Operations with Relevant Resource Agencies

2.3.7 Noise

Mitigation Measure NOI-1: Noise Reduction Measures

2.3.8 Transportation

Mitigation Measure TR-1: Traffic Management Plan

3 Affected Environment and Environmental Consequences

3.1 Affected Environment and Environmental Consequences of the No Action Alternative

The No Action alternative considered in this EA is essentially the same as the Proposed Action evaluated below. As described in Chapter 2, Regional San will construct the project identified in the Proposed Action whether or not Reclamation provides grant funding to assist with the construction costs. Therefore, the No Project alternative and Proposed Action Alternative in this EA involve the construction of the same facilities and components. As also described in Chapter 2, this same approach was taken in the Program EIR for Harvest Water, with "Alternative 2, No Reclamation Funding Alternative" being "exactly the same" as the proposed project "with the exception of funding sources." Therefore, the No Action alternative (as well as the Proposed Action alternative) considered in this EA is essentially the same as the proposed project (i.e., Alternative 1: Medium Service Area Alternative) described and incorporated by reference from the Program EIR (Chapter 2 of the Program EIR). The environmental setting and impact analyses of those resource topics described in the Program EIR are also incorporated by reference (Sections 3.1 through 3.17 of the Program EIR).

3.2 Proposed Action

This section describes the effects associated with the Proposed Action. Where applicable, the impact analysis from the Program EIR and Lateral Pipelines Initial Study Checklist have been incorporated by reference. The significance determinations considered below and within the Program EIR and IS are based on scientific information and data as well as the regulatory standards of federal, State, and local agencies and consider factors of context and intensity within the description of impact levels.

3.2.1 Required Resource Discussions

Department of Interior Regulations, Executive Orders, and Reclamation guidelines require a discussion of Native American Indian sacred sites, Indian Trust Assets, and Environmental Justice when preparing environmental documentation. Impacts to these resources were considered and found to be minor or absent.

3.2.1.1 Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in assets that are held in trust by the United States for federally recognized Indian tribes or individuals. There are no Indian reservations, rancherias, or allotments in the project area. The closest ITA to the Proposed Action is the Wilton Rancheria, which is 9.6 miles east of the project area. The Proposed Action does not have a potential to affect ITAs (Appendix B).

3.2.1.2 Indian Sacred Sites

Executive Order 13007 (May 24, 1996) requires that federal agencies accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoid adversely affecting the physical integrity of such sacred sites. The vast majority of lands affected by the Proposed Action are not located on federal land and therefore would not affect or prohibit access to and ceremonial use of Indian sacred sites. The only facilities that may be placed on federal lands are small pipeline segments on the Stone Lakes NWR and the Cosumnes River Preserve to deliver recycled water to these facilities. These small pipeline segments do not intersect known Indian sacred sites.

3.2.1.3 Environmental Justice

Executive Order 12898 requires each federal agency to identify and address disproportionately high and adverse human health or environmental effects, including social and economic effects of its program, policies, and activities on minority populations and low-income populations. As described in Section 3.15, "Environmental Justice," of the Program EIR, because the effect of the Proposed Action on areas identified as disadvantaged communities (DACs) would be very small in relation to the overall Proposed Action area of effect, and all adverse effects can be reduced to a less than significant level, the project would not disproportionately affect DACs. Although effects of the Proposed Action would be felt in areas with greater than 50 percent minority populations, outside of the small area considered to be a DAC, the minority populations are not considered disadvantaged when paired with economic characteristics. Impacts to minority populations would be similar to other affected areas where minority populations do not exceed 50 percent of the population. Based on this information, Reclamation has not identified adverse human health or environmental effects on any population because of implementing the Proposed Action. Therefore, implementing the Proposed Action would not have a significant or disproportionately negative impact on low-income or minority individuals within the Proposed Action area (Regional San 2017).

3.2.2 Air Quality Conformity

The project site is located in Sacramento County and in the Sacramento Valley Air Basin. Air quality within the Sacramento County portion of the Basin is regulated by the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and the Sacramento Metropolitan Air Quality Management District (SMAQMD). According to CARB, the Sacramento Valley Air Basin violates State ozone and particulate matter 10 microns or less in diameter (PM_{10}) standards. Additionally, the Sacramento Valley Air Basin is in moderate nonattainment for the federal ozone standard. Oxides of nitrogen (NO_X) and volatile organic compounds (VOC) are considered as precursor emissions for ozone.

The emissions calculations and analysis for construction and operations were conducted at different times (e.g., in 2016 and 2017 for the Program EIR and in 2020 for the Initial Study Checklist) resulting in the use of different models and model versions depending on standard professional practices at the time of analysis. The California Emissions Estimator Model (CalEEMod) versions 2013.2.2 and 2016.3.2 and the SMAQMD Road Construction Emissions Model versions 7.1.5.1 and 9.0.0. were used to estimate emission from general construction and linear pipeline installation activities. CalEEMod version 2013.2.2 and eGRID 2012 version 1.0, which is EPA's inventory of air emissions data from electric power systems, were used to determine electricity use and emission from electricity use during project operations. An air quality General Conformity Determination was conducted by Ascent Environmental. The analysis included emissions modeling for both construction and operation of the project and compared the emissions to the *de minimis* levels, in accordance with Title I, Section 176(c) of the federal CAA (42 United States Code Section7506(c)). Table 3-1 indicates that Proposed Action emissions are below the *de minimis* levels. Therefore, the Proposed

Action is exempt from the General Conformity Regulations for air quality, and a federal general conformity analysis report is not required.

Table 3-1 Estimated Proposed Action Emissions with Control Measures During Construction and Operations and Federal *De Minimis* Levels in Tons Per Year

Pollutant [a]	State Attainment Status for SMAQMD [b]	Federal Attainment Status for El Dorado AQMD [c]	De Minimis Levels for Federal Conformity Determinations [d]	Estimated Proposed Action Emissions [e]
Construction				
ROG	Nonattainment	Nonattainment – Moderate	100	2.2484
NOx	Nonattainment	Nonattainment – Moderate	100	20.6289
Operations				
ROG	Nonattainment	Nonattainment – Moderate	100	0.3800
NO_X	Nonattainment	Nonattainment – Moderate	100	6.4900

Notes: NO_X = oxides of nitrogen; ROG = reactive organic gases
[a] Only pollutants with federal nonattainment status are shown in the table
[b] SMAQMD 2021
[c] EPA 2021a
[d] EPA 2021b
[e] Construction emissions were estimated with CalEEMod versions 2013.2.2 and 2016.3.2 and the SMAQMD Road Construction Emissions Model versions 7.1.5.1 and 9.0.0. Operational emissions were estimated with CalEEMod version 2013.2.2 and eGrid 2012 version 1.0.

3.2.3 Cultural Resources

"Cultural resources" is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. Title 54 U.S.C. 300101 et seq., formerly and commonly known as the National Historic Preservation Act (NHPA) is the primary legislation for Federal historic preservation. Section 106 of the NHPA (54 U.S.C. 306108) requires Federal agencies to take into consideration the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation an opportunity to comment. Historic properties are those cultural resources that are listed on or eligible for inclusion in the National Register of Historic Places (National Register). The implementing regulations at 36 CFR Section 800 for Section 106 describe the process that the Federal agency takes to identify historic properties within the area of potential effects and to assess the effects that the proposed undertaking will have on those historic properties, through consultations with the State Historic Preservation Officer (SHPO), Indian Tribes, and other identified consulting and interested parties.

As described in Section 1.1, "Background," of this EA, Reclamation proposes to award Title XVI/WIIN grant funds to Regional San for the Harvest Water Program. The expenditure of Federal appropriations is an undertaking as defined in 36 CFR Section 800.16(y) and involves a type of activity that has the potential to cause effects on historic properties under 36 CFR Section 800.3(a) that requires compliance with Title 54 U.S.C. Section 306108, commonly known as Section 106 of the NHPA, and its implementing regulations found in 36 CFR Part 800. The U.S. Army Corps of Engineers, which has a permitting action related to this project, has designated Reclamation as the lead Federal agency for NHPA Section 106 compliance for this undertaking.

The area of potential effects (APE) includes an approximately 360-acre area that will include all project activities. The APE is located in Sections 19-20, 28-29, 32, T. 7 N., R. 5 E.; Sections 19, 30, T. 6 N., R. 6 E.; Sections 5, 8, 17, 20-22, 24-35, T. 6 N., R. 5 E.; Section 36, T. 6 N., R. 4 E.; Sections 1-6, 9-11, 15-16, T. 5 N., R. 5 E.; and Section 1, T. 5 N., R. 4 E., Mount Diablo Meridian, as depicted on the Bruceville, Florin, and Galt 7.5-minute U.S. Geological Survey topographic quadrangle maps. The maximum vertical extent of the APE will range between approximately 7.5 feet deep for the pipeline trenches and 20 feet deep for the jacking and boring method of construction that may be used to cross under highways, railroads, and waterways. The majority of the lands are owned by private individuals and other entities. A portion of the proposed pipeline on the western edge of the APE is situated within the Stone Lakes NWR, which is Federal land managed by the U.S. Fish and Wildlife Service.

Efforts to identify historic properties included a cultural resources investigation of the APE conducted by Environmental Science Associates (ESA) (Koenig 2021). This investigation identified one cultural resource within the APE: the Lambert Road Levee (recorded as P-34-001495). This property was recorded by EDAW in 2006 and consists of an earthen levee located between Interstate 5 and Sangiovese Lane. ESA (Koenig 2021) evaluated this resource and recommended it not eligible for inclusion on the National Register. Reclamation agrees with these findings and determinations.

Pursuant to the regulations at 36 CFR Section 800.3(f)(2), we identified the Buena Vista Rancheria, Ione Band of Miwok Indians of California, Shingle Springs Band of Miwok Indians Shingle Springs Rancheria, United Auburn Indian Community, and the Wilton Rancheria as Indian tribes who might attach religious and cultural significance to historic properties in the APE. Reclamation will send letters [pending September 2021] to invite the participation of these tribes in the Section 106 process pursuant to 36 CFR Section 800.4(a)(4). We will also send a letter to Mr. Leland Daniels and Mr. Randy Yonemura [pending], who were identified as Native American individuals likely to have knowledge of or concerns with cultural resources in the area, requesting their assistance in identifying historic properties which may be affected by the proposed undertaking pursuant to 36 CFR Section 800.4(a)(3). If Native American concerns are subsequently raised, we will work to address them.

Reclamation will submit a consultation package to the California SHPO, notifying them of our finding of "no historic properties affected pursuant to 36 CFR Section 800.4(d)(1)." A response from the SHPO is pending (Appendix C). Any changes in project activities or inadvertent discoveries during implementation may require additional NHPA Section 106 compliance.

3.2.4 Threatened and Endangered Species

Section 3.5, "Biological Resources," of the Draft EIR includes a summary of special-status resources, a summary of the Draft South Sacramento Habitat Conservation Plan (Draft SSHCP), a review of the California Natural Diversity Database (CNDDB), and impact discussion evaluating potential effects to

biological resources. Where potential impacts are identified, mitigation measures are provided to help minimize and/or avoid effects to threatened or endangered species. The Initial Study Checklist for the Lateral Pipelines and On-Farm Connections Project provided updates to the Draft EIR setting information as appropriate, and Regional San made the determination (as part of the overall determination for the Initial Study Checklist), that the effects on biological resources resulting from the evaluated Harvest Water components were within the scope of the certified Program EIR and no subsequent or supplemental environmental documentation was required to address potential effects on biological resources.

Compliance with the Endangered Species Act (ESA) for the Proposed Action will be addressed by Regional San through compliance with the South Sacramento Habitat Conservation Plan (SSHCP). The SSHCP is a regional conservation plan developed in compliance with Section 10 of the ESA. A biological opinion and incidental take authorization for the SSHCP was issued by the U.S. Fish and Wildlife Service on April 30, 2019. The installation of facilities included in the Proposed Action for this EA are covered activities in the SSHCP. Regional San is also designated as an SSHCP Participating Special Entity, a specific category of third-party project proponent during SSHCP implementation. Regional San is currently coordinating with the SSHCP implementing entity, the South Sacramento Conservation Agency (SSCA) regarding the details of SSHCP compliance during project implementation. Compliance with the SSHCP calls for two primary actions; (1) Payment of fees for conversion of lands to another land use. Fees are used to acquire and maintain habitat preserves to benefit covered species., and (2) Implementation of avoidance and minimization measures (AMMs) to minimize adverse effects on covered species as covered activities are being implemented. AMMs that will be applied during implementation of the Proposed Action are provided in Appendix A. A memo further detailing the SSHCP compliance approach for the Proposed Action is also provided in Appendix A. Additional mitigation measures for biological resources in the Program EIR, although not directly targeted towards threatened or endangered species, would minimize adverse effects on these species, such as protection of wetland habitats. Mitigation Measures from the Program EIR are provided in the Mitigation Monitoring and Reporting Program (MMRP), which is also provided in Appendix A.

Threatened and endangered species potentially affected by the Proposed Action consist of two plants, slender Orcutt grass and Sacramento Orcutt grass; two vernal pool invertebrates, vernal pool fairy shrimp and vernal pool tadpole shrimp; one insect, valley elderberry longhorn beetle; one amphibian, California tiger salamander; and one reptile, giant garter snake. As identified in the Program EIR, although slender Orcutt grass and Sacramento Orcutt grass are covered species in the SSHCP, take of these species is not authorized by the SSHCP. There is a very low probability that slender Orcutt grass or Sacrament Orcutt grass will be encountered during project implementation. Because there is no take authorization for these plants, if either species is discovered during preconstruction surveys, plants will be fully avoided either through minor adjustments to the construction disturbance area or by using trenchless construction methods to avoid disturbing the plants.

The remaining threatened and endangered species are all covered species in the SSHCP and ESA compliance for potential adverse effects is provided through implementation of applicable AMMs (see Appendix A) and payment of applicable fees to the SSCA. The potential adverse effects to these threatened and endangered species resulting from implementation of the Proposed Action include injury, mortality, disturbance, or displacement of individuals and alteration, loss, or disturbance, of breeding, foraging, or dispersal habitat. Implementation of AMMs identified in Appendix A will reduce or avoid the potential for take of these species. These AMMs include conducting environmental awareness training, implementing best management practices for erosion and stormwater runoff, implementing a hazardous materials and spill prevention/contingency plan to prevent hazardous substances and construction by-products (e.g., gas, oil, other petroleum products, chemicals, fresh cement, asphalt) from contaminating the soil or entering aquatic

habitat, clearly marking construction area limits to minimize potential for accidental disturbance of adjacent sensitive habitat, conducting pre-construction surveys for the species and/or their habitat, removing trash from the site on a daily basis, notifying the SSCA if species are observed during project construction, and preventing entrapment of target species in trenches or any other excavated area.

3.2.5 Effects of Discharge Reduction by Regional San on Sacramento River Flows and Net Changes of Discharge in the Delta

The Proposed Action would use recycled water that is currently discharged to the Sacramento River and would provide a portion of that water to agricultural and habitat lands for beneficial reuse. The Proposed Action would reduce discharges and would thus result in calculable reductions in flows in the Sacramento River, and into the Delta, although decreases in flows at Freeport would almost always be less than 1 percent of the total river flow and Delta outflow.

Effects of the reduction in discharge vary depending on the water year type. When there are "excess" conditions, and there is sufficient flow in the Delta such that CVP and SWP reservoirs are not releasing stored water (which occurs about 70 percent of the time when considering all months and all years), reductions in discharges associated with the Proposed Action would have minimal effect on the system. Under "balanced" conditions, when the CVP and SWP reservoirs are releasing stored water, the Proposed Action could require minor changes in CVP and SWP operations in response to the reduced discharges.

The potential effects on flows would be reduced by increased streamflows to the Delta resulting from changes in the interaction of groundwater and surface water as a result of the Proposed Action. The higher groundwater levels due to in-lieu recharge associated with the Proposed Action result in reduced groundwater recharge from the Cosumnes River and other tributaries to the Delta. Instead of recharging groundwater, these flows remain in the river and flow to the Delta. These streamflows increase over the life of the Proposed Action, reaching their highest as the Proposed Action approaches a new balance between the groundwater and surface water systems.

As part of Mitigation Measure HYD-4: Coordinate Operations with Relevant Resource Agencies, Regional San has worked with Reclamation through the water rights process to reduce the potential effect of discharge reductions in the early years of project operation until the beneficial effects of increased groundwater levels have resulted in increases in surface flows into the Delta. In the initial years of Harvest Water operation, Regional San will reduce recycled water deliveries in Dry and Critically Dry years, as defined by the Sacramento Valley 40-30-30 Index (25 percent cutback) and Shasta Critical years (50 percent cutback) and will increase discharges of water to the Sacramento River accordingly. Cutbacks will continue until Regional San can demonstrate that the equivalent of at least 50 percent of annual recycled water deliveries is estimated to return to surface water. It is projected that ultimately the equivalent of 80 to 90 percent of the delivered recycled water will flow into the Delta as increases in groundwater levels result in increased flows in the Cosumnes River and other Delta tributaries.

Table 3-2 shows the volume of recycled water that is currently discharged to the Sacramento River and shows the discharge volumes to the river that are projected to occur at Years 1, 20 and 50 of Harvest Water operation (scenarios Without Proposed Action, Harvest Water Year 1, Harvest Water Year 20, and Harvest Water Year 50). The table shows the volume of water discharged in normal years and demonstrates how discharges would be increased (correspondingly reducing recycled water deliveries to farms) in Dry and Critically Dry Years and Shasta Critical Years in the initial years of operation.

As shown in Table 3-2, around year 20, or shortly thereafter, modeling shows that approximately 50 percent of the delivered recycled water will translate into surface water flow downstream. Once this is demonstrated through modeling over a 3-year running average, the cutbacks would cease (as specified in the Order Approving Wastewater Change Petition WW0092 of Sacramento Regional County Sanitation District [Petition for Change, WW0092]. A copy of Petition for Change, WW0092 is provided in Appendix D).

Then, as shown in Table 3-2, by year 50 of operation, modeling shows that increases in groundwater will result in sufficient increase in surface water flows downstream (80 percent to surface water) in June, July, and August (when Reclamation is generally releasing water from storage).

The net change in discharge shown in Table 3-2 for each scenario does not correlate directly with reductions in flows into the Delta because Reclamation would continue to manage operations consistent with the regulatory requirements and operational criteria for the CVP. Reclamation will continue to operate the CVP to meet water quality, quantity, and operational criteria within the Delta.

Table 3-2 Summary of Harvest Water Effects on Sacramento River Discharges in Maximum Irrigation Months by Regional San

Scenario	Flows (acre-feet per month)	June	July	August
Without Proposed Action	Discharge to Sacramento River[1]	11,476	11,193	11,068
	Delivery of Recycled Water to Harvest Water	0	0	0
	Groundwater to Surface Water Flows from Harvest Water	0	0	0
	Net Change in Discharge	**0**	**0**	**0**
Harvest Water Year 1 - Modeling assumes no groundwater-surface water flows interaction, cutbacks per Petition for Change				
With Proposed Action Normal Year	Discharge to Sacramento River[1]	5,049	4,766	4,641
	Delivery of Recycled Water to Harvest Water[2]	6,427	6,427	6,427
	Groundwater to Surface Water Flows from Harvest Water[3]	0	0	0
	Net Change in Discharge	**6,427**	**6,427**	**6,427**
With Proposed Action Dry or Critically Dry Year (75% of Normal Year Deliveries)	Discharge to Sacramento River[1]	6,656	6,372	6,248
	Delivery of Recycled Water to Harvest Water	4,820	4,820	4,820
	Groundwater to Surface Water Flows from Harvest Water[3]	0	0	0
	Net Change in Discharge	**4,820**	**4,820**	**4,820**
With Proposed Action Shasta Critical Year (50% of Normal Year Deliveries)	Discharge to Sacramento River[1]	8,262	7,979	7,855
	Delivery of Recycled Water to Harvest Water	3,214	3,214	3,214
	Groundwater to Surface Water Flows from Harvest Water[3]	0	0	0
	Net Change in Discharge	**3,214**	**3,214**	**3,214**

Scenario	Flows (acre-feet per month)	June	July	August
Harvest Water Year 20 - Modeling assumes 50% groundwater-surface water flows interaction, cutbacks per Petition for Change				
With Proposed Action Normal Year	Discharge to Sacramento River[1]	5,049	4,766	4,641
	Delivery of Recycled Water to Harvest Water[2]	6,427	6,427	6,427
	Groundwater to Surface Water Flows from Harvest Water[3]	3,214	3,214	3,214
	Net Change in Discharge	**3,214**	**3,214**	**3,214**
With Proposed Action Dry or Critically Dry Year (75% of Normal Year Deliveries)	Discharge to Sacramento River[1]	6,656	6,372	6,248
	Delivery of Recycled Water to Harvest Water	4,820	4,820	4,820
	Groundwater to Surface Water Flows from Harvest Water[3]	2,410	2,410	2,410
	Net Change in Discharge	**2,410**	**2,410**	**2,410**
With Proposed Action Shasta Critical Year (50% of Normal Year Deliveries)	Discharge to Sacramento River[1]	8,262	7,979	7,855
	Delivery of Recycled Water to Harvest Water	3,214	3,214	3,214
	Groundwater to Surface Water Flows from Harvest Water[3]	1,607	1,607	1,607
	Net Change in Discharge	**1,607**	**1,607**	**1,607**
Harvest Water Year 50 - Modeling assumes future equilibrium of 80% groundwater-surface water flows interaction, no cutbacks				
With Proposed Action Any Water Year	Discharge to Sacramento River[1]	5,049	4,766	4,641
	Delivery of Recycled Water to Harvest Water[2]	6,427	6,427	6,427
	Groundwater to Surface Water Flows from Harvest Water[3]	5,142	5,142	5,142
	Net Change in Discharge	**1,285**	**1,285**	**1,285**

[1] Discharges to Sacramento River estimated based on Regional San's 2021 monthly flows.
[2] Maximum monthly reduction of treated wastewater discharge to the Sacramento River per Petition for Change
[3] Groundwater to surface water flows result in increased flows to the Delta
Note: In multi-year droughts, if Lake Shasta storage falls below 2.4M AF on April 1st, Regional San will consult with Bureau of Reclamation and other relevant resource agencies on deliveries. Additional restrictions apply in the months of February and March if Lake Shasta storage falls below 2.0M AF.

3.2.6 Cumulative Impacts on CVP and SWP Operations

In the Council on Environmental Quality's (CEQ's) July 16, 2020 "Update to Regulations Implementing the Procedural Provisions of the National Environmental Policy Act" (85 FR 43304) the definition of cumulative impacts provided in 40 CFR 15087 was repealed. The CEQ conveyed the position that the analysis of cumulative effects, as defined in the 1978 regulations, is not required under NEPA. This regulation update does not preclude the analysis of cumulative effects, but identifies that all analyses of environmental effects, including cumulative effects, should focus on those effects that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action.

Reclamation has made the determination that the effects of the Proposed Action evaluated in this EA, combined with other reasonably foreseeable projects, could combine to potentially create a cumulative effect on CVP and SWP operations. Reclamation has also determined that there is a sufficiently close causal relationship between the Proposed Action and the potential cumulative effect to warrant further evaluation. Therefore, an analysis of this cumulative effect is provided here. In addition, since certification of the Program EIR, which included an analysis of cumulative effects that addressed CVP and SWP operations, additional information has been developed that is relevant to this cumulative impact analysis.

As stated above, the Program EIR includes an analysis of cumulative effects that addresses CVP and SWP operations. The methodology for analysis of overall project impacts on CVP and SWP operations is described beginning at the bottom of page 3.10-24 of the Draft EIR and reads as follows (Note that the certified Program EIR is comprised of the Draft EIR and Final EIR. Under CEQA, a Final EIR typically does not republish the entire environmental review document and the dominant component of a Final EIR is responses to comments on the Draft EIR. Much of the environmental analysis is included in the Draft EIR; hence, text from the Draft EIR is presented here):

> "Evaluation of impacts to surface water and groundwater was accomplished using the SWP and CVP hydrology and system operations model, CalSim II, which was developed to simulate and evaluate changes to the complex water resources system of California under alternative conditions. The model simulates operations of the SWP, CVP, and other water districts/facilities in the Central Valley and approximates changes in storage reservoirs, river flows, and exports from the Delta that would result from a change in hydrologic conditions, water supply demands, facilities, requirements or operational policies. The model was used to evaluate potential changes in how the system would need to be operated as a result of reduction in discharges to the Sacramento River associated with the proposed Project."

The discussion of project specific impacts to CVP and SWP water supplies begins on page 3.10-36 of the Draft EIR and is addressed in the discussion of **Impact HYD-4 Interfere with or Require Changes to CVP or SWP Operations**. The analysis concludes that:

> "Although impacts of the discharge reduction are balanced by increases in streamflows that result from higher groundwater levels produced by the Project, 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 analysis identified the potential for significant thermal effects just below Lake Shasta caused by the proposed project, Regional San adopted a mitigation measure to address those impacts and reduce them to less than significant per CEQA. The adopted mitigation is presented on page 3.10-46 of the Draft EIR and is reproduced below:

"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."

The analysis of cumulative effects, which addresses CVP and SWP operations, begins on page 3.10-46 of the Draft EIR and reads as follows (Note that the Draft EIR considered "California WaterFix" as a cumulative project. Since EIR certification, that project has been renamed as the "Delta Conveyance Project." However, the text below is a quote from the Draft EIR and the terminology used in Draft EIR is retained.):

"Cumulative Impacts

The geographic scope for construction impacts is limited to the area in which the pump station and pipelines would be constructed. Other projects that would be constructed within the SRWTP and vicinity would all be required to comply with the Construction General Permit and to implement erosion control BMPs during construction. Cumulative construction-period water quality impacts are thus expected to be less than significant.

The geographic scope of potential operational impacts extends to the entire Sacramento River watershed. Evaluation of Project impacts used the SWP and CVP hydrology and system operations model, CalSim II, which was developed to simulate and evaluate changes to the complex water resources system of California under alternative conditions. The model simulates operations of the SWP, CVP, and other water districts/facilities in the Central Valley and approximates changes in storage reservoirs, river flows, and exports from the Delta that would result from a change in hydrologic conditions, water supply demands, facilities, requirements or operational policies. Modeling of Project impacts was done in the context of ongoing operations of other projects that divert water from the system, and thus considers cumulative effects.

Because the CalSim II model would not have considered effects of other recycled water projects that might reduce discharges to the Sacramento River system, the evaluation of impacts has also considered reasonably foreseeable future discharge reductions as reflected in the State Water Resources Control Board web page that provides notices of Wastewater Change Petitions (SWRCB 2015). The communities of Colusa, Woodland and Biggs are all proposing recycled water projects that would reduce discharges in the Sacramento River

watershed (see Table 3.0-1 in Section 3.0[2]). Total discharge reduction would be 1.86 cfs, which would be in addition to the maximum 108 cfs reduction associated with the proposed Project during peak periods at full implementation. The additional discharge reductions are minimal as compared to the flows in the Sacramento River at Freeport, where average flows range from about 19,000 to 14,000 cfs during the May to August time period when the demand for recycled water is highest and flows in the river are lowest.

Cumulative Effects of California WaterFix

Sacramento River flows could also be affected if the California WaterFix is implemented. The California Department of Water Resources and Bureau of Reclamation are currently considering a project to provide more reliable delivery of water exports from the Delta through the State Water Project and the Central Valley Project. Originally developed as the Bay Delta Conservation Plan (BDCP), Alternative 4A, California WaterFix, has been identified as the preferred alternative, but environmental documentation for this option has

[2] *The relevant portion of Table 3.0-1 from the Draft EIR provides the following information:*

Wastewater Change Petitions

Project Name	Estimated Schedule/Status	Project Description	Location	Potential to Combine Impacts
City of Colusa	Project approved by City Council in March 2015 Wastewater change petition filed with SWRCB in June 2015	The City of Colusa has filed a wastewater change petition, seeking to reduce the discharge of treated wastewater to Powell Slough. The City proposes to divert approximately 0.41 million gallons per day of wastewater discharge for seasonal irrigation on up to 84 acres of land (within a 185-acre gross). Discharge would be reduced by 456 AFY, which corresponds to an average of 0.63 cfs.	Immediately east and south of Colusa wastewater treatment plant (WWTP), current discharge is to unnamed tributary of Powell Slough	Y
City of Woodland	Initial Study/MND (IS/MND) completed in February 2015 Wastewater change petition filed in May 2015 Construction anticipated to begin in 2015	The City of Woodland has filed a wastewater change petition, seeking to reduce the discharge of treated wastewater from its Water Pollution Control Facility (WPCF) to the Tule Canal tributary to the Sacramento River. With the petition, the City requests to deliver up to 0.5 million gallons per day (mgd) of its tertiary treated wastewater effluent to industrial use and landscape irrigation. Discharge would be reduced by 0.77 cfs, which would reduce annual discharge by 560 AFY.	Woodland Biomass Facility located at 1786 E Kentucky Avenue in Woodland and two parks located in the City.	Y
City of Biggs	EIR finalized in December 2013 Wastewater Change Petition approved by SWRCB in June 2014	The City of Biggs Wastewater Treatment Plant filed a wastewater change petition, seeking to eliminate discharge of effluent to Lateral K, which drains to Butte Creek, thence the Sacramento River. The treated effluent would be used to irrigate 120 to 140 acres located to the south or west of the wastewater treatment plant. Discharge would be reduced by 0.46 cfs, which would reduce annual discharge by 333 AFY.	WWTP is located at 2951 West Biggs Gridley Road. West Option is immediate west of WWTP; South Option is immediately south of WWTP.	Y

not been completed, and a final decision regarding project implementation has not been made. Timing for implementation, if approved, is thus uncertain.

Evaluation of effects of the proposed Project depends on the timing of balanced and excess conditions, which dictates whether CVP and SWP reservoirs release stored water. These conditions would be expected to change under the California WaterFix, which could result in the following conditions:

- Export operations would be more dependent on excess flow conditions and conveyance of these excess flow through the North Delta Diversion intake
- Frequency of balanced conditions would likely increase in the Spring due to higher outflow requirements and upstream releases required to meet those requirements
- Ability to operationally respond and recover from a storage deficit (regardless of cause) would likely decrease with the increase in balanced conditions frequency

CalSim II modeling has shown that the Project's individual effects on CVP and SWP operations would be minimal, because reductions in discharge are almost entirely offset by increases in surface water flows due to higher groundwater conditions, which would benefit the Delta as a whole. The Cal WaterFix Alternative 4A could exacerbate potential Shasta storage impacts of the proposed Project. However, since the Project's impacts to storage can be fully mitigated, the Project would not contribute considerably to a cumulative impact to storage. Modeling has projected that CVP and SWP water service contractor deliveries would be reduced by 5,000 AFY at ultimate program implementation (a reduction of 4,000 AFY for Delta exports and a reduction of 1,000 AFY for deliveries to water users upstream of the discharge location on the Sacramento River). Reclamation staff have expressed concern about the effect of any Project-related reductions in deliveries in light of the curtailment of deliveries to contractors during recent drought conditions. However, the Project's contribution to the cumulative impact to CVP/SWP water supply deliveries is not considered to be cumulatively considerable. Year to year changes in hydrology affect export allocations on the order of millions of AFY (allocations can vary from 100 percent to 0 percent of contracted amounts in the worst case), and the minor changes associated with the project (a reduction of 0.2 percent) are not expected to result in a cumulative considerable change in deliveries to CVP or SWP contractors."

The cumulative analysis then concludes with a determination that with implementation of **Mitigation Measure HYD-4** (text provided above), the cumulative impacts of the discharge reduction are expected to be "less than significant", using the terminology appropriate to CEQA. This equates to a conclusion that the Proposed Action does not make a substantial contribution to a substantial adverse cumulative effect.

As noted above, Regional San has worked directly with Reclamation staff through the water rights process to come to agreement about the details of how Mitigation Measure HYD-4 would be implemented. This coordination led to further refinements to operational terms to provide more water from Regional San in Shasta Critical and Dry and Critically Dry Years.

During the process of resolving the Petition for Change/Water Rights protests, Regional San documented that California Water Code sections 1210 and 1211 provide that the owner of a wastewater treatment plant holds the exclusive right to its treated wastewater and can petition the State Water Board to change the point of discharge, place of use or purpose of use.

Regional San's response to Reclamation's protest also explained that wastewater treated and discharged by Regional San are not return flows to which downstream users may acquire a right. Approximately 50 to 60

percent of the water collected and treated by Regional San is derived from groundwater, which is "foreign water" legally distinct from surface water, and thus no downstream water right holder can thus legally claim a right to Regional San's discharges that are derived from groundwater supply. California Health and Safety Code section 4744, also specifically authorizes county sanitation districts to "sell or otherwise dispose of, any water, sewage effluent … or other by-product resulting from the operation of a sewerage system … or treatment plant …." Regional San's recycled water, regardless of its source is thus appropriately treated as a foreign or developed water.

Through the water rights process, working closely with Reclamation, cutbacks of recycled water deliveries (therefore discharging the recycled water directly to the Sacramento River) were proposed and agreed to. As described above, the cutbacks agreed upon are 25 percent and 50 percent in Dry and Critically Dry years and Shasta Critical years, respectively. The Order Approving Change in Purpose of Use and Place of Use of Treated Wastewater (Order) approved by the SWRCB is provided in Appendix D of this EA and discusses how Reclamation's concerns with Harvest Water's potential operational effects to CVP operations were addressed through conditions on Harvest Water's operations and Mitigation Measure HYD-4. The SWRCB later issued a minor correction to the place of use in the Order, which is included as Appendix E of this EA. The effects of the use of the water rights order are documented above in Section 3.2.4, "Effects of Discharge Reduction by Regional San on Sacramento River Flows and Net Changes of Discharge in the Delta."

The resolution of issues raised during the water rights process, the issuance of the SWRCB Order, and the clarification regarding implementation of Mitigation Measure HYD-4 further reinforces the original conclusion from the Program EIR that the Proposed Action does not make a substantial contribution to a substantial adverse cumulative effect.

4 Consultation and Coordination

Reclamation consulted and coordinated with Regional San and the U.S. Army Corps of Engineers in the preparation of this EA.

Title 54 U.S.C. Section 306108, Commonly Known as Section 106 of the National Historic Preservation Act

Title 54 U.S.C. Section 306108, commonly known as Section 106 of the National Historic Preservation Act (formerly 16 U.S.C. 470 et seq.), requires Federal agencies to consider the effects of their undertakings on historic properties, properties determined eligible for inclusion in the National Register, and to afford the Advisory Council on Historic Preservation an opportunity to comment. Compliance with Section 106 follows a series of steps, identified in its implementing regulations found at 36 CFR Part 800, that include identifying consulting and interested parties, identifying historic properties within the area of potential effect, and assessing effects on any identified historic properties, through consultations with the California SHPO, Indian tribes, and other consulting parties.

Reclamation will enter into consultation with the California SHPO, notifying them of our finding of "no historic properties affected pursuant to 36 CFR Section 800.4(d)(1)." A response from the SHPO is pending (Appendix C). Any changes in project activities or inadvertent discoveries during implementation may require additional NHPA Section 106 compliance.

5 References

5.1 Chapter 1, Introduction

Regional San. *See* Sacramento Regional County Sanitation District.

Sacramento Regional County Sanitation District. 2017 (March). *Sacramento Regional County Sanitation District's South Sacramento County Agriculture and Habitat Lands Recycled Water Program Final Environmental Impact Report*. State Clearinghouse No. 2015022067. Sacramento, CA.

———. 2020 (October). *Initial Study Checklist for the Sacramento Regional County Sanitation District Harvest Water Program, Lateral Pipelines and On-Farm Connections Project.* Prepared by Ascent Environmental, Sacramento, CA.

5.2 Chapter 2, Alternatives Including the Proposed Action

Regional San. *See* Sacramento Regional County Sanitation District.

Sacramento Regional County Sanitation District. 2017 (March). *Sacramento Regional County Sanitation District's South Sacramento County Agriculture and Habitat Lands Recycled Water Program Final Environmental Impact Report*. State Clearinghouse No. 2015022067. Sacramento, CA.

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———. 2020b (November). *Harvest Water Transmission Main and Distribution Pipelines Basis of Design Report. Draft.*

5.3 Chapter 3, Affected Environment and Environmental Consequences

EPA. *See* U.S. Environmental Protection Agency.

Koenig, Heidi. 2021. *Sacramento Regional County Sanitation District Recycled Water Transmission and Distribution Main Pipeline Project, Cultural Resources Survey Report.* Prepared for Sacramento Regional County Sanitation District by Environmental Science Associates, Petaluma, California. May 2021.

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SMAQMD. *See* Sacramento Metropolitan Air Quality Management District.

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SWRCB. *See* State Water Resources Control Board.

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———. 2021b. 40 CFR 93.153 De Minimis Tables. Available: https://www.epa.gov/general-conformity/de-minimis-tables. Accessed February 4, 2021.

Appendix A - Environmental Commitments

Appendix A1 - MMRP

Mitigation Monitoring and Reporting Plan-Updated 2021

Per the California Environmental Quality Act (CEQA) Public Resources Code Section 21000 et seq.), the Sacramento Regional County Sanitation District (Regional San) prepared an Environmental Impact Report (EIR) (State Clearinghouse No. 2015022067) for the Harvest Water Program (formerly the South Sacramento County Agricultural & Habitat Lands Recycled Water Program) in 2017, that identified potentially significant impacts related to: Aesthetics; Agriculture Resources; Biological Resources; Cultural Resources; Hazards and Hazardous Materials; Hydrology and Water Quality; Noise; and Transportation. The EIR also identified mitigation measures that would reduce the identified impacts to a less-than-significant level, or that would eliminate these impacts altogether.

Regional San adopted a Mitigation Monitoring and Reporting Plan (MMRP) and CEQA Findings of Fact and certified the EIR on March 8, 2017. A Statement of Overriding Considerations was not prepared because the EIR concluded that the project does not have any significant, unavoidable impacts.

The Program EIR evaluated the transmission line and pump station elements of the Program at a project level, but considered other elements, that had not been sufficiently well-defined to allow a project-level evaluation, at a program level. Since certification of the EIR, Regional San has further defined elements that were originally evaluated at a project level and has completed supplemental CEQA evaluation of the following project elements:

- Lateral Pipelines and On-Farm Connections – Regional San completed an Initial Study checklist, which verified that this element of the project is within the scope of activities covered in the environmental impact analysis in the Program EIR.
- EcoPlan and Wintertime Application – Regional San completed an Addendum, which verified that these project elements did not result in any significant new or substantially more severe environmental impacts.
- Groundwater Accounting Project – Regional San completed an Addendum, which verified that this project element did not result in any significant new or substantially more severe environmental impacts.

Additionally, since certification of the EIR in 2017, the South Sacramento Habitat Conservation Plan (SSHCP) was adopted. At the time of Program EIR certification, the SSHCP was in draft form but identified the Harvest Water Program as a covered activity indicating that Harvest Water Program activities would be covered and impacts to covered species would be mitigated. The 2017 Program EIR included these mitigation measures identified in the draft SSHCP and Regional San adopted an MMRP committing to compliance with those measures when the Program EIR was certified. However, some of the habitat compensation protocols and avoidance and minimization measures (AMMs) in the Draft SSHCP were revised in the final adopted SSHCP, superseding the measures in the Program EIR and were also certified as a part of the SSHCP EIR process. The three supplemental CEQA documents described above updated the mitigation measures for biological resources to provide consistency with the SSHCP, which was the intent of the original mitigation that was crafted before the SSHCP was adopted. The supplemental CEQA documents also established a procedure for evaluating the potential for cultural resources on private lands where pipeline connections will be installed in the future. This MMRP has been updated correspondingly to reflect the revised AMMs, including recent changes to the AMMs that reflect requirements of the Incidental Take Permits for the SSHCP. Changes in this MMRP are confined to revisions of the mitigation for biological resources to provide consistency with the SSHCP and the addition of a cultural resources mitigation measure that only applies to on-farm connections on private lands where access for cultural resources surveys has not been previously available. Mitigation measures for other resources have not been changed.

This amended MMRP is intended to replace the previously adopted MMRP in its entirety, although all of the mitigation measures except for revised measures for biological resources, plus one additional cultural resources mitigation measure, are the same as previously approved. Changes in the mitigation are shown in underline/~~strikeout~~.

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._____

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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._____

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~~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~~	**Mitigation Measure BIO-1b was based on the Draft SSHCP and has been superseded by the final AMM's defined in the adopted HCP.** ~~**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 Conservation 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	**SSHCP AMMs – BMPs and General Measures to Minimize Impacts to Sensitive Species and their Habitat**: 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. The following AMMs from the adopted SSHCP are described below and are considered mitigation measures designed to protect sensitive or special status species and habitats from effects associated with construction of facilities:	Regional San	Regional San, South Sacramento Conservation Agency	1. Confirm that monitoring and training requirements are included in contract specifications. 2. Complete training and document worker attendance. 3. Monitor construction activities to verify that measures are implemented during construction.	1. Design 2. Construction 3. Construction	1._____ 2._____ 3._____

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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	• **BMP-7 Biological Monitor:** If a Covered Activity includes ground disturbance within Covered Species modeled habitat, an approved biologist will be on site during the period of ground disturbance, and may need to be on site during other construction activities depending on the Covered Species affected. After ground-disturbing project activities are complete, the approved biologist will train an individual to act as the on-site construction monitor for the remainder of construction, with the concurrence of the Permitting Agencies. The on-site monitor will attend the training described in BMP-8. The approved biologist and the on-site monitor will have oversight over implementation of AMMs, and will have the authority to stop activities if any of the requirements associated with those measures are not met. If the monitor requests that work be stopped, the Wildlife Agencies will be notified within one working day by email. The approved biologist and/or on-site monitor will record all observations of listed species on California Natural Diversity Database field sheets and submit them to the California Department of Fish and Wildlife. The approved biologist or on-site monitor will be the contact source for any employee or contractor who might inadvertently kill or injure a Covered Species or who finds a dead, injured or entrapped individual. The approved biologist and on-site monitor's names and telephone numbers will be provided to the Wildlife Agencies prior to the initiation of ground-disturbing activities. Refer to species-specific measures for details on requirements for biological monitors. • **BMP-8 Training of Construction Staff:** A mandatory Worker Environmental Awareness Program will be conducted by an approved biologist for all construction workers, including contractors, prior to the commencement of construction activities. The training will include how to identify Covered Species that might enter the construction site, relevant life history information and habitats, SSHCP and statutory requirements and the consequences of non-compliance, the boundaries of the construction area and permitted disturbance zones, litter control training (SPECIES-2), and appropriate protocols if a Covered Species is encountered. Supporting materials containing training information will be prepared and distributed by the approved biologist. When necessary, training and supporting materials will also be provided in Spanish. Upon completion of training, construction personnel will sign a form stating that they attended the training and understand all of the AMMs. Written documentation of the training must be submitted to the Implementing Entity within 30 days of completion of the training, and the Implementing Entity will provide this information to the Wildlife Agencies. • **CDFW ITP Condition 6.1 CNDDB Observations**: If any special status species are observed during project implementation, the Permittee shall submit the California Natural Diversity Data Base (CNDD) Online Field Survey Form electronically at https://www.wildlife.ca.gov/data/CNDDB/submitting-data within five working days of the sightings, and provide a copy of the form, survey map and/or report to the CDFW's Regional office as instructed in SSHCP SCFW ITP Regional Contact Information section. • **CDFW ITP Condition 7.2 Compliance Monitoring**: The approved biologist shall be on-site daily when Covered Activities occur in Covered Species habitat. The approved biologist shall conduct compliance inspections to (1) minimize incidental take of the Covered Species; (2) prevent unlawful take of species; (3) check for compliance with all measures of this ITP; (4) check all exclusion zones; and (5) ensure that signs, stakes, and fencing are intact and that Covered Activities are only occurring in the Plan Area.			Document compliance and retain in the project file.		

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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	**SSHCP AMMs for Utilities to Minimize Impacts to Sensitive Species and their Habitat**: To mitigate unavoidable losses to habitats used by sensitive species the following AMMs from the adopted SSHCP are considered mitigation measures designed to protect sensitive species and habitats from effects associated with construction and maintenance of facilities: • **UTILITY-1 Avian Collision Avoidance:** Installation of new, or relocation of existing, utility poles, lines, and cell towers located within the Preserve System or within 1,000 feet of a Preserve boundary will be coordinated with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. The applicant or relevant utility/service provider will install utility poles, lines, and cell towers in conformance with Avian Powerline Interaction Committee (APLIC) standards for collision-reducing techniques, as outlined in Reducing Avian Collisions with Power Lines: State of the Art in 2012 (APLIC 2012), or any superseding document issued by the APLIC. • **UTILITY-2 Utility Maintenance on Preserves:** Utility maintenance inside SSHCP Preserves and SSHCP Preserve Setbacks containing vernal pools will occur only when vernal pools have been dry for 30 days, except in emergency situations related to human health and safety. • **UTILITY-3 Trenchless Construction Methods:** Where a pipeline or conduit crosses an existing or planned Preserve or will be located between adjacent Preserves (e.g., under a roadway that has a Preserve on both sides), trenchless construction methods will be used to minimize impacts to the existing soil profile (including impacts to a hardpan or duripan) to maintain the perched aquifer in Vernal Pool Grassland land cover type. • **UTILITY-4 Siting of Entry and Exit Location:** The entry and exit locations for the trenchless construction method (see Utility-3) will be sited to avoid impacts to vernal pools and Riparian Woodland, and to avoid direct take of SSHCP Covered Species.	Regional San	Regional San, South Sacramento Conservation Agency	1. Confirm that siting requirements, standards for new utility poles and lines, and requirements for trenchless construction are included in contract plans and specifications. 2. Monitor construction activities to verify that design measures are implemented during construction. 3. Incorporate maintenance timing requirements in operation and maintenance plan if any facilities are located in or between Preserves. Document compliance and retain in the project file.	1. Design 2. Construction 3. Operation	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~~	**Mitigation Measure BIO-1c was based on the Draft SSHCP and has been superseded by the final AMM's defined in the adopted HCP.** ~~**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.~~ • ~~**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.~~	~~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 provide documentation showing pre- and post-project conditions to the Implementing Entity, as required.~~ ~~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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	~~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.~~					

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	~~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.~~					

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	~~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 end 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.~~					

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	~~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.~~					

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	**SSHCP AMMs – General Measures to Minimize Impacts to Sensitive Species and their Habitat**: To mitigate unavoidable losses to habitats used by sensitive species the following AMMs from the adopted SSHCP are considered mitigation measures designed to protect sensitive species and habitats from effects associated with construction of facilities: • **SPECIES-1 Litter Removal Program:** A litter control program will be instituted for the entire project site. All workers will ensure that their food scraps, paper wrappers, food containers, cans, bottles, and other trash are deposited in covered or closed trash containers. All garbage will be removed from the project site at the end of each work day, and construction personnel will not feed or otherwise attract wildlife to the area where construction activities are taking place. • **SPECIES-2 No Pets in Construction Areas:** To avoid harm and harassment of native species, workers and visitors will not bring pets onto a project site. • **SPECIES-3 Take Report:** If accidental injury or death of any Covered Species occurs, workers will immediately inform the approved biologist or on-site monitor and site supervisor. The approved biologist or on-site monitor will phone the appropriate contact person at the Implementing Entity. The Implementing Entity will immediately contact the Wildlife Agencies by telephone. A memorandum will be provided to the Implementing Entity and Wildlife Agencies within 1 working day of the incident. The report will provide the date and location of the incident, number of individuals taken, the circumstances resulting in the take, and any corrective measures taken to prevent additional take. • **SPECIES-4 Post-Construction Compliance Report:** A post-construction compliance report will be submitted to the SSHCP Implementing Entity within 30 calendar days of completion of construction activities or within 30 calendar days of any break in construction activity that lasts more than 30 days. The report will detail the construction start and completion dates, any information about meeting or failing to meet species take AMM, effectiveness of each AMM that was applied at the project site, and any known project effects to Covered Species.	Regional San	Regional San, South Sacramento Conservation Agency	1. Confirm that measures and reporting requirements are included in contract specifications. 2. Monitor construction activities to verify that measures are implemented during construction. 3. Confirm reporting occurs as needed. 4. Document completion of post-construction report. Document compliance and retain in the project file.	1. Design 2. Construction 3. Construction 4. Post-construction	1._____ 2._____ 3._____ 4._____

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	**SSHCP AMMs – Species-specific Measures to Minimize Impacts to Sensitive Species and their Habitat**: To mitigate unavoidable losses to habitats used by sensitive species the following AMMs from the adopted SSHCP are considered mitigation measures designed to protect sensitive species and habitats from effects associated with construction of facilities: • **PLANT-1 Rare Plant Surveys:** If a Covered Activity project site contains modeled habitat for Ahart's dwarf rush (*Juncus leiospermus var. ahartii*), Bogg's Lake hedge-hyssop (*Gratiola heterosepala*), dwarf downingia (*Downingia pusilla*), Legenere (*Legenere limosa*), pincushion navarretia (*Navarretia myersii*), or Sanford's arrowhead (*Sagittaria sanfordii*), the Covered Activity project site will be surveyed for the rare plant by an approved biologist and following the California Department of Fish and Wildlife (CDFW) rare plant survey protocols (Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations or Sensitive Natural Communities dated March 20, 2018) or the most recent CDFW rare plant survey protocols. An approved biologist will conduct the field surveys and will identify and map plant species occurrences according to the protocols. See SSHCP Chapter 10 for the process to submit survey information to the Plan Permittee and the Permitting Agencies. • **PLANT-2 Rare Plant Protection:** If a rare plant listed in AMM PLANT-1 is detected within an area proposed to be disturbed by a Covered Activity or is detected within 250 feet of the area proposed to be disturbed by a Covered Activity, the Implementing Entity will assure one unprotected occurrence of the species is protected within a SSHCP Preserve before any ground disturbance occurs at the project site. • **CDFW ITP Condition 8.8.1.3 Annual Plant Surveys**: For those plant species covered in the CDFW ITP (Bogg's Lake hedge-hyssop) that are annual plants with seed banks which may not germinate every year, prior to beginning Covered Activities in Covered Species modeled habitat, the Permittees may be required to survey a project site for more than one year to substantiate negative findings if the previous year was either extremely dry or extremely wet (which may be found in the Department of Water Resources Water Supply Index Bulletin (http://cdec.water.ca.oov/coi-Drogs/iodir/wsi). However, if local reference populations of the species are detectable at the time of survey and none of the species are observed on a project site, a negative finding will be made. • **ORCUTT-1 Orcutt Grass Surveys:** If a Covered Activity project site is located within 1 mile of the Mather Core Recovery Area and contains the Vernal Pool land cover type, 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 (CDFG 2009) 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. See SSHCP Chapter 10 for the process to conduct and submit survey information. • **ORCUTT-2 Orcutt Grass Protection:** 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 a Third-Party Project Proponent encounters a previously undiscovered occurrence of Sacramento or slender Orcutt grass on a Covered Activity project site, the Third-Party Project Proponent will contact the Implementing Entity or Land Use Authority Permittee with authority over the project, who will coordinate with the Wildlife Agencies for written concurrence of avoidance to ensure that the project does not cause take of the species. • **CTS-1 California Tiger Salamander Daily Construction Schedule:** Ground-disturbing Covered Activities within California tiger salamander modeled habitat (SSHCP Figure 3-16) 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 modeled habitat (SSHCP Figure 3-16) 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. • **CTS-2 California Tiger Salamander Exclusion Fencing:** If a Covered Activity must be implemented in modeled habitat (SSHCP Figure 3-16) 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	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 provide documentation showing pre- and post-project conditions to the Implementing Entity, as required. Document compliance and retain in the project file.	1. Pre-construction 2. Design 3. Construction 4. At completion of construction	1._____ 2._____ 3._____ 4._____

	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. If a California tiger salamander is encountered, refer to CTS-5, below. (However, the 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 a Covered Activity project to not implement CTS-2 for certain long and linear roadway Covered Activity projects if it appears that the exclusion fencing will likely trap individuals or cause more take of California tiger salamander than it would prevent.) • **CTS-3 California Tiger Salamander Monitoring:** If Covered Activities must be implemented in modeled habitat (SSHCP Figure 3-16), 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. As required by BMP-8 (Training of Construction Staff), 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 a California tiger salamander is encountered, refer to CTS-5, below. • **CTS-4 Avoid California Tiger Salamander Entrapment:** If Covered 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, refer to CTS-5, below. • **CTS-5 California Tiger Salamander Encounter Protocol:** 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. • **CRS-6 Erosion Control Materials in California Tiger Salamander Habitat:** If erosion control (BMP-2) is implemented within California tiger salamander modeled habitat (SSHCP Figure 3-16), 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. • **CTS-7 Rodent Control:** CTS-7 only applies to projects that are within California tiger salamander modeled habitat (SSHCP Figure 3-16) and on Covered Activities. Rodent control will be allowed only in developed portions of a Covered Activity 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.					

	• **WS-1 Western Spadefoot Work Window:** Ground-disturbing Covered Activities within western spadefoot modeled habitat (SSHCP Figure 3-17) will occur outside the breeding and dispersal season (after May 15 and before October 15), to the maximum extent practicable. • **WS-2 Western Spadefoot Exclusion Fencing:** If Covered Activities must be implemented in modeled habitat (SSHCP Figure 3-17) 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 a western spadefoot is encountered, refer to WS-6, below. • **WS-3 Western Spadefoot Monitoring:** If Covered Activities must be implemented in modeled habitat (SSHCP Figure 3-17) 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 (i.e., outside the buffer zone). If a western spadefoot is encountered, refer to WS-6, below. • **WS-4 Avoid Western Spadefoot Entrapment:** If a Covered Activity occurs in western spadefoot modeled habitat (SSHCP Figure 3-17), 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 a western spadefoot is encountered, refer to WS-6, below. • **WS-5 Erosion Control Materials in Western Spadefoot Habitat:** If erosion control is implemented within western spadefoot modeled habitat (SSHCP Figure 3-17), 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 • **WS-6 Western Spadefoot Encounter Protocol:** If Covered Activities must be implemented in modeled habitat (SSHCP Figure 3-17) 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. • **GGS-1 Giant Gartersnake Surveys:** If the SSHCP giant gartersnake modeled habitat maps (SSHCP Figure 3-18) show that modeled habitat for giant gartersnake is present within a Covered Activity's project footprint or within 300 feet of a project footprint, then an approved biologist will conduct a field investigation to delineate giant gartersnake aquatic habitat within the project footprint and adjacent areas within 300 feet of the project footprint. In addition to the SSHCP land cover types shown in SSHCP Figure 3-18, giant gartersnake 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. The Third-Party					

	Project Proponent 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 gartersnake habitat must also be noted on plans that are submitted to a Local Land Use Permittee. The applicant will use this information to finalize project design. Covered Activities may occur throughout the year as long as giant gartersnake habitat is identified and fully avoided. Otherwise, Covered Activities must comply with GGS-2 through GGS-8, below. See Chapter 10 for the process to conduct and submit survey information. • **GGS-2 Giant Gartersnake Work Window:** Covered Activities that do not fully avoid giant gartersnake modeled habitat (SSHCP Figure 3-18) 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, the Third-Party Project Proponent or Plan Permittee 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. The additional measures would vary depending on where the work is occurring. For example, if the work outside the GGS active season is a continuation of work within a dewatered channel or within a disturbed area where no more than two days have passed without ground-disturbing activities, burrows are no longer expected to be occupied by GGS, therefore no additional measures may be necessary. However, if ground disturbing work will occur outside the GGS active season in an area that was not previously disturbed in the active season, or there has been no ground disturbance for more than two days, an Approved Biologist may be necessary on-site during earth moving activities, to monitor for GGS presence. • **GGS-3 Giant Gartersnake Monitoring:** If a Covered Activity is occurring in giant gartersnake modeled habitat (SSHCP Figure 3-18), an approved biologist experienced with giant gartersnake 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 gartersnake prior to construction activities. If a giant gartersnake is encountered, refer to GGS-7. The approved biologist will also train construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a giant gartersnake enters an active construction zone (i.e., outside the buffer zone). • **GGS-4 Giant Gartersnake Habitat Dewatering and Exclusion:** If construction activities will occur in giant gartersnake 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 Covered 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 gartersnake. After aquatic habitat has been dewatered 15 days prior to Covered 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 gartersnake 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 giant gartersnake is encountered, refer to GGS-7, below. • **GGS-5 Avoid Giant Gartersnake Entrapment:** If a Covered Activity occurs in giant gartersnake modeled habitat (SSHCP Figure 3-18), all excavated steep-walled holes and trenches more than 6 inches deep will be covered with plywood (or similar material) and/or provided with one or more escape ramps at an angle of ≤ 30 degrees, 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 gartersnake modeled habitat will be inspected for giant gartersnake by the approved biologist prior to being moved. If a giant gartersnake is encountered, refer to GGS-7. • **GGS-6 Erosion Control Materials in Giant Gartersnake Habitat:** If erosion control is implemented within giant gartersnake modeled habitat (SSHCP Figure 3-18), 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. • **GGS-7 Giant Gartersnake Encounter Protocol:** If a giant gartersnake is encountered during construction activities, the approved biologist will notify the Wildlife Agencies immediately and follow the methods in the CDFW approved Relocation Plan described in GGS-9. 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 and CDFW description, and any corrective measures taken to protect the giant gartersnake 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 gartersnake or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist. Any giant gartersnake observed during Covered Activities will be allowed to move away from danger on its own or be moved by the Designated Biologist with CDFW and USFWS approval to handle the snake and in accordance with the CDFW approved GGS Relocation Plan detailed in GGS-9. • **GGS-8 Giant Gartersnake Post-Construction Restoration:** After completion of ground-disturbing Covered Activities, the applicant 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 an appropriate native seed mix. 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 Gartersnake 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. • **CDFW ITP Condition 8.3.1.9 [GGS] Relocation Plan:** The Authorized Party shall develop a GGS Relocation Plan and submit it to the Wildlife Agencies for written approval no less than 30 days prior to initiating Covered Activities. The Authorized Party shall include in the Relocation Plan, at a minimum, the proposed giant gartersnake capture and handling technique; a quantification of the amount, relative location, and quality of suitable habitat (aquatic and upland) including invasive and non-native species present, available upland burrows for aestivation and high-water refugia, suitable prey items, and potential barriers for movement, within proposed relocation site(s); written permission from the landowner to use their land as a relocation site; and identification of a wildlife rehabilitation center or veterinary facility that routinely evaluates or treats snakes and is permitted to handle giant gartersnake. • **CDFW ITP Condition 8.3.1.10 Pre-Construction Surveys [*for GGS*]:** The Approved Biologist(s) shall conduct one pre-construction survey within 200 feet of suitable aquatic habitat, within 24 hours prior to beginning earth moving activities. The Approved Biologist(s) shall investigate all small mammal burrows within suitable upland habitat. The Project Area will be resurveyed whenever there is a lapse in construction activity of two weeks or more. • **WPT-1 Western Pond Turtle Surveys:** If the SSHCP western pond turtle modeled habitat maps (SSHCP Figure 3-19) show that modeled habitat for western pond turtle is present within a Covered Activity's 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 and upland habitat within the project footprint and within 300 feet of the project footprint. In addition to the SSHCP land cover types shown in SSHCP Figure 3-19, 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. The Third-Party Project Proponent will map all existing or potential sites and provide those maps to the Local Land Use Permittees and the Implementing Entity. Locations of delineated western pond turtle habitat must also be noted on plans that are submitted to a Local Land Use Permittee. The applicant will use this information to finalize project design. Covered Activities may occur throughout the year as long as western pond turtle habitat is identified					

	and fully avoided. Otherwise, Covered Activities must comply with WPT-2 through WPT-9. See Chapter 10 for the process to conduct and submit survey information. • **WPT-2 Western Pond Turtle Work Window:** 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, Covered Activities must be conducted outside of western pond turtle's active season. Covered Activities will be initiated after May 1 and will commence prior to September 15. If it appears that Covered Activities may go beyond September 15, the appropriate Plan Permittee 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. • **WPT-3 Western Pond Turtle Monitoring:** If a Covered Activity is occurring in western pond turtle modeled habitat (SSHCP Figure 3-19), 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 Covered Activities are taking place in aquatic habitat or within 300 feet of aquatic and/or upland habitat, and will inspect the project site daily for western pond turtle prior to construction activities. Active upland nests may contain eggs for 96 to 104 days (from May through August), and may contain hatchlings that remain in the nest for many months, typically until the following March or April. Additionally, adults and juveniles move to upland habitat when their aquatic habitat dries in late summer and commonly overwinter in uplands. In addition to searching aquatic habitat, the approved biologist will also search and monitor upland habitat for actives nests, hatchlings, juveniles, and adults. The approved biologist will also train construction personnel on the required avoidance procedures, exclusion fencing, and protocols in the event that a western pond turtle enters an active construction zone (i.e., outside the buffer zone). • **WPT-4 Western Pond Turtle Habitat Dewatering and Exclusion:** If Covered 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 Covered 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, the Third-Party Project Proponent will discuss the next best steps with the Implementing Entity and Wildlife Agencies. • **WPT-5 Avoid Western Pond Turtle Entrapment:** If a Covered Activity occurs within western pond turtle modeled habitat (SSHCP Figure 3-19), 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. • **WPT-6 Erosion Control Materials in Western Pond Turtle Habitat:** If erosion control is implemented within western pond turtle modeled habitat (SSHCP Figure 3-19), 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.					

	• **WPT-7 Western Pond Turtle Modeled Habitat Speed Limit:** Covered Activity construction and maintenance vehicles will observe a 20-mile-per-hour speed limit within western pond turtle modeled upland habitat (SSHCP Figure 3-19). • **WPT-8 Western Pond Turtle Encounter Protocol:** If a western pond turtle is encountered during Covered Activities, the approved biologist will notify the Wildlife Agencies immediately. Covered 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. • **WPT-9 Western Pond Turtle Post-Construction Restoration:** After completion of ground- disturbing Covered Activities, the applicant 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. • **TCB-1 Tricolored Blackbird Surveys:** If modeled habitat for tricolored blackbird is present within a Covered Activity's 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 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. The Third-Party Project Proponent will map all existing or potential nesting or foraging 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. See Chapter 10 for the process to conduct and submit survey information. • **TCB-2 Tricolored Blackbird Pre-Construction Surveys:** 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, then TCB-3 and TCB-4 will be implemented. 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. • **TCB-3 Tricolored Blackbird Nest Buffer:** If active nests are found within the project footprint or within 500 feet of any project-related Covered Activity, the Third-Party Project Proponent will establish a 500-foot temporary buffer around the active nest until the young have fledged. • **TCB-4 Tricolored Blackbird Nest Buffer Monitoring:** If nesting tricolored blackbirds are present within the project footprint or within 500 feet of any project-related Covered Activity, then an approved biologist					

	experienced with tricolored blackbird behavior will be retained by the Third-Party Project Proponent 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 the Third-Party Project Proponent, 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 (i.e., outside the buffer zone). • **CDFW ITP Condition 8.4.1.7 Mixed Riparian Scrub**: If Project impacts include the Mixed Riparian Scrub land cover type, Permittees [i.e., Third-Party Project Proponents] shall conduct a survey for tricolored blackbird breeding colonies. If the habitat contains evidence of nesting habitat for tricolored blackbird, the Permittees shall mitigate for the loss of nesting habitat as described in the SSCHP Conservation Strategy. • **SWHA-1 Swainson's Hawk Surveys:** If modeled habitat for Swainson's hawk (SSHCP Figure 3-25) is present within a Covered Activity's 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*). The Third-Party Project Proponent 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. See Chapter 10 for the process to conduct and submit survey information. • **SWHA-2 Swainson's Hawk Pre-Construction Surveys:** 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). If a nest is present, then SWHA-3 and SWHA-4 will be implemented. 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. • **SWHA-3 Swainson's Hawk Nest Buffer:** If active nests are found within the project footprint or within 0.25 mile of any project-related Covered Activity, the Third-Party Project Proponent will establish a 0.25-mile disturbance buffer around the active nest until the young have fledged, with concurrence from the Wildlife Agencies. • **SWHA-4 Swainson's Hawk Nest Buffer Monitoring:** 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 the Third-Party Project Proponent 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, Third-Party Project Proponent, 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 (i.e., outside the buffer zone).					

	CDFW ITP Condition 8.5.1.5 SWHA Nest Tree Avoidance: Permittees shall avoid removal of Swainson's hawk nest trees active in the last 5 years, to the maximum extent practicable. Permittees shall time occupied nest tree removal outside of the Swainson's hawk nest season, typically October 1 to February 1, and shall not remove any occupied nest trees until the last young have fledge, as verified by the approved biologist. Permittees shall provide the number of Swainson's hawk nest trees removed each year, along with the nest locations, in each Annual Report submitted to CDFW. [Note: as a Participating Special Entity for the Harvest Water Project, Regional San would provide the Implementing Entity with the number of Swainson's hawk nesting trees (if any) removed by the project; this information would be in the project's final construction monitoring report.] • **GSC-1 (Greater Sandhill Crane Surveys):** If modeled habitat for greater sandhill crane (Figure 3-22 [*of the SSHCP*]) is present within a Covered Activity's project footprint or within 0.5 mile of a project footprint, then an approved biologist will conduct a field investigation to determine if existing or potential roosting sites are present within the project footprint and adjacent areas within 0.5 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. Roosting sites within the Plan Area are often associated with flooded fields, seasonal wetlands, and freshwater marsh. The Third-Party Project Proponent will map all existing or potential roosting sites and provide these maps to the Local Land Use Permittees and Implementing Entity. Roosting sites must also be noted on plans that are submitted to a Local Land Use Permittee. See Chapter 10 [*of the SSHCP*] for the process to conduct and submit survey information. • **GSC-2 (Greater Sandhill Crane Pre-Construction Surveys):** Pre-construction surveys will be required to determine if active roosting sites are present within a project footprint or within 0.5 mile of a project footprint if existing or potential roosting sites were found during initial surveys and construction activities will occur when wintering flocks are present within the Plan Area (September 1 through March 15). An approved biologist will conduct pre-construction surveys within 15 days of ground-disturbing activities, and within 0.5 mile of a project footprint, to determine presence of roosting greater sandhill cranes. Pre-construction surveys will be conducted September 1 through March 15, when wintering flocks are present within the Plan Area. If birds are present, then GSC-3, GSC-4, and GSC-5 will be implemented. 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. • **GSC-3 (Greater Sandhill Crane Roosting Buffer):** If active roosting sites are found within the project footprint or within 0.5 mile of any project-related Covered Activity, the Third-Party Project Proponent will establish a 0.5 mile temporary roosting disturbance buffer around the roosting site until the cranes have left. • **GSC-4 (Greater Sandhill Crane Visual Barrier):** Greater sandhill cranes have low tolerance for human disturbance, and such disturbance has caused cranes to abandon foraging and roosting sites. Repeat disturbance affects their ability to feed and store energy needed for survival. If project-related activities occur within 0.5 mile of a known roosting site as identified by surveys conducted during implementation of GSC-1 or GSC-2, a visual barrier will be constructed. • **GSC-5 (Greater Sandhill Crane Roosting Buffer Monitoring):** If roosting sites are found within the project footprint or within 0.50 mile of any project-related Covered Activity, an approved biologist experienced with greater sandhill crane behavior will be retained by the Third-Party Project Proponent to monitor the roosting site throughout the roosting season and to determine when the birds have left. The approved biologist will be on site daily while construction-related activities are taking place within the disturbance buffer. Work within the temporary disturbance buffer can only occur with the written permission of the Implementing Entity and Wildlife Agencies. If greater sandhill cranes are abandoning their roosting and/or forage sites, the approved biologist will have the authority to shut down construction activities. If roost abandonment occurs, the approved biologist, Third-Party Project Proponent, Implementing Entity, and Wildlife Agencies will meet to determine the best course of action to avoid harm and harassment of individuals. The approved biologist will also train construction personnel on the avoidance procedures, buffer zones, and protocols in the event that greater sandhill cranes move into an active construction zone (i.e., outside the buffer zone). • **WBO-1 Western Burrowing Owl Surveys:** 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 a250-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 (California Burrowing Owl Consortium 1993). 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. See SSHCP Chapter 10 for the process to conduct and submit survey information. • **WBO-2 Western Burrowing Owl Pre-Construction Surveys:** Prior to any Covered Activity ground disturbance, 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, the Third-Party Project Proponent 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, the Third-Party Project Proponent 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. • **WBO-3 Burrowing Owl Avoidance:** 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 the Third-Party Project Proponent 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 the Third-Party Project Proponent 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, the Third-Party Project Proponent 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. • **WBO-4 Burrowing Owl Construction Monitoring:** During construction of Covered 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. • **WBO-5 Burrowing Owl Passive Relocation:** 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 Permit Term. • **WBO-6 Burrowing Owl Timing of Maintenance Activities:** All activities adjacent to existing or planned Preserves, Preserve Setbacks, or Stream Setback areas will be seasonally timed, when safety permits, to avoid or minimize adverse effects on occupied burrows. • **WBO-7 Rodent Control:** Rodent control will be allowed only in developed portions of a Covered Activity 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.					

	• **RAPTOR-1 Raptor Surveys:** If modeled habitat for a covered raptor species (SSHCP Figures 3-20 [Cooper's hawk], 3-23 [loggerhead shrike], 3-24 [northern harrier], or 3-28 [white-tailed kite]) is present within a Covered Activity's 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. The Third-Party Project Proponent 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. See Chapter 10 for the process to conduct and submit survey information. • **RAPTOR-2 Raptor Pre-Construction Surveys:** 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 a nest is present, then RAPTOR-3 and RAPTOR-4 will be implemented. 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. • **RAPTOR-3 Raptor Nest/Roost Buffer:** If active nests are found within the project footprint or within 0.25 mile of any project-related Covered Activity, the Third-Party Project Proponent will establish a 0.25 mile temporary nest disturbance buffer around the active nest until the young have fledged. • **RAPTOR-4 Raptor Nest/Roost Buffer Monitoring:** If project-related Covered 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 the Third-Party Project Proponent 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, Third-Party Project Proponent, 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 (i.e., outside the buffer zone). • **BAT-1 (Maternity Roost Surveys):** If modeled habitat (Figure 3-30 [of the SSHCP]) for western red bat is present within 300 feet of a Covered Activity's project footprint, and a Covered Activity is proposed between May 1 and August 31 (when pre-flight/nursing young may be present), then an approved biologist will conduct a field investigation of the project footprint and adjacent areas within 300 feet of a project footprint to determine if a potential maternity roost is present, and to identify and map potential maternity roost sites. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas. If potential maternity roost sites are found, the Third-Party Project Proponent will note their locations on project designs and will design the project to avoid all areas within a 300-foot buffer around the potential maternity roost sites. As discussed in BAT-3, maternity roost habitat is fully avoided if project-related activities do not impinge on a 300-foot buffer established by the approved biologist around an existing or potential maternity roost site. See Chapter 10 for the process to conduct and submit survey information. • **BAT-2 (Maternity Roost Pre-Construction Surveys**): If the Third-Party Project Proponent elects not to avoid potential maternity roost sites within the project footprint plus a 300-foot buffer during May through August, additional western red bat surveys are required. Prior to any ground disturbance related to Covered Activities or staging of equipment in the project footprint, an approved biologist will conduct a pre-construction survey within 3 days of project activities (within the project footprint and 300 feet of the project					

	footprint) to determine the presence of maternity roost sites. Pre-construction surveys will be conducted during roosting season when preflight/nursing young may be present (May 1 through August 31). If maternity roost is present, then AMM BAT-3 shall be implemented. The approved biologist will inform the Land Use Authority Permittee and Implementing Entity of all roost sites and species locations, and they in turn will notify the Wildlife Agencies (Service and CDFW), and provide all the survey information to the Wildlife Agencies.
	• **BAT-3 (Maternity Roost Buffer):** If active maternity sites are found within the project footprint or within 300 feet of the project footprint between May 1 and August 31, the Third-Party Project Proponent will establish a 300-foot temporary disturbance buffer around the active maternity roost site until bats have vacated the roost and the Wildlife Agencies concur that the roost is vacant. Very few western red bats are expected to be present in the Action Area in the winter months (November 1 through March 31). However, if active winter hibernaculum sites are found within the project footprint or within 300 feet of the project footprint between November 1 and March 31, the Third-Party Project Proponent will establish the same 300-foot temporary disturbance buffer around the active winter hibernaculum site until bats have vacated the hibernaculum and the Wildlife Agencies concur that the hibernaculum is vacant.
	• **BAT-4 (Bat Eviction Methods for Non-Maternity and Non-Hibernaculum Roosts):** An approved biologist will determine if non-maternity and non-hibernaculum day or night western red bat roosts are present on the project site. If direct project impacts to a non-maternity and non-hibernaculum day or night roost cannot be avoided, the Third-Party Project Proponent will prepare a bat eviction plan, and inform the Land Use Authority Permittee and the SSCHP Implementing Entity. They in turn shall inform the Wildlife Agencies, and provide the bat eviction plan for review. If necessary, the approved biologist may be allowed to remove the bats using use safe-eviction methods acceptable to the Wildlife Agencies.
	• **USFWS ITP Condition S.1. [VELB Avoidance and Minimization]:** For all elderberry shrubs located within 50 meters (165 feet) of the project footprint which will be avoided, the following avoidance and minimization measures will be implemented in accordance with the Framework:
	  • Fencing. All areas of the project footprint within 50 meters (165 feet) of an elderberry shrub to be avoided during construction activities shall be fenced and/or flagged as close to the construction limits as feasible.
	  • Avoidance area. Activities that may damage or kill an elderberry shrub (e.g., trenching, paving) may need an avoidance area of at least 6 meters (20 feet) from the dripline, depending on the type of activity.
	  • Worker education. A qualified biologist shall provide training for all contractors, work crews, and any on-site personnel on the status of the VELB, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for non-compliance.
	  • Construction monitoring. A qualified biologist shall monitor the initial groundbreaking activities, vegetation removal, installation of protective fencing, and shall be present during all transplanting and trimming activities. Weekly site visits shall also be conducted to ensure all mitigation measures are being implemented and maintained.
	  • Timing. As much as feasible, all activities that could occur within 50 meters (165 feet) of an elderberry shrub will be conducted outside of the flight season of the VELB (March-July).
	  • Trimming. Trimming may remove or destroy VELB eggs and/or larvae and may reduce the health and vigor of the elderberry shrub. To avoid and minimize adverse effects on VELB when trimming, trimming will occur between November and February and will avoid the removal of any branches or stems that are 1 inch or larger in diameter unless they were approved by the Implementing Entity and Service.
	  • Chemical Usage. Herbicides shall not be used within the dripline of the shrub. Insecticides shall not be used within 30 meters (98 feet) of an elderberry shrub. All chemicals shall be applied using a backpack sprayer or similar direct application method.
	  • Mowing. Mechanical weed removal within the dripline of any elderberry shrub shall be limited to the season when adults are not active (August-February) and shall avoid damaging the elderberry shrub.
	  • Erosion Control and Revegetation. Erosion control shall be implemented and temporarily affected areas shall be revegetated with appropriate native plants.					

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

	• **USFWS ITP Condition S.2 [In part] [VELB Transplanting]:** Affected elderberry shrubs with one or more stems measuring 1.0 inch or greater in diameter at ground level that could feasibly be transplanted in accordance with the 2017 Framework must be transplanted to a location approved by the Implementing Entity and the Service. Where feasible, the entire root ball and aboveground portion of the shrub should be transplanted. In order to minimize the fragmentation of VELB habitat, elderberry shrubs should be transplanted as close to their original location as possible. Elderberry shrubs may be relocated adjacent to the project footprint if: 1) the planting location is suitable for elderberry growth and reproduction; and 2) the Third-Party Project Proponent is able to protect the shrub and ensure that the shrub becomes reestablished. If these criteria cannot be met, the shrub may be transplanted to an appropriate Service-approved mitigation site. Any elderberry shrub that is unlikely to survive transplanting because of poor condition or location, or a shrub that would be extremely difficult to move because of access problems, may not be appropriate for transplanting. The following guidelines will be used to minimize impacts to VELB during transplanting:
	  • Monitor. A qualified biologist shall be on-site for the duration of transplanting activities to ensure compliance with avoidance and minimization measures and other conservation measures (as listed above).
	  • Exit Holes. Exit-hole surveys shall be completed immediately before transplanting. The number of exit holes found, the GPS location of the plant to be relocated, and the GPS location where the plant is transplanted shall be reported to the Service and to the CNDDB.
	  • Timing. Elderberry shrubs shall be transplanted when the shrubs are dormant (November through the first 2 weeks in February) and after they have lost their leaves. Transplanting during the non-growing season reduces shock to the shrub and increases transplantation success.
	  • Transplanting Procedure. Transplanting will follow the most current version of the ANSI A300 (Part 6) guidelines for transplanting shrubs (http://www.tcia.org/).
	  • Trimming Procedure. Trimming will occur between November and February and should minimize the removal of branches or stems that exceed 1 inch in diameter.					

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._____

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-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._____

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
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._____

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CR-1 Potential to result in a substantial adverse change in the significance of a historical, archaeological or paleontological resource	**The following measure only applies to on-farm connections on private lands because potential access for cultural resources surveys has not been previously available on these private lands.** **Cultural Resources Assessment for Service Connection Laterals and Turnouts in Areas of High Archaeological Sensitivity:** In areas determined to have high archaeological sensitivity based on the location of previously recorded archaeological sites and the environmental context (see Figures 1 and 2 in Appendix C to Landowner Checklist), when Regional San begins coordination with landowners on routes and locations for the service connection laterals and turnouts to connect to individual agricultural users on private property, Regional San shall conduct a cultural resources investigation. The cultural resources investigations shall, at a minimum, address the anticipated disturbance area for facility construction. Regional San shall retain a qualified archaeologist meeting the Secretary of the Interior's Qualification Standards. The qualified archaeologist will complete the following: • An intensive cultural resources survey of the project area not previously surveyed for cultural resources, including all private property to connect service laterals and turnouts for individual agricultural users; • A technical report disseminating the results of this research; and, • Recommendations for avoidance of any sensitive locations, and if necessary, additional cultural resources work necessary to refine the area of avoidance and/or determine the type and significance of the resource. The preferred approach where resources are found in the project alignment will be to adjust the alignment to entirely avoid the resource to an area where no resources have been identified. If only preliminary information on a resource is gathered, a sufficient disturbance buffer shall be established in coordination between Regional San and the archaeologist to be reasonably protective of the resource. If a suitable buffer cannot be determined, then further data may be gathered on the resource to better define its boundary and the area to be protected. Further data may also be gathered to determine the significance of a resource, with non-significant resources no longer requiring protection.	Regional San	Regional San	1. Confirm that sensitivity of location has been identified and if in an area of high sensitivity, that cultural resource investigation has been conducted. If resources are present confirm avoidance.	1. Design of on-farm connections	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._____

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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._____

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
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 that 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 Wildlife, 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

ESA

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Appendix A2 - SSHCP Consistency Memo

memorandum

date	February 24, 2021
to	Regional San- Gayleen Darting, Heidi Oriol, and Terrie Mitchell
cc	Ascent Environmental- Sean Bechta and Sarah Henningsen
from	ESA- Rachel Brownsey and John Hunter
subject	Harvest Water Pipeline System Consistency with the South Sacramento Habitat Conservation Plan Avoidance and Minimization Measures

The Sacramento Regional County Sanitation District (Regional San) is a Participating Special Entity (a specific type of third-party project proponent) that has entered into an agreement with the South Sacramento Conservation Agency, the Implementing Entity of the South Sacramento Habitat Conservation Plan (SSHCP) (County of Sacramento et al. 2018). This agreement applies the conditions of the SSHCP to Harvest Water, a recycled water program that will deliver tertiary treated water from the Sacramento Regional Wastewater Treatment Facility (SRWTF) to farms and wildlife habitat areas in southern Sacramento County once constructed. These conditions include the applicable avoidance and minimization measures (AMMs) in SSHCP Section 5.4, "Conditions on Covered Activities" and in its associated incidental take permits (CDFW 2019, USFWS 2019).

The Final SSHCP Appendix I Aquatic Resources Program (ARP) describes how the ARP was developed to be consistent with the SSHCP. As part of the Aquatic Resources Impact (ARI) Application Package for each covered activity, the ARP requires that each covered activity demonstrate compliance with the SSHCP AMMs.

The descriptions below present the compliance approach for Harvest Water permitting elements and document their consistency with the SSHCP AMMs. A comprehensive list of AMMs applicable to Harvest Water Pipeline System design and construction are included at the end of this document as **Attachment A.**

Resource Surveys and Documentation

Resource surveys and documentation needed to support permit applications for the SSHCP were completed as a first step in the permit application process. The surveys for the aquatic resources delineation mapped and characterized the aquatic resources within the Harvest Water Pipeline System Action Area, and the delineation report was provided to the U.S. Army Corps of Engineers for review and verification. A verified delineation is needed as one component of the ARI Application Package.

Resource surveys confirming and updating modeled species habitat for the covered species in the SSHCP were also conducted as a baseline for documenting suitable habitat extents and evaluating the need for specific AMMs prior to, and during construction. Modeled species habitat surveys utilized the aquatic resources boundaries from the delineation report for aquatic habitats, then evaluated habitat quality and suitability of these aquatic features, and mapped and characterized upland habitat types, including locations of elderberry plants. The modeled species habitat surveys evaluated a much larger area than the aquatic resources delineation to account for the survey distances in the SSHCP AMMs for giant garter snake, western pond turtle, tricolored blackbird, Swainson's hawk, greater sandhill crane, western burrowing owl, covered raptors, and bat maternity roosts.

Aquatic Resources and Modeled Species Habitat Impact Avoidance

Based on the results of resource surveys, and as part of the initial design process, the Harvest Water team worked through various steps and design refinements to achieve avoidance and minimization of most wetlands, riparian scrub, and mixed riparian woodland areas within the Action Area. Trenchless pipeline installation methods are proposed at several natural streams within the Action Area as another method for achieving avoidance of impacts to aquatic resources that may provide habitat for giant garter snake and western pond turtle. Examples of this include Earhardt Creek and Franklin Creek. Therefore, avoidance of sensitive habitat features has been incorporated into the design process, to the greatest degree feasible. Sensitive habitat features to be avoided during construction will be carried forward into the construction design drawings with notes indicating the boundaries of the features to be avoided.

Avoidance and Minimization Measures

Minimal temporary impacts to aquatic resources and modeled species habitats that cannot be avoided will be described in detail in the ARI application package and SSHCP application package. Because the pipeline system infrastructure will be installed entirely underground, no permanent habitat impacts are anticipated. No tree removal will be needed for construction, though some tree and shrub trimming will occur where vehicle access is needed. In all circumstances, where temporary impacts are anticipated to aquatic resources and modeled species habitat, SSHCP AMMs will be implemented to protect covered species from construction impacts. The appropriate AMMs for each pipeline location will be based on the modeled species habitat information and corresponding potential for each species to occur and be affected by construction in that location.

References

California Department of Fish and Wildlife (CDFW). 2019. California Endangered Species Act Incidental Take Permit 2081-2018-016-02: South Sacramento Habitat Conservation Plan. North Central Region, Rancho Cordova, CA.

County of Sacramento, City of Rancho Cordova, City of Galt, Sacramento County Water Agency, Sacramento Regional County Sanitation District, and the Southeast Connector Joint Powers Authority. 2018. *Final South Sacramento Habitat Conservation Plan*. January 2018. Sacramento, CA.

U.S. Fish and Wildlife Service (USFWS). 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus). Sacramento, CA.

————————. 2019. Permit Number: TE35886D-0. Endangered Species Permit Office. Sacramento, CA.

Attachment A: Avoidance and Minimization Measures for the Harvest Water Pipeline System

TABLE A-1. TITLES OF AVOIDANCE AND MINIMIZATION MEASURES APPLICABLE TO THE HARVEST WATER PIPELINE SYSTEM DESIGN AND CONSTRUCTION
BMP-1 (Construction Fencing)
BMP-2 (Erosion Control)
BMP-3 (Equipment Storage and Fueling)
BMP-4 (Erodible Materials)
BMP-5 (Dust Control)
BMP-6 (Construction Lighting)
BMP-7 (Biological Monitor)
BMP-8 (Training of Construction Staff)
BMP-9 (Soil Compaction)
BMP-10 (Revegetation)
BMP-11 (Speed Limit)
UTILITY-2 (Utility Maintenance on Preserves)
UTILITY-3 (Trenchless Construction Methods)
UTILITY-4 (Siting of Entry and Exit Location)
CDFW Condition 6.1 CNDDB Observations
CDFW ITP-2 Compliance Monitoring
SPECIES-1 (Litter Removal Program)
SPECIES-2 (No Pets in Construction Areas)
SPECIES-3 (Take Report)
SPECIES-4 (Post-Construction Compliance Report)
PLANT-1 (Rare Plant Surveys)
PLANT-2 (Rare Plant Protection)
CDFW ITP Condition 8.8.1.3 Annual Plant Surveys
WS-1 (Western Spadefoot Work Window)
WS-2 (Western Spadefoot Exclusion Fencing)
WS-3 (Western Spadefoot Monitoring)
WS-4 (Avoid Western Spadefoot Entrapment)
WS-5 (Erosion Control Materials in Western Spadefoot Habitat)
WS-6 (Western Spadefoot Encounter Protocol)
GGS-1 (Giant Gartersnake Surveys)
GGS-2 (Giant Gartersnake Work Window)

GGS-3 (Giant Gartersnake Monitoring)
GGS-4 (Giant Gartersnake Habitat Dewatering and Exclusion)
GGS-5 (Avoid Giant Gartersnake Entrapment)
GGS-6 (Erosion Control Materials in Giant Gartersnake Habitat)
GGS-7 (Giant Gartersnake Encounter Protocol)
GGS-8 (Giant Gartersnake Post-Construction Restoration)
CDFW ITP Condition 8.1.3.9 [*GGS*] Relocation Plan
CDFW ITP Condition 8.1.3.9 Pre-Construction Surveys [*for GGS*]
WPT-1 (Western Pond Turtle Surveys)
WPT-2 (Western Pond Turtle Work Window)
WPT-3 (Western Pond Turtle Monitoring)
WPT-4 (Western Pond Turtle Habitat Dewatering and Exclusion)
WPT-5 (Avoid Western Pond Turtle Entrapment)
WPT-6 (Erosion Control Materials in Western Pond Turtle Habitat)
WPT-7 (Western Pond Turtle Modeled Habitat Speed Limit)
WPT-8 (Western Pond Turtle Encounter Protocol)
WPT-9 (Western Pond Turtle Post-Construction Restoration)
TCB-1 (Tricolored Blackbird Surveys)
TCB-2 (Tricolored Blackbird Pre-Construction Surveys)
TCB-3 (Tricolored Blackbird Nest Buffer)
TCB-4 (Tricolored Blackbird Nest Buffer Monitoring)
TCB-5 (Timing of Pesticide Use and Harvest Timing on Agricultural Preserves)
CDFW ITP Condition 8.4.1.7 Mixed Riparian Scrub
SWHA-1 (Swainson’s Hawk Surveys)
SWHA-2 (Swainson’s Hawk Pre-Construction Surveys)
SWHA-3 (Swainson’s Hawk Nest Buffer)
SWHA-4 (Swainson’s Hawk Nest Buffer Monitoring)
CDFW ITP Condition 8.5.1.5 SWHA Nest Tree Avoidance
GSC-1 (Greater Sandhill Crane Surveys)
GSC-2 (Greater Sandhill Crane Pre-Construction Surveys)
GSC-3 (Greater Sandhill Crane Roosting Buffer)
GSC-4 (Greater Sandhill Crane Visual Barrier)
GSC-5 (Greater Sandhill Crane Roosting Buffer Monitoring)
WBO-1 (Western Burrowing Owl Surveys)
WBO-2 (Western Burrowing Owl Pre-Construction Surveys)
WBO-3 (Burrowing Owl Avoidance)
WBO-4 (Burrowing Owl Construction Monitoring)
WBO-5 (Burrowing Owl Passive Relocation)
WBO-6 (Burrowing Owl Timing of Maintenance Activities)

WBO-7 (Rodent Control)
RAPTOR-1 (Raptor Surveys)
RAPTOR-2 (Raptor Pre-Construction Surveys)
RAPTOR-3 (Raptor Nest/Roost Buffer)
RAPTOR-4 (Raptor Nest/Roost Buffer Monitoring)
BAT-1 (Maternity Roost Surveys)
BAT-2 (Maternity Roost Pre-Construction Surveys)
BAT-3 (Maternity Roost Buffer)
BAT-4 (Bat Eviction Methods for Non-Maternity and Non-Hibernaculum Roosts)
USFWS ITP Condition S.1. [*VELB Avoidance and Minimization*]
USFWS ITP Condition S.2. [*In part*] [*VELB Transplanting*]
Sources: CDFW 2019, County of Sacramento et al. 2018, USFWS 2019

Appendix B - Indian Trust Assets Compliance

Indian Trust Assets
Request Form

**Please send your request to: Kevin Clancy

Date:

Requested by	Doug Kleinsmith, x5034
Fund	18XRO680A1
WBS	RX3272WIIN2001000
Cost Center	2015200
Region # (if other than MP)	MP
Project Name	Sacramento Regional Sanitation District Harvest Project
CEC or EA Number	
Project Description	Reclamation is providing a grant to Sacramento San to construct a pump station, about 72,800 feet (14 miles) of 18- to 60-inch (or 66-inch) diameter transmission pipeline, and about 142,000 feet (27 miles) of up to 42-inch diameter distribution mains in south Sacramento County. The project would provide Title 22 disinfected, tertiary-treated, recycled water for irrigation, reduce groundwater pumping, and would support habitat enhancement efforts in the southern portion of Sacramento County.
***Project Location (Township, Range, Section, e.g., T12 R5E S10, or XY cords)**	Figure 1 shows the project location - 121.4 longitude by 38.4 latitude

*Please include map with request, if available.

/s/ Doug Kleinsmith Doug Kleinsmith 2/5/21

Signature	Printed name of preparer	Date

ITA Determination:

The closest ITA to the Proposed Action is the Wilton Rancheria which is 9.6 miles east of the project area. (See attached Figure 2).

Based on the nature of the planned work it does not appear to be in an area that will impact Indian hunting or fishing resources or water rights nor is the proposed activity on actual Indian lands. It is reasonable to assume that the proposed action will not have any impacts on ITAs.

Signature	Printed name of approver	Date
Kevin Clancy	Kevin Clancy	02/05/2021

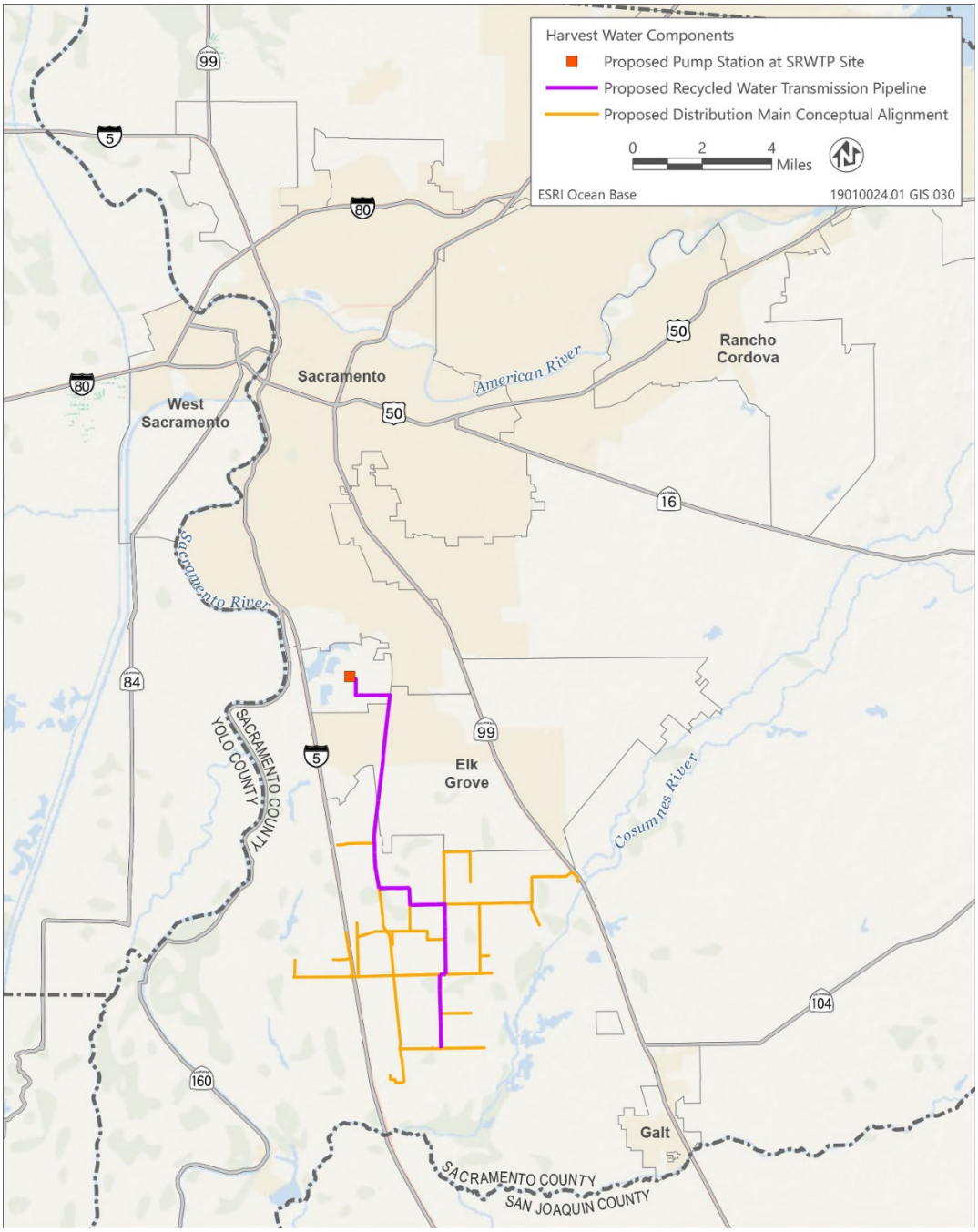

Figure 1. Project Area

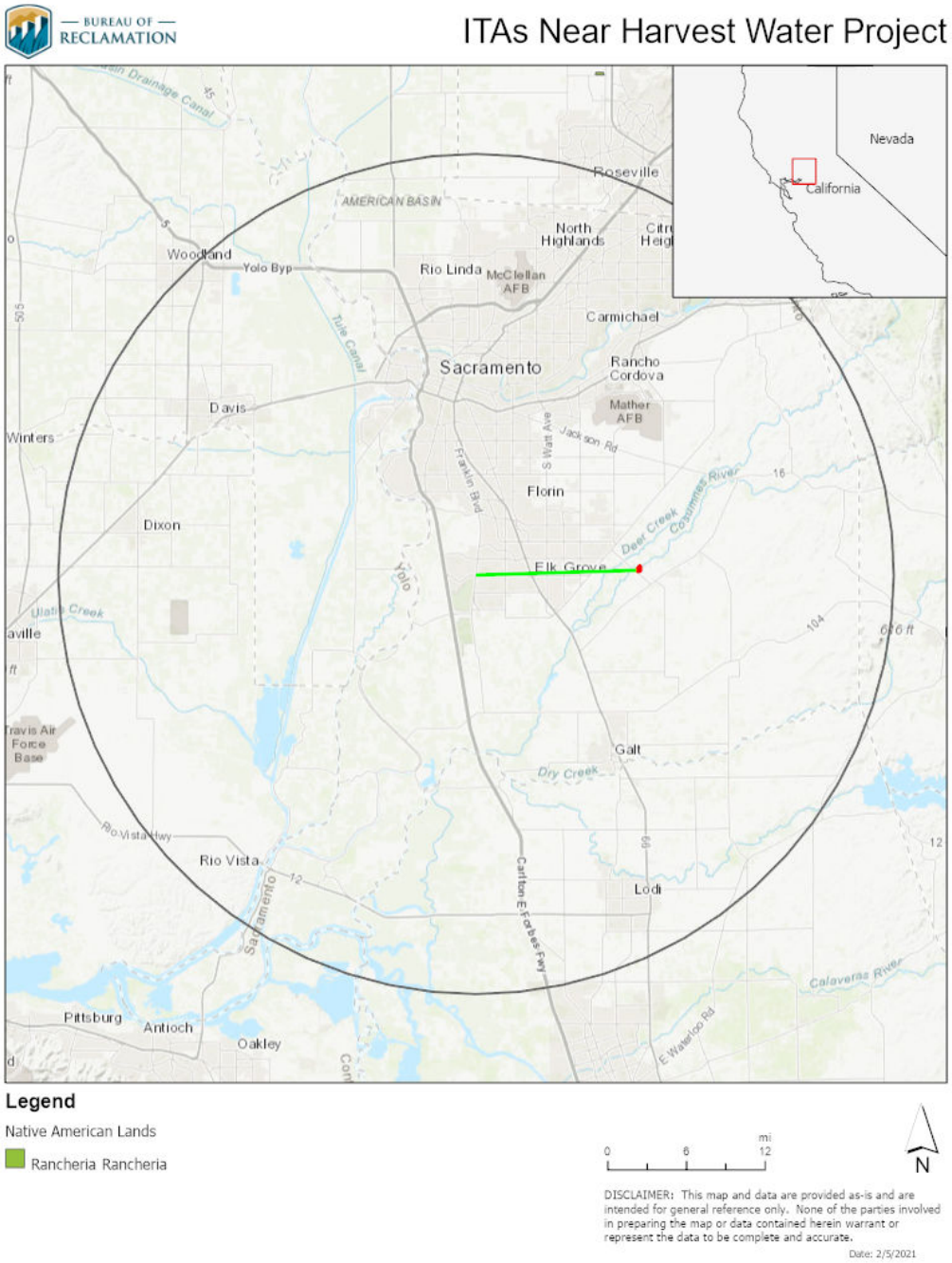

Figure 2. ITAs Near the Harvest Water Project

Appendix C – *SHPO Concurrence Letter*

Placeholder

Appendix D - Order Approving Change in Purpose of Use and Place of Use of Treated Wastewater

State Water Resources Control Board

SEPT 10 2019

In Reply Refer to:
KMG: WW0092

Ms. Terrie Mitchell
Sacramento Regional County Sanitation District
mitchellt@sacsewer.com

Dear Ms. Mitchell:

ORDER APPROVING WASTEWATER CHANGE PETITION WW0092 OF SACRAMENTO REGIONAL COUNTY SANITATION DISTICT

Enclosed is an Order approving Sacramento Regional County Sanitation District's wastewater change petition WW0092 for changes in the place of use, purpose of use, and quantity of discharge of treated wastewater. The Order may be viewed at:

http://www.waterboards.ca.gov/waterrights/water_issues/programs/applications/wastewater_petition_orders

If you have any questions regarding this matter, please contact Kate Gaffney at (916) 341-5360 or by email at kathryn.gaffney@waterboards.ca.gov. Written correspondence or inquiries should be addressed as follows: State Water Resources Control Board, Division of Water Rights, Attn: Kate Gaffney, P.O. Box 2000, Sacramento, CA, 95812-2000.

Sincerely,

ORIGINAL SIGNED BY:

Scott McFarland, Senior
Petition and Licensing Unit
Division of Water Rights

ec: See next page.

ec (w/enclosure): Mr. Jose Ramirez
Sacramento Regional County Sanitation District
ramirezj@sacsewer.com

Mr. Andy Hitchings
Somach Simmons & Dunn
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Mr. Robert Colella
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Mr. Philip A. Williams
Westlands Water District
pwilliams@westlandswater.org

San Luis & Delta-Mendota Water Authority
Mr. Jon Rubin
jon.rubin@sldmwa.org
Mr. Daniel J. O'Hanlon
dohanlon@kmtg.com

Mr. James Marshall
Central Valley Regional Water Quality Control Board
james.marshall@waterboards.ca.gov

STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

DIVISION OF WATER RIGHTS

In the Matter of Wastewater Petition WW0092
Sacramento Regional County Sanitation District

ORDER APPROVING CHANGE IN PURPOSE OF USE AND PLACE OF USE OF TREATED WASTEWATER

WATERSHED: Sacramento River

COUNTY: Sacramento

WHEREAS:

1. On August 3, 2016, Sacramento Regional County Sanitation District (Regional San or Petitioner) filed Wastewater Change Petition WW0092 with the State Water Resources Control Board (State Water Board), Division of Water Rights (Division) pursuant to Water Code section 1210 et seq. With the petition, Regional San seeks authorization to reduce the quantity of its treated wastewater discharged from the Sacramento Regional Wastewater Treatment Plant (SRWTP) into the Sacramento River by up to 108 cubic feet per second (cfs); or 70 million gallons per day (mgd), average recycled water delivery rate, as calculated across a 7-day running-average period (subject to the exception noted in Order Condition 3 below), not to exceed 6,427 acre-feet per month (up to 50,000 acre-feet annually (afa)), and direct that water to Regional San's proposed South Sacramento County Agriculture & Habitat Lands Recycled Water Program (hereinafter referred to as Program or Project). The recycled water will be used for irrigation and fish and wildlife habitat enhancement purposes at Program facilities.

2. Regional San's wastewater discharge is regulated under National Pollutant Discharge Elimination System (NPDES) Permit No. CA0077682, Waste Discharge Requirements (WDR) Order No. R5-2016-0020-01, originally issued by the Central Valley Regional Water Quality Control Board (Central Valley Regional Board) on April 21, 2016, and as amended on August 2, 2018. WDR Order No. R5-2016-0020-01 currently permits Regional San to discharge an average dry-weather flow of up to 181 mgd (approximately 280 cfs) of secondary-treated wastewater effluent from the SRWTP to the Sacramento River near the community of Freeport. WDR Order No. R5-2016-0020-01 requires Regional San to discharge mainly disinfected, tertiary-treated recycled water for a portion

of the year by 2023. Regional San is in the process of updating its wastewater treatment facilities for tertiary treatment. According to WDR Order No. R5-2016-0020-01, as of April 2016, SRWTP's average dry weather flow was approximately 119 mgd (approximately 184 cfs).

3. The Program is projected to deliver up to 50,000 afa of recycled water to 16,000 acres of currently irrigated land, 400 acres of managed wetlands, and a 500-acre groundwater recharge area, all within south Sacramento County. Recycled water could account for up to two-thirds of the maximum monthly irrigation demand on the 16,000 acres of private land under the Program. Initially, an estimated average of 32,500 afa of recycled water will be provided for growing season (April through October) irrigation to landowners who have agreed to participate in the Program. Regional San indicates that using the recycled water for irrigation will result in in-lieu groundwater recharge in the area. Regional San also proposes to implement non-growing season irrigation of 12,000 to 17,500 afa for fish and wildlife enhancement, which Regional San indicates will passively recharge groundwater in the area. In the future, Regional San proposes to directly recharge groundwater with up to 5,000 afa of recycled water for fish and wildlife enhancement purposes in the Cosumnes River, and provide up to 500 afa of recycled water, mostly delivered during the spring and fall, to 400 acres of wetlands at the Stone Lakes National Wildlife Refuge (Stone Lakes NWR), also for fish and wildlife enhancement purposes.

4. Under the California Environmental Quality Act (CEQA), Regional San is the lead agency for preparation of environmental documentation for the project. Accordingly, on July 8, 2016, Regional San issued the South Sacramento County Agriculture and Habitat Lands Recycled Water Program Draft Environmental Impact Report (DEIR) (SCH # 2015022067). After considering the environmental analysis provided in the DEIR and public comments submitted on the DEIR, Regional San determined that construction and operation of the Program would not have a significant effect on the environment with implementation of the mitigation measures identified in the Mitigation Monitoring and Reporting Program (MMRP) which was adopted for the project along with the Final EIR (FEIR) in January 2017. (The DEIR and FEIR will hereinafter be referred to collectively as the EIR.) On March 8, 2017, Regional San issued a Notice of Determination (NOD) for the project.

5. The Division issued public notice of Regional San's Wastewater Change Petition WW0092 on August 19, 2016. Protests were received from the following: California Department of Fish and Wildlife (CDFW); U.S. Bureau of Reclamation (Reclamation); Westlands Water District (Westlands); San Luis Delta-Mendota Water Authority (SLDMWA); and Mr. Richard Morat. The protests are discussed below.

6. By letter dated September 15, 2016, CDFW protested Regional San's petition. CDFW indicated that the proposed reduction in wastewater discharge could result in cumulative adverse impacts to environmental and public trust resources in the Sacramento River, including potentially negative impacts to Central Valley steelhead, Sacramento winter-run

Chinook salmon, Central Valley spring-run Chinook salmon, the Southern Distinct Population Segment of green sturgeon, and Sacramento splittail. CDFW also identified concerns about Regional San providing recycled wastewater to Stone Lakes NWR, which is tributary to Snodgrass Slough. Snodgrass Slough is considered to have poor quality holding and rearing salmonid habitat and CDFW was concerned that providing out of basin origin water to Stone Lakes NWR could create attractant flows in Stone Lakes NWR and Snodgrass Slough during adult salmon migration, negatively impacting the presently poor return success of Mokelumne River salmon. CDFW also indicated concern regarding potential direct, indirect, and cumulative impacts to terrestrial species and their habitat due to construction of the Program's conveyance system. CDFW listed the sensitive species as California tiger salamander, giant garter snake, Swainson's hawk, tricolored blackbird, and western pond turtle.

7. Following protest dismissal negotiations between Regional San and CDFW, on May 7, 2018, Regional San provided the Division with protest dismissal conditions that resolved CDFW's protest. The protest dismissal conditions included specific conditions Regional San developed with CDFW staff, as well as CDFW's request that all protest dismissal conditions developed for Reclamation, Westlands, and SLDMWA be included in any order approving Regional San's petition. By letter dated May 10, 2018, CDFW confirmed that the May 7 protest dismissal conditions would resolve CDFW's protest. CDFW's three specific protest dismissal conditions included: 1) a requirement that the proposed project not result in the taking of a threatened, endangered, or candidate species under either the California Endangered Species Act (CESA) or the federal Endangered Species Act (federal ESA); 2) a requirement that Regional San obtain all necessary federal, state, and local agency permits prior to construction and operation of the project; and 3) a requirement that Regional San consult with CDFW to develop and implement a monitoring and reporting plan, including adaptive management of the riparian forest monitoring within the Program, consistent with Regional San's March 23, 2018, technical memorandum, "*Approach for Groundwater and Riparian Forest Monitoring and Reporting*." The monitoring will be required to be conducted for at least 30 years from implementation of the Program. The proposed conditions are included as Condition Nos. 5 and 6 of this Order.

8. By letter dated September 16, 2017, Reclamation protested Regional San's petition. Reclamation's protest was based on potential harm to the stored water supplies of the Central Valley Project (CVP) that may result from the decrease in flows in the Sacramento River due to the reduced discharge from the SRWTP. Reclamation indicated that it was not requesting that the State Water Board deny Regional San's petition and requested that the Board condition any order approving the petition to address the potential injury. Reclamation indicated that the SRWTP discharge represents 85 percent of all wastewater discharged to the Sacramento River downstream of Shasta Dam. Reclamation also indicated that it considers SRWTP's treated wastewater discharge a significant source of return flow relative to the operations of the CVP and the Department of Water Resources (DWR) State Water Project (SWP), and as such, initiation of Term 91 diversion restrictions

in part reflect the discharge flow from the SRWTP. Reclamation also indicated that Regional San's reduction in discharge during months when the CVP and SWP are required to release stored water to meet required Delta water quality standards could result in the CVP and SWP having to release more water to meet those standards. Reclamation provided several terms to be included in any order approving Regional San's petition that would resolve their protest issues.

9. By letters dated September 19, 2016, both Westlands and SLDMWA protested Regional San's petition. Both protests were fundamentally the same and based on the potential negative impacts to their respective water supplies if CVP supplies were negatively impacted. Westlands and SLDMWA are both CVP contractors. SLDMWA's protest also incorporated Reclamation's protest by reference.

10. Following protest dismissal negotiations between Regional San, Reclamation, Westlands, and SLDMWA, on April 19, 2018, Regional San provided the Division with protest dismissal conditions that resolved the protests of Reclamation, Westlands, and SLDMWA. Reclamation, Westlands, and SLDWMA confirmed their protests could be considered resolved with inclusion of the protest dismissal conditions in any order approving Regional San's petition.

    a. The first protest dismissal condition includes restrictions on Regional San's reduction of wastewater discharges during the irrigation season (April through October) in dry and critically dry water years. The restrictions will be required until Regional San has demonstrated certain threshold criteria regarding groundwater levels. The criteria include three consecutive biennial groundwater model simulations that show a net in-lieu groundwater recharge of 400,000 acre-feet (af) and 50 percent return of flows to surface water as a result of the Program. Regional San will be required to continue to monitor and model groundwater and return flow impacts for the life of the Program and if any subsequent modeling does not confirm the 50 percent stream return benefits remain present, Regional San will be required to confer with Reclamation to determine what measures are necessary to increase stream return flows back to the 50 percent threshold.

    b. The second protest dismissal condition requires Regional San to comply with Mitigation Measure *'HYD-4 Coordinate Operations with Relevant Resource Agencies'* from the MMRP for the project that requires Regional San to coordinate the Program's recycled water deliveries in critically dry water years with relevant resource agencies, including Reclamation and DWR, to avoid thermal impacts to the Sacramento River below Lake Shasta. In addition, the condition requires that until Regional San has met the previously described threshold criteria, certain storage levels in Lake Shasta will also require reduction of deliveries of recycled water.

c. The third protest dismissal condition indicates that the second dismissal condition, "shall not constitute precedent as to any terms and conditions that may be imposed in an order on any future wastewater change petition filed by Regional San." The State Water Board will not include the third proposed dismissal condition in the approval Order because it is unnecessary. Only orders adopted by the State Water Board at a public meeting are considered precedential. (See Order WR 96-01, p. 17, fn. 11).

The first and second protest dismissal conditions are included as Conditions No. 7 and 8 of this Order.

11. By letter dated August 22, 2016, Richard Morat protested Regional San's petition. Mr. Morat's protest was based on the arguments that the project would not best serve the public interest and that the project would have adverse environmental impacts. Specifically, the protest described concerns about potential negative impacts to fishery resources in the Sacramento River and Sacramento-San Joaquin Bay-Delta due to the decreased flows in the Sacramento River and downstream that will result from the reduction in SRWTP's wastewater discharge. Mr. Morat requested that any Division order approving Regional San's proposed reduction of SRWTP's discharge flows include project operation terms and conditions that will be protective of fish and wildlife resources in the Sacramento-San Joaquin Bay-Delta and its tributaries. Mr. Morat also indicated his belief that the State Water Board's 2006 Sacramento-San Joaquin Bay-Delta Water Quality Control Plan (2006 Bay-Delta Plan) is not adequately protective of fish and wildlife; however, he did acknowledge that the State Water Board is in the process of updating the Bay-Delta Plan.

12. By letter dated November 21, 2016, Regional San responded to Mr. Morat's protest indicating that the Regional San Program's EIR provided extensive analyses of the potential environmental impacts associated with the Program, including potential negative impacts of Regional San's reduced discharge and the change in the place and purpose of use of the treated wastewater. Regional San indicated that the EIR included information regarding the potential adverse impacts to aquatic species and habitat in the Sacramento River and Sacramento-San Joaquin Delta resulting from the proposed decrease in wastewater discharge to the Sacramento River. The EIR included analyses of the impacts of the proposed reduced discharge under a wide range of conditions, including times when Reclamation and DWR are operating the CVP and the SWP during excess and balanced conditions in the Delta[1]. The EIR concluded that the proposed wastewater

[1] The Delta is considered to be experiencing excess conditions when there is sufficient outflow in the Delta to meet water quality objectives and in-basin entitlements without requiring the release of supplemental CVP or SWP stored water. The Delta is considered to be in balanced conditions when the SWP and CVP agree that releases from the upstream reservoirs, plus unregulated flow, approximately equal water supply needed to meet Sacramento Valley in-basin uses and Project exports. During balanced conditions in the Delta when water must be withdrawn from storage to meet Sacramento Valley and Delta

discharge reductions will have only a negligible impact on Sacramento River flows, water temperatures, and salinity gradients during operational conditions when the Delta is in excess, 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. The EIR further concluded that during balanced operational conditions, a reduction in SRWTP's treated wastewater discharge at Freeport has the potential to deplete cold water storage in CVP or SWP reservoirs and affect Sacramento River and Delta fisheries during a multi-year drought. However, the EIR provides for mitigation of these potential impacts (through Mitigation Measure HYD-4) by committing Regional San to work with Reclamation and DWR so that the timing of wastewater discharge reductions will preserve Reclamation's and DWR's stored water and cold water pools for the benefit of aquatic species and water quality in the Sacramento River and Delta. The EIR concluded that cumulative impacts to aquatic species are expected to be less than significant with implementation of Mitigation Measure HYD-4. Mitigation Measure HYD-4 is included as an enforceable condition of this Order and as part of the MMRP attached to this Order.

13. By letter dated January 9, 2017, the State Water Board requested that Mr. Morat review Regional San's November 21, 2016, response to his protest and indicate whether it was adequate to resolve the protest. The State Water Board requested, pursuant to Water Code section 1703.5[2], that if Mr. Morat determined that Regional San's response was not adequate, he must provide a statement of facts supporting his allegations and include substantial evidence that the project would not be in the public interest, would adversely affect public trust uses, or would have an adverse environmental impact. Mr. Morat responded by letter dated January 10, 2017, indicating that Regional San's response did not resolve his protest. Mr. Morat's January 10, 2017, response contends, without explanation, that Regional San's CEQA analysis on the fishery impacts of the proposed reductions in SRWTP's discharges was incorrect due to the use of the wrong hydrologic baselines for with or without project comparisons. The sole support for this assertion appears to be quotes from a hydrologist describing general issues with baseline setting in CEQA documents. Mr. Morat did not provide specific project-related information to substantiate his view that the baseline Regional San used in its CEQA analysis was incorrect or what alternative baseline should have been used.

14. Subsequent to Mr. Morat's January 10 letter, he was contacted by Regional San in an effort to address his concerns. Regional San discussed with Mr. Morat the protest dismissal conditions of Reclamation, Westlands, and SLDMWA and whether those conditions would address his concerns. A May 8, 2018, email from Mr. Morat included

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requirements, 75 percent of the responsibility to withdraw from storage is borne by the CVP and 25 percent by the SWP.

[2] Water Code section 1703.5 states, "The board may request from the protestant or the petitioner additional information that the board determines is reasonably necessary to attempt to resolve the protest. The board shall provide a reasonable period for submitting the information, and may allow additional time for good cause shown."

several questions regarding operations of the Program related to the protest dismissal conditions. Regional San responded to Mr. Morat's May 8 questions and then conducted a teleconference call with Mr. Morat on May 18, 2018. Following the teleconference call, on May 21, 2018, Regional San provided an email to the State Water Board and Mr. Morat indicating that they were unable to resolve Mr. Morat's concerns; however, Regional San believed the protest dismissal conditions agreed to with the other protestants should be sufficient to resolve Mr. Morat's protest. Mr. Morat responded to Regional San's May 21 email on the same day and reiterated his concerns about managing flow and maintaining habitat conditions that are suitable for protection of fish and wildlife in the Delta and its tributaries. Mr. Morat also acknowledged that the Bay-Delta Plan is in the process of being updated, and specifically mentioned the State Water Board's pending Phase II Bay-Delta Plan updates that may include various new or updated flow requirements for the Sacramento River, its tributaries, and the Bay-Delta that will be protective of fish and wildlife. Further, Mr. Morat indicated that his protest did not request that Regional San's petition be denied, but that protective terms and conditions be included in any order approving the petition. Mr. Morat has provided no proposed conditions to include in an approval order but requested that the State Water Board share the order with him.

15. This Order includes conditions that will ensure that Regional San's proposed reductions in wastewater discharge to the Sacramento River will not negatively impact Reclamation and DWR operations of the CVP and SWP relative to compliance with water quality and flow objectives contained in the State Water Board's Bay-Delta Plan and State Water Board Decision 1641. Further, this Order includes a condition whereby the State Water Board has continuing authority to re-open and amend this Order if necessary, to reflect new or modified flow or water quality criteria that result from the impending update to the 2006 Bay-Delta Plan.

16. The State Water Board believes that, to the extent they relate to the specific effects of this project, the issues identified in Mr. Morat's protest are addressed through the following items: Mitigation Measure HYD-4 and the other protest dismissal conditions included in this Order from CDFW, Reclamation, Westlands, and SLDWMA; the condition in the Order regarding the State Water Board's continuing authority to amend this Order relative to the impending update to the 2006 Bay-Delta Plan; and the mitigation measures included in the MMRP attached to this Order. The public review period for the DEIR expired on August 22, 2016. Mr. Morat provided only general statements about Bay-Delta issues and baseline assessment in response to the State Water Board's request for additional information. He has not explained how these broad, general concerns pertain to this specific project in light of the EIR, mitigation measures, and protest dismissal terms. Accordingly, there is not substantial evidence in light of the whole record to support the allegations contained in Mr. Morat's protest. Therefore, the protest may be dismissed pursuant to Water Code section 1703.6, subdivision (d).[3]

[3] Water Code section 1703.6 states, "If the protest is based on an allegation other than injury to a legal user of water, the board may cancel the protest for failure to submit information

17. The State Water Board is in the process of updating the 2006 Bay-Delta Plan. Amendments to the 2006 Bay-Delta Plan could, if adopted, include new inflow requirements for the Sacramento River, its tributaries, and eastside tributaries to the Delta; new and modified Delta outflow requirements; new requirements for cold water habitat; new and modified interior Delta Flow requirements; recommendations for complementary ecosystem protection actions that others should take; and adaptive management, monitoring, evaluation, special study, and reporting provisions. Changes to the 2006 Bay-Delta Plan will be implemented through water rights requirements, Federal Energy Regulatory Commission licensing requirements, or other measures.

18. Approval of Regional San's wastewater change petition WW0092 would result in a reduction of Sacramento River flow up to 50,000 af per year. Although Regional San's Program EIR indicates that the impact of reduction in SRWTP's current wastewater discharge on the Sacramento River flow is less than significant, any reduction in the Sacramento River flow may affect the water balance in the Bay-Delta watershed and have a secondary effect on the implementation of Sacramento River flow requirements. When implementing new Sacramento River flow requirements pursuant to an update of the 2006 Bay-Delta Plan, parties affected by the requirements may have to compensate for the impacts resulting from the reduction of the SRWTP's wastewater discharge into the Sacramento River. The State Water Board will reserve jurisdiction to modify the terms and conditions of this Order if, after notice to interested parties and an opportunity for hearing as required by statute, regulation, or constitutional due process, the State Water Board finds that such modification is necessary to meet water quality and flow objectives in the update of the 2006 Bay-Delta Plan.

19. The State Water Board has determined that, with the inclusion of the protest dismissal terms, the petition for change in the purpose of use and place of use of SRWTP's treated wastewater discharge will not cause injury to any other lawful user of water.

20. On August 14, 2017, the Petitioner submitted an application for funding under the Water Storage Investment Program (WSIP) administered by the California Water Commission (Commission) pursuant to chapter 8 of division 26.7 of the Water Code. On July 24, 2018, the Commission determined that the Program is eligible for a maximum of $280.5 million in WSIP funding. Section 79755, subdivision (a)(3) of the Water Code requires that the Commission cannot make a final allocation of funds for a project until the commission determines that "[t]he project applicant has entered into a contract with each public

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requested by the board if the board determines both of the following: (1) The public review period has expired for any draft environmental document or negative declaration required to be circulated for public review and comment pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code; (2) In the absence of the requested information, there is no substantial evidence in light of the whole record to support the allegation."

agency identified in Section 79754 that administers the public benefits, after that agency makes a finding that the public benefits of the project for which that agency is responsible meet all the requirements of this chapter, to ensure that the public contribution of funds pursuant to this chapter achieves the public benefits identified for the project." These public agencies potentially include the State Water Board, CDFW, and DWR. To date, Petitioner has not entered into contracts for the administration of public benefits pursuant to its WSIP application. Accordingly, the State Water Board will reserve jurisdiction to modify the terms and conditions of this Order if the State Water Board finds that modification is necessary to implement and ensure consistency with future contracts for the administration of public benefits under WSIP. Petitioner and the State Water Board will negotiate what process may be required for modifying the Order during negotiation of a future contract for the administration of public benefits under WSIP.

21. Regional San is currently party to a multi-jurisdictional partnership (including Regional San, Sacramento County, the cities of Rancho Cordova and Galt, Sacramento County Water Agency and the Capital SouthEast Connector Joint Powers Authority) that is implementing the South Sacramento Habitat Conservation Plan (SSHCP), which was adopted by all participating entities in the fall of 2018, following Regional San's certification of its EIR. The SSHCP is a Habitat Conservation Plan (HCP) that will secure permission to incidentally take Covered Species that will be listed on the CESA and federal ESA Incidental Take Permits issued by U.S. Fish and Wildlife Service (USFWS) and CDFW. The SSHCP includes and analyzes projects and activities and estimates the effects from each activity on Covered Species identified in the HCP. Projects and activities described in the SSHCP are referred to as "covered activities" and are conditionally afforded coverage from take prohibitions if they are implemented in a manner that is consistent with the expectations of and commitments with the HCP.

    The Project as described in Regional San's EIR would be a covered activity within the SSHCP; the SSHCP has been adopted and permitting is expected to be complete by the end of summer of 2019. The proposed mitigation measures included in the EIR are consistent with the SSHCP.

22. The State Water Board is a CEQA responsible agency for purposes of considering whether to approve the wastewater change petition that will allow Regional San to proceed with the proposed project. As a CEQA responsible agency, the State Water Board must consider the environmental documentation prepared by the lead agency, and any other relevant evidence in the record, and reach its own conclusions on whether and how to approve the project involved. (Cal. Code Regs., tit. 14, § 15096, subd. (a).)

23. The State Water Board has reviewed and considered Regional San's EIR in approving the wastewater change petition. As a responsible agency, the State Water Board must mitigate or avoid to the extent feasible the identified significant impacts to resources within the State Water Board's purview. In addition, the State Water Board must balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable

environmental risks when determining whether to approve the project. (Cal. Code Regs., tit. 14, § 15093, subd. (a).) Listed and discussed below are the potentially significant impacts identified in the EIR that fall within the State Water Board's purview. The potentially significant impacts result from the construction activities related to the Program as well as the reduction in discharge of treated wastewater into the Sacramento River and the use of that recycled water pursuant to the Program:

a) Biological Resources

i. **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 CDFW or USFWS.

The EIR indicated that a number of sensitive species (plants, invertebrates, amphibians and reptiles, birds) have the potential to occur in or near the project area and construction of the proposed project could kill or injure individuals, particularly during ground-disturbing activities. Construction activities could also adversely impact habitat for sensitive species. Therefore, substantial impacts to sensitive species, either directly, or indirectly through habitat impacts, may occur, which would be a potentially significant impact.

Regional San has proposed Mitigation Measures BIO-1a, BIO-1b, BIO-1c, and BIO-1d to reduce impacts to sensitive species and their habitats to less than significant. The following are brief summaries of Mitigation Measures BIO-1a, BIO-1b, BIO-1c, and BIO-1d.

Mitigation Measure BIO-1a: Regional San and its contractors will avoid and minimize permanent and temporary impacts to habitats and land cover types used by HCP-Covered and Non-HCP-Covered sensitive species by implementation of construction-related Best Management Practices (BMPs) as included in the Stormwater Pollution Prevention Plan (SWPPP) for the Project.

Mitigation Measure BIO-1b: Regional San will mitigate unavoidable losses to habitats used by both SSHCP-Covered and non-SSHCP-covered sensitive species by participating in and complying with habitat-level conservation measures identified in the SSHCP. The conservation commitments of the SSHCP will be implemented by Regional San even if the SSHCP is not adopted and involve Regional San's compensation for impacts to various types of sensitive habitats including vernal pools, wetlands, streams, freshwater marshes, riparian areas, and croplands and grasslands.

Mitigation Measure BIO-1c: Regional San will mitigate impacts to HCP-Covered species by participating in and complying with species-specific conservation measures identified in the SSHCP that would be implemented by

Regional San even if the SSHCP is not adopted. The conservation commitments are intended to mitigate construction-related impacts and cover the following species: Sacramento Orcutt grass and slender Orcutt grass; California tiger salamander; western spadefoot toad; western pond turtle; giant garter snake; tricolored blackbird; burrowing owl; and Swainson's hawk.

Mitigation Measure BIO-1d: Regional San will mitigate impacts to non-HCP-covered sensitive plant and covered bird species by conducting appropriate surveys prior to the commencement of construction activities. If sensitive plant or bird species are identified in the Project area, Regional San will coordinate with Sacramento County and CDFW and/or USFWS to determine what protective course of action is necessary.

Findings: This Order adopts Mitigation Measures BIO-1a, BIO-1b, BIO-1c, and BIO-1d and incorporates them as conditions pursuant to the MMRP attached to this Order. With the inclusion of the above mitigation measures, the potential for the project to 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 CDFW or USFWS would be reduced to a less than significant level.[4]

ii. **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 CDFW or USFWS.

In the EIR, Regional San found that construction of the proposed project could substantially and adversely affect riparian habitat or other sensitive natural communities known to occur in the project area. The EIR determined that 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.

Mitigation Measure BIO-2 requires SCRSD to secure regulatory permits for all actions that may impact riparian habitat and other sensitive natural communities, including Clean Water Act section 401 and 404 permits, federal ESA and CESA permits, and CDFW Lake and Streambed Alteration Agreement. Mitigation Measure BIO-2 also requires restoration of any habitats that were affected during construction potentially including purchase of credits from a mitigation bank.

Findings: This Order adopts Mitigation Measures BIO-1a, BIO-1b, and BIO-2 and incorporates them as conditions pursuant to the MMRP attached to this Order. With the inclusion of the above mitigation measures, the potential for the

[4] Regional San EIR, pp. 3.5-29 through 3.5-30

project to have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS would be reduced to a less than significant level. [5]

iii. **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.

The EIR determined that construction-related impacts to federally protected wetlands as defined by Section 404 of the Clean Water Act would be reduced to less than significant with implementation of Mitigation Measures BIO-1a, BIO-1b, BIO-2, and BIO-3.

Mitigation Measure BIO-3 requires Regional San to prepare a wetland delineation report for review and verification by the U.S. Army Corps of Engineers, which will be used to secure permits and approvals under sections 401 and 404 of the Clean Water Act. Mitigation Measure BIO-3 also includes restoration of affected jurisdictional areas to ensure no net loss of wetland functions and values.

The Project may deliver treated wastewater 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, and the EIR indicates that this is a beneficial effect. In order to confirm that use of the recycled water will be beneficial to the Stone Lakes NWR, this Order requires that Regional San obtain any necessary NPDES permit for the discharge of treated wastewater to Stone Lakes NWR.

Findings: This Order adopts Mitigation Measures BIO-1a, BIO-1b, BIO-2, and BIO-3 and incorporates them as conditions pursuant to the MMRP attached to this Order. With the inclusion of the above mitigation measures, and the requirement in the Order to obtain any necessary NPDES permit for the use of treated wastewater in the Stone Lakes NWR, the potential for the project to 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 would be reduced to a less than significant level.[6]

[5] Regional San EIR, p. 3.5-46
[6] Regional San EIR, pp. 3.5-48 through 3.5-49

iv. **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.

The EIR evaluated both 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 operations (Impact BIO-4b).

Impact BIO-4a covers the potential impact to movement of native resident species in drainage corridors of the project area. The EIR found that project area drainage features with currently disturbed riparian vegetation may be impacted during construction activities, and that 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. Therefore, relative to Impact BIO-4A, the EIR found that there was a less than significant impact to drainage corridors during construction of the project and no mitigation measures are required.[7]

Impact BIO-4b covers the reduction of up to 50,000 afa of treated wastewater that is normally discharged to the Sacramento River, and the reduction in flows in the Sacramento River at Freeport by up to 108 cfs (or 70 mgd), average recycled water delivery rate, as calculated across a 7-day running-average period, not to exceed 6,427 acre-feet per month, during periods (months) of peak irrigation demand.

Although reductions in discharges from the SRWTP would decrease flows in the Sacramento River at Freeport, Regional San expects that operation of the Program will produce an increase in in-lieu groundwater recharge that would benefit the groundwater basin. Regional San expects that the higher groundwater levels would potentially result in increased flows in the Cosumnes, lower Mokelumne, and Sacramento rivers. The EIR indicates that once the groundwater basin approaches a long-term balance from operation of the Program, there is expected to be an increase in stream flows by approximately 45,000 afa with implementation of wintertime irrigation.

The EIR indicates it is anticipated that as storage in the groundwater basin increases from operation of the program, the net effect of the reduction in the SRWTP discharge reduction will be reduced; although the benefits will not be fully realized until the groundwater system reaches a new balance with the surface water system. Regional San's modeling conducted in support of the EIR indicated that the eventual net change in annual flows is a reduction of about 4,800 af with wintertime irrigation.

[7] Regional San EIR, pp. 3.5-49 through 3.5-50

Project Impacts During Balanced Delta Conditions

Balanced conditions in the Delta typically require the CVP and SWP to make releases from storage to meet downstream senior water right demands and Delta flow and water quality requirements. The EIR indicates that balanced operations conditions occur on average 50 percent of the time in which Program-related reductions would occur. The EIR indicates that during balanced operations conditions, a reduction in SRWTP's discharge at Freeport has the potential to increase storage depletion in CVP or SWP reservoirs (mainly Lake Shasta), if increased releases are required to meet regulatory requirements.

According to the EIR, CalSim II modeling of sequential drought years during 1929-1934 and 1986-1992 showed that the Program would have reduced Shasta storage by up to approximately 30,000 af with wintertime irrigation over a worst-case 6-year drought period without changes to retain more cold water at Lake Shasta. The decrease in storage has the potential to create thermal impacts to fisheries habitats downstream of Lake Shasta. Regional San has proposed Mitigation Measure HYD-4 (discussed above in Paragraph 10 of this Order) which requires Regional San to coordinate operations of the Program with at a minimum Reclamation, DWR, and CDFW, to ensure that discharge reductions during balanced Delta conditions are timed to reduce impacts associated with reduced Shasta storage to less than significant.[8]

Project Impacts During Excess Delta Conditions

During Delta excess conditions, CVP and SWP reservoirs are generally not making releases of stored water to meet Delta flow and water quality requirements. The EIR indicates that excess operational conditions occur on average 50 percent of the time during which Program-related SRWTP discharge reductions would occur.

The EIR concluded that the impacts to operation of the Program during Delta excess conditions would be negligible to Sacramento River flows, water temperature, and to Delta salinity gradients; therefore, impacts to sensitive fish species from the Sacramento River at Freeport to the Delta were also anticipated to be negligible during Delta excess conditions.[9]

Findings: This Order adopts Mitigation Measure HYD-4 and incorporates it as a condition pursuant to the MMRP attached to this Order. This measure will be implemented as set forth in the MMRP, as well as a specific protest-dismissal

[8] Regional San EIR, pp. 3.5-53 through 3.5-54
[9] Regional San EIR, pp. 3.5-52 through 3.5-53

condition of this Order and will commit Regional San to implement this action. With the inclusion of the above mitigation measure, the potential for the project to 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 would be reduced to a less than significant level.

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

The EIR indicates that Mitigation Measures BIO-1a through BIO-1d and BIO-2 would address the Sacramento County General Plan, the Bufferlands Master Plan, and the City of Elk Grove General Plan policies regarding habitat and species preservation. Mitigation Measure BIO-5 requires that during construction of the Project, Regional San participate and comply with the terms of the Sacramento County Tree Preservation Ordinance.

Findings: This Order adopts Mitigation Measures BIO-1a, BIO-1b, BIO-1c, BIO-1d, BIO-2, and BIO-5 and incorporates them as conditions pursuant to the MMRP attached to this Order. With the inclusion of the above mitigation measures, the potential for the project to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, would be reduced to a less than significant level.

b) Hydrology and Water Quality

i. **Impact HYD-1** – Violate water quality standards or waste discharge requirements, create substantial sources of polluted runoff, or otherwise substantially degrade water quality.

The EIR indicates that construction activities involving soil disturbance, excavation, cutting and filling, stockpiling, dewatering, and grading activities could result in increased erosion and sedimentation to surface water during construction of the proposed project. Regional San must take precautions to contain contaminants, including hazardous materials associated with construction equipment, or construction activities that could produce contaminated stormwater runoff and contribute to degradation of surface water or groundwater quality. Regional San will be required to comply with the State Water Board's NPDES General Permit for Storm Water Discharges Associated with Construction Activities (NPDES General Construction Permit), including preparation and compliance with a SWPPP that will include BMPs to prevent polluted runoff resulting from construction activities of the proposed Project. Regional San will also conduct any necessary dewatering operations during construction of the project pursuant to the Central Valley Regional Board's NPDES General Order for Dewatering (NPDES General Dewatering Permit), or

other NPDES permit as necessary. With implementation of Mitigation Measures HYD-1a, HYD-1b, and HYD-1c, which require compliance with the NPDES General Construction Permit, implementation of appropriate BMPs to control erosion and sediment during construction and complying with the NPDES General Dewatering Permit or other appropriate NPDES permit, potential impacts would be reduced to less than significant.

Operation of Stone Lakes Managed Wetland
The EIR indicated that the suitability of recycled water for use at the Stone Lakes NWR was evaluated using the USFWS Rapid Assessment tool. The quality of the recycled water from the SRWTP was projected based on pilot treatment studies as Regional San is still in the process of upgrading treatment facilities at the plant. Prior to final agreements with USFWS to deliver recycled water to the Stone Lakes NWR, additional studies of the recycled water supply from the SRWTP's upgraded treatment facilities will be performed to demonstrate that water quality is acceptable for use. Regional San will be required to implement Mitigation Measure HYD-1d, which requires Regional San work with USFWS to ensure that Regional San's recycled water is of suitable quality before treated wastewater is provided for use at the Stone Lakes NWR.[10] Further, this Order will also require Regional San to obtain any necessary NPDES permit from the Central Valley Regional Board covering the discharge of the treated wastewater to the Stone Lakes NWR. An NPDES permit will contain effluent limitations based in part on the beneficial uses of the receiving water. Therefore, any permit issued by the Central Valley Regional Board for the discharge of recycled water into the Stone Lakes NWR would be protective of fish and wildlife at the refuge.

Operation of Potential Recharge Area
Regional San's use of recycled water for direct groundwater recharge will require WDRs issued by the Central Valley Regional Board. The WDRs will require that Regional San's groundwater recharge activities comply with recycled water regulations as detailed in the California Code of Regulations, title 22, division 4, chapter 3. Operation of the Program and the direct groundwater recharge component's potential negative impacts to groundwater quality will be subject to Mitigation Measure HYD-1e, which requires that Regional San perform detailed analyses of groundwater impacts from the recharge area and diluent wells to comply with the State Water Board's anti-degradation policy regarding surface and groundwater quality in California (State Water Board Resolution No. 68-16).[11]

[10] Regional San EIR, p. 3.10-29
[11] Regional San EIR, pp. 3.10-29 through 3.10-32

Findings: This Order adopts Mitigation Measures HYD-1a, HYD-1b, HYD-1c, HYD-1d, and HYD-1e, and incorporates them as conditions pursuant to the MMRP attached to this Order. With the inclusion of the above mitigation measures, the potential for the project to violate water quality standards or waste discharge requirements, create substantial sources of polluted runoff, or otherwise substantially degrade water quality, would be reduced to a less than significant level.

ii. **Impact HYD-4** – Interfere with or require changes to CVP or SWP operations.

The EIR indicates that the proposed project would result in reductions in flows in the Sacramento River at Freeport mostly amounting to less than one percent of the total river flow. As discussed in Impact BIO-4b, potential changes in Sacramento River flows were estimated using CalSim II by projecting changes in flows due to both the reduction in SRWTP discharges and increases in groundwater return flows to surface streamflow that are expected to result from operation of the Program. It was determined that the Program's potential impacts to Sacramento River flow vary depending on the water year type. As discussed above in the discussion on Impact BIO-4, SRWTP's reductions in wastewater discharge have the potential for more adverse impacts to the Sacramento River system during times when the Delta is in balanced conditions.

The EIR indicates that, although the Program will result in reduction in the SRWTP discharges which should be offset by groundwater returns to surface streamflow, there is still a potential that Program operations could require adjustments in CVP and SWP operations. Of main concern is the potential for reduction in Lake Shasta storage, which without operational adjustment could create thermal impacts in the Sacramento River downstream of CVP reservoirs. According to the EIR, a storage level in Lake Shasta below 2,400,000 af in the summer generally results in negative downstream temperature impacts in the Sacramento River. Therefore, Regional San has developed Mitigation Measure HYD-4 to reduce the temperature impact to less than significant. Specifically, in critically-dry years, when Shasta storage falls below 2,400,000 af, and based on consultation with Reclamation, DWR, and CDFW, Regional San could modify operations of the Program to require the SRWTP to discharge more treated wastewater to the Sacramento River.

Findings: This Order adopts Mitigation Measure HYD-4 and incorporates it as a condition pursuant to the MMRP attached to this Order. With the inclusion of Mitigation Measure HYD-4, the potential impacts to CVP storage in Shasta would be reduced to less than significant, because discharge reductions would be reduced in critical years as needed to ensure that adverse effects to the Sacramento River are avoided, and the potential for the Project to interfere with

or require changes to CVP or SWP operations would be reduced to a less than significant level. Mitigation Measure HYD-4 is also specifically included in this Order as a protest dismissal condition.

24. The State Water Board has considered Regional San's Program EIR and MMRP in deciding whether to approve the petition. Pursuant to CEQA, and based on Regional San's MMRP, the State Water Board prepared a MMRP which includes the mitigation measures described above in Paragraph 23 and specifies implementation, monitoring, and reporting on the mitigation measures. Compliance with these measures is an enforceable term within this Order. Adoption of mitigation measures in the MMRP and described in Paragraph 23 of this Order, avoids or significantly minimizes all of the significant impacts under the State Water Board's purview to a less than significant level. There is no evidence that approval of the wastewater change petition, with Regional San implementing mitigation measures from both the EIR MMRP and the State Water Board's MMRP to minimize impacts to biological resources and hydrology and water quality resources, will have adverse impacts on the environment. The State Water Board will issue a NOD within five days of the date of this Order.

25. In addition to any obligation the State Water Board may have under CEQA, the State Water Board has an independent obligation to consider the effect of the proposed project on public trust resources and to protect those resources where feasible. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419.) With the inclusion of protest dismissal terms, standard terms and conditions, and mitigation measures identified in the EIR and attached in the MMRP, the changes will not cause an unreasonable effect to public trust resources and approval of the project is not contrary to the State Water Board's public trust responsibilities.

26. Pursuant to Resolution 2012-0029, the State Water Board has delegated the authority to administer the State Water Board's water rights program to the Deputy Director for Water Rights. The Deputy Director for Water Rights has redelegated the authority.

ORDER

NOW, THEREFORE, IT IS ORDERED THAT:

1. The protests of the California Department of Fish and Wildlife (CDFW), the United States Bureau of Reclamation (Reclamation), Westlands Water District (Westlands), and San Luis Delta Mendota Water Authority (SLDWMA), and Mr. Richard Morat are dismissed.

2. Sacramento Regional County Sanitation District's (Regional San or Petitioner) Sacramento Regional Wastewater Treatment Plant (SRWTP) discharges treated wastewater effluent into the Sacramento River tributary to the Sacramento-San Joaquin Delta in Sacramento County. The point of discharge into the Sacramento River is located

as follows: California Coordinate System, NAD 83, Zone 2, North 1,927,612 feet, and East 6,704,855 feet, being within SW¼ of SW¼ of Section 13, T7N, R4E, MDB&M.

3. Regional San is authorized to reduce its treated wastewater discharge into the Sacramento River by reclaiming up to 50,000 acre-feet annually (afa) (at a rate of up to 108 cubic feet per second (cfs); or 70 million gallons per day (mgd), average recycled water delivery rate, calculated across a 7-day running-average period, and not to exceed a maximum of 6,427 acre-feet/month) to the South Sacramento County Agriculture & Habitat Lands Recycled Water Program (Program) for irrigation and fish and wildlife enhancement purposes pursuant to the conditions of this Order. When operational challenges halt delivery of recycled water, the recycled water delivery rate shall be calculated across a 14-day running average until 7 days after recycled water delivery resumes. Regional San shall provide notice to Reclamation and the Deputy Director of the Division of Water Rights when such operational challenges are present, and the 14-day running average shall go into effect as of that notice date.

4. The places of use and purposes of use of the reclaimed wastewater for the Program, as shown on Regional San's August 2016 and May 2019 maps on file with the Division, are generally described as follows: 1) irrigation use and fish and wildlife enhancement on approximately 16,560 acres in Sacramento County within T5-6N, R5-6E, MDB&M; 2) fish and wildlife enhancement on approximately 400 acres within the Stone Lakes National Wildlife Refuge within Sections 25 and 36, T6N, R4E, MDB&M; and 3) direct groundwater recharge on approximately 560 acres within the 16,560 irrigated acres providing fish and wildlife enhancement use along the Cosumnes River approximately located within the river reach as follows: a) Upstream Point – California Coordinate System, NAD83, Zone 2, North 1,916,684 feet and East 6,774,385 feet, being within NW¼ of NW¼ of Section 31, T7N, R7E, MDB&M; and b) Downstream Point – California , NAD83, Zone 2, North 1,849,015 feet and East 6,709,368 feet, being within NE¼ of SE¼ of Section 36, T5N, R4E, MDB&M, as shown on the May 2019 map accompanying the petition.

   No water may be used for the purposes described in 2) and 3) in the paragraph above pursuant to this Order until Petitioner has satisfied the requirements of the California Environmental Quality Act pertaining to any pipelines, recharge basins, or other facilities necessary to achieve those purposes of use.

5. These changes do not authorize any act which results in the taking of a threatened, endangered, or candidate species or any act which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & Game Code, §§ 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). If a "take" will result from any act authorized under this Order, the Petitioner shall obtain authorization for an incidental take prior to construction or operation of the project. Petitioner shall be responsible for meeting all requirements of the applicable Endangered Species Act for the project authorized under this Order.

6. In consultation with CDFW, Regional San will develop and implement a monitoring and reporting plan consistent with Regional San's technical memorandum *"Approach for Groundwater and Riparian Forest Monitoring and Reporting*," dated March 23, 2018. The monitoring and reporting plan will be developed in coordination with existing and planned groundwater monitoring, and any future modifications to the plan shall be done in consultation with CDFW. The monitoring and reporting plan, as well as any future modifications to the plan, shall be submitted to the Division of Water Rights. Monitoring for the South County Ag Program will continue for at least 30 years from implementation of the Project. Monitoring reports will be provided to CDFW's North Central Region Office and the Division.

   Adaptive management of the riparian forest monitoring within South County Ag Program will be implemented on a five-year cycle through at least the first 30 years of the Program, to review and respond to available data from the previous years of implementation (water application), maintenance, and monitoring, and to incorporate new technologies and lessons learned into subsequent implementation, monitoring, maintenance, and performance tracking. Periodic review of implementation and performance progress will allow for course correction with respect to the ongoing implementation milestones and obligations, should any be needed.

7. Until the groundwater recharge threshold criteria specified below is exceeded, Regional San shall meet the following restrictions for irrigation season recycled water deliveries and total annual recycled water deliveries under the Program:

   <u>Restrictions on recycled water deliveries during the irrigation season (April - October):</u>

   During Shasta Critical water years (as defined in the Sacramento River Settlement Contracts), irrigation season (April 1 - October 31) recycled water deliveries under the Program shall not exceed 16,250 acre-feet (af) in such years.

   During dry or critically dry water years (as defined in the Sacramento Valley 40-30-30 Index, but not Shasta Critical years), irrigation season (April 1 - October 31) recycled water deliveries under the Program shall not exceed 24,375 af in such years.

   During all other water year types, there will be no irrigation season restrictions to recycled water deliveries under the Program.

   <u>Restrictions on total annual recycled water deliveries:</u>

   During any Shasta Critical water year and during the first 10 years (estimated period of project buildout) of Program operation, total annual recycled water deliveries under the Program shall not exceed 25,000 afa in such years.

During dry or critically dry water years (as defined in the Sacramento Valley 40-30-30 Index, but not Shasta Critical years), and during the first 10 years of Program operation, total annual recycled water deliveries under the Program shall not exceed 37,500 afa in such years.

During Shasta Critical years, and dry or critically dry years, and 10 years after commencement of Program operation, total annual recycled water deliveries under the Program shall not exceed 50,000 afa.

During all other water year types there will be no total annual restrictions to recycled water deliveries under the Program.

Threshold Criteria

Net groundwater recharge and 50 percent demonstrated return of flows to surface water shall serve as the criteria to determine when the above-stated restrictions on recycled water deliveries are no longer required. Net groundwater recharge is defined as the cumulative amount of recycled water delivered by the Program, minus the water extracted through formal banking agreements with Regional San.

Upon exceedance of 400,000 af of net groundwater recharge, the most accepted available regional integrated groundwater model at that time will be run to compare with and without project conditions. The model's simulation period shall be extended to the end of the most recent water year. To validate the increase in groundwater elevations and the benefits accruing to the streams, Regional San will use this regional integrated groundwater and surface water model to confirm that at least 50 percent, volumetrically, of annual recycled water deliveries is estimated to return to surface water. Modeling will include incorporation of Program area groundwater elevation data and streamflow gauge data available at that time, and a comparison to simulated without Program project conditions. Regional San will extend the model simulation period every other year at the end of the most recent water year. After each extension, the model shall be validated based upon a comparison of observed and simulated groundwater elevations and surface flows and recalibrated when necessary. Once the 50 percent point is reached, the restrictions on recycled water deliveries shall be discontinued. The simulation modeling shall continue until the 50 percent stream return benefits are shown, on an annual running average basis, for three consecutive two-year periods.

The model, including input and output files shall be provided to Reclamation, Westlands, and SLDMWA (hereinafter referred to collectively as the Water Agency Protestants) upon request. Regional San and the Water Agency Protestants will meet and confer in good faith to validate modeling results.

In the event that the modeling does not validate the increase in groundwater elevations and corresponding 50 percent stream return benefits, the above restrictions on recycled water deliveries shall remain in effect pending the results of additional validation modeling.

Once the three consecutive biennial model simulations confirm the 50 percent stream return benefits, the restrictions on recycled water deliveries shall permanently cease. Regional San shall perform the simulation modeling two years after such cessation of restrictions, and every five years thereafter, to confirm that the 50 percent stream return benefits remain present. If such simulation modeling does not validate that the 50 percent stream return benefits remain present, then Regional San and the Water Agency Protestants shall meet and confer in good faith to discuss potential measures that could be voluntarily undertaken by Regional San to increase returns of recycled water deliveries to surface water, including the reinstatement of the above restrictions on recycled water deliveries.

8. Regional San shall comply with mitigation measure HYD-4 Coordinate Operations with Reclamation, the Water Agency Protestants, Department of Water Resources, CDFW, and other Relevant Resource Agencies, as set forth in the Final Environmental Impact Report for the Project. HYD-4 as included in the Mitigation and Monitoring Program reads as follows:

   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, SRCSD 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, SRCSD 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.

   In addition, until the restrictions on recycled water deliveries referenced above in Condition 7 permanently cease, when storage in Lake Shasta falls below 2,000,000 af on September 1 of a given year, Regional San shall reduce deliveries of recycled water for direct agricultural irrigation to a maximum of 2,000 af per month for the months of February through March of the immediately succeeding year. This additional limitation on deliveries of recycled water will no longer be in effect once storage in Lake Shasta exceeds 2,400,000 af in any year.

9. Regional San is responsible for compliance with any applicable waste discharge or water recycling requirements issued by the Regional Water Board or the State Water Board.

10. Regional San shall obtain all necessary permits for the discharge of treated wastewater into the Stone Lakes NWR prior to delivering treated wastewater to the Stone Lakes NWR for fish and wildlife enhancement.

11. Regional San shall obtain all necessary federal (including Clean Water Act section 404), state, and local agency permits and approvals required by other agencies (including lake or streambed alteration agreements with CDFW [Fish & Game Code, section 1600, et seq.]), prior to construction and operation of the Project. Copies of such permits and approvals shall be forwarded to the Deputy Director for Water Rights prior to initiation of construction and operation of the Project.

12. The CEQA findings specified in paragraphs 23 and 24 above are hereby adopted.

13. This Order incorporates the mitigation terms of the final EIR specified in paragraph 23 above and in the Mitigation and Monitoring Reporting Program, which is attached hereto as Attachment 1 to this Order. Regional San shall implement the measures to mitigate significant impacts to biological and water resources, and recreation, and conduct the required reporting and monitoring of those measures. The State Water Board reserves continuing authority to require any reasonable amendments to these measures and requirements to ensure that they will accomplish the stated goal or as appropriate to take into account any modifications to the project as a result of additional CEQA review or otherwise.

14. The State Water Board is currently in the process of updating the Bay-Delta Plan that could establish new and modified Delta tributary inflow and cold-water habitat and Delta outflow objectives. Subject to appropriate procedures, including notice to interested parties and opportunity for a hearing as required by statute, regulation, or constitutional due process, the timing and quantity of the reduction in Regional San's treated wastewater discharge into the Sacramento River approved by this Order may be modified to implement existing or revised water quality and flow objectives included in the Bay-Delta Plan.

15. The State Water Board reserves continuing authority in the public interest to implement and amend this Order for conformity with requirements that may be established for the Sacramento River and Sacramento-San Joaquin Delta in the future, including but not limited to any future revisions to the Bay-Delta Plan and its associated program of implementation, and in the event of unforeseen adverse impacts to fish and wildlife resources and other instream beneficial uses. Modifications to this Order shall only be made after notice and opportunity for a hearing as required by statute, regulation, or constitutional due process.

16. Subject to appropriate procedures, as may be negotiated by Petitioner and the State Water Board during negotiation of a future contract for the administration of public benefits under WSIP, the State Water Board reserves continuing authority in the public interest to implement and amend this Order for conformity with contracts for the administration of public benefits entered into by Regional San pursuant to chapter 8 of division 26.7 of the Water Code.

17. Regional San shall file an annual report with the Deputy Director for Water Rights by April 30 of each year that includes at minimum the following information for the previous calendar year:

- average daily treated wastewater discharge rate into the Sacramento River from the SRWTP (in cfs);
- maximum daily recycled water delivery rate (in cfs) to the Program for each of the following: a) irrigation uses during the growing season (April through October); b) fish and wildlife enhancement uses during the non-growing season (November through March); c) discharge to Stone Lakes NWR; and d) direct groundwater recharge;
- 7-day running average recycled water delivery rates in cfs and mgd, and monthly total recycled water deliveries (in acre-feet) (and the 14-day running average values during any periods the 14-day provision was in effect the previous year);
- monthly total recycled water deliveries (in acre-feet);
- a summary of monitoring programs conducted for CDFW in compliance with Condition No. 6 of this Order;
- a summary of recycled water delivery restrictions and mitigation measures enacted in concurrence with Reclamation, DWR, and CDFW, in compliance with Condition Nos. 7 and 8 of this Order; and
- a summary of groundwater modeling results conducted pursuant to Condition No. 7 of this Order.

STATE WATER RESOURCES CONTROL BOARD

ORIGINAL SIGNED BY:

Erik Ekdahl, Deputy Director
Division of Water Rights

Dated: SEPT 10 2019

Attachment 1: Mitigation and Monitoring Reporting Program for WW0092

Attachment 1

Mitigation Monitoring and Reporting Program for State Water Resources Control Board Order Approving WW0092 of Sacramento Regional County Sanitation District

Impact Statement	Mitigation Measure	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation
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**: Sacramento Regional County Sanitation District (SRCSD) 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.	SRCSD	SRCSD	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

Impact Statement	Mitigation Measure	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation
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, SRCSD 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 SRCSD 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 (- 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).	SRCSD	SRCSD, 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
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**: SRCSD 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 SRCSD 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.	SRCSD	SRCSD	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

Impact Statement	Mitigation Measure	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation
	• **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 SRCSD encounters a previously undiscovered occurrence of Sacramento or slender Orcutt grass at the project site, SRCSD 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.	

Impact Statement	Mitigation Measure	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation
	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.				

Impact Statement	Mitigation Measure	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation
	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. SRCSD 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. SRCSD 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, SRCSD 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, SRCSD 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.				

Impact Statement	Mitigation Measure	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation
	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 train 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, SRCSD 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.				

Impact Statement	Mitigation Measure	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation
	After completion of ground-disturbing activities, SRCSD 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. SRCSD 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. SRCSD 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, SRCSD 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, SRCSD 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.				

Impact Statement	Mitigation Measure	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation
	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, SRCSD 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. SRCSD will map all existing or potential nesting or foraging sites and provide these maps to the Local Land Use Permittees and Implementing Entity.				

Impact Statement	Mitigation Measure	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation
	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, SRCSD 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 SRCSD 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 SRCSD, 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, SRCSD 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, SRCSD 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 SRCSD 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 SRCSD to review the proposed construction monitoring plan within 21 days.				

Impact Statement	Mitigation Measure	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation
	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, SRCSD 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.				

Impact Statement	Mitigation Measure	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation
	• **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*). SRCSD 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, SRCSD 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 SRCSD 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, SRCSD, 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.				

Impact Statement	Mitigation Measure	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation
	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. SRCSD 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, SRCSD 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 SRCSD 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, SRCSD, 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, SRCSD 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, SRCSD 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, SRCSD 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.	SRCSD	SRCSD, 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

Impact Statement	Mitigation Measure	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre- construction -Construction -Operation
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:** SRCSD 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.	SRCSD	SRCSD, 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
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**: SRCSD 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 SRCSD even if the SSHCP is not adopted. As stated earlier in this section, SRCSD 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.	SRCSD	SRCSD, 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
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**: SRCSD 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.	SRCSD	SRCSD, 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

Impact Statement	Mitigation Measure	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation
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.	SRCSD	SRCSD	1. Confirm requirement for SWPPP is included in the contract documents 2. Confirm preparation of SWPPP	1. Design 2. Pre-construction
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 SRCSD, 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.	SRCSD	SRCSD	1. Review and approve SWPPP 2. Confirm implementation of BMPs Document compliance and retain in the project file.	1. Pre-construction 2. Construction

Impact Statement	Mitigation Measure	Party Responsible for Implementation and Reporting	Review and Approval by:	Monitoring and Reporting Actions	Implementation Schedule -Design -Pre-construction -Construction -Operation
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 SRCSD shall implement measures contained in the General Order for Dewatering or other appropriate NPDES permit or Waste Discharge Requirement.	SRCSD	SRCSD	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
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, SRCSD 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. SRCSD shall also obtain any necessary NPDES permit from the RWQCB covering the discharge of the treated wastewater to the Stone Lakes NWR.	SRCSD	SRCSD, USFWS, RWQCB	1. Confirm concurrence from USFWS regarding water quality 2. Confirm NPDES permit obtained prior to discharge to Stone Lakes NWR	1.Pre-Design 2.Pre-construction
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, SRCSD 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.	SRCSD	SRCSD. RWQCB	1. Confirm completion of antidegradation analysis	1. Pre-Design
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, SRCSD 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, SRCSD 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.	SRCSD	SRCSD, 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

Agency Abbreviations: SRCSD=Sacramento Regional County Sanitation District, CDFW=California Department of Fish and Wildlife, 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

Appendix E – 2021 Modification Approving Change in Purpose of Use and Place of Use of Treated Wastewater

State Water Resources Control Board

FEB 24 2021

In Reply Refer to:
KMG: WW0092

Sacramento Regional County Sanitation District
c/o Mr. Christoph Dobson
dobsonc@sacsewer.com

Dear Mr. Dobson:

MODIFICATION OF ORDER APPROVING WASTEWATER CHANGE PETITION WW0092 OF SACRAMENTO REGIONAL COUNTY SANITATION DISTICT

Enclosed is an Order modifying the State Water Resources Control Board, Division of Water Rights September 10, 2019 Order approving Sacramento Regional County Sanitation District's wastewater change petition WW0092.

If you have any questions regarding this matter, please contact Kate Gaffney by email at kathryn.gaffney@waterboards.ca.gov. Written correspondence or inquiries should be addressed as follows: State Water Resources Control Board, Division of Water Rights, Attn: Kate Gaffney, P.O. Box 2000, Sacramento, CA, 95812-2000.

Sincerely,

ORIGINAL SIGNED BY:

Scott McFarland, Senior
Petition and Licensing Unit
Division of Water Rights

ec (w/enclosure): Mr. Jose Ramirez
Sacramento Regional County Sanitation District
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Somach Simmons & Dunn
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STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

DIVISION OF WATER RIGHTS

In the Matter of the Order Approving Wastewater Change Petition WW0092

Sacramento Regional County Sanitation District

ORDER MODIFYING CONDITION 4 FROM ORDER DATED SEPTEMBER 10, 2019

WATERSHED: Sacramento River

COUNTY: Sacramento

WHEREAS:

1. On September 10, 2019, the State Water Resources Control Board (State Water Board), Division of Water Rights (Division) issued an Order (2019 Approval Order) approving Sacramento Regional County Sanitation District's (Regional San) Wastewater Change Petition WW0092.

2. The 2019 Approval Order allowed Regional San to reduce the quantity of its treated wastewater discharged from the Sacramento Regional Wastewater Treatment Plant into the Sacramento River by up to 108 cubic feet per second or 70 million gallons per day, and direct that water to Regional San's South Sacramento County Agriculture & Habitat Lands Recycled Water Program (now referred to as the Harvest Water Program). The recycled water is used for irrigation and fish and wildlife habitat enhancement purposes at Harvest Water Program facilities.

3. The 2019 Approval Order included Condition No. 4, which limited Regional San's use of the recycled water to 16,560 acres within T5-6N, R5-6E, MDB&M as shown on Regional San's maps dated August 2016 and May 2019. Regional San contacted Division staff on December 22, 2020, indicating that they proposed to provide recycled water to an additional gross 4,100 acres contiguous to the place of use referenced in the order, but the additional acreage was not included in the August 2016 or May 2019 project maps. Regional San provided the Division an updated project map dated December 2020 delineating the additional 4,100 acres proposed to be added to the place of use. Regional San

indicated the increase in the gross place of use would not increase the place of use above a net of 16,560 acres or result in a reduction in treated wastewater discharged to the Sacramento River beyond what was approved in the 2019 Approval Order.

4. Future operation of the Harvest Water Program could potentially require further modifications to the place of use. Consequently, on January 12, 2021 Regional San requested to add T4N and R4E to the narrative description of the gross place of use in the 2019 Approval Order to enable possible future place of use modifications. Any potential future changes to the place of use will be consistent with the limitations of the 2019 Approval Order by not increasing the net place of use of 16,560 acres or result in an increase in the reduction in treated wastewater discharged to the Sacramento River.

5. California Water Code section 1124 allows amendments to State Water Board orders as follows:

> *The board at any time may amend or modify a decision or order to correct any obvious typographical or clerical error or oversight without the necessity of notice and a hearing thereon.*

6. Due to administrative oversight, the Division's 2019 Approval Order did not provide Regional San the flexibility to develop future limited modifications to the place of use of the Harvest Water Program. This Order amends Condition 4 of the 2019 Approval Order to allow Regional San to modify the place of use in the future provided that the proposed modifications to the place of use would be consistent with the order limitation of a maximum net area of 16,560 acres within T4-6N, R4-6E, MDB&M, and the change would not result in an increase in the reduction of treated wastewater discharge to the Sacramento River beyond what was approved in the order.

7. Pursuant to Resolution No. 2012-0029, the State Water Board has delegated authority to the Deputy Director for Water Rights (Deputy Director) to amend or modify a decision or order to correct any obvious typographical or clerical error or oversight. (Resolution No. 2012-0029, section 4.1.3.) Resolution No. 2012-0029 authorizes the Deputy Director to redelegate this authority, and this authority has been so redelegated by Division memorandum dated October 19, 2017.

NOW, THEREFORE, IT IS ORDERED THAT:

1. Condition 4 of the September 10, 2019 approval Order of Regional San's Wastewater Change Petition WW0092 shall be modified to read as follows:

The places of use and purposes of use of the reclaimed wastewater for the Program, as shown on Program maps on file with the Division, are generally described as follows: 1) irrigation use and fish and wildlife enhancement on a net area of 16,560 acres in Sacramento County within T4-6N, R4-6E, MDB&M; 2) fish and wildlife enhancement on approximately 400 acres within the Stone Lakes National Wildlife Refuge within Sections 25 and 36, T6N, R4E, MDB&M; and 3) direct groundwater recharge on approximately 560 acres within the net area of 16,560 irrigated acres providing fish and wildlife enhancement use along the Cosumnes River approximately located within the river reach as follows: a) Upstream Point – California Coordinate System, NAD83, Zone 2, North 1,916,684 feet and East 6,774,385 feet, being within NW¼ of NW¼ of Section 31, T7N, R7E, MDB&M; and b) Downstream Point – California Coordinate System, NAD83, Zone 2, North 1,849,015 feet and East 6,709,368 feet, being within NE¼ of SE¼ of Section 36, T5N, R4E, MDB&M, as shown on the May 2019 map accompanying the petition.

2. Regional San shall provide revised and updated place of use maps to the Division when changes to the place of use are proposed.

3. All other conditions in the 2019 Approval Order of Regional San's Wastewater Change Petition WW0092, shall remain are not affected by this order.

STATE WATER RESOURCES CONTROL BOARD

ORIGINAL SIGNED BY:
SAM BOLAND-BRIEN, FOR

Erik Ekdahl, Deputy Director
Division of Water Rights

Dated: FEB 24 2021