CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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

To add
Policies for Variances from Surface Water Quality Standards for Point Source Dischargers, Variance Program for Salinity, and Exception from Application of Water Quality Objectives for Salinity

Draft Staff Report

August 2013

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

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DISCLAIMER

This publication is a report by staff of the California Regional Water Quality Control Board, Central Valley Region. This report contains the evaluation of alternatives and technical support for the adoption of a Basin Plan Amendment to the Water Quality Control Plans for the Sacramento and San Joaquin River Basins and the Tulare Lake Basin (Resolution No. TBD). Mention of specific products does not represent endorsement of those products by the Central Valley Water Board.

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ACKNOWLEDGEMENTS:

The Central Valley Water Board staff appreciates the support from the Central Valley Clean Water Association.

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* to add Policies for Variances from Surface Water Quality Standards for Point Source Dischargers, Variance Program for Salinity, and Exception from Application of Water Quality Objectives for Salinity

EXECUTIVE SUMMARY

This Central Valley Regional Water Quality Control Board (Central Valley Water Board) Staff Report describes a proposal to amend 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) to add policies for Variances from Surface Water Quality Standards for Point Source Dischargers, a Variance Program for Salinity and an Exception from Application of Water Quality Objectives for Salinity.

The variance policy will allow the Central Valley Water Board the authority to grant short term exceptions from meeting water quality based effluent limitations to dischargers subject to National Pollutant Discharge Elimination System (NPDES) permits. The policy will only apply to non-priority pollutants.

The salinity variance program will allow the Central Valley Water Board the authority to grant variances from meeting water quality based effluent limitations for salinity constituents to publicly owned treatment works (POTWs). The salinity exception program will establish procedures for dischargers that are subject to waste discharge requirements (WDRs) to obtain a short term exception from meeting effluent or groundwater limits for salinity constituents. These salinity programs will apply to electrical conductivity, total dissolved solids, chloride, sulfate or sodium.

Project Description and Need for the Proposed Amendments

At this time, there are planning processes by the Central Valley Salinity Alternative for Long-Term Sustainability (CV-SALTS) to develop a comprehensive salt and nutrient management plan for the Central Valley and by the State Water Board to review the salinity objectives in the *Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary*. These planning processes may change the water quality objectives applicable to dischargers that are currently facing additional treatment requirements. So there is a need to set permit limits at a level that protects water quality but does not compel the irretrievable commitment of major resources in advance of the completion of these planning processes.

Staff evaluated a number of regulatory options (Appendix B), including a total maximum daily load (TMDL) for Old River, site-specific water quality objectives, and completion of the salt and nitrate management plan under CV-SALTS. The

regulatory option evaluated in this Staff Report must go into effect as soon as possible, be region-wide and address compliance issues with salinity constituents. A variance from surface water quality standards for salinity is an appropriate option for addressing this situation where a comprehensive regionwide salinity management plan is under development. Since a variance only applies for dischargers subject to NPDES permits, an exception is an appropriate option for dischargers subject to WDRs.

Alternatives Considered

This Staff Report presents options on variance policies, salinity-specific variance programs for dischargers subject to NPDES permits. The Staff Report also presents options for salinity exception programs for dischargers subject to WDRs and conditional waivers.

Consistency with Federal and State Laws and Regulations

The proposed Basin Plan Amendments are consistent with federal and State anti-degradation policies, federal and State laws, and State Water Board and Central Valley Water Board policies and plans.

Environmental Analysis

The environmental impacts of the proposed Basin Plan amendment are analyzed as part of completing the Environmental Checklist in Appendix A. The proposed Basin Plan Amendments do not require and it is not reasonably foreseeable that the proposed Basin Plan Amendments would require the installation of pollution control equipment; therefore, an environmental analysis of the reasonable foreseeable methods of compliance is not required. The proposed Basin Plan Amendments will not result in any significant environmental impacts, and no mitigation measures are proposed.

Proposed Amendment

The proposed amendments are to add policies for variances from surface water quality standards for point source dischargers, a variance program for salinity, and an exception from application of water quality objectives for salinity. The variance policy will allow the Central Valley Water Board the authority to grant short term exceptions from meeting water quality based effluent limitations to dischargers subject to NPDES permits. The policy will only apply to non-priority pollutants.

The salinity variance program will allow the Central Valley Water Board the authority to grant variances from meeting water quality based effluent limitations for salinity constituents to POTWs. The salinity exception program will establish

procedures for dischargers that are subject to WDRs to obtain a short term exception from meeting effluent or groundwater limits for salinity constituents.

The proposed variance policy and salinity variance program will include criteria and conditions consistent with elements that were part of other USEPA approved variances. The salinity variance program and salinity exception program will support the development and initial implementation of the comprehensive salt and nitrate management plan (SNMP) for the Central Valley by requiring applicants to participate in the CV-SALTS efforts. The proposed salinity variance program and salinity exception programs will be in effect during the development and initial implementation of the SNMP. After basin plan amendments implementing the SNMP are adopted and in effect, the requirements under the SNMP will take over.

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LIST OF ACRONYMS

CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CTR	California Toxics Rule
CV-SALTS	Central Valley Salinity Alternatives for Long-Term Sustainability
EC	Electrical Conductivity
NPDES	National Pollutant Discharge Elimination System
OAL	Office of Administrative Law
SNMP	Comprehensive Salt and Nitrate Management Plan for the Central Valley
SIP	*Policy for Implementation of Toxics Standards for Inland Waters, Enclosed Bays, and Estuaries of California*
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
USC	United States Code
USEPA	United States Environmental Protection Agency
WDRs	Waste Discharge Requirements

1 INTRODUCTION

The purpose of this Staff Report is to provide the rationale and supporting documentation for proposed amendments to the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins* and the *Water Quality Control Plan for the Tulare Lake Basin* (Basin Plans). Amendments to the Basin Plans are proposed to provide the Central Valley Regional Water Quality Control Board (Central Valley Water Board) the authority to issue variances from surface water quality standards consistent with federal regulations (title 40 Code of Federal Regulations (CFR) § 131.13.) for point source dischargers, salinity specific variances for publicly owned treatment works (POTWs), and to provide the Central Valley Water Board with similar authority for granting exceptions to compliance with salinity water quality standards for those discharges that are not subject to the federal regulatory requirements. The *Policy for Implementation of Toxics Standards for Inland Waters, Enclosed Bays, and Estuaries of California* (SIP) provides a procedure to apply for case-by-case exceptions for toxic pollutants listed pursuant to Clean Water Act section 307(a)(1). These toxic pollutants are also called priority pollutants. Since procedures are already in place for the priority pollutants, the proposed Basin Plan Amendments for Variances from Surface Water Quality Standards for Point Source Dischargers will apply only to non-priority pollutants. The Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) provides procedures for granting exceptions from temperature standards; therefore, the proposed Basin Plan Amendments will not apply to temperature. A salinity variance program is proposed to address surface water quality standards for salinity as represented by the constituents: electrical conductivity (EC), total dissolved solids (TDS), chloride, sulfate and sodium for dischargers subject to National Pollutant Discharge Elimination System (NPDES) permits.

The terms “variance” and “compliance schedule” is used in this Staff Report consistent with the use in federal regulations. (40 CFR § 131.13. and 40 CFR § 122.47., respectively) The term “time schedule” is used in this Staff Report consistent with the use in state law. (Wat. Code, § 13263(c).) The proposed amendments will establish the term “exception” to represent the equivalent of a variance for dischargers that are not subject to federal regulation and, therefore, not subject to federal review and approval.

1.1 Regulatory Authority and Mandates for Basin Plan Amendments

The State Water Resources Control Board (State Water Board) and the nine Regional Water Quality Control Boards (regional water boards) are the state agencies with primary responsibility for coordination and control of water quality.

(Wat. Code, § 13000.) Each regional water board is required to adopt a water quality control plan, or basin plan, which provides the basis for regulatory actions to protect water quality. (Wat. Code, § 13240, et seq.) Basin plans designate beneficial uses of water, establish water quality objectives to protect the uses, and include a program of implementation to achieve the objectives. (Wat. Code, § 13050, subd. (j).) Basin plans, once adopted, must be periodically reviewed and may be revised. (Wat. Code, § 13240.)

Under the Clean Water Act (33 United States Code (USC) § 1251 et seq.), the states are required to adopt water quality standards for surface waters. (33 USC § 1313(c).) Water quality standards consist of: 1) designated uses; 2) water quality criteria necessary to protect designated uses; and 3) an antidegradation policy. (33 USC § 1313, subds. (c)(2)(A) and (d)(4)(B); 40 CFR § 131.6.) In California, water quality standards are found in the basin plans, statewide water quality control plans and policies adopted by the State Water Board, and the federal California Toxics Rule. (CTR) (40 CFR § 131.38.) Under the Clean Water Act, the states must review water quality standards at least every three years.

Regional water boards adopt and amend basin plans through a structured process involving peer review, public participation, and environmental review. Regional water boards must comply with the California Environmental Quality Act (CEQA) (Pub. Res. Code, § 21000 et seq.) when amending their basin plans. The Secretary for Natural Resources has certified the basin planning process as exempt from the CEQA requirement to prepare an environmental impact report or other appropriate environmental document. (Pub. Res. Code, § 21080.5.; Cal. Code Regs., tit. 14, § 15251, subd. (g).) Rather, State Water Board regulations require that basin plan amendments be accompanied by substitute environmental documentation that consists of, at a minimum, a written report and an Environmental Checklist and Determination with respect to Significant or Potentially Significant Environmental Impacts. (Cal. Code Regs., tit. 23, § 3775 et seq.)

Basin plan amendments are not effective until they are approved by the State Water Board and the regulatory provisions are approved by the State Office of Administrative Law (OAL). The United States Environmental Protection Agency (USEPA) also must review and approve amendments that add or modify water quality standards for waters of the United States. In this instance, the Variances from Surface Water Quality Standards for Point Source Dischargers and the Variance Program for Salinity policies are considered part of a state's water quality standards subject to USEPA review and approval. (40 CFR § 131.13.) The *Exception from Application of Water Quality Objectives for Salinity* policy is not subject to USEPA review and approval.

1.2 Water Quality Control Plans

The Central Valley Water Board first adopted 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) in 1975. The Basin Plans have been amended over the years as determined appropriate. The current Basin Plans (Fourth Edition, revised October 2011 for the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins; and Second Edition, revised January 2004 for the Water Quality Control Plan for the Tulare Lake Basin) incorporates all new amendments approved since 1975.

In accordance with Water Code section 13170, water quality control plans adopted by the State Water Board supersede Regional Water Board basin plans for the same geographic area. The State Water Board adopted the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan) which supersedes the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins to the extent that the two plans contain provisions that conflict with each other. The Bay-Delta Plan includes water quality objectives for chlorides, dissolved oxygen and EC that supersede the water quality objectives in the Basin Plans to the extent of any conflict. The Central Valley Water Board is responsible for the regulation of waste discharges to achieve these objectives.

Staff proposes to amend the two Central Valley Basin Plans but not the Bay-Delta Plan to include implementation provisions for Variances From Surface Water Quality Standards for Point Source Dischargers, Variance Program for Salinity, and Exception from Application of Water Quality Objectives for Salinity. The implementation programs in the Basin Plans will be used to implement water quality standards contained in the Bay-Delta Plan.

1.2.1 Project Area Description

The Central Valley Region stretches from the Oregon border to the northern tip of Los Angeles County and includes all or part of 38 of the State's 58 counties. Three major watersheds have been delineated within this region, namely the Sacramento River Basin, the San Joaquin River Basin and the Tulare Lake Basin. The three basins cover about 40% of the total area of the State and approximately 75% of the irrigated acreage in California. Surface water supplies tributary to or imported for use within the Central Valley, particularly the San Joaquin River and Tulare Lake basins, are inadequate to support the present level of agriculture and other development; therefore, groundwater resources within the valley are being used to provide additional water to supply demands.

The Sacramento and San Joaquin River Basins are bounded by the crests of the Sierra Nevada on the east and the Coast Range and Klamath mountains on the west. They extend over some 400 miles. The Sacramento and San Joaquin River

Basins cover about one fourth of the total area of the State and contain over 43 percent of the State's irrigable land. Surface water from these two basins meets and forms the Sacramento-San Joaquin Delta (Delta), which ultimately flows to San Francisco Bay. Major groundwater resources underlie both basins.

The Sacramento River Basin covers 27,210 square miles. The principal streams in the basin are the Sacramento River and its larger tributaries: the Pit, Feather, Yuba, Bear and American Rivers to the east; and Cottonwood, Stony, Cache and Putah Creeks to the west. Major reservoirs include Shasta, Oroville and Folsom.

The San Joaquin River Basin covers 15,880 square miles. The principal streams in the basin are the San Joaquin River and its larger tributaries: the Cosumnes, Mokelumne, Calaveras, Stanislaus, Tuolumne, Merced, Chowchilla, and Fresno Rivers. Major reservoirs include Pardee, Comanche, New Hogan, Millerton, McClure, Don Pedro, and New Melones.

The Tulare Lake Basin comprises the drainage area of the San Joaquin Valley south of the San Joaquin River and encompasses approximately 17,650 square miles. The valley floor makes up slightly less than one-half of the total basin land area. The Kings, Kaweah, Tule, and Kern Rivers, which drain the west face of the Sierra Nevada Mountains, provide the bulk of the surface water supply native to the basin. Major reservoirs are Pine Flat, Kaweah, Success and Isabella. Imported surface water enters the Basin through the San Luis Canal/California Aqueduct System, Friant-Kern Canal, and the Delta-Mendota Canal.

The boundary between the San Joaquin River Basin and the Tulare Lake Basin is defined to follow the southern watershed boundaries of the Little Panoche Creek, Moreno Gulch, and Capita Canyon to the boundary of the Westlands Water District. From here, the boundary follows the northern edge of the Westlands Water District until its intersection with the Firebaugh Canal Company's Main Lift Canal. The basin boundary then follows the Main Lift Canal to the Mendota Pool and continues eastward along the channel of the San Joaquin River to Millerton Lake in the Sierra Nevada foothills, and then follows along the southern boundary of the San Joaquin River drainage basin.

The Delta is a maze of river channels and diked islands covering roughly 1,150 square miles, including 78 square miles of water area. Two major water projects located in the South Delta, the Federal Central Valley Project and the State Water Project, pump water from the Delta to Southern California, the San Joaquin Valley, Tulare Lake Basin, and portions of the San Francisco Bay Area, as well as within the Delta boundaries. The legal boundary of the Delta is described in Water Code section 12220.

1.3 Need for Amendments to the Basin Plan

Regional water boards are required to regulate activities to attain the highest water quality which is reasonable, considering all demands that may be made on the water. (Wat. Code, § 13000.) Each regional water board may issue policy statements related to any water quality matter within its jurisdiction. (Wat. Code, § 13224) Each regional water board is required to establish water quality objectives in basin plans that will ensure the reasonable protection of beneficial uses and the prevention of nuisance, however, it is recognized that it may be possible for the quality of water to be changed to some degree without unreasonably affecting beneficial uses. (Wat. Code, § 13241.) Basin plans must include a program of implementation to achieve the water quality objectives. (Wat. Code, § 13242.)

Regional water boards are responsible for prescribing requirements for the discharge of waste within its jurisdiction. Waste discharge requirements (WDRs) for point source discharges to surface waters also serve as federal permits under the national pollutant discharge elimination system (NPDES) program. (Wat. Code, § 13370 et seq.) The requirements implement any relevant water quality control plans that have been adopted and may contain a time schedule. (Wat. Code, § 13263.) Compliance schedules may be included in NPDES permits to allow dischargers time to implement actions to comply with more stringent permit limitations implementing new, revised, or newly interpreted water quality objectives or criteria in water quality standards (State Water Board Resolution 2008-0025, *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits*) (Compliance Schedule Policy). The Compliance Schedule Policy limits the duration of compliance schedules to ten years. There are cases where dischargers are making progress but require more than ten years.[1] In addition, because re-evaluation of water quality standards that underlie effluent limits is not an action leading to compliance with the limits, compliance schedules are not an appropriate regulatory mechanism. Further discussion of basin planning actions underway that could lead to revision of the water quality standards is in Section 1.3.2, below.

Discharges from sources that are not considered point sources under federal law, and discharges to waters of the state that are not also considered waters of the United States are subject to requirements pursuant to the state's Porter-Cologne Water Quality Control Act (Porter-Cologne). In such cases, regional

[1] An example of actions that took longer than ten years are the actions undertaken by the City of Tracy to use surface water as the City's main potable water source rather than groundwater. The Tracy City Council approved working with the San Joaquin Irrigation District to use Stanislaus River water in 1995. However, it wasn't until 2005 that the construction was completed and water deliveries could begin. And it took until 2010 to reduce the groundwater use to 3% of the potable water supply. These actions by the City of Tracy reduced salinity levels in the wastewater effluent about 33% between 2005 and 2010. (LWA. 2012. Section IV.a.i., page 12 and Figure 1, page 7.)

water boards are responsible for prescribing requirements through the issuance of WDRs, or waivers from WDRs. (Wat. Code, §§ 13263, 13269.) Under the state's WDR requirements, regional water boards may provide for time schedules. (Wat. Code § 13263(c).) However, time schedules alone may not be sufficient with respect to issues or uncertainties with the underlying water quality standards for salinity, and dischargers are not in compliance with effluent limitations and/or receiving water limitations that are based on these salinity water quality standards (see Section 1.3.2, below).

1.3.1 General Variance and Exception Authority

USEPA guidance indicates that a water quality standards variance can be used to provide a mechanism by which NPDES permits can be written where discharger compliance with the underlying water quality standards is demonstrated to be infeasible at the present time within the meaning of 40 Code of Federal Regulations section 131.10(g).

Regional water boards in California have not adopted general variance policies but the State Water Board has adopted policies allowing consideration of exceptions from provisions of specific State plans. These exception policies are in the *Ocean Plan* and the *Policy for Implementation of Toxics Standards for Inland Waters, Enclosed Bays, and Estuaries of California (SIP).* The exception policies allow the State Water Board, in compliance with CEQA, subsequent to a public hearing, and with the concurrence of the USEPA, to grant exceptions where the State Water Board determines that granting the exception will not compromise protection of waters for beneficial uses, and that the public interest will be served. The *Ocean Plan* is not applicable to the Central Valley. The SIP provides an exception for priority pollutants but does not address non-priority pollutants.

An additional exception policy is found in the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan)*. The Thermal Plan allows the regional water boards, with the concurrence of the State Board, in accordance with Clean Water Act section 316(a), to grant an exception from the specific temperature objectives contained in the plan.

It would be useful for the Central Valley Water Board to have the authority to offer variances for non-priority pollutants in cases where a compliance schedule is not appropriate or is not allowed.

Porter-Cologne does not provide for a specific exception policy, however, regional water boards are to formulate and adopt water quality control plans that conform to the policies set forth in the Act, and such plans must include programs of implementation. (Wat. Code, § 13240 et seq.)

1.3.2 A Salinity Management Program

The Central Valley Water Board and State Water Board, working with a stakeholder coalition, are developing a comprehensive salinity and nutrient management plan for the Central Valley (SNMP). The Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is the stakeholder coalition working on a strategic initiative to address problems with salinity and nitrates in the surface waters and ground waters of the Central Valley. The long-term plan developed under CV-SALTS will identify future management measures aimed at the regulation of major sources of salt, and could include revision of certain beneficial use designations and/or current salinity standards. Under the umbrella of CV-SALTS, implementation of the SNMP will provide appropriate and reasonable protection of beneficial uses. In addition, the State Water Board is currently reviewing the southern Delta salinity objectives included in the Bay-Delta Plan and will consider various options, including revision of those salinity objectives.

In the meantime, a serious issue exists regarding the adoption of final water quality based effluent limits for salts in a number of NPDES permits, and effluent limitations and receiving water limits for salts in WDRs and Conditional Waivers in the Central Valley.[2] These effluent limits, which are being derived without the benefit of knowing the ultimate SNMP or Bay-Delta Plan standards determinations, may end up being inconsistent with those future outcomes, thereby placing numerous communities in a difficult compliance position. In many

[2] Three NPDES POTWs (City of Tracy Wastewater Treatment Plant, City of Stockton Regional Wastewater Control Facility and City of Manteca Wastewater Quality Control Facility) are used as case studies to demonstrate the difficulties faced by POTWs with stringent salinity limits, the types of measures that POTWs can take to reduce salinity concentrations in the effluent and the methodology for evaluating the social and economic impact of additional treatment requirements. Larry Walker Associates (LWA. 2012) conducted an analysis of information from the three POTWs to show how each POTW qualifies for a variance within the context of 40 CFR § 131.12.

The electrical conductivity (EC) of the effluent from each of the cities cannot consistently meet the water quality based effluent limitations imposed in their NPDES permits. Each City has implemented source control programs that included industrial pretreatment, residential source control, facility upgrades and source water replacement. While water quality improved, the improvements were not sufficient to consistently comply with the effluent limitations.

A WDR Discharger (Fresno-Clovis Metropolitan Regional Wastewater Reclamation Facility (RWRF)) was used to demonstrate the procedure for evaluating the effect of allowing an exception from meeting effluent limits for salinity for discharges to land. As required by Order R5-01-0254, the monthly average EC effluent limitations of the discharge from the RWRF shall not exceed the flow-weighed average EC of the source water plus 500 µmhos/cm, or a maximum of 900 µmhos/cm, whichever is less. The EC of the discharge is consistently higher than the flow-weighed average EC of the source water 500 µmhos/cm and it has occasionally exceeded 900 µmhos/cm. The City of Fresno has implemented industrial pretreatment, residential source control, facility upgrades and has increased surface water as its source water. However, the effluent quality indicates increasing concentrations of salt.

instances, the effluent limits are unattainable through any means short of reverse osmosis (membrane) treatment.[3]

The CV-SALTS efforts to develop the SNMP are a holistic process that is expected to include regulatory approaches that result in requirements which are commensurate with the water quality benefits that can be achieved through reasonable management actions by Central Valley communities and others. Ultimately, CV-SALTS will develop management strategies for important sources to protect and maintain water quality in the Central Valley. (CV-SALTS. 2012.)

The need exists to set current permit limits at a level that protects water quality but that does not compel the irretrievable commitment of major resources in advance of completion of the SNMP. A variance from surface water quality standards for salinity is an appropriate option for addressing this situation where a comprehensive regionwide salinity management plan is under development. Since a variance only applies for dischargers subject to NPDES permits, an exception is an appropriate option for dischargers subject to WDRs and conditional waivers.

[3] Several cities in the Central Valley have conducted an analysis of advanced treatment of wastewater to remove salt. Three technologies are generally acknowledged as proven technologies for removing salt from wastewater: reverse osmosis (RO), electrodialysis reversal (EDR) and nanofiltration (NF). In all cases, the analysis was conducted with the assumption that only a portion of the wastewater effluent needs to be treated and then reblended with the remaining effluent to meet effluent limits. Generally, NF is found to have the highest capital cost due to the need to treat more effluent. RO and EDR generally have similar life cycle costs but consultants generally recommend RO as the least costly and most proven technology. (CH2M Hill 2011. Chapters 6 and 7.; Stantec 2011. Chapter 3; Carollo 2009. pp. 8-15.)

2 BENEFICIAL USES

2.1 Regulations that Apply to Beneficial Use Designation

2.1.1 State Regulations and Guidance

Water Code section 13050 defines "'beneficial uses' of the waters of the state that may be protected against quality degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment, navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" and goes on to state that basin plans consist of designation or establishment of beneficial uses to be protected for the waters within the specified area.

State Water Board Resolution 88-63, commonly known as the Sources of Drinking Water Policy, establishes state policy that all waters are considered suitable or potentially suitable to support the municipal and domestic supply beneficial use (MUN), with certain exceptions.

The Central Valley Water Board implements the Sources of Drinking Water Policy by assigning MUN to all water bodies not listed in Table II-1 of the Sacramento and San Joaquin Rivers Basin Plan and to all ground water in the region. Exceptions to the MUN designation are allowed for:

1. Surface and ground waters where:
    a. The TDS exceed 3,000 mg/L (5,000 uS/cm, EC) and it is not reasonably expected by Regional Boards to supply a public water system, or
    b. There is contamination, either by natural processes or by human activity (unrelated to the specific pollution incident), that cannot reasonably be treated for domestic use using either Best Management Practices or best economically achievable treatment practices, or
    c. The water source does not provide sufficient water to supply a single well capable of producing an average, sustained yield of 200 gallons per day.

2. Surface Waters Where:
    a. The water is in systems designed or modified to collect or treat municipal or industrial wastewaters, process waters, mining wastewaters, or storm water runoff, provided that the discharge from such systems is monitored to assure compliance with all relevant water quality objectives as required by the Regional Boards; or,
    b. The water is in systems designed or modified for the primary purpose of conveying or holding agricultural drainage

waters, provided that the discharge from such systems is monitored to assure compliance with all relevant water quality objectives as required by the Regional Boards.

3. Ground water where:
The aquifer is regulated as a geothermal energy producing source or has been exempted administratively pursuant to 40 Code of Federal Regulations, section 146.4 for the purpose of underground injection of fluids associated with the production of hydrocarbon or geothermal energy, provided that these fluids do not constitute a hazardous waste under 40 Code of Federal Regulations, section 261.3.

The Central Valley Water Board considers criteria similar to the above when making exceptions to the beneficial use designations of agricultural supply (AGR) and industrial supply (IND or PRO).

2.1.2 Federal Regulations and Guidance

Federal regulations require the protection of designated uses of surface water. Federal regulations establish special protections for Clean Water Act section 101(a)(2) uses. Clean Water Act section 101(a)(2) states that it is a national goal that wherever attainable, water quality should be sufficient "for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water." These uses are also referred to as "fishable/swimmable" uses. In order to de-designate, subcategorize, or not designate these uses, the state must support its demonstration of infeasibility with a use attainability analysis. (40 CFR § 131.10(j).) A use attainability analysis, or UAA, is a structured scientific assessment of the factors affecting attainment of the use, which may include physical, chemical, biological, and economic factors. (40 CFR § 131.3(g).)

A designated use, which is not an existing use, may be removed after demonstrating that attaining the use is not feasible due to one or more of the following factors listed in 40 Code of Federal Regulations section 131.10(g):

(1) Naturally occurring pollutant concentrations prevent the attainment of the use; or
(2) Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or
(3) Human-caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
(4) Dams, diversions, or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its

original condition or to operate such modification in a way that would result in the attainment of the use; or

(5) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like unrelated to water quality preclude attainment of aquatic life protection uses; or

(6) Controls more stringent than those required by Sections 301(b) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact.

"Existing" uses are defined as uses that were attained on or after 28 November 1975. (40 CFR. §131.3(e).) A use is attained if the use has actually occurred or the water quality necessary to support the use has been achieved, even if the use itself is not currently established, unless physical factors prevent attainment of the use. (USEPA. 1994.) Uses are deemed attainable if they can be achieved by imposing effluent limits required under Clean Water Act sections 301(b) and 306 and by implementing cost-effective and reasonable best management practices for nonpoint source control. (40 CFR. § 131.10(d).)

2.2 Statement of Applicable Beneficial Uses

The Basin Plans designate the following beneficial uses in the Central Valley: Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Service Supply (IND), Industrial Process Supply (PRO), Ground Water Recharge (GWR), Freshwater Replenishment (FRSH), Navigation (NAV), Hydropower Generation (POW), Water Contact Recreation (REC-1), Non-contact Water Recreation (REC-2), Commercial and Sport Fishing (COMM), Aquaculture (AQUA), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Estuarine Habitat (EST), Wildlife Habitat (WILD), Preservation of Biological Habitats of Special Significance (BIOL), Rare, Threatened, or Endangered Species (RARE), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), and Shellfish Harvesting (SHELL).

The proposed Basin Plan Amendments will not modify the designated beneficial uses. The proposed Basin Plan Amendments establish a variance policy, a salinity variance program for dischargers subject to NPDES permits and a salinity exception program for dischargers subject to WDRs and conditional waivers. The proposed amendments will include procedures to ensure continued reasonable protection of the applicable beneficial uses.

The following beneficial uses are sensitive to concentrations of salt and are protected by either numeric and/or narrative water quality objectives:

- Agricultural supply (AGR)
- Municipal and domestic supply (MUN)

- Industrial service supply (IND)
- Industrial process supply (PRO)
- Ground water recharge (GWR)
- Fish and wildlife uses (EST, COLD, WARM, MIGR, SPWN, WILD, RARE)

3 WATER QUALITY OBJECTIVES

3.1 Regulations that Apply to Establishing Water Quality Objectives

3.1.1 State Regulations and Guidance

When the Legislature adopted Porter-Cologne, it declared that "activities and factors which may affect the quality of the waters of the state shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible." (Wat. Code, § 13242.) Basin Plans, as adopted by the regional water boards, are required to conform to this policy. (Wat. Code, § 13240.)

Water Code section 13050 defines water quality objectives as "…the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area."

When adopting water quality objectives, the Regional Water Board is required to consider:

(a) Past, present, and probable future beneficial uses of water;
(b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto;
(c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;
(d) Economic considerations;
(e) The need for developing housing within the region; and
(f) The need to develop and use recycled water. (Wat. Code, § 13241)

3.1.2 Federal Regulations and Guidance

Federal regulations require States to adopt narrative or numeric water quality criteria (synonymous with water quality objectives in California) to protect designated beneficial uses. (40 CFR § 131.11(a)(1).) States are required to adopt numeric criteria for constituents considered priority toxic pollutants. (33 USC § 1313(c)(2)(B).) Federal regulations permit States to establish water quality criteria based on criteria that USEPA publishes under Clean Water Act section 304(a) modified to reflect site-specific conditions. (40 CFR § 131.11(b)(1)(ii).)

3.2 Statement of Applicable Water Quality Criteria and Objectives

Water quality objectives to protect beneficial uses of waters in the Central Valley are found in the Basin Plans and the Bay-Delta Plan. The USEPA promulgated

criteria for priority toxic pollutants for surface waters of California in the CTR and NTR. (40 CFR § 131.38.) Currently, there are no State Water Board policies that include statewide water quality objectives that would apply in the Central Valley but several policies are under development.

The Basin Plans include a general narrative water quality objective that chemical constituents, including salinity constituents, shall not be in concentrations that adversely affect beneficial uses. The Basin Plans go on to incorporate the maximum contaminant levels (MCLs) from Title 22 of the California Code of Regulations as water quality objectives for the protection of MUN. There are secondary MCLs for EC, TDS, chloride and sulfate. In addition, both Basin Plans and the Bay-Delta Plan establish site-specific numeric water quality objectives for salinity constituents for certain water bodies.

To protect AGR, the Central Valley Water Board interprets the narrative water quality objective to consider agricultural water quality goals. (Ayers and Westcot, 1985.) When considering such agricultural water quality goals, the Central Valley Water Board is required to consider site-specific conditions associated with the discharge. (*In the Matter of the Own Motion Review of City of Woodland*, Order WQO 2004-0010, p. 7.) The Central Valley Water Board has adopted effluent limits based on such water quality goals for EC, TDS, chloride and sodium.

The proposed Basin Plan Amendments to establish a variance policy, a variance program for salinity, and an exception from application of water quality objectives for salinity will not modify any of the water quality objectives but will affect the implementation of water quality objectives by allowing the Central Valley Water Board to adopt permits, WDRs and conditional waivers that do not require meeting effluent limitations or receiving water limits based on applicable water quality criteria during the term of the variance or exception. The policy will include procedures to ensure the continued protection of beneficial uses and for attaining the highest water quality that is reasonable during the term of the variance or exception. The proposed variance policy will apply to future water quality objectives for non-priority pollutants adopted by the State Water Board unless otherwise stated in a policy adopted by the State Water Board. The proposed salinity variance program and the salinity exception program will apply to EC, TDS, chloride, sulfate and sodium.

4 PROGRAM OF IMPLEMENTATION

4.1 Regulations that Apply to Establishing Implementation Programs

4.1.1 State Regulations and Guidance

Per the Water Code section 13050, subdivision (j)(3) and Water Code section 13242, a basin plan must include an implementation program to achieve water quality objectives. Water Code section 13242 prescribes the contents of an implementation plan, which include the following:

- description of the actions necessary to achieve the water quality objectives;
- time schedule; and
- a monitoring and surveillance program.

Discharges from sources that are not considered point sources under federal law, and discharges to waters of the state that are not also considered waters of the United States are subject to requirements pursuant to the state's Porter-Cologne. In such cases, regional water boards are responsible for prescribing requirements through the issuance of WDRs, or waivers from WDRs. (Wat. Code §§ 13263, 13269.) Under the state's WDR requirements, regional water boards may provide for time schedules. (Wat. Code, § 13263(c).)

WDRs for point source discharges to surface waters also serve as federal permits under the national pollutant discharge elimination system (NPDES) program. (Wat. Code, § 13370 et seq.) The State Water Board adopted the SIP to provide state regulations on implementation provisions for priority pollutant criteria and water quality objectives in NPDES permits. The State Water Board also adopted a *Compliance Schedule Policy* which provides the conditions under which a Regional Water Board may include a compliance schedule in an NPDES permit.

4.1.2 Federal Regulations and Guidance

Section 402 of the Clean Water Act requires a permitting system which USEPA addressed by promulgating 40 Code of Federal Regulations part 122, which are the regulations pertaining to the NPDES program. The State's regulations pertaining to NPDES permits must be consistent with the federal regulations.

Title 40 Code of Federal Regulations section 122.44(d)(1)(ii) sets forth the regulations for determining whether a discharge has a reasonable potential to cause or contribute to a violation of water quality standards. It states, "When determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria

within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water." While the federal regulations do not contain explicit procedures to derive effluent limitations, USEPA has provided guidance (USEPA. 1991.) that includes explicit procedures.

Title 40 Code of Federal Regulations section 122.47 sets forth the regulations for schedules of compliance for NPDES programs.

4.2 Actions Necessary to Achieve the Water Quality Objectives

4.2.1 General Variance Authority

To implement basin plans, NPDES permits must include effluent limitations for discharge of pollutants that have a reasonable potential to cause or contribute to an excursion above water quality standards.

The proposed Basin Plan amendments allow the Central Valley Water Board to grant a variance from meeting water quality based effluent limitations where compliance has been demonstrated to be infeasible at the present time within the meaning of 40 Code of Federal Regulations, section 131.10(g) and the discharger has considered treatment and control strategies more advanced than that required by sections 301(b) and 306 of the Clean Water Act. However, during the term of the variance, dischargers will be expected to develop and implement pollution prevention plans to reduce the discharge of the pollutant(s). Section 4.5.1, below, presents the issue, alternatives and staff recommendations for a variance policy.

4.2.2 A Salinity Management Program

Recently issued discharge permits have included an evaluation of the salinity concentrations in effluent discharges to determine the need for effluent limitations. Regardless of whether the discharge has reasonable potential to cause or contribute to an excursion above water quality standards, consistent with the Central Valley Water Board's salinity priorities, the recent permits have required dischargers to develop and implement salinity reduction plans.

The proposed Basin Plan Amendments will include a salinity variance program for dischargers subject to NPDES permits and a salinity exception program for dischargers subject to WDRs that have implemented control measures and are now facing costly treatment to comply with effluent limits and groundwater limits for salinity constituents. It should be noted that federal regulations (40 CFR Part 131) do not allow economic considerations when promulgating water quality

criteria (i.e. establishing water quality objectives for waters of the United States). Economic considerations are also excluded from the procedures for derivation of water quality based effluent limitations. A variance from meeting water quality based effluent limits must be consistent with at least one of the factors listed in 40 Code of Federal Regulations section 131.10(g), which includes an economic factor. The salinity variance will allow the Central Valley Water Board to grant a temporary exception from meeting the water quality based effluent limits under certain conditions. The salinity exception will apply to effluent limits and receiving water limits for salinity constituents in WDRs and conditional waivers. Section 4.5.2, below, presents the issue, alternatives and staff recommendations for a salinity variance program. Section 4.5.3, below, presents the issue, alternatives and staff recommendations for a salinity exception program.

4.3 Time Schedule

WDRs for point source discharges to surface waters serve as NPDES permits. (Wat. Code, § 13370 et seq.) WDRs may contain a time schedule. (Wat. Code, § 13263) Compliance schedules may be included in NPDES permits if conditions specified in State and federal regulations (*Compliance Schedule Policy* and 40 CFR § 122.47) are met. The proposed Basin Plan amendments will allow the Central Valley Water Board to consider allowing a short-term variance for non-priority pollutants in cases when a compliance schedule is either not allowed or is not practical under the state and federal regulations (see Section 1.3 for more discussion). The proposed Basin Plan amendments will also include a salinity variance program for NPDES dischargers and provisions for the Central Valley Water Board to consider exceptions from effluent limits and groundwater limits for salinity constituents in WDRs and conditional waivers.

4.4 Monitoring and Surveillance Program

WDRs, including NPDES permits, include a Monitoring and Reporting Program to assure that the discharger is complying with the Order. If the Central Valley Water Board decides to allow a variance, the proposed Basin Plan amendments include provisions for additional monitoring and reporting requirements to evaluate receiving water quality conditions during the term of the variance from water quality standards.

4.5 Analysis of Issues and Alternatives

NPDES permits include effluent limits for salinity constituents if there is a demonstration that the discharge of these constituents has a reasonable potential of causing exceedance of water quality objectives in the receiving waters. A serious compliance issue exists for POTWs regarding the adoption of final water quality based effluent limitations for salts in a number of Central Valley NPDES permits, and effluent limitations prescribed by Basin Plans in WDRs in

the Central Valley. These effluent limits, which have been derived without the benefit of knowing the ultimate SNMP or Bay-Delta standards determinations and which may, in fact, be inconsistent with those future outcomes, are placing numerous communities in a difficult compliance position. Sources of salt to POTWs include industrial inputs, residential inputs and municipal water supply. POTWs can reduce salinity levels in effluent with source control measures but these measures may not assure compliance with effluent limitations set to achieve water quality objectives. In many instances, the effluent limits are unattainable through any means short of reverse osmosis[4]. Therefore, it would be useful for the Central Valley Water Board to have regulatory flexibility when there are effluent limitations for salinity that cannot be met without construction and operation of expensive treatment technology and there is an ongoing process to review and revise water quality objectives and management plans for salts in the Central Valley. The Central Valley Water Board has authority to include time schedules in WDRs. (Wat. Code § 13263, subd. (c).) However, NPDES discharges are subject to the *Compliance Schedule Policy* and including compliance schedules in NPDES permits is no longer an option for some dischargers.

In consideration of the issues related to reducing salinity in effluent and the planning processes currently in progress, the Central Valley Water Board has adopted NPDES permits without final water quality based effluent limits such as the one for the City of Tracy. (CVRWQCB. 2007.) However, upon petition to the State Water Board, the State Water Board remanded the permit to the Central Valley Water Board for final effluent limits and with the following instructions in Order WQ 2009-0003 (SWRCB. 2009): "On remand, the Central Valley Water Board should consider the salt reduction study and other reasonable ways in which the City could reduce the EC in its discharge to meet the applicable effluent limitation. If it appears that there are no feasible ways to reduce the level of EC to meet the water quality objective, the Central Valley Water Board could then consider various planning options: a total maximum daily load (TMDL) for Old River; site-specific water quality objectives amendment to the basin plan, or a request to the State Water Board for an amendment to the Bay-Delta Plan; or, if the timing allows, the results of the State and Central Valley Water Boards' joint study and planning process regarding management of salt in the watershed (CV-SALTS, Central Valley Salinity Alternatives for Long-Term Sustainability). Issues pertaining to salts and salt management can be very complex, and planning processes may provide the optimum vehicle for addressing salts. Different planning options require different amounts of time, but a long-term planning solution should not displace interim planning solutions that could afford the Central Valley Water Board additional flexibility in regulating salt discharges. We suggest that a series of planning options could help dischargers comply in the near term while protecting water quality, and also while undertaking longer-term

[4] See Footnote 3 for a summary of various evaluations of end-of-pipe treatment to remove salinity constituents from wastewater.

strategies." The State Water Board identified variances, site specific objectives, or a policy allowing offsets as planning options with shorter time-horizons. (SWRCB. 2009. pp. 9-10, 19.)

There is a need to provide a procedure to set current permit and WDR limits at a level that protects water quality but that does not compel the irretrievable commitment of major resources in advance of the completion of the SNMP. After considering various planning options (Appendix B), staff have determined that a variance is appropriate to allow permitting flexibility so that dischargers do not need to install reverse osmosis treatment to meet salinity effluent limits while the development of the SNMP is in progress. A salinity variance program can be adopted for multiple dischargers that have similar issues with salinity standards. Under a salinity variance program, USEPA will review and approve the program. With the program approved, dischargers may apply for a variance in which the Central Valley Water Board will make the final decision on whether or not a variance is granted. USEPA has approved multiple discharger variances for several of the Great Lakes states that were consistent with 40 Code of Federal Regulations part 132.

There are three issues presented, below. The first issue addresses the need for the Central Valley Water Board to have the authority to consider variances for NPDES discharges. The second issue assumes that the Central Valley Water Board will go ahead with a variance policy and addresses the salinity issues facing NPDES dischargers with a salinity variance program. The third issue assumes the Central Valley Water Board will adopt the variance policy and the salinity variance program and addresses the salinity issues facing WDR dischargers with a salinity exception program.

4.5.1 Issue 1: Variance Authority

Issue Description: Regional Water Boards may issue policy statements related to any water quality matter within its jurisdiction. (Wat. Code, § 13224) WDRs for discharges to surface waters serve as NPDES permits. (Wat. Code, § 13370 et seq.) WDRs may contain a time schedule. (Wat. Code, § 13263) Compliance schedules may be included in NPDES permits if conditions specified in State and federal regulations (*Compliance Schedule Policy* and 40 CFR § 122.47) are met. However, granting time schedules in NPDES permits for compliance with existing water quality objectives or criteria may not be possible and there may be limitations on schedules in enforcement orders without generating mandatory minimum penalties. In addition, compliance schedules alone are not the appropriate mechanism when there may be issues with the underlying water quality standards and dischargers are not in compliance with the effluent limitations that are based on these water quality standards (see Section 1.3.2 for a discussion illustrating this issue).

USEPA guidance indicates that a water quality standards variance can be used to provide a mechanism by which NPDES permits can be written where discharger compliance with the underlying water quality standards is demonstrated to be infeasible at the present time within the meaning of 40 Code of Federal Regulations section 131.10(g). For NPDES permittees, USEPA guidance notes that a variance provides a “bridge” if additional data or analysis is needed before the state can make a determination whether the designated use or standard is not attainable and should be modified. (USEPA. 2007.) A variance policy may also provide a mechanism that bridges the gap between time schedules allowed under state laws and compliance schedules allowed under federal laws. USEPA has approved variances that include the following elements (USEPA. 1994.):

- each individual variance is included as part of the water quality standard;
- the State demonstrates that meeting the standard is unattainable based on one or more of the grounds outlined in 40 Code of Federal Regulations section 131.10(g);
- the justification submitted by the State includes documentation that treatment more advanced than that required by sections 303(c)(2)(A) and (B) of the Clean Water Act has been carefully considered, and that alternative effluent control strategies have been evaluated;
- the more stringent State criterion is maintained and is binding upon all other dischargers on the stream or stream segment;
- the discharger who is given a variance for one particular constituent is required to meet the applicable criteria for other constituents;
- the variance is granted for a specific period of time and must be rejustified upon expiration but at least every 3 years (Note: the 3-year limit is derived from the triennial review requirements of section 303(c) of the Clean Water Act.);
- the discharger either must meet the standard upon the expiration of this time period or must make a new demonstration of "unattainability";
- reasonable progress is being made toward meeting the standards; and
- the variance was subjected to public notice, opportunity for comment, and public hearing. (33 USC § 1313(c)(l) and 40 CFR § 131.20.) The public notice should contain a clear description of the impact of the variance upon achieving water quality standards in the affected stream segment.

Regional water boards have not adopted general variance policies but the State Water Board has adopted policies allowing consideration of exceptions from

provisions of specific State plans. These exception policies are in the *Thermal Plan*, *Ocean Plan* and the SIP.

The following are alternatives that the Central Valley Water Board will consider in determining whether to adopt a general variance policy and what requirements to include in the policy.

4.5.1.1 Alternative 1. No Action. Under the no action alternative, the Central Valley Water Board would not go forward with Basin Plan Amendments allowing the Board general variance authority. Variances would not be allowed in the Central Valley unless the State Water Board chooses to adopt a policy that includes the Central Valley. For priority pollutants, interested parties may apply with the State Water Board for an exception in accordance with the exception provisions of the SIP.

4.5.1.2 Alternative 2. Adopt a Central Valley variance policy for all pollutants. Federal regulations allow variance policies to be part of a State's surface water quality standards. (40 CFR § 131.13.) There is federal guidance and precedent for obtaining USEPA approval of variances. Under this alternative, the Central Valley Water Board would consider adopting a general variance policy consistent with 40 Code of Federal Regulations section 131.13. The policy would allow Central Valley Water Board consideration of individual variances for any water quality based effluent limitation. Individual dischargers, when needing to implement a variance, would be able to apply for a variance but the variance would need to be approved by the Central Valley Water Board and the USEPA before it would go into effect. For variances for priority pollutants, State Water Board approval will be needed after Central Valley Water Board approval and prior to USEPA approval.

4.5.1.3 Alternative 3. Adopt a Central Valley variance policy for non-priority pollutants. As explained in Alternative 2, federal regulations allow variance policies to be part of a State's surface water quality standards. Currently, the SIP includes exception procedures for case-by-case exceptions from criteria and objectives for priority pollutants. Since there are already procedures for priority pollutants, the Central Valley Water Board only needs authority for the non-priority pollutants. In addition, because the Thermal Plan includes an exception for the temperature objectives, this alternative will not allow variances for temperature objectives. Individual dischargers seeking a variance for non-priority pollutants would be able to apply to the Central Valley Water Board for a variance but the variance would need to be approved by the Central Valley Water Board and the USEPA before it would go into effect. Individual dischargers would continue to seek a variance for priority pollutants by applying with the State Water Board under its exception procedures in the SIP.

4.5.1.4 Alternative 4. Adopt a Central Valley variance policy for non-priority pollutants with application and approval procedures. As explained in

Alternative 2, federal regulations allow variance policies to be part of a State's surface water quality standards but the regulations do not include any application or review provisions. Federal guidance describes elements of a variance policy that USEPA has approved elsewhere. The SIP includes application requirements and describes the Water Board and USEPA review process as part of the exception procedures. Application and approval procedures provide clarity and certainty for the discharger and the state and would be consistent with the SIP. The application and approval procedures could include the elements that were part of other USEPA approved variances.

4.5.1.5 Recommendation. Adopt Alternative 4. Alternative 4 will include application requirements and permit conditions that will be in effect during the term of the variance. It provides the greatest amount of certainty to dischargers and other stakeholders on what the Board will consider when determining whether or not to grant a variance. Staff recommends that the policy specify that permittees must apply for a variance and the Central Valley Water Board will act on the application if the applicant shows that the variance request is based on one of the 40 CFR 131.10(g) factors. The variance application can be concurrent with permit renewal. The application must include the constituents for which a variance is requested, information on receiving water(s), proposed interim performance based effluent limitations that represents the highest water quality that can be achieved consistently during the variance term, methods to reduce/eliminate concentrations of the variance constituent(s), documentation of one or more of the 40 Code of Federal Regulations 131.10(g) factors that applies to the discharge, and documentation of actions that the applicant has taken or will do to reduce the concentrations of the variance constituent(s). If the Regional Board determines to grant the variance, conditions will be included in the permit to require an interim effluent limit, development and implementation of pollution prevention programs for the constituents for which the variance is granted, and any additional necessary monitoring. The term of the variance will be no longer than the term of the permit, with provisions for renewal. The variance policy will be reviewed during the triennial review.

4.5.2 Issue 2: Salinity Variance Program

The Central Valley Water Board has a great deal of information available regarding salinity constituents and is in a planning process to address salinity region-wide. The available information includes quality of waste discharges with respect to salinity constituents from POTWs, the type of controls that POTWs can implement to reduce salinity in effluent discharges, the implementation costs of these controls, the quality of the receiving waters, and the anticipated quality of the receiving waters with full treatment by POTWs. Appendix D is a compilation of the salinity requirements and salinity quality of the effluent for POTWs in the Central Valley as of December 2011. Three NPDES POTWs (City of Tracy Wastewater Treatment Plant, City of Stockton Regional Wastewater Control Facility and City of Manteca Wastewater Quality Control Facility) were

used as case studies to demonstrate the types of measures that POTWs can take to reduce salinity concentrations in the effluent and to demonstrate the methodology for evaluating the social and economic impact of additional treatment requirements. The use of these three POTWs provides a reasonable expectation of what other POTWs might be able to achieve because of the following: (1) POTWs are not designed to remove salinity constituents so every POTW must control what enters the wastewater treatment plant or install end-of-pipe treatment to remove salt; (2) sources of salt to POTWs are industrial dischargers, residential dischargers or municipal water supply; (3) the most appropriate end-of-pipe treatment technology for POTWs to remove salinity constituents is reverse osmosis; (4) POTWs finance operations with fees or taxes on its user base so while the impact to the user base may vary, the procedures to assess impact to the user base are the same; and (5) while each POTWs impact on the receiving water will vary, the POTWs used for case studies have tidal influences and; therefore, represent the most complicated examples of how to evaluate impacts to receiving waters.

As described in a Technical Memorandum from Larry Walker Associates (2012), the EC of the effluent from each of the case studies cannot consistently meet the water quality based effluent limitations imposed in their NPDES permits. Each City has implemented source control programs that included industrial pretreatment, residential source control, facility upgrades and source water replacement. While water quality improved, the improvements were not sufficient to consistently comply with the effluent limitations.

Staff has used data from the case studies to address the elements that USEPA deems necessary for a variance policy. Note that several of the elements are procedural elements or permit requirements that are not relevant to discharger information. These procedural and permit requirement elements are not discussed below but will be included in the recommended program.

A. CONSTITUENTS THAT FALL UNDER THE SALINITY VARIANCE PROGRAM

Evaluation of the NPDES permits for POTWs in the Central Valley (Appendix D) indicate that POTWs have difficulty meeting water quality based effluent limits for EC and TDS. Other salinity constituents that are similar to EC and TDS and have similar characteristics are chlorides, sulfate and sodium. In municipal wastewater, all five of these constituents are related in that their sources are similar, reduction strategies affect all of them and the evaluations on advanced treatment are based on these constituents. POTWs that apply for a salinity variance will need to demonstrate that they have been unable to meet one of these salinity constituents.

B. ALTERNATIVE EFFLUENT CONTROL STRATEGIES AND ADVANCED TREATMENT HAVE BEEN CONSIDERED

To reduce salinity concentrations in effluent, POTWs implement source control programs that include industrial pretreatment, residential source control, facility upgrades and source water replacement.

Industrial pretreatment

The types of industries that might discharge salt to municipal sewer systems and the ability of each industry to control the salt discharges are varied. POTWs have worked with individual industries to reduce salinity levels. Other than that, cities might impose a local limit to restrict the discharge of salt but imposing a local limit takes time and without a full analysis of the effect, there is no assurance that the industries can meet the local limits. (LWA. 2012., p 15, section IV.a.ii.; p19, section IV.c.ii.; p17, section IV.b.ii.)

Residential source control

State law (Wat. Code, § 13148) gives POTWs limited ability to control residential inputs if the source is water softeners. Municipalities may engage in public education and outreach to encourage residents to voluntarily implement measures to reduce salt inputs to the sewer system. (RBI. 2009. p. 14.; LWA. 2010. pp 14-16.) These programs have limited success.

Facility upgrades

Wastewater treatment facility upgrades are usually done to improve biological treatment or solids removal. These upgrades do not affect the salinity in wastewater effluent. Some POTWs can make adjustments to the treatment process to effect slight changes in EC levels. However, these improvements were minor and not really detectible in the normal variability of effluent quality. (LWA. 2012. pp. 17, 20.)

Municipal water supply

Improving the municipal water supply is possible if the existing water supply is poor quality groundwater and better quality surface water is available to replace all or part of the groundwater supply. Use of surface waters depends on availability and rights to the surface water may be limited in drought years so this may not provide a consistent solution. This conversion to surface water supplies is typically very expensive and takes a very long time. (LWA. 2012. pp. 12-14, section IV.a.i.) State law makes it difficult for local governmental agencies to raise revenue through taxes or fees so obtaining the financing for converting water supplies can be very challenging. (Proposition 218, as set forth in article XIII C and XIII D of the California Constitution.)

In addition, residents may be satisfied with the quality of the municipal water supply and may not want to pay for better quality water. The recommended maximum contaminant level for EC is 900 umhos/cm but EC levels ranging up to 1,600 umhos/cm are acceptable if it is neither reasonable nor feasible to

provide more suitable waters. (22 CCR § 64449(a) and (d).) In support of residents that find a higher EC level water supply acceptable, the state has a recommended management strategy to match water quality to use so that higher quality water can be reserved for uses that need the higher quality water. (DWR. 2009.) Maintaining the current water supply may be consistent with this recommended management strategy. However, retaining the existing water supply may lead to a compliance issue if the AGR use is designated in the receiving water. In these cases, effluent limits for EC may be as low as 700 umhos/cm in NPDES permits as has occurred in the Delta and elsewhere in the Central Valley.

End-of-pipe treatment

In many cases, as illustrated in the case studies, source control reduces salinity concentrations but cannot achieve the water quality based effluent limits. (LWA. 2012., pp. 12 – 20, Section IV.) Other than source control and source water replacement, the only method to consistently reduce salt is to provide end-of-pipe treatment. Several cities in the Central Valley have conducted an analysis of advanced treatment of wastewater to remove salt. Three technologies are generally acknowledged as proven technologies for removing salt from wastewater: reverse osmosis, electrodialysis reversal and nanofiltration. In all cases, the analysis is conducted with the assumption that only a portion of the wastewater effluent needs to be treated and then reblended with the remaining effluent to meet effluent limits. Generally, nanofiltration is found to have the highest capital cost due to the need to treat more effluent. Reverse osmosis and electrodialysis reversal generally have similar life cycle costs but consultants generally recommend reverse osmosis as the least costly and the most proven technology. (CH2M Hill. 2011., Chapters 6 and 7.; Stantec. 2011., Chapter 3; Carollo. 2009., pp. 8-15) Reverse osmosis is typically very expensive, energy intensive and results in a brine (10 to 20 percent of the waste stream) that must be properly disposed. The energy consumption of reverse osmosis and the brine waste stream are environmental impacts that must be considered when planning and designing reverse osmosis. (SWRCB. 2005., p 12.) As discussed above, state laws make it difficult for local governmental agencies to raise revenue to construct and operate this technology. Modeling of water quality that would result from the discharge indicates that the improvements in ambient water quality are imperceptible. (LWA. 2012., pp. 53-59, Section VI.d.; DWR. 2007.; LWA. 2012., pp. 23-37, 46-47, Section V.a, Section V.c.i.)

More discussion on the potential impacts and environmental benefits of reverse osmosis are included below (Attainability of water quality based effluent limits).

C. ATTAINABILITY OF WATER QUALITY BASED EFFLUENT LIMITS

Analysis of the case studies indicates that salinity in the Delta is a human caused condition that cannot be remedied by dischargers and it would result in substantial and widespread economic and social impact to require the dischargers to meet water quality based effluent limitations for salinity. These conclusions are consistent with factors 3 and 6 in 40 Code of Federal Regulations, section 131.10(g) and demonstrate that it is infeasible for POTWs to attain the water quality based effluent limits for salinity constituents at this time. The following discussions justify how these factors are met individually based on the situation in the case studies.

40 CFR section 131.10(g)(3)

The salinity objectives for the Delta have not been attained. The State Water Board recognized that the salinity objectives are largely to be met by a combination of (a) flow releases into the San Joaquin River to attain objectives at Vernalis, (b) installation of physical facilities (pumps and barriers) in the south Delta, and (c) operation of the State Water Project and Central Valley Project. In addition, State Water Board orders and reports over the years since adoption of the salinity objectives did not discuss dischargers subject to NPDES permits as sources of salinity to the southern Delta. (SWRCB. 2005., pp. 7-11.) Point source dischargers provide a small percentage of the total salt in the Delta and requiring the point source dischargers to meet the water quality based effluent limits for salinity will not cause the salinity objectives to be met.

To characterize the contribution from point source dischargers, a stakeholder group worked with the Department of Water Resources to conduct DSM2 modeling of the salinity impacts of the current and potential future discharges from the City of Tracy and Mountain House Community Services District wastewater treatment plants. The modeling effort produced monthly average volume fractions for the discharges at various locations in the Delta. These volume fractions could then be used to calculate the incremental increase in EC due to the discharges. The incremental increase between meeting the water quality based effluent limit compared to meeting a performance based effluent limit ranged from 5 to 20 umhos/cm EC in Delta water quality from the discharge from the City of Tracy Wastewater Treatment Plant which was an order of magnitude lower than other sources of salinity to the Delta. (DWR. 2007.) It should be noted that at the time the modeling was performed, the performance based effluent limit was calculated to be 1416 umhos/cm. The City of Tracy has since successfully reduced the salinity in the effluent discharge so the incremental increase in salinity would be lower than the modeling results. (LWA. 2012., p. 13, Figure 5.) A similar analysis was conducted for the case study cities. The salinity reductions in the Delta that would result from requiring these POTWs to meet their water quality based effluent limitations range from 1 to 18 µmhos/cm (0.31% to 2.68%) within the vicinity of discharge. Modeling indicated that the effect decreased with distance from the discharge point and there would be no detectable change to

EC at the compliance points identified in the Bay-Delta Plan (Old River at Middle River and San Joaquin River at Brandt Bridge). The State Water Board did a simple mass-balance analysis to evaluate the relative effect of NPDES point sources to the south Delta and concluded that the salt loads from point sources in this part of the southern Delta is a small percentage of the salt load entering from upstream. (SWRCB. 2012., pp. 4-11.)

The 40 Code of Federal Regulations, section 131.10(g)(3) factor is met because the water quality has been degraded by human caused conditions but imposing water quality based effluent limits on the wastewater treatment plant will not cause attainment of the water quality standards.

40 CFR section 131.10(g)(6)

To evaluate whether implementation of water quality based effluent limits for salinity would result in substantial and widespread economic and social impact within the context of 40 Code of Federal Regulations, section 131.10(g)(6), affordability of additional treatment to the case study communities was analyzed in accordance with USEPA guidance. (USEPA. 1995.) For some dischargers, water quality based effluent limits for salinity are unattainable except with end of pipe treatment. At this time, reverse osmosis appears to be the least costly and the most proven technology for removing salt from wastewater. The municipal preliminary screener (MPS) values have been calculated for the case studies based on implementation of reverse osmosis treatment. MPS values were between 1 and 2 which is interpreted as representing a mid-range economic impact to households in these communities. However, these communities also have relatively high unemployment rates ranging from 9.3% to 17.9% and are the largest communities in San Joaquin County which has an unemployment rate of 14.8%. The impact of requiring these communities to implement reverse osmosis treatment would result in a reduction in disposable income to the residents of these communities. Due to their proximity to each other and their relevance to San Joaquin County, the loss of disposable income by the residents in these communities will be felt throughout the region. In addition to costs, the State Water Board recognized that large scale reverse osmosis plant would result in production of highly saline brine for which an acceptable method of disposal would have to be developed. (SWRCB. 2005., p. 12.) Reverse osmosis also has energy consumption and greenhouse gas emissions that must be considered. (LWA. 2012., pp. 53-59, section IV.d.) The estimated increase in greenhouse gas emission to implement reverse osmosis, while very small, is inconsistent with state law to reduce greenhouse gas emissions (Appendix A, section VII.).

The 40 Code of Federal Regulations, section 131.10(g)(6) factor is met because the financial cost of implementing reverse osmosis will be substantial for the case study communities and the impacts will be widespread throughout the region. In addition, the societal cost is also

substantial and widespread in comparison to the lack of significant environmental benefits as shown above in the evaluation of the 40 Code of Federal Regulations, section 131.10(g)(3) factor.

D. REASONABLE PROGRESS IS BEING MADE TO ATTAIN THE WATER QUALITY STANDARDS

The Central Valley Water Board and State Water Board, working with a stakeholder coalition, are developing a comprehensive salinity and nutrient management plan for the Central Valley. The Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is the stakeholder coalition that is working on a strategic initiative to address problems with salinity and nitrates in the surface waters and ground waters of the Central Valley. The long-term plan developed under CV-SALTS will identify future management measures aimed at the regulation of major sources of salt, and could include revision of certain beneficial use designations and/or current salinity standards. Under the umbrella of CV-SALTS, implementation of the SNMP will provide appropriate and reasonable protection of beneficial uses. In addition, the State Water Board is currently reviewing the southern Delta salinity objectives included in the Bay-Delta Plan and will consider various options, including revision of those southern Delta salinity objectives.

To demonstrate reasonable progress towards attaining the water quality standards, dischargers under the salinity variance program must conduct watershed salinity studies and implement salinity reduction practices either individually or through participation in CV-SALTS as well as submit and implement a Salinity Reduction Workplan. Under the salinity variance program, implementation of Salinity Reduction Workplans is expected to result in overall improvements to water quality during the term of the variance. In addition, future improvements in water quality are expected through the participation in CV-SALTS to develop and implement the SNMP.

The following alternatives for a salinity variance program are based on the assumption that the general variance authority is adopted. If the general variance authority is not adopted, then a salinity variance program is not recommended.

4.5.2.1 Alternative 1. No Action. Under this no action alternative, the Central Valley Water Board would not go forward with a salinity variance program but the variance policy would have been adopted under the alternatives described in Section 4.5.1, above. Dischargers subject to NPDES permits that are interested in pursuing a variance for EC, TDS, chlorides, sulfate or sodium would need to independently apply for a variance as a standards action. Before the individual variance could be implemented in an NPDES permit, the variance would need to be approved by the state and the USEPA.

4.5.2.2 Alternative 2. Adopt a salinity variance program for dischargers subject to NPDES permits. Establish a salinity-specific program through which regulated NPDES dischargers would apply for a variance from effluent limits that are based on applicable EC, TDS, chloride, sulfate or sodium water quality objectives. This program would be modeled after a USEPA-approved approach that has been used in the Great Lakes to streamline the approval of individual variances. Under this alternative, the Central Valley Water Board would identify which of the factors listed in 40 Code of Federal Regulation section 131.10(g) make the water quality based effluent limitations for salinity not feasible and the treatment and control measures that are available to reduce salinity. In addition, the Central Valley Water Board will conduct an anti-degradation analysis. To assure that existing water quality is reasonably protected and that reasonable progress is made toward meeting the water quality standards, dischargers will be required to meet an interim performance-based effluent limitation, implement a Salinity Reduction Study Workplan, and conduct watershed salinity studies and implement salinity reduction practices either individually or through participation in the CV-SALTS efforts. The proposed policy will allow dischargers to apply for and be granted salinity-specific variances while basin plan amendments developed and initiated under CV-SALTS are in progress.

4.5.2.3 Alternative 3. Water conservation, drought and recycling provisions. Water conservation, drought and recycling can cause increased concentrations of pollutants in wastewater effluent. (Appendix C) The State supports water conservation and has a conservation plan to reduce per capita urban water use. Most conservation measures reduce the amount of potable water that passes through a household but does not change the waste generated in the household. Therefore, increased conservation may result in increased concentrations of some pollutants; although, the loads would remain the same.

During periods of drought, residents are called upon to increase water conservation. As discussed above, water conservation reduces the amount of water that passes through a household but does not reduce the amount of pollutants generated in the household. Additionally, municipalities that have access to higher quality surface waters during wet years may not be able to divert water during dry years and may need to resort to poorer quality groundwater to meet municipal needs.

Water recycling can increase salinity if the recycled water is used in a manner that it re-enters the sewerage system. While increased salinity of the effluent does not always result from conservation, drought and recycling, there may be instances where a discharger can demonstrate that salinity increases are due to these activities. In that case, the Central Valley Water Board should have the authority to consider these increases and make reasonable accommodations in the permit conditions.

4.5.2.4 Recommendation. Adopt alternative 2.

It will be efficient and effective for the Central Valley Water Board to establish a salinity variance program, as described in alternative 2, to help facilitate the development of the salt and nutrient management plan under CV-SALTS. The Central Valley Water Board has analyzed three POTWs (Cities of Tracy, Stockton and Manteca) as case studies to generate the type of information that USEPA expects to receive for individual variance applications and to develop a salinity variance program. The salinity variance program will apply to EC, TDS, chlorides, sulfate and sodium. This section includes a discussion of the available controls for POTWs and demonstrates the effectiveness of the controls and the ability or inability of a POTW to meet water quality based effluent limitations, justifies the variances consistent with one or more of the factors in 40 Code of Regulations section 131.10(g), and includes an antidegradation analysis to show that the existing uses and water quality will be protected. The program will include application requirements that will allow permittees with conditions similar to the above program conditions to apply for a salinity variance. The program will specify that the term of the variance will be no longer than the term of the permit and will include permit requirements that include performance based interim effluent limitation(s), requirements to develop and implement a salinity reduction study, conduct watershed salinity studies and implement salinity reduction practices either individually or through participation in the CV-SALTS efforts any additional monitoring that is determined to be necessary by the Central Valley Water Board to evaluate the effects on the receiving water body of the variance from water quality standards, and any other conditions that the Central Valley Water Board determines to be necessary to implement the terms of the variance.

In the evaluation of the water quality changes experienced by the three case studies, the water quality of the POTWs subject to NPDES permits did not demonstrate that conservation measures implemented in the service area result in an increased concentration of salinity constituents in effluent. Therefore, staff recommendation is not to include alternative 3 in the salinity variance program. POTWs that are not in compliance with water quality based effluent limits for salinity constituents and can demonstrate a need for interim effluent limits higher than performance based effluent limits will be able to apply for a variance that includes higher interim effluent limits under the Variance Policy as described in section 4.5.1.

4.5.3 Issue 3: Salinity Exception Program

The Central Valley Water Board believes that there should be consistent requirements for dischargers regardless of whether the discharge is to land or to surface waters. NPDES dischargers must receive a variance from surface water quality standards. For WDR dischargers, the proposed Basin Plan amendment would include an exception provision that would be consistent with the concept of a variance. Information regarding the source control measures and water quality

effects of the Fresno-Clovis Metropolitan Regional Wastewater Reclamation Facility was analyzed as a case study for the exception program.

Similar to the case studies for the salinity variance program, the City of Fresno cannot meet effluent limits for EC, which is represented by TDS, chlorides, sulfate and sodium. Source control strategies which the City has implemented include industrial pretreatment, residential source control, facility improvements and source water replacement. (LWA. 2012, pp. 21 to 22, section IV.d.) The main difference in the effect of implementing source control between the City of Fresno and the NPDES case studies is that the City of Fresno's effluent limits are based on an incremental increase from source water so improvements in source water quality do not help the City meet its effluent limits.

The City has analyzed end-of-pipe treatment and concluded that reverse osmosis is the most proven technology to consistently reduce the salinity levels in the effluent. (Carollo. 2009, pp. 8-15, section 8.7.3.)

In accordance with the Antidegradation Policy (State Water Board, Resolution 68-16), the existing high quality of water should be maintained until it has been demonstrated that a change in quality is consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies. A technical memorandum from Larry Walker and Associates (2012., pp. 37-46, section V.b.) includes an analysis of the potential effect on ground water quality of allowing an exception from meeting effluent limits. The difference in ground water quality is projected to be 40-41 µmhos/cm or 5-6% higher than without the exception. The Basin Plan assigns the following beneficial uses to ground water in this area: municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), industrial process supply (PRO), water contact recreation (REC-1) and non-contact water recreation (REC-2). Generally, as EC increases, there are increasing impacts to these beneficial uses. The drinking water secondary maximum contaminant levels (MCLs) have three levels for EC: a recommended level of 900 umhos/cm, an upper level or 1,600 umhos/cm and a short term level of 2,200 umhos/cm. The Sources of Drinking Water Policy (State Water Board Resolution 88-63) finds EC greater than 5,000 umhos/cm is unsuitable for drinking water use. Ayers and Westcot (1985) has been used by the Central Valley Water Board to set salinity limits to protect agricultural supply and has the following guidelines to evaluate water quality for irrigation use: less than 700 umhos/cm has no restriction on irrigation use; EC between 700 and 3,000 uhmos/cm has slight to moderate restrictions; and EC greater than 3,000 umhos/cm has severe restrictions. (Table 1.) Ayers and Westcot also compiled salinity guidelines for livestock use. EC less than 1,500 umhos/cm is considered an excellent supply for all classes of livestock and poultry. (Table 6.) Industrial supply needs vary by the industry with some uses intolerant of any salts to some uses that can tolerate unlimited salts (i.e. semiconductor manufacturing and cooling water). Salinity

requirements for recreational uses are not well defined; however, full immersion contact recreation occurs in both fresh and marine waters so most likely the difference in salinity levels that would occur with or without the exception program are not likely to affect recreational uses. Salinity requirements for wildlife are also not well defined but should be adequately protected with salinity criteria for livestock watering.

The ground water and the wastewater quality are currently better than and are expected to stay better than 900 umhos/cm EC. At this EC level, all beneficial uses are maintained; although, higher quality needs of irrigation supply and industrial processing supply may be affected. Since the beneficial uses, water quality objectives and implementation strategies are being re-evaluated by CV-SALTS, salinity requirements for individual dischargers may change at the end of the process. So there is a need to provide flexibility so that dischargers are not required to make an irretrievable commitment of major resources on technology such as reverse osmosis that may have its own significant environmental impacts that should be carefully considered.

The preferred alternative should not only provide permit flexibility but include procedures to support CV-SALTS while it is in process. The following alternatives for a salinity exception program are based on the assumption that the general variance authority and the salinity variance program are adopted. If the general variance authority or the salinity variance program is not adopted, then a salinity exception program is not recommended.

4.5.3.1 Alternative 1. No Action. Under this no action alternative, the Central Valley Water Board would not go forward with a salinity exception program even though the variance policy would have been adopted under the alternatives described in Section 4.5.1, above and a salinity variance program would have been adopted under the alternatives described in Section 4.5.2. While Water Code section 13263 allows the Central Valley Water Board to include time schedules for dischargers subject to WDRs, a specific case-by-case exception for dischargers with WDRs would not exist.

4.5.3.2 Alternative 2. Adopt a salinity exception program for dischargers subject to WDRs. Include case-by-case exceptions to salinity requirements through salinity exception program which will have conditions consistent with the salinity variance program described in Section 4.5.2. Under this salinity exception program, dischargers regulated with WDRs and/or conditional waivers meeting specified conditions would apply for and obtain a case-by-case exception from existing EC, TDS, chloride, sulfate or sodium requirements.

4.5.3.3 Alternative 3. Water conservation, drought and recycling provisions. Water conservation, drought and recycling can cause increased concentrations of pollutants in wastewater effluent. (Appendix C) The State supports water conservation and has a conservation plan to reduce per capita

urban water use. Most conservation measures reduce the amount of potable water that passes through a household but does not change the waste generated in the household. Therefore, increased conservation may result in increased concentrations of some pollutants; although, the loads would remain the same.

During periods of drought, residents are called upon to increase water conservation. As discussed above, water conservation reduces the amount of water that passes through a household but does not reduce the amount of pollutants generated in the household. Additionally, municipalities that have access to higher quality surface waters during wet years may not be able to divert water during dry years and may need to resort to poorer quality groundwater to meet municipal needs.

Water recycling can increase salinity if the recycled water is used in a manner that it re-enters the sewerage system. While increased salinity of the effluent does not always result from conservation, drought and recycling, there may be instances where a discharger can demonstrate that salinity increases is due to these activities. In that case, the Central Valley Water Board should have the authority to consider these increases and make reasonable accommodations in WDR and waiver conditions.

4.5.3.4 Recommendation. Adopt alternatives 2 and 3.

It will be efficient and effective for the Central Valley Water Board to establish a salinity exception program, as described in alternative 2, to help facilitate the development of the salt and nutrient management plan under CV-SALTS. Alternative 2 will allow the Central Valley Water Board the ability to offer to dischargers subject to WDRs a program similar to the salinity variance program described in section 4.5.2. The Central Valley Water Board analyzed a municipal wastewater treatment facility discharger (City of Fresno) as a case study to evaluate the impact that a short-term exception from meeting water quality objectives may have on receiving water.

In the evaluation of the water quality changes experienced by the municipal discharger subject to WDRs, the effluent EC showed slightly increasing concentrations even though the municipality has started use of better quality surface waters, increased industrial source control, instituted a salinity outreach program to improve the quality of residential wastewater and changed facility operations to optimize removal of salt compounds in the effluent. It is possible that the increasing salinity concentrations are due to water conservation efforts or the necessary use of groundwater during drought years. Therefore, staff recommendation is to incorporate alternative 3 into the salinity exception program to provide the Central Valley Water Board the ability to consider water conservation along with drought and water recycling when determining the appropriate performance based effluent limitations that will be in effect during the term of the exception.

5 PROPOSED BASIN PLAN AMENDMENTS

The proposed changes to the Basin Plans are as follows. Text additions to the existing Basin Plan language are indicated by underline and text deletions are indicated by ~~strikethrough~~. Entirely new policies are shown in their final format and are not underlined.

Revise Chapter II, Existing and Potential Beneficial Uses, page II-1.00 for both Basin Plans as follows:

Beneficial use designation (and water quality objectives, see Chapter III, or variance of a water quality standard, see Chapter IV) must be reviewed at least once during each three-year period for the purpose of modification as appropriate (40 C.F.R. 131.20).

Revise Chapter IV, Implementation, of the Sacramento/San Joaquin Rivers Basin Plan under "Control Action Considerations of the Central Valley Regional Water Board, Policies and Plans", as follows:

The following *are the Regional Water Board's* policies ~~were adopted, or are hereby adopted, by the Regional Water Board. The first four policies were adopted as part of the 1975 Basin Plan. Items 7 through 1113 are new policies:~~ *to protect water quality in the Central Valley.*

Revise Chapter IV, Implementation, under "Policies and Plans of the Control Action Considerations of the Central Valley Regional Water Board" starting on page IV-14.00 of the Sacramento/San Joaquin Rivers Basin Plan, and under the "Nature of Control Actions Implemented by the Regional Water Board" starting on page IV-19 of the Tulare Lake Basin Plan, to add the following new policy:

Variance Policy for Surface Waters

As part of its state water quality standards program, states have the discretion to include variance policies. (See 40 C.F.R., §131.13.) This policy provides the Regional Water Board with the authority to grant a variance from application of water quality standards under certain circumstances.

I. Variances From Surface Water Quality Standards for Point Source Dischargers

A. A permit applicant or permittee subject to an NPDES permit may apply to the Regional Water Board for a variance from a surface water quality standard for a specific constituent(s), as long as the constituent is not a priority toxic pollutant identified in 40 C.F.R., 131.38(b)(1), or temperature. The application for such a variance shall be submitted in accordance with the requirements specified in section II of this policy.

Permittees that meet the criteria in section III.A. may submit a salinity variance application in accordance with the requirements specified in section III of this policy.

B. The Regional Water Board may approve all or part of a requested variance, or modify and approve a requested variance, if the permit applicant demonstrates a variance is appropriate based on at least one of the six following factors:

(1) Naturally occurring pollutant concentrations prevent the attainment of the surface water quality standard; or
(2) Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the surface water quality standard, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating state water conservation requirements to enable surface water quality standards to be met; or
(3) Human caused conditions or sources of pollution prevent the attainment of the surface water quality standard and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
(4) Dams, diversions, or other types of hydrologic modifications preclude the attainment of the surface water quality standard, and it is not feasible to restore the waterbody to its original condition or to operate such modification in a way that would result in the attainment of the surface water quality standard; or
(5) Physical conditions related to the natural features of the waterbody, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality preclude attainment of aquatic life protection of surface water quality standards; or
(6) Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.

C. In making a determination on a variance application that is based on factor (6) in paragraph B above, the Regional Water Board shall balance the risk to human health and the environmental impact likely to result if the variance is granted against the hardship or burden upon the applicant if the variance is not granted. In balancing these factors, the Regional Water Board shall consider the following to determine if the hardship or burden upon the applicant is undue:

(1) The cost and cost-effectiveness of pollutant removal by implementing the methodology capable of attaining the adopted or proposed water quality based effluent limitation (WQBEL) for the specific constituent(s) for which a variance is being requested.
(2) The reduction in concentrations and loadings of the pollutant or pollutant in question attainable by source control and pollution prevention efforts as compared to the reduction attainable by use of the methodology capable of attaining the adopted or proposed WQBEL.
(3) The overall impact of attaining the adopted or proposed WQBEL and implementing the methodologies capable of attaining the adopted or proposed WQBEL.
(4) Information on the type and magnitude of adverse or beneficial environmental impacts, including the net impact on the receiving water, resulting from the proposed methodologies capable of attaining the adopted or proposed WQBEL.
(5) Other relevant information requested by the Regional Water Board or supplied by the applicant or the public.

D. A determination to grant or deny a requested variance shall be made in accordance with the procedures specified in section II or section III below.

E. A variance applies only to the permit applicant requesting the variance and only to the constituent(s) specified in the variance application. The granting of a variance does not imply or require that the surface water quality standard corresponding to the variance be modified through a Basin Plan amendment in accordance with Water Code sections 13240 et seq.

F. A variance or any renewal thereof shall not be granted for a term greater than the permit term or the time remaining on the permit term. If a permit is administratively extended until the effective date of a new permit, the variance shall also be extended until such time that a new permit is issued. (See 40 C.F.R., § 122.6(d).)

G. Neither the filing of a variance application nor the granting of a variance shall be grounds for the staying or dismissing of, or a defense in, a pending enforcement action. A variance shall be prospective only from the date the variance becomes effective.

II. Variance Application Requirements and Processes

A. An application for a variance from a surface water quality standard for a specific constituent(s) subject to this policy may be submitted at any time after the permittee determines that it is unable to meet a WQBEL or proposed WQBEL based on a surface water quality standard, and/or an adopted waste load allocation. The variance application may be submitted with the renewal application (i.e., report of waste discharge) for a NPDES permit. If the permittee is seeking to obtain a variance after a WQBEL has been adopted into a NPDES permit, the WQBEL shall remain in effect until such time that the Regional Water Board makes a determination on the variance application.

B. The granting of a variance by the Regional Water Board is a discretionary action subject to the requirements of the California Environmental Quality Act. As such, the Regional Water Board may require the applicant for the variance to prepare such documents as are necessary so that the Regional Water Board can ensure that its action complies with the requirements set forth in the California Environmental Quality Act, or the Regional Water Board may use any such documents that have been prepared and certified by another state or local agency that address the potential environmental impacts associated with the project, and the granting of a variance.

C. A complete variance application must contain the following:

(1) Identification of the specific constituent and water quality standard for which a variance is sought;
(2) Identification of the receiving surface water, and any available information with respect to receiving water quality for the specific constituent;
(3) Identification of the WQBEL that is being considered for adoption, or has been adopted in the NPDES permit;
(4) List of methods for removing or reducing the concentrations and loadings of the pollutants with an assessment of technical effectiveness and the costs and cost-effectiveness of these methods. At a minimum, and to the extent feasible, the methods must include source control measures, pollution prevention measures and end-of-pipe treatment technology. From this list, the applicant must identify the method(s) that will consistently attain the WQBELs and provide a detailed discussion of these methodologies capable of consistently attaining the WQBEL;
(5) Documentation of at least one of the following:

(i) That naturally occurring pollutant concentrations prevent the attainment of the surface water quality standard within the next five years; or

(ii) That natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the surface water quality standard within the next five years, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating state water conservation requirements to enable surface water quality standards to be met within the next five years; or

(iii) That human caused conditions or sources of pollution prevent the attainment of the surface water quality standard from which the WQBEL is based, and it is not possible to remedy the conditions or sources of pollution in the next five years; or

(iv) That dams, diversions, or other types of hydrologic modifications preclude the attainment of the surface water quality standard from which the WQBEL is based, and it is not feasible to restore the waterbody to its original condition or to operate such modification in a way that would result in attainment of the surface water quality standard in the next five years; or

(v) Physical conditions related to the natural features of the waterbody, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection of surface water quality standards from which the WQBEL is based within the next five years; or

(vi) That installation and operation of each of the available methodologies capable of attaining the WQBEL would result in substantial and widespread economic and social impact; or

(vii) That it is not technically feasible to install and operate any of the available methodologies capable of attaining the WQBEL for which a variance is sought;

(6) Documentation that the permittee has reduced, or is in the process of reducing, to the maximum extent practicable, the discharge of the pollutant for which a variance is sought through implementation of local pretreatment, source control, and pollution prevention efforts; and,

(7) A detailed discussion of a proposed interim discharge limitation(s) that represents the highest level of treatment that the permittee can consistently achieve during the term

of the variance. Such discussion shall also identify and discuss any drought, water conservation, and/or water recycling efforts that may cause certain constituents in the effluent to increase, or efforts that will cause certain constituents in the effluent to decrease with a sufficient amount of certainty. When the permittee proposes an interim discharge limitation that is higher than the current level of the constituent in the effluent due to the need to account for drought, water conservation or water recycling efforts, the permittee must provide appropriate information to show that the increase in the level for the proposed interim discharge limitation(s) will not adversely affect beneficial uses. If the permittee indicates that certain constituents in the effluent are likely to decrease during the term of the variance due to recycling efforts or management measures, then the proposed interim discharge limitation(s) shall account for such decreases.

(8) Copies of any documents prepared and certified by another state or local agency pursuant to Public Resources Code section 21080 et seq.; or, such documents as are necessary for the Regional Water Board to make its decision in compliance with Public Resources Code section 21080 et seq..

D. Within 60 days of the receipt of a variance application, the Regional Water Board shall determine that the variance application is complete, or specify in writing any additional relevant information, which is deemed necessary to make a determination on the variance request. Such additional information shall be submitted by the applicant within a time period agreed upon by the applicant and the Regional Water Board Executive Officer. Failure of an applicant to submit any additional relevant information requested by the Regional Water Board Executive Officer within the agreed upon time period may result in the denial of the variance application.

E. If the variance application is submitted with an NPDES permit renewal application, then the variance application shall be transmitted to USEPA in accordance with the terms and conditions of the *NPDES Memorandum of Agreement Between the U.S. Environmental Protection Agency and The California State Water Resources Control Board*. Otherwise, the Regional Water Board shall provide a copy of the variance application to USEPA Region 9 within 30 days of finding that the variance application is complete.

F. Within a reasonable time period after finding that the variance application is complete, the Regional Water Board shall provide public

notice, request comment, and, schedule and hold a public hearing on the variance application. When the variance application is submitted with the NPDES permit renewal application (i.e., report of waste discharge), the notice, request for comment and public hearing requirement on the variance application may be conducted in conjunction with the Regional Water Board's process for the renewal of the NPDES permit.

G. The Regional Water Board may approve the variance, either as requested, or as modified by the Regional Water Board. The Regional Water Board may take action to approve a variance and renew and/or modify an existing NPDES permit as part of the same proceeding. The permit shall contain all conditions needed to implement the variance, including, at a minimum, all of the following:

(1) An interim effluent limitation for the constituent(s) for which the variance is sought. The interim effluent limitation must be determined to be attainable during the term of the variance, and calculation of the interim effluent limitation must include consideration of, but not be limited to, current performance, drought, water conservation, and water recycling efforts. When the duration of the variance is shorter than the duration of the permit, compliance with effluent limitations sufficient to meet the water quality criterion upon the expiration of the variance shall be required;
(2) A requirement to prepare and implement a pollution prevention plan pursuant to Water Code section 13263.3;
(3) Any additional monitoring that is determined to be necessary by the Regional Water Board to evaluate the effects on the receiving waterbody of the variance from water quality standards;
(4) A provision allowing the Regional Water Board to reopen and modify the permit based on any revision to the variance made by the Regional Water Board during the next revision of the water quality standards or by EPA upon review of the variance; and
(5) Other conditions that the Regional Water Board determines to be necessary to implement the terms of the variance.

H. The variance, as adopted by the Regional Water Board in section G, is not in effect until it is approved by U.S. EPA.

I. Permit limitations for a constituent contained in the applicant's permit that are in effect at the time of the variance application shall remain in effect during the consideration of a variance application for that particular constituent.

J. The permittee may request a renewal of a variance in accordance with the provisions contained in sections A and B and this section. The renewal application shall also contain information concerning its compliance with the conditions incorporated into its permit as part of the original variance and shall include information to explain why a renewal of the variance is necessary. As part of its renewal application, a permittee shall also identify all efforts the permittee has made, and/or intends to make, towards meeting the standard. Renewal of a variance may be denied if the permittee did not comply with any of the conditions of the original variance.

K. All variances and supporting information shall be submitted by the Regional Water Board to the U.S. EPA Regional Administrator within 30 days of the date of the Regional Water Board's final variance decision for approval and shall include the following:

(1) The variance application and any additional information submitted to the Regional Water Board;
(2) Any public notices, public comments, and records of any public hearings held in conjunction with the request for the variance;
(3) The Regional Water Board's final decision; and
(4) Any changes to NPDES permits to include the variance.

L. All variances shall be reviewed during the Regional Water Board's triennial review process of this Basin Plan.

III. Variance Program for Salinity Water Quality Standards

A. The Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is a stakeholder effort to develop a comprehensive salt and nitrate management plan (SNMP) by May 2016 that is expected to result in basin plan amendments that will be considered by the Regional Water Board by May 2017. CV-SALTS is undertaking technical work to analyze salt and nitrate conditions in surface and ground water in the Central Valley, identify implementation measures, and develop monitoring strategies to ensure environmental and economic sustainability. The technical work under development includes developing the models for loading and transport of salt, development and evaluation of effective management practices, and implementing activities to ensure beneficial uses are protected. Participation by all stakeholders is necessary to assure that the work is scientifically justified, supported by broad stakeholder representation, and completed in a timely fashion.

During the development and initial implementation of the comprehensive salt and nitrate management plan for the Central Valley (SNMP) by the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS), permittees may apply for a variance from salinity water quality standards if they have or will have WQBELs for salinity that they are unable to meet, and if they qualify for submitting a salinity variance application as indicated by the Regional Water Board in its adoption of this policy and as approved by U.S. EPA. The salinity variance as described specifically herein is for municipal and domestic wastewater dischargers that have or will implement local pretreatment, source control, and pollution prevention efforts to reduce the effluent concentrations of salinity constituents and are now faced with replacing the municipal water supply with a better quality water or installing membrane filtration treatment technology such that widespread social and economic impacts are expected consistent with the justification provided in the *Staff Report for the 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 to add Policies for Variances from Surface Water Quality Standards for Point Source Dischargers, Variance Program for Salinity, and Exception from Application of Water Quality Objectives for Salinity, [Final Date of Amendment]*. Consistent with the planned development and implementation of the SNMP, no salinity variance under this section shall be approved after 30 June 2019. For the purposes of this policy, salinity water quality standards are defined to only include water quality standards for the following constituents: electrical conductivity, total dissolved solids, chloride, sulfate, and sodium.

B. An application for a variance for a specific salinity water quality standard may be submitted at any time after the permittee determines that it is unable to meet a WQBEL or proposed WQBEL based on a salinity water quality standard. Preferably, the salinity variance application should be submitted with the renewal application (i.e., report of waste discharge) for a NPDES permit. If the permittee is seeking to obtain a variance after a WQBEL has been adopted into a NPDES permit, the WQBEL shall remain in effect until such time that the Regional Water Board makes a determination on the variance application.

C. An application for variance from WQBELs based on a salinity water quality standard must contain the following:

(1) Identification of the salinity constituents for which the variance is sought;
(2) Identification of the receiving surface water, and any available information with respect to receiving water quality for the specific constituent;

(3) Identification of the WQBEL that is being considered for adoption, or has been adopted in the NPDES permit;

(4) A description of salinity reduction/elimination measures that have been undertaken as of the application date, if any;

(5) A Salinity Reduction Study Workplan, which at a minimum must include the following:

  (i) Data on current influent and effluent salinity concentrations,

  (ii) Identification of known salinity sources,

  (iii) Description of current plans to reduce/eliminate known salinity sources,

  (iv) Preliminary identification of other potential sources,

  (v) A proposed schedule for evaluating sources,

  (vi) A proposed schedule for identifying and evaluating potential reduction, elimination, and prevention methods.

(6) An explanation of the basis for concluding that there are no readily available or cost-effective methodologies available to consistently attain the WQBELs for salinity.

(7) A detailed discussion explaining why the permittee's situation is similar to or comparable with the permittee case studies supporting the salinity variance program identified in the *Staff Report for the 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 to add Policies for Variances from Surface Water Quality Standards for Point Source Dischargers, Variance Program for Salinity, and Exception from Application of Water Quality Objectives for Salinity, [Final Date of Amendment]*.

(8) A detailed discussion of proposed interim discharge limitation(s) that represents the highest level of treatment that the permittee can consistently achieve during the term of the variance. Such discussion shall also identify and discuss any drought, water conservation, and/or water recycling efforts that may cause certain constituents in the effluent to increase, or efforts that will cause certain constituents in the effluent to decrease with a sufficient amount of certainty. When the permittee proposes an interim discharge limitation that is higher than the current level of the constituent in the effluent due to the need to account for drought, water conservation or water recycling efforts, the permittee must provide appropriate information to show that the increase in the level for the proposed interim discharge limitation(s) will not harm associated beneficial uses. If the permittee indicates that the certain constituents in the

effluent are likely to decrease during the term of the variance due to efforts, then the proposed interim discharge limitation(s) shall account for such decreases.

(9) Documentation of the applicant's active participation in the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) as indicated by a letter of support from CV-SALTS.

(10) A detailed plan of how the applicant will continue to participate in CV-SALTS and how the applicant will contribute to the development and implementation of the SNMP.

D. After the receipt of a variance application for salinity, the Regional Water Board shall determine whether the variance application is complete and whether the permittee qualifies for consideration of the variance, or specify in writing any additional relevant information that is deemed necessary to make a determination on the salinity variance request. Such additional information shall be submitted by the applicant within a time period agreed upon by the applicant and the Regional Water Board Executive Officer. Failure of an applicant to submit any additional relevant information requested by the Regional Water Board Executive Officer within the time period specified by the Executive Officer may result in the denial of the variance application for salinity.

E. After determining that the variance application for salinity is complete, the Regional Water Board shall provide notice, request comment, and, schedule and hold a public hearing on the variance application for salinity. When the variance application is submitted with the NPDES permit renewal application (i.e., report of waste discharge), the notice, request for comment and public hearing requirement on the variance application may be conducted in conjunction with the Regional Water Board's process for the renewal of the NPDES permit.

F. The Regional Water Board may approve a salinity variance, either as requested, or as modified by the Regional Water Board, after finding that the permittee qualifies for the salinity variance, attaining the WQBEL is not feasible, the permittee has implemented or will implement feasible salinity reduction/elimination measures and the permittee continues to participate in CV-SALTS. The Regional Water Board may take action to approve a variance and issue a new, or reissue or modify an existing NPDES permit as part of the same proceeding. The permit shall contain all conditions needed to implement the variance, including, at a minimum, all of following:

(1) The interim effluent limitations that are determined to be attainable during the term of the variance. When the duration

of the variance is shorter than the duration of the permit, compliance with effluent limitations sufficient to meet the water quality criterion upon the expiration of the variance shall be required;

(2) A requirement to implement the Salinity Reduction Study Workplan submitted with the variance application as required by paragraph C.5 above;

(3) A requirement to participate in CV-SALTS and contribute to the development and implementation of the SNMP in accordance with the plan submitted under section C.10.

(4) Any additional monitoring that is determined to be necessary to evaluate the effects on the receiving waterbody of the variance from water quality standards;

(5) A provision allowing the Regional Water Board to reopen and modify the permit based on any revision to the variance made by the Regional Water Board during the next revision of the water quality standards or by EPA upon review of the variance;

(6) Other conditions that the Regional Water Board determines to be necessary to implement the terms of the variance.

G. Permit limitations for a substance contained in the applicant's permit that are in effect at the time of the variance application shall remain in effect during the consideration of the variance application for that particular substance.

H. The permittee may request a renewal of a salinity variance in accordance with the provisions contained in sections B and C this section. The renewal application shall also contain information concerning its compliance with the conditions incorporated into its permit as part of the original variance, and shall include information to explain why a renewal of the variance is necessary. As part of its renewal application, a permittee shall also identify all efforts the permittee has made, and/or intends to make, towards meeting the standard. Renewal of a variance may be denied if the permittee did not comply with the conditions of the original variance.

I. All variances shall be reviewed during the Regional Water Board's triennial review process of this Basin Plan.

Revise Chapter IV, Implementation, under "Policies and Plans" of the "Control Action Considerations of the Central Valley Regional Water Board" starting on page IV-14.00 of the Sacramento/San Joaquin Rivers Basin Plan, and under the "Salinity" section starting on page IV-5 of the Tulare Lake Basin Plan, to add the following new policy:

Policy With Respect to Limited-Term Exceptions from Basin Plan Provisions and Water Quality Objectives for Groundwater and for non-NPDES dischargers to surface waters

Pursuant to Water Code sections 13050 and 13240 et seq., the Regional Water Board has adopted beneficial use designations and water quality objectives that apply to surface and ground waters in the basins covered by this Basin Plan as well as programs of implementation. The Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is a stakeholder effort to develop a comprehensive salt and nitrate management plan (SNMP) by May 2016 that is expected to result in basin plan amendments that will be considered by the Regional Water Board by May 2017. CV-SALTS is undertaking technical work to analyze salt and nitrate conditions in surface and ground water in the Central Valley, identify implementation measures, and develop monitoring strategies to ensure environmental and economic sustainability. The technical work under development includes developing the models for loading and transport of salt, development and evaluation of effective management practices, and implementing activities to ensure beneficial uses are protected. Participation by all stakeholders is necessary to assure that the work is scientifically justified, supported by broad stakeholder representation, and completed in a timely fashion. The Regional Water Board finds that it is reasonable to grant exceptions to the application of water quality objectives for salinity for non-NPDES dischargers to surface water, and for discharges to groundwater in order to allow for development and implementation of the SNMP.

Exception from Application of Water Quality Objectives for Salinity

1. Any person[5] subject to waste discharge requirements and/or waivers issued pursuant to Water Code 13269 that are not also NPDES permits may apply to the Regional Water Board for an exception from the application of water quality objectives for salinity. The exception may apply to the issuance of effluent limitations and/or groundwater limitations that implement water quality objectives for salinity in groundwater, or to effluent limitations and/or surface water limitations that implement water quality objectives for salinity in surface water. For the purposes of this policy, salinity and its constituents include, and are limited to, the following: electrical conductivity, total dissolved solids, chloride, sulfate, and sodium. The application for such an exception(s) shall be submitted in accordance with the requirements specified in paragraph 7 below.

[5] The term "person" includes, but is not limited to, "any city, county, district, the state, and the United States, to the extent authorized by federal law." (Wat. Code, § 13050, subd. (c).)

2. An exception to the application of water quality objectives for salinity imposed as limitations in either waste discharge requirements and/or conditional waivers that are not also NPDES permits shall be set for a term not to exceed ten years. An exception may be renewed beyond the initial term if the Regional Water Board is continuing to develop salinity management plans, and if a renewal application is submitted in accordance with the requirements specified in paragraph 7 below.

3. The Regional Water Board will consider granting an exception to the application of water quality objectives for salinity under this Policy if the applicant is actively participating in the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS).

4. When granting an exception to the application of water quality objectives for salinity under this Policy, the Regional Water Board shall consider including an interim performance-based effluent limitation and/or groundwater limitation that provides reasonable protection of the groundwater or the receiving water, where appropriate. When establishing such a limitation, the Regional Water Board shall take into consideration increases in salinity concentrations due to drought, water conservation, and/or water recycling efforts that may occur during the term of the exception granted.

5. When granting an exception to the application of water quality objectives for salinity under this Policy, the Regional Water Board shall require the discharger to prepare and implement a Salinity Reduction Study, or a salinity-based watershed management plan. A Salinity Reduction Study shall at a minimum include the following:

a. Data on current influent and effluent salinity concentrations;
b. Identification of known salinity sources;
c. Description of current plans to reduce/elimination known salinity sources;
d. Preliminary identification of other potential sources;
e. A proposed schedule for evaluating sources; and
f. A proposed schedule for identifying and evaluating potential reduction, elimination, and prevention methods.

If the discharger prepares a salinity-based watershed management plan, the salinity-based watershed management plan shall at a minimum include the following[6]:

[6] A salinity-based watershed management plan prepared to meet requirements contained within adopted waste discharge requirements, such as those contained in MRP Order R5-2012-0116, Appendix MRP-1, and that is approved by the Executive Officer of the Regional Water Board may be used in lieu of new requirements identified here.

a. A discussion of the physical conditions that affect surface water or groundwater in the management plan area, including land use maps, identification of potential sources of salinity, baseline inventory of identified existing management practices in use, and a summary of available surface and/or groundwater quality data;
b. A management plan strategy, that includes a description of current management practices being used to reduce or control known salinity sources;
c. Monitoring methods;
d. Data evaluation; and,
e. a schedule for reporting Management Plan Progress.

6. When granting an exception to the application of water quality objectives under this policy, the Regional Water Board will include a requirement to participate in CV-SALTS and contribute to the development and implementation of the SNMP in accordance with the plan submitted under Section 8.f..

7. The granting of an exception to the application of water quality objectives for salinity under this Policy by the Regional Water Board is a discretionary action subject to the requirements of the California Environmental Quality Act. As such, the Regional Water Board may require the applicant for the exception to prepare such documents as are necessary so that the Regional Water Board can ensure that its action complies with the requirements set forth in the California Environmental Quality Act, or the Regional Water Board may use any such documents that have been prepared and certified by another state or local agency that address the potential environmental impacts associated with the project, and the granting of an exception from application of water quality objectives for salinity in groundwater.

8. A person seeking an exception to the application of water quality objectives for salinity under this Policy must submit its application to the Regional Water Board. The person's request shall include the following:

a. An explanation/justification as to why the exception is necessary, and why the discharger is unable to ensure consistent compliance with existing effluent and/or groundwater/surface water limitations associated with salinity constituents at this time;
b. A description of salinity reduction/elimination measures that the discharger has undertaken as of the date of application, or a description of a salinity-based watershed management plan and progress of its implementation;
c. A description of any drought impacts, irrigation, water conservation and/or water recycling efforts that may be causing or cause the concentration of salinity to increase in the effluent, discharges to receiving waters, or in receiving waters;

d. Copies of any documents prepared and certified by another state or local agency pursuant to Public Resources Code section 21080 et seq.; or, such documents as are necessary for the Regional Water Board to make its decision in compliance with Public Resources Code section 21080 et seq.
e. Documentation of the applicant's active participation in CV-SALTS as indicated by a letter of support from CV-SALTS.
f. A detailed plan of how the applicant will continue to participate in CV-SALTS and how the applicant will contribute to the development and implementation of the SNMP.

9. Upon receipt of an application for an exception of water quality objectives for salinity under this Policy, the Regional Water Board shall determine that the exception application is complete, or specify in writing any additional relevant information, which is deemed necessary to make a determination on the exception request. Failure of an applicant to submit any additional relevant information requested by the Regional Water Board Executive Officer within the applicable time period may result in the denial of the exception application.

10. Within a reasonable time period after determining that the exception application is complete, the Regional Water Board shall provide notice, request comment, and schedule and hold a public hearing on the application within a timely manner. The notice and hearing requirements shall comply with those set forth in Water Code section 13167.5. The notice, request for comment, and public hearing requirement may be held in conjunction with the Regional Water Board's review process for the issuance, reissuance, or modification of waste discharge requirements and/or conditional waiver. Where the Regional Water Board is not issuing, reissuing, or modifying waste discharge requirements or a conditional waiver, the Regional Water Board may issue an exception through a resolution or special order that amends applicable waste discharge requirements and/or conditional waiver requirements.

Revise Page IV-3 of the Tulare Lake Basin Plan under the heading of "Irrigated Agriculture" as follows:

- Agricultural drainage may be discharged to surface waters provided it does not exceed 1,000 umhos/cm EC. 175 mg/l chloride, nor 1 mg/l boron. Other requirements also apply. An exception from the EC and/or the chloride limit for agricultural drainage discharges to surface waters may be permitted consistent with the Policy for Exception from Application of Water Quality Objectives for Salinity.

Revise Page IV-10 of the Tulare Lake Basin Plan under the heading of "Discharges to Navigable Waters" in the "Municipal and Domestic Wastewater" section, as follows:

- The maximum electrical conductivity (EC) of a discharge shall not exceed the quality of the source water plus 500 micromhos per centimeter or 1,000 micromhos per centimeter, whichever is more stringent. When the water is from more than one source, the EC shall be a weighted average of all sources.

- Discharges shall not exceed an EC of 1,000 micromhos per centimeter, a chloride content of 175 mg/l, or a boron content of 1.0 mg/l.

- An exception from the EC and/or the chloride limits identified here may be granted for municipal and domestic wastewater discharges to navigable waters if a variance is granted pursuant to the Variance Policy for Surface Water.

Revise Page IV-11 of the Tulare Lake Basin Plan under the heading of "Discharges to Land" in the "Municipal and Domestic Wastewater" section, as follows:

- The incremental increase in salts from use and treatment must be controlled to the extent possible. In most circumstances, ~~T~~the maximum EC shall not exceed the EC of the source water plus 500 micromhos/cm. When the source water is from more than one source, the EC shall be a weighted average of all sources. However, under certain circumstances, the Regional Board, upon request of the discharger, may adopt an effluent limit for EC that allows EC in the effluent to exceed the source water by more than 500 micromhos/cm. This request will be granted consistent with the Policy for Exception from Application of Water Quality Objectives for Salinity.

- In the Poso Creek Subarea, discharges shall not exceed 1,000 micromhos/cm EC, 200 mg/l chlorides, and 1.0 mg/l boron. …

- In the White Wolf Subarea, for areas overlying Class I irrigation water, discharges shall not exceed 1,000 umhos/cm EC, 175 mg/l chlorides; 60 percent sodium, and 1.0 mg/l boron. For areas overlying Class II or poorer irrigation water, discharges shall not exceed 2,000 umhos/cm EC, 350 mg/l chlorides, 75 percent sodium, and 2 mg/l boron. In areas where ground water would be Class I except for the concentration of a specific constituent, only that constituent will be allowed to exceed the specified limits for Class I water. In no case shall any constituent be greater than those limits specified for areas overlying Class II irrigation water. …

- Discharges to areas that may recharge to good quality ground waters shall not exceed an EC of 1,000 micromhos per centimeter, a chloride content of 175 mg/l, or a boron content of 1.0 mg/l.

- An exception from the EC and/or the chloride limit for discharges to land may be permitted consistent with the Policy for Exception from Application of Water Quality Objectives for Salinity.

Revise Page IV-13 of the Tulare Lake Basin Plan under the heading of "Industrial Wastewater", as follows:

Generally, the effluent limits established for municipal waste discharges will apply to industrial wastes. Industrial dischargers shall be required to:

5. Limit the increase in EC of a point source discharge to surface water or land to a maximum of 500 umhos/cm. A lower limit may be required to assure compliance with water quality objectives.

   An exception to this EC limit may be permitted for industrial sources when the discharger technically demonstrates that allowing a greater net incremental increase in EC will result in lower mass emissions of salt and in conservation of water, provided that beneficial uses are protected.

   An exception may also be permitted for food processing industries that discharge to land and exhibit a disproportionate increase in EC of the discharge over the EC of the source water due to unavoidable concentrations of organic dissolved solids from the raw food product, provided that beneficial uses are protected. Exceptions shall be based on demonstration of best available technology and best management practices that control inorganic dissolved solids to the maximum extent feasible.

   Cull fruits and wastes from food processing generally are voluminous and may have a high water content like winder wastes. Provision should be made for thin spreading of such materials on the fields, followed promptly by disking into the soil.

An exception from the EC limit may also be permitted consistent with the Policy for Exception from Application of Water Quality Objectives for Salinity.

Revise Page IV-15 of the Tulare Lake Basin Plan under the heading of "Oil Field Wastewater" in the "Industrial Wastewater" section, as follows:

- Maximum salinity limits for wastewaters in unlined sumps overlying ground water with existing and future probable beneficial uses are 1,000 umhos/cm EC, 200 mg/l chlorides, and 1 mg/l boron, except in the White Wolf subarea where more or less restrictive limits apply. The limits for the White Wolf subarea are discussed in the "Discharges to Land" subsection of the "Municipal and Domestic Wastewater" section.

- Discharges of oil field wastewater that exceed the above maximum salinity limits may be permitted to unlined sumps, stream channels, or surface waters if the discharger successfully demonstrates to the Regional Water Board in a public hearing that the proposed discharge will not substantially affect water quality nor cause a violation of water quality objectives.

- An exception from the EC and/or the chloride limit may be permitted consistent with the Policy for Exception from Application of Water Quality Objectives for Salinity.

6 CONSISTENCY WITH OTHER LAWS, PLANS AND POLICIES

Any proposed changes to the Regional Water Board Basin Plans must be consistent with existing Federal and State laws and regulations including adopted State and Regional Water Board policies. Water Code section 13146 requires that, in carrying out activities that affect water quality, all state agencies, departments, boards and offices comply with state policy for water quality control unless otherwise directed or authorized by statute, in which case they shall indicate to the State Water Board in writing their authority for not complying with such policy. This chapter summarizes existing Federal and State laws and policies that are relevant to the proposed Basin Plan Amendments.

6.1 Antidegradation Analysis

Both USEPA (40 CFR § 131.12) and the State of California (State Water Board Resolution 68-16) have adopted antidegradation policies as part of their approach to regulating water quality. The Central Valley Water Board must ensure that its actions are consistent with the federal or State antidegradation policies. This section of the Staff Report analyzes whether approval of the proposed amendments would be consistent with the federal and State antidegradation policies.

6.1.1 Federal Antidegradation Policy

The Federal Antidegradation Policy (40 CFR § 131.12) states:

> "(a) The State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy pursuant to this subpart. The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following:
>
> (1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
>
> (2) Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all

cost-effective and reasonable best management practices for nonpoint source control.

(3) Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

(4) In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with section 316 of the Act."

In order to protect the existing instream uses, the proposed variance policy and salinity variance program require permit conditions that include interim effluent limitations based on the current achievable effluent quality. In addition, the proposed variance policy requires the preparation and implementation of a pollution prevention plan and the proposed salinity variance program requires the implementation of a salinity reduction study workplan. The implementation of pollution prevention plans and salinity reduction study workplans are expected to result in overall improvement in effluent quality. Therefore, the existing use will be protected and increased degradation is not allowed during the term of the variance.

6.1.2 State Antidegradation Policy

Antidegradation provisions of State Water Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining High Quality Waters in California") state, in part:

"(1) Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.

(2) Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet WDRs which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained."

To maintain the existing quality of water, the variance and exception conditions specify that the permits and WDRs will include an interim performance based effluent limit. In addition dischargers will be required to implement pollution prevention plans, salinity reduction study workplans or salinity based watershed management plans. Implementation of these plans is expected to result in water quality improvement.

Applicants are required to provide information on methods for removing or reducing concentrations and loadings of these pollutants and to include plans for implementing the reasonable methods in pollution prevention plans, salinity reduction study workplans or salinity based watershed management plans. The approved plans represent the best practicable treatment or control and the Central Valley Water Board will require implementation of these plans in the resulting NPDES permits or WDRs.

Further analysis of the effect of allowing variances will be provided with future variance applications. The remainder of this discussion analyzes the salinity programs (i.e. the salinity variance program and the salinity exception program).

In addition, to requiring development and implementation of a salinity reduction study workplan or a salinity based watershed management plan, the salinity programs require that the applicant document participation in CV-SALTS. The resulting NPDES permit or WDRs will require that the applicant actively participate CV-SALTS to help develop a comprehensive salt and nitrate plan.

There is a difference in water quality between allowing a variance and not allowing a variance. This difference is the incremental improvement in ambient water quality if there were no variance and the discharger was required to meet water quality based effluent limits. A technical memorandum from Larry Walker and Associates (2012., pp. 23 to 47, section V.) contains an analysis of the incremental improvements if the case studies achieved water quality based effluent limits. For the Delta communities, the improvements in local EC concentrations of the receiving waters in the vicinity of the discharges ranged from 0.31% to 2.68%. Analysis conducted of the ambient water further away from the discharges indicated that there were no measurable effects. For the City of Fresno, the difference in water quality in groundwater of not allowing an exception is potential improvement of the down gradient groundwater by 4-6% or about 40 µmhos/cm. As noted in section 4.5.3, beneficial uses continue to be protected through a broad salinity range. Based on the case study analyses that have been performed, the salinity changes, if any, are small and have minimal effects on beneficial uses, therefore the salinity programs are not expected to unreasonably affect present or anticipated beneficial uses of waters.

The proposed salinity programs delay implementing end-of-pipe treatment or reverse osmosis for affected dischargers. Reverse osmosis is typically very expensive, energy intensive and results in a brine (10 to 20 percent of the waste

stream) that must be properly disposed. The energy consumption of reverse osmosis and the brine waste stream are environmental impacts that must be considered when planning and designing reverse osmosis. (SWRCB. 2005., p 12.) LWA 2012 estimated the amount of carbon dioxide emissions that would result if the cities of Tracy, Stockton, Manteca and Fresno implemented reverse osmosis technology. More details of the analysis are described in the Greenhouse Gas Emissions section of the Environmental Checklist. (Appendix A, section VII.) While the increased emissions per capita are very small, they are increases and are, therefore, inconsistent with the statewide mandate to reduce carbon dioxide emissions. Additionally, as explained above, implementing treatment to achieve the water quality based effluent limits do not provide significant improved ambient water quality. Therefore, the potential increased greenhouse gas emissions of implementing reverse osmosis technology with the lack of water quality improvement are not in the best interest of the people of the State.

The proposed amendments require imposition of an interim performance based effluent limit which will maintain the water quality. The proposed amendments also contain provisions for the Board to include requirements to develop and implement pollution prevention plans, salinity reduction study workplans and salinity based watershed management plan in NPDES permits and WDRs. These plans are considered to be best practicable treatment and control for salinity constituents since the include consideration of all measures short of end-of-pipe treatment. Across all the applicants, implementation of these provisions is expected to result in water quality improvements over the term of the variance or the exception. The discharger will be required to meet the applicable water quality based effluent limits and the applicable water quality objectives at the end of the term of the variance or exception. The proposed salinity programs are consistent with maximum benefit to the people of the state because they avoid greenhouse gas emissions, consistent with state law, from reverse osmosis technology that will not improve water quality. Therefore, the proposed salinity programs are consistent with state and federal antidegradation policies.

6.2 Consistency with Federal and State Laws and Regulations

Federal and state agencies have adopted regulations implementing federal and state laws to which Central Valley Water Board actions must conform. The following federal and state laws are relevant to the proposed Basin Plan Amendments:

- Antidegradation Policy (40 CFR § 131.12)
- Clean Water Act
- Federal & State Endangered Species Acts (50 CFR et seq., California Fish and Game Code § 2050-2116 et seq.)

These laws and their relevance to the proposed water quality objectives and implementation plan are described in the following sections.

6.2.1 Antidegradation Policy

The consistency with the federal Antidegradation Policy is discussed in Section 6.1.1.

6.2.2 Clean Water Act

Under section 303(c) of the Clean Water Act, water quality standards adopted by a State are subject to USEPA approval. Title 40 Code of Federal Regulations section 131.13 identifies variance policies as a part of a state's water quality standards and subject to USEPA approval. The variance provisions will be submitted for USEPA approval if they are adopted by the Central Valley Water Board and approved by the State Water Board and the Office of Administrative Law.

6.2.3 Federal & State Endangered Species Act

The Federal Endangered Species Act of 1973 (50 CFR *et seq*.) was established to identify, protect and recover imperiled species and the ecosystems upon which they depend. It is administered by the Interior Department's U.S. Fish and Wildlife Service (USFWS) and the Department of Commerce's National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS). The USFWS has primary responsibility for terrestrial and freshwater organisms, while the NMFS has primary responsibility for marine species such as salmon and whales. In addition, the State of California enacted the California Endangered Species Act (California Fish and Game Code, Sections 2050-2116 *et seq*.), which is administered by the California Department of Fish and Wildlife and similarly maintains State lists of rare, threatened and endangered species.

The proposed Basin Plan amendments provide for a short-term exception from meeting water quality based effluent limitations for non-priority pollutants. However, while fish and wildlife may be sensitive to certain non-toxic chemical constituents, the policy requires that the current effluent quality be maintained or improved by imposing an interim performance based effluent limit and requires the development and implementation of a pollution prevention plan or a salinity reduction study workplan. If the variance applicant thinks that they need to discharge a higher concentration, the applicant will need to demonstrate that the beneficial uses will continue to be protected. Therefore, the proposed Basin Plan amendments are not expected to affect fish and wildlife and the Endangered Species Act is not expected to be applicable to the proposed Basin Plan amendments.

6.2.4 Water Quality Variances

Title 40 Code of Federal Regulations section 131.13 identifies variances as water quality standards actions subject to USEPA approval. USEPA has approved variances that include specific elements. (USEPA. 1994.) The proposed policy addresses each of the elements that USEPA expects to see included in variance applications and policies. The following lists the USEPA elements verbatim as found in USEPA guidance (underlined italics). Following each element is the staff summary of the provisions in the proposed policy that address each element:

A. *each individual variance is included as part of the water quality standard;*

   The variance policy and salinity variance program will be adopted through a basin planning process and incorporated into the Basin Plans after final approval.

B. *the State demonstrates that meeting the standard is unattainable based on one or more of the grounds outlined in 40 Code of Federal Regulations section 131.10(g)*;

   The variance policy specifies that variances may be approved if the permittee demonstrates that one of the 40 CFR 131.10(g) factors are met (Section I.B.) The salinity variance program is for dischargers that cannot meet water quality based effluent limitations consistent with the factors in 40 CFR 131.10(g)(3) and/or (6) as described in section 4.5.2, above.

C. *the justification submitted by the State includes documentation that treatment more advanced than that required by sections 303(c)(2)(A) and (B) of the Clean Water Act has been carefully considered, and that alternative effluent control strategies have been evaluated*;

   The variance policy requires that applicants identify methods to remove or reduce pollutant loads and/or concentrations and to document removal of the pollutant to the maximum extent possible. Under the salinity variance program, the staff report demonstrates that POTWs control salinity through source control (industrial controls, residential controls and changing municipal water supply) or end-of-pipe treatment. End-of-pipe treatment is salt removal technology and reverse osmosis is the most appropriate end of pipe treatment for POTWs.

D. *the more stringent State criterion is maintained and is binding upon all other dischargers on the stream or stream segment*;

The policy specifies that the variance is for a single discharger and only for the constituents identified in the approved variance. (Section I.E)

E. *the discharger who is given a variance for one particular constituent is required to meet the applicable criteria for other constituents*;

The policy specifies that the variance is only for the constituents identified in the approved variance. (Section I.E)

F. *the variance is granted for a specific period of time and must be rejustified upon expiration but at least every 3 years*;

Both the variance policy and the salinity variance program include a variance term and include provisions for reviewing variances during triennial reviews. (Section I.F. and Sections II.L. and III.I.)

G. *the discharger either must meet the standard upon the expiration of this time period or must make a new demonstration of "unattainability"*;

The variance policy and the salinity variance program includes renewal provisions that require the same justification as the original application plus demonstration of compliance under the original variance. (Section II.J. and III.H.)

H. reasonable progress is being made toward meeting the standards; and

The variance policy requires preparation and implementation of a pollution prevention plan. (Section II.G.(2).) The salinity variance program requires a development and implementation of salinity reduction study workplan. (Section III.C.(5) and III.F.(2)) Pollution prevention plans and salinity reduction study workplans must include plans to implement cost-effective control methods which are expected to result in overall water quality improvements. In addition, under the salinity variance program, dischargers will be required to participate in the development of the SNMP through CV-SALTS. The eventual SNMP is expected to include regulatory approaches that result in requirements which are commensurate with the water quality benefits that can be achieved through reasonable management actions by Central Valley communities and others. (Section III.F.).

I. *the variance was subjected to public notice, opportunity for comment, and public hearing. (USC § 1313(c)(l) and 40 CFR § 131.20.) The public notice should contain a clear description of the impact of the variance upon achieving water quality standards in the affected stream segment.*

The variance policy and the variance salinity program will be adopted through a basin planning process. Individual variances will go through a public hearing. (Section II.F. and III.E.)

6.3 Consistency with State Water Board Plans and Policies

The State Water Board is authorized to adopt state policy for water quality control. (Wat. Code § 13140.) State Water Board water quality control plans supersede any regional water quality control plans for the same waters to the extent of any conflict. (Wat. Code § 13170.) Regional water quality control plans must conform to State Water Board policies. (Wat. Code § 13240.) The following are the State Water Board plans and policies:

- Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan)
- Statement of Policy with Respect to Maintaining High Quality of Water in California (Antidegradation Implementation Policy) (Resolution No. 68-16)
- Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan)
- Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Resolution No. 74-43)
- Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Powerplant Cooling (Resolution 75-58)
- Policy and Action Plan for Water Reclamation in California (Resolution 77-1) and Policy for Water Quality Control for Recycled Water (Resolution 2009-0011)
- Policy on the Disposal of Shredder Waste (Resolution 87-22)
- Policy regarding the Underground Storage Tank Pilot Program (Resolution 88-23)
- Sources of Drinking Water Policy (Resolution 88-63)
- Pollutant Policy Document (Resolution 90-67)
- Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304 (Resolution 92-49)
- Policy for Regulation of Discharges of Municipal Solid Waste (Resolution 93-62)
- Consolidated Toxic Hot Spots Cleanup Plan (Resolutions 99-065 and 2004-0002)

- Nonpoint Source Management Plan & the Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program (Resolutions 99-114 and 2004-0030)
- Water Quality Enforcement Policy (Resolution 2002-0040)
- Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Resolution 2005-0019)
- Policy for Developing California's Clean Water Act Section 303(d) list (Resolution 2004-0063)
- Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options (Resolution. 2005-0050)
- Policy for Compliance Schedules in Nation Pollutant Discharge Elimination System Permits (Resolution 2008-0025)
- Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems (Resolution 2012-0032)

These policies and their relevance to the proposed water quality objectives and implementation plan are described in the following sections.

6.3.1 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan)

The State Water Board adopted the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan) which supersedes the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins to the extent of any conflicts. The Bay-Delta Plan includes water quality objectives for chlorides, dissolved oxygen and EC that supersede the water quality objectives in the Basin Plans to the extent of any conflict. The Central Valley Water Board is responsible for the regulation of waste discharges to achieve these objectives.

Staff proposes to amend the two Central Valley Basin Plans but not the Bay-Delta Plan to include implementation provisions for Variances From Surface Water Quality Standards for Point Source Dischargers, Variance Program for Salinity, and Exception from Application of Water Quality Objectives for Salinity. The implementation programs in the Basin Plans will be used to implement water quality standards contained in the Bay-Delta Plan.

6.3.2 Resolution 68-16: Statement of Policy with Respect to Maintaining High Quality of Water in California (Antidegradation Implementation Policy)

The Antidegradation Implementation Policy includes the following statements:

> "1. Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become

effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water, and will not result in water quality less than that prescribed in the policies.

"2. Any activity which produces or may produce a waste or increase volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet WDRs which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained."

This policy incorporates the Federal antidegradation standards for surface waters (Section 6.1.1). As discussed in Section 6.1.1 and 6.1.2, the proposed Basin Plan Amendments are consistent with both the federal and state antidegradation policies.

6.3.3 Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan)

The Thermal Plan specifies water quality objectives, effluent quality limits, and discharge prohibitions related to thermal characteristics of interstate waters and waste discharges. The Thermal Plan allows the regional water boards, with the concurrence of the State Board, in accordance with Clean Water Act section 316(a), to grant an exception from the specific water quality objectives contained in the plan. The proposed Basin Plan Amendments will not apply to temperature; therefore, the Thermal Plan is not applicable to the proposed Basin Plan amendments.

6.3.4 Resolution 74-43: Water Quality Control Policy for the Enclosed Bays and Estuaries of California

This policy was adopted by the State Water Board in 1974 and provides water quality principles and guidelines for the prevention of water quality degradation in enclosed bays and estuaries to protect the beneficial uses of such waters. The Regional Water Boards must enforce the policy and take actions consistent with its provisions. For the San Francisco Bay-Delta system, the policy requires implementation of a program which controls toxic effects through a combination of source control for toxic materials, upgraded waste treatment, and improved dilution of wastewaters to provide full protection to the biota and the beneficial uses of San Francisco Bay-Delta waters.

The proposed Basin Plan amendments affect non-toxic pollutants; therefore, this policy is not applicable to the proposed Basin Plan amendments.

6.3.5 Resolution 75-58: Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Powerplant Cooling

This policy provides consistent principles and guidance for supplementary WDRs or other water quality control actions for thermal powerplants using inland waters for cooling.

The policy prohibits land discharge except to salt sinks or lined facilities approved by the Regional and State Boards. The policy also requires that regional water boards adopt WDRs for discharges from powerplant cooling facilities which specify allowable mass emission rates and/or effluent concentrations and the water quality conditions to be maintained in the receiving waters.

The proposed Basin Plan amendments would not change the siting requirement for land disposal but could allow a variance from meeting the surface water quality objectives if the discharger successfully applies for a variance under the general variance authority. During the term of the variance, the WDRs will include an interim effluent limitation, and dischargers will be expected to develop and implement pollution prevention plans and work towards attaining the water quality standard for the water body as a whole. These variance conditions are similar to the requirements in the policy so the proposed Basin Plan amendments are consistent with this policy.

6.3.6 Resolution 77-1: Policy and Action Plan for Water Reclamation in California and Resolution 2009-0011: Policy for Water Quality Control for Recycled Water

These Policies establish consistent and predictable requirements in order to increase the use of recycled water in California. Resolution 2009-0011 establishes mandates for the use of recycled water; requires the development by stakeholders and the adoption by Regional Water Quality Control Boards of regional salt/nutrient management plans; establishes requirements for regulating incidental runoff from landscape irrigation with recycled water; establishes criteria and procedures for recycled water landscape irrigation projects eligible for streamlined permitting; establishes procedures for permitting groundwater recharge projects; establishes procedures for implementing State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California" for recycled water projects; requires the establishment of a scientific advisory panel to advise the State Water Board on regulation of constituents of emerging concern; and establishes actions and incentives to promote the use of recycled water.

The purpose of the proposed Basin Plan amendments is to allow time for the development of the salt and nitrate management plans called for in Resolution 2009-0011 through CV-SALTS. Therefore, the amendments are consistent and support the need to develop and use recycled water.

6.3.7 Resolution 87-22: Policy on the Disposal of Shredder Waste

This policy permits the disposal into certain landfills of wastes, produced by the mechanical destruction of car bodies, old appliances and similar castoffs, under specific conditions designated and enforced by the Regional Water Boards. The proposed amendments do not apply to shredder waste; therefore, this policy is not applicable to the proposed Basin Plan amendments.

6.3.8 Resolution 88-23: Policy regarding the Underground Storage Tank Pilot Program

This policy implements a pilot program to fund oversight of remedial action at leaking underground storage tank sites, in cooperation with the California Department of Health Services. Oversight may be deferred to the Regional Water Boards. The proposed Basin Plan amendments do not apply to the oversight of remedial actions at leaking underground storage tank sites; therefore, this policy is not applicable to the proposed Basin Plan amendments.

6.3.9 Resolution 88-63: Sources of Drinking Water Policy

This policy states that all waters of the state are to be protected as existing or potential sources of municipal and domestic supply water. The proposed amendments do not modify any of the beneficial uses of water so this Policy is not applicable to the proposed Basin Plan amendments.

6.3.10 Resolution 90-67: Pollutant Policy Document

This policy requires, in part, that the Central Valley and San Francisco Bay Water Boards use the Pollutant Policy Document (PPD) as a guide to update portions of their Basin Plans. The PPD requires that the Central Valley Water Board develop a Mass Emissions Strategy (MES) for limiting loads of pollutants from entering the Sacramento-San Joaquin Delta. The purpose of the MES is to control the accumulation in sediments and the bioaccumulation of pollutant substances in the tissues of aquatic organisms in accordance with the statutory requirements of the state Porter-Cologne Water Quality Act and the Federal Clean Water Act.

The pollutants of concern covered under this policy are toxic pollutants that are addressed by the CTR and the SIP. The proposed Basin Plan amendments

apply to pollutants that are not covered by the CTR and the SIP; therefore, this policy is not applicable to the proposed Basin Plan amendments.

6.3.11 Resolution 92-49: Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code Section 13304

This policy contains procedures for the Central Valley Water Board to follow for oversight of cleanup projects to ensure cleanup and abatement activities protect the high quality of surface and groundwater. The proposed Basin Plan amendments do not include any requirement for cleanup and abatement activities; therefore, this policy is not applicable to the proposed Basin Plan amendments.

6.3.12 Resolution 93-62: Policy for Regulation of Discharges of Municipal Solid Waste

This policy directs Regional Water Boards to amend WDRs for municipal solid waste landfills to incorporate pertinent provisions of the federal "Subtitle D" regulations under the Resource Conservation and Recovery Act (40 CFR Parts 257 & 258). The provisions address design of landfills and containment systems. Regional Water Boards have discretion to prescribe less stringent requirements when beneficial uses of ground water will not be affected. The proposed Basin Plan amendments allow a delay in meeting water quality objectives for salinity but do not change the beneficial uses. Therefore, this policy is not applicable to the proposed Basin Plan amendments.

6.3.13 Resolution 99-065 & Resolution 2004-0002: Consolidated Toxic Hot Spots Cleanup Plan

In June 1999, the State Water Board adopted the Consolidated Toxic Hot Spots Cleanup Plan (Cleanup Plan), as required by California Water Code section 13394. The Regional Water Board Toxic Hot Spots Clean-up Plan identified the following hot spots in the Central Valley:

- Mercury in the entire Delta and the Cache Creek watershed including Clear Lake
- Low dissolved oxygen concentrations in the San Joaquin River in the vicinity of the City of Stockton
- Diazinon from orchard dormant spray runoff in the entire Delta
- Diazinon and chlorpyrifos from urban stormwater runoff in Morrison Creek in the City of Sacramento and Mosher Slough, 5 Mile Slough, the Calaveras River, and Mormon Slough in the City of Sacramento
- Chlorpyrifos from irrigation tailwater in French Camp Slough, Duck Slough, Paradise Cut and Ulatis Creek.

Water Code section 13395 requires the reevaluation of WDRs for dischargers who have discharged pollutants causing all or part of the toxic hot spot to include requirements that prevent the maintenance or further pollution of existing hot spots.

The proposed Basin Plan amendments allow permittees to apply for a variance from water quality based effluent limitations for non-priority pollutants. Mercury is a priority pollutant and a variance for mercury will not be part of the Regional Board's authority. However, dissolved oxygen, diazinon and chlorpyrifos are not priority pollutants so permittees will be able to apply for a variance from meeting water quality based effluent limitations for these constituents. However, the permittee will be required to demonstrate that meeting the water quality based effluent limitation is infeasible based on one or more of the factors listed in 40 Code of Federal Regulations section 131.10(g) and the permit will include an interim effluent limitation that is determined to be attainable during the permit term, a requirement to prepare a pollution prevention plan, and appropriate conditions requiring reasonable progress be made towards attaining the water quality standard for the waterbody as a whole. The proposed variance requirements are consistent with the concept of preventing the maintenance or further pollution of existing hot spots; therefore, the proposed Basin Plan amendments are consistent with this policy.

6.3.14 Resolution 99-114 & Resolution 2004-0030: Nonpoint Source Management Plan & the Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program

In December 1999, the State Water Board adopted the Plan for California's Nonpoint Source (NPS) Pollution Control Program (NPS Program Plan) and in May 2004, the State Water Board adopted the Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program (NPS Policy). The NPS Policy explains how State and Regional Water Boards will use their planning and waste discharge regulation authority under the Porter-Cologne Act to implement and enforce the NPS Program Plan. The NPS Policy requires all nonpoint source discharges to be regulated under WDRs, waivers of WDRs, a Basin Plan prohibition, or some combination of these administrative tools. The NPS Policy also describes the key elements that must be included in a nonpoint source implementation program.

Nonpoint source dischargers are not subject to NPDES permits; therefore, the variance provisions in the proposed Basin Plan amendments will not apply for these dischargers. However, the proposed Basin Plan amendments provide a procedure for obtaining an exception from applying water quality objectives for salinity in WDRs and conditional waivers. Since this policy requires that nonpoint source dischargers be regulated under WDRs, waivers of WDRs or Basin Plan Prohibitions but does not specify requirements to be included, the policy does not apply to the proposed Basin Plan amendments.

6.3.15 Resolution 2002-0040: Water Quality Enforcement Policy

The State Water Board adopted this policy to ensure enforcement actions are consistent, predictable, and fair. The policy creates a framework for identifying and investigating instances of noncompliance, for taking enforcement actions that are appropriate in relation to the nature and severity of the violation, and for prioritizing enforcement resources to achieve maximum environmental benefits.

The proposed Basin Plan amendments allow a short term exception from meeting water quality based effluent limits for non-priority pollutants. During the term of the exception, interim effluent limits will apply. Violation of the interim effluent limits would result in enforcement actions as directed by this policy. Therefore, the proposed Basin Plan amendments are consistent with this policy.

6.3.16 Resolution 2005-0019: Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California

The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (a.k.a. State Implementation Plan or SIP) applies to discharges of toxic pollutants into the inland surface waters, enclosed bays, and estuaries of California subject to regulation under the Porter-Cologne Water Quality Control Act and the Federal Clean Water Act. Regulation of priority toxic pollutants may occur through the issuance of National Pollutant Discharge Elimination System (NPDES) permits or other regulatory approaches. The goal of the SIP is to establish a statewide, standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters. The State Water Board also developed procedures for case-by-case exceptions from meeting a priority pollutant criterion/objective. The State Water Board procedures recognized that USEPA would independently review the exception request so the procedures included steps that USEPA would need but were not necessary for the State's review. The procedures have a specific application requirement.

The SIP applies to priority pollutants while the proposed Basin Plan amendments apply to non-priority pollutants. Therefore, the SIP does not apply to the proposed Basin Plan amendments.

6.3.17 Resolution 2004-0063: Policy for Developing California's Clean Water Act Section 303(d) List

Pursuant to the Water Code section 13191.3(a), this State policy for water quality control describes the process by which the State Water Board and the Regional Water Boards will comply with the listing requirements of Clean Water Act section 303(d). The Listing Policy establishes a standardized approach for developing California's section 303(d) list to achieve water quality standards and

maintain beneficial uses in all of California's surface waters. The Listing Policy applies only to the listing process methodology used to comply with Clean Water Act section 303(d).

Clean Water Act section 303(d) requires states to identify waters that do not meet, or are not expected to meet by the next listing cycle, applicable water quality standards after the application of technology-based controls specified in sections 301(b)(1)(A) and 301(b)(1)(B) of the Clean Water Act and schedule such waters for development of Total Maximum Daily Loads (40 CFR § 130.7(c) and (d)).

The proposed Basin Plan amendments consist of a policy to allow variances from meeting water quality based effluent limitations. The proposed amendments do not change any water quality standards or their interpretation for purposes of identifying waters that do not meet, or are not expected to meet the applicable water quality standards by the next listing cycle. However, the proposed Basin Plan amendments will impose permit requirements that may improve the quality of the effluent discharge and water quality in the receiving water body as a whole. Consistent with this policy, any improvements in water quality will need to be considered in determining if the waters will or will not meet the applicable water quality standards by the next listing cycle. Therefore, the proposed Basin Plan amendments are consistent with this policy.

6.3.18 Resolution 2005-0050: Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options

The State Water Board's Impaired Waters Policy incorporates the following:

- Clean Water Act section 303(d) identification of waters that do not meet applicable water quality standards and prioritization for TMDL development;
- Water Code section 13191.3(a) requirements to prepare guidelines to be used by the Regional Water Boards in listing, delisting, developing, and implementing TMDLs pursuant to Clean Water Act section 303(d); and
- Water Code section 13191.3(b) requirements that State Water Board considers consensus recommendations adopted by the 2000 Public Advisory Group when preparing guidelines.

The Impaired Waters Policy includes the following statements:

> "A. If the water body is neither impaired nor threatened, the appropriate regulatory response is to delist the water body.
>
> B. If the failure to attain standards is due to the fact that the applicable standards are not appropriate to natural conditions, an appropriate regulatory response is to correct the standards.

C. The State Water Board and Regional Water Boards are responsible for the quality of all waters of the state, irrespective of the cause of the impairment. In addition, a TMDL must be calculated for impairments caused by certain EPA designated pollutants.

D. Whether or not a TMDL calculation is required as described above, impaired waters will be corrected (and implementation plans crafted) using existing regulatory tools.

D1. If the solution to an impairment will require multiple actions of the Regional Water Board that affect multiple persons, the solution must be implemented through a Basin Plan amendment or other regulation.

D2. If the solution to an impairment can be implemented with a single vote of the Regional Water Board, it may be implemented by that vote.

D3. If a solution to an impairment is being implemented by a regulatory action of another state, regional, local, or federal agency, and the Regional Water Board finds that the solution will actually correct the impairment, the Regional Water Board may certify that the regulatory action will correct the impairment and if applicable, implement the assumptions of the TMDL, in lieu of adopting a redundant program.

D 4. If a solution to an impairment is being implemented by a non-regulatory action of another entity, and the Regional Water Board finds that the solution will actually correct the impairment, the Regional Water Board may certify that the non-regulatory action will correct the impairment and if applicable, implement the assumptions of the TMDL, in lieu of adopting a redundant program."

The proposed Basin Plan amendments allow a temporary variance from meeting water quality based effluent limitations but it does not change the impairment status of a water body, or the need to address the impairment. However, the proposed Basin Plan amendments will provide a new regulatory tool that may be used in the programs that implement TMDLs. Therefore, the proposed Basin Plan amendments are consistent with this policy.

6.3.19 Resolution 2008-0025: Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits

The *Compliance Schedule Policy* authorizes the Regional Water Board to include a compliance schedule in a permit for an existing discharger to implement a new, revised, or newly interpreted water quality objective or criterion in a water quality standard that results in a permit limitation more stringent than the limitation previously imposed.

The proposed Basin Plan amendments recognize these constraints and establish policy and procedures for situations that are not subject to compliance schedules. Therefore the *Compliance Schedule Policy* is not applicable to the proposed Basin Plan amendments.

6.3.20 Resolution 2012-0032: Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems

This policy allows the continued use of onsite wastewater treatment systems (OWTS) while protecting water quality and public health. The policy establishes a statewide, risk-based, tiered approach for the regulation and management of OWTS installations and replacements and sets the level of performance and protection expected from OWTS. One of the tiers is based on water body impairment due to pathogens or nitrogen.

The proposed Basin Plan amendments allow dischargers the ability to apply for a variance for NPDES dischargers and an exception from application of water quality objectives for salinity for dischargers subject to WDRs. Therefore the policy is not applicable to the proposed Basin Plan amendments.

6.4 Consistency with Central Valley Regional Water Quality Board Policies

The following are the Central Valley Water Board policies:

- Urban Runoff Policy
- Wastewater Reuse Policy
- Controllable Factors Policy
- Water Quality Limited Segment Policy
- Antidegradation Implementation Policy
- Application of Water Quality Objectives Policy
- Watershed Policy

These policies are identified as specific policies in the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins but are included in text in the Water Quality Control Plan for the Tulare Lake Basin. These policies and their relevance to the proposed implementation plan are described in the following sections.

6.4.1 Urban Runoff Policy

The policy requires the issuance of WDRs on the discharge of urban runoff when a threat to water quality exists.

The proposed Basin Plan amendments do not change the need to assess the water quality impacts of urban runoff or to address identified water quality impacts but the proposed Basin Plan amendments provide a procedure to allow a variance from meeting water quality based effluent limits in NPDES permits or a short term exception from application of water quality objectives for salinity in WDRs. During the term of a variance or the exception, dischargers will be expected to develop and implement pollution prevention programs and to work towards achieving the water quality standards in the water body as a whole. Therefore the proposed Basin Plan amendments are consistent with this policy.

6.4.2 Wastewater Reuse Policy

This policy encourages reclamation and reuse of wastewater by requiring an evaluation of reuse and land disposal options as part of a Report of Waste Discharge. In the Water Quality Control Plan for the Tulare Lake Basin, there is an additional requirement to regulate the quality of waste discharges to promote reclamation and reuse wherever feasible.

The proposed Basin Plan amendments allow a short-term exception from meeting water quality based effluent limits and from meeting salinity effluent limits and application procedures are provided for obtaining the exception. The proposed Basin Plan amendments do not change any of the requirements in a Report of Waste Discharge. In addition, the purpose of the proposed Basin Plan amendments is to allow time for CV-SALTS to develop the salt and nitrate management plans required by the Recycled Water Policy as discussed in Section 6.3.6. Therefore, the Basin Plan amendments are consistent with the Wastewater Reuse Policy and support the need to develop and use recycled water.

6.4.3 Controllable Factors Policy

This policy specifies that controllable water quality factors are not allowed to cause further degradation of water quality in instances where other factors have already resulted in water quality objectives being exceeded. The policy goes on to define controllable water quality factors as those actions, conditions, or circumstances resulting from human activities that may influence the quality of the waters of the State, that are subject to the authority of the State Water Board or Central Valley Water Board, and that may be reasonably controlled.

The proposed Basin Plan amendments provide provisions for controllable sources to obtain a short-term exception from meeting water quality based effluent limits and salinity effluent limits. The proposed provisions include application requirements for the discharger to demonstrate that additional

treatment cannot be reasonably controlled. Therefore, the proposed Basin Plan amendments are consistent with the Controllable Factors Policy.

6.4.4 Water Quality Limited Segment Policy

This policy specifies that additional treatment beyond minimum federal requirements will be imposed on dischargers to Water Quality Limited Segments. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.

The proposed Basin Plan amendments allow the Central Valley Water Board to grant a variance from meeting water quality based effluent limitations if the permittee demonstrates that a variance is appropriate based on at least one of the factors listed in 40 Code of Federal Regulations section 131.10(g). Under the variance policy, the permit will include interim effluent limitations based on the current achievable effluent quality and development and implementation of a pollution prevention plan to reduce the effluent concentrations of the pollutant. Under the salinity variance program, the permit will include interim effluent limitations based on the current achievable effluent quality and implementation of a salinity reduction study workplan. The proposed Basin Plan amendments also allow the time for development of waste load allocations applicable to the discharger so that the discharger will be able to plan and implement additional treatment in an efficient manner. Therefore, the proposed Basin Plan amendments are consistent with this policy.

6.4.5 Antidegradation Implementation Policy

Consistency of the proposed Basin Plan Amendments with the federal and state antidegradation policies is discussed in Section 6.1.

6.4.6 Application of Water Quality Objectives Policy

This policy describes how the Central Valley Water Board applies the water quality objectives established in the Basin Plans and how compliance is evaluated.

The proposed Basin Plan amendments do not change the applicability of water quality objectives nor how compliance is evaluated. Therefore, the policy is not applicable to the proposed Basin Plan amendments.

6.4.7 Watershed Policy

This policy describes the Central Valley Water Board's support for a watershed based approach to addressing water quality problems.

The proposed Basin Plan amendments provide for a short-term exception from meeting water quality based effluent limits and salinity effluent limits. During the term of the exception, dischargers will be expected to work towards achieving the water quality standards for the water body as a whole. Therefore the proposed Basin Plan amendments are consistent with this policy by requiring consideration of the watershed and not just the point of discharge.

7 ENVIRONMENTAL ANALYSIS

7.1 Environmental Impacts of the Proposed Project

The environmental impacts for the proposed project (i.e., the proposed Basin Plan Amendments) are discussed in Appendix A, Environmental Checklist. Based on the environmental evaluation, the proposed Basin Plan Amendments and the reasonably foreseeable means of compliance will not result in any significant environmental impacts, and no mitigation measures are proposed.

7.2 Reasonable Foreseeable Methods of Compliance

The Central Valley Water Board is required to perform, at the time it adopts a rule or regulation requiring the installation of pollution control equipment, or a performance standard or treatment requirement, an environmental analysis of the reasonable foreseeable methods of compliance. (Pub. Res. Code, § 21159.)

The proposed Basin Plan amendments will allow dischargers an opportunity to delay implementation of treatment measures for a short period of time; therefore, the proposed Basin Plan amendments do not require and it is not reasonably foreseeable that the proposed Basin Plan amendments would require the installation of pollution control equipment. On the other hand, in the absence of the proposed Basin Plan amendments, dischargers that would have successfully applied for either a salinity variance or a salinity exception would not have a variance or an exception and would need to start investigating treatment technology to meet effluent limits for salinity.

8 ECONOMIC CONSIDERATIONS

There are three requirements for the Board to consider economics when adopting a basin plan amendment. The first requirement is in Water Code section 13241(d) which requires that the Board consider economics when establishing water quality objectives. The second requirement is Water Code section 13141 which requires that prior to implementation of any agricultural water quality control program, the Board must have an estimated cost of such a program, together with an identification of potential sources of funding, be included in the basin plan. The third requirement is Public Resources Code section 21159 which requires the Board, when adopting an amendment that will require the installation of pollution control equipment or is a performance standard or treatment requirement, to include an environmental analysis of the reasonably foreseeable methods of compliance. This environmental analysis is required to take into account a reasonable range of environmental, economic, and technical factors, population and geographic areas, and specific sites.

The proposed Basin Plan amendments allow dischargers to continue the current discharge without additional treatment that would otherwise be required. The proposed amendments do not include water quality objectives, do not implement an agricultural water quality control program, nor require any additional treatment as a reasonably foreseeable method of compliance. Therefore, the Central Valley Water Board is not required to consider economics when considering the proposed Basin Plan amendment. However, the Board has compiled the estimated costs to the cities used as case studies if the cities implemented reverse osmosis technology. (LWA. 2012., pp. 53-55, 71-73.)

City	***Order No.***	***Facility Design Flow***	***Cost ($ Millions)***
City of Tracy	R5-2012-0115	10.8 mgd	166
City of Stockton	R5-2008-0154	55.0 mgd	523
City of Manteca	R5-2009-0095	9.9 mgd	99
City of Fresno	R5-2001-0254	88.0 mgd	777

An impact of allowing salinity variances could be increased salinity in water exported out of the Sacramento-San Joaquin Delta. A 1999 study estimated that the Metropolitan Water District Service Area would realize an economic benefit of $95 million annually if the salinity of the imported water decreased by 100 mg/l. (Bookman-Edmonston. 1999.) Without the proposed Basin Plan amendments, the case study cities would need to meet water quality based effluent limitations that would have resulted in estimated salinity reductions within the vicinity of the

discharge that range from 1 to 18 µmhos/cm (0.31% to 2.68%). However, modeling indicated that the effect decreased with distance from the discharge point and there would be no detectable change to EC at the compliance points identified in the Bay-Delta Plan (Old River at Middle River and San Joaquin River at Brandt Bridge). Therefore, the water purveyors that withdraw water from the Delta would realize no economic benefit regardless of whether or not the proposed Basin Plan amendments go forward. (LWA. 2012., pp. 23-37.)

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APPENDIX A

ENVIRONMENTAL CHECKLIST

Environmental Checklist

California Environmental Quality Act Requirements

The Central Valley Regional Water Quality Control Board (Central Valley Water Board or Board), as a Lead Agency under the California Environmental Quality Act (CEQA), is responsible for evaluating all the potential environmental impacts that may occur due to changes made to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins and to the Water Quality Control Plan for the Tulare Lake Basin (Basin Plans). (Pub. Resources Code, §21000 et seq.) The Secretary for Natural 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's Basin Planning process needs only to comply with abbreviated CEQA requirements. The Staff Report and this Checklist satisfy the requirements of State Water Board's Regulations for Implementation of CEQA, Exempt Regulatory Programs, which are found at California Code of Regulations, title 23, section 3775 et seq.

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 to add Policies for Variances From Surface Water Quality Standards for Point Source Dischargers, Variance Program for Salinity, and Exception from Application of Water Quality Objectives for Salinity

2. Lead agency name and address:

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

3. Contact person and phone number:

Betty Yee, Senior Water Resources Control Engineer
916-464-4643

4. Project location:

The Central Valley which comprises all basins including the Goose Lake Basin and the Tulare Lake Basin draining into the Sacramento and San Joaquin Rivers to the easterly boundary of the San Francisco Bay near Collinsville.

5. Description of project:

The project is the adoption of policies for variances from surface water quality standards for point source dischargers, variance program for salinity, and exception from application of water quality objectives for salinity. The variance policy will allow the Central Valley Water Board the authority to grant short term exceptions from meeting water quality based effluent limitations to dischargers subject to National Pollutant Discharge Elimination System (NPDES) permits. The policy will only apply to non-priority pollutants.

The salinity variance program will allow the Central Valley Water Board the authority to grant variances from meeting water quality based effluent limitations for salinity constituents to publicly owned treatment works (POTWs). The salinity exception program will establish procedures for dischargers that are subject to waste discharge requirements (WDRs) to obtain a short term exception from meeting effluent or groundwater limits for salinity constituents. The salinity variance program and the salinity exception program are necessary because NPDES permits and WDRs are being adopted with salinity limits that dischargers cannot meet without the addition of expensive reverse osmosis treatment technology. At this time, there are planning processes by the Central Valley Salinity Alternative for Long-Term Sustainability (CV-SALTS) to develop a comprehensive salt and nutrient management plan for the Central Valley and by the State Water Board to review the salinity objectives in the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary. These planning processes may change the water quality objectives applicable to dischargers that are currently facing additional treatment requirements. So there is a need to set permit limits at a level that protects water quality but does not compel the irretrievable commitment of major resources in advance of the completion of these planning processes.

Since the project allows dischargers an opportunity to delay implementation of treatment measures for a short period of time, there is no reasonably foreseeable need for the installation of pollution control equipment.

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.

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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the dischargers will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. Except for water supply replacement, none of these measures will result in any visual changes to the environment. Evaluation of water supply replacement projects is speculative at this time since the proposed project does not require water supply replacement. Dischargers that implement water supply replacement projects will need to conduct a separate environmental review to identify project specific significant environmental impacts and to incorporate any necessary measures to avoid, reduce, or mitigate for any identified significant environmental impacts. The proposed project will have no effect on aesthetics.

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?	☐	☐	☐	☒
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	☐	☐	☐	☒

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the dischargers will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. Dischargers will not need to encroach on any land currently used for agriculture or forestry to conduct any of these measures; therefore, the proposed project will have no effect on agricultural or forestry resources.

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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the dischargers will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. Except for water supply replacement, none of these measures will result in any air quality changes to the environment. Water supply replacement projects may result in construction of pipelines and other conveyance facilities and water treatment plants that may adversely affect air quality. Evaluation of water supply replacement projects is speculative at this time since the proposed project does not require water supply replacement. Dischargers that implement water supply replacement projects will need to conduct a separate environmental review to identify project specific significant environmental impacts and to incorporate any necessary measures to avoid, reduce, or mitigate for any identified significant environmental impacts. The proposed project will have no effect on air quality.

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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the dischargers will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. Other than water supply replacement, none of these measures will result in any change to biological resources. Water supply replacement may redirect stream flows that would leave less water for in-stream habitat. Evaluation of water supply replacement projects is speculative at this time since the proposed project does not require water supply replacement. Dischargers that implement water supply replacement projects will need to conduct a separate environmental review to identify project specific significant environmental impacts and to incorporate any necessary measures to avoid, reduce, or mitigate for any identified significant environmental impacts. The proposed project will have no effect on biological 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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the dischargers will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. None of these measures will result in any change to cultural resources.

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?	☐	☐	☐	☒

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the dischargers will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. None of these measures will expose people or structures to earthquakes, seismic ground shaking, landslides nor will they cause soil erosion. Therefore, the proposed project will have no effect on geology or soils.

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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the dischargers will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement.

However, if the proposed project does not go forward, some dischargers may need to implement end-of-pipe treatment or reverse osmosis of the effluent. Reverse osmosis is typically very expensive, energy intensive and results in a brine (10 to 20 percent of the waste stream) that must be properly disposed. The energy consumption of reverse osmosis and the brine waste stream are environmental impacts that must be considered when planning and designing reverse osmosis. (SWRCB. 2005., p 12.) LWA 2012 estimated the amount of carbon dioxide emissions that would result if the cities of Tracy, Stockton, Manteca and Fresno implemented reverse osmosis technology. Based on 2011 US Census Data (USCENSUS. 2011.), the per capita emissions are as shown in the following table:

City	*Estimated Annual CO2 Emissions to Implement Reverse Osmosis Technology (LWA. 2012)*	*Population (2011 US Census data)*	*Estimated Annual CO2 Emissions per capita*
City of Tracy	17,554	84,266	0.21
City of Stockton	55,318	296,357	0.19
City of Manteca	10,938	68,254	0.16
City of Fresno	51,040	598,291	0.09

California law (Health and Safety Code section 38500 et. Seq.) requires reduction in greenhouse gas emission to 1990 levels by 2020 and the California Air Resources Board determined that this means Californians must reduce the annual per capita emissions from 14 tons of carbon dioxide equivalent down to about 10 tons by 2020. (CARB. 2008., p. ES-1.) While the increased emissions from implementation of reverse osmosis are very small, they are increases and are, therefore, inconsistent with the need to reduce carbon dioxide emissions.

The proposed project is not expected to generate greenhouse gas emissions nor conflict with any plans to reduce emissions of greenhouse gases. In addition, the proposed project avoids increasing greenhouse gas emissions.

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 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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the dischargers will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. None of these measures will result in any hazardous waste nor will any of these measures present a hazard to people.

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?	☐	☐	☒	☐
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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the discharger will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. The purpose of a variance or an exception is authorize a short term change

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT

in water quality objectives for a specific discharger so that waste discharge requirements, conditional waivers, and NPDES permits may be adopted in compliance with water quality standards. The proposed project will have no effect on groundwater supplies, drainage, runoff or flood patterns.

The variance or the exception may result in continued water quality degradation during the term of the variance if the discharger was degrading water quality preceding the application for the variance or exception. Dischargers that cannot comply with current effluent limits will be eligible to apply for a variance or an exception which will include conditions to maintain the current effluent quality so additional impacts and water quality degradation will not occur. The variance or exception will include interim performance based limits and will require development and implementation of a pollution prevention plan which may improve the quality of the effluent during the term of the variance or exception.

To provide information on potential water quality degradation, discharges from four municipal wastewater treatment facilities were analyzed. As shown in a technical memorandum from Larry Walker and Associates (2012., pp. 23-37, 46-47), for discharges to surface waters, modeling of receiving water quality, both near the point of discharge and downstream, that would result from the discharge indicates that the impacts to ambient water quality are imperceptible. A simple model on the impact to groundwater from a land discharger shows that the discharge will eventually be better quality than the background water quality so the impact to ambient groundwater is minimal. (LWA. 2012., pp. 37-46, 47) Therefore, the proposed project is expected to have less than significant impact on water quality.

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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the discharger will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. The proposed project will not divide a community, conflict with any land use plan nor will it conflict with a natural community conservation plan.

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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the discharger will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT

include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. The proposed project will have no effect on mineral resources.

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 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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the discharger will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. Except for water supply replacement, none of these measures will result in any change to noise levels in the environment. Water supply replacement projects may result in construction of pipelines and other conveyance facilities and water treatment plants that may increase noise levels. Evaluation of water supply replacement projects is speculative at this time since the proposed project does not require water supply replacement. Dischargers that implement water supply replacement projects will need to conduct a separate environmental review to identify project specific significant environmental impacts and to incorporate any necessary measures to avoid, reduce, or mitigate for any identified significant environmental impacts. The proposed project will have no effect on noise levels.

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)?	☐	☐	☐	☒

ISSUES	*POTENTIALLY SIGNIFICANT IMPACT*	*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED*	*LESS THAN SIGNIFICANT IMPACT*	*NO IMPACT*
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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the discharger will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. The proposed project will have no effect on population growth nor will it displace any people.

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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the discharger will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. The proposed project will have no effect on public services.

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	☐	☐	☐	☒

ISSUES	POTENTIALLY SIGNIFICANT IMPACT	LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED	LESS THAN SIGNIFICANT IMPACT	NO IMPACT
might have an adverse physical effect on the environment?				

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the discharger will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. The proposed project will neither increase use of recreational facilities nor does it include any new or expansion of existing facilities.

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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the discharger will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. The proposed project will have no effect on transportation systems nor will it change traffic pattern or conflict with any plans regarding public transit or bicycle or pedestrian facilities.

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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the discharger will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. The purpose of a variance or an exception is authorize a short term change in water quality objectives for a specific discharger so that NPDES permits and waste discharge requirements may be adopted in compliance with water quality standards. During the term of the variance, dischargers will not need to construct new or expand existing treatment facilities to reduce or eliminate the constituents for which a variance is granted. Therefore, the proposed project will have no effect on water supplies, wastewater treatment capacity or solid waste.

ISSUES	*POTENTIALLY SIGNIFICANT IMPACT*	*LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED*	*LESS THAN SIGNIFICANT IMPACT*	*NO IMPACT*
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.				
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?	☐	☐	☐	☒

The proposed project would allow the Central Valley Water Board the authority to grant a variance or an exception from meeting certain effluent limits. During the term of the variance or exception, the discharger will not need to add additional treatment technology but will be expected to develop and implement a pollution prevention plan which may include measures such as industrial pretreatment, residential water softener control, facility upgrades (i.e. operational changes), and water supply replacement. The proposed project will have no impact on the environment except for a potentially less than significant impact to water quality which is described in more detail in section IX of this checklist. Dischargers that are granted variances or exception will be required to meet an interim performance based limitations and to develop and implement pollution prevention plans that may improve the quality of the effluent during the term of the variance or exception. These conditions will assure that any potential impacts are insignificant and will not be cumulatively considerable nor have effects that will cause substantial effects on human beings.

Preliminary Staff Determination

On the basis of this evaluation and staff report, which collectively provide the required information:

☒ The proposed project COULD NOT have a significant effect on the environment, and, therefore, no alternatives or mitigation measures are proposed.

☐ The proposed project MAY have a significant or potentially significant effect on the environment, and therefore alternatives and mitigation measures have been evaluated.

PAMELA C. CREEDON
Executive Officer
California Regional Water Quality Control Board
Central Valley Region

DATE

Note: Authority cited: Section 21082, Public Resources Code. Reference: Sections 21080(c), 21080.1, 21080.3, 21080.5, 21082.1, 21083, 21083.05, 21083.3, 21093, 21094, 21151, Public Resources Code; *Sundstrom v. County of Mendocino*, 202 Cal.App.3d 296 (1988); and *Leonoff v. Monterey Board of Supervisors*, 222 Cal.App.3d 1337 (1990).

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APPENDIX B

REGULATORY OPTIONS

Evaluation of Alternative Regulatory Options

An assessment of various alternative regulatory strategies is needed to chart a course of action. The preferred option must go into effect before the comprehensive salt and nitrate management plan for the Central Valley under development by the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is adopted and preferably as soon as possible (the goal is to complete this strategy in two years), it must be region-wide, and it must address all the compliance issues with salinity constituents. The preferred option should also support development of CV-SALTS. The following pro/con analysis matrix provides a starting point for that assessment. All alternatives will require a basin plan amendment.

Pro/Con Analysis

Alternative	Pro	Con	Timeline & Example
Policy allowing offsets	• Salts reduction projects are available as offset projects • Offset program may create incentives for early projects that reduce salt levels • Early projects can provide knowledge and opportunities to inform CV-SALTS planning and implementation effort • Precedent exists: Santa Ana Water Board Basin Plan incorporates offset concept in its salt management/ implementation plan • Would apply region-wide	• Ability to be developed and approved likely extends beyond the desired two year time frame • Ambiguity whether participation in CV-SALTS and other activities can qualify as an offset project • Complexity of offset program features – amount of credit, certainty of credit, duration of credit, etc. can hinder program development • Unlikely to be adopted in a short time frame since offsets are controversial and will require a great deal of evaluation • Uncertain whether it will address all compliance issues	• Santa Ana Water Board Offset Policy

Variance	• Directly addresses the regulatory issues (need for final effluent limits) by providing a variance to the implementation of the adopted objectives • May be possible within the two year time frame • Addresses both State and federal regulatory constraints • If approved, solution would be unambiguous • USEPA guidance exists • Would apply region-wide • Sufficient information is available to process amendments in two years.	• Durability is concern, since variances must be re-approved at set (e.g. 5 year) intervals – future outcomes unknown • Requires studies and findings to address the same factors necessary for Use Attainability Analyses • Experience with variances in California is limited/poor • Has not been done at a regional board level	• USEPA has approved variances for the Great Lakes states • SIP Case-by-Case Exception
TMDL in Old River	• Would address significance of POTW salt loadings in watershed context • Could lead to wasteload allocation that would resolve compliance problem for Tracy • Could establish framework for offsets • Might be able to process a basin plan amendment for a TMDL for Old River in two years.	• Wouldn't necessarily solve problem, depending on outcome of wasteload allocation • Only addresses one water body and one discharger. Multiple TMDLs for other watersheds may be required to address various permit situations • Since waste contributions are not the sole cause of the salinity impairment	• TMDL for Salt and Boron at Vernalis

	• May be able to assign waste load allocations that address compliance issues.	in the Delta, it is not certain if State Water Board will approve waste load allocations that do not attain the water quality standards.	
Site-specific water quality objectives	• Would address both state and federal issues • Precedent for approval by State and USEPA • Hoffman and Grattan studies provide framework for development of SSOs • Water quality objectives could be established region-wide	• Complicated, overlaps ongoing Bay-Delta planning efforts as well as CV-SALTS • Controversial, with many interested parties • Insufficient information is available to establish water quality objectives, CV-SALTS is currently gathering and assessing salinity information for this purpose. • Dischargers may still be unable to meet effluent limits based on revised water quality objectives • Multiple basin plan amendments may be needed and all amendments could not be completed in two years.	• SSOs for temperature, pH and turbidity in Deer Creek • Regionwide WQOs for pH and turbidity
CV-SALTS	• Will address salinity management issue in holistic, pragmatic context • Will be a long term plan • Will likely be supported by diverse group of stakeholders	• Cannot be developed within an acceptable time frame • Outcome uncertain • CV-SALTS is the long-term planning process for which interim solutions need to be	• Santa Ana Water Board Basin Plan

	• Process is region-wide	developed in the meantime.	

In addition to the above alternatives suggested by the SWRCB, the following alternatives merit at least preliminary consideration:

Alternative	Pro	Con	Example & Timeline
WQ Standards Implementation such as Mixing Zones, Point of Application	• Approvable under USEPA regulation 40 CFR 131.13. • Applicable region-wide • Most likely can be adopted and put into effect quickly	• Part of CV-SALTS so it would be duplicative to develop these strategies now. • May not address all the compliance issues.	
Use De-Designation	• Approvable under 40 CFR 131.10 • Could demonstrate that attainment of use/objectives in Old River not feasible • Can be completed in a short time frame if information supporting de-designation is readily available.	• May not be able to justify removing uses • Solution to compliance issue uncertain • May not be able to be completed in the desired time frame due to complicated technical analysis • AGR and MUN are existing uses that may not be de-designated. • AGR de-designation has never been done and might be very controversial. • Addresses one water body at a time.	• Old Alamo Creek • Sulphur Creek

APPENDIX C

CONSERVATION, DROUGHT, AND WATER RECYCLING

CONSERVATION

The State has a general policy to conserve water (Wat. Code §100). Consistent with that policy, in 2008, the Governor called upon the State agencies to develop a water conservation plan to achieve a 20 percent reduction in per capita water use statewide by 2020. The Legislature supported this goal with the Water Conservation Act of 2009.

Indoor water conservation generally reduces the amount of water that is used. However, the waste loads remain the same. With less water to dilute the waste loads, concentrations of waste constituents are expected to increase with increased conservation. A 1999 study mentions that long-term indoor water conservation measures increase salinity concentrations of residential wastewater by 2 to 5 percent. (Bookman-Edmonston. 1999., pp. 2-7.)

The state agencies completed the *20x2020 Water Conservation Plan* in February 2010. (California. 2010.) The focus of this effort was urban water use. The 20x2020 Water Conservation Plan contains regional targets based on the potential for conservation in each region from water use in 2005. For the Central Valley, the targets are approximately 33 percent reduction per capita. Urban water use is a mix of indoor and outdoor water use. In the Central Valley, about 30 percent of the targeted reductions are expected to come from indoor water use. Therefore, by 2020, the amount of indoor water use could be reduced by 10 percent and a commensurate increase in waste concentrations, specifically salinity, can be expected.

DROUGHT

During periods of drought, residents are called upon to reduce water use. In some cases, due to the lack of water supply, residents have achieved extraordinary reductions in water use. Excepting the most extraordinary examples of reductions in water use, the waste loads generated by residents remain the same. The end result, similar to conservation efforts, is increased waste concentrations. During droughts, urban water agencies have achieved water use reductions in the 20-30 percent range. Some suppliers achieved water use reductions in the 45-50 percent range. (DWR. 2012.)

Historical multi-year droughts affecting Northern California, the source of much of the State's water supply, include: 1912-13, 1918-20, 1923-24, 1929-34, 1947-50, 1959-61, 1976-77, and 1987-92. (DWR. 2000. Page 9.) The latest drought occurred from 2008-11. Droughts in California cannot be predicted but based on the historical occurrences; it is possible for a drought to occur during any single permit term and likely to occur in two permit terms.

An additional concern with respect to wastewater effluent quality is the situation where a municipality uses surface water under appropriative water rights during

wet years but must resort to poorer quality groundwater during dry years. Appropriative water rights are based on seniority. During periods of drought, there may be insufficient water to satisfy all the right holders and the most recent ("junior") right holder must be the first to discontinue use. (SWRCB. 2002.) In this case, the water quality improvements that occurred with the use of surface water will be lost and the water quality will revert to the quality resulting from the use of groundwater for the municipal supply.

WATER RECYCLING

Water recycling can increase salinity of the effluent if the recycled water re-enters the sewage system. Usually, recycling is outdoor water use and does not re-enter the sewage system but might indirectly discharge to the receiving water if the recycled water is used in the watershed or drainage area of the receiving water. Recycled water more likely will reduce salinity of the receiving water because the recycled water, with its salt load, is not going to be discharged to the receiving water. For dischargers that recycle water, it may be demonstrated that increased salinity concentration in the effluent will not have an adverse effect on the receiving water because a salt load has been diverted for recycling. The increased salinity concentration could become the effluent limit if the discharger demonstrates the same or better quality receiving water.

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APPENDIX D

WASTEWATER DISCHARGERS WITH NPDES PERMITS

Appendix D is an Excel spreadsheet with a compilation of salinity requirements for municipal and domestic point source dischargers with National Pollutant Discharge Elimination System (NPDES) permits. The information was compiled from Central Valley Water Board NPDES permits as of December 2011. The information was compiled to provide an overview of the scope of the project. Information on specific dischargers should be confirmed by reviewing the appropriate NPDES permit. Because of the size of the spreadsheet, a paper copy is not included in this report. Instead the compilation is available electronically in a Microsoft Excel file upon request.