APPENDIX K

Environmental Checklist

California Environmental Quality Act Requirements

The Central Valley Water Board, as a Lead Agency under CEQA (Pub. Res. Code, § 21000 et seq.), is responsible for evaluating all the potential environmental impacts that may occur due to changes made to the Basin Plans. The Secretary of Resources has determined that the Central Valley Water Board's basin planning process qualifies as a certified regulatory program pursuant to Public Resources Code section 21080.5 and California Code of Regulations, title 14, section 15251(g). This determination means that the Central Valley Water Board is exempt from the requirement to prepare an environmental impact report for basin planning activities. Instead, this Staff Report and the Environmental Checklist (Appendix K) satisfy the applicable CEQA requirements.

1. Project title:

Amendments to 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.

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:

Jeanne Chilcott, Environmental Program Manager, (916) 464-4788

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 a suite of policies and guidance that will be integrated into 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 (Basin Plans) as amendments that would establish a Central Valley-wide Salt and Nitrate Control Program. The Salt and Nitrate Control Program would establish a 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 board must complete an environmental checklist prior to the adoption of plans or policies for the Basin/208 Planning program as certified by the Secretary for Natural

Resources. The checklist becomes a part of the Substitute Environmental Documentation (SED).

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

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the Project:				
a) Have a substantial adverse effect on a scenic vista?	☒	☐	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☒	☐	☐	☐
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☒	☐	☐	☐

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 amendments to the Basin Plans to facilitate implementation of innovative salt, nitrate, and secondary MCL management strategies, in the form of new and modified regulatory policies, to improve surface water and groundwater quality 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. 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 is considered to have a **potentially significant impact** to a scenic vista.

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.

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.

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.

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

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
II. 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. **Would the project:**				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☒	☐	☐	☐
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

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 amendments to the Basin Plans to facilitate implementation of innovative salt, nitrate, and secondary MCL management strategies, in the form of new and modified regulatory policies, to improve surface water and groundwater quality 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 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 is considered

to have a **potentially significant impact** to conversion of farmland to non-agricultural use.

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.

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 (see assessment in Section IX, Hydrology and Water Quality) 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.

Air Quality

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
III. 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. **Would the Project:**				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) 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)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

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,e) The Proposed Project is a set of amendments to the Basin Plans to facilitate implementation of innovative salt, nitrate, and secondary MCL management strategies, in the form of new and modified regulatory policies, to improve surface water and groundwater quality 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. 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 the applicable air quality plan or create objectionable odors affecting a substantial number of people.

Implementation Projects are not be expected to conflict with or obstruct implementation of an applicable air quality plan because the Board has no evidence that such projects would create substantial, long-term increases in air quality pollutants. Likewise, these projects would not result in substantial, long-term air quality degradation that would produce objectionable odors. Therefore, the Proposed Project would have **no impact** on applicable air quality plans or objectionable odors.

b,c,d) As described above under "a," the Proposed Project would not directly result in adverse effect to air quality. 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. 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, contribute 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. However, any such effects, should they occur, would be temporary in nature during construction. The projects constructed would not produce air quality pollutants of concern on a long-term operational basis. 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 indirectly result in substantial, long-term adverse effects to air quality or sensitive receptors.

Therefore, the Proposed Project would result in a **less-than-significant impact** on air quality and sensitive receptors.

Biological Resources

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES. Would the Project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) 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?	☐	☐	☒	☐

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

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 amendments to the Basin Plans to facilitate implementation of innovative salt, nitrate, and secondary MCL management strategies, in the form of new and modified regulatory policies, to improve surface water and groundwater quality 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 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 (i.e., 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.

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.

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 is considered to have a **less-than-significant impact** to any federally protected wetlands.

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 is 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.

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.

Cultural Resources

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES. Would the Project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☐	☒	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Discussion

a,b) The Proposed Project is a set of amendments to the Basin Plans to facilitate implementation of innovative salt, nitrate, and secondary MCL management strategies, in the form of new and modified regulatory policies, to improve surface water and groundwater quality 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. 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.

Geology, Soils, and Seismicity

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS. Would the Project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
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.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) 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?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

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 amendments to the Basin Plans to facilitate implementation of innovative salt, nitrate, and secondary MCL management strategies, in the form of new and modified regulatory policies, to improve surface water and groundwater quality within The Central Valley Region. 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.

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.

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

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS. Would the Project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

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 amendments to the Basin Plans to facilitate implementation of innovative salt, nitrate, and secondary MCL management strategies, in the form of new and modified regulatory policies, to improve surface water and groundwater quality within The Central Valley Region. 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 (University of California, 2018).

The existing practices that contribute to existing nitrate concentrations in soils, such as application of fertilizers on agricultural lands and wastewater discharge quality, would be expected to remain similar to existing conditions with the Proposed Project. Wastewater discharge quality is a function of the treatment processes in place, which will continue to be utilized into the future. The Proposed Project does not specifically authorize expanded wastewater treatment plant discharges. Regarding agriculture, 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 (see Section II, Agricultural and Forestry Resources). Further, WDRs issued through the Central Valley Water Board's Irrigated Lands Regulatory Program 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. 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. The amount of additional greenhouse gas emissions that could potentially occur from constructing and operating these projects is not expected to be substantial because construction would be temporary and the projects themselves are not projects that would produce substantial greenhouse gas emissions.

Therefore, the adoption and implementation of the Proposed Project by the Central Valley Water Board would have **a less-than-significant impact** on generation of greenhouse gas emissions and **no impact** in regard to conflicts with any applicable plan, policy, or regulation related to greenhouse gas emissions.

Hazards and Hazardous Materials

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the Project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through	☐	☐	☒	☐

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) 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?	☐	☐	☒	☐

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 surface water and groundwater regulatory policies that constitute the Proposed Project do 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.

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.

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.

Hydrology and Water Quality

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY. Would the Project:				
a) Violate any water quality standards or waste discharge requirements?	☒	☐	☐	☐
b) 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)?	☐	☐	☒	☐
c) 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?	☐	☐	☒	☐
d) 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?	☐	☐	☒	☐
e) 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?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☒	☐	☐	☐

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
g) 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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☒	☐
i) 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?	☐	☐	☒	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

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 establish new and revised policies for the regulation of discharges to surface waters and groundwater within the Central Valley Region. Because the Central Valley Water Board's Basin Plans are not self-implementing, 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 permit POTWs additional discharge capacity that would induce growth nor 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 (i.e., 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 wastewater, agricultural, and storm water discharges do not have processes in place to remove TDS, EC, chloride, sulfate, and sodium, though entities with wastewater treatment plants have made efforts to control salt loading to their facilities through limiting chemical usage (e.g., using ultraviolet disinfection rather than chlorine) or through service area controls (e.g., alternative municipal water supplies having lower salinity, water softener control/removal ordinances). 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 wastewater, storm water, and 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 WDRs to maintain existing salinity levels to the extent reasonable, feasible, and practicable. However, the proposed Basin Plan Amendments would extend the Salinity Variance Program by extending the existing sunset date of June 30, 2019 to 15 years after the date of adoption of the Salt Control Program. Facilities 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**.

For groundwater, water quality degradation with regard to salinity constituents is not anticipated in relation to storm water discharges, as storm water is a result of precipitation, which is generally not a high salinity source. However, wastewater and 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.

Lastly, the Proposed Project would establish the Drought and Conservation Policy, which would establish of 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 and EC concentration of 2,200 µS/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 µS/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.

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.

The Nitrate Control Program differentiates between those individual dischargers that threaten to degrade groundwater in a significant manner or that are projected to occur in a heavily-impacted area (Categories 4 and 5) from those that don't threaten to cause degradation that would potentially impair beneficial uses (Categories 1, 2 and 3). For those dischargers that represent a negligible threat of degradation, the Nitrate Control Program sets a margin of safety by establishing triggers at 75% of the objective, further ensuring that present or probable future beneficial uses will be protected.

However, permittees that cannot meet the requirements of Categories 1, 2 or 3, or permittees participating in management zones that have little to no assimilative capacity, will likely continue to degrade groundwater. However, these permittees would need to obtain an exception, which is conditioned on the implementation of Alternative Compliance Projects under Path A and Management Zone Implementation Plans under Path B. This will have the effect of mitigating impacts through the development of long-term plans to achieve the goals of the SNMP. For example, a minimum requirement of a management zone implementation plan is identification of short (≤ 20 years) and long-term (≥ 20 years) projects and/or planning activities that will be implemented within the management zone, and in particular within prioritized areas (if such areas are identified in the implementation plan), to make progress towards aquifer restoration such that present or probable future beneficial uses are protected. Following the long-term implementation of the Nitrate Control Program, groundwater throughout Management Zones that have been established throughout the priority basis and groundwater in areas where Alternate Compliance Projects have been authorized is expected to meet the drinking water MCL or the highest quality water technically and economically achievable.

During the period in which the management zone is 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.

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 to improve relative to existing conditions. 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**.

Secondary MCL Revisions

Secondary MCLs have two existing regulatory applications in the Central Valley Region:

- The State Water Resources Control Board's Division of Drinking Water regulates drinking water systems to ensure that the water delivered by these systems is, "pure, wholesome, and potable drinking water." (Health & Saf. Code, § 116270.) The Division is responsible for establishing regulatory standards necessary to protect the public welfare. Secondary MCLs may apply to any contaminant in drinking water that may adversely affect the odor or appearance of the water, cause a substantial number of persons served by the public water system to discontinue its use, or otherwise adversely affect the public welfare. (Health & Saf. Code, § 116275, subd. (d).) Secondary MCLs shall not be exceeded in the water supplied to the public by community water system. For drinking water suppliers, compliance with the Secondary MCLs is measured in the groundwater source or at distribution system entry points. Groundwater undergoes some natural filtration as that water moves through the vadose zone. Nearly all surface water sources require filtration of the drinking water prior to entering the distribution system. Therefore, in most cases, the water used to demonstrate compliance with the SMCLs has been filtered before the compliance samples are collected.

- The Central Valley Water Board regulates discharges of waste to protect beneficial uses in both surface waters and groundwaters. The Central Valley Water Board has incorporated by reference the Secondary MCLs into its Basin Plans as part of the Chemical Constituents water quality objective. When establishing permit limitations to protect the MUN beneficial use, the Board must ensure compliance with the Chemical Constituents water quality objective. In this way, the Secondary MCLs are used to interpret when the quality of water is sufficient for the protection of public welfare. When considered by the Central Valley Water Board, compliance with the Secondary MCLs is measured in the ambient surface or ground water, such as a river, or at the discharge point from a treatment facility prior to entering a water body. This means the Central Valley Water Board has historically implemented conservative practices when determining compliance with the Secondary MCLs for its regulatory programs when compared to the Division of Drinking Water's regulation of drinking water systems.

Implementing a conservative methodology to develop permit limits for Secondary MCLs has caused concerns by the Central Valley Water Board and the regulated community subject to the Board's requirements. The conservative approach may result in the need for wastewater dischargers to implement costly treatment or control measures that are not necessary to fully protect water quality and ensure safe drinking water supplies. The Salt and Nitrate Control Program proposes to incorporate guidance into the Basin Plans

to clarify how compliance with secondary MCLs will be determined by the Central Valley Water Board. These recommendations include:

Under Chapter 3 Water Quality Objectives: incorporate guidance from Title 22 for utilizing the applicable "Recommended", "Upper", or "Short Term" concentrations included in Table 64449-B; clarify consideration of natural background concentrations; and specify annual averaging for surface water and appropriate long-term averaging for groundwater.

Under Chapter 4 Implementation:

- Consider "Recommended" concentrations as goals and allow concentrations ranging to the "Upper" level if it is demonstrated that it is neither reasonable nor feasible to achieve lower levels. "Short Term" level may be authorized on a temporary basis consistent with Title 22 or with the Drought and Conservation Policy

- Clarify use of dissolved samples to measure compliance for aluminum, color, copper, iron, manganese, silver, turbidity and zinc in Table 64449-A until translators are developed to better represent filtration capabilities from water treatment facilities. Allot 10-years to complete studies for translators.

Secondary MCL revisions pertaining to TDS, EC, Chloride, and Sulfate

For TDS, EC, chloride, and sulfate, the secondary MCLs in Table 64449-B consist of three values: recommended, upper, and short-term. The Board currently requires that permittees that discharge salinity comply with water quality objectives specified in this table to protect designated MUN uses. The proposed Basin Plan Amendments incorporate language that would clarify the use of the recommended, upper and short-term values when issuing waste discharge permits, thereby acknowledging that there is a range of TDS, EC, chloride, and sulfate concentrations within which MUN uses are protected. Clarifying the Board's authority to establish effluent limitations or receiving water limits within these ranges is significant because salts are extremely difficult to control in discharges, especially during an extended drought or when water recycling and conservation practices are implemented. Most wastewater, agricultural, and storm water discharges do not have specific treatment processes in place to remove TDS, EC, chloride, and sulfate. Wastewater treatment plant owners and operators in the Central Valley have implemented actions to control salt loading to their facilities over approximately the last ten years, through limiting chemical usage (e.g., using ultraviolet disinfection rather than chlorine) or through service area controls (e.g., water softener control/removal ordinances) resulting from salinity minimization plans/pollution prevention plans, in compliance with NPDES permit provisions. Storm water and agricultural BMPs (e.g., sediment basins, filter strips) are typically concerned with reducing particulates in discharges, not salts, and implementation of these BMPs and resulting water quality are not expected to substantially change due to these clarifications of the secondary MCLs for EC, TDS, chloride, and sulfate, because regulatory requirements related to control of particulates (e.g., turbidity objectives, suspended sediment objectives) would be unchanged. In establishing permit limitations, the Board would continue to ensure that no pollution or nuisance will occur. Thus, the proposed SMCL revisions reflect the Board's current permitting approach for salinity constituents and would not cause a substantial degradation of water quality.

Secondary MCL revisions pertaining to aluminum, color, copper, iron, manganese, silver, turbidity and zinc

The Secondary MCL revisions recommends that for receiving waters that are not exempt from surface water treatment requirements (i.e. 40 CFR Part 141, Subparts H, P, T & W) and for groundwater, compliance with the Secondary MCLs for aluminum, copper, iron, manganese, silver, zinc, color and turbidity in Table 64449-A will be determined from samples that have been passed through a 1.5-micron filter to reduce filterable residue[1]. Metal constituents will then be analyzed using the acid-soluble procedure described in EPA Approved Methods[2], as appropriate, or by other methods approved by the Central Valley Water Board. The proposed alternative modifies the current practice of utilizing dissolved measurements of SMCL constituents when determining need for limitations to implement Secondary MCLs in Board-issued orders. Dissolved measurements require water samples to be filtered through a 0.45-micron filter prior to analysis[3]. A 0.45-micron filter may not represent the level of filtration utilized by water treatment facilities drawing from the source water (Figure 4–10). Filtering the sample will remove suspended solids that may contribute to turbidity and color in samples that may negatively impact analytical results for metal concentrations while better representing the dissolved solids that may pass through a water treatment plant's filtration system. The proposed amendments allow the Board to adjust the filter size where necessary to more accurately represent site-specific conditions based on scientific evidence submitted for their consideration and after consultation with Division of Drinking Water and public comment. The proposed amendment also clarifies that these proposed provisions apply solely to evaluate compliance with constituents identified with Secondary MCLs. The amendment does not affect or alter the methods used to evaluate compliance with other water quality objectives that have been established for those same constituents (e.g. as Primary MCLs, California Toxics Rule or National Toxic Rule constituents, or constituents with specific objectives listed in the Basin Plans).

- *Copper, Silver, and Zinc:* The proposed compliance approach (i.e., assessing compliance from a filtered water sample) is not expected to result in substantial water quality changes for these constituents in surface waters and groundwater relative to existing conditions. For copper, silver, and zinc, there are aquatic life criteria established in the California Toxics Rule that are more restrictive than the secondary MCLs, thus permits for surface water discharges from wastewater, agriculture, and storm water would continue to be required to comply with the more restrictive aquatic life criteria. As such, the quality of discharges to surface waters for these metals is not expected to change following adoption and implementation of the Secondary MCL revisions. For discharges to groundwater, this may result in a less restrictive compliance approach relative to existing conditions, but it will not likely result in a significant increased loading of these constituents because degradation will still be limited by the State and Federal Antidegradation Policies. However, groundwater quality, as affected by wastewater, storm water, and agricultural

[1] Filter size recommended in EPA Approved Methods 30 CFR Part 136 for Total Dissolved Solids and Total Suspended Solids and is used for removing suspended solids from a solid prior to analysis. Filtering the sample will remove suspended solids that may contribute to turbidity and color in samples that may negatively impact analytical results for metal concentrations while better representing the dissolved solids that may pass through a water treatment plant's filtration system.

[2] Currently EPA Approved Methods are 200.7 and 200.8 for metals, Method 180.1 for turbidity and SM 2120 F-2011 for color. EPA methods are periodically updated and future approved methods may be applicable.

[3] Federal Regulations 40 CFR Part 136, Appendix C, Definitions

discharges is expected to be largely unaffected, because the processes currently in place to control/treat discharges would be expected to remain in place with this proposed approach. Therefore, the Secondary MCL revisions would not result in substantial degradation for copper, silver, and zinc in surface waters or groundwater.

- *Aluminum, Iron, and Manganese:* Elevated levels of these metals are associated with particulates in surface waters, and the dissolved concentrations for these constituents are typically less than the secondary MCLs. As stated above, sediment control is a typical component of storm water and agricultural management plans and BMPs, and implementation of these BMPs is expected to be unchanged as a result of the Secondary MCL Policy, because regulatory requirements related to control of particulates (e.g., turbidity objectives, suspended sediment objectives) would be unchanged. Thus, concentrations of aluminum, iron, and manganese, which are associated with particulates, in agricultural and storm water discharges is not expected to substantially change relative to existing conditions due to implementation of the Secondary MCL revisions. For wastewater discharges, the proposed compliance approach (i.e., assessing compliance from a filtered water sample) is not expected to result in different discharge quality, because the discharge quality is a function of the treatment processes in place, which will continue to be utilized into the future unaffected by this process (treatment processes are modified in response to more stringent effluent quality requirements, not less stringent effluent quality requirements). The proposed compliance approach may affect the degree by municipal wastewater operators/owners to control industrial sources of aluminum, iron, and manganese, but this assumes that industrial discharges are a large source of aluminum, iron, and manganese and that these metals are largely in the particulate form, which is not necessarily the case in many service areas. Many wastewater service areas in the Central Valley have relatively little industry compared to domestic and commercial sources of wastewater. Further, the presence of elevated aluminum, manganese, and iron in surface waters is mostly related to particulates, as most data show dissolved concentrations to be below secondary MCLs (see Section 2, Environmental Setting). Thus, surface water quality is not expected to change substantially as a result of the proposed compliance approach. Similarly, groundwater quality, as affected by wastewater, storm water, and agricultural discharges is expected to be largely unaffected, as the processes currently in place to control/treat discharges would be expected to remain in place with this proposed approach. Therefore, the secondary MCL revisions would not result in substantial degradation for aluminum, iron, and manganese in surface waters or groundwater.

- *Turbidity:* Turbidity is a measure of the relative clarity of water. While there is a secondary MCL for turbidity of 5 Nephelometric Turbidity Units (NTU), there also are surface water quality objectives for turbidity in the Basin Plans that limit increases in turbidity based on ambient levels. Also, turbidity is usually controlled in wastewater discharges to surface water through operational specifications to ensure that adequate treatment is provided. The proposed approach to assessing compliance with the secondary MCL for turbidity (i.e., assessing compliance from a filtered water sample) would not modify how compliance is assessed for receiving water quality objectives or operational specifications. Thus, the proposed amendments would not result in substantial degradation for turbidity in surface waters or groundwater.

- *Color:* Color is of concern in drinking water at the point of consumption for aesthetic reasons and can be affected by a number of factors, including the presence of other constituents that have MCLs. In addition to the secondary MCL for color, there is a surface water quality objective in the Basin Plans that states, "Water shall be free of discoloration that causes nuisance or adversely affects beneficial uses." The proposed compliance approach (i.e., assessing compliance from a filtered water sample) would not affect this objective. There is no water quality objective for color for groundwater in the Basin Plans. The color of discharges from wastewater facilities, storm water outfall, and agricultural drains is a result of treatment for actual constituents, not color itself. For the reasons described above, levels of constituents with secondary MCLs are not expected to be substantially different from existing conditions with the proposed compliance assessment approach. Because of this consideration, as well as the fact that the surface water quality objective for color would be unaffected, there would be no substantial degradation of water quality for color with implementation of the secondary MCL revisions.

Based on the above considerations, the secondary MCL revisions would have a **less-than-significant impact** to water quality degradation.

Exceptions Policy (Including impacts due to Boron)

The existing Salinity Exceptions Policy that only applies to TDS/EC, chloride, sulfate and sodium, prohibits the Central Valley Water Board from authorizing new exceptions or reauthorizing previously approved exceptions after June 30, 2019. This Salt and Nitrate Control Program recommends revising the existing Exceptions Policy by amending the Basin Plans to (a) add nitrate to the list of chemical constituents for which the Central Valley Water Board identifies a specific process to authorize an exception; (b) expand/revise conditions or authorization of an exception to reflect the requirements of the Salt and Nitrate Control Program (no exception needed if meeting Phase I Alternative Salinity Compliance and implementation of an approved alternate nitrate compliance project, respectively); (c) remove the existing sunset provision that prohibits the granting of exceptions beyond June 30, 2019; and (d) delete the current provision limiting the term of an exception to no more than 10 years and add a new provision stating that when authorizing an exception, the Central Valley Water Board shall generally not exceed a term of 10-years and may only exceed 50-years if management practices under the exception is resulting in significant, measurable and continuing improvements in water quality. Exception application provisions specific to boron are also included.

As defined by the proposed amendments, an exception would be applied in situations where the groundwater or a non-NPDES surface water discharge concentration of a salinity, nitrate or boron parameter exceeds the applicable water quality objective and there is no assimilative capacity. In cases where the discharge concentration also exceeds the water quality concentration, degradation would occur. Because the exception allows discharges and groundwater or receiving surface water to exceed water quality objectives for salinity, nitrate or boron, there would be the potential to adversely affect beneficial uses in some areas of the Central Valley, especially the AGR and MUN beneficial uses. This is considered a **potentially significant impact** during the period in which it occurs.

Where exceptions are sought in order to provide time to develop and approve a more appropriate water quality standard (uses and/or objectives), there must be a well-defined work plan (including a schedule of milestones) and a commitment by dischargers to provide the resources needed to complete the proposed process. Where existing water quality standards are unlikely to change, dischargers must explain how the proposed exception facilitates the larger long-term strategy designed to ultimately attain those standards while, in the interim, allocating available resources to address more urgent water quality priorities, where applicable.

Under Phase I of the Salt Control Program, permittees that are in compliance with the conditions for the Alternative Permitting Approach are in compliance with their salinity limits. Permittees that opt out of participating in the P&O Study by choosing the Conservative Permitting Approach will not be eligible for a salinity exception. Additional conditions for exceptions to water quality objectives for salinity under Phase II and Phase III of the Salt Control Program may be incorporated in the future.

As a condition of obtaining the exception for nitrate, permittees would be required to assure availability of an adequate supply of clean, safe, reliable, and affordable drinking water for those who have been adversely affected by the non-compliant discharge(s). The assurance must include a credible and realistic framework to construct/install a permanent long-term solution and an immediate commitment to make available temporary replacement water in the interim.

Exceptions specific to boron mirror the provisions required for salinity in the current Exception Program. Requirements include a Boron Reduction Study Work Plan or a boron-based watershed management plan. In addition, the granting of an exception for boron under this Program by the Central Valley Water Board is a discretionary action subject to the requirements of the California Environmental Quality Act. Thus, potential environmental impacts associated with the project will need to be considered before an exception will be granted. Permittees seeking an exception for boron will also be required to participate in the Phase I P&O study.

In summary, an exception would only be granted to a permittee or management zone to facilitate the long-term attainment of water quality standards or to provide time needed to develop and approve a more appropriate water quality standard. Thus, although implementation of the Exceptions Policy would allow water quality degradation to occur for a period of time, this policy would be applied in conjunction with other actions designed to ultimately address degraded water quality conditions in groundwater and applicable surface waters (e.g., in conjunction with the Salt and Nitrate Control Program) such that there would be no adverse effects to beneficial uses in the future. Consequently, based on the above discussion, the Exceptions Policy could result in **potentially significant impacts** to water quality degradation in regard to salinity, nitrate or boron in the coming years and potentially decades, but as a regulatory tool that would be used in conjunction with other Salt and Nitrate Control Program actions, would be expected to ultimately improve salt, nitrate and boron concentrations, relative to existing conditions such that the impact with regard to water quality degradation would be **less than significant**.

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

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.

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.

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.

Land Use and Planning

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING. Would the Project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) 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?	☐	☐	☒	☐
c) Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan?	☐	☐	☒	☐

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 amendments to the Basin Plans to facilitate implementation of innovative salt, nitrate, and secondary MCL management strategies, in the form of new and modified regulatory policies, to improve surface water and groundwater quality 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. 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 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 (see Section IX), 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.

Mineral Resources

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES. Would the Project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

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 amendments to the Basin Plans to facilitate implementation of innovative salt, nitrate, and secondary MCL management strategies, in the form of new and modified regulatory policies, to improve surface water and groundwater quality within The Central Valley Region. 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

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XII.NOISE. Would the Project result in:				
a) 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?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	☐	☐	☒	☐
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within	☐	☐	☐	☒

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				
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?	☐	☐	☐	☒

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 amendments to the Basin Plans to facilitate implementation of innovative salt, nitrate, and secondary MCL management strategies, in the form of new and modified regulatory policies, to improve surface water and groundwater quality 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 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.

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

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING. Would the Project:				
a) 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)?	☐	☐	☒	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

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 amendments to the Basin Plans to facilitate implementation of innovative salt, nitrate, and secondary MCL management strategies, in the form of new and modified regulatory policies, to improve surface water and groundwater quality 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. As such, the Proposed Project does not directly involve the construction of new housing or businesses, and does not permit additional capacity to POTW dischargers. 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.

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 (e.g., agricultural lands, which is addressed in Section II). 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 (e.g., Nitrate Permitting Strategy, Exceptions Policy) would allow for some degradation of salts and nitrate in groundwater, as described above in Section IX. 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 (i.e., 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 (Guidelines for Developing Alternative Compliance Projects for Nitrate Discharges, Appendix H). 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.

Public Services

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES.				
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:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

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 amendments to the Basin Plans to facilitate implementation of innovative salt, nitrate, and secondary MCL management strategies, in the form of new and modified regulatory policies, to improve surface water and groundwater quality 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 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

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION.				
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

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 amendments to the Basin Plans to facilitate implementation of innovative salt, nitrate, and secondary MCL management strategies, in the form of new and modified regulatory policies, to improve surface water and groundwater quality within The Central Valley Region. 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

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION / TRAFFIC. Would the Project:				
a) 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?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐
c) 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?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance of safety of such facilities?	☐	☐	☐	☒

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 amendments to the Basin Plans to facilitate implementation of innovative salt, nitrate, and secondary MCL management strategies, in

the form of new and modified regulatory policies, to improve surface water and groundwater quality 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, nor does it affect regional traffic or traffic patterns or conflict with applicable congestion management programs such as level of service standards. Further, the Proposed Project does not permit POTWs additional discharge capacity that would induce growth nor would 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 construction of these projects, however, the increase in traffic would be temporary in nature, limited to the duration of the project. Traffic generation may also increase following completion of the project, related to personnel trips necessary to operate these new projects, however, such projects are not expected to be substantial traffic generators that would reduce the level of service of nearby roadways and intersections. Hence, the Proposed Project would not indirectly result in substantial, long-term adverse effects to air quality or sensitive receptors.

Therefore, the Proposed Project would have **a less-than-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 Systems

ISSUES	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS. Would the Project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) 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?	☐	☐	☒	☐
c) 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?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) 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?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

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 amendments to the Basin Plans to facilitate implementation of innovative salt, nitrate, and secondary MCL management strategies, in the form of new and modified regulatory policies, to improve surface water and groundwater quality within the Central Valley Region. 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 establish new and revised policies for the regulation of point 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.

   Implementation Projects would not be expected to exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, because they would be implemented for the purpose of compliance of wastewater treatment requirements.

   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.

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

ISSUES	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?	☐	☐	☐	☒
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)?	☒	☐	☐	☐
c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

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 WDRs 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 alt and boron control program, ILRP, 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. A component of the proposed amendments is the Salinity Variance Policy, which proposes to amend the existing Salinity Variance Program to allow the authorization of variances up to 15 years following the effective date of the Basin Plan amendments that revise the program, and extend application of variances to salinity parameters for protection of the MUN and AGR beneficial uses. During this period, municipal wastewater dischargers could be granted variances from meeting WQBELs for salinity constituents, provided that these dischargers are their discharge situation is similar or comparable to the case studies evaluated for the current Salinity Variance Program. An additional condition for obtaining the variance is that the discharger would participate in the Salinity Prioritization and Optimization Study. Modeling of the effects of granting variances to specific municipal wastewater discharges concluded that the effects on ambient salinity levels both near the point of discharge and at downstream locations would be imperceptible (Central Valley Water Board, 2014). Further, these variances would be limited to the period during which the Salinity Management Strategy is implemented. 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 assumes implementation of the Central Valley Salt and Nitrate Control Program, as well as continued implementation of other regulatory programs, including NPDES program and ILRP, 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.

Additional Secondary MCL Parameters

Additional secondary MCL parameters include aluminum, copper, iron, manganese, silver, zinc, color, and turbidity. There are no CWA section 303(d) listings for these constituents due to impairment of the MUN beneficial use, with the exception of two ephemeral creeks in the foothills above Sacramento for aluminum, iron, and manganese. Total concentrations of aluminum, iron, and manganese have been frequently measured above the respective secondary MCL levels. Elevated levels of these metals are associated with particulates (i.e., suspended sediments) in surface waters and the dissolved concentrations for these constituents are typically less than the secondary MCLs and levels of these parameters are not identified as being of concern in watershed sanitary surveys (Larry Walker Associates, 2016b). Color is a parameter typically not evaluated on drinking water, thus, data to characterize surface water conditions in the Central Valley Region is not available for this assessment; however, color is generally not recognized as a parameter of concern. All surface water bodies within the Central Valley Region have variable turbidity and high turbidity in surface waters does not preclude their use as a drinking water supply.

The future cumulative condition assumes implementation of the Central Valley Salt and Nitrate Control Program, as well as continued implementation of other regulatory programs, including the NPDES program and ILRP, to control discharges relative to applicable water quality objectives and protection of beneficial uses. The secondary MCL revisions, to be implemented as part of the Salt and Nitrate Control Program, would

clarify how secondary MCL-related water quality objectives for aluminum, copper, iron, manganese, silver, zinc, color and turbidity would be implemented in WDRs for surface water discharges. As discussed for the secondary MCL revisions in Section IX, for copper, silver, and zinc there are more stringent aquatic life criteria that apply to surface waters, therefore, the limitations in WDRs for these metals would be unaffected by the secondary MCL revisions. Also, as discussed in Section IX, turbidity and color water quality objectives would be unchanged by the secondary MCL revisions, thus, implementation of the secondary MCL revisions is not expected to result in substantial cumulative increases in turbidity or color relative to existing conditions. Aluminum, iron, and manganese are associated with particulates, and because objectives related to the control of particulates (e.g., turbidity and suspended sediment objectives) would be unchanged, the SMCL guidance is not expected to result in substantial cumulative increases in these metals concentrations in surface waters as they relate to agricultural and storm water discharges (see Section IX). Similarly, increases in aluminum, iron, and manganese concentrations in surface water as related to municipal wastewater discharges are not expected to result in substantial cumulative increases in these metals, because the discharge quality is a function of the treatment processes in place, which will continue to be utilized into the future unaffected by this process. Therefore, future aluminum, copper, iron, manganese, silver, zinc, color, and turbidity conditions within Central Valley surface waters are expected to remain at similar levels to those that occur under existing conditions.

Construction of projects and facilities in the future to achieve the control program goals could contribute suspended sediments to surface waters near the construction sites, while construction is occurring, which could load additional aluminum, iron, manganese, other metals, color, and turbidity to receiving waters. However, construction BMPs would be implemented to minimize the input of suspended sediments to surface waters from construction projects associated with the Salt and Nitrate Control Program, and any such effects would be temporary in nature and would cease upon construction ceasing and the site soils being permanently stabilized. Because construction BMPs would be implemented with any construction project associated with the Salt and Nitrate Control Program and because any sediment inputs to surface waters would be temporary in nature, such effects would not contribute considerably to the future cumulative condition for the secondary MCL parameters of aluminum, copper, iron, manganese, silver, zinc, color, and turbidity.

Consequently, implementation of the Proposed Project would not have a considerable contribution to any adverse cumulative conditions with respect to aluminum, copper, iron, manganese, silver, zinc, color, or turbidity conditions.

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 (see Section 2, Environmental Setting). 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 is considered to be a **potentially significant cumulative impact**. 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 is considered to be a **potentially significant cumulative impact**. 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 (i.e., 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 policies, 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.

References

Full text citation for the references used in Appendix K can be found in Section 9, References in the Final Staff Report.