

# Draft: Guidance to Prepare Salinity Management Sustainability Plan

## Purpose

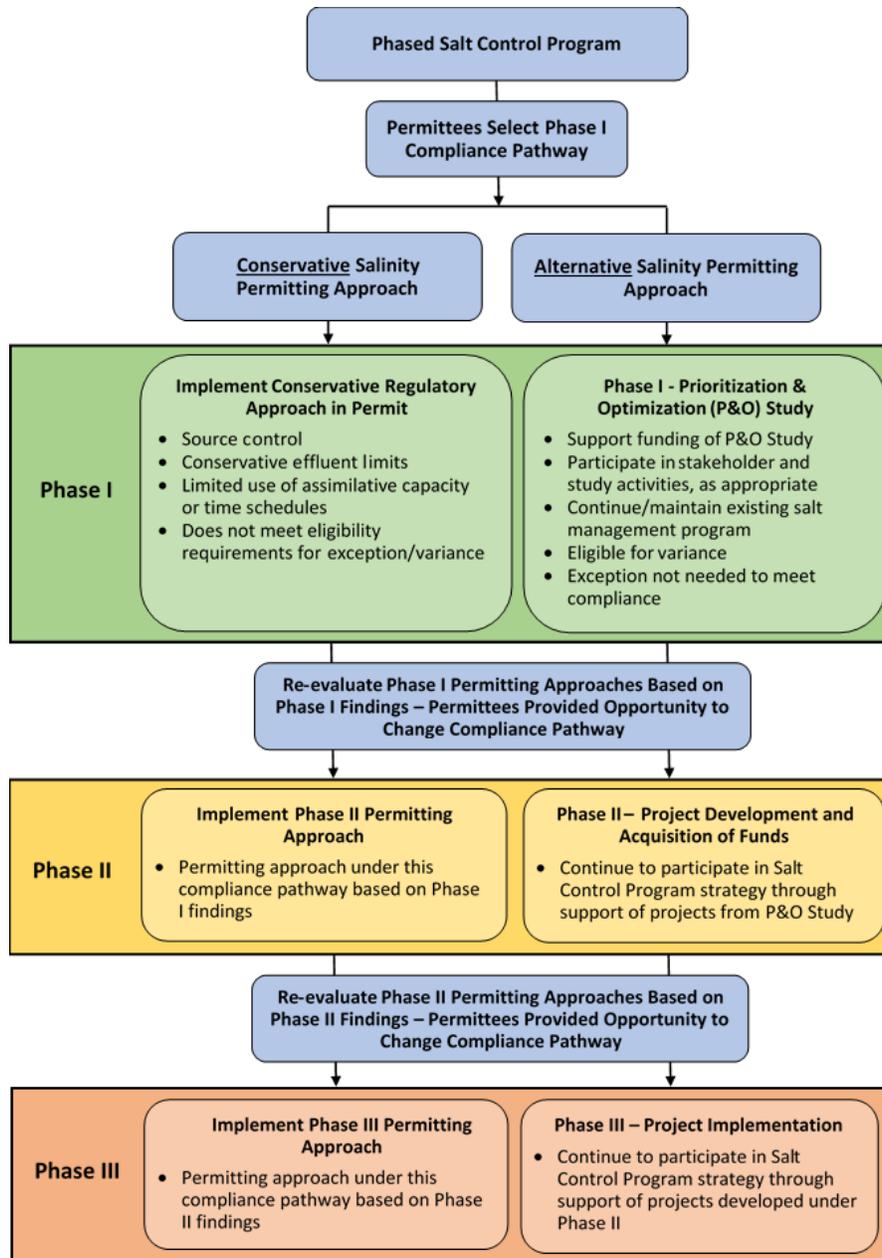
The Central Valley Regional Water Quality Control Board (Central Valley Water Board) has established a Salt Control Program (SCP or “Program”) that requires all permitted dischargers (permittees) that receive a Notice to Comply (NTC) with the Program to select their means of compliance with the SCP – either through the Conservative Permitting Approach or the Alternative Permitting Approach. The purpose of this document is to provide guidance to permittees regarding what is necessary to demonstrate that the permittee’s facility does comply with the Conservative Permitting Approach.

## Regulatory Background

The Central Valley Water Board adopted Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and the Tulare Lake Basin (Basin Plans) to incorporate a Central Valley-wide Salt and Nitrate Control Program (Resolution R5-2018-0034) on May 31, 2018 (Central Valley Water Board 2018). The State Water Resources Control Board (State Water Board) and the Office of Administrative Law (OAL) approved these amendments to the Central Valley Water Board Basin Plans (Central Valley Water Board 2015, 2016) on October 16, 2019 (Resolution No. \_\_\_\_ ) and \_\_\_\_\_ (OAL Matter Number: \_\_\_\_\_), respectively. The groundwater elements of these Basin Plan Amendments (BPA) become effective following OAL approval. Surface water elements become effective upon approval by the United States Environmental Protection Agency (USEPA).

The BPA establishes new regulations for the control and permitting of salt discharges to surface water and groundwater. Included in these amendments is a Conditional Prohibition that applies to all permittees discharging salt pursuant to Board-issued waste discharge requirements and conditional waivers that are not otherwise regulated under the Irrigated Lands Regulatory Program (ILRP) (Attachment A). The Conditional Prohibition shall apply from the time permittees receive the NTC until such time that permits are updated to reflect the requirements of the SCP. Permittees regulated under an IRLP General Order will comply with SCP as required by the General Order, which will be amended to incorporate the Program.

All permittees in the Central Valley Region are subject to the SCP, which will be implemented in three phases, each phase lasting ten to fifteen years (**Figure 1**). The establishment of a phased approach provides the opportunity to complete studies needed to identify long-term solutions for achieving salt sustainability in the Central Valley Region. These solutions will be identified through completion of the Phase I Prioritization and Optimization (P&O) Study. The findings from Phase I will be implemented under Phases II and III. During all three phases, permittees will need to select a permitting approach to comply with the SCP. The SCP establishes two permitting approaches (Figure 1).



**Figure 1. Phased Salt Control Program Pathways to Compliance (Figure S-1 in Attachment 1 to Central Valley Water Board Resolution No. R5-2018-0034)**

1. *Conservative Salinity Permitting Approach* - Utilizes the existing regulatory structure of the Basin Plans and focuses on source control, use of conservative salinity limits, and limited use of assimilative capacity and/or compliance time schedules.
2. *Alternative Salinity Permitting Approach* – The permittee achieves compliance with the SCP by participating in the Phase I P&O Study and continuing implementation of performance-based measures and the permittee’s existing salinity management program(s)/best

management practices. Discharges of salt to waste management units subject to the containment requirements of Division 2 of Title 27 of the California Code are not eligible to be permitted under the Alternative Salinity Permitting Approach.

The rest of this document is intended to provide guidance to permittees that want to select the Conservative Permitting Approach to comply with the SCP. Attachment B provides additional information regarding what the permittee should do in order to select the Alternative Permitting Approach as their compliance pathway.

## **Requirements to Comply with the Conservative Permitting Approach**

The primary goal of the Conservative Permitting Approach is to prevent further degradation of receiving waters. This compliance pathway includes requirements that focus on source control to ensure that beneficial uses are protected and restricts degradation without a finding that the discharge provides a greater benefit to the people of the state than participation in the Alternative Permitting Approach compliance pathway. Where a receiving water body already exceeds applicable water quality objectives, further degradation is prohibited and the permittees discharge must be at concentrations at or below the applicable objectives to protect Agricultural Supply (AGR) and Municipal and Domestic Supply (MUN) beneficial uses.

Recipients of a NTC have six months to submit a Notice of Intent (NOI) to the Central Valley Water Board regarding their selection of a compliance pathway. Permittees that select the Conservative Permitting Approach must submit with their NOI an assessment of how their facility's discharge will comply with the conservative permitting requirements established in the SCP (**Table 1**). The sections below provide guidance to permittees regarding preparation of the assessment to be included with the NOI.

## **Compliance Demonstration for Conservative Permitting Approach**

The requisite information for the compliance demonstration described in the steps below will be documented in a Technical Memorandum submitted as an attachment to the Conservative Permitting Approach NOI Form (Attachment C).

### **Step 1: Describe the Permitted Facility**

The permittee shall prepare a description of the facility that includes the information summarized in **Table 2**. Where the required information is already documented in the facility's permit fact sheet, the permittee may submit this information to satisfy the requirements of Step 1. Any modifications to update the facility information should be noted.

### **Step 2: Characterize Receiving Waters**

Under Step 2, the permittee shall characterize ambient water quality in the receiving water(s) as described below for surface water and/or groundwater. If insufficient data are available to characterize the receiving water as required below, then the permittee should consider the option provided in Step 6 below.

**Table 1. Conservative Permitting Approach Requirements**

All Permitted Dischargers	
<ul style="list-style-type: none"> <li>• Apply conservative assumptions for interpretation of the narrative objectives and application of numeric water quality objectives to protect AGR and MUN beneficial uses:                             <ul style="list-style-type: none"> <li>– <i>AGR Beneficial Use Protection</i> – When the Central Valley Water Board applies the narrative water quality objective, the Board shall use the conservative numeric value of 700 µS/cm electrical conductivity (EC) as a monthly average to protect the AGR beneficial use. For a permitted discharge where a site-specific numeric value has been developed and/or previously applied to the discharge for the protection of the AGR beneficial use, the Board shall continue to apply that value, as appropriate.</li> <li>– <i>MUN Beneficial Use</i> – When the Central Valley Water Board applies a Secondary Maximum Contaminant Level (SMCL) for protection of a MUN beneficial use, the Board shall use the recommended SMCL of 900 µS/cm EC (as an annual average).</li> </ul> </li> <li>• Limited availability of a compliance or time schedule order to meet a salinity-related effluent limit or waste discharge requirement (subject to the discretion of the Central Valley Water Board)</li> </ul>	
Permitted Groundwater Discharges and Non-NPDES Discharges	NPDES Surface Water Permitted Discharges
<ul style="list-style-type: none"> <li>• Limited new or expanded allocation of assimilative capacity subject to the discretion of the Central Valley Water Board</li> <li>• Does not meet eligibility requirements for an exception</li> </ul>	<ul style="list-style-type: none"> <li>• A new or expanded allocation of assimilative capacity may be authorized only where a permittee can demonstrate that the impact of the new discharge or the increased discharge is temporary or de minimis, a determination subject to the discretion of the Central Valley Water Board</li> <li>• Does not meet eligibility requirements for a variance</li> </ul>

**Table 2. Required Information About Permitted Facility**

Element	Required Information
<b>Facility Information</b>	<ul style="list-style-type: none"> <li>• Facility name and address</li> <li>• Waste Discharger Identification (WDID) Number</li> <li>• California Integrated Water Quality System (CIWQS) Project Facility Place Identification Number</li> <li>• Facility Contact information</li> <li>• Description of the treatment facilities and permitted and design flows</li> </ul>
<b>Receiving Water<sup>1</sup></b>	<ul style="list-style-type: none"> <li>• Surface water: Provide waterbody name and location(s) of effluent discharge(s)</li> <li>• Groundwater: Provide groundwater basin/subbasin name and delineation of the Area of Contribution<sup>2</sup></li> </ul>

<sup>1</sup> The SCP defines the “Receiving Water” as the surface waterbody or groundwater basin or subbasin into which pollutants are discharged

<sup>2</sup> The SCP defines the “Area of Contribution” as the portion(s) of basin or sub-basin where a discharge or discharges will commingle with the receiving water and where the presence of such discharge(s) could be detected

## Surface Water Characterization Requirements

- *Constituent(s) to Analyze* - The permittee should characterize the electrical conductivity (EC) of the receiving water. Total dissolved solids (TDS) data may be used, but prior to analysis, the TDS results should be transformed to EC using the following standard conversion:  $TDS/0.64 = EC$ . If the permittee wants to use a site-specific conversion method for converting TDS data to EC, the technical justification for the alternative conversion factor should be attached as an appendix to the technical memorandum.
- *Locations of Permitted Discharges and Surface Water Stations*– For each outfall with a discharge to a receiving water, data must be provided from three locations that are representative of ambient water quality around the outfall location:
  - Upstream of the outfall location;
  - Downstream of the facility, but relatively close to the outfall location; and
  - Downstream of the facility at a location where the discharge from the outfall is fully mixed with the receiving water.

The surface water characterization should provide a justification for the selection of the surface water stations used to characterize the receiving water.

- *Period of Record for Data Used in Receiving Water Analysis* - Characterize ambient water quality in the receiving water for at least the two-year period prior to the date of the NTC. The ideal dataset used to characterize ambient water quality should include at least monthly water quality measurements over the minimum two-year period. These data should be characterized on a monthly, seasonal and annual basis.

Many surface waters may exhibit considerable interannual variability – highly dependent on water year type. As a result, it may be necessary to supplement the most recent two-year dataset with historical data to characterize the variability and determine if there are significant water quality trends. If historical data are used to supplement receiving water data for any reason, the following requirements must be satisfied:

- Only data from within ten years prior to the date of the NTC may be considered and there should be no significant gaps in the period of record.
- The permittee must demonstrate that the historical data are representative of current ambient water quality in the receiving water (e.g., there have been no substantive changes in the characteristics of the receiving water such as changes in flow).
- The dataset includes data for the receiving water during low flow conditions.

## Groundwater Characterization Requirements

- *Constituent(s) to Analyze* - The permittee should characterize the EC of the receiving water. TDS data may be used, but prior to analysis, the TDS results should be transformed to EC using the following standard conversion:  $TDS/0.64 = EC$ . If the permittee wants to use a site-specific conversion method for converting TDS data to EC, the technical justification for the alternative conversion approach should be attached.
- *Data Locations* – The permittee will characterize the groundwater within and around the Area of Contribution. This characterization should be conducted at first encountered groundwater without any volume-weighted averaging. The following locations must be included in the water quality assessment:
  - Upgradient of the Area of Contribution
  - Within the Area of Contribution
  - Downgradient of the Area of Contribution
- *Period of Record for Data Used in Receiving Water Analysis* - Characterize ambient water quality in the receiving water for at least the two-year period prior to the date of the NTC. The ideal dataset used to characterize ambient water quality should include at least monthly water quality measurements from within and around the Area of Contribution over a two-year period that includes periods of drier and wetter than normal hydrology. These data should be characterized on a monthly, seasonal and annual basis.

To establish sufficient data to characterize the receiving water, including characterizing variability and determining if any significant trends exist, it may be necessary to supplement the most recent two-year dataset with historical data. If historical data are used to supplement receiving water data for any reason, the following requirements must be satisfied:

- Only data from within ten years prior to the date of the NTC may be considered and there should be no significant gaps in the period of record.
- It should be demonstrated that the historical data are representative of the underlying groundwater where the facility is located (e.g., there have been no substantive changes in discharges to the receiving water during the period of record).
- The dataset includes data for the receiving water during a range of hydrologic conditions.

## Step 3: Characterize Effluent Discharge

The permittee will provide existing and historical data to characterize the EC of the effluent at the permitted facility after implementation of all treatment controls and prior to discharge to the receiving water. At least two years of monthly data from the two years prior to the NTC data are required and the frequency of water quality analysis must be sufficient to characterize any variability or trends in the effluent quality. The two-year data set may be supplemented with

historical data from the most recent five years to provide additional characterization of any variability or trends in the effluent data.

#### **Step 4: Assess Compliance with Conservative Permitting Requirements**

Using the findings from Steps 2 and 3, the permittee will assess the ability of the facility to comply with the conservative permitting requirements. This assessment should demonstrate or consider the following:

- Ability to comply with the following minimum effluent limits: Monthly average of 700  $\mu\text{S}/\text{cm}$  EC (AGR protection) and annual average of 900  $\mu\text{S}/\text{cm}$  EC (MUN protection) (Note: If a site-specific objective applies to the receiving water and was used as the basis for the establishment of effluent limits in the facility's existing permit, then the site specific objective(s) should be used as the basis for this analysis).
- The effluent discharge will not result in degradation in a receiving water now or in the future (over at least a 30-year planning horizon). This finding must be made under all anticipated hydrologic conditions. The technical basis for a finding of no degradation (e.g., findings from application of numerical models) must be attached to the technical memorandum
- The compliance assessment must be based solely on existing treatment controls and not include any planned changes in the facilities treatment controls or source of water. If planned modifications to the facility will allow the facility to comply with the conservative permitting requirements in the future, see Section, entitled, "Ability to Comply with Conservative Effluent Limits in the Future" below.
- A modification to the facility's current operation that improves effluent quality through changes in blending of source waters may be considered, if it can be demonstrated that the facility has the authority and capability to implement that change at the time this assessment is submitted to the Central Valley Water Board.

#### **Step 5 (Optional): Demonstrate Compliance through Application of a Compliance Tool**

The SCP limits the availability of the use of compliance tools to achieve compliance over the long term, including: (a) a compliance or time schedule order to meet a salinity-related effluent limit or waste discharge requirement; or (b) a new or expanded allocation of assimilative capacity (if it exists). Approval of either of these compliance strategies is subject to the discretion of the Central Valley Water Board. If the findings from Step 4 indicate that the facility cannot comply with the Conservative Permitting Approach except through the use of one of these compliance tools, the permittee must contact the Central Valley Water Board staff regarding the potential to receive approval of a request for allocation of some portion of the available assimilative capacity or a compliance/time schedule order. If the permittee finds that the Central Valley Water Board staff will consider application of a compliance tool consistent with the requirements of the Conservative Permitting Approach, the permittee should complete any additional technical analyses and documentation requested by the Central Valley Water Board to support the application. Alternatively, the permittee should consider selecting the

Alternative Permitting Approach to address the NTC and evaluate the potential to change the permitting approach at a later date (see “Ability to Comply with Conservative Effluent Limits in the Future” below).

### **Step 6: Complete Conservative Permitting Approach NOI Submittal Form**

Within six months of receiving the NTC with the SCP, the permittee must submit its NOI to the Central Valley Water Board indicating its intent to comply with the requirements of the Conservative Permitting Approach. The submitted NOI should include the completed Conservative Permitting Approach NOI Submittal Form (Attachment C) with all supporting technical analyses attached.

### **Ability to Comply with Conservative Effluent Limits in the Future**

A permittee may find that it is not possible to demonstrate an ability to comply with the conservative effluent limits applicable the Conservative Permitting Approach within the time frame allowed to submit the NOI. Reasons may include:

- Lack of sufficient data to adequately characterize a receiving water or facility’s effluent (which could be remedied with additional data collection in the future).
- Planned facility modifications that will result in compliance with the conservative effluent limits will not be completed in a timely manner.

Under these scenarios or others, the permittee should consider selecting the Alternative Permitting Approach when submitting its NOI. At a later date, the permittee may revisit their selected permitting approach. Specifically, the SCP states:

*Permittees may switch from one approach to another by submitting a written request to the Executive Officer of the Central Valley Water Board to change its selected compliance pathway. This request must include documentation regarding how the permittee will comply with the requirements applicable to the compliance pathway it is now requesting to be permitted under and the basis for the change. If the permittee requests to change from the Alternative to the Conservative Permitting Approach, the permittee must demonstrate to the Board that it has complied with all provisions associated with the Alternative Permitting Approach, including financial support to the P&O study, up through the time of permit revision to incorporate requirements for the Conservative Permitting Approach.*

Permittees that decide to implement this provision of the SCP will need to submit to the Central Valley Water Board the information required in the assessment, as described in Steps 1-4 above. At the time of submittal of a request to change the permitting approach and until the Central Valley Water Board approves the change, the permittee must continue to comply with the Alternative Permitting Approach requirements.

## Attachment A – Conditional Prohibition<sup>1</sup>

### Overview

During Phase 1 of the Salt Control Program, a Conditional Prohibition shall apply to all permittees discharging salt pursuant to Board-issued waste discharge requirements and conditional waivers, except those dischargers regulated under the Board’s Irrigated Lands Regulatory Program (ILRP). Dischargers regulated under the ILRP will instead be required to comply with the initial phase of the Salt Control Program through an amendment to the ILRP General Orders, which the Central Valley Water Board shall consider within 18 months of the effective date of the Basin Plan Amendment.

For permittees subject to the Conditional Prohibition, the prohibition shall apply from the time of receiving a NTC until such time that the permittees’ existing waste discharge requirements or conditional waivers regulating the discharge of salts are updated or amended to reflect requirements of Phase I of the Salt Control Program, or until such time that the Central Valley Water Board affirmatively notifies the permittee that their permit complies with the Phase I of the SCP without the need for further update or amendments. Until the discharger receives a NTC, the relevant waste discharge requirements or conditional waiver provisions governing the discharge of salts, including any applicable compliance schedule, shall remain in force.

### Conditional Prohibition on Salt Discharges – Basin Plan Amendment Language

Upon receiving a Notice to Comply from the Central Valley Water Board, discharges of salts at concentrations that exceed salinity numeric values identified in the Phase 1 Conservative Permitting Approach of the Salt Control Program are prohibited unless the permittee is implementing the Phase I requirements of the Salt Control Program.

Permittees subject to the Conditional Prohibition must notify the Central Valley Water Board within six months of receiving a Notice to Comply whether they elect to be regulated under the Conservative or Alternative permitting approaches. Dischargers who do not reply to the Notice to Comply will be required to meet the requirements of the Salt Control Program’s Conservative permitting approach. The following information must be submitted with the permittee’s response to the Central Valley Water Board of its permit compliance pathway decision (i.e. within six months of receiving a Notice to Comply).

#### (a) Conservative Salinity Permitting Approach

Permittees not selecting the alternative approach must submit an assessment of how their discharge complies with the conservative permitting requirements set forth in the Salt Control Program. If the Central Valley Water Board’s Executive Officer does not concur with the

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<sup>1</sup> Pages 73-74 in Central Valley Water Board. 2018. *Amendments to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and Tulare Lake Basin to Incorporate a Central Valley-wide Salt and Nitrate Control Program*. Final Staff Report. May 2018.  
[https://www.waterboards.ca.gov/centralvalley/water\\_issues/salinity/#cvwbaction](https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/#cvwbaction)

findings of the assessment, the Executive Officer may request additional information from the permittee to verify that the permittee will meet those conservative permitting requirements.

(b) Alternative Salinity Permitting Approach

Permittees selecting the alternative salinity permitting approach must submit written documentation from the lead entity for the Salinity Prioritization and Optimization Study (P&O Study) confirming the discharger's full participation in the P&O Study. Status of the P&O Study must be documented and confirmed through reports to the Central Valley Water Board from the lead entity. Dischargers maintaining full participation in the P&O Study will be deemed in compliance with salinity discharge requirements in their waste discharge requirements or conditional waivers consistent with the Salt Control Program. During the P&O Study, the permittee must maintain current efforts to control levels of salinity in the discharge.

The Salinity Conditional Prohibition shall sunset at the end of Phase I of the Salt Control Program.

## **Attachment B – Alternative Permitting Approach**

Permittees that select the Alternative Permitting Approach must submit an NOI to the Central Valley Water Board within six months after receipt of the NTC. Specifically, per the SCP regulations:

*“A permittee that selects this approach shall participate in the Phase I P&O Study by providing at least the minimum required level of financial support throughout Phase I as determined by the lead entity overseeing the P&O Study. The permittee shall provide documentation of its compliance with the required level of support with the notification to the Central Valley Water Board of its permitting decision.”*

The lead entity of the P&O Study is INSERT. Permittees that wish to select this permitting approach should contact INSERT to determine the level of financial support required to participate in the P&O Study. If the permittee selects the Alternative Permitting Approach and provides the appropriate level of financial support, the INSERT will provide the permittee with the documentation it needs to submit with its NOI to the Central Valley Water Board.

## Attachment C - Conservative Permitting Approach NOI Submittal Form

Facility Name/Address: \_\_\_\_\_

WDID Number: \_\_\_\_\_ CIWQS Project Facility Place ID: \_\_\_\_\_

Facility Contact: \_\_\_\_\_

Compliance Demonstration Step	Initial	Demonstrated Finding <sup>1</sup>
Step 1: Facility Description	_____	Information has been reviewed and determined to be accurate
Step 2: Characterize Receiving Water	_____	Data used to characterize the receiving water(s) meets minimum requirements, including: <ul style="list-style-type: none"> <li>Required locations for receiving water analysis</li> <li>Data record for each receiving water location is representative of water quality conditions at that site</li> <li>Data record includes required range of hydrologic conditions and is sufficient to assess variability and trends</li> <li>Data record is sufficient to characterize monthly, seasonal and annual Electrical Conductivity (EC) at each site</li> </ul>
Step 3: Characterize Effluent Discharge	_____	Data used to characterize the permitted facility's effluent meets minimum requirements: <ul style="list-style-type: none"> <li>Monthly EC data for at least the two-year period prior to the NTC</li> <li>Sufficient data available to assess variability or trends in effluent quality</li> </ul>
Step 4: Assess Compliance with Conservative Permitting Requirements (Initial applicable finding)	_____	Based on the technical analysis, the salinity discharged from the permitted facility can immediately: <ul style="list-style-type: none"> <li>Comply with the following minimum effluent limits of (a) monthly average of 700 µS/cm EC; and (b) annual average of 900 µS/cm EC; or effluent limits based on an existing site-specific objective</li> <li>Cause no degradation in a receiving water now or in the future over a 30-year planning horizon.</li> </ul>
	_____ (If initialed complete Step 5)	Based on the technical analysis, the salinity discharged from the permitted facility can comply with the following requirements <i>if the Central Valley Water Board authorizes</i> a: (a) compliance or time schedule order; or (b) new or expanded allocation of assimilative capacity: <ul style="list-style-type: none"> <li>Comply with the following minimum effluent limits of (a) monthly average of 700 µS/cm EC; and (b) annual average of 900 µS/cm EC; or effluent limits based on an existing site-specific objective</li> <li>Cause no degradation in a receiving water now or in the future over a 30-year planning horizon.</li> </ul>
Step 5: Demonstrate Compliance through Application of a Compliance Tool (Initial where applicable)	_____	Based on consultation with the Central Valley Water Board, the required documentation to support a formal request for a compliance or time schedule order has been included in the attached Technical Memorandum
	_____	Based on consultation with the Central Valley Water Board, the required documentation to support a formal request for a new or expanded allocation of assimilative capacity compliance has been included in the attached Technical Memorandum

<sup>1</sup> – See *Guide to Prepare Salinity Management Sustainability Plan* for additional information