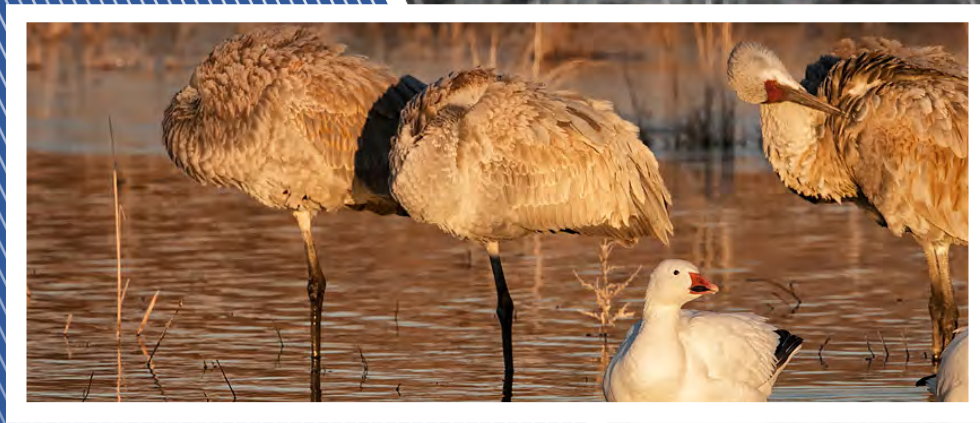


South Sacramento County Agriculture and Habitat Lands Recycled Water Program  
Environmental Impact Report  
Addendum

Harvest Water Program  
EcoPlan and Wintertime Application Project



State Clearinghouse No. 2015022067

Prepared for:



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10060 Goethe Road  
Sacramento, CA 95827

December 7, 2020

# Harvest Water Program EcoPlan and Wintertime Application Project



State Clearinghouse No. 2015022067

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## LIST OF ABBREVIATIONS

°C	degrees Celsius
µg/m <sup>3</sup>	micrograms per cubic meter
AB	Assembly Bill
AFY	acre feet per year
ALUC	Airport Land Use Commission
AMM	avoidance and minimization measure
AQMP	Air Quality Management Plan
BAU	business-as-usual
BLM	Bureau of Land Management
BMP	best management practices
CAAQS	California Ambient Air Quality Standards
CAC	County Agricultural Commissioner
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
DPR	California Department of Pesticide Regulation
DTSC	California Department of Toxic Substances Control
<i>EcoPlan</i>	Ecological Plan
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FHSZ	fire hazard severity zone
FMMP	Farmland Mapping and Monitoring Program
GHG	greenhouse gas
I-5	Interstate 5
km	kilometer
LAFCo	Local Agency Formation Commission
LRA	Local Responsibility Area
mg/L	micrograms per liter
MLD	Most Likely Descendant
MMRP	Mitigation Monitoring and Reporting Program
MMTCO <sub>2</sub> e	million metric tons of CO <sub>2</sub> equivalents
MWh/yr	megawatts per year
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NO <sub>2</sub>	nitrogen dioxide
NOP	notice of preparation

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NO <sub>x</sub>	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWR	National Wildlife Refuge
OEHHA	Office of Environmental Health Hazard Assessment
PCA	Pest Control Advisor
PM <sub>10</sub>	respirable particulate matter
PM <sub>2.5</sub>	fine particulate matter
ppb	parts per billion
ppm	parts per million
Preserve	Cosumnes River Preserve
Program EIR	<i>South Sacramento County Agriculture and Habitat Lands Recycled Water Program Environmental Impact Report</i>
Regional San	Sacramento Regional County Sanitation District
ROG	reactive organic gases
ROW	right-of-way
SB	Senate Bill
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMCL	secondary maximum contaminant level
SO <sub>2</sub>	sulfur dioxide
SOI	sphere of influence
SRA	State Responsibility Area
SRWTP	Sacramento Regional Wastewater Treatment Plant
SSHCP	<i>South Sacramento Habitat Conservation Plan</i>
SVAB	Sacramento Valley Air Basin
SWPPP	Stormwater Pollution Prevention Program
TAC	toxic air contaminant
TCR	tribal cultural resource
TDS	Total Dissolved Solids
TMP	Traffic Management Plan
TTC	Temporary Traffic Control
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
VMT	vehicle miles traveled
WDR	waste discharge requirement
WSIP	Water Storage Improvement Program

# 1 INTRODUCTION

## 1.1 BACKGROUND AND ACTION TRIGGERING THE ADDENDUM

This addendum to the Environmental Impact Report (EIR) for the South Sacramento County Agriculture and Habitat Lands Recycled Water Program (Program EIR) addresses implementation of the Ecological Plan (*EcoPlan*) and aspects of proposed wintertime application of recycled water that were not known at the time the Program EIR was prepared. Specifically, this addendum analyzes the potential environmental impacts of the proposed *EcoPlan*—a cohesive plan to track and record the various ecological benefits of Harvest Water (formerly, the South County Ag Program)—and focuses on the actions included in the plan that enhance and maximize the Harvest Water benefits and would also have a physical effect on the environment. This addendum also evaluates wintertime uses of recycled water beyond those identified in the Program EIR, specifically the potential addition of wintertime delivery of recycled water to the Cosumnes River Preserve. Including the Cosumnes River Preserve would expand the potential delivery area for recycled water beyond the area originally identified in the Program EIR.<sup>1</sup> Although the potential delivery area would be expanded, the quantity of recycled water proposed to be delivered and the area irrigated would not change. The *EcoPlan* and the wintertime application of recycled water are collectively referred to as the *EcoPlan* and Wintertime Application Project.

As the lead agency under the California Environmental Quality Act (CEQA), the Sacramento Regional County Sanitation District (Regional San) has determined that, in accordance with Section 15164 of the State CEQA Guidelines, the proposed *EcoPlan* and Wintertime Application Project differ sufficiently from the Program elements described in the Program EIR to warrant preparation of an addendum.

## 1.2 PREVIOUS ENVIRONMENTAL ANALYSIS

Regional San proposes to implement Harvest Water, which would provide a safe and reliable supply of tertiary-treated recycled water for agricultural uses, reduce groundwater pumping, support habitat enhancement efforts, and provide near-term benefits to the region. Regional San prepared an EIR (Program EIR) to analyze the environmental effects of Harvest Water and certified the EIR in March 2017 (State Clearinghouse No. 2015022067) (Regional San 2017). The Program EIR included both program- and project-level analyses depending on the level of detail available at the time for each program element.

Program EIRs provide a tiering mechanism to allow for the efficient processing of subsequent projects that are within the scope of the program EIR, with little-to-only minor additional CEQA analysis. CEQA and the State CEQA Guidelines encourage the use of tiered environmental documents to reduce delays and excessive paperwork in the environmental review process (State CEQA Guidelines Section 15168). This is accomplished in tiered documents by eliminating repetitive analyses of issues that were already addressed in the program EIR and by incorporating those analyses by reference.

*EcoPlan* implementation and the wintertime application of recycled water are elements of Harvest Water. Although the Program EIR identifies various ecological benefits of Harvest Water, it does not identify development of a cohesive plan to track and record these benefits, nor does it include specific actions to further enhance and maximize these benefits. In addition, the delivery of up to 17,000 acre-feet per year (AFY) of recycled water for wintertime application was evaluated at a program level of detail in the Program EIR. The Program EIR identifies that this water could be used for irrigation of agricultural land, including cover crops in orchards and vineyards, and for groundwater recharge, but does not identify any other potential uses for this water, including wintertime delivery to lands used for Sandhill crane foraging and roosting habitat and to lands in the Cosumnes River Preserve adjacent to project

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<sup>1</sup> The expanded delivery area is within the place of use described in the Order Approving Change in Purpose and Place of Use of Treated Wastewater that was issued by the State Water Resources Control Board Division of Water Rights on September 10, 2019, but is slightly larger than the delivery area identified in maps that are included in the State Water Resources Control Board files for the decision.

customers being served summertime agricultural irrigation water. Thus, a further evaluation of the tracking and enhancement of ecological benefits through the *EcoPlan* and wintertime application of recycled water are the focus of this addendum.

### 1.3 CEQA GUIDELINES REGARDING AN ADDENDUM TO AN EIR

Altered conditions, changes, or additions to the description of a project that occur after certification of an EIR may require additional analysis under CEQA. The legal principles that guide decisions regarding whether additional environmental documentation is required are provided in the State CEQA Guidelines, which establish three mechanisms to address these changes: a Subsequent EIR, a Supplement to an EIR, and an Addendum to an EIR.

Section 15162 of the State CEQA Guidelines describes the conditions under which a Subsequent EIR would be prepared. In summary, when an EIR has been certified or a negative declaration adopted for a project, no Subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
  - (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
  - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
  - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternatives; or
  - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Section 15163 of the State CEQA Guidelines states that a lead agency may choose to prepare a Supplement to an EIR rather than a Subsequent EIR if:

- (1) Any of the conditions described in Section 15162 would require the preparation of a Subsequent EIR; and
- (2) Only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation.

An addendum is appropriate where a previously certified EIR has been prepared and some changes or revisions to the project are proposed, or the circumstances surrounding the project have changed, but none of the changes or revisions would result in significant new or substantially more severe environmental impacts, consistent with CEQA Section 21166 and State CEQA Guidelines Sections 15162, 15163, 15164, and 15168.

This addendum is intended to evaluate and confirm CEQA compliance for the proposed *EcoPlan* and Wintertime Application Project, which would be a change in the project relative to what is described and evaluated in the Program EIR. This addendum is organized as an environmental checklist, and is intended to evaluate all environmental topic areas for any changes in the project, changes in circumstances, or new information of substantial



importance, as compared to the approved EIR, and determine whether such changes trigger any of the criteria included in Section 15162 of the CEQA Guidelines triggering the need for a Subsequent EIR. This checklist is not the traditional CEQA Environmental Checklist, per Appendix G of the CEQA Guidelines. As explained in Section 3.1, the purpose of this checklist is to evaluate the checklist categories in terms of any "changed condition" (i.e., changed circumstances, project changes, or new information of substantial importance) that may result in a different environmental impact significance conclusion from the Program EIR. The column titles of the checklist have been modified from the Appendix G presentation to help answer the questions to be addressed pursuant to CEQA Section 21166 and State CEQA Guidelines Section 15162, 15163, 15164, and 15168.

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## 2 DESCRIPTION OF THE PROPOSED ACTION

As described in Chapter 1, "Introduction," the Ecological Plan (*EcoPlan*) and Wintertime Application Project (project modifications) are components of Harvest Water (formerly, the South County Ag Program). This chapter provides a summary of Harvest Water and its relationship to the project modifications. Then a detailed description of the project modifications (i.e., the *EcoPlan* and proposed wintertime application of recycled water) is provided.

### 2.1 HARVEST WATER AND RELATIONSHIP TO THE PROJECT MODIFICATIONS

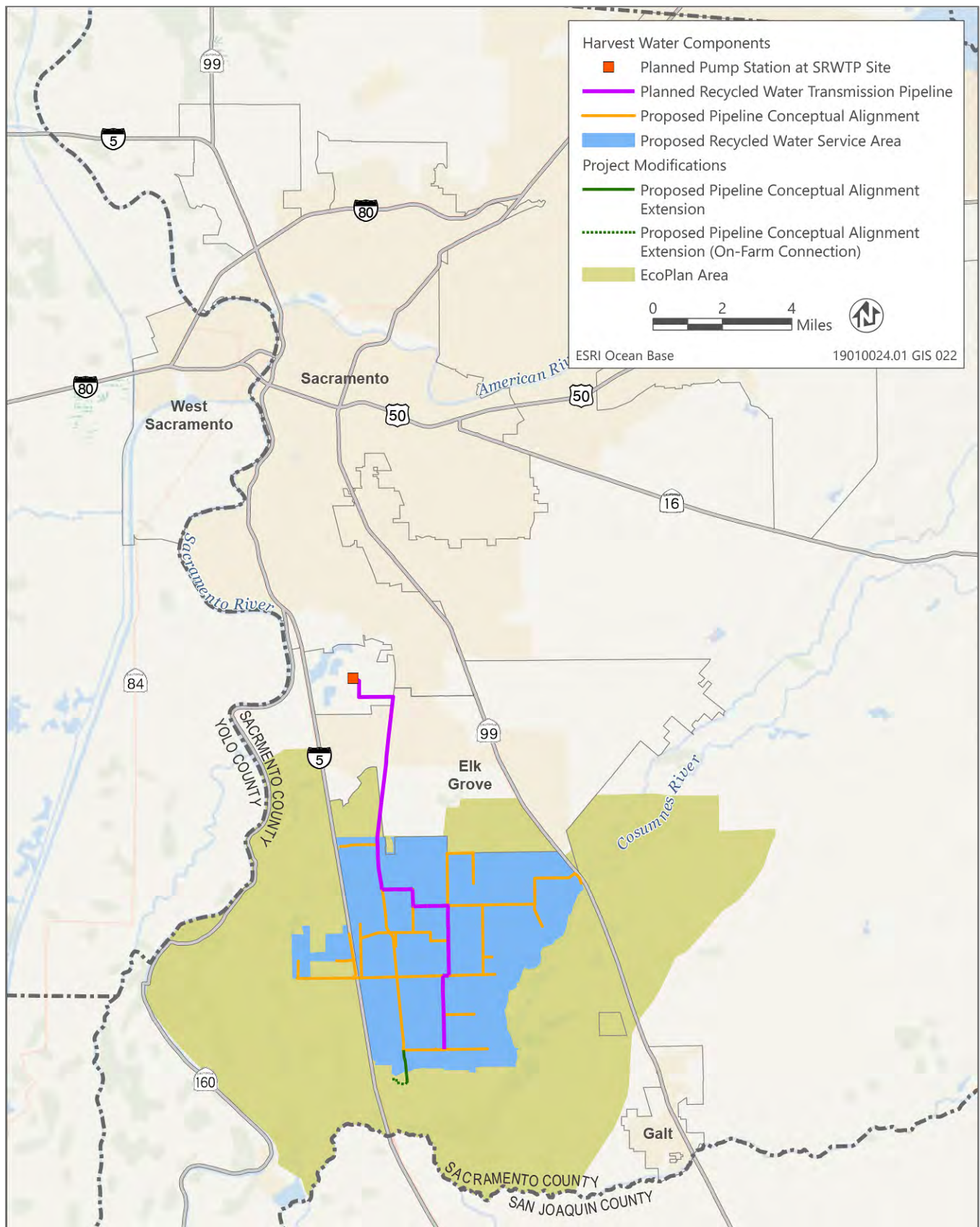
Harvest Water involves delivery of disinfected tertiary-treated water to agricultural customers in Southern Sacramento County. Regional San plans to deliver up to 50,000 acre feet per year (AFY) of Title 22 tertiary recycled water (including wintertime habitat application) to up to approximately 16,000 acres of irrigated lands, 400 acres of managed wetlands within the Stone Lakes National Wildlife Refuge (NWR), and a potential recharge area, as shown in Figures 2-1 and 2-2 (note: the Recycled Water Delivery Area covers approximately 23,000 acres, but not all lands in the area will be irrigated by Harvest Water).

The initial phase of Harvest Water, already addressed at a project level in the South Sacramento County Agriculture and Habitat Lands Recycled Program Environmental Impact Report (Program EIR) (Regional San 2017), includes the installation of a pump station within the Sacramento Regional Wastewater Treatment Plant (SRWTP) site and up to 13.8 miles of off-site transmission pipeline. Figure 2-2 shows the proposed locations of these future facilities. These facilities have been evaluated at a project level CEQA review and need no further CEQA analysis.

Another element of Harvest Water is the Lateral Pipelines and On-Farm Connections Project, which includes the installation of new distribution mains, service connection laterals, and appurtenant facilities that would connect the transmission pipeline to individual customers. Figure 2-2 shows the conceptual alignments for pipelines in public road rights-of-way as well as the proposed recycled water service area. The Lateral Pipelines and On-Farm Connections Project focusses on irrigation during the growing season, which would use an average of 32,500 AFY of recycled water and up to 37,000 AFY in higher demand (drier) years. These facilities were evaluated at a program level of detail in the Program EIR but have since been evaluated in a project-level CEQA review tiering from the Program EIR.

In addition, one of the recognized benefits of Harvest Water is providing a new source of water in the region that will advance the conjunctive (or combined) use of groundwater and surface water (recycled water) resources in southern Sacramento County for agricultural irrigation and habitat protection and enhancement. This conjunctive use will result in a net decrease in groundwater use, resulting in increased groundwater elevations in the aquifer. Accounting of groundwater recharge (including in-lieu recharge) and storage, and infrastructure to support Regional San's access to groundwater under very specific circumstances to support Harvest Water, are the focus of a separate EIR addendum.

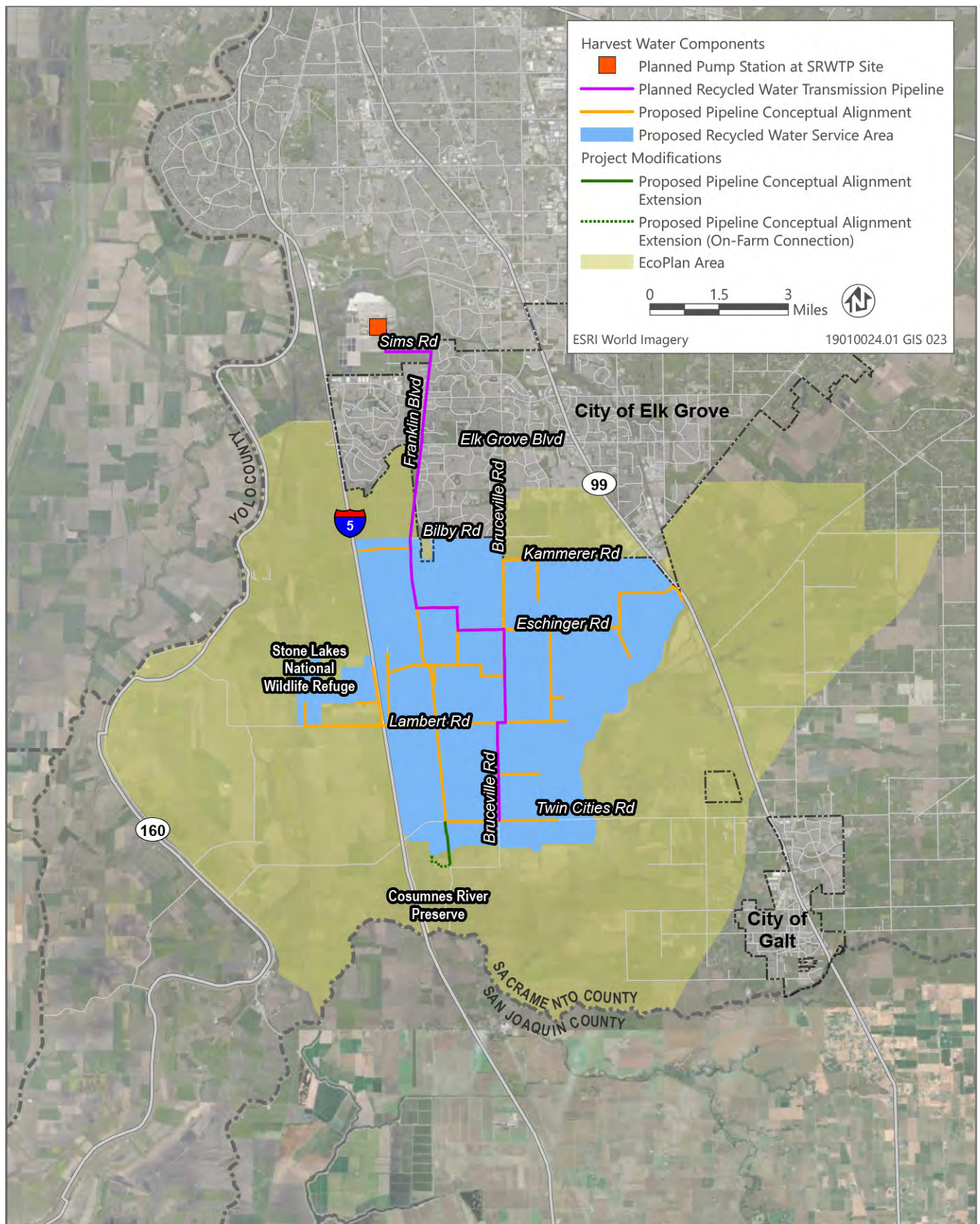
The delivery of up to 17,000 AFY of recycled water for wintertime application was also evaluated at a program level of detail in the Program EIR. The Program EIR identified that this water could be used for irrigation of agricultural land and for groundwater recharge but did not identify any other potential uses for this water. In addition, although the Program EIR identifies various ecological benefits of Harvest Water, it does not identify the details of a cohesive plan to track and record these benefits, nor specific physical actions to further enhance and maximize these benefits. A further evaluation of these program elements—wintertime application of recycled water and elements of the *EcoPlan* that result in physical changes in the environment—are the focus of this addendum and are discussed further below.



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

Figure 2-1 Regional Location





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

Figure 2-2 Project Area

## 2.2 PROJECT LOCATION

The Recycled Water Delivery Area is located within Sacramento County, within portions of unincorporated Sacramento County and portions of the Stone Lakes NWR (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 (Preserve) to the south (Figure 2-2). A portion of the Recycled Water Delivery Area is located west of I-5 and comprises portions of the Stone Lakes National Wildlife Refuge and other lands between the refuge and I-5. As identified above, Harvest Water would provide a network of pipelines and related facilities to deliver recycled water from the SRWTP to landowners in the service area.

Many of the ecological benefits resulting from Harvest Water will occur beyond the boundaries of the Recycled Water Delivery Area. This is due in large part to increased groundwater elevations attributable to Harvest Water extending outside the actual Recycled Water Delivery Area. Therefore, the *EcoPlan* boundary (i.e., *EcoPlan* Area) extends outside the Recycled Water Delivery Area boundary (Figures 2-1 and 2-2) to better capture the total area of Harvest Water ecological benefits. *EcoPlan* activities are proposed within the Recycled Water Delivery Area but would also extend to the *EcoPlan* Area identified in Figures 2-1 and 2-2. Therefore, lands used for other *EcoPlan* activities, such as grazing, fencing, and vegetation management, will lie within the *EcoPlan* Area, but could be within or outside of the Recycled Water Delivery Area. The *EcoPlan* Area is generally consistent with the area of elevated groundwater identified in the Program EIR. As stated above, the *EcoPlan* Area includes the Recycled Water Delivery Area, but also extends west from the Recycled Water Delivery Area boundary to the Sacramento River, south to the Mokelumne River, east towards the City of Galt and community of Wilton, and north into agricultural and open space lands between the northern boundary of the Recycled Water Delivery Area and developed portions of the City of Elk Grove. As the *EcoPlan* Area encompasses all activities evaluated in this addendum, the terms “*EcoPlan* Area” and “project area” can be considered synonymous.

Lands for wintertime application of recycled water will be identified when landowners willing to accept the water are identified. Therefore, specific locations for wintertime application are not yet known. However, all lands used for wintertime application will be within the same Recycled Water Delivery Area shown in Figures 2-1 and 2-2 because the same pipeline network used for summertime recycled water deliveries will also be used for wintertime application. Additionally, as part of the wintertime application of recycled water, Regional San would provide recycled water to the Cosumnes River Preserve (Preserve) via a new proposed pipeline that would extend from the intersection of Twin Cities Road and Franklin Boulevard south to the Preserve, where it would be located on Preserve lands and connect to an existing Preserve operated water intake (Figures 2-1 and 2-2). Including the Cosumnes River Preserve would expand the potential delivery area for recycled beyond the area originally identified in the Program EIR.<sup>1</sup> Although the potential delivery area would be expanded, the quantity of recycled water proposed to be delivered and the area irrigated would not change.

## 2.3 PROJECT CHARACTERISTICS AND CHANGES TO THE PREVIOUSLY APPROVED PROJECT

The project modifications analyzed in this addendum consist of implementation of the *EcoPlan* and wintertime application of recycled water to support various ecological benefits. This section describes these proposed activities and provides information that was not known at the time the Program EIR was prepared.

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<sup>1</sup> The expanded delivery area is within the place of use described in the Order Approving Change in Purpose and Place of Use of Treated Wastewater that was issued by the State Water Resources Control Board Division of Water Rights on September 10, 2019, but is slightly larger than the delivery area identified in maps that are included in the State Water Resources Control Board files for the decision.

## 2.3.1 EcoPlan

As stated above, although the Program EIR identifies various ecological benefits of Harvest Water, it does not identify development of a cohesive plan to track and record these benefits. The Program EIR also does not identify various specific actions currently being considered to further enhance and maximize these benefits. However, since publication of the Program EIR, the *EcoPlan* has been identified as a mechanism to track, record, and validate the ecological benefits resulting from implementation of Harvest Water. As the *EcoPlan* has been developed, it has also come to include various specific actions to further enhance ecological conditions in the *EcoPlan* Area.

An important source of funding for Harvest Water is a grant from the Proposition 1 Water Storage Improvement Program (WSIP). The purpose of the *EcoPlan*, in large part, is to identify, quantify, track, and validate ecological benefits generated by Harvest Water to confirm compliance with grant funding obligations. The *EcoPlan* was not considered directly in the Program EIR because the conditional award of the WSIP grant was not received until after the Program EIR was completed.

Various categories of ecological benefits are addressed in the *EcoPlan*, including the following:

- ▶ Restoring depleted groundwater levels in portions of Southern Sacramento County through in-lieu recharge; that is, through the use of recycled water for irrigation, less groundwater would be used for agricultural operations, supporting increases in groundwater elevations in the aquifer
- ▶ Improving flows in the Cosumnes River through an increase in groundwater levels
- ▶ Improving flows in the Cosumnes River in a manner that improves habitat conditions for salmonids
- ▶ Protecting and enhancing wetland, vernal pool, and riparian ecosystems
- ▶ Supporting riparian corridors along the Cosumnes River and other waterways, particularly groundwater influenced riparian habitat
- ▶ Maintaining and improving agricultural and conservation lands in the *EcoPlan* Area
- ▶ Enhancing overwintering habitat for Sandhill cranes

As stated above, a large component of the *EcoPlan* is to document and report on ecological benefits already considered in the Program EIR. Documentation of these benefits has no new or additional physical effect on the environment and if this was the only function of the *EcoPlan* there would be no need for further CEQA review of the plan. However, the *EcoPlan* also includes specific actions not expressly identified in the Program EIR to further enhance ecological conditions in the *EcoPlan* Area. These actions center around the concept of identifying working lands (i.e., agricultural land, grazing land, pasture) with high potential ecological value, defining ecological enhancements for WSIP benefits, implementing agreements to manage lands for those values, and monitoring performance of those actions. The land management activities addressed in the *EcoPlan* to achieve desired ecological enhancements include adjusting grazing management regimes for greater ecological benefit, replacing or installing new livestock fencing to support grazing management adjustments, vegetation management through use of cover crops and weed management, managing crop residue on agricultural lands to enhance wildlife benefits, habitat enhancement through the planting of desired species and control of undesirable species, and ponding agricultural fields in wintertime to provide foraging and roosting habitat for Sandhill cranes. Each of these are discussed below. The categories of activities are the components of the *EcoPlan* that could result in a change in the physical environment and are the focus of this addendum.

## GRAZING MANAGEMENT

As part of *EcoPlan* implementation, Regional San will identify existing grazing lands in the *EcoPlan* Area with a high potential to provide enhanced ecological values with modified grazing practices. Regional San will enter into agreements with willing landowners (see the section on Landowner Coordination below) to support grazing practices to achieve identified goals and benefits. There would be no changes in land use, only adjustments in grazing practices on lands that are already grazed.

Alterations in grazing practices could include the following activities:

- ▶ Increases or decreases in stocking rates
- ▶ Changes in timing or duration of grazing in particular areas
- ▶ Provision of water from existing or adapted water sources to new locations to attract and keep livestock in particular areas

Although there may be adjustments in stocking rates on particular parcels, there will be no significant increase or decrease in overall numbers of grazing animals as a result of the *EcoPlan*.

Potential ecological benefits that will guide grazing practice adjustments include (but are not limited to) the following benefits:

- ▶ Where vernal pool and riparian habitats may be unintentionally impacted by existing grazing practices, management and timing of stocking rates and adjusting access to these habitats to allow habitat conditions to improve
- ▶ Decreased presence of weeds and invasive or nuisance species
- ▶ Increased or stabilized presence of native plant and wildlife species
- ▶ Improved habitat for songbirds and pollinators
- ▶ Reduced sedimentation through decreased bare ground and increased riparian buffer strips

The specific location and extent of lands where grazing management adjustments will occur is not known at this time and will be largely dependent on the number and location of landowners willing to participate in Harvest Water. However, it is estimated that Harvest Water could improve up to 500 acres of existing vernal habitat that is currently used as pasture, enhance up to 500 acres of riparian forest, and provide passive benefits on up to 2,600 acres resulting from all combined *EcoPlan* activities.

## FENCING

The provision of fencing is closely related to the grazing management activity described above. In order to support altered grazing regimes, Regional San, in coordination with the landowner, may install, fund, or otherwise support installation of additional fencing and gates. Fencing and gates would be consistent with fencing already present on the working lands in the *EcoPlan* Area such as t-posts with either smooth wire or barb wire. Fencing and gates would be located to support greater control of where, and how long, livestock have access to particular areas. Fencing would also be located to support protection of vernal pools, riparian habitat, and other sensitive resources. In some instances, agreements would be secured with willing landowners to implement modifications to existing fencing or provide new fences and gates to control livestock use or timing of use at specific sites where sensitive habitats may passively return with the removal of grazing pressure. If exclusion fencing is applied, alternate sources of water or directional fencing could be used to manage livestock access to water supplies. Because Harvest Water is bringing a large supply of recycled water into much of the *EcoPlan* area (the Recycled Water Delivery Area), which will substantially improve the water supply for the region, the provision of a portion of that water for livestock watering, or the freeing up of groundwater for a modest quantity of livestock watering, is not anticipated to have any water supply impacts in the project area.

## VEGETATION MANAGEMENT

The activity of "vegetation management" in the *EcoPlan* consists of the use of cover crops and weed management to achieve desired ecological conditions. Proper use of cover crops can enhance both vegetation and soil conditions by adding organic material to the soil, improving moisture retention in the soil, and protecting the soil from erosion. Cover crops can also provide forage for various wildlife species, which then may act as prey for raptors and other predators. Planting of cover crops consists of the planting or broadcasting of commercially purchased seed of species



that grow during the desired time, but then either die, or are tilled into the soil when the land is needed for another use. Cover crops would typically be placed on agricultural fields during fallow periods between crops, or between rows of permanent crops (e.g., orchard trees, grape vines). Cover crops can also serve as high value forage for livestock, allowing livestock to graze on the cover crop and subsequently reduce grazing in other areas, such as vernal pool complexes or riparian habitat.

Weed management can provide a similar benefit by removing non-native weed species that are unpalatable to livestock or provide limited nutritional value and supporting a higher density of superior forage species. By improving grazing area quality through weed management, grazing pressure in sensitive areas can potentially be reduced. Weed management can also improve conditions for, and occurrence of, native plant and wildlife species.

Weed management under the *EcoPlan* may also include the removal of invasive non-native species from riparian habitats to improve conditions for native plants and wildlife.

Weed removal under the *EcoPlan* may be implemented through hand removal, use of hand tools (including power tools such as line-trimmers), and mowing. Targeted herbicide application would be implemented by licensed pesticide applicators and in accordance with manufacturer, local, and state guidelines. The extensive existing agricultural and local conservation weed management programs have already stabilized weed populations and are reducing application areas each year. This element of the *EcoPlan* is also intended to support 'good neighbor' weed management (i.e., prevent weed spreading from one property to adjacent properties) for working lands, and be able to address new invasive species before they are able to establish on a case-by-case basis. Grazing with livestock species that will eat the target weed species and timing the grazing to occur before the weed species produces seed may also be used.

## CROP RESIDUE MANAGEMENT

The term "crop residue" refers to a portion of a crop left on agricultural land after harvest. For example, a corn harvester does not collect 100 percent of the crop and a small portion of the kernels are left on the field after harvest. Although a very small portion of the overall crop, crop residue in the *EcoPlan* Area provides an important source of forage for many wildlife species, particularly migratory birds.

As part of the *EcoPlan*, Regional San will seek out landowners willing to either alter harvest practices to increase the proportion of the harvest left in the field as crop residue, or to intentionally leave a portion of a field unharvested. The intent of this management action is to provide additional forage for native wildlife species. If cropping patterns shift away from corn, or small grains and similar winter crops, Harvest Water may contract or otherwise purchase portions of these crops for additional forage value or depredation.

## HABITAT ENHANCEMENT

It is anticipated that ecological benefits resulting from the delivery of recycled water, in-lieu recharge, and raising of groundwater levels resulting from Harvest Water, combined with implementation of the various components of the *EcoPlan*, will be sufficient to meet the WSIP requirements for acreage, density, or other associated performance metrics. However, in the event that WSIP requirements are not met or other ecological benefits are desired, the *EcoPlan* includes the option for active habitat enhancement. Under the *EcoPlan*, active habitat enhancement would not include large-scale earthmoving and associated land disturbance, but would include minor disturbance to land (temporary access roads/minor fill and cut), adding chemical treatment to weed management options, and planting of selected native species. No land disturbance will occur in jurisdictional wetlands or Waters of the United States. The *EcoPlan* identifies that the number of acres actively enhanced in this category will be approximately 500 acres of riparian forest, 1,000 acres of currently managed wetlands (i.e., wetlands on a habitat preserve or similar managed/protected landscape), and 300 acres of currently unmanaged wetlands (i.e., wetlands on lands where habitat protection is not the primary land use goal, such as on grazing lands). These acres will vary somewhat as the implementation of the program starts with no enrollment, reaches the target acreage, and then varies with individual enrollment in each category.

## SANDHILL CRANE ROOSTING HABITAT

Sandhill cranes winter in the *EcoPlan* Area. When present, they roost in shallow water, typically 6-12 inches deep. Pondered agricultural fields are frequently used as roosting habitat. Standing in the shallow water provides protection from predators and other disturbances.

Under the *EcoPlan*, Regional San will work with willing landowners to create temporary ponded water approximately 6-12 inches deep in suitable fields during the months of November through March. Application would be curtailed when the rainfall model projects overtopping of existing berms. Sandhill crane roosting habitat lands would need to be recipients of recycled water under Harvest Water; therefore, only lands in the Recycled Water Delivery Area would be considered for this activity. Many fields in the Recycled Water Delivery Area are already surrounded by berms to support flood irrigation and these fields would be targeted to provide Sandhill crane habitat. Ponding of fields would occur in late fall and winter when Sandhill cranes are present. In addition to providing roosting habitat, as fields are ponded, rodents and invertebrates are driven from the field, which provides a foraging opportunity for Sandhill cranes and other predators.

Up to 17,000 acre-feet of recycled water will be provided by Regional San each year for this activity (including up to 500 AFY that could be used in Stone Lakes if that project element is advanced). It is estimated that this volume of water can provide at least 3,500 acres of suitable Sandhill crane roosting habitat (and potentially double that level if sufficient land is available and landowners are willing). The specific amount and location of land used to create ponded fields may change from year to year depending on landowner interest and hydrologic conditions. The balance of the available 17,000 acre-feet of water not used for Sandhill crane roosting and foraging habitat would be available for wetland pond, duck pond, and other similar habitat uses in the recycled water delivery area outlined in Section 2.3.2 below.

## LANDOWNER COORDINATION

For the above actions, agreements with landowners may include contracting, easements, or other means. Activities would only be undertaken with willing landowners. In limited circumstances, Regional San could also acquire land in fee title to support some activities. Regional San is already undertaking an extensive landowner outreach effort as part of Harvest Water to identify customers for recycled water deliveries. This outreach effort will be extended to find landowners willing to support *EcoPlan* activities on their lands. As stated above, Sandhill crane roosting habitat lands would need to be recipients of recycled water under Harvest Water; therefore, landowners in the Recycled Water Delivery Area would be contacted for this activity. In the remainder of the *EcoPlan* Area that is outside the Recycled Water Delivery Area, Regional San will undertake a separate outreach effort seeking landowners to participate in *EcoPlan* activities.

## 2.3.2 Wintertime Application of Recycled Water

### GENERAL WINTERTIME APPLICATION OF RECYCLED WATER

The Program EIR evaluated up to 17,000 AFY of recycled water being delivered to the Recycled Water Delivery Area for wintertime irrigation. Anticipated uses of the water at that time included cover crop irrigation and irrigation above agronomic rates to promote managed aquifer (groundwater) recharge (much as the State is actively seeking opportunities for using stormwater and wintertime excess surface water flows diverted onto agricultural fields to promote managed aquifer recharge [Flood MAR]). These planned uses for wintertime delivery of recycled water have been updated. Since certification of the Program EIR, additional species-specific targeted options for the wintertime application of recycled water are being considered. As described above for the *EcoPlan*, up to 17,000 acre-feet of recycled water will be provided by Regional San each year to support Sandhill crane foraging and roosting habitat. Additional possible wintertime uses for recycled water not necessarily included in the *EcoPlan*, but evaluated in this addendum, include shallow ponding of water to provide roosting habitat for other waterfowl, shallow ponding of water to improve crop residue management, irrigation for cover-cropping, and irrigation of upland areas adjacent to

vernal pools where additional water could enhance and support vernal pool habitat. Any water supplied to uplands in vernal pool complexes would be provided in a way to avoid any adverse physical effects on vernal pools.

As described further in Chapter 1, "Introduction," wintertime application of recycled water was evaluated in the Program EIR at a program level of detail. This addendum not only evaluates the proposed changes in wintertime use of recycled water from those identified in the Program EIR, but also satisfies the requirements of CEQA Guidelines 15168(c) to confirm that the activity is covered by the Program EIR. Consistent with Section 15168(c)(4), this addendum acts as "...a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR."

## PROPOSED PIPELINE TO THE COSUMNES RIVER PRESERVE

As part of the wintertime application of recycled water, Regional San would provide recycled water to a focused area within the Cosumnes River Preserve (Preserve) for wintertime use via a new proposed pipeline that would be installed primarily within Franklin Boulevard. The recycled water would be used to help fill existing waterfowl ponds if existing surface water sources were not available. Additional details are provided below.

### Background

The Preserve consists of over 50,000 acres of wildlife habitat and agricultural lands owned by seven partners, which include The Nature Conservancy, Bureau of Land Management (BLM), California Department of Fish and Wildlife, Sacramento County Regional Parks, California Department of Water Resources, Ducks Unlimited, and the California State Lands Commission (Cosumnes River Preserve 2020). BLM manages the Preserve, which is located along the Cosumnes River, its floodplains, and riparian habitat. The habitat supports wildlife, including birds that migrate throughout the Pacific Flyway.

The Cosumnes River Preserve Visitor Center is located at 13501 Franklin Boulevard, approximately 1.75 miles south of the Franklin Boulevard /Twin Cities Road intersection. Just north of the visitor center, on both the east and west sides of Franklin Boulevard, the Preserve maintains and manages a network of constructed ponds primarily used to benefit waterfowl. These ponds go through wetting and drying cycles and typically contain water during late fall, winter, and spring on a planned cycle. The water filling the ponds is a mix of rainwater and surface water diverted from the sloughs north of the ponds. The intakes that draw water from the slough are west of Franklin Boulevard as shown in Figure 2-3. From the intakes, a network of gates, culverts, pipes, and pumps moves water through the pond network.

### Proposed Pipeline and Recycled Water Use

Surface water drawn from the slough north of the ponds is a key source of water for keeping the ponds wetted. However, during drought conditions, the reduced rainwater entering the ponds coupled with potential cutbacks to surface water diversion could prevent the pond network from having sufficient water to benefit waterfowl and other wildlife. To maintain the ecological benefits provided by this pond network, even during severe drought conditions, the Preserve is interested in being able to accept delivery of recycled water from Regional San during the winter. The Preserve would obtain the recycled water during periods when rainwater and/or surface water are not sufficient to maintain the waterfowl and wildlife benefits the ponds are managed to provide.

To deliver recycled water to the pond network, a pipeline is needed to convey recycled water from Regional San's already planned distribution pipeline in Twin Cities Road to the Preserve. Harvest Water already includes a planned distribution pipeline along Twin Cities Road (see Figure 2-2) and this pipeline has already received CEQA approval. The new pipeline evaluated in this addendum would extend from the intersection of Twin Cities Road and Franklin Boulevard approximately 0.9 mile south and into the Preserve (Figure 2-3). The pipeline would be up to 16 inches in diameter. From Franklin Boulevard, the pipeline would connect to the Preserve via an on-property service connection lateral that would connect to the existing surface water intake. From the intake, the recycled water could be moved through the existing Preserve infrastructure used to move surface water through the pond network. A conceptual alignment for the on-property service connection lateral is shown in Figure 2-3. The alignment shown follows existing dirt roads and Preserve lands. This conceptual alignment extends approximately 3,100 feet through Preserve lands and represents a worst-case scenario in terms of pipeline length. The recycled water pipeline could ultimately

connect to a part of the pond water distribution infrastructure closer to Franklin Boulevard resulting in a shorter on-property service connection lateral. Consistent with the Landowner Checklist provided in Appendix B, the on-property connection pipeline would be sited to avoid sensitive biological and cultural resources.

A turnout would be located where the pipeline leaves Franklin Boulevard and enters the Preserve property. The turnout would consist of a dedicated customer service line to the property line and facilities such as flow meter, totalizing meter, and isolation valve, which all would be sized to accommodate the peak supplemental supply objective. The ponds would continue to be supplied in part by rainwater and surface water from the slough. The location of the turnout will be determined based on feedback from the Preserve. All turnouts/service connection laterals would require an air gap or other backflow protection for the recycled water system.

Up to 500 acre-feet of recycled water would be used exclusively to irrigate and flood the existing pond network. Water deliveries, on years when they do occur, are expected to occur during October through April. There may be deliveries during other months if there is a need to maintain water in the ponds and recycled water is available without adversely affecting deliveries to other customers.

## Construction

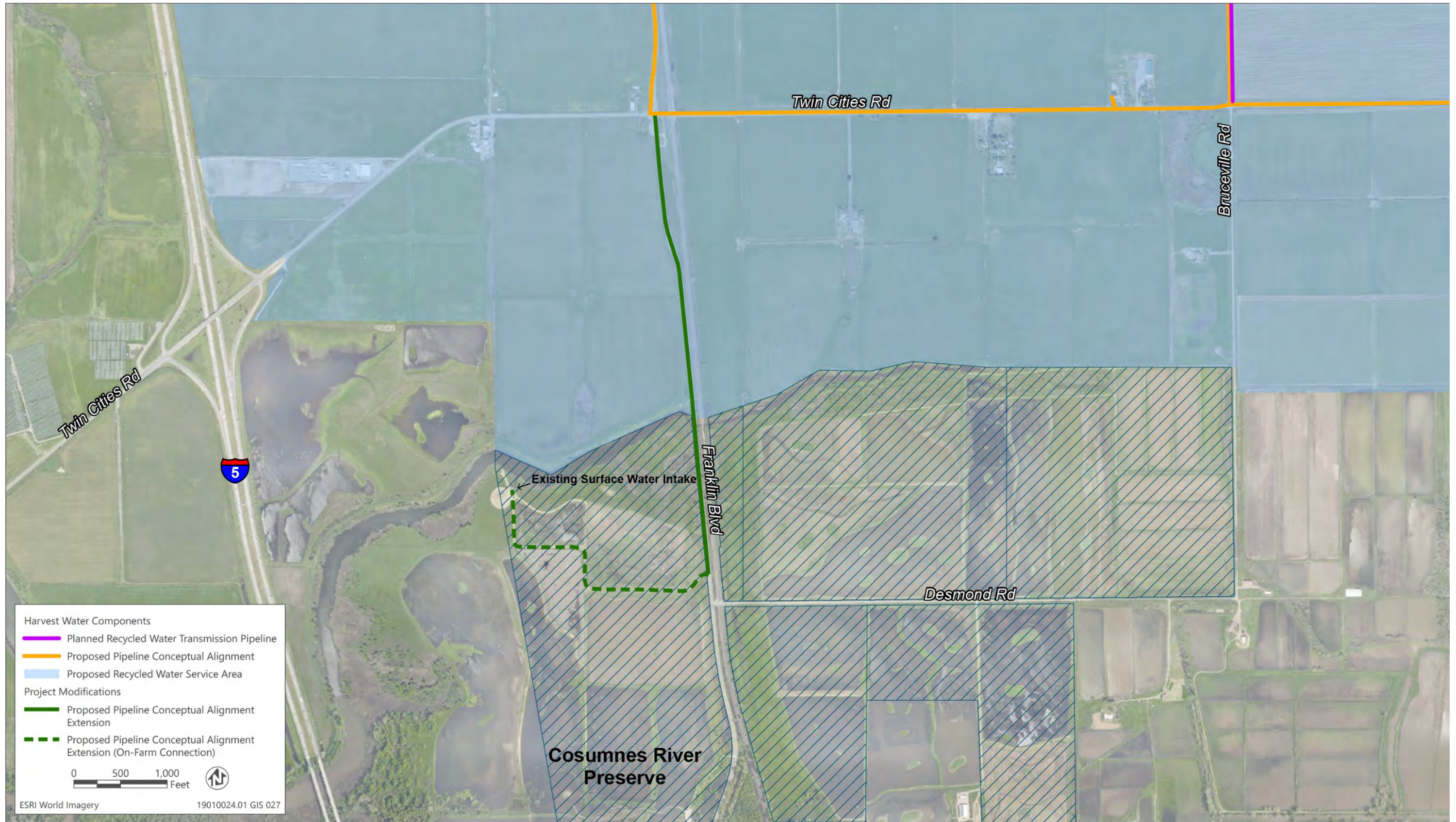
A total of approximately 1.5 miles of pipeline would be installed, including 0.9 mile of pipeline within the public right-of-way (ROW) of Franklin Boulevard and approximately 3,100 feet (or 0.6 mile) within the Preserve lands, with an assumed roughly 400 feet of daily pipeline advancement. Within the public ROW, the construction phases for the advancement of the pipeline include site preparation/asphalt removal, trench excavation, pipeline installation/trench refilling, compaction, and asphalt repair. The on-property service connection lateral would not require asphalt removal or repair as installation would occur along existing dirt roads.

Pipeline installation would be accomplished using open-cut construction, except at specific sensitive crossings (e.g., where Franklin Boulevard crosses the slough), where trenchless construction techniques could be employed. Open-cut and trenchless construction methods are described in the Program EIR as well as the *Lateral Pipelines and On-Farm Connections Project Initial Study Checklist* (Regional San 2020) and these descriptions are applicable to the pipeline installation evaluated here. The Lateral Pipelines and On-Farm Connections Project includes the installation of approximately 25 miles of new distribution mains, service connection laterals, and appurtenant facilities (see the "Proposed Pipeline Conceptual Alignment" on Figures 2-1 and 2-2).

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 applicable laws and regulations. Any material that would not be reused as backfill would be stabilized and stored temporarily at the 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.

The new pipeline would be constructed at the same time as the Lateral Pipelines and On-Farm Connections Project, which is estimated to begin as early as 2022 and continue for approximately two years. Construction of the new pipeline would occur over approximately 20 workdays within that two-year period. Assuming 5-day work weeks, the pipeline would be installed over a 4-week period that would be added to the overall work effort for the Lateral Pipelines and On-Farm Connections Project. Because the same crews installing the Lateral Pipelines and On-Farm Connections Project would install this pipeline, construction hours, equipment, crew size, staging areas, and other construction characteristics would be the same as those described for the Lateral Pipelines and On-Farm Connections Project. Construction of this new pipeline would generate additional spoil (approximately 8,800 cubic yards for 1.5 miles of pipeline construction), resulting in an estimated 550 truck trips to dispose of the spoil compared with the Lateral Pipelines and On-Farm Connections Project, which would generate a total of approximately 219,000 cubic yards of spoil material and up to 13,690 truck trips (round trips).





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

Figure 2-3 Proposed Pipeline Extension to Cosumnes River Preserve

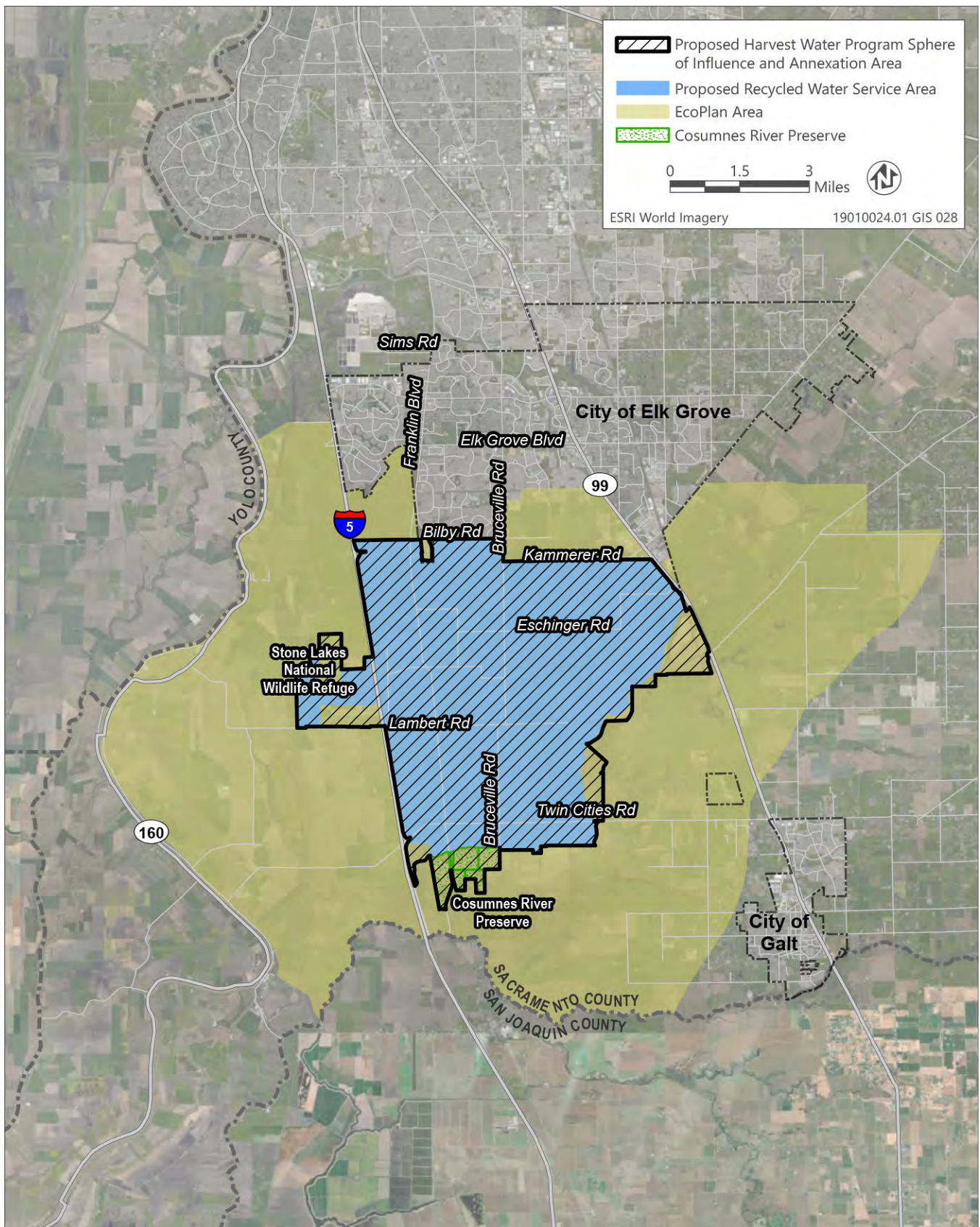


## Maintenance

Similar to the Lateral Pipelines and On-Farm Connections Project, maintenance would primarily involve regular visual inspections of all above ground facilities (estimated to be weekly or monthly depending upon the facilities), and physical inspection of the pipeline 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.

### 2.3.3 Sphere of Influence Expansion and Service Area Annexation

The project modifications would also involve an expansion of Regional San's sphere of influence (SOI) and annexation of the approximately 26,000 acres of South Sacramento County to become part of Regional San's service area specifically for recycled water service only. The area included in the annexation, shown in Figure 2-4, represents a logical extension of the existing Regional San service area, which currently terminates at Bilby Road and Kammerer Road at its southern border, and specifically, to target agricultural groundwater users. Revision of Regional San's service area would require approval by the Sacramento Local Agency Formation Commission (LAFCo). Chapter 4, "Evaluation of Service Area Establishment," summarizes setting information and identifies potential environmental impacts related to LAFCo policies and standards.



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

Figure 2-4 Proposed SOI and Annexation Area

## 3 ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION

### 3.1 EXPLANATION OF CHECKLIST EVALUATION CATEGORIES

This checklist and analysis are not a traditional CEQA "Initial Study" checklist and analysis. The purpose of this checklist is to evaluate the categories in terms of any "changed condition" (i.e., changed circumstances, project changes, or new information of substantial importance) that may result in a different environmental impact significance conclusion from the certified *South Sacramento County Agriculture and Habitat Lands Recycled Water Program EIR* (Program EIR). The row titles of the checklist include the full range of environmental topics, as presented in Appendix G of the State CEQA Guidelines. The column titles of the checklist have been modified from the Appendix G presentation to help answer the questions to be addressed pursuant to CEQA Section 21166 and State CEQA Guidelines Section 15162, 15163, 15164, and 15168. A "no" answer does not necessarily mean that there are no potential impacts relative to the environmental category, but that there is no change in the condition or status of the impact since it was analyzed and addressed with mitigation in the Program EIR. The purpose of each column of the checklist is described below.

#### 3.1.1 Where Impact Was Analyzed in the Program EIR

This column provides a cross-reference to the pages of the prior environmental documents (i.e., the Program EIR) where information and analysis may be found relative to the impact criteria listed under each topic.

#### 3.1.2 Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?

Pursuant to Section 15162(a)(1) of the State CEQA Guidelines, this column indicates whether the changes represented by the current project will result in new significant impacts that have not already been considered by the prior environmental review or a substantial increase in the severity of a previously identified impact.

#### 3.1.3 Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?

Pursuant to Section 15162(a)(2) of the State CEQA Guidelines, this column indicates whether there have been changes to the project site or the vicinity (circumstances under which the project is undertaken) that have occurred subsequent to the prior environmental documents, which would result in the current project having new significant environmental impacts that were not considered in the prior environmental documents or that substantially increase the severity of a previously identified impact.

#### 3.1.4 Any Substantially Important New Information Requiring New Analysis or Verification?

Pursuant to Section 15162(a)(3)(A-D) of the State CEQA Guidelines, this column indicates whether new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous environmental documents were certified as complete, is available. This would require an update to the analysis of the previous environmental documents to verify that the environmental conclusions and mitigations remain valid. If the new information shows that: (A) the project will have one or more significant effects not discussed in the prior environmental documents; or (B) that significant effects previously examined will be substantially more severe



than shown in the prior environmental documents; or (C) that mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or (D) that mitigation measures or alternatives which are considerably different from those analyzed in the prior environmental documents would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative, the question would be answered 'Yes' requiring the preparation of a Subsequent EIR or supplement to the EIR. However, if the additional analysis of the new information completed as part of this environmental checklist review finds that the conclusions of the prior environmental documents remain the same and no new significant impacts are identified, or identified environmental impacts are not found to be substantially more severe, the question would be answered 'Yes, but no significant impact would occur' and no additional EIR documentation (supplement to the EIR or Subsequent EIR) would be required.

### 3.1.5 Do Mitigation Measures in the Program EIR Address/Resolve Impacts?

Pursuant to Section 15162(a)(3) of the State CEQA Guidelines, this column indicates whether the prior environmental documents provide mitigation for Harvest Water that would also apply to impacts associated with the proposed modified components of the program. If "N/A" is indicated, there is no significant impact requiring mitigation with implementation of Harvest Water as analyzed in the Program EIR or with the proposed modifications evaluated in this addendum.

## 3.2 EXPLANATION OF ENVIRONMENTAL SETTING, DISCUSSION, MITIGATION MEASURES, AND CONCLUSION SECTIONS

### 3.2.1 Environmental Setting

The environmental setting includes the existing environmental conditions on the project site and in the surrounding area, as appropriate. Reference is made to the environmental setting provided in the Program EIR because it is relevant to understanding the potential impacts associated with the *EcoPlan* and Wintertime Application Project. Where appropriate, additional information is provided to update the information from the Program EIR and reflect the current environmental setting as well as to describe conditions in portions of the *EcoPlan* Area that are outside the Recycled Delivery Area evaluated in the Program EIR. As the *EcoPlan* Area encompasses all activities evaluated in this addendum, the terms "EcoPlan Area" and "project area" can be considered synonymous.

The Program EIR identified the Recycled Water Delivery Area as being the program area, and evaluated the potential impacts that would occur within this area as a result of implementing Harvest Water. However, as described in Chapter 2, "Description of the Proposed Action," many of the ecological benefits resulting from Harvest Water will occur beyond the boundaries of the Recycled Water Delivery Area because increased groundwater elevations will extend outside the actual Recycled Water Delivery Area (see Figures 2-1 and 2-2). The *EcoPlan* Area, which both encompasses and expands outside the Recycled Water Delivery Area, is generally consistent with the area of elevated groundwater identified in the Program EIR. Land uses in the *EcoPlan* Area are similar to those described in the Recycled Water Delivery Area. Urban land uses include residential and commercial, which are primarily located along Franklin Boulevard within the city of Elk Grove and developed areas just northwest of the City of Galt. Agricultural land uses dominate southern Sacramento County, including cropland, pasture, and open space, with scattered rural residential development also located throughout the area.

Lands used for other *EcoPlan* activities, such as grazing, fencing, and vegetation management (but not provision of Sandhill crane roosting habitat as described in Chapter 2), will lie within the *EcoPlan* Area, but could be within or outside of the Recycled Water Delivery Area. Provision of Sandhill crane roosting habitat will use recycled water for ponding and, therefore, will occur within the Recycled Water Delivery Area.

With one exception, lands used for wintertime application of recycled water (as well as provision of Sandhill crane roosting habitat) will be within the Recycled Water Delivery Area identified in the Program EIR as all wintertime application activities require the delivery of recycled water. The exception is the delivery of recycled water to the Cosumnes River Preserve. As described in Chapter 2, this activity was not considered in the Program EIR. However, the pipeline route and areas proposed for the use of recycled water on the Cosumnes River Preserve fall within the *EcoPlan* Area. A large portion of the pipeline route falls within the right-of-way (ROW) of Franklin Boulevard, consistent with the installation of pipelines in road ROWs considered in the Program EIR. The pond network where the recycled water would be used, and surrounding lands, are consistent with the open space land uses identified in the Program EIR setting. The inclusion of the designated portion of the Cosumnes River Preserve as part of Harvest Water does not add any new or unique setting conditions not already included in the setting described in the Program EIR.

### 3.2.2 Discussion

A discussion of the elements of the checklist is provided under each environmental category to clarify the answers. The discussion provides information about the particular environmental issue, how the project relates to the issue, and the status of any mitigation that may be required or that has already been implemented.

### 3.2.3 Mitigation Measures

Applicable mitigation measures from the prior environmental review that apply to the project are summarized under each environmental category. New mitigation measures are included, if needed.

### 3.2.4 Conclusion

A discussion of the specific conclusion for each topical section relating to the need for additional environmental documentation is contained at the end of each separate section.

## 3.3 IMPACT EVALUATION CHECKLIST

A summary of findings and overall conclusions of the environmental checklist and requirements for further environmental documentation pursuant to the State CEQA Guidelines 15162, 15163, 15164, and 15168 are provided following the checklist items.

### 3.3.1 Aesthetics

Section 3.1, "Aesthetics," of the Program EIR evaluates the impacts of the program on visual resources. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>1. Aesthetics. Would the project modifications:</b>					
a) Have a substantial adverse effect on a scenic vista?	Impact AES-1	No	No	No	N/A
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Impact AES-1	No	No	No	N/A
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Impact AES-1	No	No	No	N/A
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Impact AES-2	No	No	No	Yes

## ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.1-1 through 3.1-4 of the Program EIR is relevant to understanding the potential impacts to aesthetic resources resulting from implementation of the *EcoPlan* and Wintertime Application Project. The larger *EcoPlan* Area (which includes the portion of the Cosumnes River Preserve considered for recycled water deliveries) does not add any new or unique setting conditions related to aesthetic resources that are not already included in the setting described in the Program EIR.

## DISCUSSION

The Program EIR determined that the program elements would not substantially alter existing viewsheds or degrade the existing visual character or quality of the program area; this impact was concluded to be less than significant (Program EIR Impact AES-1). Additionally, the Program EIR determined that the program elements would introduce

new sources of light and glare associated with nighttime construction; this impact was concluded to be less than significant with mitigation (Program EIR Impact AES-2).

There are no new circumstances since certification of the Program EIR that would influence aesthetic impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification

- a) A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area. The project area and its surroundings do not offer expansive views or high value landscape, although the openness of the terrain and fields of row crops offer scenic value. The project area does not provide any aesthetic resources that would be considered a scenic vista. In addition, the project modifications would consist of *EcoPlan* activities, such as grazing, fencing, and vegetation management, as well as wintertime application of recycled water, all of which would occur on agricultural lands. Permanent structures would include agricultural fencing, which would be of a height and material consistent with existing fencing in the area, and a proposed pipeline (underground). Thus, the project modifications would not alter existing visual conditions and therefore would not have a substantial adverse effect on a scenic vista.
- b) Route 160 within Sacramento County is considered an officially designated state scenic highway and Highway 99 is designated as a protected scenic corridor by the Sacramento County General Plan; however, neither of these routes provide views of the project area. Interstate-5 (I-5) is also designated as a protected scenic corridor in the *Sacramento County General Plan* (2011). Limited views of new fencing could potentially be visible from I-5; however, views would be distant with intervening vegetation and development. In addition, the project modifications would be consistent with surrounding agricultural fencing and other infrastructure and would not damage scenic resources within any scenic corridors.
- c) The project modifications would consist of *EcoPlan* activities, such as grazing, fencing, and vegetation management, as well as wintertime application of recycled water, all of which would occur on agricultural lands. Permanent structures would include agricultural fencing and a proposed underground pipeline. Regional San, in coordination with the landowner, may install, fund, or otherwise support installation of additional fencing and gates to control where and how long livestock have access to particular areas and to protect sensitive habitat. Additionally, a new underground pipeline would be installed along Franklin Boulevard south of Twin Cities Road to deliver water to the Cosumnes River Preserve. Besides fencing and the proposed pipeline, the *EcoPlan* activities would not include permanent structures or infrastructure that would be visible or degrade views.

As noted above, the new pipeline would be located primarily within the public ROW of Franklin Boulevard with the on-property connection located on preserve land. Consistent with the Landowner Checklist provided in Appendix A, the on-property connection pipeline would be placed in private roads, agricultural lands, and open space areas where sensitive biological and cultural resources are not present. Pipeline construction activities would temporarily alter the visual character of the project area (along Franklin Boulevard south of Twin Cities Road to the Cosumnes River Preserve) due to excavation activities and the presence of construction equipment/materials and fencing around work areas. Existing residences located near the pipeline alignment and motorists using the affected or adjacent roadways would have views of construction activities, vehicles, equipment, and materials. Residences situated near construction activities would be the most sensitive viewer group. Motorists typically would have fleeting views of construction activities due to the speed of travel with slightly longer views when there is a momentary stoppage in traffic. However, views of construction activities would temporary, and be of disturbed areas would be restored to pre-construction conditions following construction.

The proposed pipeline would be installed underground and, therefore, would not be visible or degrade views once construction is complete. The proposed agricultural fencing and gates would be consistent with fencing already present on the working lands in the *EcoPlan* Area such as t-posts with either smooth wire or barb wire and, thus, would not substantially degrade views. Therefore, the project modifications would not substantially degrade the existing visual quality of the project area or surroundings.

- d) Consistent with what is described in the Program EIR, the project modifications would be located in a primarily agricultural area characterized by orchards, fields of row crops, and scattered rural residences and farm structures (e.g., barns). Existing lighting is minimal. The project modifications would not include lighting at night and, therefore, would not result in a new source of substantial light or glare.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to aesthetics. The combined analysis of aesthetics issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.2 Agriculture and Forest Resources

Section 3.2, "Land Use and Agriculture," of the Program EIR evaluates the impacts of the program on land use and agriculture. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

The following analysis pertains to agriculture and forestry resources. Land use is addressed in Section 3.3.11, "Land Use and Planning," in this addendum.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>2. Agriculture and Forest Resources. Would the project modifications:</b>					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	Impact LUA-2	No	No	No	Yes
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	Impact LUA-2	No	No	No	Yes
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	Not evaluated	No	No	No	N/A
d) Result in the loss of forest land or conversion of forest land to non-forest use?	Not evaluated	No	No	No	N/A
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	Impact LUA-2	No	No	No	N/A

### ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.2-1 through 3.2-9 of the Program EIR is relevant to understanding the potential impacts to agriculture and forest resources resulting from implementation of the *EcoPlan* and Wintertime

Application Project. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

Farmlands are mapped by the State of California Department of Conservation under the Farmland Mapping and Monitoring Program (FMMP). The FMMP was created by the State of California to provide data on farmland quality for use by decision-makers in considering possible conversion of agricultural lands. Under the FMMP, land is delineated into the following eight categories: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, Urban or Built-Up Land, Other Land, and Water. Mapping is conducted on a county-wide scale, with minimum mapping units of 10 acres unless otherwise specified.

Consistent with what is described in the Program EIR, the project modifications would be located in a primarily agricultural area characterized by orchards, fields of row crops, and scattered rural residences and farm structures (e.g., barns). The project area is relatively flat due to active farming and agricultural operations. In addition, portions of the project area are subject to Williamson Act contracts.

The proposed pipeline to Cosumnes River Preserve would primarily be located within the public ROW of Franklin Boulevard. In this area, lands on either side of Franklin Boulevard are designated under the FMMP as Farmland of Statewide Importance and are also subject to Williamson Act contracts. Once the pipeline leaves Franklin Boulevard and extends through preserve land, it would be located on lands designated under the FMMP as Other Land. The land where the pipeline route is proposed is not subject to Williamson Act contracts.

The project area is zoned under various agricultural categories, does not include forest or timberland uses, and is not zoned for these resource types.

## DISCUSSION

The Program EIR determined that the program elements would result in construction-related effects to agricultural lands, including those designated as Important Farmland and lands under Williamson Act contracts; this impact was concluded to be less than significant with mitigation (Program EIR Impact LUA-2).

There are no new circumstances since certification of the Program EIR, other than the updated environmental setting information provided above, that would influence agricultural resources impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a,b) As described in Chapter 2, "Description of the Proposed Action," the project modifications would consist of *EcoPlan* activities, such as grazing, fencing, and vegetation management, as well as wintertime application of recycled water for habitat use, all of which would occur on agricultural lands.

As described in Chapter 2, "Description of the Proposed Action," as part of the project modifications, recycled water would be delivered to the Recycled Water Delivery Area for wintertime irrigation. Possible wintertime uses for this recycled water include shallow ponding of water to provide roosting habitat for other waterfowl, shallow ponding of water to improve crop residue management, and cover-cropping.

Permanent structures would include fencing and a proposed pipeline. Regional San, in coordination with the landowner, may install, fund, or otherwise support installation of additional fencing and gates to control where and how long livestock have access to particular areas and to protect sensitive habitat. The installation of fencing would not convert farmland or conflict with existing zoning for agricultural use or a Williamson Act contract.

Additionally, a new pipeline would be installed along Franklin Boulevard south of Twin Cities Road to deliver recycled water to the Cosumnes River Preserve. The pipeline would be installed in the public ROW of Franklin Boulevard (for about 0.6 mile), where lands on either side of the roadway are designated under the FMMP as Farmland of Statewide Importance and are also subject to Williamson Act contracts. Once the pipeline leaves Franklin Boulevard and extends through preserve land, it would be located on lands designated under the FMMP as Other Land that are not subject to Williamson Act contracts.

If construction activities outside of the Franklin Boulevard ROW (approximately 0.6 mile on Preserve land) require any excavation outside of existing dirt roads, it could involve the removal of topsoil. Heavy equipment (e.g., excavator, dump truck, flat-bed truck, front-end loader) would be used to excavate, dig trenches, transport pipe, and off-load excavated materials. The removal of topsoil and use of heavy equipment, outside of existing road beds, would have the potential to adversely affect long-term soil characteristics and productivity of affected lands (i.e., through compaction/removal of topsoil), potentially causing a degradation of soil quality in such areas.

Construction could potentially affect small areas of land adjacent to the road ROW during construction, however this would be temporary. The proposed pipeline would be buried underground, installed up to 7 feet deep, and soil would be backfilled over the trench per Mitigation Measure LUA-2, below, such that farming would be able to resume following construction. While there could be small areas that are permanently removed from agricultural production, similar to impacts discussed in the Program EIR, the proposed pipeline would have minimal effect on Important Farmland because it would require minimal land, which would not affect existing agricultural operations or be incompatible with existing agricultural operations.

The proposed pipeline would need to be inspected and maintained periodically after construction (for which permanent easements would be acquired as necessary). Inspections for pipelines would be conducted through the utility access manholes installed during construction. Maintenance would consist of monthly inspections of pipelines. The inspections and maintenance activities would generally be isolated and confined to manholes and the immediate vicinity of pipeline alignments. Therefore, maintenance would not be expected to disturb agricultural operations.

In summary, even though the *EcoPlan* activities and wintertime application of recycled water would occur on agricultural lands, none of these activities would be incompatible with existing agricultural operations, would convert Important Farmland, or would conflict with existing zoning for agricultural use or a Williamson Act contract. In addition, Harvest Water, supported by the project modifications, would provide a benefit to agricultural lands in the project area, including those designated as Important Farmland and Williamson Act lands by providing a sustainable water supply that would be available even during droughts, when other groundwater supplies may be limited.

- c,d) The project area is zoned under various agricultural categories, does not include forest or timberland uses, and is not zoned for these resource types. Thus, the project modifications would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. Further, there is no forest or timberland in the area; therefore, the project modifications would not result in the loss of forest land or conversion of forest land to non-forest use.
- e) As described in item a,b) above, the project modifications would be located on and/or be adjacent to Important Farmland as well as lands under Williamson Act contracts; however, these project modifications would not involve any other changes that could result in conversion of farmland to non-agricultural use. In addition, Harvest Water, supported by the project modifications, would provide long-term benefits to agricultural lands by providing a sustainable water supply that would be available even during droughts.

As described in item c,d) above, the project area does not include forest or timberland uses. Thus, the project modifications would not involve any changes that could result in conversion of forest land to non-forest use.

## MITIGATION MEASURES

The following mitigation measure from the Program EIR would address the potential for construction-related effects to agricultural lands, including those designated as Important Farmland and lands under Williamson Act contracts, and reduce the potential impact to a less-than-significant level.



No new agricultural resources impacts would result from the project modifications evaluated in this addendum, and no new mitigation measures are required. The following mitigation measure from the Program EIR would apply to the project modifications evaluated in this addendum.

**Mitigation Measure LUA-2: Stockpile Topsoil**

*The following mitigation measure from the Program EIR would be implemented on agricultural lands and would address potential adverse effects related to the long-term soil characteristics and productivity of this land (i.e., through compaction/removal of topsoil).*

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.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to agriculture and forest resources. The combined analysis of agriculture and forest resources issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.3 Air Quality

Section 3.4, "Air Quality and Greenhouse Gas Emissions," of the Program EIR evaluates the impacts of the program on air quality and greenhouse gas (GHG) emissions. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

The following analysis pertains to air quality. GHG emissions are addressed in Section 3.3.8, "Greenhouse Gas Emissions," in this Initial Study Checklist.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>3. Air Quality. Would the project modifications:</b>					
a) Conflict with or obstruct implementation of the applicable air quality plan?	Impacts AQ-1, AQ-3, and AQ-5	No	No	No	N/A
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Impact AQ-6	No	No	No	N/A
c) Expose sensitive receptors to substantial pollutant concentrations?	Impact AQ-2	No	No	No	N/A
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Impact AQ-4	No	No	No	N/A

## ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.4-1 through 3.4-6 of the Program EIR is relevant to understanding the potential impacts to air quality resulting from implementation of the *EcoPlan* and Wintertime Application Project. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

### Criteria Air Pollutants

Concentrations of criteria air pollutants are used to indicate the quality of the ambient air. Since the Program EIR, the National Ambient Air Quality Standards (NAAQS) for ozone have been updated and are included in Table 3.3-1 along with the California Ambient Air Quality Standards (CAAQS). Ozone, respirable particulate matter (PM<sub>10</sub>), and fine particulate matter (PM<sub>2.5</sub>) are the criteria air pollutants of primary concern in this analysis due to their nonattainment status with respect to the applicable NAAQS and CAAQS in the Sacramento Valley Air Basin (SVAB). Emission source types and health effects are summarized in Table 3.3-2. The attainment status of each criteria air pollutant with respect to the NAAQS and CAAQS in the SVAB has not changed since certification of the Program EIR and is provided in the Program EIR Table 3.4-1 (page 3.4-5). Monitoring data applicable to the project site has been updated since the Program EIR to provide the most current site-specific information and is included in Table 3.3-3.

**Table 3.3-1 National and California Ambient Air Quality Standards**

Pollutant	Averaging Time	California (CAAQS) <sup>a,b</sup>	National (NAAQS) <sup>c</sup>	
			Primary <sup>b,d</sup>	Secondary <sup>b,e</sup>
Ozone	1-hour	0.09 ppm (180 µg/m <sup>3</sup> )	— <sup>e</sup>	Same as primary standard
	8-hour	0.070 ppm (137 µg/m <sup>3</sup> )	0.070 ppm (147 µg/m <sup>3</sup> )	
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m <sup>3</sup> )	35 ppm (40 mg/m <sup>3</sup> )	Same as primary standard
	8-hour	9 ppm <sup>f</sup> (10 mg/m <sup>3</sup> )	9 ppm (10 mg/m <sup>3</sup> )	
Nitrogen dioxide (NO <sub>2</sub> )	Annual arithmetic mean	0.030 ppm (57 µg/m <sup>3</sup> )	53 ppb (100 µg/m <sup>3</sup> )	Same as primary standard
	1-hour	0.18 ppm (339 µg/m <sup>3</sup> )	100 ppb (188 µg/m <sup>3</sup> )	—
Sulfur dioxide (SO <sub>2</sub> )	24-hour	0.04 ppm (105 µg/m <sup>3</sup> )	—	—
	3-hour	—	—	0.5 ppm (1300 µg/m <sup>3</sup> )
	1-hour	0.25 ppm (655 µg/m <sup>3</sup> )	75 ppb (196 µg/m <sup>3</sup> )	—
Respirable particulate matter (PM <sub>10</sub> )	Annual arithmetic mean	20 µg/m <sup>3</sup>	—	Same as primary standard
	24-hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	
Fine particulate matter (PM <sub>2.5</sub> )	Annual arithmetic mean	12 µg/m <sup>3</sup>	12.0 µg/m <sup>3</sup>	15.0 µg/m <sup>3</sup>
	24-hour	—	35 µg/m <sup>3</sup>	Same as primary standard
Lead <sup>f</sup>	Calendar quarter	—	1.5 µg/m <sup>3</sup>	Same as primary standard
	30-Day average	1.5 µg/m <sup>3</sup>	—	—
	Rolling 3-Month Average	—	0.15 µg/m <sup>3</sup>	Same as primary standard
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m <sup>3</sup> )	No national standards	
Sulfates	24-hour	25 µg/m <sup>3</sup>		
Vinyl chloride <sup>f</sup>	24-hour	0.01 ppm (26 µg/m <sup>3</sup> )		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km		

Notes: µg/m<sup>3</sup> = micrograms per cubic meter; km = kilometers; ppb = parts per billion; ppm = parts per million.

- a California standards for ozone, carbon monoxide, SO<sub>2</sub> (1- and 24-hour), NO<sub>2</sub>, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards (CAAQS) are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- b Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- c National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. The PM<sub>10</sub> 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. The PM<sub>2.5</sub> 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. Environmental Protection Agency for further clarification and current federal policies.
- d National primary standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- e National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- f The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants (TACs) with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Source: CARB 2016

**Table 3.3-2 Sources and Health Effects of Criteria Air Pollutants**

Pollutant	Sources	Acute <sup>1</sup> Health Effects	Chronic <sup>2</sup> Health Effects
Ozone	Secondary pollutant resulting from reaction of ROG and NO <sub>x</sub> in presence of sunlight. ROG emissions result from incomplete combustion and evaporation of chemical solvents and fuels; NO <sub>x</sub> results from the combustion of fuels	increased respiration and pulmonary resistance; cough, pain, shortness of breath, lung inflammation	permeability of respiratory epithelia, possibility of permanent lung impairment
Carbon monoxide (CO)	Incomplete combustion of fuels; motor vehicle exhaust	headache, dizziness, fatigue, nausea, vomiting, death	permanent heart and brain damage
Nitrogen dioxide (NO <sub>2</sub> )	combustion devices; e.g., boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines	coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis or pulmonary edema; breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, death	chronic bronchitis, decreased lung function
Sulfur dioxide (SO <sub>2</sub> )	coal and oil combustion, steel mills, refineries, and pulp and paper mills	Irritation of upper respiratory tract, increased asthma symptoms	Insufficient evidence linking SO <sub>2</sub> exposure to chronic health impacts
Respirable particulate matter (PM <sub>10</sub> ), Fine particulate matter (PM <sub>2.5</sub> )	fugitive dust, soot, smoke, mobile and stationary sources, construction, fires and natural windblown dust, and formation in the atmosphere by condensation and/or transformation of SO <sub>2</sub> and ROG	breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, premature death	alterations to the immune system, carcinogenesis
Lead	metal processing	reproductive/ developmental effects (fetuses and children)	numerous effects including neurological, endocrine, and cardiovascular effects

<sup>1</sup> "Acute" refers to effects of short-term exposures to criteria air pollutants, usually at fairly high concentrations.

<sup>2</sup> "Chronic" refers to effects of long-term exposures to criteria air pollutants, usually at lower, ambient concentrations.

Notes: NO<sub>x</sub> = oxides of nitrogen; ROG = reactive organic gases.

Source: EPA 2018

## Monitoring Station Data and Attainment Designations

Criteria air pollutant concentrations are measured at several monitoring stations in the SVAB. The Sacramento County average air quality conditions are most representative of the project area with recent data for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>. Table 3.3-3 summarizes the air quality data from the most recent three years where data is available (2016-2018).

**Table 3.3-3 Summary of Annual Data on Ambient Air Quality (2016-2018)**

	2016	2017	2018
<b>Ozone</b>			
Maximum concentration (1-hr/8-hr avg, ppm)	0.111/0.094	0.121/0.091	0.117/0.098
Number of days state standard exceeded (1-hr/8-hr)	10/33	6/18	8/19
Number of days national standard exceeded (8-hr)	15	9	10
<b>Fine Particulate Matter (PM<sub>2.5</sub>)</b>			
Maximum concentration (24-hour µg/m <sup>3</sup> )	46.8	46.9	228.4
Number of days national standard exceeded (24-hour measured)	3	6.2	16
<b>Respirable Particulate Matter (PM<sub>10</sub>)</b>			
Maximum concentration (µg/m <sup>3</sup> )	88.5	237.7	454.0
Number of days state standard exceeded	0	1	9
Number of days national standard exceeded	31	38	66

Notes: µg/m<sup>3</sup> = micrograms per cubic meter; ppm = parts per million; Ozone and fine particulate matter (PM<sub>2.5</sub>) measurements from Sacramento County. Respirable particulate matter (PM<sub>10</sub>) measurements from SVAB.

Source: CARB 2019

Both the California Air Resources Board (CARB) and U.S. Environmental Protection Agency (EPA) use this type of monitoring data to designate areas according to their attainment status for criteria air pollutants. Table 3.4-1 (page 3.4-5) of the Program EIR shows that the SVAB is in nonattainment for CAAQS and NAAQS for ozone, CAAQS PM<sub>10</sub>, and the NAAQS for PM<sub>2.5</sub>.

## DISCUSSION

The Program EIR determined that the program elements would not exceed any applicable thresholds for criteria air pollutants and precursors or conflict with or obstruct implementation of the applicable air quality plan (Program EIR Impacts AQ-1, AQ-3, and AQ-5); would not expose sensitive receptors to substantial pollutant concentrations (Program EIR Impact AQ-2); would not create permanent or long-term objectionable odors (Program EIR Impact AQ-4); and would not result in a cumulatively considerable contribution to a significant air quality impact (Program EIR Impact AQ-6). These impacts were concluded to be less than significant. In a CEQA document prepared after certification of the Program EIR, the Lateral Pipelines and On-Farm Connections Project was verified to be within the scope of the Program EIR (*Lateral Pipelines and On-Farm Connections Project Initial Study Checklist* [Regional San 2020a]). As part of this CEQA analysis, emissions of criteria pollutants resulting from the construction and operation of the lateral pipelines and on-farm connections were modelled and those emissions were added to the emissions resulting from the pump station and transmission pipeline evaluated at a project level of detail in the Program EIR (Regional San 2020b). The total emissions from the construction and operation of all these project elements were found to remain below applicable Sacramento Metropolitan Air Quality Management District (SMAQMD) mass emissions significance thresholds. Therefore, construction and operation of the Lateral Pipelines and On-Farm Connections Project did not result in any new significant air quality impacts, or substantially more severe significant air quality impacts, compared to those identified in the Program EIR.

There are no new circumstances since certification of the Program EIR, other than the updated environmental setting information provided above, that would influence air quality impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

- a) The project modifications would be located within the SVAB. Air quality planning for the Basin is under the jurisdiction of the SMAQMD. The SMAQMD has adopted Air Quality Management Plans (AQMPs) to reduce emissions of reactive organic gases (ROGs) and oxides of nitrogen (NO<sub>x</sub>) (ozone precursors), PM<sub>10</sub>, and PM<sub>2.5</sub> to lead the SVAB into compliance with the NAAQS and CAAQS. The SVAB is currently designated as nonattainment for NAAQS and CAAQS ozone standards, CAAQS for PM<sub>10</sub> standards, and NAAQS for PM<sub>2.5</sub> standards. The AQMPs rely on emissions forecasts based on demographic and economic growth projections provided by the County and City general plans. Projects whose growth is included in the projections used in the formulation of the AQMPs are considered to be consistent with the plans and would not interfere with its attainment plans. Because the project would not modify land uses, the project would be consistent with SMAQMD's AQMPs. Furthermore, as discussed in the following impact discussions, the short-term construction and long-term operation of the project modifications would not generate criteria air pollutants that would exceed the SMAQMD significance thresholds, which were developed to determine whether a project would cumulatively contribute to the SVAB nonattainment designations. The project modifications would not conflict with applicable air quality plans and would not cause any additional or worse impacts as compared to those identified in the Program EIR.
- b) Consistent with what is described in the Program EIR, construction of the project modifications would result in emissions of criteria air pollutants (e.g., PM<sub>10</sub> and PM<sub>2.5</sub>) and precursors (e.g., NO<sub>x</sub> and ROGs) in the City of Elk Grove and Sacramento County, within the jurisdiction of the SMAQMD. The SVAB is currently designated as nonattainment for NAAQS and CAAQS ozone standards, CAAQS for PM<sub>10</sub> standards, and NAAQS for PM<sub>2.5</sub> standards.

The project modifications include installation of approximately 1.5 miles of pipeline that would be located within the public ROW of Franklin Boulevard and within the Cosumnes River Preserve lands. The new pipeline would be constructed at the same time as the Lateral Pipelines and On-Farm Connections Project, which is estimated to begin as early as 2022 and continue for approximately two years. This construction period could

also overlap with active construction of the pump station and/or transmission pipeline. Therefore, to assess the maximum potential total program emissions, emissions from all three activities should be considered together, (1) pump station and transmission pipeline construction; (2) lateral pipelines and on-farm connections construction; and (3) pipeline connection to the Cosumnes River Preserve construction and operation (1.5-mile pipeline).

Construction of the 1.5-mile pipeline would occur over approximately 20 workdays somewhere within the 2-year construction window identified for the Lateral Pipelines and On-Farm Connections Project. Assuming 5-day work weeks, the pipeline would be installed over a 4-week period that would be added to the overall work effort for the Lateral Pipelines and On-Farm Connections Project. Construction of the 1.5-mile pipeline would not increase the intensity of overall project construction activities. No new construction equipment or personnel would be added to install this pipeline. A portion of the construction equipment and personnel installing the Lateral Pipelines and On-Farm Connections Project would, at some point, divert to install the 1.5-mile pipeline. With no new equipment or personnel added to the overall construction effort, the maximum daily emissions (i.e., the maximum emissions during the most intense day of construction activity) would not change. Although additional days may be added to the overall construction effort, the maximum single day of emissions would not change. This conclusion is also supported by the fact that for the transmission pipeline, pipeline segments in excess of 70 inches in diameter will be installed; and for the lateral pipelines, pipeline segments in excess of 40 inches in diameter will be installed. The 1.5-mile pipeline will be approximately 16 inches in diameter, requiring less excavation, less equipment, and smaller horsepower equipment, resulting in lower daily emissions than larger diameter pipelines. Therefore, adding the 1.5-mile pipeline to Harvest Water will not result in the exceedance of any SMAQMD emissions criteria measured in lbs/day.

SMAQMD also has emissions criteria for PM<sub>10</sub> and PM<sub>2.5</sub> measured in tons/year. For these yearly total emissions criteria, it would be appropriate to add emissions from the 1.5-mile pipeline to those calculated for the pump station, transmission line, and lateral pipelines and on-farm connections. As stated above, detailed air quality and GHG emissions modeling was conducted as part of the Lateral Pipelines and On-Farm Connections Project as well as for the Program EIR for the transmission pipeline and pump station. Because the 1.5-mile pipeline would involve similar activities (i.e., installation of underground pipelines) in the same project area during the same construction period, this modeling was used to calculate estimated emissions from the 1.5-mile pipeline. Table 3.3-4 summarizes the estimated maximum annual PM<sub>10</sub> and PM<sub>2.5</sub> emissions from construction activities. The Lateral Pipelines and On Farm Connections Project air quality modelling assumed 25 miles of pipeline installation and the transmission main air quality modelling assumed 18.5 miles of pipeline installation. Combining the total PM<sub>10</sub> and PM<sub>2.5</sub> emissions from these two pipeline installation activities and dividing by the 38.8 total miles of pipeline results in average emissions of 0.4 tons of PM<sub>10</sub> and 0.4 tons of PM<sub>2.5</sub> emitted per a mile of pipeline installed. Note that this average includes installation of pipelines with diameters larger than the 16-inch diameter pipeline planned for the 1.5-mile pipeline. Therefore, although these average emissions are higher than what would be expected for the 1.5-mile pipeline, they are still used for this calculation. Taking these per mile emissions estimates, it is assumed that the 1.5-mile pipeline would result in a total of 0.6 tons of PM<sub>10</sub> emissions and 0.6 tons of PM<sub>2.5</sub> emissions. Adding these emissions to the construction emissions from the Lateral Pipelines and On Farm Connections Project, the transmission main, and pump station, results in maximum annual emissions of 11.1 tons of PM<sub>10</sub> and 3.5 tons of PM<sub>2.5</sub>. These results remain below the applicable SMAQMD thresholds.

SMAQMD's project thresholds are intended to maintain or achieve attainment designations in the SVAB with respect to the CAAQS and NAAQS. The NAAQS and CAAQS in turn were developed based on health-based criteria to be protective of public health. As indicated in the Program EIR, SMAQMD requires all construction projects to implement the Basic Construction Emission Control Practices, under Rule 403, to reduce overall fugitive dust and exhaust emissions. If the project does not exceed the District's thresholds its individual emissions are not anticipated to cause or contribute towards nonattainment designations. Therefore, a project with estimated emissions below SMAQMD's thresholds of significance would not exacerbate or interfere with the region's ability to attain the health-based standards. Furthermore, because emissions of

criteria air pollutants would not cause an exceedance of the NAAQS and CAAQS the project would not cause adverse health impacts as the standards are set to be protective of public health. Because the project's construction phase emissions would be below SMAQMD's thresholds, they would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Operational emissions from the 1.5-mile pipeline would primarily be from the vehicle trips associated with routine maintenance of the pipeline. Because maintenance vehicle trips would be conducted weekly or monthly depending upon the facilities, emissions associated with trips would be nominal and would not be anticipated to exceed SMAQMD thresholds of significance. As indicated in the Program EIR, the majority of operational emissions from the overall Program would be from energy usage associated with the Pump Station. As shown in Tables 3.4-8 and 3.4-9 of the Program EIR (page 3.4-22 of Draft EIR), operational emissions, including the pump station, are more than 40 percent below SMAQMC thresholds, and in one case, more than 99 percent below the threshold. The addition of a nominal amount of operational emissions associated with operation of the 1.5-mile pipeline would not result in an exceedance of any SMAQMD thresholds. Similarly, activities associated with the *EcoPlan* would involve fence installation, changes in grazing practices, and other activities that would not generate substantial emissions. These activities would be similar to existing agricultural operations, would involve minor equipment, and earth movement would be limited to fence installation. As the project's operational emissions would be below SMAQMD's recommended thresholds, they would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Because the ambient air quality standards are established to be protective of public health, adverse health impacts to receptors are not anticipated as the project modification's emissions would be below SMAQMD's thresholds.

Therefore, the short-term construction and long-term operations contribution of criteria air pollutants and precursors, combined with other cumulative sources of criteria air pollutants and precursors in the region would not be cumulatively considerable and would not contribute to adverse health impacts.

**Table 3.3-4 Summary of Daily Maximum Emissions of Criteria Air Pollutants and Precursors Associated with Construction of Harvest Water and the Project Modifications**

Program Element	Pipeline Miles	PM <sub>10</sub> tons/year	PM <sub>2.5</sub> tons/year
Lateral Pipelines and On-Farm Connections (25 miles)	25	9	2
Transmission Pipeline (13.8 miles)	13.8	0.6	0.4
<b>Total (38.8 miles)</b>	<b>38.8</b>	<b>9.6</b>	<b>2.4</b>
Emissions per pipeline mile		0.4	0.4
Emissions for 1.5 miles of pipeline	1.5	0.6	0.6
Pump Station		0.9	0.5
<b>Total</b>		<b>11.1</b>	<b>3.5</b>
SMAQMD Threshold of Significance		14.6	15

Notes: PM<sub>10</sub> = respirable particulate matter with aerodynamic diameter of 10 micrometers or less; PM<sub>2.5</sub> = fine particulate matter with aerodynamic diameter of 2.5 micrometers or less; SMAQMD = Sacramento Metropolitan Air Quality Management District.

Maximum emissions include compliance with SMAQMD's Basic Construction Emission Control Practices (Best Management Practices) under Rule 403.

Total values may not sum exactly due to rounding. See Appendix A of the *Lateral Pipelines and On-Farm Connections Project Initial Study Checklist* (Regional San 2020a) for detailed input parameters and modeling results.

Source: Calculated by Ascent Environmental in 2020

- c) Particulate exhaust emissions from diesel-fueled engines (i.e., diesel PM) were identified as a Toxic Air Contaminant (TAC) by CARB in 1998. The potential cancer risk from the inhalation of diesel PM outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs (CARB 2003: K-1). With regard to exposure of diesel PM, the dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher level of health

risk for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period. According to the Office of Environmental Health Hazard Assessment (OEHHA), when a Health Risk Assessment is prepared to project the results of exposure of sensitive receptors to selected compounds, exposure of sensitive receptors to TAC emissions should be based on a 70- or 30-year exposure period; however, such assessments should be limited to the duration of activities associated with the project modifications if emissions occur for shorter periods (OEHHA 2015:5-23, 5-24).

The TAC that is the focus of this analysis is diesel PM because it is known that diesel PM would be emitted during project construction. Although other TACs exist (e.g., benzene, 1,3-butadiene, hexavalent chromium, formaldehyde, methylene chloride), they are primarily associated with industrial operations and the project site would not include any industrial sources of other TACs. Construction-related activities that would result in temporary, intermittent emissions of diesel PM would be from the exhaust of off-road equipment.

Potential exposure levels of diesel PM, analyzed in the Program EIR, have not changed. The sensitive receptors closest to the proposed pipeline consist of residences located along Franklin Boulevard. Due to the temporary nature of construction activities, exposure of any particular sensitive receptor would be brief (i.e., days) and would not be expected to cause an incremental increase in cancer risk greater than 10 in 1 million or a hazard index greater than 1.0. Because construction would not occur near a particular receptor for an extended period of time, any TAC exposure would be short-term and temporary.

- d) Consistent with what was described in the Program EIR, construction activities would not generate permanent or long-term objectionable odors. The project's minor odors from the use of heavy-duty diesel equipment, and the laying of asphalt during project-related construction activities would be intermittent and temporary. While the pipeline is estimated to advance approximately 400 feet per day, construction activity would only occur in the vicinity of sensitive receptors temporarily. In addition, emissions from the source would dissipate rapidly with an increase in distance. Sensitive receptors in proximity to the project site are as close as 100 feet, but exposure would be brief and intermittent. As evaluated in the Program EIR, the operations and maintenance of the project modifications were determined not to be a substantial odor source. The other elements of the *EcoPlan* and wintertime application activities mirror, or repeat standard activities that already occur in the project area. They are not considered activities that would emit objectionable odors that would affect a substantial number of people.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to air quality. The combined analysis of air quality issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.



### 3.3.4 Biological Resources

Section 3.5, "Biological Resources," of the Program EIR evaluates the impacts of the program on biological resources. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>4. Biological Resources. Would the project modifications:</b>					
a) 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 Wildlife or the U.S. Fish and Wildlife Service?	Impact BIO-1	No	No	No	Yes
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	Impact BIO-2	No	No	No	Yes
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Impact BIO-3	No	No	No	Yes
d) 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?	Impact BIO-4a, Impact BIO-4b	No	No	No	Yes
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Impact BIO-5	No	No	No	Yes
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Impact BIO-6	No	No	No	N/A

## ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.5-1 through 3.5-4 of the Program EIR is relevant to understanding the *EcoPlan* and Wintertime Application Project's potential impacts to biological resources. The following information provides an update of information from the Program EIR and reflects the current environmental setting. In addition, the *Biological Resources Technical Report for the Sacramento Regional County Sanitation District Harvest Water Program, Lateral Pipelines and On-Farm Connections Project* (Regional San 2020c) evaluated biological resources in the project area.

The Program EIR identified 32 special-status species in the program area. In addition to the species discussed in the Program EIR, eight others are known to occur or have the potential to occur within the project area: pappose tarplant (*Centromadia parryi* ssp. *parryi*), lesser sandhill crane (*Grus canadensis*) (wintering), greater sandhill crane (*Grus canadensis tabida*) (wintering), least bittern (*Ixobrychus exilis*) (nesting), California black rail (*Laterallus jamaicensis coturniculus*) (year round), yellow warbler (*Setophaga petechia*) (nesting), crotch bumble bee (*Bombus crotchii*), and mid-valley fairy shrimp (*Branchinecta mesovallensis*).

Sensitive biological resources in the project area include raptor nests, elderberry shrubs, giant garter snake habitat, seasonal wetlands, trees, drainages, and vernal pool habitat. Stone Lakes National Wildlife Refuge (NWR), Cosumnes River Preserve, and the Cosumnes River are also within the project area.

The project area is located within the South Sacramento Habitat Conservation Plan (SSHCP) area and Regional San is a Plan Partner that is eligible to utilize the SSHCP as a "Participating Special Entity." Harvest Water is identified in the SSHCP as providing recycled water service from the existing Sacramento Regional Wastewater Treatment Plant to agriculture and habitat lands in the southwest portion of the SSHCP Plan Area. Consistent with the current Harvest Water project description, the SSHCP states that recycled water would be used to irrigate agricultural lands and improve aquatic and terrestrial habitat on existing and future conservation lands near the existing Cosumnes River Preserve. Recycled water may also be used to irrigate reestablished/established wetlands and groundwater recharge basins. Both construction and maintenance of facilities associated with Harvest Water are SSHCP Covered Activities.

At the time the Program EIR was certified, the SSHCP had not yet been completed. Harvest Water is a covered activity in the SSHCP, and therefore, it was anticipated that participation in the SSHCP would provide mitigation for covered species. With the SSHCP now adopted and in effect, the habitat compensation measures provided in the Program EIR are superseded by the habitat compensation protocols avoidance and minimization measures (AMMs) included in the SSHCP.

## DISCUSSION

The project area now encompasses the *EcoPlan* area, which includes sensitive habitats such as the Cosumnes River Preserve and the Cosumnes River. In addition, eight new special-status species have the potential to occur within the expanded project area. However, these changes would not appreciably alter the type or extent of impacts covered under the Program EIR and previous addenda; therefore, impacts on terrestrial biological resources resulting from construction and operation of the project modifications and the implementation and effectiveness of associated mitigation measures would not be different from that described in the Program EIR and previous addenda.

The Program EIR determined that the program elements could adversely affect sensitive species and their habitat (Program EIR Impact BIO-1), could adversely affect riparian habitat or other sensitive natural community (Program EIR Impact BIO-2), could adversely affect federally protected wetlands (Program EIR Impact BIO-3), could interfere with the movement or reproduction of sensitive or important fish species in the Sacramento River or Delta region (Program EIR Impact BIO-4b), and could conflict with local policies and ordinances protecting biological resources (Program EIR Impact BIO-5); these impacts were concluded to be less than significant with mitigation. Additionally, the program elements could interfere with the movement of native species; this impact was concluded to be less than significant (Program EIR Impact BIO-4a). Finally, the Program EIR determined that the program elements would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local,

regional, or state habitat conservation plan because there was no such adopted plan at the time the Program EIR was prepared; it was thus concluded that there would be no impact (Program EIR Impact BIO-6).

Other than the addition of species identified above, addition of service to the Cosumnes River Preserve, and approval of the SSHCP, there are no new circumstances since certification of the Program EIR that would influence biological resources impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

- a) Although additional special-status species have potential to occur in or near the project area, potential impacts to similar species were covered in the Program EIR. As with the impacts described in the Program EIR, construction of the project modifications could kill or injure individuals, particularly during ground-disturbing activities such as grubbing, grading, and excavating. Use of equipment and storage/moving of construction materials could also impact sensitive species. Habitat for sensitive species could also be adversely affected by implementation of the project modifications, and this could indirectly impact sensitive species. Substantial impacts to sensitive species, either directly, or indirectly through habitat impacts, may occur. Therefore, the types and intensities of impacts to special-status species as a result of implementation of the project modifications would be similar to those described in the Program EIR.
- b) There are sensitive natural communities, including the Cosumnes River Preserve, in the project area and pipeline construction could adversely affect riparian habitat or other sensitive natural communities, including use of equipment and excavation during construction. Sensitive natural communities similar to those in the project area (i.e., Stone Lakes NWR) were covered by the Program EIR. In addition, the types of impacts and facilities constructed, intensity of construction, and amount of habitat affected by construction of the project modifications would be less than the impacts described in the Program EIR as the project modifications would only include construction of one pipeline, fencing, and minor land alterations. In addition, the project modifications would support riparian corridors along the Cosumnes River and other waterways. The project modifications would include managing grazing and installing fencing to reduce impacts on vernal pools and riparian areas. These activities are estimated to improve up to 500 acres of existing vernal habitat that is currently used as pasture, and enhance up to 500 acres of riparian forest.
- c) Wetlands, drainages, and vernal pools within the project area could be considered protected wetlands. However, no land disturbance would occur in jurisdictional wetlands or Waters of the United States. In addition, the project modifications would improve flows in the Cosumnes River and protect and enhance wetland and vernal pool habitat. Therefore, impacts to wetlands would be less than those described in the Program EIR.
- d) Although the drainage corridors within the project area likely function as low quality migratory corridors, indirect impacts to drainage corridors could occur during pipeline construction. Similar to impacts to migratory corridors described in the Program EIR, direct impacts to drainage corridors from the project modifications would be limited to construction, as these features would be available for use as movement corridors following construction. Installing new livestock fencing could also interfere with the movement of migratory wildlife species. However, fencing and gates would be consistent with fencing already present on agricultural lands in the project area. There would not be any other permanent facilities constructed. Therefore, the project modifications would not interfere substantially with movement of migratory species.

In addition, the Program EIR evaluated the potential for the Harvest Water Program to reduce flows in the Sacramento River. However, the project modifications would not alter the operation of recycled water facilities or the transfer of recycled water to the South County rather than the Sacramento River. Furthermore, the project modifications would be conducted consistent with the ecosystem benefits of the Harvest Water Program. Therefore, the project modifications would not reduce flows in the Sacramento River or affect movement or reproduction of sensitive or important fish species in the Sacramento River. The project modifications would not substantially interfere with the movement of migratory species and would result in less of an impact on migratory corridors than described in the Program EIR.

- e) The Sacramento County General Plan (Sacramento County 2011) and Bufferlands Master Plan (Regional San 2000) have policies regarding habitat and species preservation, and any tree removal would be subject to the Sacramento County Tree Preservation Ordinance. Drainages, wetlands, special-status species, and sensitive habitats are within the project area, and ground-disturbing activities could result in adverse effects to these sensitive resources. The Program EIR evaluated the potential for tree trimming and removal to accommodate construction and installation of facilities under the program. No tree removal or trimming is anticipated with implementation of the project modifications, except for potentially the removal of small specimens of non-native species as part of habitat enhancement efforts. In addition, as described above and consistent with the conclusions in the Program EIR, sensitive resources would be avoided when possible and any impacts to sensitive resources would be mitigated. Therefore, conflicts with local policies and regulations would be less than those described in the Program EIR.
- f) Harvest water is expressly identified as a covered activity in the SSHCP (County of Sacramento et al. 2018). The project modifications support the implementation of Harvest Water. In addition, installation of the proposed pipeline is a covered activity under the SSHCP. Other proposed project modifications are extensions of already implemented agricultural operations, would not require take authorization, and would not result in any conversion of land uses that would trigger SSHCP fees. Therefore, these activities would not be subject to the SSHCP or require SSHCP authorization. Regional San is already coordinating with the South Sacramento Conservation Agency regarding the details of use of the SSHCP for Harvest Water and is applying to be identified as a Participating Special Entity consistent with SSHCP processes. Therefore, the project modifications would comply with terms and conditions of the SSHCP to gain regulatory permits and approvals and implementation of the project modifications would not conflict with the provisions of the SSHCP.

## MITIGATION MEASURES

The following mitigation measures from the Program EIR would address the potential for adverse effects to sensitive species and their habitat, riparian habitat or other sensitive natural community, and federally protected wetlands; and conflicts with local policies and ordinances protecting biological resources. With implementation of these mitigation measures, potential impacts to biological resources would be reduced to a less-than-significant level.

No new biological resources impacts would result from the project modifications evaluated in this addendum, and no new mitigation measures are required. The following mitigation measures from the Program EIR would apply to the project modifications evaluated in this addendum.

### **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**

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 Program). Avoidance and minimization of habitat areas will be accomplished during project design work, and/or during construction by implementing best management practices, including establishment of buffer zones, installation of fencing around sensitive habitats, and implementation of a storm water pollution prevention plan (SWPPP) to reduce the potential for sediments or contaminants to enter sensitive habitats.

### **Mitigation Measure BIO-1b: Mitigate Impacts to Habitats and Land Cover Types Used by HCP-Covered and Non-HCP-Covered Sensitive Species**

*Mitigation Measure BIO-1b in the Program EIR provides mitigation measures for habitats covered in the SSHCP. At the time the Program EIR was certified, the SSHCP had not yet been completed. Harvest Water is a covered activity in the SSHCP, and therefore, it was anticipated that participation in the SSHCP would provide mitigation for covered species.*

*With the SSHCP now adopted and in effect, the habitat compensation measures provided in Mitigation Measure BIO-1b are now superseded by the habitat compensation protocols avoidance and minimization measures (AMMs) included in the SSHCP. The original text from Mitigation Measure BIO-1b in the Program EIR is not reproduced here as this measure is no longer in effect.*

*The SSHCP AMMs are provided in SSHCP Section 5.4.2, "Covered Species Take Avoidance and Minimization Measures," at <https://www.southsachcp.com/>. A file listing only the AMMs is available at <https://planning.saccounty.net/PlansandProjectsIn-Progress/Documents/SSCHP/AMMs%20Table.pdf>.*

*The Mitigation Monitoring and Reporting Program (MMRP) for the Program EIR is being updated to reflect the details of the approved SSHCP.*

### **Mitigation Measure BIO-1c: Mitigate Impacts to HCP-Covered Species**

*Mitigation Measure BIO-1c in the Program EIR provides mitigation measures for plant and wildlife species covered in the SSHCP. At the time the Program EIR was certified, the SSHCP had not yet been completed. Harvest Water is a covered activity in the SSHCP, and therefore, it was anticipated that participation in the SSHCP would provide mitigation for covered species.*

*With the SSHCP now adopted and in effect, the species-specific measures provided in Mitigation Measure BIO-1c are now superseded by the habitat compensation protocols AMMs included in the SSHCP. The original text from Mitigation Measure BIO-1c in the Program EIR is not reproduced here as this measure is no longer in effect.*

*The SSHCP AMMs are provided in SSHCP Section 5.4.2, "Covered Species Take Avoidance and Minimization Measures," at <https://www.southsachcp.com/>. A file listing only the AMMs is available at <https://planning.saccounty.net/PlansandProjectsIn-Progress/Documents/SSCHP/AMMs%20Table.pdf>.*

*Also, see the Landowner Checklist (Appendix A to this document), which summarizes the covered species AMMs.*

*The MMRP for the Program EIR is being updated to reflect the details of the approved SSHCP.*

### **Mitigation Measure 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 feasibly 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.

### **Mitigation Measure 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. *With the SSHCP now adopted and in effect, the SSHCP provides a mechanism for FESA, CESA, and Clean Water Act authorization. Regional San may use the SSHCP to obtain these permit authorizations, but must seek separate approval outside the SSHCP for a CDFW Lake and Streambed Alteration Agreement.*

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

*Mitigation Measure BIO-3 in the Program EIR provides mitigation measures for federally protected wetlands. At the time the Program EIR was certified, the SSHCP had not yet been completed. Harvest Water is a covered activity in the SSHCP, and therefore, it was anticipated that participation in the SSHCP would provide mitigation for covered species and habitats, including wetlands.*

*With the SSHCP now adopted and in effect, the measures provided in Mitigation Measure BIO-3 are now superseded by the habitat compensation protocols, AMMs, and Clean Water Act compliance process included in the SSHCP. The original text from Mitigation Measure BIO-3 in the Program EIR is not reproduced here as this measure is no longer in effect.*

*The MMRP for the Program EIR is being updated to reflect the details of the approved SSHCP.*

## **CONCLUSION**

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to biological resources. Although additional special-status species are present and the geographic area is different from that described in the Program EIR, the types of impacts, intensity and duration of construction, and types of sensitive resources present in the project area would be similar to or less than those described in the Program EIR. As described for the Program EIR, AMMs from the SSHCP will be implemented, any necessary permits will be obtained prior to construction, and fees will be paid. Implementation of the mitigation measures above would reduce impacts such that no new significant impacts or substantially more severe impacts to biological resources would occur, consistent with the conclusions described in the Program EIR. The combined analysis of biological resources issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.5 Cultural Resources

Section 3.6, "Cultural Resources," of the Program EIR evaluates the impacts of the program on cultural resources. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

To supplement the analysis in the Program EIR with site-specific information, the *Sacramento Regional County Sanitation District Recycled Water Distribution Mains, Lateral Pipelines, and On-Farm Connections Project, CEQA Cultural Resources Survey Report* (Regional San 2020d) was prepared to further clarify the potential for cultural resources along anticipated pipeline routes, evaluate previously identified resources to determine whether they are historical resources or unique archaeological resources, determine whether the project modifications would affect these resources, and recommend procedures for avoidance. The study area for this report encompasses the Recycled Water Delivery Area, but not the entire *EcoPlan* Area evaluated in this addendum. Due to its confidential nature, this report is not appended to this document.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>5. Cultural Resources. Would the project modifications:</b>					
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	Impact CR-1	No	No	No	Yes
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Impact CR-1	No	No	No	Yes
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	Impact CR-2	No	No	No	Yes

## ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.6-2 through 3.6-12 of the Program EIR is relevant to understanding the potential impacts to cultural resources resulting from implementation of the *EcoPlan* and Wintertime Application Project. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

As noted above, a records search was conducted as part of the Cultural Resources Survey Report, which covered the distribution main pipeline and transmission pipeline routes considered in the Recycled Water Delivery Area and a ¼-mile radius around those pipeline routes, but not the entire *EcoPlan* Area. Nonetheless, the results of the records search apply to the project modifications because the *EcoPlan* Area contains similar land uses (including historical uses), geology and soils, topography, and sensitive resources compared to the Recycled Water Delivery Area. Also, activities included in the project modifications that could occur outside the Recycled Water Delivery Area (e.g., adjustments to grazing practices, fencing, vegetation management) do not involve ground disturbance or other activities that could adversely affect cultural resources.

The results of the records search indicate that there are no historic-era resources in the vicinity of the pipeline routes being considered, and most of the project area is in Pleistocene-age alluvium, which has a low potential for buried

archaeological resources. However, there are some previously recorded archaeological resources within the project area, and these locations are considered archaeologically sensitive (Regional San 2020d).

## DISCUSSION

The Program EIR determined that the program elements would have the potential to result in the substantial adverse change in the significance of a buried archaeological resource (Program EIR Impact CR-1), and would have the potential to expose human remains during excavation (Program EIR Impact CR-2); these impacts were concluded to be less than significant with mitigation.

Other than the updated cultural resources report prepared for the lateral pipelines and on-farm connections (Regional San 2020d), there are no new circumstances since certification of the Program EIR that would influence cultural resources impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

- a,b) As noted above, a records search was conducted as part of the Cultural Resources Survey Report, which covered pipeline routes and a ¼ mile buffer in the Recycled Water Delivery Area, but not the entire *EcoPlan* Area. The results of the records search indicate that there are no known built historic-era resources in the vicinity of the pipeline routes considered in Recycled Water Delivery Area. The project modifications could occur outside the records search area, as well as outside the Recycled Water Delivery Area (e.g., adjustments to grazing practices, fencing, vegetation management) where built historic-era resources could be present; however, the project modifications addressed in this addendum would not adversely affect such resources if they are present. Therefore, the project modifications would not affect built historic resources.

In addition, most of the project area is considered to have a low sensitivity for archaeological resources and, thus, the Program EIR concluded that there were no previously recorded archaeological resources in the project area that would be affected by the Program elements. Similarly, the *CEQA Cultural Resources Survey Report* (Regional San 2020d), which was prepared to further clarify the potential for cultural resources along the pipeline routes being considered, indicates that there are no previously recorded archaeological resources that are near the portion of the proposed pipeline to Cosumnes River Preserve that occurs in the records search area. The pipeline to the preserve is the only project element addressed in this addendum that would involve subsurface ground disturbance. As stated above, the records search covered pipeline routes and a ¼ mile buffer. Therefore, the records search area covered lands ¼ mile south of the Twin Cities Road pipeline alignment, including a portion of Franklin Blvd. where the pipeline to the Cosumnes River Preserve is proposed. However, the pipeline route to the Cosumnes River Preserve extends approximately ¾ mile south of Twin Cities Road; therefore, a portion of the pipeline is outside the area covered by the records search. Nonetheless, as stated previously, the project area, including the proposed route for the pipeline to the Cosumnes River Preserve, is considered to have a low sensitivity for archeological resources.

Nonetheless, the project modifications have the potential to affect previously unrecorded archaeological resources or subsurface historical resources.

- c) No evidence suggests that any prehistoric or historic-era marked or un-marked human interments are present within or in the immediate vicinity of the project area. However, there is a possibility that unmarked, previously unknown Native American or other graves could be present and could be uncovered during construction activities. California law recognizes the need to protect historic-era and Native American human burials, skeletal remains, and grave-associated items from vandalism and inadvertent destruction.

## MITIGATION MEASURES

The following mitigation measures from the Program EIR would address the potential for substantial adverse changes in the significance of a buried archaeological resource and exposure of human remains during excavation. With implementation of these mitigation measures, potential impacts to cultural resources would be reduced to a less-than-significant level.



No new cultural resources impacts would result from the project modifications evaluated in this addendum, and no new mitigation measures are required. The following mitigation measures from the Program EIR would apply to the project modifications evaluated in this addendum.

### **Mitigation Measure 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).

### **Mitigation Measure 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.

### **Mitigation Measure 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.

### **Mitigation Measure CR-2: Discovery of Human Remains**

*Note: The text of this mitigation measure has been changed slightly from what is shown in Program EIR to make sure that the mitigation measure can be clearly applied to the activities included in the project modifications (specifically, underground pipelines).*

If human remains are encountered during the construction of the Project site or the off-site infrastructure corridor in the project area, 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.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to cultural resources. The combined analysis of cultural resources issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.6 Energy

Section 3.7, “Energy Resources,” of the Program EIR evaluates the impacts of the program on energy resources. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>6. Energy. Would the project modifications:</b>					
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Impact ENE-1	No	No	No	N/A
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Impact ENE-1	No	No	No	N/A

## ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.7-1 through 3.7-2 of the Program EIR is relevant to understanding the potential impacts to energy resulting from implementation of the *EcoPlan* and Wintertime Application Project. The larger *EcoPlan* Area (which includes the portion of the Cosumnes River Preserve considered for recycled water deliveries) does not add any new or unique setting conditions related to energy that are not already included in the setting described in the Program EIR.

## DISCUSSION

The Program EIR determined that the program elements would not result in the wasteful, inefficient, or unnecessary consumption of energy resources; this impact was concluded to be less than significant (Program EIR Impact ENE-1).

There are no new circumstances since certification of the Program EIR that would influence energy impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

a,b) The project modifications would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. *EcoPlan* activities, such as grazing, fencing, and vegetation management, as well as wintertime application of recycled water, would occur on agricultural lands and would be consistent with typical agricultural operations. These activities would include the use of fuels (primarily gas, diesel, and motor oil) for a variety of agricultural equipment and vehicles. Use of these fuels would not be wasteful or unnecessary because their use is necessary to ongoing agricultural operations as well as to contribute to the ecological benefits of Harvest Water.

Additionally, pipeline installation would also require the use of fuels (primarily gas, diesel, and motor oil) for a variety of construction activities, including excavation, grading, and vehicle travel. Use of these fuels would not be wasteful or unnecessary because their use is necessary to contribute to the long-term distribution, use, and reliability of water resources within the project area. However, excessive idling and other inefficient site operations during construction could result in the inefficient use of fuels. Fuels would not be used

wastefully during construction because doing so would not be economically sustainable for contractors. In addition, implementing SMAQMD's required emission control practices, as described in Section 3.3.3, "Air Quality," would reduce air pollutant emissions generated during pipeline construction by a variety of methods including limiting idling, and would also reduce inefficient use of fuels. Implementation of this measure during pipeline construction would reduce the inefficient use of construction-related fuels.

The South County Ag Program Feasibility Study determined that Harvest Water would decrease energy consumption in two areas: (1) avoided groundwater pumping energy and (2) avoided wastewater discharge energy. The avoided cost of groundwater pumping would translate to a reduction in energy consumption by approximately 5,000 megawatts per year (MWh/yr). Because less water would be discharged into the Sacramento River, Harvest Water would also reduce energy consumption from avoided wastewater discharge by 750 MWh/yr.

The project modifications would not conflict with the 2008 *Energy Action Plan*, which focuses on energy efficiency, demand response, renewable energy, and energy provisioning reliability and infrastructure (CEC 2020) because only a minimal amount of electricity would be used to pump and convey water to the Preserve. This energy use would occur on an infrequent basis and would occur instead of pumping surface water into the Preserve using the existing pumping infrastructure. Further, Harvest Water, as a whole, would decrease energy consumption in two areas: (1) avoided groundwater pumping energy and (2) avoided wastewater discharge energy. Therefore, the project modifications would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to energy. The combined analysis of energy issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.7 Geology and Soils

Section 3.8, "Geology and Soils," of the Program EIR evaluates the impacts of the program on geology and soils. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Section 3.6, "Cultural Resources," of the Program EIR evaluates the impacts of the program on paleontological resources. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>7. Geology and Soils. Would the project modifications:</b>					
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> <li>i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)</li> <li>ii) Strong seismic ground shaking?</li> <li>iii) Seismic-related ground failure, including liquefaction?</li> <li>iv) Landslides?</li> </ul>	Impact GEO-2	No	No	No	N/A
b) Result in substantial soil erosion or the loss of topsoil?	Impact GEO-1	No	No	No	N/A
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	Impact GEO-2	No	No	No	N/A
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?	Impact GEO-2	No	No	No	N/A

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	Issue dismissed on page 3.8-7	No	No	No	N/A
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Impact CR-1	No	No	No	Yes

## ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.8-1 through 3.8-3 of the Program EIR is relevant to understanding the potential impacts to geology and soils resulting from implementation of the *EcoPlan* and Wintertime Application Project. The larger *EcoPlan* Area (which includes the portion of the Cosumnes River Preserve considered for recycled water deliveries) does not add any new or unique setting conditions related to geology and soils that are not already included in the setting described in the Program EIR.

## DISCUSSION

The Program EIR determined that the program elements would not result in substantial soil erosion, siltation, or loss of topsoil because compliance with the Construction General Permit would ensure that best management practices (BMPs) are implemented during construction (Program EIR Impact GEO-1); and would not exacerbate existing environmental hazards or conditions, resulting in a substantial risk of loss, injury, or death, because the geotechnical analysis required as part of the California Building Standards Code would incorporate appropriate standard engineering practices and specifications in facility design to minimize these risks (Program EIR Impact GEO-2); these impacts were concluded to be less than significant. Additionally, the Program EIR determined that the program elements would result in ground disturbance and, thus, the potential for discovery and disturbance of paleontological resources; this impact was concluded to be less than significant with mitigation (Program EIR Impact CR-1). Finally, the Program EIR determined that the program elements would have no impacts associated with soils supporting septic tanks or alternative wastewater disposal systems.

There are no new circumstances since certification of the Program EIR that would influence geology and soils impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

- a) The project area is not within an Alquist-Priolo Zone earthquake fault zone. In addition, the project modifications would include *EcoPlan* activities, wintertime application of recycled water, and a proposed pipeline, and would not include structures for human occupancy.

Sacramento County is less affected by seismic activity and other related geologic hazards than other locations throughout California. The nearest fault is the Vaca fault, a potentially active fault, approximately 20 miles west of the *EcoPlan* area. However, seismic events could still result in seismic ground shaking in the project area. The proposed pipeline would be installed consistent with the California Building Code (CBC). The CBC includes design standards that are intended to protect structures from the maximum credible

earthquake that could occur on the site. The potential for seismic impacts would be minimized by applying all standard engineering and construction techniques in compliance with the requirements of the CBC.

While seismic activity in the surrounding area could result in secondary seismic impacts, such as liquefaction, that are associated with unstable soils, there are no areas susceptible to liquefaction within the project area. In addition, because the proposed pipeline would be designed and constructed in a manner appropriate to the physical environment, seismic-related ground failure would, because of the nature of the project modifications, be unlikely to pose a hazard to people or property.

Topography in the project area is generally flat, and the potential for landslides is low. In addition, the project modifications would not include any structures for human occupancy; therefore, the project would not substantially increase the exposure of people or structures to landslides.

- b) Construction activities would be limited to pipeline installation and would involve ground disturbance, such as excavation, stockpiling, and grading that could result in increased erosion, sedimentation, and siltation to surface waters. A review of soil data shows that soils within the project area have a range of slow to high runoff potential. Ground disturbance in areas of high runoff potential could result in erosion.
- c) Lateral spreading is the lateral movement of saturated soils due to earthquake induced liquefaction. If not designed correctly, the project modifications could be subject to misalignment of pipelines, failure of joints, damage to wells, and recycled water leakage from pipelines after a seismic event. Leakage from pipelines could saturate soils, contributing to conditions for liquefaction, lateral spreading, and subsidence. Structural failures could therefore result in increased risk to safety. However, the geotechnical analysis required as part of the CBC would incorporate appropriate standard engineering practices and specifications in facility design to minimize risk of structural failure in a seismic event, and would reduce secondary impacts that may occur as a result.
- d) Soils in the project area are primarily clays, which have the potential to be expansive soils. Substantial risk related to expansive soils would generally occur to habitable buildings, and no buildings that would be inhabited would be constructed as part of the project modifications. Structural failure of the proposed facilities could occur as a result of expansive soils; however, the geotechnical analysis required as part of the California Building Standards Code would incorporate appropriate standard engineering practices and specifications in facility design to minimize risks related to expansive soils.
- e) The project modifications would include *EcoPlan* activities, wintertime application of recycled water, and installation of a proposed pipeline, and would not involve or require construction of septic tanks or alternative wastewater disposal systems.
- f) The project area is within the Pleistocene-age Riverbank Formation (California Geological Survey 1981), which has the potential to contain paleontological resources. Although no known paleontological resources have been identified within the project area, construction would result in ground disturbance related to pipeline installation and, thus, the potential for discovery and disturbance of unknown paleontological resources.

## MITIGATION MEASURES

No new geology and soils impacts would result from the project modifications evaluated in this addendum, and no new mitigation measures are required. The following mitigation measures from the Program EIR would address the potential for discovery and disturbance of paleontological resources, and reduce the potential impact to a less-than-significant level.

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

Implement Mitigation Measure CR-1a above.

**Mitigation Measure CR-1b: Note on Construction Plans**

Implement Mitigation Measure CR-1b above.

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

Implement Mitigation Measure CR-1c above.

**CONCLUSION**

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to geology and soils. The combined analysis of geology and soils issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.



### 3.3.8 Greenhouse Gas Emissions

Section 3.4, “Air Quality and Greenhouse Gas Emissions,” of the Program EIR evaluates the impacts of the program on air quality and GHG emissions. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

The following analysis pertains to GHG emissions. Air quality is addressed in Section 3.3.3, “Air Quality,” in this addendum.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>8. Greenhouse Gas Emissions. Would the project modifications:</b>					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Impact GHG-1	No	No	No	N/A
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Impact GHG-2	No	No	No	N/A

## ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.4-1 through 3.4-6 of the Program EIR is relevant to understanding the potential impacts to GHG emissions resulting from implementation of the *EcoPlan* and Wintertime Application Project. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

### Greenhouse Gas Emission Sources

The total GHG inventory for California in 2016 was 429 million metric tons of CO<sub>2</sub> equivalents (MMTCO<sub>2e</sub>) (CARB 2018a). This is less than the 2020 target (1990 levels by 2020) of 431 MMTCO<sub>2e</sub> (CARB 2018b). Table 3.8-1 summarizes the 2016 statewide GHG inventory for California.

**Table 3.8-1 Statewide Greenhouse Gas Emissions by Economic Sector**

Sector	Emissions (MMTCO <sub>2e</sub> )	Percent
Transportation	174.01	41
Industrial	100.37	23
Electricity generation (in state)	42.67	10
Electricity generation (imports)	26.28	6
Agriculture	33.84	8
Residential	28.34	7
Commercial	23.04	5
Not specified	0.79	<1

Sources: CARB 2018a, 2018c

As shown in Table 3.8-1, transportation, industry, and electricity generation make up the largest GHG emission sectors for the state.

Emissions of carbon dioxide (CO<sub>2</sub>) are byproducts of fossil fuel combustion. Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. Nitrous oxide is also largely attributable to agricultural practices and soil management. CO<sub>2</sub> sinks, or reservoirs, include vegetation and the ocean, which absorb CO<sub>2</sub> through sequestration and dissolution (CO<sub>2</sub> dissolving into the water), respectively, two of the most common processes for removing CO<sub>2</sub> from the atmosphere.

In 2009, a GHG inventory for Sacramento County was conducted using 2005 as the emissions baseline year. An updated inventory was conducted in 2016 using a new emission baseline year of 2015. The County's updated baseline year and projected business-as-usual (BAU) inventory is summarized in Table 3.8-2. The BAU projection assumes that no additional efforts or legislative actions beyond what have already been adopted at the time the inventory was conducted will be made to reduce GHG emissions in the future.

**Table 3.8-2 Sacramento County Greenhouse Gas Emissions Inventory for 2015 and Business-as-Usual Forecast Years (MTCO<sub>2e</sub>)**

Emissions Sector	2015	2020	2030	2050
Residential Energy	1,193,311	1,254,182	1,385,397	1,690,448
Commercial/Industrial Energy	890,603	978,487	1,181,128	1,720,999
On-Road Transportation	1,671,596	1,765,579	1,969,694	2,451,443
Off-Road Transportation	196,769	214,146	253,855	357,866
Solid Waste	352,909	372,751	415,844	517,551
Agriculture	254,899	253,627	251,102	246,128
High-GWP Gases	251,085	265,202	295,861	368,223
Wastewater	27,253	28,785	32,113	39,967
Water-Related	15,222	16,078	17,937	22,323
<b>Total</b>	<b>4,853,647</b>	<b>5,148,836</b>	<b>5,802,930</b>	<b>7,414,948</b>

Notes: Totals may not add due to rounding.

MTCO<sub>2e</sub> = metric tons of carbon dioxide equivalent

Source: Sacramento County 2016

As shown in Table 3.8-2, on-road transportation and residential and non-residential energy use are the largest GHG emission sectors for the county.

In 2005, a GHG inventory for the City of Elk Grove was conducted using 2005 as the emissions baseline year. An updated inventory was conducted in 2019 with the City's General Plan Update using a new emission baseline year of 2013. The City's updated baseline year and projected business-as-usual inventory is summarized in Table 3.8-3.

**Table 3.8-3 City of Elk Grove Greenhouse Gas Emissions Inventory for 2013 and Business-as-Usual Forecast Years (MTCO<sub>2e</sub>)**

Emissions Sector	2013	2020	2030	2050
Residential Energy	231,400	257,171	310,017	413,560
Commercial/Industrial Energy	129,860	147,685	196,037	293,532
On-Road Transportation	430,340	645,542	844,317	1,241,867
Off-Road Transportation	93,340	102,776	123,896	165,275
Solid Waste	26,260	36,181	39,817	47,781
Wastewater	3,854	4,283	5,163	6,888
Water-Related	2,708	3,010	3,628	4,840
Agriculture	1,030	2,585	1,061	299
<b>Total</b>	<b>918,790</b>	<b>1,199,232</b>	<b>1,523,936</b>	<b>2,174,042</b>

Notes: Totals may not add due to rounding.

MTCO<sub>2e</sub> = metric tons of carbon dioxide equivalent

Source: City of Elk Grove 2019

Like Sacramento County, Table 3.8-3 shows that on-road transportation and residential and non-residential energy use are the largest GHG emission sectors for the City of Elk Grove.

## DISCUSSION

The Program EIR determined that the program elements would generate GHG emissions during construction and operation, but would not exceed SMAQMD's significance thresholds; this impact was concluded to be less than significant (Program EIR Impact GHG-1). Additionally, the Program EIR determined that the program elements would be consistent with applicable GHG reduction plans; it was concluded that no impact would result (Program EIR Impact GHG-2).

For the *Lateral Pipelines and On-Farm Connections Project Initial Study Checklist* (Regional San 2020a) GHG emissions were calculated for the activities included in this project element and were also added to the emissions calculated in the Program EIR. The conclusion was that the construction related GHG emissions and operational emissions would remain below SMAQMD's significance thresholds for the Lateral Pipelines and On-Farm Connections Project alone, as well as if the emissions were added to those identified in the Program EIR. Annual construction GHG emissions for 38.8 total miles of pipeline and the pump station were determined to be 94 MTCOe per year, with the applicable threshold being 1,100 MTCOe per year. Total maximum GHG emissions combining both construction and operations were calculated to be 5,458 MTCOe per year, with the applicable threshold being 10,000 MTCOe per year.

There are no new circumstances since certification of the Program EIR, other than the updated environmental setting information provided above, that would influence GHG impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

- a) The project modifications include installation of approximately 1.5 miles of pipeline that would be located within the public ROW of Franklin Boulevard and within the Cosumnes River Preserve lands. The new pipeline would be constructed at the same time as the Lateral Pipelines and On-Farm Connections Project, which is estimated to begin as early as 2022 and continue for approximately two years. This construction period could also overlap with active construction of the pump station and/or transmission pipeline. Therefore, to assess the maximum potential total program emissions, emissions from all three activities should be considered together, (1) pump station and transmission pipeline construction and operation; (2) lateral pipelines and on-farm connections construction and operation; and (3) pipeline connection to the Cosumnes River Preserve construction and operation (1.5-mile pipeline).

Construction of the 1.5-mile pipeline would occur over approximately 20 workdays somewhere within the 2-year construction window identified for the Lateral Pipelines and On-Farm Connections Project. Assuming 5-day work weeks, the pipeline would be installed over a 4-week period that would be added to the overall work effort for the Lateral Pipelines and On-Farm Connections Project. Construction of the 1.5-mile pipeline would not increase the intensity of overall project construction activities. No new construction equipment or personnel would be added to install this pipeline. A portion of the construction equipment and personnel installing the Lateral Pipelines and On-Farm Connections Project would, at some point, divert to install the 1.5-mile pipeline.

Off-road construction equipment, materials transport, and worker commute during construction of the project modifications would result in exhaust emissions of GHGs. As described in Section 3.2.3, "Air Quality," above, as well as in the introduction to this "Discussion" section, detailed air quality and GHG modeling was conducted as part of the Lateral Pipelines and On-Farm Connections Project as well as for the Program EIR for the transmission pipeline and pump station. Because the 1.5-mile pipeline would involve similar activities (i.e., installation of underground pipelines) in the same project area during the same construction period, this modeling was used to help assess GHG emissions from the 1.5-mile pipeline. As identified above, construction of 38.8 miles of pipeline and the project pump station would result in GHG emissions of 94 MTCOe per year. This is 1,006 MTCOe per year below the applicable significance threshold of 1,100 MTCOe per year. Total maximum GHG emissions combining both construction and operations of all these facilities was calculated to be 5,458 MTCOe per year, 4,542 MTCOe below the applicable threshold of 10,000 MTCOe per year. The addition of 1.5 miles of 16-inch diameter pipeline to this overall effort would result in only a

minor increase in construction related and operational GHG emissions, and nowhere near enough to result in an exceedance of applicable thresholds. Similarly, other activities included in the EcoPlan and Wintertime Application Project (e.g., installing fencing, adjustments to grazing practices, vegetation management) would not generate sufficient GHG emissions to result in exceedance of applicable significance thresholds.

- b) The EcoPlan and Wintertime Application Project is a component of the Harvest Water recycled water system to deliver a total of 50,000 acre feet per year (AFY) to irrigated lands and managed wetlands. The project modifications would not conflict with CARB's 2017 Scoping Plan and would support California's efforts to reduce GHGs by reducing energy needs for water supply through recycled water infrastructure and programs. In addition, the 50,000 AFY of recycled water currently discharged into the Sacramento River would be used to replenish the groundwater basin and increase flow in the Cosumnes River. Thus, the project modifications would help replenish the area's groundwater systems and help maintain healthy habitat lands that sequester carbon. The project modifications would also be consistent with the City of Elk Grove's General Plan in that the project modifications would protect and enhance the City's carbon sequestration resources. In addition, the project modifications would be consistent with the County of Sacramento's General Plan Policy CO-22 such that the project modifications would manage water sources in response to GHG emission reductions and climate change. Thus, the project modifications would be consistent with applicable GHG emission reduction plans.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to GHG emissions. The combined analysis of GHG emissions issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.9 Hazards and Hazardous Materials

Section 3.9, "Hazards and Hazardous Materials," of the Program EIR evaluates the impacts of the program on hazards and hazardous materials. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>9. Hazards and Hazardous Materials. Would the project modifications:</b>					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Issue dismissed on page 3.9-11	No	No	No	N/A
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	Impact HAZ-1	No	No	No	Yes
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Issue dismissed on page 3.9-11	No	No	No	N/A
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Issue dismissed on page 3.9-11	No	No	No	N/A
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	Impact HAZ-2	No	No	No	N/A
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Impact HAZ-3	No	No	No	Yes
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	Not evaluated	No	No	No	N/A

## ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.9-1 through 3.9-4 of the Program EIR is relevant to understanding the *EcoPlan* and Wintertime Application Project's potential impacts to hazards and hazardous materials. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

Much of the project area is agricultural land where pesticides and herbicides are used for crop pest management and weed control. A pesticide is any substance intended to control, destroy, repel, or attract a pest. Herbicides are a common type of pesticide that target weeds and other unwanted plants (California Department of Pesticide Regulation 2014). The terms pesticide and herbicide are used interchangeably herein. Herbicides can be used selectively to control specific types of vegetation or non-selectively to clear all vegetation on a particular area. Pesticide residue, if present in soils, can be disturbed and dispersed by ground-disturbing activities, particularly those using equipment.

## DISCUSSION

The Program EIR determined that the program elements would not create any significant hazards to the public or the environment associated with the transport, use or disposal of hazardous materials; would not create a significant hazard to the public or the environment associated with the transport, use or disposal of hazardous materials within 0.25 mile of an existing or proposed school; and would not be located on a site included on a list of hazardous materials site compiled pursuant to Government Code Section 65962.5 (Cortese List) and, therefore, would not create a significant hazard to the public or the environment. Thus, it was concluded that no impacts would occur.

The Program EIR determined that the program elements could expose the public or environment to a substantial hazard through reasonably foreseeable upset conditions involving the release of hazardous materials into the environment; this impact was concluded to be less than significant with mitigation (Program EIR Impact HAZ-1). Additionally, program elements would not result in a significant safety hazard for people residing or working in the project area within 2 miles of a public use airport; this impact was concluded to be less than significant (Program EIR Impact HAZ-2). Finally, impacts related to implementation of an emergency response plan or emergency evacuation plan would be less than significant with mitigation (Program EIR Impact HAZ-3) because construction could interfere with the accessibility of roadways to emergency vehicles; however, implementation of Mitigation Measure TR-1, which would require the preparation and implementation of a traffic management plan, would reduce this impact to a less-than-significant level.

There are no new circumstances since certification of the Program EIR, other than the updated environmental setting information provided above, including the use of herbicides, that would influence impacts related to hazards and hazardous materials associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

- a) The project modifications would require the use of various types of equipment and vehicles, which need fuels, oils, and lubricants to operate. In addition, targeted herbicide application would be implemented with the project modifications for weed management. As identified in Chapter 2, herbicide application would be implemented by licensed pesticide applicators. The extensive existing agricultural and local conservation weed management programs have already stabilized weed populations and are reducing application areas each year. This project modification is intended to ensure 'good neighbor' weed management for working lands, and to address new invasive species before they are able to establish on a case-by-case basis. The use, transport, and disposal of construction-related hazardous materials or herbicides could result in an accidental upset or release into the environment and associated health hazards.

As discussed in the Program EIR, workers would be required to use, store, and transport hazardous materials, including those associated with construction activities, in accordance with local, state, and federal regulations, including California Occupational Safety and Health Administration (Cal/OSHA) and California Department of Toxic Substances Control (DTSC) requirements and manufacturer's instructions. The use and handling of herbicides would be similar to the use and handling of other hazardous materials covered in the Program EIR. Cal/OSHA has safety standards and practices regarding workplace safety and providing a safe

and healthy environment for workers, and the California Pesticide Regulatory Program regulates the sale and use of pesticides in California. Herbicide application must comply with the U.S. Environmental Protection Agency (EPA) label directions, as well as California Environmental Protection Agency and California Department of Pesticide Regulation (DPR) label standards. Only ground-level application would occur; no aerial applications would be implemented as part of the project. In addition, herbicides would be applied per written recommendations from a licensed Pest Control Advisor (PCA) and by an herbicide applicator certified by DPR. A permit from the Sacramento County Agricultural Commissioner (CAC) is required prior to applying restricted herbicides. Therefore, similar to impacts discussed in the Program EIR, compliance with all laws, regulations, and herbicide label instructions, along with proper personal protective equipment, would prevent significant risks related to hazardous materials associated with the project modifications. Thus, the project modifications would not create any new significant or substantially more severe hazards to the public or the environment associated with the transport, use or disposal of hazardous materials.

- b) As described above and consistent with the Program EIR, the project modifications would use limited quantities of fuels, oils, lubricants, solvents, and other materials that are classified as hazardous. All materials would be stored, handled, and used in accordance with applicable laws. If needed, excavated materials from pipeline construction would be hauled off site and disposed of as required by state and federal regulations, and waste would be classified and disposed of properly. Unidentified areas of contaminated soils may be present within the project area and soil disturbance in these areas could expose construction workers to contaminated soils. However, the ground disturbing activities are the same as analyzed in the Program EIR and there are no recorded hazardous materials sites along the proposed pipeline alignment (DTSC 2020); therefore, the risk of encountering already contaminated soil is no greater than already identified in the Program EIR.
- c) Bates Elementary School is within the project area. Pipeline construction would not occur in the vicinity of this school; however, other project modifications could be within 0.25 mile of this facility. Most of the project modifications would not require the use of hazardous materials that could create a significant hazard to a school. Herbicide use within 0.25 mile of a school could pose a hazard; however, herbicide use would be consistent with existing use of these herbicides on agricultural lands within the project area. In addition, compliance with all laws, regulations, and herbicide label instructions would prevent significant risks related to human exposure to herbicides. Consistent with the conclusions of the Program EIR, use of hazardous materials within 0.25 mile of a school in compliance with applicable laws would not result in adverse effects to the public or the environment.
- d) The project modifications would not be located on a site included on a list of hazardous materials site compiled pursuant to Government Code Section 65962.5 (Cortese List) and, therefore, would not create a significant hazard to the public or the environment (DTSC 2020).
- e) Franklin Field is within the project area, and if any project modifications occur within two miles of the airport, workers would be exposed to airport noise. However, the exposure to noise would be temporary and Occupational Safety and Health Administration requirements for workers would be followed. In addition, the project modifications would not include any new residences or businesses that would expose people or workers to excessive noise in the long-term.

The only new facilities proposed would include a below ground pipeline and aboveground fencing. These facilities would not be considered an obstruction to air navigation by the FAA or penetrate the height notification limits of FAA Part 77 (Airport Land Use Commission 1992). Additionally, these facilities would not interfere with airport operations, or endanger pilots or passengers of aircraft. Therefore, the project modifications would not result in a safety hazard for people residing or working in the project area within two miles of Franklin Field.

- f) The project modifications would occur on agricultural lands and open space within the project area and would not interfere with any adopted emergency response plans. However, construction of the proposed pipeline could temporarily interfere with the accessibility of roadways to emergency vehicles if constructed within roadways or public ROW as discussed in the Program EIR.

- g) The project modifications would be primarily located on private lands that are used for agriculture and open space. Existing wildfire risk in the project area is minimal as it is not designated as having high wildfire fuel loads; by their nature farmed lands have roads, canals, and other features that act as fire breaks; and farmed lands have irrigation systems that prevent the vegetation that is present from becoming overly dry. The topography of the project area and its proximity to water is unlikely to exacerbate wildfire risk. The project modifications would include activities such as vegetation management and grazing management, which would slightly alter the density and composition of vegetation, but would not result in a hazardous increase in fuels in the project area. The project modifications would not include habitable structures. For these reasons, the project modifications would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

## MITIGATION MEASURES

The following mitigation measures from the Program EIR would address the potential for exposure of the public or environment to a substantial hazard through reasonably foreseeable upset conditions involving the release of hazardous materials into the environment as well as conflicts with implementation of an emergency response plan or emergency evacuation plan. With implementation of these mitigation measures, potential impacts related to hazards and hazardous materials would be reduced to a less-than-significant level.

No new hazards and hazardous materials impacts would result from the project modifications evaluated in this addendum, and no new mitigation measures are required. The following mitigation measures from the Program EIR would apply to the project modifications evaluated in this addendum.

### **Mitigation Measure HAZ-1: Conduct Phase I Study**

*Note: The text of this mitigation measure has been changed slightly from what is shown in Program EIR to make sure that the mitigation measure can be clearly applied to the activities included in the project modifications (specifically, the underground pipeline).*

Before the start of construction of the proposed pipeline serving the Cosumnes River Preserve, a Phase I hazardous waste/hazardous materials study for soil and groundwater contamination shall be completed for ~~these~~ this project modifications. 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, 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 during construction. 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.

### **Mitigation Measure TR-1: Traffic Management Plan**

*Note: The text of this mitigation measure has been changed slightly from what is shown in Program EIR to make sure that the mitigation measure can be clearly applied to the activities included in the project modifications (specifically, the underground pipeline).*

Implementation of the project shall include a Traffic Management Plan (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 other agencies with jurisdiction over the activity (e.g., Caltrans, the County of Sacramento Department of Public Works, 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:

- ▶ Define 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, if applicable, the City of Elk Grove.
- ▶ Determine the need to schedule construction workforce arrival and departure times outside peak traffic periods.
- ▶ Determine the need for construction scheduling outside of legal holidays and special events.
- ▶ Identify vehicle safety procedures for entering and exiting site access roads and staging areas.
- ▶ Notify and coordinate potential road closures with emergency responders prior to construction.
- ▶ Ensure access for emergency vehicles to and around the Project area.
- ▶ Identify procedures for construction area evacuation in the case of an emergency declared by county or other local authorities
- ▶ Maintain access to adjacent properties. The construction contractor will notify residential and commercial occupants of property adjacent to the construction site of the hours of construction activity which may impact the area. This notification will be provided one week in advance of the start of the extended construction activity.
- ▶ Notify and coordinate potential road closures with transit operators prior to construction.
- ▶ Maintain access to transit, bicycle, and pedestrian facilities along the project route(s).
- ▶ Notify and coordinate potential road closures with mail service and waste haulers prior to construction.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to hazards or hazardous materials. Although the use and handling of herbicides is being proposed under the project modifications and the geographic area is different from that described in the Program EIR, the types of impacts, intensity, and proposed use and handling of hazardous materials would be similar to that described in the Program EIR. As described for the Program EIR, compliance with all

applicable laws and regulations would prevent significant risks related to hazardous materials. Implementation of the mitigation measures above would reduce impacts such that no new significant impacts or substantially more severe impacts to hazards and hazardous materials would occur, consistent with the conclusions described in the Program EIR. The combined analysis of hazards and hazardous materials for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.10 Hydrology and Water Quality

Section 3.10, "Hydrology and Water Quality," of the Program EIR evaluates the impacts of the program on hydrology and water quality. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>10. Hydrology and Water Quality. Would the project modifications:</b>					
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	Impact HYD-1	No	No	No	Yes
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Impact HYD-2	No	No	No	N/A
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: <ul style="list-style-type: none"> <li>i) Result in substantial on- or offsite erosion or siltation;</li> <li>ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;</li> </ul>	Impact HYD-3	No	No	No	N/A
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	Issue dismissed on page 3.10-27	No	No	No	N/A
iv) Impede or redirect flood flows?	Issue dismissed on page 3.10-27	No	No	No	N/A
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Issue dismissed on page 3.10-27	No	No	No	N/A
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Not evaluated	No	No	No	N/A

## ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.10-1 through 3.10-13 of the Program EIR is relevant to understanding the *EcoPlan* and Wintertime Application Project's potential impacts to hydrology and water quality. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

Hydrologic features within the project area include the Communes River, Snodgrass Slough, wetlands, vernal pools, freshwater lakes, agricultural drainages, and freshwater sloughs. In addition, the Mokelumne River forms the southern border of the project area.

## DISCUSSION

The Program EIR determined that construction of program elements could result in increased erosion and sedimentation to surface waters and contaminated stormwater runoff, which could degrade water quality. Compliance with the Construction General Permit, implementation of construction BMPs, and compliance with the General Order for Dewatering or other appropriate National Pollutant Discharge Elimination System (NPDES) permit would reduce potential water quality degradation. This impact was concluded to be less than significant with mitigation (Program EIR Impact HYD-1). Additionally, the Program EIR determined that construction and operation of the program elements would not deplete groundwater supplies because the program would not involve extraction of groundwater; instead, it would benefit the groundwater basin and would not result in adverse impacts related to groundwater supply depletion. This impact was concluded to be beneficial (Program EIR Impact HYD-2). The Program EIR determined that the program elements would not increase the amount of impervious surfaces or the amount or rate of surface runoff, thus resulting in a less-than-significant impact (Program EIR Impact HYD-3). Finally, the Program EIR found that discharge reductions associated with the program would have minor impacts on Delta outflows but could affect storage in Shasta, resulting in a less-than-significant impact with mitigation (Program EIR Impact HYD-4).

There are no new circumstances since certification of the Program EIR, other than the updated environmental setting information provided above, that would influence hydrology and water quality impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

- a) Construction activities included in the project modifications could result in increased erosion and sedimentation to surface waters and contaminated stormwater runoff, which could degrade water quality. Ground-disturbing activities associated with pipeline construction including soil disturbance, excavation, cutting/filling, stockpiling, dewatering, and grading activities could result in increased erosion and sedimentation to surface waters. If precautions are not taken to contain contaminants, ground disturbance could produce contaminated stormwater runoff (nonpoint source pollution), which is a contributor to the degradation of water quality. In addition, hazardous materials could adversely affect surface and groundwater quality if spilled or stored improperly. However, construction activities associated with the project modifications would be very similar to or less intense than those addressed in the Program EIR; therefore, the types and intensities of impacts to water quality from construction activities would be less than those described in the Program EIR.

Once the pipeline is constructed, hydrostatic testing would need to be conducted, and water from the testing would also need to be discharged. Water from testing would be discharged in accordance with the General Order for Dewatering or other appropriate NPDES permit. This issue is also addressed in the Program EIR with the same regulatory restrictions identified.

Groundwater quality conditions related to summertime irrigation using recycled water, in-lieu groundwater recharge, and wintertime application were modeled (see Appendix B). Modeling indicated that average Total Dissolved Solids (TDS) concentrations are estimated to increase to 540 micrograms per liter (mg/L) with wintertime application of recycled water as part of the project modifications. The upper secondary maximum contaminant level (SMCL) is 1,000 mg/L. Although the project modifications would increase TDS concentrations in groundwater, the levels would be well below the SMCL. Nitrate-N concentrations are also

estimated to increase to 2.8 mg/L, but would also be well below the maximum contamination level of 10 mg/L for nitrate. The rate of increase for TDS and nitrate is projected to decrease near the end of the planning horizon as the groundwater basin approaches equilibrium. The Program EIR evaluation of the potential effects on groundwater quality also identified a potentially significant impact if specific groundwater recharge basins included in Harvest Water were operated because operation of these recharge basins could result in the mobilization of contaminants in groundwater from changing groundwater levels in the Central Sacramento Groundwater Basin. However, these recharge basins have no nexus to the project modifications evaluated in this addendum. As indicated above, the water quality modeling evaluating the combined effects of Harvest Water's summertime irrigation with recycled water, wintertime application of recycled water evaluated in this addendum, and any resulting in-lieu groundwater recharge, would not result in violations of any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Therefore, the potential for water quality impacts from the project modifications would not differ from those evaluated in the Program EIR.

- b) The project modifications would not deplete groundwater supplies because the modifications would not conflict with the commitments to recharge groundwater (including in-lieu recharge). The project modifications would not alter the project elements or commitments that result in this beneficial effect.
- c.i-ii) The project modifications would result in little to no increase in impervious surfaces in the project area. Land management activities proposed would primarily include fencing, vegetation management, grazing, and crop management and would not result in new impervious surfaces. In addition, the proposed pipeline would be underground.

The project modifications could temporarily alter the existing drainage patterns of creeks or waterways during construction if pipeline crossings would be necessary. However, as described in Chapter 2, "Description of the Proposed Action," pipeline installation would be accomplished using trenchless construction techniques at creek/drainage crossings. Therefore, consistent with the conclusions in the Program EIR, the project modifications would not alter the existing drainage pattern of any creeks or drainages in the project area.

- c.iii) The project modifications would not create or contribute substantial runoff water that would exceed the capacity of existing or planned stormwater drainage systems. As discussed above, the project modifications would not increase impervious surfaces and, therefore, would not create a substantial increase in runoff. Thus, the project modifications would not create or contribute substantial runoff water that would exceed the capacity of existing or planned stormwater drainage systems.
- c.iv) The project modifications would not include aboveground structures that would impede or redirect flows. The pipeline would be buried and creek/drainage crossings, if required, would be accomplished using trenchless construction techniques. Aboveground facilities would be limited to fencing that would not impede flows. Therefore, the project modifications would not impede or redirect flood flows.
- d) The project modifications would not expose people or structures to a risk of loss, injury or death involving flooding. As described in item c.iv), above, the only aboveground structures proposed would be new fencing, which would not affect flood flows or runoff volumes. Further, the project modifications would have no impact on any levees or dams and would not increase the risk of failure of any levee or dam.
- e) The project modifications would comply with all federal, state, and local regulations and requirements for construction and implementation including the San Francisco Bay/Sacramento-San Joaquin Delta Water Quality Control Plan (Bay-Delta Plan) and the Groundwater Sustainability Plan for the California Department of Water Resources South American Subbasin. The Basin Plan establishes control measures to be implemented by the Regional Water Quality Control Board as applicable to the project modifications. The Basin Plan also provides water quality objectives and waste discharge requirements (WDRs) to minimize impacts to water quality. NPDES permits are one method to regulate WDRs. As discussed in item a), above, the project modifications would be covered under the Construction General Permit, and the recycled wastewater has been addressed through WDRs and an NPDES permit specific to the Regional San

wastewater treatment plant, and allows for this use. Thus, the project modifications would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

## MITIGATION MEASURES

The following mitigation measures from the Program EIR would address the potential for water quality degradation. With implementation of these mitigation measures, potential impacts related to hydrology and water quality would be reduced to a less-than-significant level.

No new hydrology and water quality impacts would result from the project modifications evaluated in this addendum, and no new mitigation measures are required. The following mitigation measures from the Program EIR would apply to the project modifications evaluated in this addendum.

### **Mitigation Measure 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 Stormwater Pollution Prevention Program (SWPPP).

### **Mitigation Measure 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.

### **Mitigation Measure 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.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to hydrology and water quality. The combined analysis of hydrology and water quality issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.11 Land Use and Planning

Section 3.2, "Land Use and Agriculture," of the Program EIR evaluates the impacts of the program on land use and agriculture. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>11. Land Use and Planning. Would the project modifications:</b>					
a) Physically divide an established community?	Issue dismissed on page 3.2-17	No	No	No	N/A
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Impact LUA-1	No	No	No	N/A

### ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.2-1 through 3.2-9 of the Program EIR is relevant to understanding the *EcoPlan* and Wintertime Application Project’s potential impacts to land use and planning. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

Harvest Water would involve annexation of a portion of South Sacramento County to become part of Regional San’s service area for recycled water service only and an amendment to Regional San’s current Sphere of Influence (SOI). Revision of Regional San’s service area would require approval by Sacramento Local Agency Formation Commission (LAFCo). Chapter 4, "Evaluation of Service Area Establishment," summarizes setting information and identifies potential environmental impacts related to LAFCo policies and standards.

### DISCUSSION

The Program EIR determined that the program elements would not physically divide an established community; it was concluded that no impact would occur. Additionally, the program elements would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over Harvest Water; this impact was concluded to be less than significant/beneficial (Program EIR Impact LUA-1).

Other than the LAFCo SOI amendment and service area annexation, there are no new circumstances since certification of the Program EIR that would influence land use and planning impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

- a) The project modifications would include activities such as a pipeline, fencing, grazing management, herbicide use, and wintertime ponding of agricultural fields. The project modifications would primarily be enhancements of existing land uses and would be consistent with the general plan designations and zoning in the project area. These activities would be dispersed throughout the project area and would not result in any new aboveground structures that would physically divide an established community.

- b) The project modifications would be located outside of the *Franklin Field Comprehensive Land Use Plan* (ALUC 1992) and would not include aboveground structures that would conflict with height, noise, or safety requirements in the plan. In addition, the project modifications would be sited to avoid sensitive biological resources and would not conflict with the *Sacramento County General Plan* (Sacramento County 2011), *Bufferlands Master Plan* (Regional San 2000), or SSHCP (County of Sacramento et al. 2018).

Construction and operation of the project modifications would not result in any changes to land use. The proposed pipeline would be located underground and primarily within public ROW. The project modifications would not include residential or commercial development and would not alter land use designations of existing land uses. Fencing, grazing management, vegetation management, and crop residue management would be enhancements of current agricultural practices in the South County, and would contribute to Sacramento County's goals and objective of protecting farmland and enhancing the viability of the agricultural economy. Therefore, the project would be consistent with applicable land use plans in the project area.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to land use and planning. The combined analysis of land use and planning issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.



### 3.3.12 Mineral Resources

Section 3.8, “Geology and Soils,” of the Program EIR evaluates the impacts of the program on geology and soils, including mineral resources. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>12. Mineral Resources. Would the project modifications:</b>					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Issue dismissed on page 3.8-7	No	No	No	N/A
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	Issue dismissed on page 3.8-7	No	No	No	N/A

## ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.8-1 through 3.8-3 of the Program EIR is relevant to understanding the *EcoPlan* and Wintertime Application Project’s potential impacts to mineral resources. The larger *EcoPlan* Area (which includes the portion of the Cosumnes River Preserve considered for recycled water deliveries) does not add any new or unique setting conditions related to mineral resources that are not already included in the setting described in the Program EIR.

## DISCUSSION

The Program EIR determined that the program elements would not be located within any areas of mineral resources or significant mineral deposits; it was concluded that no impact would occur.

There are no new circumstances since certification of the Program EIR that would influence mineral resources impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

- a,b) The project area is not located within an area of known mineral resources, and the primary land uses include agriculture and open space. The project modifications would include a pipeline, fencing, and grazing and vegetation management dispersed throughout the project area and would not change the land uses within the project area. Therefore, implementation of the project would have no effect on the availability of known mineral resources that would be of value to the region and the residents of the state.

There are no locally important mineral resource recovery sites delineated on a local general plan, specific plan, or other land use plan that include the project area. Therefore, the project modifications would have no effect on the availability of known mineral resources.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to mineral resources. The combined analysis of mineral resources issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.13 Noise

Section 3.12, "Noise," of the Program EIR evaluates the impacts of the program on noise. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>13. Noise. Would the project modifications result in:</b>					
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	Impact NOI-1, Impact NOI-2	No	No	No	Yes
b) Generation of excessive groundborne vibration or groundborne noise levels?	Impact NOI-3	No	No	No	N/A
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	Issue dismissed on page 3.9-11	No	No	No	N/A

## ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.12-1 through 3.12-5 of the Program EIR is relevant to understanding the *EcoPlan* and Wintertime Application Project's potential impacts to noise. The larger *EcoPlan* Area (which includes the portion of the Cosumnes River Preserve considered for recycled water deliveries) does not add any new or unique setting conditions related to noise that are not already included in the setting described in the Program EIR.

## DISCUSSION

The Program EIR determined that implementation of Harvest Water would generate short-term and temporary noise during construction, which would not violate local noise standards, but that could cause annoyance to residences along the construction corridor; this impact was concluded to be less than significant with mitigation (Program EIR Impact NOI-1). Harvest Water elements would not expose people to or generate noise levels in excess of local noise standards (Program EIR Impact NOI-2), and would not expose people to or generate excessive groundborne vibration or groundborne noise levels (Program EIR Impact NOI-3); these impacts were concluded to be less than significant. Finally, the Program EIR determined that the program elements would not expose people residing or working in the project area to excessive noise levels near a public use airport; it was concluded that no impact would occur.

There are no new circumstances since certification of the Program EIR that would influence noise impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

- a) **Construction:** The project modifications for construction of the pipeline to the Cosumnes River Preserve would be constructed in an existing roadway passing through an agricultural area with few if any homes or other sensitive noise receptors. The primary activity that would generate noise is pipeline construction. If sensitive receptors are located along the pipeline alignment, construction-related noise could affect sensitive receptors within the project area. However, the noise would be intermittent and short-term as construction is expected to occur over approximately four weeks. 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 6:00 a.m. and 8:00 p.m. on weekdays within Sacramento County), and on weekends and nighttime only if necessary and approved by the affected jurisdictions.
- Operation:** Operations related to the proposed modifications would include activities such as installing fencing, grazing management, and vegetation management and would result in very minor and intermittent noise sources in the long term, which would be consistent with existing agricultural operations in the area. In addition, these activities would occur in agriculture and open space areas and would not be near sensitive receptors. Therefore, the project modifications would not generate a substantial temporary or permanent increase in ambient noise levels.
- b) **Construction:** Vibrational impacts from pipeline construction would mainly be associated with the use of bulldozers, loaded trucks, and a jack compactor. These activities would be temporary and intermittent. Operation of heavy construction equipment would not generate vibration levels that could cause threshold (cosmetic) damage to fragile buildings. Other project modifications would not require equipment that would result in vibrational impacts.
- Operation:** Once operational, the project modifications would not include facilities that would generate vibration. Therefore, there would be no operational vibration impacts.
- c) Although Franklin Field is within the project area, the project modifications would not include construction of inhabited structures. Therefore, the project modifications would not expose residents to excessive noise near a public use airport. Construction workers could be working within 0.9 mile of the airport and would be exposed to airport noise. However, the exposure to noise would be temporary and Occupational Safety and Health Administration requirements for workers would be followed.

## MITIGATION MEASURES

The following mitigation measure from the Program EIR would address the potential for short-term and temporary noise during construction and generation of noise levels in excess of local noise standards. With implementation of this mitigation measure, potential impacts related to noise would be reduced to a less-than-significant level.

No new noise impacts would result from the project modifications evaluated in this addendum, and no new mitigation measures are required. The following mitigation measure from the Program EIR would apply to the project modifications evaluated in this addendum.

### Mitigation Measure 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 (7:00 a.m. to 7:00 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).

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to noise. The combined analysis of noise issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.14 Population and Housing

Section 3.17, "Population and Housing," of the Program EIR evaluates the impacts of the program on population and housing. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>14. Population and Housing. Would the project modifications:</b>					
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Section 4.2, "Growth Inducing Impacts"	No	No	No	N/A
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Issue dismissed on page 3.17-3	No	No	No	N/A

## ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.17-1 through 3.17-2 of the Program EIR is relevant to understanding the *EcoPlan* and Wintertime Application Project’s potential impacts to population and housing. The larger *EcoPlan* Area (which includes the portion of the Cosumnes River Preserve considered for recycled water deliveries) does not add any new or unique setting conditions related to population and housing that are not already included in the setting described in the Program EIR.

## DISCUSSION

The Program EIR determined that the program elements would not directly induce population growth, nor would they remove an obstacle to growth; this impact was concluded to be less than significant (Program EIR Section 4.2, "Growth Inducing Impacts"). Additionally, the program elements would not displace any existing housing units and would not necessitate the construction of replacement housing; it was concluded that there would be no impact.

There are no new circumstances since certification of the Program EIR that would influence population and housing impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

- a) As described on page 4-3 of the Program EIR, Harvest Water would provide recycled water for non-potable uses (e.g., irrigation of agricultural lands), thus improving regional water sustainability. The project modifications would use recycled water to create ponding of agricultural fields in the wintertime for Sandhill crane foraging and roosting habitat.

The project modifications would not directly induce population growth, as no new residential or commercial development projects would be constructed. In addition, the project modifications would not require new permanent employees who would generate a demand for new housing. Recycled water would be used for

ecological benefits and would not be used to serve residential or commercial development. Therefore, the project would not be growth inducing.

- b) The project modifications would not displace any existing housing units and would not necessitate the construction of replacement housing. The project modifications would include construction of a buried pipeline, fencing, grazing management, and vegetation management within public ROW, agricultural lands, and open space. As such, the project modifications would not displace any existing housing units and would not necessitate the construction of replacement housing.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to population and housing. The combined analysis of population and housing issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.15 Public Services

Section 3.13, "Public Services and Utilities," of the Program EIR evaluates the impacts of the program on public services and utilities. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

The following analysis pertains to public services. Utilities are addressed in Section 3.3.19, "Utilities and Service Systems," in this addendum.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>15. Public Services. Would the project modifications:</b>					
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: Fire protection? Police protection? Schools? Parks? Other public facilities?	Issue dismissed on page 3.13-7	No	No	No	N/A

### ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.13-1 through 3.13-3 of the Program EIR is relevant to understanding the *EcoPlan* and Wintertime Application Project’s potential impacts to public services. The larger *EcoPlan* Area (which includes the portion of the Cosumnes River Preserve considered for recycled water deliveries) does not add any new or unique setting conditions related to public services that are not already included in the setting described in the Program EIR.

### DISCUSSION

The Program EIR determined that the program elements would not directly or indirectly induce population growth and, thus, would not require new or expanded public services; it was concluded that there would be no impact.

There are no new circumstances since certification of the Program EIR that would influence public services impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.



- a) The project modifications would involve construction of a pipeline, fencing, grazing management, vegetation management, and wintertime ponding of agricultural lands. As discussed above in Section 3.3.14, "Population and Housing," the project modifications would not directly or indirectly induce population growth and, thus, would not require new or expanded public services. As such, it would not require new or expanded fire protection, police protection, schools, parks, or other public services and/or facilities. In addition, given the nature of the project modifications (e.g., pipeline, fencing, grazing management), operations would not affect the ability of local service providers to maintain acceptable service ratios, response times, or other performance objectives. The project modifications would not increase the need for new staff for public service providers.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to public services. The combined analysis of public services issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.16 Recreation

Section 3.3, "Recreation," of the Program EIR evaluates the impacts of the program on recreation. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>16. Recreation. Would the project modifications:</b>					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Impact REC-1	No	No	No	Yes
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	Issue dismissed on page 3.13-7	No	No	No	N/A

### ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.3-1 through 3.3-2 of the Program EIR is relevant to understanding the *EcoPlan* and Wintertime Application Project’s potential impacts to recreation. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

The Cosumnes River Preserve provides opportunities for passive recreation such as wildlife viewing.

### DISCUSSION

The Program EIR determined that construction of the program elements would involve temporary road closures, which could adversely affect access to park facilities, and construction dust and noise could disrupt the enjoyment of recreational users; this impact was concluded to be less than significant with mitigation (Program EIR Impact REC-1). The program elements would not include the construction or expansion of recreational facilities that could result in direct adverse physical effect on the environment; therefore, it was concluded that there would be no impact related to this issue.

There are no new circumstances since certification of the Program EIR that would influence recreation impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

- a) Construction of the proposed pipeline would occur primarily in roadway ROW and other project modifications would occur within agricultural lands and open space. While no recreational facilities would be affected by the project modifications, a portion of the proposed pipeline would be within the Cosumnes River Preserve, which provides opportunities for passive recreation such as wildlife viewing. Construction activities could result in short-term impacts related to access to the Preserve from temporary closures of roadway lanes to accommodate construction. Construction activities may also disrupt the enjoyment of users

due to construction dust and noise (see Sections 3.3.3, "Air Quality," Section 3.3.13, "Noise," and Section 3.3.17, "Transportation," for a discussion of these impacts). These temporary road closures could adversely affect access to the Preserve and construction dust and noise could disrupt the enjoyment of recreational users. In compliance with Mitigation Measures TR-1 and NOI-1, Regional San and/or the construction contractor would be required to ensure that access is maintained to adjacent uses, including parks, and that construction noise is controlled and minimized, respectively. In addition, delivery of water to the Cosumnes River Preserve and enhancements to riparian and wetland habitats could provide indirect benefits to informal recreation opportunities such as wildlife viewing.

- b) The project modifications would not include construction or expansion of recreational facilities that could result in direct adverse physical effects on the environment. The project modifications would not result in population growth or increase in demand for recreation facilities. In addition, the project modifications would not result in an increase in use of existing parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

## MITIGATION MEASURES

The following mitigation measures from the Program EIR would address the potential for adverse effects related to access to park facilities and construction dust and noise to a less-than-significant level.

No new recreation impacts would result from the project modifications evaluated in this addendum, and no new mitigation measures are required. The following mitigation measures from the Program EIR would apply to the project modifications evaluated in this addendum.

### **Mitigation Measure TR-1: Traffic Management Plan**

Implement Mitigation Measure TR-1 above.

### **Mitigation Measure NOI-1: Noise Reduction Measures**

Implement Mitigation Measure NOI-1 above.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to recreation. The combined analysis of recreation issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.17 Transportation

Section 3.14, "Traffic and Transportation," of the Program EIR evaluates the impacts of the program on traffic and transportation. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>17. Transportation. Would the project modifications:</b>					
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Impact TR-1	No	No	No	Yes
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Not evaluated	No	No	No	N/A
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Impact TR-3	No	No	No	Yes
d) Result in inadequate emergency access?	Impact TR-4	No	No	No	Yes

### ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.14-1 through 3.14-10 of the Program EIR is relevant to understanding the EcoPlan and Wintertime Application Project’s potential impacts to transportation. The following information provides an update of information from the Program EIR and reflects the current environmental setting.

Senate Bill 743, passed in 2013, required the Governor’s Office of Planning and Research to develop new CEQA Guidelines that address traffic metrics under CEQA. As stated in the legislation (and Section 21099[b][2] of CEQA), upon adoption of the new CEQA guidelines, “automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the CEQA guidelines, if any.”

The Office of Administrative Law approved the updated CEQA Guidelines on December 28, 2018, and the changes are reflected in new CEQA Guidelines (Section 15064.3). State CEQA Guidelines Section 15064.3 was added December 28, 2018, to address the determination of significance for transportation impacts. Pursuant to the new CEQA Guidelines, vehicle miles traveled (VMT) will replace congestion as the metric for determining transportation impacts. The CEQA Guidelines state that “lead agencies may elect to be governed by these provisions of this section immediately. Beginning July 1, 2020, the provisions of this section shall apply statewide.”

The Program EIR was certified in 2017 (Regional San 2017). As described above, the updated CEQA Guidelines were not adopted until December 28, 2018, subsequent to certification of the Program EIR in 2017. Section 15007 of the CEQA Guidelines addresses amendments to the CEQA Guidelines and states: “If a document meets the content requirements in effect when the document is sent out for public review, the document shall not need to be revised to

conform to any new content requirements in Guideline amendments taking effect before the document is finally approved." (CEQA Guidelines Section 15007[c]) Stated another way, because the EIR was circulated for public review (and completed) prior to this change in the CEQA Guidelines, the new provisions regarding VMT do not apply to this project. Therefore, the shift from automobile delay to VMT as the primary metric used to analyze transportation impacts under CEQA, as dictated by CEQA Guidelines Section 15064.3, does not constitute "new information" as defined in CEQA Guidelines Section 15162 and, even if it was "new information," CEQA Guidelines Section 15007 directs that the document "shall not need to be revised" to reflect this information.

## DISCUSSION

The Program EIR determined that Harvest Water would result in temporary impacts related to traffic operations during program construction, including temporary impacts to transit, bicycle, and pedestrian facilities due to the anticipated temporary intermittent road and lane closures (Program EIR Impact TR-1); could substantially increase transportation hazards (Program EIR Impact TR-3); and could result in inadequate emergency access (Program EIR Impact TR-4); these impacts were concluded to be less than significant with mitigation.

There are no new circumstances since certification of the Program EIR, other than the updated environmental setting information provided above, that would influence transportation impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

- a) The project modifications would result in a temporary increase in local traffic as a result of construction-related workforce traffic, equipment, and material deliveries. Construction would also occur within Franklin Boulevard, which could temporarily disrupt existing transportation and circulation in the vicinity of the proposed pipeline.

Public transit operates in the vicinity of the project area; however, there are no transit routes or bus stops on the portion of Franklin Boulevard that would be affected by temporary road and lane closures associated with construction activity. There are no designated bike paths in this area; however, the informal use of the shoulder of Franklin Road by bicyclists could be affected during construction.

- b) See discussion of the updated CEQA Guidelines related to VMT, above.
- c) The project modifications would not result in any permanent hazards related to a design feature or incompatible use. However, the project modifications could increase transportation hazards due to the anticipated temporary and intermittent road and lane closures associated with construction activity within and along the public ROW.
- d) Most of the project modifications would occur within agricultural lands or open space and would not interfere with any adopted emergency response plans. However, construction of the proposed pipeline within Franklin Boulevard could temporarily interfere with the accessibility of roadways to emergency vehicles.

## MITIGATION MEASURES

The following mitigation measure from the Program EIR would address the potential for construction-related impacts related to traffic operations, including temporary impacts to transit, bicycle, and pedestrian facilities; potential transportation hazards; and emergency access. With implementation of this mitigation measure, potential impacts related to transportation would be reduced to a less-than-significant level.

No new transportation impacts would result from the project modifications evaluated in this addendum, and no new mitigation measures are required. The following mitigation measure from the Program EIR would apply to the project modifications evaluated in this addendum.

### **Mitigation Measure TR-1: Traffic Management Plan**

Implement Mitigation Measure TR-1 above.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to transportation. The combined analysis of transportation issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.18 Tribal Cultural Resources

Assembly Bill (AB) 52, signed by the California governor in September of 2014, establishes a new class of resources under CEQA: "tribal cultural resources." It requires that lead agencies undertaking CEQA review must, upon written request of a California Native American tribe, begin consultation after the lead agency determines that the application for the project is complete, before a notice of preparation (NOP) of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration is issued. AB 52 also requires revision to CEQA Appendix G, the environmental checklist. This revision has created a new category for tribal cultural resources (TCRs).

The Program EIR does not address TCRs because it was not required to do so. The NOP for the Program EIR was issued on February 19, 2015 (State Clearinghouse No. 2015022067), and AB 52 went into effect on July 1, 2015. Because the NOP was released before AB 52 went into effect, the Program EIR was not required to address TCRs. Further, because this addendum tiers from the Program EIR, it also is not required to address TCRs.

### 3.3.19 Utilities and Service Systems

Section 3.13, "Public Services and Utilities," of the Program EIR evaluates the impacts of the program on public services and utilities. It presents environmental setting information, the regulatory framework, the analysis methodology, thresholds of significance, and a detailed environmental impact evaluation.

The following analysis pertains to utilities. Public services are addressed in Section 3.3.15, "Public Services," in this addendum.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>19. Utilities and Service Systems. Would the project modifications:</b>					
a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	Impact PUB-1, Impact PUB-2	No	No	No	N/A
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	Impact HYD-2	No	No	No	N/A
c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	Impact PUB-1	No	No	No	N/A
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Impact PUB-3	No	No	No	N/A
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Impact PUB-3	No	No	No	N/A

## ENVIRONMENTAL SETTING

The environmental setting provided on pages 3.13-1 through 3.13-3 of the Program EIR is relevant to understanding the *EcoPlan* and Wintertime Application Project's potential impacts to utilities and service systems. The larger *EcoPlan* Area (which includes the portion of the Cosumnes River Preserve considered for recycled water deliveries) does not add any new or unique setting conditions related to utilities and service systems that are not already included in the setting described in the Program EIR.

## DISCUSSION

The Program EIR determined that the program elements would result in impacts associated with the construction of new water or wastewater treatment and disposal facilities or expansion of existing facilities; this impact was concluded to be less than significant with mitigation (Program EIR Impact PUB-1). Additionally, the Program EIR determined that the program elements would not generate a need for new stormwater drainage facilities or the expansion of existing facilities (Program EIR Impact PUB-2), and would be served by a landfill with sufficient permitted capacity and would comply with all federal, state, and local statutes and regulations related to solid waste (Program EIR Impact PUB-3); these impacts were concluded to be less than significant.

The Program EIR determined that the program involves construction of new facilities to augment water supply with recycled water elements, the environmental effects of which were analyzed throughout the Program EIR, and that the program elements would not generate additional demand for wastewater treatment or disposal; thus, it was concluded that there would be no impacts.

There are no new circumstances since certification of the Program EIR that would influence utilities and service systems impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

- a) **Water and Wastewater:** The project modifications involve construction of a new pipeline to augment water supply for Cosumnes River Preserve with recycled water. The environmental effects of the proposed pipeline are evaluated throughout this addendum. The project would not result in the construction of any other water or wastewater infrastructure. In addition, the project modifications would include ponding of agricultural fields in the wintertime for Sandhill crane habitat. ponding of agricultural fields in the winter months would increase groundwater recharge in those areas.

**Stormwater:** The project modifications would not create or contribute substantial runoff water that would exceed the capacity of existing or planned stormwater drainage systems. The proposed facilities would either be buried underground within or along roadways or would not result in an increase in impervious surfaces.

The project modifications would not require expansion of wastewater, stormwater, natural gas, or telecommunication facilities and the effects of the proposed pipeline are evaluated throughout this addendum.

- b) The project modifications would involve construction of a new pipeline to augment water supply with recycled water elements to Cosumnes River Preserve, the environmental effects of which were analyzed throughout this addendum. The project modifications would not increase demand for water supplies.
- c) The project modifications would not generate additional demand for wastewater treatment or disposal. The project modifications would provide recycled water as a source of non-potable water for ecological benefits. The project modifications would not generate any additional demand for wastewater treatment or disposal.
- d) During pipeline construction, there would be minimal solid waste generated that would require disposal at a landfill. Spoil (soil and rock) excavated during construction would either be reused on site for backfill or disposed of properly. Spoil not suitable for reuse would be temporarily stored at staging areas until characterized, and then hauled away to the proper disposal site (e.g., landfill). Additional solid waste would be generated by construction crews within the project area, which would need to be hauled off site to be disposed. Solid waste generated during construction, including spoil that cannot be reused, would be delivered to the Kiefer Landfill. This landfill is currently sized to satisfy all county landfill disposal needs through 2064.



- e) During pipeline construction, there would be minimal solid waste generated that would require disposal at a landfill. No solid waste would be generated by operation of the project modifications. The project modifications would comply with all federal, state, and local statutes and regulations related to solid waste.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to utilities and service systems. The combined analysis of utilities and service systems issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.20 Wildfire

Wildfire was not addressed in the Program EIR because a wildfire analysis was not required at that time. Changes to Appendix G of the State CEQA Guidelines were adopted in December 2018 and wildfire was added as a new resource to be evaluated in CEQA documents. The following analysis describes the potential impacts of the program related to wildfire and wildfire-related risks.

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>20. Wildfire. Would the project modifications:</b>					
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	Impact HAZ-3	No	No	No	Yes
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	Not evaluated	No	No	No	N/A
c) Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Not evaluated	No	No	No	N/A
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Not evaluated	No	No	No	N/A

## ENVIRONMENTAL SETTING

The project modifications to construct a pipeline to the Cosumnes River Preserve would be located within existing paved and dirt roadways. Surrounding lands are primarily agricultural, characterized by orchards, fields of row crops, and scattered rural residences and farm structures (e.g., barns). The project area is relatively flat due to active farming and agricultural operations.

The California Department of Forestry and Fire Protection (CAL FIRE) maintains fire hazard severity zone (FHSZ) maps for the Local Responsibility Area (LRA) and State Responsibility Area (SRA). These areas are mapped based on fuels, terrain, weather, and other relevant factors. The project area is located within the LRA and is not categorized as a "Very High" FHSZ. A federal responsibility area southwest of the project area is also not designated as a "Very High" FHSZ. There are no portions of the project area that are classified as high fire hazard severity zones (CAL FIRE 2008).

## DISCUSSION

The Program EIR determined that impacts related to implementation of an emergency response plan or emergency evacuation plan would be less than significant with mitigation (Program EIR Impact HAZ-3) because construction could interfere with the accessibility of roadways to emergency vehicles; however, implementation of Mitigation Measure TR-1, which would require the preparation and implementation of a traffic management plan, would reduce this impact.

There are no new circumstances since certification of the Program EIR, other than the updated environmental setting information provided above, that would influence wildfire impacts associated with Harvest Water or the project modifications evaluated in this addendum, and there is no new information requiring analysis or verification.

- a) As described in Section 3.3.9, "Hazards and Hazardous Materials," project modifications would primarily be within agricultural lands and open space and would not interfere with any adopted emergency response plans. However, pipeline construction within Franklin Road could temporarily interfere with the accessibility of roadways to emergency vehicles.
- b) The project area is not categorized as a Very High FHSZ. By their nature farmed lands have roads, canals, and other features that act as fire breaks, and farmed lands have irrigation systems that prevent the vegetation that is present from becoming overly dry. The topography of the project area and its proximity to permanent water sources is unlikely to exacerbate wildfire risk. Because the location and topography of the project area are unlikely to exacerbate wildfire risk, factors such as slope and prevailing wind would not further exacerbate the wildfire risk. Therefore, project area residents would not be exposed to pollutant concentrations or the uncontrolled spread of a wildfire.
- c) The project modifications would include a pipeline, fencing, grazing management, vegetation management, and wintertime ponding of agricultural lands. Therefore, the project modifications would not require the installation of infrastructure that could exacerbate fire risk, and the topography of the project area and its proximity to water is unlikely to exacerbate wildfire risk.
- d) The project modifications would involve minor infrastructure, and enhancements to existing agriculture practices and habitats in the project area. The project area is in an area of flat terrain and would not involve the changing of slopes that could expose people or structures to risks of downslope or downstream flooding or landslides from runoff, post-fire instability, or drainage changes.

## MITIGATION MEASURES

No new wildfire impacts would result from the project modifications evaluated in this addendum, and no new mitigation measures are required. The following mitigation measure from the Program EIR would address potential adverse impacts related to the potential for the project to interfere with implementation of an emergency response plan or emergency evacuation plan to a less-than-significant level.

### **Mitigation Measure TR-1: Traffic Management Plan**

Implement Mitigation Measure TR-1 above.

## CONCLUSION

The proposed changes to Harvest Water addressed in this addendum would not result in new significant impacts or substantially more severe impacts related to wildfire. The combined analysis of wildfire issues for Harvest Water in this addendum, as well as the Program EIR, is sufficient to meet CEQA requirements and support the approval of the project modifications, if Regional San so chooses.

### 3.3.21 Mandatory Findings of Significance

Environmental Issue Area	Where Impact was Analyzed in the Program EIR	Do Proposed Changes Involve New or Substantially More Severe Significant Impacts?	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Mitigation Measures in the Program EIR Address/Resolve Impacts?
<b>21. Mandatory Findings of Significance.</b>					
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	Chapter 3, "Environmental Setting, Impacts, and Mitigation Measures"	No	No	No	N/A
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	Chapter 3, "Environmental Setting, Impacts, and Mitigation Measures"	No	No	No	N/A
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	Chapter 3, "Environmental Setting, Impacts, and Mitigation Measures"	No	No	No	N/A

## DISCUSSION

- a) All applicable mitigation measures identified in the Program EIR to avoid and reduce impacts are integrated into the *EcoPlan* and Wintertime Application Project. Given the nature of the project modifications (i.e., installation of a pipeline, fencing, and grazing and vegetation management) and the integration of these measures, the project modifications would not substantially degrade the quality of the environment. As described in Section 3.3.4, "Biological Resources," of this addendum, the project modifications would not significantly affect fish or wildlife habitat or species. The project area is primarily agricultural and impacts of the project modifications would be addressed by mitigation measures included in this addendum.

As described in Section 3.3.5, "Cultural Resources," portions of the project area are considered sensitive for cultural resources. Measures integrated into the project modifications would avoid disturbance, disruption, or destruction of inadvertent archaeological resource discoveries. Therefore, the project modifications would not eliminate any examples of the major periods of California history or prehistory.

- b) No significant and unavoidable impacts were identified in the Program EIR. Further, no cumulatively considerable impacts were identified in the Program EIR. Therefore, the *EcoPlan* and Wintertime Application Project would not incrementally contribute to any cumulatively considerable impacts. No conditions have substantially changed, and no new information has become available since certification of the Program EIR that would alter this previous analysis.
- c) Construction and operation emissions generated by Harvest Water were evaluated in the Program EIR. These impacts were also addressed in the Findings adopted by Regional San in connection with its certification of the Program EIR. Effects of the project modifications would not result in substantial adverse effects on human beings beyond those analyzed in the Program EIR. No conditions have substantially changed, and no new information has become available since certification of the Program EIR that would alter this analysis. No additional mitigation is available to reduce the project's contribution to these impacts. Other impacts with the potential to affect human beings were determined to be less than significant in the Program EIR.

### 3.4 CONCLUSIONS REGARDING THE ENVIRONMENTAL ANALYSIS OF THE PROJECT MODIFICATIONS

Based on the analysis of the categories of environmental impacts evaluated above, implementing Harvest Water with the modifications described in this document would result in none of the conditions described in Section 15162 of the State CEQA Guidelines calling for preparation of a Subsequent EIR. In summary, no altered circumstances or new information of substantial importance has been identified since certification of the Program EIR, and the project modifications evaluated in this addendum would not: (1) result in any new environmental effects; (2) substantially increase the severity of any previously identified effects; (3) result in mitigation measures or alternatives previously found to be infeasible becoming feasible; and (4) result in availability/implementation of mitigation measures or alternatives that are considerable different from those analyzed in the previous document that would substantially reduce one or more significant effects on the environment. These conclusions confirm that this addendum to the Program EIR is the appropriate CEQA document to evaluate the minor project modifications described in this document.

## 4 EVALUATION OF SERVICE AREA ESTABLISHMENT

This chapter summarizes setting information and identifies potential impacts related to the proposed establishment of a new service area for recycled water service specific to the Sacramento Local Agency Formation Commission's (LAFCo) policies and standards related to the environment. Materials used to prepare this chapter include the Sacramento LAFCo *Policy, Standards, and Procedures Manual*. This chapter only addresses the potential action of LAFCo authorizing Regional San's request for the establishment of the identified recycled water service area that would involve an amendment to its existing sphere of influence and annexation. The environmental effects of implementation of Harvest Water as a whole are addressed in the Program EIR and related CEQA documents, including this addendum. Although the Program EIR identified the need for LAFCo authorization for establishment of the service area and identified LAFCo as a responsible agency under CEQA, this chapter provides further environmental review documentation for the LAFCo authorization.

### 4.1 OVERVIEW OF ANNEXATION REQUEST

Regional San proposes to implement Harvest Water (formerly, the South County Ag Program), which would provide a safe and reliable supply of tertiary-treated recycled water for agricultural uses, reduce groundwater pumping, and support habitat enhancement/retention efforts.

Harvest Water includes expanding Regional San's 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 agricultural and habitat lands customers. This proposed reorganization would include an amendment of the existing sphere of influence and annexation of a total of 22,400 acres into Regional San's service area for recycled water service only, including unincorporated irrigated lands in the South County and managed wetlands within the South Stone Lake area of the Stone Lakes National Wildlife Refuge (NWR) and the Cosumnes River Preserve. The proposed recycled water service area is located in Sacramento County and includes portions of unincorporated Sacramento County, the NWR, and the Cosumnes River Preserve. The approximate boundaries of the recycled water service area 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 (see Figure 2-2). A portion of the Recycled Water Delivery Area is located west of I-5 comprising portions of the Stone Lakes NWR and lands between the refuge and I-5. While the project area is located close to the SRWTP, it is outside the current Regional San service area. The proposed annexation of the project area is for extension of recycled water service only and would not extend Regional San's wastewater treatment service area.

### 4.2 ENVIRONMENTAL SETTING

#### 4.2.1 Affordable Housing

A majority of the proposed service area is undeveloped consisting of agricultural uses and habitat preservation areas within the NWR and the Cosumnes River Preserve. No affordable housing projects exist in the area.

#### 4.2.2 Disadvantaged Unincorporated Communities

In 2011, Senate Bill (SB) 244 was enacted, resulting in changes to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Cortese-Knox-Hertzberg Act). LAFCos are now required to deny any application to annex to a city territory that is contiguous to a disadvantaged unincorporated community unless a second application is submitted to annex the disadvantaged community as well and LAFCos are required to evaluate disadvantaged unincorporated communities in a municipal service review. SB 244 defines "disadvantaged unincorporated

community” as any area with 12 or more registered voters where the median household income is less than 80 percent of the statewide annual median. This project would result in changes to Regional San’s service boundary and would not include annexation of land to a city; therefore, the project would not result in any impacts to said communities and disadvantaged unincorporated communities.

### 4.2.3 Agricultural Lands/Open Space

Public Resources Code Section 21060.1 defines “agricultural land” as: prime farmland, farmland of statewide importance, or unique farmland, as defined by the United States Department of Agriculture (USDA) land inventory and monitoring criteria, as modified for California. This definition is based on the USDA, Natural Resources Conservation Service (NRCS), Farmland Mapping and Monitoring Program (FMMP). NRCS through the FMMP uses two systems to determine a soil’s agricultural productivity: The Soil Capability Classification System and the Storie Index Rating System.

LAFCo has also established provisions for the consideration of proposed actions which uses a definition of agricultural lands that differs from those used under CEQA. Section 56064 of the Cortese-Knox-Hertzberg Local Government Reorganization Act defines “prime agricultural land” as follows:

“Prime agricultural land” means an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and that meets any of the following qualifications:

- (a) Land that qualifies, if irrigated, for rating as class I or class II in the USDA Natural Resources Conservation Service (NRCS) land use capability classification, whether or not land is actually irrigated, provided that irrigation is feasible.
- (b) Land that qualifies for rating 80 through 100 Storie Index Rating.
- (c) Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture in the National Range and Pasture Handbook, Revision 1, December 2003.
- (d) Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than four hundred dollars (\$400) per acre.
- (e) Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than four hundred dollars (\$400) per acre for three of the previous five calendar years.

Large portions of the proposed service area would meet both the CEQA definition of important farmland and Section 56064 of the Cortese-Knox-Hertzberg Local Government Reorganization Act definition of prime agricultural land. The proposed service area also includes preserved habitat areas associated with the Stone Lakes NWF and the Cosumnes River Preserve that would meet the definition of “open space land” under Section 65560 of the Cortese-Knox-Hertzberg Local Government Reorganization Act.

Over the long term, agricultural land use in the area would be unaffected as a result of the installation of proposed infrastructure such as pipelines. The project and extension of the service area would provide a benefit to agricultural and open space lands in the project area and would not involve changes that could result in conversion of these areas.

### 4.2.4 Environmental Justice

Government Code Section 65040.12 (e) defines environmental justice as: “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws and policies.” The Cortese-Knox-Hertzberg Local Government Reorganization Act Section 56668(o) further defines environmental justice as the fair treatment of people of all races, cultures, and incomes with respect to the location of public facilities and the provision of public services. Environmental justice addresses issues

concerning whether an activity could expose minority or disadvantaged populations to proportionately greater impacts compared with those borne by other individuals.

## 4.3 REGULATORY SETTING

### 4.3.1 Cortese-Knox-Hertzberg Local Government Reorganization Act

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Act) establishes procedures for local government changes of organization, including city incorporations, annexations to a city or special district, and city and special district consolidations. Local agency formation commissions (LAFCOs) have numerous powers under the Act, but those of primary concern are the power to act on local agency boundary changes and to adopt spheres of influence (SOI) for local agencies. Among the purposes of LAFCOs are the discouragement of urban sprawl and the encouragement of the orderly formation and development of local agencies. The Act includes the following provisions:

**56425.** (a) In order to carry out its purposes and responsibilities for planning and shaping the logical and orderly development and coordination of local governmental agencies subject to the jurisdiction of the commission to advantageously provide for the present and future needs of the county and its communities, the commission shall develop and determine the sphere of influence of each city and each special district, as defined by Section 56036, within the county and enact policies designed to promote the logical and orderly development of areas within the sphere.

**56428.** (a) Any person or local agency may file a written request with the executive officer requesting amendments to a sphere of influence or urban service area adopted by the commission. The request shall state the nature of the proposed amendment, state the reasons for the request, include a map of the proposed amendment, and contain any additional data and information as may be required by the executive officer. (b) After complying with the California Environmental Quality Act, Division 13 (commencing with Section 21000) of the Public Resources Code, the executive officer shall place the request on the agenda of the next meeting of the commission for which notice can be given. The executive officer shall give notice in the manner provided by Section 56427. On the date and time provided in the notice, the commission may do either of the following: (1) Without further notice, consider the amendments to a sphere of influence. (2) Set a future date for the hearing on the request.

**56653.** (a) If a proposal for a change of organization or reorganization is submitted pursuant to this part, the applicant shall submit a plan for providing services within the affected territory. (b) The plan for providing services shall include all of the following information and any additional information required by the commission or the executive officer: (1) An enumeration and description of the services currently provided or to be extended to the affected territory. (2) The level and range of those services. (3) An indication of when those services can feasibly be extended to the affected territory, if new services are proposed. (4) An indication of any improvement or upgrading of structures, roads, sewer or water facilities, or other conditions the local agency would impose or require within the affected territory if the change of organization or reorganization is completed. (5) Information with respect to how those services will be financed.

### 4.3.2 Sacramento Local Agency Formation Commission

Establishment of the proposed service area is subject to Sacramento LAFCo's *Policy, Standards and Procedures Manual*. The following discussion includes a list of Sacramento LAFCo policies that apply to the project.

#### SACRAMENTO LAFCO GENERAL POLICIES

5. CEQA requires that LAFCo assess the environmental consequences of its actions and decisions, and take actions to avoid or minimize a project's adverse environmental impacts, if feasible, or approve a project despite



significant effects because it finds overriding considerations exist. To comply with CEQA, the LAFCo will take one or more of the following actions:

- a. At its discretion, approve a project without changes if environmental impacts are insignificant;
  - b. Require an applicant to modify a project;
  - c. Establish mitigating measures as a condition of its approval of the proposal, (note the Commission may also impose terms and conditions of project approval other than CEQA identified mitigation measures.);
  - d. Modify and approve to avoid or lessen environmental impacts, or disapprove the proposal because of unacceptable adverse environmental impacts;
  - e. Approve the project despite its significant effects by making findings of overriding concern.
6. LAFCo will favorably consider those applications that do not shift the cost for services and infrastructure benefits to other service areas.
  7. The LAFCo encourages the use of service providers which are governed by officials elected by the citizens.

## SACRAMENTO LAFCO GENERAL STANDARDS

### B. Conformance with applicable general and specific plans

1. LAFCo will approve changes of organization or reorganization only if the proposal is consistent with the General Plan and applicable Specific Plans of the applicable planning jurisdiction.
2. For purposes of the above policy, the applicable planning jurisdiction is as follows:
  - a. For annexations to a city, the applicable jurisdiction is the city to which annexation is proposed;
  - b. For applications for annexation to or detachment from a district all of whose territory lies within an adopted Sphere of Influence of a city, the General Plan of the city;
  - c. For an application for annexation to a special district for lands outside an adopted city Sphere of Influence, the Sacramento County General Plan;
  - d. For an application for annexation or detachment from a district whose territory lies in both the city and the unincorporated area of the county, the General Plan of the city unless the project lies outside of the city's Sphere of Influence; and
  - e. For applications for incorporations, this standard is inapplicable.
3. For purposes of this standard, the proposal shall be deemed consistent if the proposed use is consistent with the applicable General Plan designation and text, the applicable General Plan is legally adequate and internally consistent and the anticipated types of services to be provided are appropriate to the land use designated for the area.
4. The governing body of the applicable planning jurisdiction shall recommend by resolution whether the proposal meets all applicable consistency requirements of state law, including internal consistency. LAFCo shall retain jurisdiction to determine consistency pursuant to its jurisdiction to approve, disapprove or condition changes of organization or reorganization and may require additional information if necessary.

### Boundaries

1. The LAFCo will not approve applications within boundaries which:
  - a. Result in islands, corridors or peninsulas or incorporated or unincorporated territory or otherwise cause or further the distortion of existing boundaries;
2. LAFCo will make exceptions to the requirements of this standard only if the exception:
  - a. Is rendered necessary because of unique circumstances;

- b. Results in improved quality or lower cost of service available to the affected parties; or
- c. There exists no feasible and logical alternative.

### 4.3.3 Sacramento County 2030 General Plan

The following discussion includes a list of Sacramento County 2030 General Plan goals, objectives, and policies that apply to the project.

## SACRAMENTO COUNTY GENERAL PLAN AGRICULTURAL ELEMENT

### Groundwater Depletion, Water Quality And Water Conservation

**OBJECTIVE:** Reduce or eliminate groundwater cones of depression in farming areas by encouraging water conservation.

**INTENT:** Groundwater depletion has caused pumping costs to increase in some farming areas south of the American River in the South County. Increasing pumping costs have reduced the viability of farming in these areas where substantial urban development is planned. Such developments could increase demands on local aquifers unless alternative surface water supplies are made available to them. The California Department of Public Health has established California water recycling criteria (known as Title 22) for various purposes, including agriculture.

- ▶ **Policy AG-27:** The County shall actively encourage groundwater recharge, water conservation and water recycling by both agricultural and urban water users.
  - **Implementation Measure A:** Promote, through educational and technical assistance programs, adoption of water conservation and water recycling measures, including programs established in the Sacramento Regional County Sanitation District's Water Recycling Master Plan. (DWR, SACDOT)
  - **Implementation Measure B:** In cooperation with SRCSD, the County shall explore innovative ways to encourage groundwater recharge in agricultural areas. (DWR, PLANNING & ENVIRONMENTAL REVIEW)

## SACRAMENTO COUNTY GENERAL PLAN CONSERVATION ELEMENT

### Efficient Use of Urban and Agricultural Water

**OBJECTIVE:** Ensure the most efficient use of water in urban and agricultural areas.

Efficient water use is essential to address the limited volume of safe, reliable water supplies available for beneficial use in Sacramento County. Water available for beneficial use is limited by precipitation patterns, water rights limitations, sustainable groundwater yield, and water required for the preservation of important environmental resources.

- ▶ **Policy CO-13:** Support the WFA Conservation Element and the California Urban Water Conservation Council Best Management Practices for Water Conservation.
- ▶ **Policy CO-14:** Support the use of recycled wastewater to meet non-potable water demands where financially feasible.
- ▶ **Policy CO-15:** Support effective agricultural water conservation practices, including the use of recycled wastewater where financially feasible.

### Manage Water to Protect Ecosystems

**OBJECTIVE:** Manage water supply to protect valuable water-supported ecosystems.

The beneficial use of water for urban development and agriculture changes patterns of river and stream flow and water quality, which have impacts on valuable water-supported ecosystems, including riparian and stream ecology and the Sacramento River Delta.

- ▶ **Policy CO-20:** Support preservation and restoration of the Cosumnes River riparian ecosystem.

## SACRAMENTO COUNTY GENERAL PLAN DELTA PROTECTION ELEMENT

Utilities and Infrastructure Goal: Support construction of new utilities and infrastructure facilities appropriate to the Delta which avoid, minimize and mitigate the impacts of such new construction on the integrity of levees, wildlife, recreation, agriculture.

- ▶ **Policy DP-65:** Encourage the provision of infrastructure for new water, recycled water and recreational and scientific research facilities.

### 4.4 IMPACTS AND MITIGATION MEASURES

#### 4.4.1 Significance Criteria

Impacts related to the establishment of the proposed service area would be considered significant if the project would result in conflicts with Sacramento LAFCo policies and standards related to public service provision and the environment for any of the following:

- ▶ affordable housing;
- ▶ loss of prime agricultural lands (as defined by Section 56064 of the Cortese-Knox-Hertzberg Local Government Reorganization Act); or
- ▶ loss of open space (as defined in Government Code Section 65560).

In addition, impacts related to the project would be considered significant if the reorganization would result in adverse effects or impacts that are appreciably more severe in magnitude or are predominately borne by any segment of the population, for example, household population with low income or a minority population in comparison with a population that is not low income or minority (i.e., environmental justice impacts).

### METHODS AND ASSUMPTIONS

As noted above, the analysis below is focused on impacts related to reorganization of the project specific to the Sacramento LAFCo policies and standards for public services and the environment. The project and cumulative environmental impacts of the project are addressed in the Program EIR.

### IMPACTS AND MITIGATION MEASURES

#### Impact 6-1: Loss of Affordable Housing

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The proposed service area does not contain any existing affordable housing projects and would not involve the removal of any existing housing. Therefore, the project would have **no impact** involving the loss of affordable housing.

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Upon annexation, the project would provide recycled water that would provide a benefit to agricultural lands and preserved habitat areas in the service area and would not involve changes in existing land use conditions or require removal of any housing. Therefore, the project would have **no impact** involving the loss of affordable housing.

#### Mitigation Measures

No mitigation is required.

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## Impact 6-2: Loss of Prime Agricultural Lands

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The proposed service area will provide recycled water service to agricultural landowners who have agreed to participate in the Program. Recycled water use for irrigation will offset groundwater pumping and will result in in-lieu groundwater recharge in the area. This would provide water supply benefits to agricultural uses and not result in the loss of prime agricultural lands as defined by Section 56064 of the Cortese-Knox-Hertzberg Local Government Reorganization Act. Therefore, the project would have **no impact** involving the loss of prime agricultural lands.

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While there would be some construction related to the installation of pipelines, this construction would occur primarily within existing roadways and would be temporary in nature. Where construction may occur in agricultural lands, pipelines would be installed underground and temporarily disturbed agricultural lands would be restored to agricultural production after pipeline installation. The provision of recycled water service to agricultural landowners who have agreed to participate in the Program will offset groundwater pumping and will result in in-lieu groundwater recharge in the area. The project would provide a benefit to agricultural lands in the project area and would not involve changes that could result in conversion of farmland to non-agricultural use. Therefore, the project would have **no impact** involving the loss of prime agricultural lands.

### Mitigation Measures

No mitigation is required.

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## Impact 6-3: Loss of Open Space Land Uses

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The proposed service area and recycled water service to agricultural landowners, Stone Lakes NWR, and the Cosumnes River Preserve will provide habitat and groundwater benefits. The project would not result in the conversion of open space land uses or support future development that could convert such uses within the service area. Therefore, the project would have **no impact** involving the loss of loss of open space land uses.

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As noted above, Section 56059 of the Cortese-Knox-Hertzberg Local Government Reorganization Act uses the open space definition under Government Code Section 65560. The proposed service area would meet the definition under Section 65560(b)(1) and (2) as it is currently in agricultural use and includes the Stone Lakes NWR and the Cosumnes River Preserve.

While there would be some construction related to the installation of pipelines, this construction would occur primarily within existing roadways and would be temporary in nature. Where construction occurs outside of roadways, disturbance would be temporary in order to install the pipelines underground, and disturbed areas would be restored to pre-project conditions. Recycled water service to agricultural landowners, Stone Lakes NWR, and the Cosumnes River Preserve would provide habitat and groundwater benefits to these open space uses. Therefore, the project would have **no impact** involving the loss of open space lands.

### Mitigation Measures

No mitigation is required.

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## Impact 6-4: Impacts Related to Environmental Justice

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The proposed service area does not contain any existing affordable housing projects and would not involve the removal of any existing housing. There are no existing or proposed uses in the project area that would expose any existing residents in the area to one or more environmental hazards. Therefore, the project's impact would be **less than significant** related to environmental justice concerns.

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Upon annexation, the project would provide recycled water that would provide a benefit to agricultural lands and preserved habitat areas in the service area and would not involve changes in existing land use conditions or require removal of any housing. The proposed service area does not contain any existing affordable housing projects. Environmental hazards would only be associated with project construction. Potential hazards, such as accidental

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releases of fuels or other construction materials would be reduced to a less than significant level through compliance with existing laws and regulatory regimes regarding the use and storage of typical construction material. Therefore, impacts related to environmental justice would be **less than significant**.

## Mitigation Measures

No mitigation is required.

## Impact 6-5: Impacts related to consistency with Sacramento Local Agency Formation Commission policies and standards

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The project would generally be consistent with Sacramento Local Agency Formation Commission standards associated with annexation requests that address environmental issues as set forth in its *Policy, Standards and Procedures Manual*. Therefore, the project's impact would be **less than significant**.

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The following is a consistency analysis of the project based on the general standards and specific standards by action type set forth in Sacramento LAFCo's *Policy, Standards and Procedures Manual*.

### General Standard B. Conformance with Applicable General and Specific Plans

Construction and operation of the project would not result in any changes to land use. The proposed pipelines and appurtenances would be located underground, primarily within public rights-of-way, although construction could temporarily occur on adjacent agricultural land. The project does not include residential, commercial, or agricultural development and would not alter land use designations of existing land uses. The project would also not introduce new uses or result in changes to the functions of the Cosumnes River Preserve or Stone Lakes NWF. Providing recycled water to agricultural customers in the South County would contribute to Sacramento County's goals and objectives of protecting farmland, enhancing the viability of the agricultural economy, and reducing or eliminating groundwater cones of depression in farming areas. In addition, the use of recycled water in an area currently relying primarily on groundwater would be consistent with groundwater management policies in the area. Therefore, the project would be consistent with the Land Use Elements of the Sacramento County General Plan and the Cosumnes River Preserve Management Plan

### General Standard C. Boundaries

The proposed service area boundary was drawn to provide the flexibility to deliver recycled water to interested agricultural groundwater users and conservation landowners located south of the Sacramento Regional Wastewater Treatment Plant. By providing recycled water for seasonal agricultural irrigation to current groundwater users, the project will result in in-lieu groundwater recharge in the area. West of I-5 and south of Twin Cities Road, agricultural irrigation is mainly sourced from surface water. East of Highway 99 and the Cosumnes River Preserve, a crossing under the Cosumnes River and an additional booster pump station would be needed to support the distribution system. Hence, at this time, the service area lies to the East of the Cosumnes River, and resides solely in the South American Groundwater Basin, and within the purview of the Sacramento County Groundwater Authority (SCGA).

Based on the analysis above, the project would be generally consistent with Sacramento LAFCo policies that address environmental issues, and this impact would be **less than significant**.

## Mitigation Measures

No mitigation is required.

# 5 REFERENCES

## 1 Introduction

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#### 4 Evaluation of Service Area Establishment

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# Appendix A

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## Landowner Checklist

# HARVEST WATER PROGRAM LANDOWNER CHECKLIST

## INTRODUCTION

The Sacramento Regional County Sanitation District (Regional San) anticipates connecting its recycled water system to approximately 60 to 125 parcels or groups of parcels owned and operated by about 50 to 75 landowners and farmer/operators. These parcels are within the project area and will comprise about 10,000 to 15,000 acres of land with summertime irrigation demand up to approximately 32,500 acre-feet per year (AFY). Because the precise location of the interconnection into each farm/parcel group is unknown at this time, Regional San has prepared this checklist approach so that each connection can be evaluated and implemented expeditiously, and in coordination with the landowner and operator of the property/properties. In some cases, Regional San will be leading the siting, design, and construction, and in the remaining cases, the landowner will take on one or more of these tasks. In either case, the checklist will be followed and documented.

## BACKGROUND AND PURPOSE

The EIR for the South Sacramento County Agriculture and Habitat Lands Recycled Water Program (Program EIR) evaluated some elements of the project at a project level of detail, and some elements at a program level. As stated in the EIR, "A program EIR assesses and documents the broad environmental impacts of a program with the understanding that a more detailed site-specific review may be required to assess future projects implemented under the program." Because detailed plans for service connection laterals and customer turnouts were not known at the time the Program EIR was prepared, the EIR provides a program level of analysis for these project elements. These project elements can be equated with the portions of the Harvest Water Program (formerly, the South County Ag Program) that would be located on private lands. This checklist is intended to provide the final facet of "detailed site-specific review" for facility installations on private lands for biological and cultural resources that was called for in the Program EIR. Following the checklist supports the avoidance of potential impacts to biological and cultural resources called for in the Program EIR. For the reasons described below, this checklist does not substitute for the Mitigation Monitoring and Reporting Program (MMRP) prepared for the Program EIR. The MMRP must still be followed for all project elements. However, this checklist supplements and supports implementation of the MMRP.

Mitigation Measures BIO-1b and BIO-1c in the Program EIR provide mitigation measures for habitats and plant and wildlife species covered in the South Sacramento Habitat Conservation Plan (SSHCP). At the time the Program EIR was certified, the SSHCP had not yet been completed. The Harvest Water Program is a covered activity in the SSHCP, and therefore, it was anticipated that participation in the SSHCP would provide mitigation for covered species. However, with the SSHCP not completed when the Program EIR was prepared, Mitigation Measure BIO-1b provides habitat compensation ratios, and Mitigation Measure BIO-1c provides SSHCP conservation measures, as they existed at that time, with Mitigation Measure BIO-1c stating:

"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."

With the SSHCP now adopted and in effect, the habitat compensation measures provided in Mitigation Measure BIO-1b and species-specific measures provided in Mitigation Measure BIO-1c are now superseded by the habitat compensation protocols and species-specific avoidance and minimization measures (AMMs) included in the SSHCP. The checklist below provides key text from relevant AMMs from the SSHCP and does not present the habitat compensation and species-specific measures included in the Program EIR as these measures are no longer in effect.

For cultural resources, it is identified on page 3.6-17 of the Draft Program EIR that "additional inventory would be required before construction of the program-level elements." The portion of the checklist addressing cultural resources provides the additional inventory called for in the Program EIR. Further evaluation based on the location of

previously recorded archaeological sites and the environmental context has identified areas with high archaeological sensitivity. The checklist calls for on-site surface investigations for cultural resources in these high sensitivity areas, and avoidance of archeological resource sites, as part of the facility siting process.

## CHECKLIST USE

Before final selection of a facility location on private lands, Regional San staff, or a designated representative, must verify compliance with all items on the checklist below. In some cases, compliance may be verification that a measure is not applicable to a particular site, such as confirming that habitat for a particular plant or wildlife species is not present. In cases where habitat, or the absence of habitat, is clearly obvious, such as an asphalt parking area, graded road, or a cultivated agricultural field, determinations of the absence of sensitive habitat may be made without a technical specialist. However, in any instances where habitat conditions are not abundantly clear, a technical specialist, such as a wildlife biologist or botanist, will be called to review the site. In all areas designated as having high archaeological sensitivity, consistent with the checklist item for cultural resources, the required cultural resources investigation shall be conducted by a qualified archaeologist.

Regional San staff, or a designated representative, shall sign each Verification of Compliance section of the checklist and describe briefly how compliance was achieved, or why the checklist item is not applicable to the proposed facilities. The completed checklist, and all supporting documents, such as biological or archeological survey reports, shall be retained together in the project files.

It is the intent of Regional San to avoid biological and cultural resources addressed in this checklist consistent with the direction below. Resource avoidance is considered feasible and desirable in a vast majority of circumstances given that the facilities to be reviewed under this checklist are relatively small linear facilities (primarily small diameter: 4-inch to 12-inch-diameter pipelines constructed primarily of PVC and steel or ductile iron), with flexibility in location and routing, and with limited aerial effects.

- ▶ Rare plants (species listed below in Mitigation Measure PLANT-1) – Fully avoid individuals or populations of plants if surveys indicate presence.
- ▶ California Tiger Salamander – Fully avoid aquatic habitat. Avoid upland habitat where feasible. If recycled water pipeline laterals are routed intentionally to serve aquatic habitats, those projects will be implemented directly by Regional San rather than the landowner.
- ▶ Western Spadefoot Toad – Fully avoid aquatic habitat. Avoid upland habitat where feasible. If recycled water pipeline laterals are routed intentionally to serve aquatic habitats, those projects will be implemented directly by Regional San rather than the landowner.
- ▶ Giant Garter Snake – Fully avoid aquatic habitat. Avoid upland habitat where feasible. If recycled water pipeline laterals are routed intentionally to serve aquatic habitats, those projects will be implemented directly by Regional San rather than the landowner.
- ▶ Wester Pond Turtle – Fully avoid aquatic habitat. Avoid upland habitat where feasible. If recycled water pipeline laterals are routed intentionally to serve aquatic habitats, those projects will be implemented directly by Regional San rather than the landowner.
- ▶ Tri-colored Blackbirds – Fully avoid nest colonies. Cannot avoid foraging habitat as this includes some agricultural fields.
- ▶ Swainson's Hawk – Fully avoid nest trees when occupied. Cannot avoid foraging habitat as this includes some agricultural fields.
- ▶ Greater Sandhill Crane – Fully avoid roosting sites when occupied. Cannot avoid foraging habitat as this includes some agricultural fields.
- ▶ Western Burrowing Owl – Fully avoid occupied burrows.
- ▶ Raptors- Fully avoid occupied nests. Cannot avoid foraging habitat as this includes some agricultural fields.
- ▶ Western Red Bat – Fully avoid occupied roosts.

- ▶ Sensitive Habitat – Fully avoid aquatic and riparian habitats
- ▶ Archeological Resources – Fully avoid known, or discovered (i.e., via checklist-driven investigations in high sensitivity areas or during construction) archeological sites

As stated previously, the checklist below provides key text from relevant AMMs from the SSHCP. The intent is to provide species-specific AMMs relevant to the evaluation and selection of a pipeline routes and related facilities on private land. The SSHCP includes many AMMs beyond those addressed in the checklist. All SSHCP AMMs are provided in SSHCP Section 5.4.2, "Covered Species Take Avoidance and Minimization Measures."

The full SSHCP is available at <https://www.southsachcp.com/>.

A file listing only the AMMs is available at <https://planning.saccounty.net/PlansandProjectsIn-Progress/Documents/SSCHP/AMMs%20Table.pdf>.

The first step for most species-specific AMMs is to determine if Covered Species modeled habitat is within the proposed Covered Activity footprint or within a specified distance of the proposed Covered Activity. This first step, and subsequent steps in any AMM implementation, should be coordinated with the SSHCP implementing agency, the South Sacramento Conservation Agency. Section 3.4 of the SSHCP provides maps and descriptions of modeled habitat for each Covered Species. It is only if modelled habitat is present that further steps in AMM implementation may be applicable. Only the first AMM for each covered species, or group of covered species, is provided in the checklist below. These AMMs provide the first step of determining whether modelled habitat is present. Additional AMMs are included in the SSHCP for situations where modelled habitat is present. These additional AMMs are not included in the checklist below, in large part because the intent is to site project facilities in locations on private lands that avoid sensitive biological resources.

Citations included in any checklist measures can be found in the references section of the source document (e.g., CDFW 2009 cited in AMM Plant-1 can be found in SSHCP references).

Some SSHCP species-specific AMMs are specific to regional locations outside the boundary of the Harvest Water Program or address species or habitats that do not occur in the Harvest Water Program project area. These AMMs are not provided in the checklist below. For example, AMMs for Sacramento Orcutt Grass and Slender Orcutt Grass are not included in the checklist below as the area of interest for these species is within 1 mile of the Mather Core Recovery Area and the project site is outside of this area.

The SSHCP includes the following definitions that are relevant to the AMMs:

Plan Permittees: The SSHCP was prepared by six local jurisdictions, including the County of Sacramento, City of Galt, City of Rancho Cordova, Sacramento County Water Agency, Sacramento Regional County Sanitation District, and the Southeast Connector Joint Powers Authority. These six permit applicants and a (to be formed) SSHCP Implementing Entity are collectively referred to as the Plan Permittees.

Permitting Agencies: Agencies that are issuing permits for the SSHCP or developing programmatic agreements for the SSHCP. In the SSHCP the permitting agencies are California Department of Fish & Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and U.S. Environmental Protection Agency (EPA).

Implementing Entity: The body that is responsible for implementation of a permitted HCP. The SSHCP Implementing Entity is composed of a Governing Board, Implementation Commission, various committees and staff who oversee management and administration of the Plan.

Approved Biologist: The SSHCP itself does not provide a clear definition for an approved biologist, instead requiring that the SSHCP implementing entity "develop a checklist of qualifications for Approved Biologist...in coordination with the Wildlife Agencies." The implementing entity, the South Sacramento Conservation Agency, has not yet published a definition for an approved biologist. It can be assumed that any activity that involves the handling or disturbance of a listed species must be conducted by a biologist with an ESA Section 10(a)(1)(A) permit and/or state Scientific Collecting Permit that covers the specific activity and the specific species.

Mitigation Measure	Verification of Compliance	Notes
<p><b>PLANT-1 (Rare Plant Surveys):</b> If the site being considered contains modeled habitat for Ahart's dwarf rush (<i>Juncus leiospermus</i> var. <i>aharti</i>), Bogg's Lake hedge-hyssop (<i>Gratiola heterosepala</i>), dwarf downingia (<i>Downingia pusilla</i>), Legenere (<i>Legenere limosa</i>), pincushion navarretia (<i>Navarretia myersi</i>), or Sanford's arrowhead (<i>Sagittaria sanfordii</i>), and the habitat cannot be fully avoided, the 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 (CDFG 2009) 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. <b>(from SSHCP AMMs)</b></p>		<p>Check SSHCP modelled habitat maps for each species (see SSHCP Chapter 3). Only survey for species where the project facilities intersect modelled habitat.</p>
<p><b>CTS-1 (California Tiger Salamander Daily Construction Schedule):</b> 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 (Figure 3-17) 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. <b>(from SSHCP AMMs)</b></p>		<p>This is the first of several California Tiger Salamander (CTS) AMMs included in the SSHCP. For the purposes of this checklist, determine if pipeline route is within CTS modelled habitat. Then, if the project facilities are within modelled habitat, ensure all CTS AMMs are implemented as appropriate.</p>
<p><b>WS-1 (Western Spadefoot Toad Work Window):</b> 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. <b>(from SSHCP AMMs)</b></p>		<p>This is the first of several western spadefoot toad (WS) AMMs included in the SSHCP. For the purposes of this checklist, determine if project facilities are within WS modelled habitat. Then, if the project facilities are within modelled habitat, ensure all WS AMMs are implemented as appropriate.</p>
<p><b>GGs-1 (Giant Gartersnake Surveys):</b> 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 consistent with SSHCP requirements. In addition to the SSHCP land cover types shown in 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. Covered Activities may occur throughout the year as long as giant gartersnake habitat is identified and fully avoided. Otherwise, Covered Activities must comply with AMMs GGS-2 through GGS-8. See SSHCP Chapter 10 for the process to conduct and submit survey information. <b>(from SSHCP AMMs)</b></p>		<p>This is the first of several giant garter snake (GGS) AMMs included in the SSHCP. For the purposes of this checklist, determine if project facilities are within 300 feet of GGS modelled habitat. Then, if the project facilities are within 300 feet of modeled habitat, ensure all GGS AMMs are implemented as appropriate.</p>



Mitigation Measure	Verification of Compliance	Notes
<p><b>WPT-1 (Western Pond Turtle Surveys):</b> 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 habitat consistent with the SSHCP requirements. In addition to the SSHCP land cover types shown in 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. 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 AMMs WPT-2 through WPT-9. See SSHCP Chapter 10 for the process to conduct and submit survey information. <b>(from SSHCP AMMs)</b></p>		<p>This is the first of several western pond turtle (WPT) AMMs included in the SSHCP. For the purposes of this checklist, determine if project facilities are within 300 feet of WPT modelled habitat. Then, if the project facilities are within 300 feet of modeled habitat, ensure all WPT AMMs are implemented as appropriate.</p>
<p><b>TCB-1 (Tricolored Blackbird Surveys):</b> 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, consistent with SSHCP required methodology, to determine if existing or potential nesting or foraging sites are present 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. See SSHCP Chapter 10 for the process to conduct and submit survey information. <b>(from SSHCP AMMs)</b></p>		<p>This is the first of several tricolored blackbird (TCB) AMMs included in the SSHCP. For the purposes of this checklist, determine if project facilities are within 500 feet of TCB modelled habitat. Then, if the project facilities are within 500 feet of modeled habitat, ensure all TCB AMMs are implemented as appropriate. Although not mentioned in the AMM, TCB modelled habitat is shown in SSHCP Figure 3-26.</p>
<p><b>SWHA-1 (Swainson's Hawk Surveys):</b> 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, consistent with SSHCP required methodology, to determine if existing or potential nesting sites are present. 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 (<i>Populus fremontii</i>), oaks (<i>Quercus</i> spp.), willows (<i>Salix</i> spp.), walnuts (<i>Juglans</i> spp.), eucalyptus (<i>Eucalyptus</i> spp.), pines (<i>Pinus</i> spp.), and Deodar cedar (<i>Cedrus deodara</i>). See SSHCP Chapter 10 for the process to conduct and submit survey information. <b>(from SSHCP AMMs)</b></p>		<p>This is the first of several Swainson's hawk (SWHA) AMMs included in the SSHCP. For the purposes of this checklist, determine if project facilities are within 0.25 mile of SWHA modelled habitat. Then, if the project facilities are within 0.25 mile of modeled habitat, ensure all SWGHA AMMs are implemented as appropriate.</p>

Mitigation Measure	Verification of Compliance	Notes
<p><b>GSC-1 (Greater Sandhill Crane Surveys):</b> If modeled habitat for greater sandhill crane (Figure 3-22) 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, consistent with SSHCP required methodology, to determine if existing or potential roosting sites are present. Roosting sites within the Plan Area are often associated with flooded fields, seasonal wetlands, and freshwater marsh. See SSHCP Chapter 10 for the process to conduct and submit survey information. <b>(from SSHCP AMMs)</b></p>		<p>This is the first of several greater sandhill crane (GSC) AMMs included in the SSHCP. For the purposes of this checklist, determine if project facilities are within 0.5 mile of GSC modelled habitat. Then, if the project facilities are within 0.5 mile of modeled habitat, ensure all GSC AMMs are implemented as appropriate.</p>
<p><b>WBO-1 (Western Burrowing Owl Surveys):</b> 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, eggshell fragments, pellets, prey remains, and/or excrement. Surveying and mapping will be conducted by the approved biologist following SSHCP required methodology. 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. <b>(from SSHCP AMMs)</b></p>		<p>This is the first of several western burrowing owl (WBO) AMMs included in the SSHCP. For the purposes of this checklist, determine if project facilities are within WBO modelled habitat. Then, if the project facilities are within modeled habitat, ensure all WBO AMMs are implemented as appropriate. Although not mentioned in the AMM, WBO modelled habitat is shown in SSHCP Figure 3-27.</p>
<p><b>RAPTOR-1 (Raptor Surveys):</b> If modeled habitat for a covered raptor species (SSHCP Figures 3-20, 3-23, 3-24, or 3-28) 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, consistent with SSHCP required methodology, to determine if existing or potential nesting sites are present. See SSHCP Chapter 10 for the process to conduct and submit survey information. <b>(from SSHCP AMMs)</b></p>		<p>This is the first of several covered raptor (RAPTOR) AMMs included in the SSHCP. For the purposes of this checklist, determine if project facilities are within 0.25 mile of covered raptor modelled habitat. Then, if the project facilities are within 0.25 mile of covered modeled habitat, ensure all RAPTOR AMMs are implemented as appropriate.</p>
<p><b>BAT-1 (Winter Hibernaculum Surveys):</b> If modeled habitat (SSHCP Figure 3-30) for western red bat is present within 300 feet of a Covered Activity's project footprint, then an approved biologist will conduct a field investigation, consistent with SSHCP required methodology, to determine if a potential winter hibernaculum is present, and to identify and map potential hibernaculum sites. Winter hibernaculum 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 winter hibernaculum site. See SSHCP Chapter 10 for the process to conduct and submit survey information. <b>(from SSHCP AMMs)</b></p>		<p>This is the first of several western red bat (BAT) AMMs included in the SSHCP. For the purposes of this checklist, determine if project facilities are within 300 feet of BAT modelled habitat. Then, if the project facilities are within 300 feet of modeled habitat, ensure all BAT AMMs are implemented as appropriate.</p>

Mitigation Measure	Verification of Compliance	Notes
<p><b>Non-SSHCP-Covered Sensitive Plants.</b> <i>The following text is repeated from Program EIR Mitigation Measure BIO-1d. Although this mitigation measure, as written in the EIR, is also in the MMRP, and would be implemented/enforced through that mechanism, it is repeated here to address all biological survey obligations together in this checklist.</i> 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 feasibly 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.</p> <p><b>(from Mitigation Measure BIO-1d in Program EIR)</b></p>		<p>Surveys may be conducted concurrently with SSHCP AMM related botanical surveys.</p> <p>Note: "Sensitive" plants are defined in the Program EIR as plants identified by the California Native Plant Society (CNPS) as having a California Rare Plant Rank (CRPR) rank of 1A, 1B, or 2 (see Program EIR page 3.5-13).</p>
<p><b>Non-SSHCP-Covered Birds:</b> <i>The following text is repeated from Program EIR Mitigation Measure BIO-1d. Although this mitigation measure, as written in the EIR, is also in the MMRP, and would be implemented/enforced through that mechanism, it is repeated here to address all biological survey obligations together in this checklist.</i> 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.</p> <p><b>(from Mitigation Measure BIO-1d in Program EIR)</b></p>		<p>Surveys may be conducted concurrently with SSHCP AMM related wildlife surveys.</p> <p>In the event that these surveys do not overlap with surveys described for SSHCP covered species, nesting bird surveys should be conducted if any ground or vegetation disturbing activities occur between February 1 and September 15. This is consistent with the typical survey window for birds protected under the Migratory Bird Treaty Act (MBTA).</p>
<p><b>Cultural Resources Assessment for Service Connection Laterals and Turnouts in Areas of High Archaeological Sensitivity:</b> In areas determined to have high archaeological sensitivity based on the location of previously recorded archaeological sites and the environmental context (Figures 1 and 2 in Attachment A to this 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.</p> <p>The cultural resources investigation 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</p>		<p>Figures 1 and 2 in Attachment A of this Checklist identify the areas determined to have high archaeological sensitivity based on the location of previously recorded archaeological sites and the environmental context. These areas are designated as "Areas of Archeological Sensitivity" in Figures 1 and 2.</p>

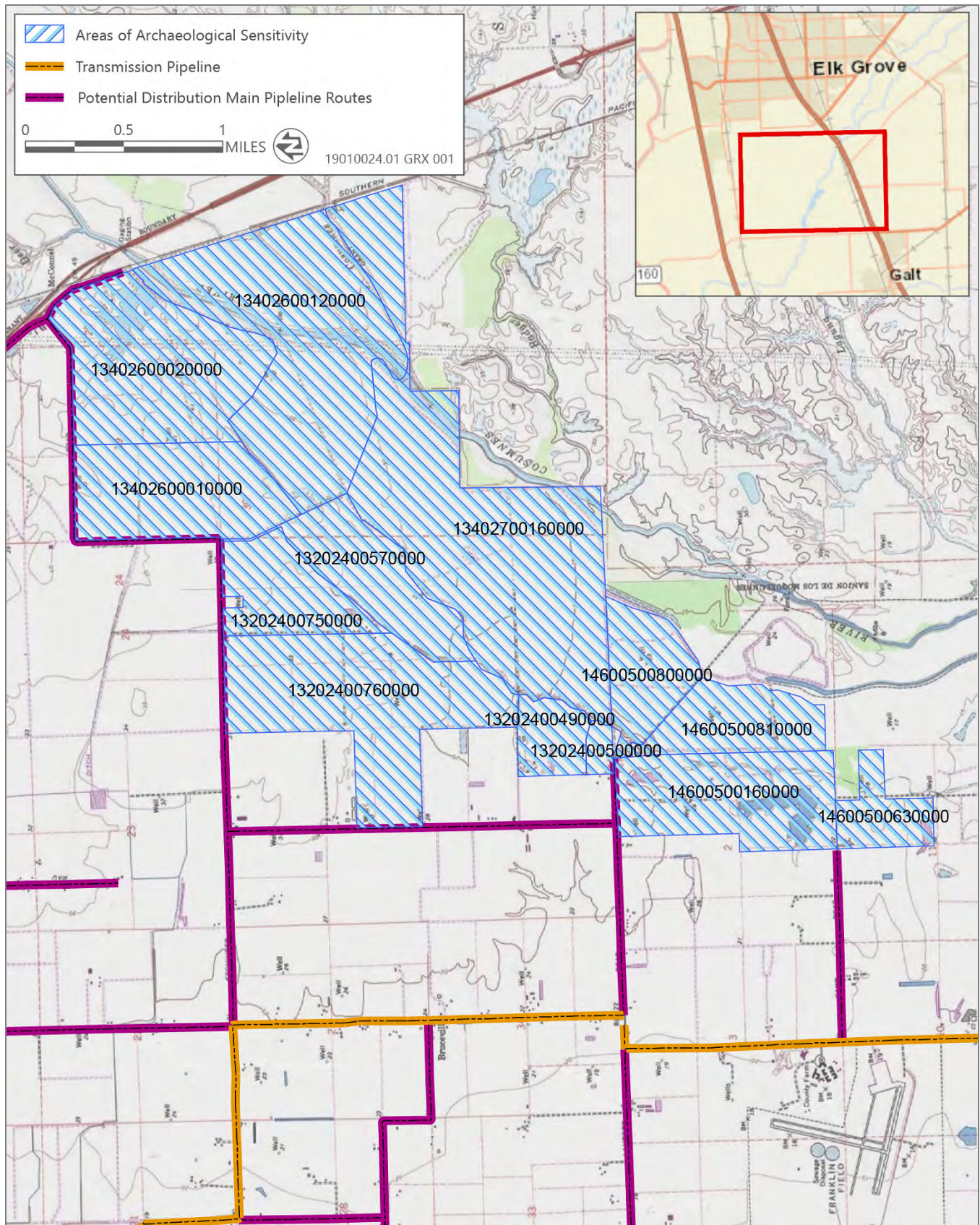
Mitigation Measure	Verification of Compliance	Notes
<p>Qualification Standards. The qualified archaeologist will complete the following:</p> <ul style="list-style-type: none"> <li>▶ An intensive cultural resources survey of the project area not previously surveyed for cultural resources, including all private property to connect service laterals and turnouts for individual agricultural users;</li> <li>▶ A technical report disseminating the results of this research; and,</li> <li>▶ 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.</li> </ul> <p>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.</p> <p><b>(from the Lateral Pipelines and On-Farm Connections Project Cultural Resources Survey Report)</b></p>		

# Attachment A

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Areas Where Cultural Resources  
Surveys Would Be Required

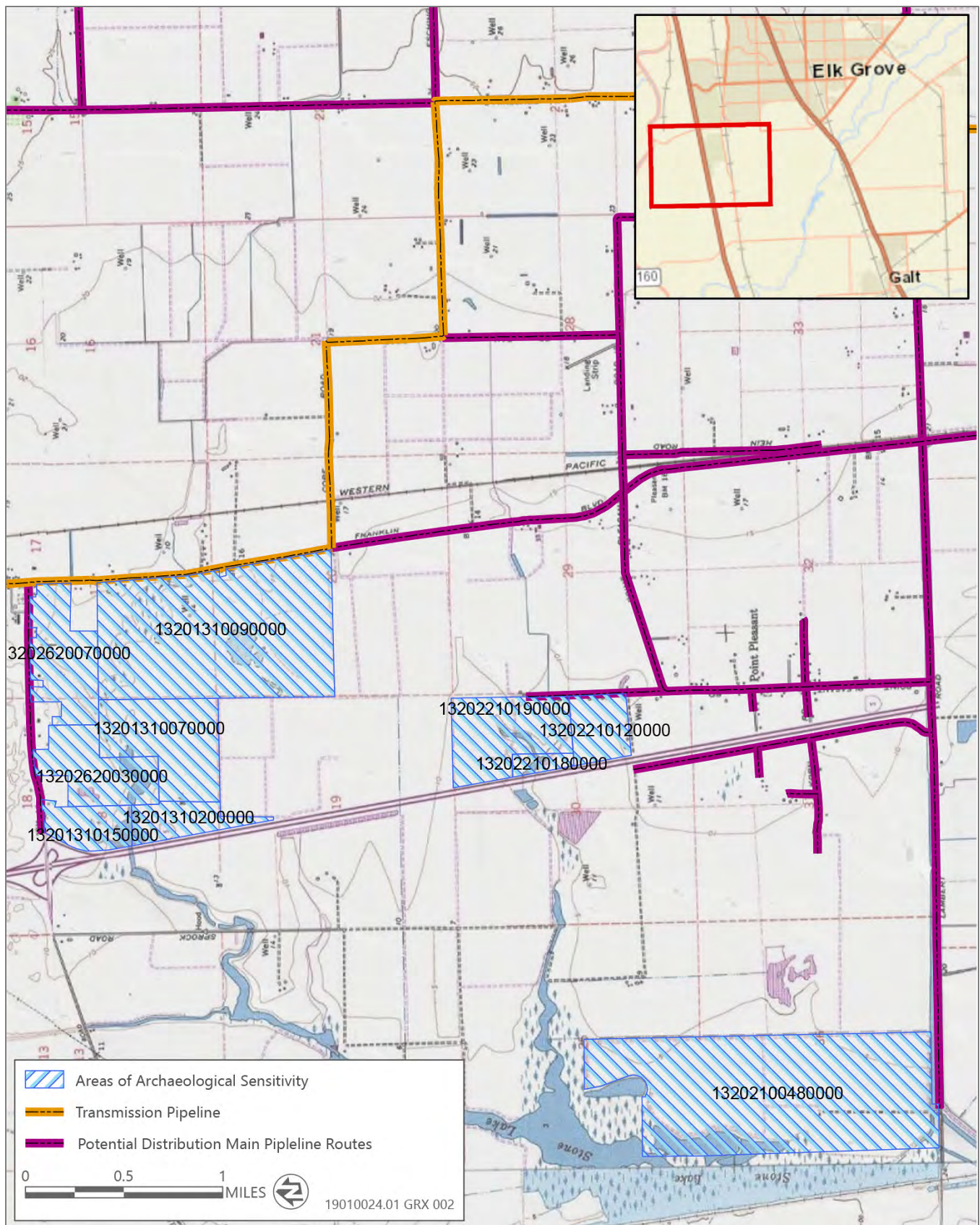




Source: Prepared by ESA in 2020 (Base Maps: USGS, Sacramento County 2019, NCIC 2019); adapted by Ascent Environmental in 2020

Figure 1 Areas Where Cultural Resources Surveys Would Be Required (1 of 2)





Source: Prepared by ESA in 2020 (Base Maps: USGS, Sacramento County 2019, NCIC 2019); adapted by Ascent Environmental in 2020

Figure 2 Areas Where Cultural Resources Surveys Would Be Required (2 of 2)

# Appendix B

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Loading and Mixing Analysis



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## FINAL TECHNICAL MEMORANDUM

TO: Sarah Rhodes, Woodard & Curran  
Dave Richardson, Woodard & Curran

PREPARED BY: Brian Wickes, Woodard & Curran

REVIEWED BY: Jim Blanke, Woodard & Curran

DATE: November 6, 2020

RE: Harvest Water Loading and Mixing Analysis

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### 1. BACKGROUND

Sacramento Regional County Sanitation District (Regional San) is considering construction of Harvest Water (Program), formerly known as the South Sacramento County Agriculture & Habitat Lands Recycled Water Program, a pressurized recycled water irrigation delivery system south of Elk Grove and north of the Cosumnes River (Program Area or Area). Historically, agricultural irrigation in the area was provided through flood delivery methods via private groundwater pumping. Over the past twenty years or so there has been a shift towards other methods of irrigation, such as sprinklers, drip systems, and micro-sprinklers that provide increased irrigation efficiency, as well as increased efficiency in terms of fertilizer uptake.

Historically, agricultural water discharges have not been subject to the same regulation as other water and wastewater discharges. Agricultural discharges are exempt from the federal Clean Water Act but have been regulated by the State of California since the passage of the 1982 Porter-Cologne Water Quality Control Act by virtue of a waiver of Waste Discharge Requirements (RWQCB 2014). The waiver required agricultural dischargers to minimize sediment in agricultural return water to meet Basin Plan turbidity objectives and prevent concentrations of materials toxic to fish or wildlife. Through additional waivers which require monitoring and outreach, what is known as the Irrigated Lands Regulatory Program (ILRP) was established in 2003. Beginning in 2004, the Central Valley Regional Water Quality Control Board (Regional Water Board) allowed groups of farmers to create coalition groups to implement the requirements of a Conditional Waiver of Waste Discharge Requirements (WDRs) for Discharges from Irrigated Lands, which is what the farmers in this Program Area have done. The Waste Discharge Requirements (General Order R5-2014-0030-06) for the Sacramento Valley Water Quality Coalition, the Third-Party Group with responsibility for agricultural discharges in the Program Area, was last renewed in 2014 as the first step of a long-term ILRP. Under the 2014 General Order, agricultural dischargers can choose to be subject to the General Order and comply with its conditions or submit a report of waste discharge and seek an individual WDR.

The objective of this loading and mixing analysis is to estimate the overall, average, Program-wide water quality changes that may result from build-out of Harvest Water compared to the baseline case of maintaining status quo. Area-specific and farm-specific impacts will be different from the overall, average, Program-wide impacts estimates herein. However, the overall average impact forecast can be used to 1) provide Regional San with a better understanding of how Harvest Water may relate to water quality objectives within the Program Area, as well as 2) assist Regional San with planning its response to potential changes in water quality regulations that may be implemented by the Regional Water Board in the future. The key water quality criteria considered in this Technical Memorandum are nitrate (reported as mg/L of N), and salt (mg/L of TDS) concentrations.

The Regional Water Board has developed water quality standards specific to the Program Area for TDS and nitrate through the Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan) based on

maximum contaminant levels (MCLs). The upper secondary maximum contaminant level for TDS is 1,000 mg/L and the primary MCL for nitrate is 10 mg/L. Goals of the Regional Water Board's CV-SALTS (Central Valley Salinity Alternatives for Long-Term Sustainability) program include developing revised water quality objectives (WQO), if needed, for salinity, and developing means to utilize assimilative capacity. These goals have not been achieved at this time. Revising the WQO for nitrate of 10 mg-N/L is not anticipated because this is a primary Maximum Contaminant Level (MCL) for drinking water supplies established to protect public health.

## 2. LOADING ANALYSIS

### 2.1 Loading Analysis and Methodology

Salt and nitrogen loadings for with and without-project conditions during summertime in-lieu recharge were determined using the general methodology outlined below:

- **Define the loading analysis area:** To determine the impacts of the Program, the Program area with a one-mile buffer was analyzed, rather than the entire South-American Subbasin. Figure 1 depicts the area analyzed for this loading analysis. Model inflows and outflows were limited to Layer 1 of the SacIWRM model to represent shallow aquifer conditions. Layer 1 is the shallowest layer of the SacIWRM model, has an average thickness of 186 feet over the Program Area, and an average saturated thickness of approximately 101 feet.
- **Identify the analysis units to be used in the model:** Parcels and land use data from the County of Sacramento, The Freshwater Trust, and Woodard & Curran's 2016 Facility Plan served as the analysis units.
- **Categorize and group land uses:** Land use groups represent land uses that have similar water demand as well as similar salt and nitrogen loading and uptake characteristics. Utilizing The Freshwater Trust's land use database and Woodard & Curran's 2016 Facilities Plan parcel data estimates, land use groups were determined by crop. Each crop was assigned values for percent irrigated, applied water, and applied fertilizer application rates.
- **Identify concentrations of TDS and nitrogen for private groundwater supplies and recycled water:** Concentrations of TDS and nitrate within the Program Area are assumed to be uniform for both of the supply sources – groundwater and recycled water. Concentrations of TDS and nitrate in groundwater are based on data collected from the State Water Board's Groundwater Ambient Monitoring and Assessment Program (GAMA). Concentrations of TDS and nitrate in recycled water are based on data provided by Regional San from the Final Phase 2 Advanced Treatment Technology Pilot Project Report. Program Area demand exceeds the amount of recycled water Regional San proposes to deliver to the Program Area, so for purposes of the analysis a conservative blend of groundwater and recycled water is assumed to be delivered to the Program Area. Irrigation in the one-mile buffer was assumed to remain as it was without project as surface water or groundwater.
- **Identify concentrations of recharge water from the Cosumnes River:** Surface water quality data for the Cosumnes River were obtained to estimate TDS and nitrate loading from recharge in the Program Area.
- **Apply the irrigation water source to the analysis units:** Each analysis unit is assigned a water source with associated concentrations of TDS and nitrogen.
- **Estimate the TDS load applied to each parcel:** TDS load is based on the land use practices, irrigation water source and quantity, and septic load. TDS loading from fertilization and amendments is assumed to be negligible. The loading model makes the conservative assumption that no salt is removed from the system once it enters the system.

- Estimate the nitrogen load applied to each parcel:** Nitrogen load is based on the land use practices and fertilizer application, irrigation water source and quantity, and septic load. The loading model assumes that a portion of the applied nitrogen is taken up by plants and (in some cases) removed from the system (through harvest of plant material). Additional nitrogen is converted to gaseous forms and lost to the atmosphere. A 10 percent volatilization rate is applied for all land uses other than dairies, where a 20 percent volatilization rate is applied (Bussink & Oenema 1998). Remaining nitrogen is assumed to convert to nitrate and to be subject to leaching.

## 2.2 Data Sources

### 2.2.1 Land Use

For purposes of the loading analysis, a land use database was developed at a parcel-level basis, using Sacramento County parcel data as well as cropping data from The Freshwater Trust and Woodard & Curran. Woodard & Curran's cropping data was derived from the DWR 2000 Land Use Survey and field-verified by The Freshwater Trust in 2019. Crop types to be analyzed are those with at least 640 acres (1 square mile) within the Program Area. Crops with less than 640 acres within the Program Area and parcel land use that cannot be determined are analyzed conservatively assuming the same loading as the worst-case loading of the crops above 640 acres. Loading for septic systems is also included. The acreages are summarized in Table 1.

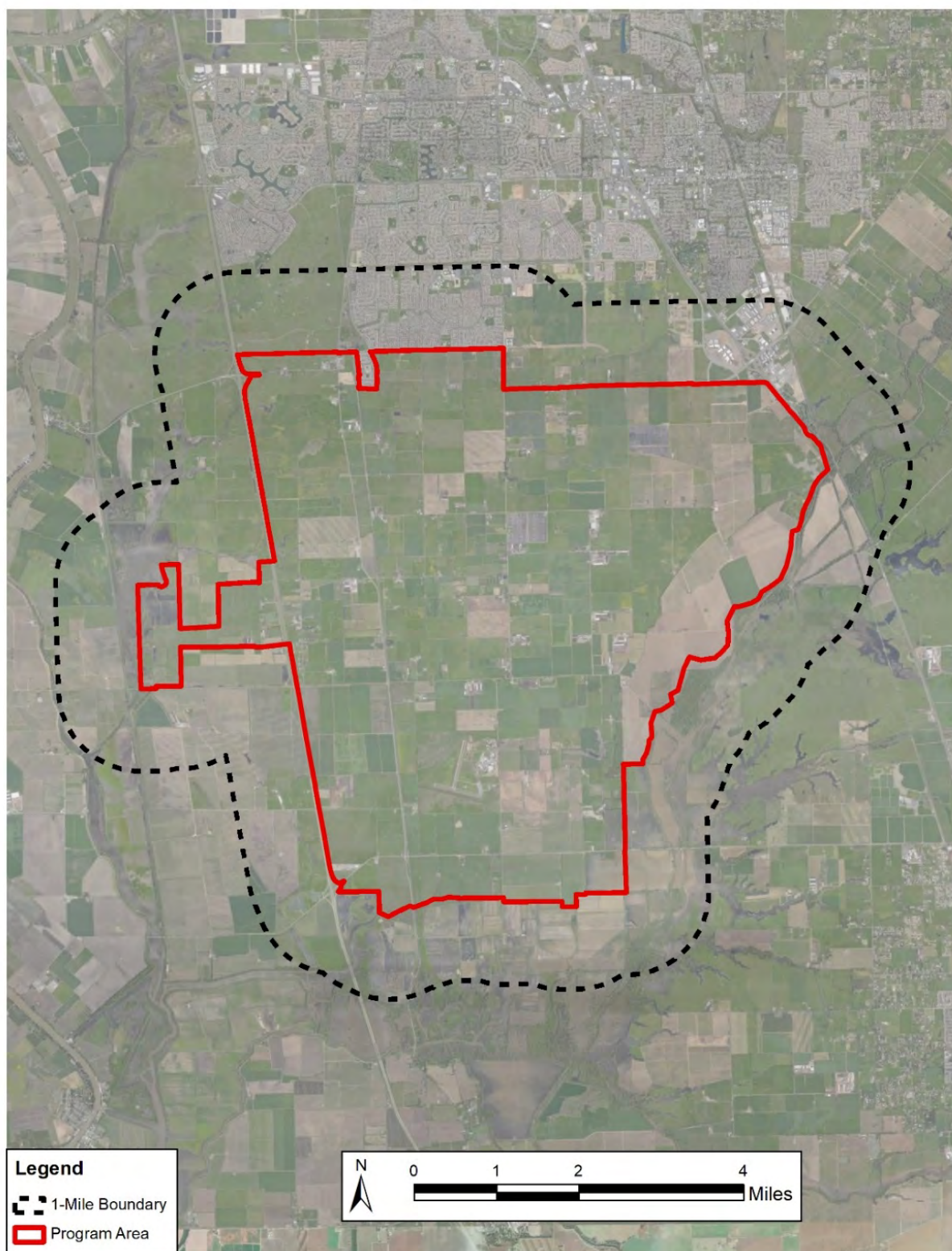
**Table 1: Land Uses for Loading Analysis<sup>1</sup>**

Land Use	Total Area (acres)
Alfalfa	17,700
Corn	1,500
Grapes	5,100
Grassland/Pasture	1,100
Native Riparian Vegetation <sup>2</sup>	6,000
Dairies	1,800
Fallow <sup>2</sup>	3,800
Other/Unknown	6,000
<b>Total</b>	<b>43,000</b>

<sup>1</sup>Includes Program Area and Buffer

<sup>2</sup>Assumed no irrigation

Figure 1: South County Ag Program Loading and Mixing Analysis Footprint





## 2.2.2 Water Supply Sources

The irrigation water source data input within the Program Area derived from two sources – groundwater and recycled water. Existing groundwater quality was estimated using publicly available groundwater quality data from GAMA. Estimated recycled water quality data were based on the Final Phase 2 Advanced Treatment Technology Pilot Project Report (December 2015). A summary of groundwater data collected is presented in Table 2 and in Figures 2 and 3. Assumed water quality concentrations for water supply sources are presented in Table 3.

**Table 2: Groundwater Quality Data Sources**

Source	Number of Wells	
	TDS	Nitrate-N
GeoTracker GAMA	9	12

**Table 3: Water Quality Parameters for Loading Model Water Sources**

Source	TDS (mg/L)	Nitrate-N (mg/L)
Groundwater – Private Wells <sup>1</sup>	340	0.5
Estimated Recycled Water <sup>2</sup>	503	11

<sup>1</sup>Median value used from available GAMA data

<sup>2</sup>Average value used from Final NPDES Water Quality Report (Larry Walker Associates 2020)

**Figure 2: GAMA Well Location and TDS Concentration**

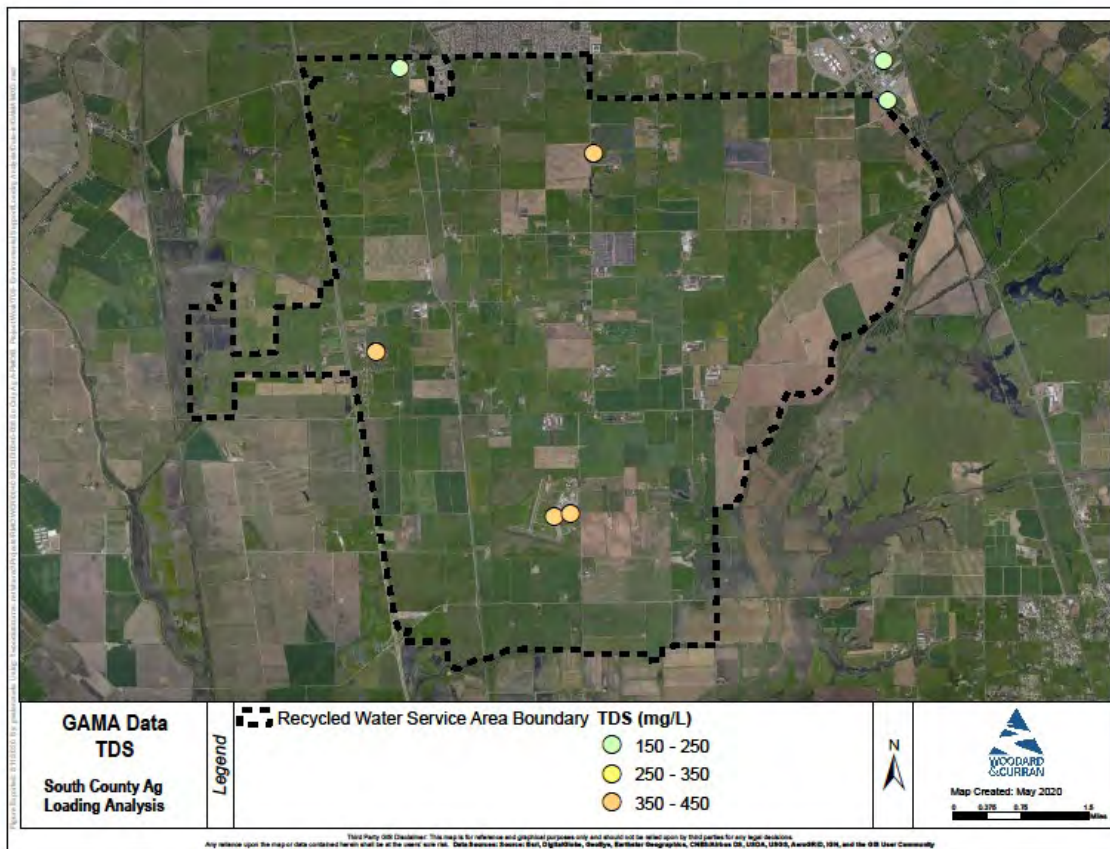
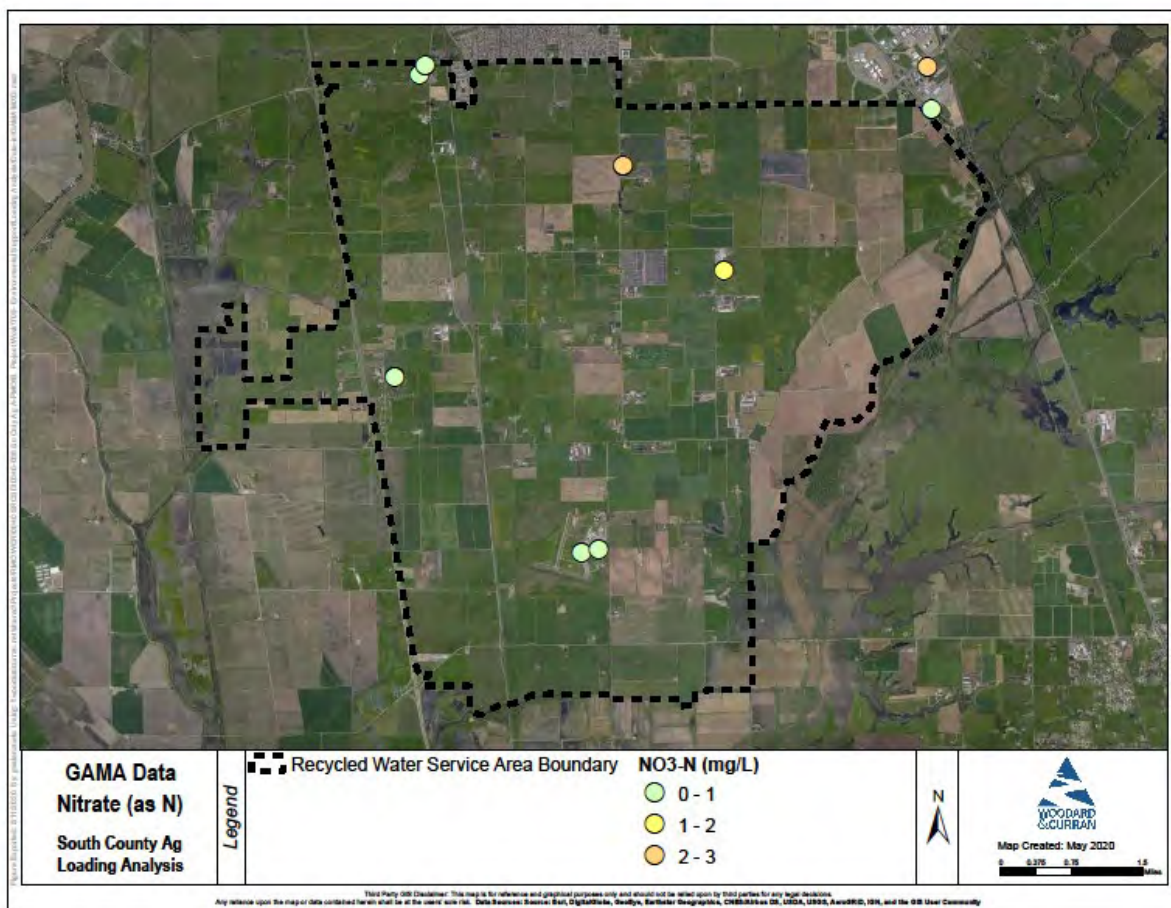
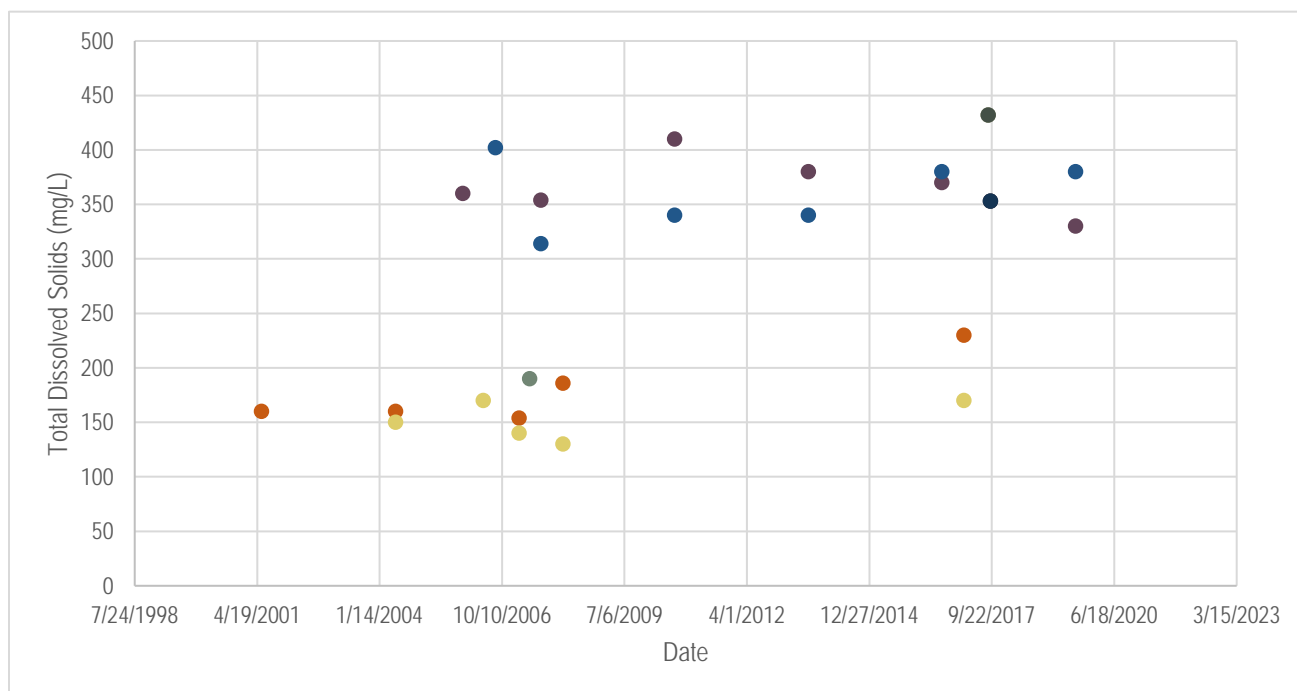


Figure 3: GAMA Well Location and Nitrate (as N) Concentrations



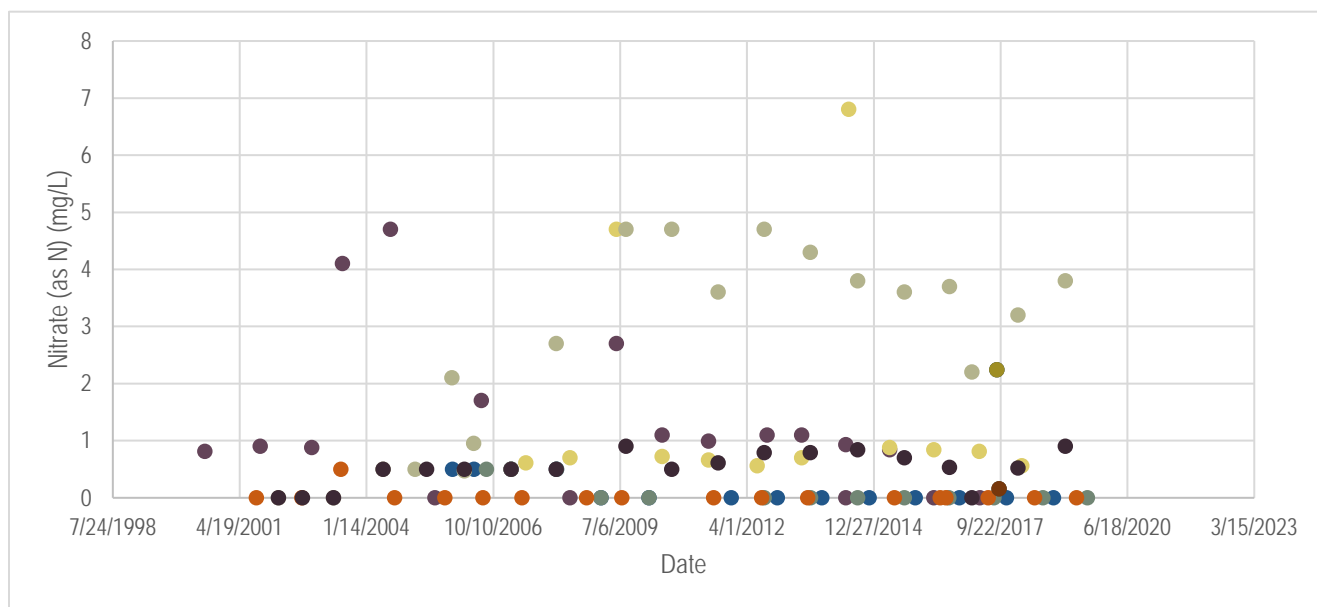
Groundwater TDS concentrations between 1996 and 2019 within the Program Area are presented in Figure 4. Groundwater nitrate (as N) concentrations between 2000 and 2019 are presented in Figure 5. Concentrations from individual wells are color-coded the same. Ambient groundwater TDS and nitrate concentrations are relatively stable in the Program Area.

Figure 4: Groundwater TDS Concentrations within Program Area<sup>1</sup>



<sup>1</sup> Concentrations from individual wells are color-coded the same.

Figure 5: Groundwater Nitrate Concentrations within Program Area<sup>1,2</sup>



<sup>1</sup> Represented values of 0 mg/L are non-detect values, below the laboratory reporting limit.

<sup>2</sup> Concentrations from individual wells are color-coded the same.

### 2.2.3 Irrigation Loading

This analysis assumes that the proper irrigation methods, tailored to the water, crop, and site conditions, and a high level of management are available to accomplish the efficiencies anticipated in this analysis for agricultural irrigation practices. Residential irrigation systems, on the other hand, are anticipated to have a lower application efficiency. Conveyance efficiency is assumed to be 95 percent while irrigation efficiency varies with the irrigation systems and methods. Conveyance efficiency refers to losses during the delivery of water to the irrigation system.

Salts can accumulate in the root zone if allowed to remain in the soil due to insufficient leaching. Leaching is the process of applying more water to the field than can be retained by the soil such that the excess water drains below the root system, carrying salts with it. The more water that is applied in excess of the crop water requirement, the less salinity remains in the root zone, despite the fact that more salt loading has actually been added to the field. The objective of leaching is to maintain or reduce soil salinity in the root zone to levels that are equal to or less than the threshold for the particular crops selected. Some crops are very sensitive to salts, while others can tolerate much higher concentrations.

Table 4 shows the estimated salt tolerance threshold values ( $EC_{ct}$ ) for alfalfa, corn, grapes, and pasture, above which yield reductions are likely to begin to occur.

**Table 4: Salt Tolerance of Program Area Crops**

Crop	Salt Tolerance Threshold $EC_{ct}$	Salt Tolerance Threshold TDS mg/L	Source
Alfalfa	2.0 milliMohs/cm	1,280	Tanji, K. and N. Keilen, 2002
Corn	1.7 milliMohs/cm	1,088	
Grapes	1.5 milliMohs/cm	960	
Grassland/Pasture	6.0 milliMohs/cm	4,800	

These crop tolerances, along with irrigation efficiency, are used to estimate the leaching fraction. The leaching fraction is the minimum fraction of the applied water that must pass through the crop root zone to prevent a reduction in yield or plant vigor from excessive accumulation of salts. Irrigation efficiency, considered when calculating the gross irrigation requirement, varies by crop type. For instance, turfgrass is irrigated through conventional irrigation methods while high frequency irrigation is more commonly used for tree crops (e.g., almonds).

An average regional Nitrogen Use Efficiency (NUE) between the California average and the practical upper limit of 80 percent can be reasonably expected at the individual parcel level. Thus, for the purposes of this analysis, it is assumed that the NUE is 70 percent. Additionally, for the purposes of this analysis, it is assumed that nitrogen loss through  $NH_3$  volatilization is limited to 10 percent for high frequency Urea-Ammonium Nitrate Solution (UAN) applications. For baseline nitrogen fertilizer application rates, it was assumed to be 34 pounds (lbs.) N/acre-year for alfalfa, 240 lbs. N/acre-year for corn, 72 lbs. N/acre-year for grapes, and 240 lbs. N/acre-year for grassland/pasture. The Grassland/Pasture land-use category is a broad category that encompasses a range of similar land-use types. It is known that not all parcels in this land-use category have applied fertilizer; the approach is a conservative approach that assumes a constant fertilizer application rate.

### 2.2.4 Irrigation Related Loading Factors

Based on the land use characterization and the irrigation and fertigation assumptions described herein, loading factors were associated with each land use type. These loading factors are summarized in Table 5 and Table 6.



**Table 5: Baseline Crop Loading Factors, Groundwater<sup>1</sup>**

Crop Type Category	Leachate Volume (inches/year)	Leachable TDS (lbs/acre-year)	Leachable Nitrogen (lbs/acre-year)
Alfalfa	14.5	4,214	9.4
Corn	20.9	5,992	65.1
Grapes	10.6	2,924	19.6
Grassland/Pasture	14.1	4,444	65.0

<sup>1</sup>Estimates based on ET, applied water, and applied fertilizer rates.

**Table 6: With-Project Crop Loading Factors, Recycled Water<sup>1</sup>**

Crop Type Category	Leachate Volume (inches/year)	Leachable TDS (lbs/acre-year)	Leachable Nitrogen (lbs/acre-year)
Alfalfa	15.3	5,351	11.3
Corn	22.5	7,558	67.7
Grapes	11.6	3,751	20.9
Grassland/Pasture	14.2	5,568	67.0

<sup>1</sup>Estimates by Woodard & Curran based on ET, applied water, and applied fertilizer rates.

## 2.2.5 Dairies

Due to the significance of dairies as a source of salts and nutrients within the Program Area, some additional consideration was applied to dairy parcels. To better reflect land use practices, the applied, used, and leachable nitrogen characteristics and the applied TDS characteristic were further subdivided into production areas, ponds, and land application areas. Leachable nitrogen was calculated the same way as for the other land use groups except that gaseous loss was assumed to be 20 percent as opposed to the 10 percent assumed loss for other land use groups. Table 7 summarizes the assumed dairy characteristics, which were developed with literature reviews and best-known practices, to best reflect the typical operations of local dairies. Dairies were identified using aerial imagery and are often within the same parcel as alfalfa farming practices. Conservative estimates were assumed for the entire parcel.

**Table 7: Assumed Characteristic Dairy Values for the Loading Model<sup>1</sup>**

Dairy Subdivision Designation	Applied TDS (lbs/acre-year)	Applied Nitrogen (lbs/acre-year)	Used Nitrogen (lbs/acre-year)	Leachable Nitrogen (lbs/acre-year)
Production Area	82	20	0	8
Ponds	933	141	0	113
Land Application Area	1,280	367	352	30

<sup>1</sup>Data retrieved from the City of Santa Rosa Salt and Nutrient Management Plan and was developed with review and input from representatives of Western United Dairymen.

## 2.2.6 Septic Systems

Each parcel with a septic system is assumed to leach 244 gallons per day (gpd), based on 75 gallons per capita per day (gpcd) with an average of 3.25 people per system. The 75 gpcd estimate is based on domestic use quantity estimates contained in the CCR, Title 23, Section 697. An estimate of 3.25 persons per household is a conservative estimate which assumes that the average household size for homes with septic systems is larger than that of average homes within the Program Area<sup>1</sup>. TDS concentrations in septic system effluent are assumed to be 540 mg/L across the Program Area, based on the groundwater quality plus a typical addition of 200 mg/L for urban uses. Nitrate-N concentrations were assumed to be 30 mg/L, based on typical wastewater concentrations for medium strength wastewater of 40 mg/L minus an assumed volatilization rate of 25 percent within the septic system (Metcalf & Eddy, 2003). There is no domestic use for recycled water within the Program Area.

## 2.2.7 Summary of Loading Analysis Results for Baseline Conditions

Based on the loading parameters and methodology described above, TDS and nitrate-N loading rates across the Program Area were estimated under existing conditions. Results are summarized in Table 8.

**Table 8: Baseline Conditions TDS and Nitrate-N Loading Results**

Land Use Category	Total Area (acres)	TDS (lbs/year)	Nitrogen (lbs/year)
Alfalfa	17,700	54,518,000	60,000
Corn	1,500	7,019,000	37,000
Grapes	5,100	11,863,000	39,000
Grassland/Pasture	1,100	2,936,000	24,000
Dairies	1,800	7,257,000	118,000
Other	6,000	20,514,000	102,000
Septic	N/A	17,000	960
Native Riparian Vegetation	6,000	0	0
Fallow	3,800	0	0
TOTAL	43,000	104,124,000	380,960

## 2.2.8 Summary of Loading Analysis Results with Project for Summertime Irrigation

Based on the loading parameters and methodology described above, the loading model was used to estimate TDS and nitrate-N loading rates across the Program Area replacing groundwater with recycled water and assuming irrigation under agronomic rates. Results are summarized in Table 9.

<sup>1</sup> Persons per household is 2.77 in Sacramento County (U.S. Census).

**Table 9: Summertime Irrigation with Recycled Water TDS and Nitrate-N Loading Results**

Land Use Category	Total Area (acres)	TDS (lbs/year)	Nitrogen (lbs/year)
Alfalfa	17,700	66,614,000	70,000
Corn	1,500	8,009,000	38,000
Grapes	5,100	13,755,000	41,000
Grassland/Pasture	1,100	3,578,000	25,000
Dairies	1,800	9,196,000	125,000
Other	6,000	21,287,000	103,000
Septic	N/A	17,000	960
Native Riparian Vegetation	6,000	0	0
Fallow	3,800	0	0
<b>TOTAL</b>	<b>43,000</b>	<b>122,456,000</b>	<b>402,960</b>

## 2.2.9 Summary of Loading Analysis Results with Project for Wintertime Application

Based on the loading parameters and methodology described above, the loading model was used to estimate TDS and nitrate-N loading rates across the Program Area replacing groundwater with recycled water during winter months. Recycled water is expected to be used in winter for ecological benefits, including roosting habitat. Approximately 17,500 AFY will be supplied. Results are summarized in Table 10 and assumes a percolation rate of 100% and a nitrogen loss of 20% through soil denitrification and volatilization (Huang et al 2017).

**Table 10: Wintertime Application with Recycled Water TDS and Nitrate-N Loading Results**

Land Use Category	Volume (AFY)	TDS (lbs/year)	Nitrogen (lbs/year)
Winter Application	17,500	23,937,000	419,000

## 2.2.10 Summary of Loading Analysis Results with Project for Full Project Implementation

Based on the loading parameters and methodology described above, the loading model was used to estimate TDS and nitrate-N loading rates across the Program Area replacing groundwater with recycled water and assuming irrigation under agronomic rates. Results are summarized in Table 11.

Table 11: Full Project Implementation with Recycled Water TDS and Nitrate-N Loading Results

Land Use Category	Total Area (acres)	TDS (lbs/year)	Nitrogen (lbs/year)
Alfalfa	17,700	66,614,000	70,000
Corn	1,500	8,009,000	38,000
Grapes	5,100	13,755,000	41,000
Grassland/Pasture	1,100	3,578,000	25,000
Dairies	1,800	9,196,000	125,000
Other	6,000	21,287,000	103,000
Septic	N/A	17,000	960
Native Riparian Vegetation	6,000	0	0
Fallow	3,800	0	0
Winter Application	N/A	23,937,000	419,000
TOTAL	43,000	146,393,000	821,960

TDS and nitrate loadings by crop type are shown in Figures 6 and 7, respectively.

Figure 6: TDS Loading by Crop Type

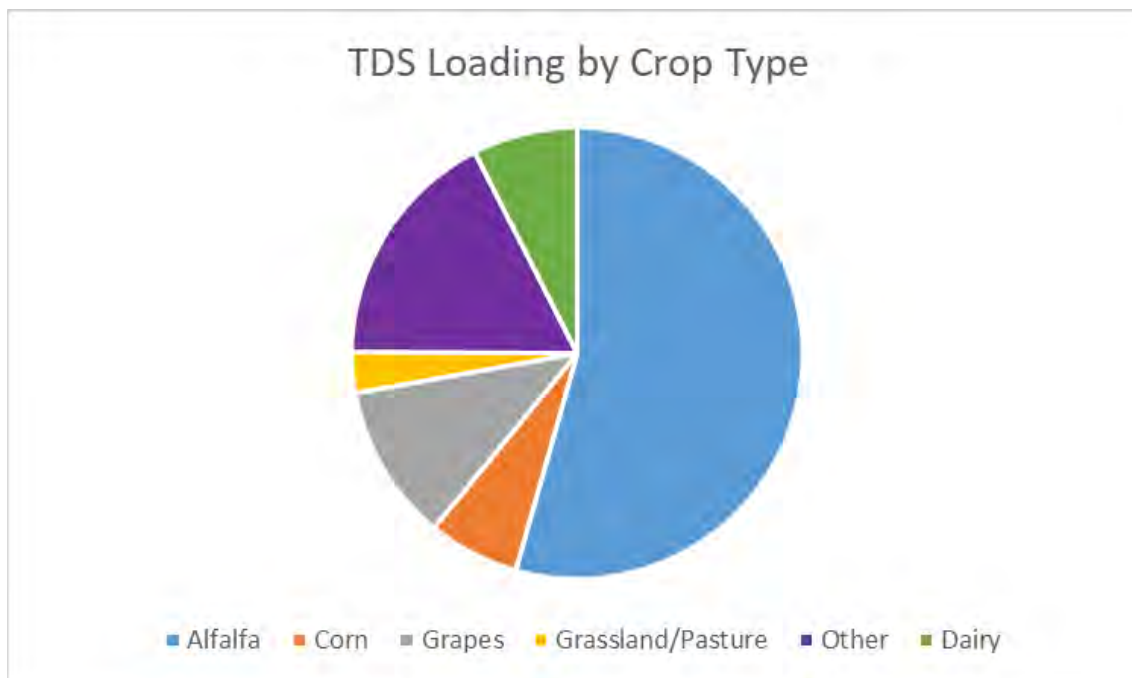
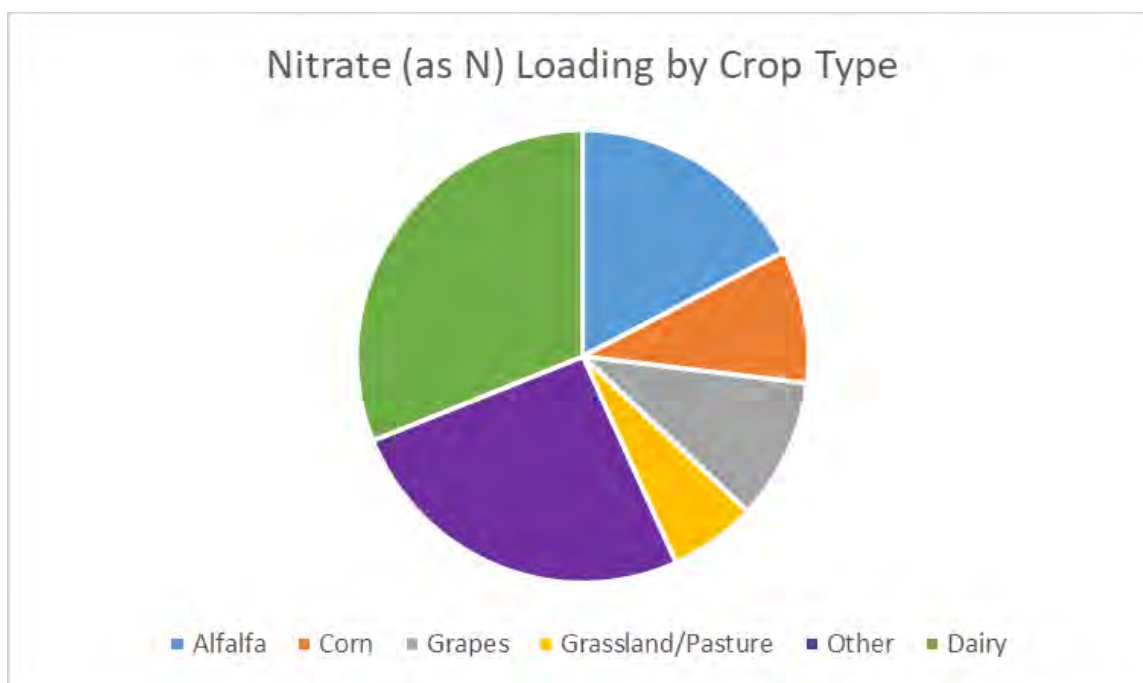


Figure 7: Nitrate Loading by Crop Type



### 3. TREND ANALYSIS

A mass-balance mixing model was developed to evaluate constituent trends in groundwater concentrations over a 25-year planning horizon within the Program Area considering four scenarios – present land and water uses (reflecting baseline or present-day conditions), with-project summertime irrigation only, with-project wintertime application only, and full-project implementation. This model considered the volume of groundwater in storage and water qualities in the Program Area, and it evaluated the impact of the Program Area inflows and outflows on groundwater quality.

Inflows and outflows in the model include the following components:

- Deep percolation includes deep percolation of precipitation, agricultural irrigation return flows, and septic discharges
- Subsurface inflows or outflows from other basins
- Inflows and outflows to/from deeper portions of the aquifer
- River discharge
- Groundwater pumping

As previously discussed, existing water quality of the Program Area has been evaluated as part of this analysis based on available data. Average constituent concentrations and loading assumptions for the analysis area are summarized in Section 2.

Groundwater quality concentrations for TDS and nitrate-N were estimated using a spreadsheet-based mass balance model. To simulate the effect of current and future loading on groundwater quality, the spreadsheet model calculated the loading factors of each component based on the conditions at the simulated time step. Under this model, each flow component listed in the groundwater budget was combined with its respective concentration of either TDS or nitrate-N

to estimate loading from the constituent's mass. These transfers of mass were then assumed to completely mix with groundwater in the shallow-aquifer system on an annual time-step to determine the resulting concentrations in the Program Area. This mixing was assumed to occur only within the upper portions of the aquifer system, approximately to a depth of 186 feet, representing approximately 101 feet of saturated aquifer. As available surface and subsurface water quality data are limited, future revisions of this analysis should confirm or revise constituent concentrations based on additional available data.

The surface and aquifer loading, used to determine water quality, was calculated utilizing the following equations:

**Surface Loading:**

$$X_t = X_{t-1} + \sum_{j=1}^m Q_{tj} C_{t-1j}$$

**Aquifer Loading:**

$$M_t = M_{t-1} + \sum_{i=1}^n Q_{ti} C_{t-1i}$$

$$C_t = M_t/S_t$$

Where:  $X_t$  is the mass of the constituent in the root zone available for deep percolation.

$M_t$  is the mass of the constituent in the aquifer at timestep  $t$ .

$m$  is the total number of budgetary flow components ( $j$ ) experienced by the root zone (applied water, fertilizers and septic systems).

$n$  is the total number of budgetary flow components ( $i$ ) experienced by the groundwater system (deep percolation, subsurface boundary flows, and groundwater pumping).

$Q_t$  is the flow into, out of, or between adjacent basins at timestep  $t$ .

$C_t$  is the concentration of the constituent at timestep  $t$ .

$S_t$  is the end-of-year storage in the groundwater system at timestep  $t$ .

### 3.1 Mass Balance Model Inputs

The inputs to the mass balance model are summarized in Table 10 for the Baseline Conditions. The inputs to the mass balance model are summarized in Table 11 for the with-project conditions.

**Table 10: Estimated Volume and Concentration of Inflows and Outflows for Groundwater Quality Trend Analysis for Baseline Conditions**

Item	Volume in Storage or Flow (AF or AFY)	TDS (mg/L)	Nitrate (as N) (mg/L)	Basis for Volume Estimate
Initial Groundwater in Storage	300,500			From IWFM Baseline Model.
Initial Concentrations in Groundwater		340	0.5	Based on existing groundwater conditions as describe in Section 2.
<i>Inflows</i>				
Subsurface Inflow	19,000	340	0.5	From IWFM Baseline Model
Deep Percolation of Irrigation (Leachate)	29,600	2,275	4.0	Leachate volume, and TDS and Nitrogen loads are calculated based on loading analysis discussed in Section 2.
Deep Percolation of Precipitation	2,900	0	0	Deep percolation of precipitation is based on a recharge coefficient of 0.1.
Vertical Inflow	60	340	0.5	From IWFM Baseline Model
Stream Seepage	30,500	65	0.05	From IWFM Baseline Model
Septic Systems	12	540	30	
<i>Outflows</i>				
Groundwater Production	51,900	Variable	Variable	From IWFM Baseline Model
Subsurface Outflow	8,700	Variable	Variable	From IWFM Baseline Model
Vertical Outflow	8,700	Variable	Variable	From IWFM Baseline Model

**Table 11: Estimated Volume and Concentration Inflows and Outflows for Groundwater Quality Trend Analysis for With-Project Conditions**

Item	Volume in Storage or Flow (AF or AFY)	TDS (mg/L)	Nitrate (as N) (mg/L)	Basis for Volume Estimate
Initial Groundwater in Storage	300,500			From IWFMM Baseline Model.
Initial Concentrations in Recycled Water		476	8.2	Based on conditions as describe in Section 2.
<i>Inflows</i>				
Subsurface Inflow	4,400	340	0.5	From IWFMM Project Scenario 2030 Climate Change
Deep Percolation of Irrigation (Leachate)	31,200	2,527	4.84	Leachate volume, and TDS and Nitrogen loads are calculated based on loading analysis discussed in Section 2.
Deep Percolation of Precipitation	2,900	0	0	Deep percolation of precipitation is based on a recharge coefficient of 0.1 and average precipitation.
Vertical Inflow	58	340	0.5	From IWFMM Project Scenario 2030 Climate Change
Stream Seepage	16,000	65	0.05	From IWFMM Project Scenario 2030 Climate Change
Winter Application	17,500	476	6.5	Nitrate value assuming 20% loss.
Septic Systems	12	540	30	
<i>Outflows</i>				
Groundwater Production	22,500	Variable	Variable	From IWFMM Project Scenario 2030 Climate Change
Subsurface Outflow	18,200	Variable	Variable	From IWFMM Project Scenario 2030 Climate Change
Vertical Outflow	8,700	Variable	Variable	From IWFMM Project Scenario 2030 Climate Change

### 3.2 Mass Balance Model Results

Results from the mass balance model are summarized in Table 12 as well as Figures 8 and 9. Analysis of existing Program Area-wide groundwater quality conditions indicates that the current groundwater quality has been stable over the previous 20 years, is lower than the SMCL for TDS (recommended SMCL is 500 mg/L, upper SMCL is 1,000 mg/L), and is well below the MCL for nitrate-N, 10 mg/L-N. Baseline concentrations are estimated to be 340 mg/L TDS and 0.5 mg/L-N nitrate. Therefore, there is assimilative capacity in the basin for both TDS and nitrate. With-project concentrations are estimated to increase TDS and nitrate concentrations in the Program Area to 540 mg/L TDS and 2.8 mg/L-N nitrate.



**Table 12: Estimated Groundwater Concentrations from Project Implementation over 25-Year Implementation Period**

Parameter	MCL	Baseline Conditions	Estimated Increase from Project	Estimated Groundwater Concentrations
TDS (mg/L)	500 – 1,000	340	+200	540
Nitrate as N (mg/L)	10	0.5	+2.3	2.8

The results of the groundwater quality trend and loading analyses, based on the assumptions described above and over a 25-year planning horizon, indicate that Program Area-wide average TDS concentrations are estimated to increase with the project but still fall below the upper SMCL of 1,000 mg/L. Nitrate-N concentrations are also estimated to increase but will be well below the 10 mg/L-N MCL. The rate of increase for TDS and nitrate decreases near the end of the planning horizon as the basin approaches equilibrium.

**Figure 8: Estimated Change in TDS Concentrations over Baseline**

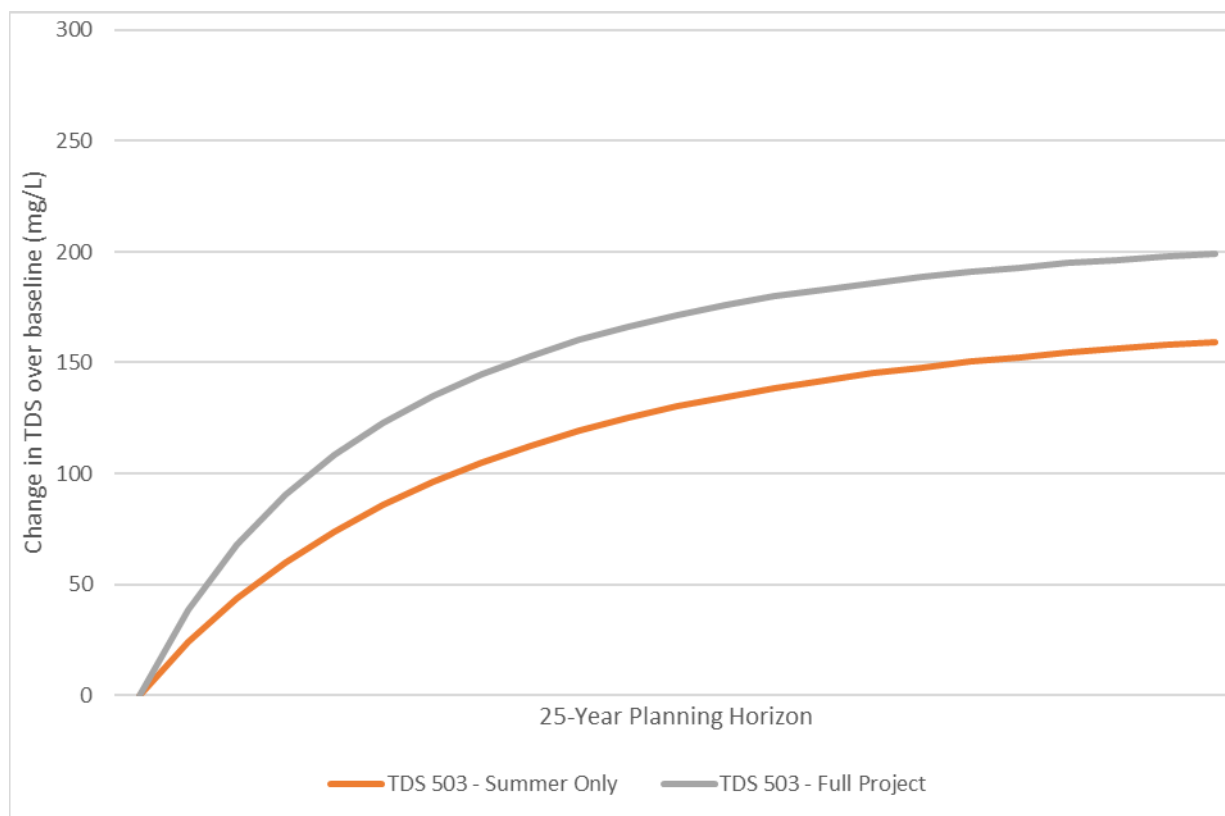
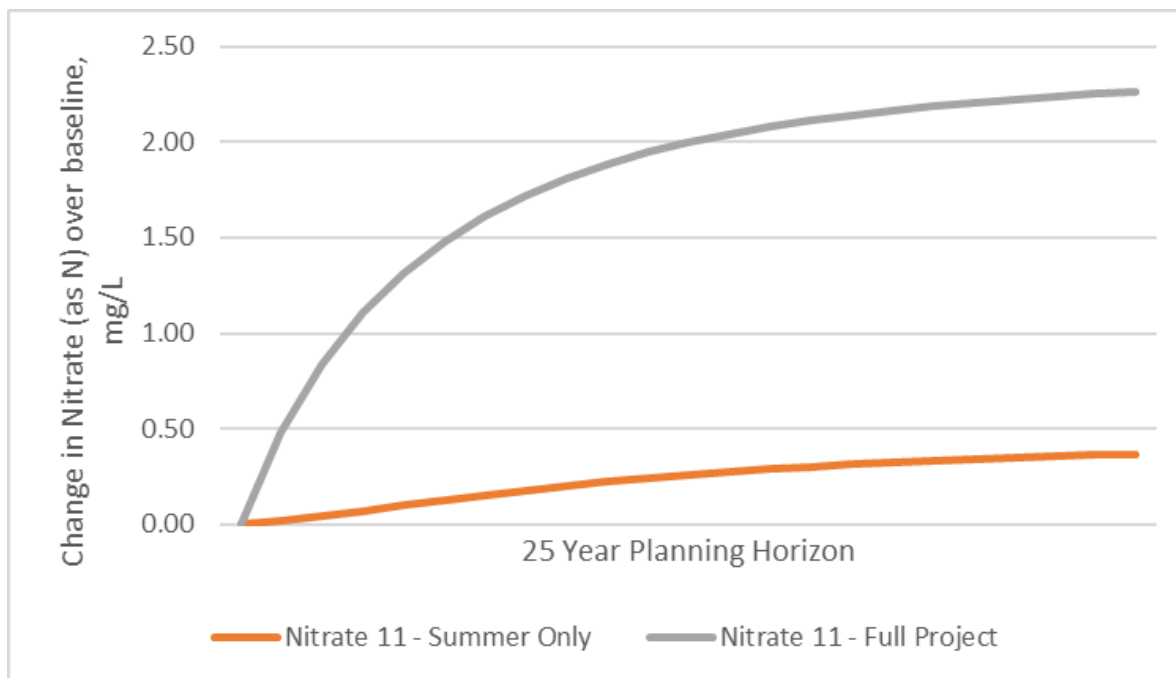


Figure 9: Estimated Change in Nitrate Concentrations over Baseline



#### 4. REFERENCES

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