

Supplemental Program Environmental Impact Report for the Irrigated Lands Regulatory Program

1. Introduction

1.1 Background

This Supplemental Program Environmental Impact Report (SPEIR) is a supplement to the March 2011 Final Program Environmental Impact Report (FPEIR) (Central Valley Water Board, 2011) for the Irrigated Lands Regulatory Program (ILRP). The Central Valley Water Board certified the FPEIR on 7 April 2011 in Resolution R5-2011-0017. The FPEIR consists of a July 2010 Draft Program Environmental Impact Report (DPEIR) (Central Valley Water Board, 2010) and Responses to Comments and Revisions of the DPEIR, evaluating the environmental impacts of programmatic implementation of the ILRP.

This SPEIR amends the original ILRP FPEIR with additional impacts for the proposed project of the Revisions to the ILRP Waste Discharge Requirements General Orders (collectively the “General Orders”) to incorporate the Central Valley-wide Salt and Nitrate Control Program (SNCP) in the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins and the Water Quality Control Plan for the Tulare Lake Basin (Proposed Project). This SPEIR includes an Environmental Checklist (Attachment A) that details the assessment of the environmental impacts of the Proposed Project.

1.2 California Environmental Quality Act Requirements

The Central Valley Water Board, as a Lead Agency under California Environmental Quality Act (CEQA) (Pub. Res. Code, section 21000 et seq.), is responsible for evaluating all the potential environmental impacts that may occur due to changes made to ILRP General Orders. These changes are being made as a result of the Central Valley-wide Salt and Nitrate Control Program. Under California Public Resources Code section 21159.2, this evaluation shall address only the project-specific issues related to the General Orders which were not discussed in the Substitute Environmental Document (SED) for the Salt and Nitrate Control Program Basin Plan Amendments.

1.2.1 Purpose of the SPEIR

When an FPEIR has been certified for a project, CEQA defines standards and the procedure for additional environmental review in Sections 15162–15164 of the State CEQA Guidelines in Title 14 of the California Code of Regulations. When it is determined that the proposed changes to a project, or changes in the circumstances under which the Project will be undertaken, would result in new significant impacts not identified in the FPEIR, or cause a substantial increase in the severity of significant

impacts identified in the FPEIR, preparation of an SPEIR is required. California Code of Regulations Title 14, Section 15163 states a Supplemental EIR may be prepared if:

- (a)(1) substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects (pursuant to Section 15162(a)(1) of Title 14 of Cal. Code of Regulations), and
- (a)(2) only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation.

The following provisions of California Code of Regulations Title 14, Section 15163 also apply:

- (b) The supplement to the EIR need only contain the information necessary to make the previous EIR adequate for the project as revised.
- (c) A supplement to an EIR shall be given the same kind of notice and public review as is given to a draft EIR under Section 15087.
- (d) A supplement to an EIR may be circulated by itself without recirculating the previous draft of an FEIR.
- (e) When the agency decides whether to approve the project, the decision-making body shall consider the previous EIR as revised by the supplemental EIR. A finding under Section 15091 shall be made for each significant effect shown in the previous EIR as revised.

The Central Valley Water Board adopted the SNCP basin plan amendments with a SED that thoroughly and comprehensively analyzed all potential environmental impacts from the SNCP. The SED included an analysis of the impacts of implementing the SNCP for all dischargers in the Central Valley, including irrigated agriculture. The Proposed Project is complying with the requirement in the SNCP to modify the General Orders to incorporate the SNCP, and under Public Resources Code section 21159.2, subdivision (a), it must utilize the environmental analysis done in the SED to the greatest extent feasible. (Pub. Resources Code section 21159.2, subd. (a).) Therefore, all impacts from irrigated agriculture analyzed in the SED do not need to be evaluated again in this environmental analysis.

If there are project-specific issues related that were not discussed in sufficient detail in the environmental analysis, then a new environmental document must be prepared to discuss only those impacts. (Pub. Resources Code section 21159.2, subd. (b).) Central Valley Water Board staff reviewed the SED and determined that there were three potential project-specific potentially significant impacts which were not fully analyzed in the SED. This necessitates the need for a supplement to the FPEIR to evaluate those project-specific impacts. A supplement is appropriate because the significant impacts can be fully analyzed through minor additions to the FPEIR. Under Public Resources

Code section 22159.2, this SPEIR need only address those project-specific impacts without reiterating the remaining impacts already analyzed in the SED.

1.3 Salt and Nitrate Control Program

The SNCP was incorporated into basin plan amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins Plan and the Tulare Lake Basin in Central Valley Water Board Resolution R5-2018-0034 (Central Valley Water Board, 2018). These amendments were approved by the State Water Resources Control Board (State Water Board) in Resolution 2019-0057 (State Water Board, 2019) on 16 October 2019, pending targeted revisions detailed by the State Water Board. The original Salt and Nitrate Control Program amendments were approved by the Office of Administrative Law (OAL) on 17 January 2020, and the surface water portions of the original amendments were approved by the U.S. Environmental Protection Agency (EPA) on 2 November 2020.¹

The purpose of the SNCP is to address the ongoing issues of salt and nitrates throughout the Central Valley. Portions of the Central Valley have salt or nitrate accumulations in the surface water, groundwater, and soil from both historical and ongoing discharges from agriculture, municipal, and industrial activities. High nitrate concentrations in groundwater are impacting drinking water quality and, in some communities, water supply and/or domestic wells do not meet safe drinking water standards.

The Salt Control Program applies to discharges to surface water and groundwater within the Central Valley region and the Nitrate Control Program applies to discharges to groundwater. The over-arching goals of the SNCP are to: 1) ensure safe drinking water supply; 2) reduce salt and nitrate loading; and 3) implement long-term, managed restoration of impaired water bodies. The SNCP is phased with the primary focus of early actions on nitrate impacts to groundwater drinking supplies and establishes specific implementation activities. The Salt Control Program has two compliance pathways – the conservative permitting approach and the alternative permitting approach. The Nitrate Control Program also has two compliance pathways – the individual discharger permitting approach and the management zone permitting approach.

The SNCP contains a conditional prohibition that applies to all permittees discharging salt and nitrate except for permittees regulated under the General Orders from the time the permittee receives a Notice of Comply. The SNCP states that dischargers regulated under the General Orders will be required to comply with the Salt Control Program and Nitrate Control Program through an amendment to the General Orders, which the Central Valley Water Board shall consider within 18 months of the effective date of the

¹ The targeted revisions to these Salt and Nitrate Control Program amendments directed by the State Water Board were incorporated into revised amendments that were adopted by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) in Resolution R5-2020-0057 (Central Valley Water Board, 2020) on 10 December 2020. These revised amendments will be considered for approval by the State Water Board, OAL, and U.S. EPA.

Basin Plan Amendment. The Proposed Project satisfies the requirement to amend the General Orders to incorporate the SNCP within the 18-month timeline.

The SNCP SED analyzed impacts from the SNCP as a comprehensive program. Included in the analysis were impacts from irrigated agriculture as a result of adoption and implementation of the SNCP, which is the Proposed Project. Based on the SED, the only environmental impacts related to adoption and implementation of the Proposed Project were indirect impacts to Agriculture and Forestry Resources and Hydrology and Water Quality that were **Potentially Significant**.

2. Supplemental PEIR Evaluation

The FPEIR evaluated impacts by analyzing each proposed alternative's impacts individually without specifying a single program alternative. Alternatives 1 through 5 were evaluated, as well as a sixth alternative that was recommended by staff, that included elements of the five evaluated programmatic alternatives. The SNCP is not a new comprehensive alternative, but rather a new alternative that can be added on to any of the six alternatives already considered in the FPEIR. The SNCP augments any existing alternative but is not a stand-alone alternative. Thus, the SPEIR will analyze the impacts from the Proposed Project as a new alternative A.

The SED for the SNCP Basin Plan Amendments evaluated potential environmental impacts due to implementation of the SNCP. As the ILRP will be incorporating the SNCP into the ILRP General Orders, the SNCP SED was used to evaluate the potential for additional environmental impacts to occur from SNMP Implementation through the ILRP implementation. Three environmental impacts were found to be elevated from the FPEIR due to adoption and implementation of the Proposed Project. These impacts are: Air Quality, Greenhouse Gas Emissions/Climate Change, and Transportation/Traffic and Circulation.

Please see the associated Environmental Checklist for further information on the evaluated environmental impacts.

3. Impact Analysis

3.1. Air Quality Impacts

The ILRP Final PEIR stated in the Air Quality section (Section 5.5 of the DPEIR) that, for Alternatives 1 through 5, the Generation of Construction Emissions in Excess of Local Air District Thresholds (Impact AQ-1), Generation of Operational Emissions in Excess of Local Air District Thresholds (Impact AQ-2), and Elevated Health Risks from Exposure of Nearby Sensitive Receptors to Toxic Air Contaminants and Hazardous Air Pollutants (Impact AQ-3) were **Potentially Significant** before mitigation and **Less Than Significant** after mitigation. Mitigation Measures listed as requirements to reduce these impacts to Less Than Significant were Mitigation Measures AQ-MM-1, AQ-MM-2, and AQ-MM-3.

The adoption and implementation of the Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board. As such, it would have no direct adverse effects on Air Quality.

The adoption and implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management and the provision of immediate drinking water solutions. Insufficient information pertaining to the setting, size, and design of such projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of their effects on air quality. However, Salt and Nitrate Control Program implementation projects specific to the provision of immediate drinking water solutions are reasonably anticipated to generate new construction and project/facility operation (e.g., public fill stations) and/or new services (i.e., bottled water delivery creating additional traffic) which may produce both short and long-term impacts to Air Quality.

Separate project-specific environmental review would be performed prior to physical project construction and operation to identify project-specific environmental impacts and to incorporate any necessary measures to avoid, reduce, or mitigate for any identified significant environmental impacts. However, due to the potential scope and duration of service-related projects for the provision of immediate drinking water, the adoption and implementation of the Proposed Project may result in **Potentially Significant** impacts to Air Quality.

No additional Mitigation Measures beyond the original Air Quality Mitigation Measures listed in the FPEIR are anticipated at this time. When developing Salt and Nitrate Control Program implementation projects, Mitigation Measures AQ-MM-1, AQ-MM-2, and AQ-MM-3 should be utilized to the extent possible.

During any construction associated with the implementation of the Salt and Nitrate Control Program, the use of heavy machinery could potentially, on a short-term basis, expose sensitive receptors to substantial pollutant concentrations. However, any such effects, should they occur, would be temporary in nature during construction. Additionally, construction best management practices would be implemented by proponents of such projects to minimize adverse construction-related effects on air quality.

3.2 Climate Change Impacts

The ILRP FPEIR stated in the Climate Change section (Section 5.6 of the DPEIR) that, for Alternatives 1 through 5, the Generation of Greenhouse Gas Emissions Resulting in Global Climate Change (Impact CC-1) was **Less than Significant**, and that no mitigation was required. However, Mitigation Measures CC-MM-1 and CC-MM-2 were recommended to minimize impact.

The adoption and implementation of the Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board. As such, it would have no direct adverse effects on Climate Change.

The adoption and implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management and the provision of immediate drinking water solutions. Insufficient information pertaining to the setting, size, and design of such projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of their effects on Climate Change. However, Salt and Nitrate Control Program implementation projects specific to the provision of immediate drinking water solutions are reasonably anticipated to generate new construction and project/facility operation (e.g., public fill stations) and new services (i.e., bottled water delivery creating additional traffic) which may produce both short and long-term impacts to Climate Change.

Separate project-specific environmental review would be performed prior to physical project construction and operation to identify project-specific environmental impacts and to incorporate any necessary measures to avoid, reduce, or mitigate for any identified significant environmental impacts. However, due to the potential scope and duration of service-related projects for the provision of immediate drinking water, the adoption and implementation of the Proposed Project may result in **Potentially Significant** impacts to Climate Change.

No additional Mitigation Measures beyond the original Climate Change Mitigation Measures listed in the FPEIR are anticipated at this time. When developing Salt and Nitrate Control Program implementation projects, Mitigation Measures CC-MM-1 and CC-MM-2 should be utilized to the extent possible.

3.3 Transportation and Circulation Impacts

The ILRP FPEIR stated in the Minimally Impacted Resources section (Section 5.11 of the DPEIR) that, for Alternatives 1 through 5, no significant direct or indirect environmental impacts would affect Transportation and Circulation. It states that it is not anticipated that the ILRP would substantially increase or decrease the existing traffic load in the program area. It also states that some alternatives may increase traffic due to additional monitoring, and some alternatives may decrease traffic load due to reduced needs for nutrient and pesticide deliveries, but any determination of an increase or decrease in traffic would be speculative at this programmatic level. Additionally, no Mitigation Measures were required.

The adoption and implementation of the Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board, nor does it directly affect regional traffic or traffic patterns or conflict with applicable congestion management programs such as level of service standards. Further, the adoption and implementation of the Proposed Project would not result in changes to agricultural operations, as related to transportation/traffic generation. As such, the implementation would have no direct adverse effects on transportation/traffic.

Insufficient information pertaining to the setting, size, and design of SNCP implementation projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of the indirect effects of such

projects on transportation/traffic. Nevertheless, traffic generation on local roadways in the vicinity of these projects may increase during the construction and implementation of SNCP implementation projects specific to the provision of immediate drinking water solutions, which are reasonably anticipated to generate new construction (e.g., public fill stations) and new services (e.g., bottled water delivery creating additional traffic). The increase in traffic due to construction or project implementation would be temporary in nature and limited to the duration of the project. The increase in traffic due to implementation is anticipated to come from personnel trips necessary to operate these new projects and potential generation of new services (e.g., bottled water delivery).

Separate project-specific environmental review would be performed prior to physical project construction and operation to identify project-specific environmental impacts and to incorporate any necessary measures to avoid, reduce, or mitigate for any identified significant environmental impacts. However, due to the potential scope and duration of service-related SNCP implementation projects for the provision of immediate drinking water, the adoption and implementation of the Proposed Project may result in **Potentially Significant** impacts to Transportation and Circulation.

No Mitigation Measures were listed in the FPEIR, due to the original statement of minimal impact. When developing SNCP Implementation Projects, Mitigation Measures CC-MM-1 and CC-MM-2 from the Climate Change section should be utilized to the extent possible where appropriate, including reduction of vehicle trips and limits to vehicle idling time.

4. References

Central Valley Water Board (2010): July 2010, Irrigated Lands Regulatory Program [Draft Program Environmental Impact Report](http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/regulatory_information/program_environmental_impact_report/2010jul_draft_peir/index.html); Retrieved from www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/regulatory_information/program_environmental_impact_report/2010jul_draft_peir/index.html

Central Valley Water Board (2011): March 2011, Irrigated Lands Regulatory Program [Final Program Environmental Impact Report](http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/regulatory_information/program_environmental_impact_report/); Retrieved from www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/regulatory_information/program_environmental_impact_report/

Central Valley Water Board (2018): May 2018, Central Valley Regional Water Quality Control Board [Salt and Nitrate Control Program Resolution 2018-0034](http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2018-0034_res.pdf); Retrieved from www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2018-0034_res.pdf

Central Valley Water Board (2020): December 2020, Central Valley Regional Water Quality Control Board [Salt and Nitrate Control Program Revisions Resolution 2020-0057](http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf); Retrieved from www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf

State Water Board (2019): October 2019, State Water Resources Control Board [Salt and Nitrate Control Program Resolution 2019-0057](http://www.cvsalinity.org/docs/agendas-notes-and-materials/meeting-materials/4236-state-water-resources-control-board-resolution-no-2019-0057/file.html); Retrieved from www.cvsalinity.org/docs/agendas-notes-and-materials/meeting-materials/4236-state-water-resources-control-board-resolution-no-2019-0057/file.html

ATTACHMENT A

Environmental Checklist for Revisions to the ILRP Waste Discharge Requirements General Orders to incorporate the Central Valley-wide Salt and Nitrate Control Program

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Attachment A: Environmental Checklist

California Environmental Quality Act Requirements

The Central Valley Water Board, as a Lead Agency under California Environmental Quality Act (CEQA) (Pub. Res. Code, section 21000 et seq.), is responsible for evaluating all the potential environmental impacts that may occur due to changes made to Waste Discharge Requirements General Orders for the Irrigated Lands Regulatory Program (ILRP) (collectively the “General Orders”). These changes are being made to incorporate into the General Orders the approved Central Valley-wide Salt and Nitrate Control Program (SNCP) in the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins and the Water Quality Control Plan for the Tulare Lake Basin (collectively referred to as ‘Basin Plans’). Under California Public Resources Code section 21159.2, this evaluation shall address only the project-specific issues related to the Waste Discharge Requirements which were not discussed in the Substitute Environmental Document (SED) for the SNCP basin plan amendments.

1. Project title:

Revisions to the Waste Discharge Requirements General Orders for waste discharges from irrigated lands within the Central Valley.

2. Lead agency name and address:

California Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670

3. Contact person and phone number:

Sue McConnell, Program Manager
Irrigated Lands Regulatory Program
(916) 464-4798

4. Project location:

The project is located within the Sacramento River, San Joaquin River and Tulare Lake Basins, in the Central Valley.

5. Description of project:

The proposed project consists of revisions to General Orders to incorporate updated policies and guidance that have been adopted into the Basin Plans, specifically the SNCP and associated regulatory framework to achieve long-term improvements in ambient water quality conditions in surface waters and groundwater in the Central Valley.

Evaluation of the Environmental Impacts in the Checklist

1. The checklist is developed for the Supplemental Program Environmental Impact Report for the ILRP (SPEIR) to evaluate potential impacts of the proposed project. This checklist includes impacts addressed in the SED that are applicable to the revisions of the General Orders, but only new impacts that were not previously addressed in the SED will be incorporated into the SPEIR.
2. For each environmental category in the checklist, the board must determine whether the project will cause any adverse impact. If there are potential impacts that are not included in the sample checklist, those impacts should be added to the checklist.
3. If the board determines that a particular adverse impact may occur as a result of the project, then the checklist boxes must indicate whether the impact is “Potentially Significant,” “Less than Significant with Mitigation Incorporated,” or “Less than Significant.”
 - a) “Potentially Significant Impact” applies if there is substantial evidence that an impact may be significant. If there are one or more “Potentially Significant Impact” entries on the checklist, the SED must include an examination of feasible alternatives and mitigation measures for each such impact, similar to the requirements for preparing an environmental impact report.
 - b) “Less than Significant with Mitigation Incorporated” applies if the board or another agency incorporates mitigation measures into the SED that will reduce an impact that is “Potentially Significant” to a “Less than Significant Impact.” If the board does not require the specific mitigation measures itself, then the board must be certain that the other agency will in fact incorporate those measures.
 - c) “Less than Significant” applies if the impact will not be significant, and mitigation is therefore not required.
 - d) If there will be no impact, check the box under “No Impact.”
4. The board must provide a brief explanation for each “Potentially Significant,” “Less than Significant with Mitigation Incorporated,” “Less than Significant,” or “No Impact” determination in the checklist. The explanation may be included in the written report described in section 3777(a)(1) or in the checklist itself. The explanation of each issue should identify: (a) the significance criteria or threshold, if any, used to evaluate each question; and (b) the specific mitigation measure(s) identified, if any, to reduce the impact to less than significant. The board may determine the significance of the impact by considering factual evidence, agency standards, or thresholds. If the “No Impact” box is checked, the board should briefly provide the basis for that answer. If there are types of impacts that are not listed in the checklist, those impacts should be added to the checklist.
5. The board must include mandatory findings of significance if required by CEQA Guidelines section 15065.
6. The board should provide references used to identify potential impacts, including a list of information sources and individuals contacted.

The following sections provide the assessment of the impacts of the Proposed Project on the environmental resources of the Central Valley Region. The assessment utilizes the CEQA Appendix G Checklist as the basis for identifying environmental impacts.

Aesthetics

Table 1 - Aesthetics Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project have a substantial adverse effect on a scenic vista?	Yes	No	No	No
b) Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No	No	Yes	No
c) Would the Project substantially degrade the existing visual character or quality of the site and its surroundings?	Yes	No	No	No
d) Would the Project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	Yes	No	No	No

Discussion

The discussion below for Aesthetics describes **direct and indirect impacts** that would occur from adoption and implementation of the Proposed Project.

- a) The Proposed Project is a set of revisions to the General Orders. The Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board. Consequently, the Proposed Project would not directly result in adverse effects on any scenic vista within the region.

However, the Proposed Project will likely indirectly result in the construction of Implementation Projects. Insufficient information pertaining to the setting, size, design, and aesthetic aspects of such projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of the indirect effects of such projects on aesthetics. Although it is not anticipated that any future Implementation Projects would adversely affect any scenic vista, because the specific locations of such projects are unknown, there is some potential for impacts to scenic vistas to occur, since the scope of the Implementation Projects could be quite large. Consequently, due to the potential for indirect impacts to scenic vistas to occur, the adoption and implementation of the Proposed Project by the Central Valley Water Board was considered to have a **potentially significant impact** to a scenic vista in the SED.

- b) For the reasons described above for “a,” and because future Implementation Projects can be sited and constructed in a manner that would avoid substantial damage to scenic resources within a state scenic highway, adoption and implementation of the Proposed Project by the Central Valley Water Board would have a **less-than-significant impact** to scenic resources within a state scenic highway in the SED.
- c) For the reasons described above for “a,” adoption and implementation of the Proposed Project by the Central Valley Water Board would have a **potentially significant impact** on the existing visual character of the Central Valley region in the SED.
- d) For the reasons described above for “a,” adoption and implementation of the Proposed Project by the Central Valley Water Board would have a **potentially significant impact** on day or nighttime views in the areas affected in the SED.

Because separate project-specific environmental review would be performed prior to the construction of specific Implementation Projects for salt and nitrate management to identify project-specific environmental impacts and to incorporate measures to avoid, reduce, or mitigate any identified significant environmental impacts, and because parties other than the State of California may serve as the project proponents and thus be responsible for mitigation measures, should they be necessary, no mitigation measures are proposed here. Although not anticipated to be substantial, decisions makers should recognize the potential for such indirect effects to aesthetics from implementation of the Proposed Project, and that mitigation introduced for such impacts, should mitigation be identified under separate, future project-specific environmental review, may or may not mitigate aesthetic impacts to a less-than-significant level. Hence, although not anticipated, there is some potential for a significant and unavoidable impact to aesthetic resources.

Agricultural and Forestry Resources

In determining whether impacts to agricultural resources are significant environmental impacts, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forestry resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Table 2 - Agricultural and Forestry Resources Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project 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?	Yes	No	No	No
b) Would the Project conflict with existing zoning for agricultural use or a Williamson Act contract?	No	No	No	Yes
c) Would the Project 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))?	No	No	No	Yes
d) Would the Project result in the loss of forest land or conversion of forest land to non-forest use?	No	No	Yes	No
e) Would the Project 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?	No	No	Yes	No

Discussion

The discussion below for Agricultural and Forestry Resources describes **direct and indirect impacts** that would occur from adoption and implementation of the Proposed Project.

- a) The Proposed Project is a set of revisions to the General Orders. The Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board that would directly convert agricultural land to another use. Further, there would be no change to the agricultural beneficial use (AGR) designation applied to surface water and groundwater within the Central Valley Region as a result of adopting the Proposed Project. Consequently, the Proposed Project would not directly result in adverse effects on farmland by conversion to a non-agricultural use.

Implementation Projects will likely result in indirect effects to Agricultural and Forestry Resources. Such projects may result in the conversion of limited areas of farmland required for siting facilities or recharge areas to non-agricultural use. Such projects are not expected to be sited in forest lands. However, along with conversion of farmland to non-agricultural use would be improved conditions for farmland with implementation of the Proposed Project, in the long-term, for salinity in water and soils. Insufficient information pertaining to the setting, size, and design of such projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of the indirect effects of such projects on the conversion of farmland to non-agricultural use. Although it is expected that future discharger-specific project(s) would not result in substantial conversion of existing farmland to non-agricultural use, some such conversion due to these projects could occur, particularly on a local scale. Consequently, due to the potential for an indirect impact to occur, the adoption and implementation of the Proposed Project by the Central Valley Water Board was considered to have a **potentially significant impact** to conversion of farmland to non-agricultural use in the SED.

Because separate project-specific environmental review would be performed prior to the construction of Implementation Projects to identify project-specific environmental impacts and to incorporate measures to avoid, mitigate, or reduce any identified significant environmental impacts, and because parties other than the State of California may serve as the project proponents and thus be responsible for mitigation measures, should they be necessary, no mitigation measures are proposed here. Although not anticipated to be substantial, decisions makers should recognize the potential for such indirect effects to agricultural lands from implementation of the Proposed Project, and that mitigation introduced for such impacts, should mitigation be identified under separate, future project-specific environmental review, may or may not mitigate the impacts to a less-than-significant level. Hence, although not anticipated, there is some potential for a significant and unavoidable impact to agricultural lands due to conversion of farmland to non-agricultural use in local areas.

- b) The Proposed Project would have **no impact** on existing agricultural use zoning of a Williamson Act contract.
- c) The Proposed Project would not conflict with existing zoning for, or cause rezoning of, forest land or timberland. Therefore, the Proposed Project would have **no impact** on existing zoning of forest land or timberland.
- d) The Proposed Project would not directly or indirectly result in the loss of forest land or conversion of forest land to non-forest use because the projects for salt and nitrate management that may be implemented in the future are expected to be sited primarily in agricultural areas and are not expected to be sited in forested areas. Any projects that are sited in areas that would result in conversion of forest land to non-forest use would be expected to affect a negligible percentage of the region's forest lands. Therefore, the Proposed Project would have a **less-than-significant impact** on the loss or conversion of forest land to a non-forest use in the SED.
- e) As stated under "c" and "d" above, the Proposed Project is not expected to directly or indirectly affect forest lands. As described above for "a," there would be no change to the relevant agricultural beneficial use (AGR) designation of any water bodies within the Central Valley Region. In addition, the Proposed Project would have no impact on

existing zoning of forest land or timberland, nor would the actions under the Proposed Project result in the substantial loss or conversion of forest land to a non-forest use. There would be period of time (approximately 10 to 20 years) between when the Proposed Project is adopted by the Central Valley Water Board and projects are implemented to manage salt loading in the Central Valley during which salts would continue to accumulate in underlying groundwater and, thus, in overlying soils. The degree to which salts would accumulate in Central Valley would vary by region and depend on source water quality and water application timing and rates. The continued salt accumulation in the Central Valley during this period is not expected to result in a substantial conversion of farmland to non-agricultural use, but reduced crop yields and shifts to salt tolerant crops within certain localized areas of the valley is a potential outcome of continued salt accumulation. Therefore, the Proposed Project would result in a **less-than-significant impact** on farmland and forest land related to changes in the existing environment in the SED.

Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Table 3 - Air Quality Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project conflict with or obstruct implementation of the applicable air quality plan?	Yes	No	No	No
b) Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	Yes	No	No	No
c) Would the Project 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	Yes	No	No	No
d) Would the Project expose sensitive receptors to substantial pollutant concentrations?	Yes	No	No	No
e) Would the Project create objectionable odors affecting a substantial number of people?	No	No	No	Yes

Discussion

The discussion below for Air Quality describes the **direct and indirect impacts** that would occur from adoption and implementation of the Proposed Project.

- a,b,c,d) The Proposed Project is a set of revisions to the General Orders. The Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board. As such, the Proposed Project would have no direct adverse effects on air quality. Therefore, the Proposed Project would not directly conflict with or obstruct implementation of an applicable air quality plan, violate an air quality standard or contribute substantially to an existing or projected air quality violation, increase a criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard, or expose sensitive receptors to substantial pollutant concentrations.

Implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management and the provision of immediate drinking water solutions. Insufficient information pertaining to the setting, size, and design of such projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of their effects on air quality. However, Implementation Projects specific to the provision of immediate drinking water solutions are reasonably anticipated to generate new construction (e.g., public fill stations) and new services (e.g., bottled water delivery) which may produce both short and long-term impacts to air quality. No additional Mitigation Measures beyond the original Air Quality Mitigation Measures listed in the March 2011 Final Program Environmental Impact Report for the ILRP (FPEIR) are anticipated at this time. When developing Implementation Projects for the Proposed Project, Mitigation Measures AQ-MM-1, AQ-MM-2, and AQ-MM-3 from the FPEIR should be utilized to the extent possible. At this time, it is unknown where such projects will be adopted and whether those projects will be in areas that are already in non-attainment of applicable federal or state ambient air quality standards. Therefore, the Proposed Project may result in **potentially significant impacts** due to conflicts with or obstruction of implementation of an applicable air quality plan, violations of an air quality standard or substantial contribution to an existing or projected air quality violation, increase of a criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard, or exposure of sensitive receptors to substantial pollutant concentrations.

- e) As described above under “a,” the Proposed Project would not directly result in adverse effects on air quality and will not create objectionable odors affecting a substantial number of people. Also, as described above, implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management and the provision of immediate drinking water solutions. Insufficient information pertaining to the setting, size, and design of such projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of the indirect effects of such projects on air quality. Nevertheless, the use of heavy machinery in the construction of these projects could potentially, on a short-term basis, create objectionable odors affecting a substantial number of people. However, any such

effects, should they occur, would be temporary in nature during construction. Moreover, standard construction best management practices would be implemented by project proponents to minimize adverse construction-related effects on air quality. Hence, the Proposed Project would not result in substantial, long-term air quality degradation that would produce objectionable odors. Therefore, the Proposed Project would have **no impact** on objectionable odors.

Biological Resources

Table 4 - Biological Resources Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project 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 U.S. Fish and Wildlife Service?	No	No	Yes	No
b) Would the Project 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 U.S. Fish and Wildlife Service?	No	No	Yes	No
c) Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No	No	Yes	No
d) Would the Project 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?	No	No	Yes	No

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No	No	Yes	No
f) Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No	No	Yes	No

Discussion

The discussion below for Biological Resources describes the **direct and indirect impacts** that would occur from adoption and implementation of the Proposed Project.

- a) The Proposed Project is a set of revisions to the General Orders. The Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board that would change the landscape. As such, the Proposed Project would have no direct adverse effects on terrestrial biological resources.

The Proposed Project would make no changes to biological resource-related beneficial uses (e.g., WARM, COLD, WILD, BIOL, RARE, MIGR, SPWN) or associated water quality objectives, or implementation programs related to these beneficial uses or objectives. The potential changes to surface water quality, which can affect aquatic life beneficial uses, are addressed below in Section IX, Hydrology and Water Quality. The constituents that are addressed by the Proposed Project include salts (e.g., TDS, EC, chloride, and sulfate), nitrate, and constituents with secondary MCLs. Some of these constituents (e.g., chloride, copper, silver, zinc) also have aquatic life criteria, the regulation of which would be unchanged by the Proposed Project. Further, as described in the water quality assessment, no substantial degradation for these aquatic life constituents would occur with the Proposed Project. Thus, the Proposed Project would not contribute to adverse chemical conditions to aquatic life. Also, as stated above, the Proposed Project does not directly involve the construction of new physical facilities by the Central Valley Water Board and thus would not adversely modify aquatic habitats. Based on these findings, the Proposed Project would not implement actions that would directly result in substantial adverse effects to aquatic or terrestrial biological resources, including on any species identified as a candidate, sensitive, or special status species.

In the long term, Implementation Projects could theoretically cause impacts to biological resources. However, insufficient information pertaining to the setting, size, and design aspects of such projects was available at the time this documentation was prepared to enable an assessment of reasonably foreseeable indirect effects of such projects on biological resources. For example, the largest of the potential

Implementation Projects is the construction of a regional network of desalter facilities and a regulated brine line. Though this project would be expected to potentially have adverse impacts on biological resources, such impacts are purely speculative. Before any major elements of such a project are built, the Board would first be required to reopen and amend the Basin Plans, which would require subsequent environmental review. Upon adoption of the Basin Plan Amendments currently under consideration, the Board would not be committed to any particular implementation project and would not be precluded from considering any alternatives or mitigation measures associated with such projects – such considerations will instead occur after Phase I of the Salt Control Program is complete. These considerations would also include project-specific environmental impacts and to incorporate measures to avoid, mitigate, or reduce any identified significant environmental impacts.

Furthermore, should future projects include use of federal funds, require a Clean Water Act 404 permit issued by the U.S. Army Corps of Engineers or in another way involve a federal agency, then federal agency consultation under Section 7 of the federal endangered species act (ESA) would be required prior to implementation of projects. This ESA consultation would further ensure that substantial adverse effects to ESA-listed species would not result from project implementation.

Because the only adverse direct or indirect impacts to biological resources are purely speculative, the adoption of the Proposed Project is therefore considered to have a **less-than-significant impact** to species identified as a candidate, sensitive, or special status species in the SED.

- b) As described above for “a,” the Proposed Project does not directly involve construction of new buildings, or other facilities by the Central Valley Water Board that would remove or adversely modify riparian habitat or any other sensitive natural community identified in local or regional plans, policies, or regulations. Consequently, the Proposed Project would not directly result in substantial adverse effects on riparian habitats or other natural biological communities.

As described above under “a,” implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management. Insufficient information pertaining to the setting, size, and design of such projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of the indirect effects of such projects on riparian habitat or other sensitive natural communities at specific sites. However, proper siting of projects, implementation of appropriate impact avoidance measures, and construction best management practices are expected to minimize any potential adverse effects to riparian habitat or other sensitive natural communities from project construction and long-term operation.

Therefore, the adoption and implementation of the Proposed Project by the Central Valley Water Board is considered to have a **less-than-significant impact** to any riparian habitat and other sensitive natural biological communities in the SED.

- c) As described above for “a,b” the Proposed Project does not directly involve construction of new buildings, or other facilities by the Central Valley Water Board. The Proposed Project would not result in the direct removal, filling, or hydrological

interruption of wetlands. Consequently, the Proposed Project would not directly result in substantial adverse effects on federally protected wetlands.

As described above under “a,” implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management. Insufficient information pertaining to the setting, size, and design of such projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of the indirect effects of such projects on federally protected wetlands at specific sites. Nevertheless, construction and operation of specific projects for salt and nitrate management are not expected to result in removal, filling, or hydrological interruption of marsh, vernal pool, coastal, or other wetland habitats because the majority of such projects are expected to be constructed in agricultural and urban areas of the Central Valley. However, project proponents would be required to obtain a Clean Water Act 404 permit and mitigate for any impacts to or loss of federally protected wetlands.

Therefore, the adoption and implementation of the Proposed Project by the Central Valley Water Board was considered to have a **less-than-significant impact** to any federally protected wetlands in the SED.

- d) As described above for “a,” the Proposed Project does not directly involve construction of new buildings, or other facilities by the Central Valley Water Board. As such, the Proposed Project would not directly modify terrestrial or aquatic habitats and thus would not directly result in substantial adverse effects on biological resources or their habitats. Consequently, the Proposed Project would not directly interfere substantially with the movement of any native resident or migratory fish or wildlife species, with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

As described above under “a,” implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management. Insufficient information pertaining to the setting, size, and design of such projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of the indirect effects of such projects on fish and wildlife movement and use of native nursery sites. However, proper siting of projects, implementation of appropriate impact avoidance measures, and construction best management practices are expected to minimize any potential adverse effects to fish and wildlife movement and use of nursery sites. Moreover, most projects are anticipated to be constructed in agricultural and urban areas and are also expected to have minimal effects on surface water quality and habitat.

Therefore, the adoption and implementation of the Proposed Project by the Central Valley Water Board was considered to have a **less-than-significant impact** to the movement of any native resident or migratory fish or wildlife species and use of native wildlife nursery sites in the SED.

- e,f) As described above for “a,” the Proposed Project does not directly involve construction of new buildings, or other facilities by the Central Valley Water Board. As such, the Proposed Project would not directly modify terrestrial or aquatic habitats and thus would not directly result in substantial adverse effects on biological resources or their habitats. The Proposed Project would make no changes to biological resource-related

beneficial uses (e.g., WARM, COLD, WILD, BIOL, RARE, MIGR, SPWN) or associated water quality objectives, or implementation programs related to these beneficial uses or objectives. Hence, the Proposed Project would not directly conflict with any local policies or ordinances protecting biological resources, conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or any other approved local, regional, or state habitat conservation plan.

As described above under “a,” implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management. Construction and operation of such projects would not conflict with any local policies or ordinances protecting biological resources or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan; or any other habitat conservation plan. This is primarily due to the size, nature, and anticipated siting of these projects (primarily in agricultural and urban areas) and the fact that each project would be required to undergo separate, project-specific environmental review and permitting before it can be constructed and operated. Project refinement, development of impact avoidance and minimization measures, and mitigation, where warranted, would prevent potential effects to biological resources from reaching levels that would conflict with provisions of adopted plans.

Therefore, the adoption and implementation of the Proposed Project by the Central Valley Water Board would have a **less-than-significant impact** to local policies or ordinances protecting biological resources and to local, regional, or state Habitat Conservation Plan or Natural Community Conservation Plan in the SED.

Cultural Resources

Table 5 - Cultural Resources Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5?	No	No	No	Yes
b) Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5?	No	No	No	Yes
c) Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	No	No	Yes	No
d) Would the Project disturb any human remains, including those interred outside of formal cemeteries?	No	No	Yes	No

Discussion

- a,b) The Proposed Project is a set of revisions to the General Orders. The Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board. As such, the Proposed Project would not change or affect historical or archaeological resources.

Implementation Projects may result in ground excavations for facility construction or placement of facilities or pipelines in areas of historical or archaeological significance. Because separate project-specific environmental review would be performed prior to project construction and operation to identify project-specific environmental impacts and to incorporate any necessary measures to avoid, reduce, or mitigate for any identified significant environmental impacts, these projects themselves are not expected to change or adversely affect historical or archaeological resources. Proponents of future salt and nitrate management projects would be expected to site projects and conduct construction monitoring in a manner that would avoid adverse effects to historical or archaeological resources.

Therefore, adoption and implementation of the Proposed Project by the Central Valley Water Board would have **no impact** on the significance of a historical or archaeological resource in the SED.

Geology, Soils, and Seismicity

Table 6 - Geology, Soils, and Seismicity Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	Not Applicable			
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 Division of Mines and Geology Special Publication 42.	No	No	Yes	No
ii) Strong seismic ground shaking?	No	No	Yes	No
iii) Seismic-related ground failure, including liquefaction?	No	No	Yes	No
iv) Landslides?	No	No	Yes	No
b) Would the Project result in substantial soil erosion or the loss of topsoil?	No	No	Yes	No

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Would the Project 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?	No	No	No	Yes
d) Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	No	No	No	Yes
e) Would the Project 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?	No	No	No	Yes

Discussion

The discussion below for Geology, Soils, and Seismicity describes the **direct and indirect impacts** that would occur from adoption and implementation of the Proposed Project.

- a) The Proposed Project is a set of revisions to the General Orders. The Proposed Project does not directly involve the construction of new buildings, houses, services, or other facilities by the Central Valley Water Board and thus does not directly locate, re-locate, or concentrate people in areas different from where people occur under existing conditions. As such, the Proposed Project would not directly expose people or structures to earthquake fault lines, seismic ground shaking, ground liquefaction, or landslides.

Implementation Projects may result in ground excavations for facility construction or placement of facilities or pipelines in areas that may be in the vicinity of a fault or subject to future strong seismic shaking, or soils of unknown quality at this time. Insufficient information pertaining to the siting, size, and design of such projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of the indirect effects of such projects on the expose people or structures to earthquake fault lines, seismic ground shaking, ground liquefaction, or landslides. Nevertheless, construction and operation of specific projects for salt and nitrate management would undergo separate project-specific environmental review and permitting. Through these processes, these projects are expected to be sited and constructed in a manner that would avoid or minimize exposure of people and property to loss, injury, or death as a result of fault lines, seismic ground shaking, ground liquefaction, or landslides.

Therefore, approval and implementation of the Proposed Project by the Central Valley Water Board would have a **less-than-significant impact** on the exposure of people or structures to adverse effects involving fault lines, seismic-related ground shaking and failure, and landslides in the SED.

- b) As discussed above under “a,” the Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board. As such, the Proposed Project would not directly result in ground excavations for facility construction that could result in soil erosion or the loss of topsoil. Thus, the Proposed Project would not directly result in soil erosion or the loss of topsoil.

As also described above under “a,” implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management. Insufficient information pertaining to the setting, size, and design of such projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of the indirect effects of such projects on soils. Construction and operation of these projects for salt and nitrate management would undergo separate project-specific environmental review and permitting. Through these processes, proper siting of projects, implementation of appropriate impact avoidance measures, and construction best management practices are expected to occur when these projects are constructed, which would both avoid and minimize the potential for soil erosion or the loss of topsoil at construction sites. Through these actions, soil erosion and the loss of topsoil would be minimized and is not expected to occur at levels of concern.

Therefore, adoption and implementation of the Proposed Project by the Central Valley Water Board would result in a **less-than-significant impact** to soil erosion and the loss of topsoil in the SED.

- c,d) For the reasons described above for “a,b,” the Proposed Project would have **no impact** on the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse to occur; or for facilities to be located on expansive soil creating substantial risks to life or property.
- e) For the reasons described above for “a,b,” the Proposed Project would not directly result in the placement of structures that would generate wastewater requiring disposal to land, nor would the Proposed Project affect soils in a manner that would cause soils to be incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems. Consequently, the Proposed Project would have **no impact** on soils or their ability to support septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Greenhouse Gas Emissions

Table 7 - Greenhouse Gas Emissions Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Yes	No	No	No
b) Would the Project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	Yes	No	No	No

Discussion

The discussion below for Greenhouse Gas Emissions describes the **direct and indirect impacts** that would occur from adoption and implementation of the Proposed Project.

- a,b) The Proposed Project is a set of revisions to the General Orders. Nitrate in soil can be converted to nitrous oxide, a greenhouse gas. Nitrous oxide is a byproduct of the conversion of ammonia to nitrate and ultimately to nitrogen gas (Natural Resources Conservation Service 2009). Nitrogen fertilization practices contribute significantly to nitrous oxide production; nitrous oxide emissions increase dramatically when fertilization exceeds crop usage.

The existing practices that contribute to existing nitrate concentrations in soils, such as application of fertilizers on agricultural lands, would be expected to remain similar to existing conditions with the Proposed Project. Wastewater discharge quality is a function of the management practices in place, which will continue to be utilized into the future. Additionally, no region-wide changes in agricultural production are expected, though there may be near-term localized shifts to salt tolerant crops due to interim salt accumulations in soils before salt management projects needed under the Proposed Project are implemented. Further, the General Orders require the preparation and implementation of farm-specific nitrogen management plans to optimize application of nitrogen for crop production. Thus, fertilizer application rates in the future would be expected to be no greater than under existing conditions. Because the rate at which nitrate is applied to soils with the Proposed Project is expected to be no greater than existing conditions, the generation of nitrous oxide with the Proposed Project is expected to be no greater than existing conditions.

Implementation Projects could indirectly contribute to greenhouse gas emissions from construction and operation of the projects/facilities and generation of additional traffic. Separate project-specific environmental review would be performed prior to physical project construction and operation to identify project-specific environmental impacts and to incorporate any necessary measures to avoid, reduce, or mitigate for any identified significant environmental impacts. However, due to the potential scope and

duration of service-related projects for the provision of immediate drinking water (e.g., bottled water delivery) the amount of additional greenhouse gas emissions may be substantial and unavoidable.

Therefore, the adoption and implementation of the Proposed Project by the Central Valley Water Board would have a **potentially significant impact** on generation of greenhouse gas emissions and potential conflict with any applicable plan, policy, or regulation related to greenhouse gas emissions.

No additional Mitigation Measures beyond the original Climate Change Mitigation Measures listed in the FPEIR are anticipated at this time. When developing Implementation Projects for the Proposed Project, Mitigation Measures CC-MM-1 and CC-MM-2 should be utilized to the extent possible.

Hazards and Hazardous Materials

Table 8 - Hazards and Hazardous Materials Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	No	No	Yes	No
b) Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	No	No	Yes	No
c) Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	No	No	Yes	No
d) Would the Project 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?	No	No	No	Yes

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 for people residing or working in the Project area?	No	No	No	Yes
f) For a Project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?	No	No	No	Yes
g) Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No	No	No	Yes
h) Would the Project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	No	No	Yes	No

Discussion

The discussion below for Hazards and Hazardous Materials describes the **direct and indirect impacts** that would occur from adoption and implementation of the Proposed Project.

- a) The Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board, nor does the project directly involve the transport, use, or disposal of hazardous materials. Consequently, the Proposed Project would have no direct effect on hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials.

The construction and operation of Implementation Projects could involve the transport, use, or disposal of hazardous materials such as petroleum fuels, concrete, and chemicals uses in treatment of water supplies at water treatment plants. These types of materials are not highly hazardous when used and transported properly. Separate project-specific environmental review would be performed prior to project construction and operation to identify project-specific environmental impacts and to incorporate any necessary measures to avoid, reduce, or mitigate for any identified significant environmental impacts related to the transport, use, or disposal of hazardous materials. Consequently, hazards associated with the construction and operation of salt and nitrate management projects are expected to be low.

Therefore, the adoption and implementation of the Proposed Project by the Central Valley Water Board would result in a **less-than-significant impact** to the transport, use, or disposal of hazardous materials in the SED.

- b,c) As discussed above for “a,” the Proposed Project does not directly involve the transport, use, or disposal of hazardous materials. Hence, the Proposed Project would have no direct effect on the transport, use, or disposal of hazardous materials; release of hazardous materials into the environment; or exposure of a school to hazardous materials or emissions.

As also discussed above under “a,” the Proposed Project would indirectly result in the need to construct and operate projects across the Central Valley for salt and nitrate management. However, as concluded above under “a,” hazards associated with the construction and operation of salt and nitrate management projects are expected to be low, and the risk to the public or the environment would be primarily from the transport of hazardous materials to the project site. Insufficient information pertaining to the siting of such projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of the indirect effects of the transport and use of hazardous materials within one-quarter mile of an existing or proposed school location. However, these projects would undergo separate project-specific environmental review and permitting where the issue of transporting or using hazardous materials within one-quarter mile of an existing or proposed school location would be addressed. Through these environmental review processes, proper siting of projects (including the consideration of school locations), implementation of appropriate impact avoidance measures, and construction and transport best management practices are expected to occur when these projects are constructed and operated, which would both avoid and minimize the potential for hazards to the public, including schools, or the environment from the transport, use, or disposal of hazardous materials.

Based on these findings, the adoption and implementation of the Proposed Project by the Central Valley Water Board would result in a **less-than-significant impact** regarding hazards to the public, including schools, or the environment from the transport, use, or disposal of hazardous materials in the SED.

- d) For the reasons described above for “a,b,c,” the Proposed Project would have no direct effect on the exposure of the public or the environment to a significant hazard associated with hazardous materials located on a site. Any indirect effect of the Proposed Project on the exposure of the public or the environment to a significant hazard associated with hazardous materials located on a site, through the construction of projects by dischargers, would undergo separate project-specific environmental review and permitting. Through these processes, it is not expected that a project for the management of salt or nitrate would 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 itself create a significant hazard to the public or the environment. Consequently, the Proposed Project would have **no impact** on the exposure of the public or the environment to a significant hazard associated with hazardous materials located on a site.
- e,f) For the reasons described for “a,b,c,” the Proposed Project would have no direct effect on the exposure of people residing or working within two miles of a public airport or private airstrip to a safety hazard. Any indirect effect of the Proposed Project on the

exposure of people to a safety hazard through the construction and operation of projects for salt and nitrate management would undergo separate project-specific environmental review and permitting. Through these processes, impact avoidance and mitigation measures would be introduced to projects, if needed to avoid substantial safety hazards to people. Moreover, the types of projects that may be constructed and operated for salt and nitrate management would not be of the nature that would expose people residing or working within two miles of a public airport or private airstrip to a safety hazard. Therefore, the Proposed Project would have **no impact** on the exposure of people residing or working within two miles of a public airport or private airstrip to a safety hazard.

- g) For the reasons described for “a,b,c,d,” the Proposed Project would have **no impact** on an adopted emergency response plan or emergency evacuation plan.
- h) For the reasons described for “a,b,c,d,” the Proposed Project would have no direct effect on the exposure of people or structures to a significant risk or loss, injury or death involving wildland fires.

As discussed above under “a,” the Proposed Project is expected to indirectly result in the construction and operation of Implementation Projects for salt and nitrate management. The construction and operation of these projects could involve use of hazardous materials such as petroleum fuels, concrete, and chemicals uses in treatment of water supplies at water treatment plants. These types of materials would not cause or contribute to wildland fires when used and transported properly. Separate project-specific environmental review and permitting would be performed prior to project construction and operation to identify project-specific environmental impacts and to incorporate any necessary measures to avoid, reduce, or mitigate for any identified significant environmental impacts related to exposure of people or structures to wildland fires. This would involve proper siting of facilities, use of fire breaks around facilities, and proper storage and transport of flammable materials.

Therefore, the adoption and implementation of the Proposed Project by the Central Valley Water Board would result in a **less-than-significant impact** to the exposure of people or structures to a significant risk or loss, injury or death involving wildland fires in the SED.

Hydrology and Water Quality

Table 9 - Hydrology and Water Quality Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project violate any water quality standards or waste discharge requirements?	Yes	No	No	No

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	No	No	Yes	No
c) Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	No	No	Yes	No
d) Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that results in flooding on- or off-site?	No	No	Yes	No
e) Would the Project create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	No	No	Yes	No
f) Would the Project otherwise substantially degrade water quality?	Yes	No	No	No
g) Would the Project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	No	No	No	Yes
h) Would the Project place within a 100-year flood hazard area structures that would impede or redirect flood flows?	No	No	Yes	No

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
i) Would the Project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	No	No	Yes	No
j) Would the Project inundation by seiche, tsunami, or mudflow?	No	No	Yes	No

Discussion

The discussion below describes the **direct and indirect impacts** to Hydrology that would occur from adoption and implementation of the Proposed Project.

- a,f) The Proposed Project is an action of the Central Valley Water Board to revise the General Orders, the Proposed Project itself would not itself directly result in violation of water quality standards or waste discharge requirements, nor would it directly otherwise substantially degrade water quality. The Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board. Further, the Proposed Project does not directly require changes to agricultural operations.

However, it is reasonably foreseeable that the construction and operation of Implementation Projects designed to comply with elements of the Proposed Project will have adverse impacts on groundwater and surface waters, at least during the next 10 years, and that those impacts may not be fully mitigated in all circumstances. Though these projects would undergo separate environmental review to identify project-specific environmental impacts and to incorporate any necessary measures to avoid, reduce, or mitigate for any identified significant environmental impacts, currently-regulated discharges will be allowed, subject to certain conditions, to discharge wastes at levels that will continue to have an adverse effects on beneficial uses in both surface waters and groundwater. Though the conditions placed on these discharges will mitigate adverse impacts to a substantial degree by mitigating impacts to those who use the water, the Proposed Project may nonetheless reasonably be expected to cause potentially significant impacts due to exceedances of applicable water quality standards and due to water quality degradation. This degradation will primarily occur because the Proposed Project will involve extending compliance timelines under which discharges that are not fully compliant with pre-Amendment regulatory requirements will be allowed to persist.

The following is a discussion of the areas of the Proposed Project where potentially significant impacts due to exceedances of applicable water quality standards and due to water quality degradation may occur.

Salt Control Program

The Salinity Management Strategy involves a three-phased approach of study and implementation to control salt accumulation in the Central Valley. Each of the three phases has a duration of ten to fifteen years. Phase I consists of developing a

Prioritization and Optimization (P&O) Study to facilitate the development of a long-term Salinity Management Strategy. Phase II would involve environmental permitting, securing funds for implementation projects, and engineering design and environmental permitting of preferred projects. Phase III would involve actual construction of preferred implementation projects.

Phase I includes the identification of the suite of regional and sub-regional projects to be implemented to manage salinity, the conceptual design of regional and sub-regional projects, the development and implementation of a funding plan and financing strategy for the identified projects, the establishment of a governance plan, strategic planning to address regulatory and policy issues, and stakeholder coordination. Phase I also includes a proposed Interim Salinity Permitting Approach for salinity discharges. Under this approach, permittees may select to be regulated under conservative limits or opt into participating in the funding and development of the P&O Study. (For the purposes of this analysis, the effects beyond Phase I are not reasonably foreseeable.)

Salts (e.g., TDS, EC, chloride, sulfate, and sodium) are extremely difficult to control in discharges, hence the ongoing work by CV-SALTS and the development of the Central Valley SNMP and the proposed Salt and Nitrate Control Program. Most agricultural operations do not have processes in place to remove TDS, EC, chloride, sulfate, and sodium from discharges. Storm water and agricultural BMPs are typically concerned with reducing particulates in discharges, not salts. Requiring dischargers to continue reasonable, feasible and practicable efforts to implement current salinity management practices and/or source control efforts during the Phase I would essentially result in no change in discharge quality for these parameters, relative to existing conditions.

The continuation of discharges from agriculture to surface waters in the Central Valley Region at current levels is not anticipated to result in substantial degradation for salinity constituents relative to existing conditions. As described above, the quality of discharges would be regulated through modifications to the General Orders to maintain existing salinity levels to the extent reasonable, feasible, and practicable. Dischargers would therefore not necessarily need to meet water quality objectives for the protection of beneficial uses, provided that they met the stringent criteria for granting a water quality variance. In addition, the proposed Salinity Variance Revisions would extend application of the existing Salinity Variance Program to include salinity water quality objectives related to the MUN beneficial use in addition to the AGR beneficial use. Though the Salt Control Program will likely have the indirect effect of allowing limited surface water degradation to occur, water quality degradation would be minimized through the application of variance criteria. Therefore, the impact to surface water quality degradation as result of implementation of Phase I of the Salinity Management Strategy would be expected to be **less than significant** in the SED.

For groundwater, agricultural discharges have the potential to have high salinity levels relative to receiving waters. In groundwater basins or portions of basins where levels of salinity constituents are near or above applicable objectives and the discharge levels are above groundwater levels, there is the potential for water quality degradation to occur, and this degradation may result in groundwater concentrations

being increased above applicable objectives, or result in groundwater quality that is already exceeding objectives being further degraded. Furthermore, although salinity offsets authorized under the Offsets Policy would result in a net benefit to water quality, salinity offsets will still result in degradation (including potential exceedances of water quality objectives) in localized areas. Over the Phase I of the Salt Control Program, this degradation could be substantial in some areas of the Central Valley and thus, for the degradation scenarios described above, could result in an adverse effect to MUN and AGR uses. This is considered a **potentially significant impact** with regard to water quality degradation in groundwater for salinity in the SED.

Lastly, the Proposed Project implements the Drought and Conservation Policy, which provides interim salinity permit limits during emergencies when high quality water supplies diminish such as during droughts or through conservation and recycling – all of which are anticipated to increase as a result of climate change. The interim permit limits during statewide or local emergencies include interim effluent and/or groundwater/surface water limitations based on historic salinity load (with consideration given to reasonable increment of use or changes in source water salinity concentration). The interim limit will not exceed an EC concentration of 2,200 $\mu\text{S}/\text{cm}$ as a 30-day running average. Though the limit may be established in terms of concentration or TDS load, concentration and loading limits shall not apply at the same time.

Interim salinity permit limits for permittees who have documented that conservation or recycling is causing increased salinity in their discharge may be based on one of the following:

- Limits that do not exceed the receiving water concentration, provided that there are no unreasonable impacts to downstream/downgradient water quality; or
- Limits that reflect those for emergency conditions: limitations based on historic salinity load with maximums based either on an EC concentration of 2,200 $\mu\text{S}/\text{cm}$ as a 30-day running average or as a load.

Dischargers to groundwater who document long-term commitment (20+ years) to water conservation and/or water recycling efforts may be eligible to use a long-term (10+ year) flow-weighted average to calculate compliance with effluent and or groundwater limitations.

Based on the above considerations, the Drought and Water Conservation Policy would have a **less-than-significant impact** to water quality degradation for salinity parameters in the SED.

Nitrate Control Program

The Nitrate Control Program will establish new permitting authorities that are designed to rectify nitrate pollution where it is reasonably feasible to do so. While the Nitrate Control Program's strategies are developed and implemented, adverse groundwater quality impacts will be mitigated through programs designed to provide drinking water to individuals and communities whose wells have been rendered unusable as a drinking water supply because of nitrate pollution.

During the period in which management zones are formed and the required proposals and plans are prepared and submitted, and the plans are implemented, there could be degradation of nitrate relative to existing conditions. If this degradation occurs in areas where groundwater nitrate is near or already above the 10 mg/L-N objective, this degradation would have the potential to adversely affect the MUN beneficial use. The duration of the degraded nitrate conditions would depend on the sources and amount of nitrate loading to the affected aquifer, and type of short-term and long-term project(s) implemented to reduce groundwater nitrate concentrations, but is estimated to be multiple years, if not decades, in some areas of substantial impairment. Note that environmental review will be conducted with development of the proposals and plans needed for implementation of a management zone. This checklist is focused on the selection of permitting pathways and specifically on the Early Action Program and the bottle water delivery component of that program.

Consequently, based on the above discussion, the Nitrate Permitting Strategy could result in potentially significant impacts to water quality degradation in regard to nitrate in the coming years and potentially decades, but would be expected to ultimately improve nitrate concentrations within the Central Valley Region. Due to the fact that it is likely that implementation of the Nitrate Control Program will result in water quality degradation, at least in the coming decades, the impact with regard to water quality degradation would be **potentially significant** in the SED.

Because at least some potentially significant impacts are expected to occur under the Proposed Project, impacts to a) and f) are considered **potentially significant** in the SED.

- b) The Proposed Project does not directly involve the construction of housing or other facilities that would rely on extraction of groundwater supplies, or would expand impervious area or otherwise cause interference of groundwater recharge. Therefore, the Proposed Project would have no direct effect on groundwater supplies.

As discussed above under “a,” the Proposed Project is anticipated to indirectly result in the construction and operation of specific projects for salt and nitrate management. Of the projects described above under “a” that the Proposed Project may indirectly result in, only new community water systems may reduce local groundwater supplies by pumping and treating local groundwater supplies to levels where it could be used for municipal supply where it was not being used under existing conditions due to high levels of salts and/or nitrate. Nevertheless, any such new use of groundwater by communities due the Proposed Project would be expected to be done on a sustainable basis, and not result in adverse levels of groundwater depletion over time. The other types of salt and nitrate management projects that may indirectly result from the Proposed Project would either not affect groundwater supplies or would increase groundwater supplies.

Therefore, the Proposed Project would have a **less-than-significant impact** on groundwater supplies in the SED.

- c,d,e) As discussed above under “a,” the Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water

Board. As such, the Proposed Project would not directly result in land modifications that would substantially alter the existing drainage pattern of the site or area or create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. Consequently, the Proposed Project have no direct effect on the drainage pattern of a site or area, the generation of additional storm water runoff, or the capacity of existing or planned storm system.

As also described above under “a,” implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management. Depending on the community water system source water supply, there could be an effect on instream flows within a Central Valley Region water body or water bodies. Instream flow patterns could also be altered as a result of groundwater recharge basins that rely on diversion of flows from surface waters (e.g., diversion of Kings River flood waters for on-farm recharge). These projects could alter the hydrology of surface water and groundwater bodies. Construction of new facilities also could result in the drainage pattern of a site being altered. Insufficient information pertaining to the setting, size, and design of such projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of the indirect effects of such projects on existing drainage pattern and runoff. Nevertheless, construction and operation of these projects for salt and nitrate management would undergo separate project-specific environmental review and permitting. Through these processes, proper siting of projects, implementation of appropriate impact avoidance measures, mitigation measures, and construction best management practices are expected to occur when these projects are constructed, which would both avoid and minimize the potential for adverse changes to site hydrology, drainage and runoff. Through these required processes, changes to site drainage patterns and runoff would be minimized and designed to avoid substantial erosion or siltation on- or off-site, flooding on- or off-site, exceedance of existing stormwater system capacity, or substantially increase polluted runoff.

Therefore, the Proposed Project would have a **less-than-significant impact** to site or area drainage patterns, runoff volume and pollutant load, or existing or planned storm water drainage systems capacity in the SED.

- g,h,i,j) As discussed above under “a,” the Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board. As such, the Proposed Project would not directly result in construction of housing or structures. Consequently, the Proposed Project would have no effect on the placement of housing or structures in a 100-year flood hazard area; the exposure of people or structures to a significant risk of loss, injury, or death involving flooding; or on the inundation of areas by seiche, tsunami, or mudflow.

As also described above under “a,” implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management. Insufficient information pertaining to the siting, size, and design of such projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of the indirect effects of or risks to such projects from flooding or inundation of areas by seiche, tsunami, or mudflow.

Nevertheless, construction and operation of these projects for salt and nitrate management would undergo separate project-specific environmental review and permitting. Through these processes, proper siting of projects, implementation of appropriate impact avoidance measures, mitigation measures, and construction best management practices are expected to occur when these projects are constructed, which would both avoid and minimize the potential for exposure of people or structures to a significant risk of loss, injury, or death involving flooding or on the inundation of areas by seiche, tsunami, or mudflow. Although some risk minimal would exist if structures or portions of structures associated with the Proposed Project are built within a 100-year flood hazard area or near the coast (e.g., brine line to San Francisco Bay), this risk is expected to be minimal and to be addressed consistent with current best engineering practices when the projects are designed, reviewed, permitted, and constructed.

Therefore, the Proposed Project would have **no impact** on the placement of housing in a 100-year flood hazard area, and a **less-than-significant impact** to the placement of structures within a 100-year flood area, exposure of people or structures to flooding or inundation by seiche, tsunami, or mudflow in the SED.

Land Use and Planning

Table 10 - Land Use and Planning Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project physically divide an established community?	No	No	No	Yes
b) Would the Project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	No	No	Yes	No
c) Would the Project conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan?	No	No	Yes	No

Discussion

The discussion below for Land Use and Planning describes the **direct and indirect impacts** that would occur from adoption and implementation of the Proposed Project.

- a) The Proposed Project is a set of revisions to the General Orders. The Proposed Project does not directly involve the construction of new buildings, services, or other facilities

by the Central Valley Water Board. As such, the Proposed Project would not directly physically divide an established community.

Implementation Projects would not be expected to physically divide a community, because such projects would be expected to be sited adjacent to or outside of established communities, in areas which there would be available land (e.g., agricultural lands), or otherwise situated in a manner that would not create a barrier to movement through a community (e.g., extended pipelines would be placed underground). Therefore, the Proposed Project would have **no impact** on physically dividing an established community.

- b,c) As described above for “a,” the Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board. As such, the Proposed Project would not directly conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan. A potential direct effect of the Proposed Project may be elevated nitrate in the interim while projects are being developed and implemented, which may preclude a local groundwater aquifer from being used as a drinking water supply. Having a limited water supply may prevent land development (e.g., new housing) from occurring according to an adopted land use plan. However, a component of the Nitrate Permitting Strategy is the requirement for an Alternative Compliance Project proposal, which may include both interim actions (e.g., bottled water) in the short-term, permanent solutions (such as well-head treatment or alternative drinking water supplies) in the intermediate term, and efforts to re-attain the water quality objective (where feasible and practicable) over the long-term. Because provisions have been included in the Proposed Project policies and permitting strategies to provide for safe drinking water alternatives, the Proposed Project would not directly result in a conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project.

As described above for “a,” implementation of the Proposed Project is expected to indirectly result in the need for surface and groundwater dischargers to construct specific projects for salt and nitrate management. However, it is expected that these projects would be compatible with land use plans, policies, and regulations, as well as with a Habitat Conservation Plan or Natural Community Conservation Plan. This is primarily due to the size, nature, and anticipated siting of these projects (primarily in agricultural and urban areas) and the fact that each project would be required to undergo separate, project-specific environmental review and permitting before it can be constructed and operated. Project refinement, development of impact avoidance and minimization measures, and mitigation, where warranted, would prevent conflict with provisions of adopted land use and conservation plans.

Therefore, the Proposed Project would result in a **less-than-significant impact** relative to conflicts with land use plans, policies, and regulations, and Habitat Conservation Plans and Natural Community Conservation Plans in the SED.

Mineral Resources

Table 11 - Mineral Resources Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project 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?	No	No	No	Yes
b) Would the Project 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?	No	No	No	Yes

Discussion

The discussion below for Mineral Resources describes **direct and indirect impacts** that would occur from adoption and implementation of the Proposed Project.

- a,b) The Proposed Project is a set of revisions to the General Orders. As such, it does not involve mineral resources. The Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board that would 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. Consequently, the Proposed Project would not be expected to directly result in any adverse effects to mineral resources.

Implementation Projects not expected to result in the loss of availability of mineral resources of importance locally or to the state because the construction of the anticipated projects would not eliminate or prevent the extraction of underlying mineral resources. Moreover, separate project-specific environmental review would be performed prior to project construction and operation to identify project-specific environmental impacts and to incorporate, as necessary, measures to avoid, reduce, or mitigate any identified significant environmental impacts.

The Proposed Project would, therefore, have **no impact** on the availability of mineral resources.

Noise

Table 12 - Noise Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	No	No	Yes	No
b) Would the Project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	No	No	Yes	No
c) Would the Project result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?	No	No	Yes	No
d) Would the Project result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	No	No	Yes	No
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 expose people residing or working in the Project area to excessive noise levels?	No	No	No	Yes
f) For a Project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?	No	No	No	Yes

Discussion

The discussion below for Noise describes the **direct and indirect impacts** that would occur from adoption and implementation of the Proposed Project.

- a,b,c,d) The Proposed Project is a set of revisions to the General Orders. The Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board. Therefore, the Proposed Project would have no direct adverse effects on the exposure of persons to noise levels in excess

of standards, excessive ground-borne vibration or permanent increase in ambient noise levels above existing conditions.

Insufficient information pertaining to the setting, size, and design of Implementation Projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of the indirect effects of such projects on air quality. Nevertheless, the use of heavy machinery in the construction of these projects could potentially, on a short-term basis, contribute to exposure of persons to noise levels in excess of standards and excessive ground-borne vibration. However, any such effects, should they occur, would be temporary in nature during construction. The effects of excessive noise from construction equipment would depend on the distance between the construction activities and the sensitive receptors (e.g., residential areas). The effects can be reduced through limiting the time period and days of the week during which construction activities can occur, prohibiting use of unmuffled equipment, and limiting idle time, and notifications to residents regarding work schedule. There is the potential for some projects to produce a permanent increase in ambient noise, but noise levels from such facilities would be from the running of equipment (e.g., pumps), thus, not resulting in a substantial increase in noise above ambient levels.

Therefore, the Proposed Project would result in a **less-than-significant impact** on the exposure of persons to noise levels in excess of standards, excessive ground-borne vibration and temporary and permanent increase in ambient noise levels above existing conditions in the SED.

- e,f) As described above for “a,” the Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board. Therefore, the Proposed Project does not directly involve development of a project near or in the vicinity of an airport or airstrip. Also, as described above for “a,” implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management. These projects would not be related to development near an airport or airstrip. As described above for “c,” these projects would not be expected to result in substantial increases in noise levels. Therefore, the Proposed Project would have **no impact** on excessive noise levels within an airport land use plan area, within two miles of an airport, or in the vicinity of a private airstrip.

Population and Housing

Table 13 - Population and Housing Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project induce substantial 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)?	No	No	Yes	No
b) Would the Project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	No	No	No	Yes
c) Would the Project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	No	No	Yes	No

Discussion

The discussion below for Population and Housing describes the **direct and indirect impacts** that would occur from adoption and implementation of the Proposed Project.

- a) The Proposed Project is a set of revisions to the General Orders. The Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board. As such, the Proposed Project does not directly involve the construction of new housing or businesses. Therefore, the Proposed Project would not directly induce population growth in an area or displace substantial numbers of existing housing.

As groundwater quality is improved and provision of a safe water supply is assured for a community, this may encourage those residing in the community to stay long-term and others not residing in the community to move there. However, these projects involving community water systems or groundwater pump and treat systems are not expected to result in substantial population growth, as they would primarily be for the purpose of providing water supplies to existing demands, with some provision for additional capacity, as appropriate for the specific site.

Therefore, the Proposed Project would have a **less-than-significant impact** on inducement of substantial population growth in the SED.

- b) For the reasons described above for “a” the Proposed Project would not directly result in new construction, thus, would not result in the displacement of existing housing. Also, as described above for “a,” implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management. These projects that may indirectly result from implementing the Proposed Project would be

expected to be constructed on lands currently used for similar facilities or on lands not used for housing. Therefore, the Proposed Project would have **no impact** on the displacement of substantial numbers of existing housing.

- c) The availability of a safe and reliable drinking water supply is an important factor in the ability of people to reside in a particular area. Aspects of the Proposed Project would allow for some degradation of salts and nitrate in groundwater. Drinking water MCLs for salts (e.g., EC, TDS, chloride, sulfate) address consumer acceptance levels and the drinking water MCL for nitrate is for protection of human health.

The elevated salts in groundwater used as drinking water supplies is generally of concern relative to the palatability of water (e.g., having a salty taste) and scaling on household fixtures, which can shorten the life of appliances. Because these are consumer-acceptability concerns and not human health concerns, degradation of groundwater for salts is not expected to result in the displacement of people from their existing homes.

Because elevated nitrate is a human health concern, areas where nitrate concentration in groundwater is close to or already exceed the drinking water MCL and would be further degraded, as would be allowed by the Proposed Project, has the potential to adversely affect the use of that water as a drinking water supply, relative to existing conditions. To situations where there is little to no assimilative capacity for nitrate and the discharge concentration is greater than the MCL, the Proposed Project requires the implementation of an Alternative Compliance Project for individual dischargers or an Early Action Plan for management zones. An Alternative Compliance Project must prioritize assurance that drinking water that meets drinking water standards is available to all drinking water users within the zone of influence where there are significant nitrate water quality concerns in groundwater. Similarly, an Early Action Plan is to include specific actions and a schedule of implementation to address the immediate drinking water needs of those initially identified within the management zone boundary that are drinking groundwater that exceeds nitrate standards.

Thus, because the Proposed Project prioritizes providing a safe and reliable drinking water supply to communities that would be affected by potential future adverse nitrate conditions in groundwater, the Proposed Project would not directly result in the displacement of substantial numbers of people that would necessitate the construction of replacement housing elsewhere.

Also, as described above for “a,” implementation of the Proposed Project is expected to result in the need for surface and groundwater dischargers to construct specific projects for salt and nitrate management. These projects are not expected to displace substantial numbers of existing people, because it is anticipated they would be located in areas of low population and small communities around which there would be available land.

Therefore, the Proposed Project would result in a **less-than-significant impact** on the displacement of substantial number of people in the SED.

Public Services

Table 14 - Public Services Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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:	Not Applicable			
----- Fire protection?	No	No	No	Yes
----- Police protection?	No	No	No	Yes
----- Schools?	No	No	No	Yes
----- Parks?	No	No	No	Yes
----- Other public facilities?	No	No	No	Yes

Discussion

The discussion below for Public Services describes the **direct and indirect impacts** that would occur from adoption and implementation of the Proposed Project.

- a) The Proposed Project is a set of revisions to the General Orders. The Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board that would affect the needs for fire protection, police protection, schools, parks, or other public facilities. Consequently, the Proposed Project would not be expected to directly result in any adverse effects to public services.

Implementation Projects are not expected to result in the need for facilities changes for fire protection, police protection, schools, parks, or other public facilities, because the construction of the anticipated projects would be public works in nature, not new housing that would increase public demand from such facilities. Moreover, separate project-specific environmental review would be performed prior to project construction and operation to identify project-specific environmental impacts and to incorporate, as necessary, measures to avoid, reduce, or mitigate for any identified significant environmental impacts.

The Proposed Project would, therefore, have **no impact** on fire protection, police protection, schools, parks, or other public facilities.

Recreation

Table 15 - Recreation Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project 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?	No	No	No	Yes
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	No	No	No	Yes

Discussion

The discussion below for Recreation describes the **direct and indirect impacts** that would occur from adoption and implementation of the Proposed Project.

- a,b) The Proposed Project is a set of revisions to the General Orders. The Proposed Project does not directly involve the construction of new buildings, services, parks, recreational facilities, or other facilities by the Central Valley Water Board that would increase the demand for recreational facilities. Consequently, the Proposed Project would not be expected to directly result in any adverse effects to neighborhood or regional parks or other recreational facilities.

Implementation Projects do not involve the construction of housing that would contribute to a substantial population increase in an area that would result in increased demand for parks or other recreational facilities. Moreover, separate project-specific environmental review would be performed prior to project construction and operation to identify project-specific environmental impacts and to incorporate, as necessary, measures to avoid, reduce, or mitigate for any identified significant environmental impacts.

The Proposed Project would, therefore, have **no impact** on the use of or demand for recreational facilities.

Transportation/Traffic

Table 16 - Transportation/Traffic Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	Yes	No	No	No
b) Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	Yes	No	No	No
c) Would the Project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	No	No	No	Yes
d) Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No	No	No	Yes
e) Would the Project result in inadequate emergency access?	No	No	No	Yes
f) Would the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	No	No	No	Yes

Discussion

The discussion below for Transportation/Traffic describes the **direct and indirect impacts** that would occur from adoption and implementation of the Proposed Project.

- a,b) The Proposed Project is a set of revisions to the General Orders. The Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board, nor does it directly affect regional traffic or traffic patterns or conflict with applicable congestion management programs such as level of service standards. Further, the Proposed Project would not result in changes to agricultural operations, as related to transportation/traffic generation. As such, the Proposed Project would have no direct adverse effects on transportation/traffic.

Insufficient information pertaining to the setting, size, and design of Implementation Projects was available at the time this documentation was prepared to enable making a detailed, definitive impact assessment of the indirect effects of such projects on transportation/traffic. Nevertheless, traffic generation on local roadways in the vicinity of these projects may increase during the construction and implementation of Implementation Projects specific to the provision of immediate drinking water solutions which are reasonably anticipated to generate new construction (e.g., public fill stations) and new services (e.g., bottled water delivery). The increase in traffic due to construction or project implementation would be temporary in nature and limited to the duration of the project. The increase in traffic due to implementation is anticipated to come from personnel trips necessary to operate these new projects and potential generation of new services (e.g., bottled water delivery). The duration and scope of Implementation Projects are currently undefined, and as such, their impacts on traffic are potentially significant.

No Mitigation Measures were listed for Transportation/Traffic in the FPEIR, due to the original statement of minimal impact. When developing Implementation Projects for the Proposed Project, Mitigation Measures CC-MM-1 and CC-MM-2 from the Climate Change section should be utilized to the extent possible where appropriate, including reduction of vehicle trips and limits to vehicle idling time.

Therefore, the Proposed Project would have **potentially significant impact** relative to conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for performance of a circulation system; and relative to conflict with an applicable congestion management program.

- c) For the reasons described above for “a,b” the Proposed Project would not directly result in adverse effect to air traffic. Also, as described above, implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management. Nevertheless, these projects that may indirectly result from implementing the Proposed Project would not be expected to conflict with air traffic patterns, because these projects would not be related to air travel. Therefore, the Proposed Project would have **no impact** on air traffic patterns.
- d) For the reasons described above for “a,b” the Proposed Project would not directly result in hazards related to a transportation design feature or incompatible uses. Also, as described above, implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management. Nevertheless,

these projects that may indirectly result from implementing the Proposed Project would not be expected to increase transportation hazards, because these projects would not be related to transportation design or otherwise result in generation of traffic from incompatible uses. Therefore, the Proposed Project would have **no impact** on hazards due to a design feature or incompatible uses.

- e) For the reasons described above for “a,b” the Proposed Project would not directly result in inadequate emergency access. Also, as described above, implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management. Nevertheless, these projects that may indirectly result from implementing the Proposed Project would not be expected to result in inadequate emergency access, because these projects would not be related to transportation design or modifications to circulation systems. Therefore, the Proposed Project would have **no impact** on emergency access.
- f) For the reasons described above for “a,b” the Proposed Project would not directly result in a conflict with adopted policies, plans, or programs regarding public transit or bicycle or pedestrian facilities, or their safety performance. Also, as described above, implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management. Nevertheless, these projects that may indirectly result from implementing the Proposed Project would not be expected to result in adverse effects to public transit or bicycle or pedestrian facilities, because these projects would not be related to transportation design or modifications to circulation systems. Therefore, the Proposed Project would have **no impact** on public transit or bicycle or pedestrian facilities.

Utilities and Service System

Table 17 - Utilities and Service System Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	No	No	No	Yes
b) Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	No	No	Yes	No

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Would the Project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	No	No	Yes	No
d) Would the Project have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	No	No	No	Yes
e) Would the Project result in a determination by the wastewater treatment provider, which 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?	No	No	No	Yes
f) Would the Project be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	No	No	No	Yes
g) Would the Project comply with federal, state, and local statutes and regulations related to solid waste?	No	No	No	Yes

Discussion

The discussion below for Utilities and Service Systems describes the **direct and indirect impacts** that would occur from adoption and implementation of the Proposed Project.

- a) The Proposed Project is a set of revisions to the General Orders. As a regulatory action, the Proposed Project itself would not cause exceedance of wastewater treatment requirements of the Central Valley Water Board. Rather, the Proposed Project is an action of the Central Valley Water Board to incorporate new and revised policies for the regulation of nonpoint source discharges to surface waters and groundwater within the Central Valley Region. The Proposed Project does not directly involve the construction of new buildings, services, or other facilities by the Central Valley Water Board. Therefore, the Proposed Project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

Therefore, the Proposed Project would have **no impact** exceedance of wastewater treatment requirements of the applicable Regional Water Quality Control Board.

- b,c) As described above for “a,” the Proposed Project itself does not directly involve the construction of new buildings, services, or other facilities and, thus, would not directly result in new water or wastewater treatment, or storm water drainage needs. Also, as described above for “a,” implementation of the Proposed Project is expected to indirectly result in the need for specific projects for salt and nitrate management. Some of these projects may be water or wastewater treatment, or storm water management projects. Construction of such projects may involve temporary environmental effects to other resource categories, as discussed for other sections within this checklist (e.g., air quality, transportation/traffic). However, the construction of such projects would generally be for improvement in the environmental condition, and the environmental effects that would occur during construction would be temporary in nature. Therefore, the Proposed Project would have a **less-than-significant impact** with respect to the construction of new or expanded water treatment, wastewater treatment, and storm water drainage facilities in the SED.
- d,e,f,g) As described above for “a,” as a regulatory action, the Proposed Project does not directly or indirectly involve construction of new housing or other buildings that would require appreciable demand for water, wastewater, or solid waste service. Projects undertaken indirectly as a result of the Proposed Project would be for the purpose of improving water and wastewater treatment conditions. Therefore, the Proposed Project would have **no impact** on the need for water supplies, wastewater treatment capacity, solid waste disposal needs, or compliance with statutes and regulations related to solid waste.

Mandatory Findings of Significance

Table 18 - Mandatory Findings of Significance Issues and Impacts of the Proposed Project.

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Does the Project have the potential to 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	No	No	No	Yes

Issues in Question	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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)?	Yes	No	No	No
c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	No	No	Yes	No

Discussion

- a) As discussed in Section IV, Biological Resources, with the Proposed Project, there would be no change to the biological resources-related beneficial use designations (e.g., WARM, COLD, WILD, BIOL, RARE, MIGR, SPWN) or associated water quality objectives, or implementation programs related to these beneficial uses or objectives. Further, the Proposed Project does not directly involve the construction of new buildings or other facilities. Thus, the Proposed Project would have **no direct impact** on the quality or quantity of habitat for any fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels; a plant or animal community; or a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. However, Implementation Projects may result in altered instream flow patterns (e.g., on-farm recharge projects) or new discharges to surface waters (e.g., brine line discharges) may result in indirect impacts to biological resources. Because separate project-specific environmental review would be performed prior to project construction and operation to identify project-specific environmental impacts and to incorporate any necessary measures to avoid, reduce, or mitigate for any identified significant environmental impacts, no impact determination is made.
- b) The Environmental Checklist analysis (Sections I through XVII) concluded that the Proposed Project would have no direct impacts to aesthetics, agricultural and forestry resources, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems. As such, the Proposed Project would not directly contribute to a cumulative impact to these resource categories.

Implementation of the Proposed Project is expected to indirectly result in the need for surface and groundwater dischargers to construct specific projects for salt and nitrate management to achieve compliance with the General Orders or other provisions that may result from the Board’s implementation of the Proposed Project. These

Implementation Projects could indirectly cause impacts at the local level from construction of the projects/facilities to air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology, noise, and transportation and traffic. However, the construction activities indirectly resulting from the Proposed Project would not contribute to any long-term adverse cumulative condition to these resources, because the construction activities would be temporary in nature.

Operation of the projects that would indirectly occur from the Proposed Project could result in indirect less-than-significant and potentially significant impacts to aesthetics, agricultural and forestry resources, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology, land use and planning, noise, population and housing, transportation and traffic, and utilities and service systems. There would be no indirect impacts to mineral resources, public services, and recreation. The specific projects and locations of the projects have not been defined to a level that allows for identifying whether the projects would occur in areas with cumulatively adverse conditions for aesthetics, agricultural and forestry resources, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology, land use and planning, noise, population and housing, transportation and traffic, and utilities and service systems. This assessment does not speculate on whether the Proposed Project would indirectly contribute considerably to a cumulative condition for these resources, because the location and scope of the future projects is unspecified or uncertain. However, decision makers should recognize that a project may be located in a non-attainment area for air quality or where cumulative traffic conditions are forecasted to be adverse, for example, and may contribute considerably to an adverse cumulative condition for one or more resources. Because separate project-specific environmental review would be performed prior to the construction and operation of specific projects for salt and nitrate management to identify project-specific environmental impacts and to incorporate measures to avoid, reduce, or mitigate any identified significant environmental impacts to the extent feasible, and because parties other than the State of California may serve as the project proponents and thus be responsible for mitigation measures, should they be necessary, no mitigation measures are proposed here.

The Environmental Checklist analysis concluded that the Proposed Project impacts to water quality degradation would be “no impact,” “less than significant,” or “potentially significant,” depending on the particular Salt and Nitrate Control Program strategy, policy, or guidance document considered (see Section IX). The constituents of concern to water quality degradation with the Proposed Project include salts (EC, TDS, chloride, sulfate and sodium), nitrate, and additional parameters with secondary MCLs (aluminum, color, copper, iron, manganese, silver, turbidity, and zinc). Thus, this cumulative assessment is focused on cumulative water quality conditions for these constituents of concern in surface waters and groundwaters within the Central Valley Region.

Cumulative Surface Water Quality Conditions

Past and present projects or actions affecting surface water bodies within the Central Valley Region have resulted in the existing water quality conditions for these water bodies. Aside from the Proposed Project, reasonably foreseeable future actions that could affect surface water quality for the constituents of concern to this assessment in

the Central Valley Region include the Lower San Joaquin River salt and boron control program, storm water management programs, continued implementation of the NPDES program, CVP and SWP operations in compliance with regulatory requirements, and California Water Action Plan. The salt and boron TMDL, ILRP, and storm water management programs are all aimed at making improvements to water quality in the Central Valley Region. The California Water Plan lays out actions to improve water management in the state and CVP and SWP operations in compliance with regulatory requirements including compliance with Bay-Delta WQCP objectives for the salinity parameters EC and chloride.

Salinity Parameters

Salinity (as measured by EC and/or TDS) conditions within surface waters of the Central Valley Region are variable, with some areas of the region having concentrations of these constituents that adversely affect the ability to use the water for AGR and/or MUN purposes. Portions of the Sacramento, San Joaquin River and Delta hydrologic regions have water bodies on the state's CWA section 303(d) list of impaired water bodies due to salinity, EC, and/or TDS relative to the protection of AGR and MUN beneficial uses. In the future cumulative condition, the concentrations of salts in surface waters of the Central Valley Region are not expected to be substantially worse and, in fact, are expected to remain at similar levels or improve somewhat, relative to existing conditions in many water bodies, due to implementation of the Central Valley Salt and Nitrate Control Program and other Central Valley Water Board actions, such as development and implementation of TMDLs for impaired water bodies. In the future, through implementation of the Salt and Nitrate Control Program and TMDLs, dischargers in the Central Valley Region will have implemented treatment and control measures and projects to reduce loading of salts to surface waters. Consequently, implementation of the Proposed Project would not have a considerable contribution to any adverse cumulative condition with respect to salinity parameters.

Nitrate

Within surface waters of the Sacramento River, Tulare Lake, and Delta hydrologic regions, nitrate concentrations are not impacted under existing conditions, relative to protection of MUN beneficial uses, with concentrations falling below the primary drinking water MCL of 10 mg/L-N (see Section 2, Environmental Setting). No beneficial uses, other than the MUN beneficial use, have numeric objectives or MCLs established for nitrate. Nitrate concentrations are variable across the San Joaquin River Hydrologic Region. Median concentrations in tributaries and the San Joaquin River are below 10 mg/L-N. Mud Slough and Salt Slough have historical concentrations above the 10 mg/L-N (Section 2, Environmental Setting); however, MUN is not a designated beneficial use of these water bodies. Within primary tributaries that are direct source waters for drinking water supplies (e.g., Merced River, Cosumnes River, Tuolumne River, Stanislaus River, San Joaquin River), nitrate concentrations are below 10 mg/L-N based on recent historical concentrations (Larry Walker Associates, 2016b).

The future cumulative condition will include implementation of the Central Valley Salt and Nitrate Control Program, as well as continued implementation of other regulatory programs to control discharges relative to applicable water quality objectives and protection of beneficial uses. Therefore, future surface water nitrate conditions within the Central Valley Region are expected to be at similar levels, or possibly be improved, relative to existing conditions. Consequently, implementation of the Proposed Project

would not have a considerable contribution to any adverse cumulative condition with respect to nitrate.

Cumulative Groundwater Quality Conditions

Salinity Parameters

Salinity (as measured by EC and/or TDS) conditions within groundwaters of the Central Valley Region are variable, with some areas of the region having concentrations of these constituents that adversely affect the ability to use the water for AGR and/or MUN purposes. Hence, in some basins or sub-basins, salts have impacted beneficial uses in some groundwaters under existing conditions.

In the future, the concentrations of salts in the groundwaters of the Central Valley Region are expected to be at similar levels or be improved, relative to existing conditions, largely due to implementation of the Central Valley Salt and Nitrate Control Program. In the future cumulative condition, through implementation of the Salt and Nitrate Control Program, dischargers in the Central Valley Region will have implemented treatment and control measures and projects to reduce loading of salts to groundwaters. There may be localized areas within the region where salts may still be above levels necessary for protection of AGR and MUN uses and stabilized at levels similar to those under existing conditions or at future levels. Finally, there may be localized areas within the region where groundwater salt degradation continues to occur into the future, and remediation back to existing conditions is not feasible. This may occur, for example, where an offset project has been used to address degradation. However, on a basin/sub-basin volume-weighted average basis, which is the proposed management structure for controlling and restoring salt, an improvement in groundwater quality is expected under the future cumulative condition from implementing the Proposed Project, relative to existing conditions. Consequently, implementation of the Proposed Project is not expected to have a considerable contribution to any adverse cumulative conditions with respect to salt conditions at the basin or sub-basin level; rather, the Proposed Project is expected to have a beneficial impact on the future cumulative salt conditions at the basin and sub-basin level. However, because the Proposed Project would allow localized areas of groundwater basins/sub-basins that are near or over the applicable water quality objective to be further degraded in the future, and because it will not be feasible to remediate all such localized areas of groundwater back to existing conditions or conditions better than existing conditions, the Proposed Project would contribute considerably to adverse future cumulative conditions of salts in some localized areas of basins/sub-basins within the Central Valley. This was considered to be a **potentially significant cumulative impact** in the SED. Because there is the potential for the degraded water quality conditions to remain over the long-term, this impact is considered potentially significant and unavoidable.

Nitrate

Nitrate conditions within groundwaters of the Central Valley Region are variable, with some areas of the region having concentrations of these constituents that adversely affect the ability to use the water for MUN purposes (see Section 2, Environmental Setting). Hence, groundwater beneficial uses are considered to be impacted by nitrates in some basins or sub-basins under existing conditions.

In the future cumulative condition, the concentrations of nitrate in the groundwaters of the Central Valley Region are expected to be at similar levels or be improved, relative to existing conditions, largely due to implementation of the Central Valley Salt and Nitrate Control Program. In the future cumulative condition, through implementation of the Salt and Nitrate Control Program, dischargers in the Central Valley Region will have implemented treatment and control measures and projects to reduce loading of nitrate to groundwaters. There may be localized areas within the region where nitrate may still be above levels necessary for protection of MUN uses and stabilized at levels similar to those under existing conditions or at future levels. Finally, there may be localized areas within the region where groundwater nitrate degradation continues to occur into the future, and remediation back to existing conditions is not feasible. This may occur, for example, where an offset project has been used to address degradation. However, on a basin/sub-basin volume-weighted average basis, which is the proposed management structure for controlling and restoring nitrate, an improvement in groundwater quality is expected under the future cumulative condition from implementing the Proposed Project, relative to existing conditions. Consequently, implementation of the Proposed Project is not expected to have a considerable contribution to any adverse cumulative conditions with respect to nitrate conditions at the basin or sub-basin level; rather, the Proposed Project is expected to have a beneficial impact on the future cumulative nitrate conditions at the basin and sub-basin level. However, because the Proposed Project would allow localized areas of groundwater basins/sub-basins that are near or over the applicable water quality objective to be further degraded in the future, and because it will not be feasible to remediate all such localized areas of groundwater back to existing conditions or conditions better than existing conditions, the Proposed Project would contribute considerably to adverse future cumulative conditions of nitrate in some localized areas of basins/sub-basins within the Central Valley. This was considered to be a **potentially significant cumulative impact** in the SED. Because there is the potential for the degraded water quality conditions to remain over the long-term, this impact is considered potentially significant and unavoidable.

Additional Secondary MCL Parameters

Groundwater conditions for the additional secondary MCL parameters – aluminum, copper, iron, manganese, silver, zinc, color, and turbidity – are considered to not be impaired in the Central Valley Region under existing conditions. While there are localized areas where concentrations of some of these parameters have been measured above secondary MCLs, on a region-wide basis, the quality relative to these parameters, which address consumer acceptance (e.g., non-health) concerns, is considered generally suitable for MUN and AGR uses (California Department of Water Resources, 2003). The trace metals of concern relative to secondary MCLs are natural elements and their presence in groundwater is largely a function of the hydrogeological conditions of the aquifers in the region. Similarly, turbidity in groundwater is caused by natural factors and typically less than 1 NTU (State Water Board, 2004). Color of groundwater is affected by the presence of other constituents that have MCLs that may be present. The natural hydrogeological processes that are occurring under existing conditions that contribute to the existing levels of trace metals, color and turbidity also would occur for the future cumulative condition. Therefore, future cumulative conditions for these parameters within the groundwaters of the Central Valley Region are expected to be similar to existing conditions. Consequently, implementation of the Proposed Project would not have a considerable contribution to any adverse

cumulative groundwater conditions with respect to the secondary MCL parameters of aluminum, copper, iron, manganese, silver, zinc, color, and turbidity.

- c) For salts and nitrate, the Proposed Project would put permitting and management strategies, and guidance in place to ensure that a safe, reliable drinking water supply is available to residents of the Central Valley Region. The Salt and Nitrate Control Program implementation policies and management strategies are directed at regulation of salt and nitrate discharges to restore beneficial use protection, including drinking water uses, where reasonable and feasible and minimizing or preventing further degradation of groundwater that are currently meeting water quality objectives so that they do not become impaired. As described in Section IX, Hydrology and Water Quality, the Proposed Project, there may be near-term degradation of salts and nitrate that could result in an adverse effect to MUN beneficial uses. To address near-term degradation of nitrate, which is a human health concern that could have an adverse effect on MUN beneficial uses, the Salt and Nitrate Control Program policies require interim actions (e.g., bottled water) in the short-term, permanent solutions (such as well-head treatment or alternative drinking water supplies) in the intermediate term, and efforts to re-attain the water quality objective (where feasible and practicable) over the long-term to protect the MUN beneficial uses. Therefore, the Proposed Project would have a **less-than-significant impact** regarding environmental effects which could cause substantial adverse effects on human beings, either directly or indirectly in the SED.