



CENTRAL VALLEY REGIONAL
WATER QUALITY CONTROL BOARD

VARIANCE POLICY AND
INTERIM SALINITY PROGRAM

Staff Report

June 2011



CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY



STATE OF CALIFORNIA

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This document describes the regulatory issues that result when there are effluent limitations that cannot be met, immediate compliance with such limitations is not reasonable, and, due to current laws and regulations, regulatory flexibility does not exist to avoid a difficult compliance situation. More specifically, this document describes the need for 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. This document presents various options to address these situations. The purpose of this document is to provide the context for scoping proposed Water Quality Control Plan (Basin Plan) amendments for analyses pursuant to the California Environmental Quality Act. Should the Central Valley Water Board choose to go forward with proposed amendments, staff will prepare and circulate a staff report to support amendments to the Water Quality Control Plans.

I. Background

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. (California Water Code (CWC) §13000). Each Regional Water Board is required to adopt water quality control plans, or basin plans, which provide the basis for regulatory actions to protect water quality. (CWC §13240 et seq.). Basin plans designate beneficial uses of water, water quality objectives to protect the uses, and programs of implementation to achieve the objectives. (CWC §13050(j)). Basin plans, once adopted, must be periodically reviewed and may be revised. (CWC §13240). Regional Water Boards are 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. (CWC §13241) Regional Water Boards may issue policy statements related to any water quality matter within its jurisdiction. (CWC §13224)

Under the Clean Water Act (CWA), 33 USC §1251 et seq., the states are required to adopt water quality standards for surface waters. (CWA §303(c)). Water quality standards consist of: 1) designated uses; 2) water quality criteria necessary to protect designated uses; and 3) an antidegradation policy. (CWA 303(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 adopted by the State Water Board, and the federal California Toxics Rule (CTR). Under the CWA, the states must review water quality standards at least every three years.

Regional Water Boards are responsible for prescribing requirements for the discharge of waste within its jurisdiction. The requirements must implement any relevant water quality control plans that have been adopted and may contain time schedules. (CWC §13263) Waste discharge requirements (WDRs) for discharges to surface waters also serve as permits under the National Pollutant Discharge Elimination System (NPDES) program. (CWC §13370 et seq.) 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 No. 2008-0025, *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits* (Compliance Schedule Policy))

II. PROBLEM STATEMENT

A. Salt Management in the Central Valley

This section briefly describes the salt management issues in the Central Valley. Salt management issues face both discharges subject to NPDES permits and discharges that are subject to WDRs.

The Central Valley Regional Water Quality Control Board (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 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 and implement 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. In addition, the State Water Board is currently reviewing the southern Delta salinity objectives included in the 2006 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan) and will consider various options, including revision of the southern Delta 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 in WDRs in the Central Valley. These effluent limits, which are being derived without the benefit of knowing the ultimate CV-SALTS or Bay-Delta standards determinations, may end up being inconsistent with those future outcomes, thereby placing numerous communities in a difficult compliance position. In many instances, the effluent limits are unattainable through any means short of reverse osmosis (membrane) treatment.

CV-SALTS is 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 determine management strategies for important sources to protect and maintain water quality in the Central Valley. 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 CV-SALTS plan.

The possible solutions to this problem are different depending on whether the impacted discharge is to surface waters, subject to an NPDES permit, or to land, subject to WDRs. For dischargers subject to NPDES permits, the concept of utilizing a water quality standards variance to promote productive actions in the management of salts and to avoid unreasonable permit compliance problems in the Central Valley has been identified. For land dischargers, the concept of

developing a procedure for issuing case-by-case exceptions from meeting salt requirements has also been identified.

B. Variances

The California Water Code allows Regional Water Boards the ability to adopt time schedules to achieve water quality objectives and to include time schedules in WDRs. (CWC §13242(b) and §13263) However, compliance schedules may be included in NPDES permits only under certain conditions. (Compliance Schedule Policy) In addition, compliance schedules alone are not the appropriate mechanism when there may be issues with or probable changes to the underlying water quality standards and dischargers are not able to comply with the effluent limitations that are based on these water quality standards. (USEPA. 2006.) In accordance with the Compliance Schedule Policy, “[c]ompliance schedules are not authorized based solely on the time needed to develop a TMDL, use attainability analysis, or site specific objective.”

USEPA guidance indicates that a water quality standards variance has been and 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 CFR 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 or tribe can make a determination whether the designated use or standard is not attainable and should be modified. (USEPA. 2007.) A variance policy would also provide a mechanism that bridges the gap between time schedules allowed under state laws and compliance schedules allowed under federal laws.

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. For example, exception policies are included 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 the California Environmental Quality Act (CEQA), subsequent to a public hearing, and with the concurrence of the United States Environmental Protection Agency (USEPA), to grant water quality standards 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. Since the SIP provides a provision for obtaining an exception from meeting priority pollutant criteria/objectives, the proposed Central Valley Water Board variance policy would only need to apply to non-priority pollutant criteria/objectives.

It is useful for the Central Valley Water Board to have a mechanism to address the situation where discharger compliance with water quality standards is infeasible at the present time and changes in those standards and/or the implementation of those standards is being evaluated. Further, it is useful for the Central Valley Water Board to have consistent procedures for implementing

salinity effluent limitations for land dischargers, subject to WDRs. One of the objectives of this project is to develop an approach that is consistent for both discharges subject to NPDES permits and discharges that are subject only to WDRs. Since the Central Valley Water Board has regulatory flexibility for discharges subject to WDRs, much of the following discussion is focused on NPDES permitting, why a variance is a possible solution to resolve associated regulatory issues, and various variance approaches.

1. Variance Process: General Provision Approach

The first step in the variance process is to establish a variance authority. In accordance with 40 CFR 131.13, states may adopt the authority to grant variances. Once authority has been established, regulated dischargers (e.g., NPDES permittees) may apply for a variance. Individual variance applications are reviewed and approved by the state and require final approval by USEPA as a water quality standards action.

2. Variance Process: Programmatic Approach

Variances have been employed by several Great Lakes states, including Indiana, Michigan, and Ohio, in the regulation of mercury. The approach taken in these states was to adopt both a general variance authority and a specific variance program to address mercury, which, as required, were approved by USEPA. The respective state agencies approve variances for existing permitted entities concurrent with the NPDES permit renewal process.

A summary of the USEPA-approved variance programs in Indiana, Michigan and Ohio is provided below.

Table 1. Summary of Mercury Variance Programs that have been implemented in the Great Lakes Area

Program Element	Indiana	Michigan	Ohio
Types of variances	“Streamlined Variance Program” specific to mercury; can also apply for individual variance if SMV denied	Mercury Permitting Strategy used with one variance process for all pollutants	Mercury-specific general variance program
Date of variance program development	Variance EPA-approved in 2005	Variance EPA-approved in 2002	Variance EPA-approved in 2000 in Final Rule on Great Lakes mercury permitting
Requirements	Pollutant Minimization Plan (PMP) with annual report	Various monitoring with analysis by EPA Method 1631 and PMP	Monitoring with analysis by EPA Method 1631 including in collection system, Plan of Study source tracking and PMP

Frequency of renewal	With NPDES permit	With NPDES permit	with annual report With NPDES permit
Conditions for renewal	Progress in meeting mercury limit, as demonstrated in annual report	PMP progress	PMP progress

3. Exception Process for State Issued WDRs

Porter-Cologne does not specifically include or recognize a “variance” for compliance with state water quality standards. However, it does provide regional water boards with considerable discretion in establishing and implementing water quality standards. For example, the program of implementation for achieving water quality objectives shall include, but is not limited to including, a description of actions necessary to achieve the objectives and time schedule for actions to be taken. (CWC §13241.) Further, basin plans, including the programs of implementation, shall be periodically reviewed and revised.

III. WATERSHED DESCRIPTION

The Central Valley 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. 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 mined to provide additional water to supply demands.

The Sacramento and San Joaquin River Basins are bound 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 Delta, which ultimately drains 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, 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.

IV. WATER QUALITY CONTROL PLANS

The Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) adopted the *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* to protect water quality in the northern two-thirds of the Region and the *Water Quality Control Plan for the Tulare Lake Basin* to protect water quality in the southern one-third of the Region. These two Water Quality Control Plans will be referenced as the Basin Plans. Both Basin Plans were first adopted in 1975 and have been periodically updated. The State Water Board adopted the Bay-Delta Plan in December 2006 to supplement other water quality control plans that cover the Bay-Delta Estuary.

A. 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).

1. Salt Sensitive Beneficial Uses

The following beneficial uses are sensitive to concentrations of salt and are protected by either numeric and/or narrative water quality objectives. Most commonly either total dissolved solids (TDS) or electrical conductivity (EC), two common chemical measurements of salt content in water, are used to measure and/or control salts:

- 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)

A description of these beneficial uses, as well as the salt-related concerns for each, is provided below.

Agricultural supply (AGR) – Uses of water for farming, horticulture or ranching, including, but not limited to, irrigation (including leaching of salts), stock watering, or support of vegetation for range grazing. Excessive concentrations of salt can

limit crop yield and, in extreme cases, cause crop damage. Water quality objectives are established to protect salt sensitive crops that can be grown in the Central Valley. Examples of salt sensitive crops include dry beans, strawberries, almonds, and the seedlings of most plants.

Municipal and domestic supply (MUN) – Uses of water for community, military or individual water supply systems, including, but not limited to, drinking water supply. Excessive concentrations of salt can cause taste issues, staining and corrosion of fixtures, and corrosion of water supply piping.

Industrial service supply (IND) – Uses of water for industrial activities that do not depend primarily on water quality, including, but not limited to, mining, cooling water, hydraulic conveyance, gravel washing, fire protection, or oil well repressurization. Excessive concentrations of salts could potentially limit industrial service supply uses of water because of corrosion and scale. In general, such uses are not as sensitive to salt levels as the AGR or MUN uses.

Industrial Process Supply (PRO) – Uses of water for industrial activities that depend primarily on water quality. Excessive concentrations of salt could limit industrial process uses and/or increase operating costs.

Ground Water Recharge (GWR) – Uses of water for natural or artificial recharge of groundwater for future extraction, maintenance of water quality or halting of saltwater intrusion into freshwater aquifers. Excessive concentrations of salts could potentially degrade groundwater quality, rendering it less beneficial upon extraction for future uses, such as those listed above, or for halting saltwater intrusion into freshwater aquifers.

Fish and Wildlife Uses (EST, COLD, WARM, MIGR, SPWN, WILD, RARE) –

- Estuarine Habitat (EST) – Uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g. estuarine mammals, waterfowl, shorebirds).
- Warm Freshwater Habitat (WARM) – Uses of water that support warm water ecosystems including, but not limited to, preservation of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- Cold Freshwater Habitat (COLD) – Uses of water that support cold water ecosystems including, but not limited to, preservation of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- Migration of Aquatic Organisms (MIGR) – Uses of water that support habitats necessary for migration or other temporary activities by aquatic organisms, such as anadromous fish.
- Spawning, Reproduction, and/or Early Development (SPWN) – Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.
- Wildlife Habitat (WILD) – Uses of water that support estuarine ecosystems including, but not limited to, preservation and enhancement of terrestrial

- habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
- Rare, Threatened, or Endangered Species (RARE) – Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under State or federal law as being rare, threatened, or endangered.

Excessive concentrations of salt can degrade freshwater habitat and harm freshwater wildlife. Examples of degradation include a loss of species diversity, decreased population abundance (animals), or significant reduction in stature or percent cover (plants).

B. Water Quality Objectives and Criteria

Numeric water quality objectives for TDS and EC to protect beneficial uses of waters in the Central Valley are found in the Bay-Delta Plan and the Basin Plans. Current permit limits are developed based on narrative and/or numeric objectives from the Bay-Delta Plan and the Basin Plans, as described below.

1. Bay-Delta Plan

Salinity (expressed as EC) objectives for the Delta are described in the Bay-Delta Plan in Table 2 (Water Quality Objectives for Agricultural Beneficial Uses) and Table 3 (Water Quality Objectives for Fish and Wildlife Beneficial Uses). The objectives within the Bay-Delta Plan that have been used to develop recent Central Valley permit limits are listed in Table 2 for the San Joaquin River at Airport Way Bridge, Vernalis, and Brandt Bridge site, and for Old River near Middle River and at Tracy Road Bridge. The objectives are a maximum 30-day running average of mean daily EC of 700 $\mu\text{mhos/cm}$ between April and August, and 1000 $\mu\text{mhos/cm}$ between September and March. (Bay-Delta Plan, Page 13.)

The Bay-Delta Plan includes a description of implementation measures associated with the South Delta Agricultural Salinity Objectives. These measures include water rights actions and salinity control, such as controls on in-Delta agricultural, municipal, and domestic dischargers and on San Joaquin salinity sources through a TMDL. (Bay-Delta Plan, Page 26.)

The Bay-Delta Plan recommends and supports the CV-SALTS management planning effort and the re-evaluation of Southern Delta salinity objectives. (Bay-Delta Plan, Page 6)

2. Tulare Lake Basin Plan

The Tulare Lake Basin Plan includes implementation measures for salinity effluent limitations in permits for discharges from wastewater treatment plants. The following narrative language in the Implementation section of the Basin Plan is specifically for Discharges to Navigable Waters:

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. (Tulare Lake Basin Plan, Page IV-10.)

The narrative language in the Implementation section of the Basin Plan regarding Discharges to Land from wastewater treatment facilities states:

The incremental increase in salts from use and treatment must be controlled to the extent possible. 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. (Tulare Lake Basin Plan, Page IV-11.)

Specific numeric water quality objectives for EC are included in Tables III-2 and III-3. The objectives in Table III-2 specify the maximum EC levels and range from 100 µmhos/cm to 600 µmhos/cm for various reaches of the streams within the Tulare Lake basin. The objectives in Table III-3 for stream flow stations specify the 90-percentile, median and mean EC levels.

Maximum contaminant levels (MCLs) for municipal drinking water are specified in Section 64449 of Title 22 of the California Code of Regulations and are incorporated by reference into the Tulare Lake Basin Plan as water quality objectives for waters designated for use as domestic or municipal supply (MUN). (Tulare Lake Basin Plan, Page III-3.) The MCLs for TDS and EC are listed in Table 64449-B (Secondary Maximum Contaminant Levels) and are as follows:

- TDS
 - 500 mg/L (recommended)
 - 1000 mg/L (upper)
 - 1500 mg/L (short term)

- EC
 - 900 µmhos/cm (recommended)
 - 1,600 µmhos/cm (upper)
 - 2,200 µmhos/cm (short term)

The Tulare Lake Basin Plan also includes the narrative chemical objective, which states as follows: “[w]aters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.” (Tulare Lake Basin Plan, Page III-3.)

3. Sacramento-San Joaquin Basin Plan

Specific numeric water quality objectives for EC and TDS are included in Tables III-3 and III-5 of the Sacramento-San Joaquin Basin Plan.

In Table III-3, ranges of EC objectives are established for the Sacramento River from Knight's Landing to the I Street Bridge (230-240 umhos/cm), the Feather River (150 umhos/cm), and the San Joaquin River from Friant Dam to Mendota Pool (150 umhos/cm). TDS objectives are established for the American River (125 mg/L), Folsom Lake (100 mg/L), and Goose Lake (1,300,000 tons). (Sacramento-San Joaquin Basin Plan, Page III-7.00.)

MCLs from Title 22 of the California Code of Regulations are incorporated by reference into the Sacramento-San Joaquin Basin Plan as water quality objectives for waters designated for use as domestic or municipal supply (MUN). (Sacramento-San Joaquin Basin Plan, Page III-3.00.)

The Sacramento-San Joaquin Basin Plan also includes a narrative chemical objective, which states as follows: “[w]aters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.” (Sacramento-San Joaquin Basin Plan, Page III-3.00.)

C. Implementation Program

Regional Water Boards are responsible for prescribing requirements for the discharge of waste within its jurisdiction. (CWC §13263) WDRs for discharges to surface waters also serve as permits under the NPDES program. (CWC §13370 et seq.)

The State Water Board adopted the SIP to provide state regulations on implementation provisions for priority pollutant criteria and priority pollutant water quality objectives. Salinity is not a priority pollutant subject to the SIP; as such, the Central Valley Regional Board maintains the discretion to apply the SIP's provisions to other non-priority pollutants such as TDS and EC. The State Water Board also adopted the Compliance Schedule Policy, which provides the conditions under which a Regional Water Board may include a compliance schedule in a NPDES permit.

For discharges subject to state issued WDRs, WDRs must implement relevant water quality control plans, taking into consideration the beneficial uses to be protected and applicable water quality objectives. (CWC § 13263) WDRs may also include a time schedule. (CWC § 13263(c))

1. Salt Regulation

To implement adopted water quality control plans, permits must include effluent limitations for discharge of all pollutants that have a reasonable potential to cause or contribute to an excursion above water quality standards. Recently issued discharge permits have required dischargers to develop and implement salinity plans. 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 prescribed by Basin Plans in WDRs in the Central Valley. These effluent limits, which have been derived without the benefit of knowing the ultimate CV-SALTS or Bay-Delta standards determinations and may, in fact, be

inconsistent with those future outcomes, and are placing numerous communities in a difficult compliance position. In many instances, the effluent limits are unattainable through any means short of reverse osmosis (membrane) treatment. CV-SALTS is 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.

Issues pertaining to salts and salt management can be very complex, and planning processes may provide the optimum vehicle for addressing salts. An interim planning solution could afford the Central Valley Water Board additional flexibility in regulating salt discharges. In Water Quality Order 2009-03, the State Water Board advised the Central Valley Water Board that it could consider various planning options as an interim solution for permitted discharges while longer-term planning options were in process. A variance program and Interim Salinity Program could provide an interim planning process while longer-term salinity planning and management efforts were being developed.

V. PROJECT ALTERNATIVES

As explained above, there is a need for 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. (CWC § 13263(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.

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. However, because of federal and state regulations, it is necessary for the Central Valley Water Board to obtain the authority to grant variances for NPDES discharges before the Central Valley Water Board can consider a consistent salinity program for all dischargers.

There are two sets of alternatives presented, below. The first set of alternatives addresses the need for the Central Valley Water Board to have the authority to consider variances for NPDES discharges.

The second set of alternatives assumes that the Central Valley Water Board will go ahead with a variance policy and addresses the salinity issues facing both NPDES and WDR discharges.

A. Variance Policy

Staff has made no decisions on any of the alternatives. Additional alternatives may also be considered.

Alternative 1. No Action. Under the no action alternative, the Central Valley Water Board would not go forward with a Basin Plan Amendment allowing the Board general variance authority. Variances would continue to not be allowed in the Central Valley unless the State Water Board chooses to adopt a policy that includes the Central Valley.

Alternative 2. Adopt a variance policy. 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 variance policy consistent with 40 CFR §131.13. The policy would allow Central Valley Water Board consideration of individual variances. Individual dischargers, when needing to implement a variance, would be required to seek State and federal approval for a specific variance request.

B. Variance Policy and Interim Salinity Program Alternatives

The following alternatives can be considered individually or in combination to form a Variance Policy and Interim Salinity Program proposal. Additional alternatives may be considered. Staff has made no decisions. Since the Variance Policy and Interim Salinity Program is dependent on the authority to grant variances or case-by-case exceptions as discussed above in Section V.A., each of the alternatives described below are based on the assumption that general variance authority is adopted. If general variance authority is not adopted, then there will be no proposal for a Variance Policy and Interim Salinity Program.

Alternative 1. No Action. Under this no action alternative, the Central Valley Water Board would not go forward with an Interim Salinity Program but the Variance Policy would have been adopted under the alternative described in Section V.A.2 described in the section above. Dischargers subject to NPDES permits that are interested in pursuing a variance for EC or TDS would need to independently apply for a variance as a standards action. Before the individual variance can be implemented in an NPDES permit, the variance would need to be approved by the state and the USEPA. While CWC section 13263 allows the Central Valley Water Board to include time schedules for dischargers subject to WDRs, a specific case-by-case exception under an Interim Salinity program for dischargers with WDRs would not exist.

Alternative 2. Salinity-specific variance policy 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 water quality objectives. This program would likely be modeled after a USEPA-approved approach that has been used in the Great Lakes to streamline the approval of individual variances. Approval of individual variances would be streamlined by the establishment of an overall variance program through a Basin Plan amendment that addresses the elements that USEPA typically expects variances to address. These elements include, but are not limited to, addressing one or more of the factors listed in 40 CFR 131.10(g) and information on how the existing use, as defined in 40 CFR 131.3(e), will be protected.

Alternative 3. Salinity-specific program for dischargers subject to waste discharge requirements. Include as part of a program of implementation case-by-case exceptions to salinity requirements through an Interim Salinity Program. Under this salinity-specific program, regulated dischargers to land meeting specified conditions would apply for and obtain a case-by-case exception from existing EC/TDS requirements which would be included in revised WDRs.

VI. REFERENCES

United States Environmental Protection Agency (USEPA). 1994. Water Quality Standards Handbook: Second Edition, Section 5.3. Office of Water, Washington, DC. EPA-823-B-94-005b. pp 5-11 through 5-12.

USEPA. 2006. Letter from Alexis Strauss, (Director, Water Division, United States Environmental Protection Agency, Region IX, San Francisco) to Celeste Cantu (Executive Director, State Water Resources Control Board, Sacramento) regarding compliance schedule provisions of the California SIP, dated 23 October 2006.

USEPA. 2007. Water Quality Standards Academy Module 15: Variances, 15 November 2007.