CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2012-0012

AMENDING WASTE DISCHARGE REQUIREMENTS
ORDER NO. R5-2010-0018
GENERAL NPDES NO. CAG135001

WASTE DISCHARGE REQUIREMENTS FOR COLD WATER CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITY DISCHARGES TO SURFACE WATERS

The California Regional Water Quality Control Board, Central Valley Region, (hereinafter Central Valley Water Board) finds that:

1. On 29 January 2010, the Central Valley Water Board adopted the Waste Discharge Requirements for Cold Water Concentrated Aquatic Animal Production Facility Discharges to Surface Waters (General Order No. R5-2010-0018; General NPDES No. CAG135001). This General Order applies to individuals, public agencies, private businesses, and other legal entities (hereafter Dischargers) that operate facilities which meet the definition of a cold water "Concentrated Aquatic Animal Production" (CAAP) facility, as defined in section 122.24 of Title 40 of the *Code of Federal Regulations* (CFR), and that discharge to water bodies within the Sacramento and San Joaquin River Basins and Tulare Lake Basin. To be eligible for coverage under this General Order, a fish hatchery, fish farm, or other such facility must contain, grow, or hold cold water species of finfish in ponds, raceways, or similar structures. Facilities covered by this General Order must discharge at least 30 calendar days per year, produce at least 20,000 pounds harvest weight of aquatic animals per year, and feed at least 5,000 pounds of food during the calendar month of maximum feeding. Facilities that do not meet the above criteria may also be designated as a CAAP facility upon a determination that the facility is a significant contributor of pollution to waters of the United States.

2. CAAP facilities are constructed to simulate natural cold water streams and are used to produce cold water fish species, typically trout or salmon. Fresh water is usually supplied to CAAP facilities by springs or surface water diversions. Fresh water continuously enters the headworks of the CAAP facility and passes through a series of aquatic animal production units (e.g., a series of holding tanks, ponds or raceways). Wastewater from these production units can be discharged directly to surface waters or treated in settling basins or percolation ponds prior to discharge.

3. The operation of CAAP facilities have the potential to introduce a variety of pollutants into receiving waters, including various aquaculture drugs and chemicals that are used periodically at CAAP facilities to ensure the health and productivity of the confined fish population, as well as to maintain production efficiency.

4. The approach used in the General Order to control the discharge of pollutants of concern include a combination of best management practices (consistent with the requirements established under the Effluent Limitations Guidelines and Standards

for the Concentrated Aquatic Animal Production Point Source Category at 40 CFR Part 451) and effluent limitations for several pollutants of concern including total suspended solids, settleable solids, formaldehyde, chlorine, and copper (applicable only to facilities that use copper sulfate).

5. Nineteen existing CAAP facilities covered under individual permits and one new CAAP facility were identified that are or may be eligible for coverage under this General Order. Of these, Notices of Applicability (NOAs) have been issued to 13 dischargers. A preliminary determination has been made that at least five existing dischargers will not be eligible for coverage under the General Order because the discharge has reasonable potential to cause or contribute to an excursion of the applicable water quality standards or objectives for one or more metals due primarily to the presence of the metals in intake water.

6. An amendment to the General Order will allow for intake water credits and coverage under this General Order in those instances where intake water is responsible for the reasonable potential to cause or contribute to an excursion of the applicable water quality standards or objectives.

7. *The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) section 1.4.4 allows intake water credits when establishing water quality-based effluent limitations (WQBELs) when specified conditions are met. Specifically, the SIP authorizes the Central Valley Water Board to consider priority pollutants on a pollutant-by-pollutant and discharge-by-discharge basis provided the discharger has demonstrated to the satisfaction of the Central Valley Water Board that the following conditions have been met:

   - The observed maximum ambient background concentration, as determined in section 1.4.3.1 of the SIP, and the intake water concentration of the pollutant exceed the most stringent applicable water quality criteria or objective for that pollutant;

   - The intake water credits are consistent with any total maximum daily load (TMDL) applicable to the discharge;

   - The intake water is from the same water body as the receiving water body;

   - The facility does not alter the intake water pollutant chemically or physically in a manner that adversely affects water quality and beneficial uses; and

   - The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body.

   When the above conditions are met, the Central Valley Water Board may establish effluent limitations allowing the facility to discharge a mass and concentration of

the intake water pollutant that is no greater than the mass and concentration found in the facility's intake water.

8. The proposed amendment to the General Order will allow the dischargers to apply for an intake water credit for a specific pollutant if the discharger demonstrates that the conditions of the SIP for granting an intake water credit have been met. The amendment will include the following revisions:

   - Revision to the Notice of Intent (NOI) requiring the submission of supplemental information by each discharger to demonstrate that the SIP conditions for intake water credits are met.

   - A new provision allowing for intake water credits and the method for determining whether the pollutant concentration and mass in the discharge exceed the pollutant concentration and mass in the intake water.

   - Revision of the Monitoring and Reporting Program Requirements (Attachment C to the General Order) to include the methods, procedures, and frequency of sampling of the intake water (i.e. influent) and the effluent.

9. The proposed amendment also includes several technical corrections. A summary of these changes follows:

   - Removal of redundant pH influent and effluent monitoring requirements in the Monitoring and Reporting Program.

   - Removal of redundant drug and chemical use reporting requirements in the Monitoring and Reporting Program.

   - Renumbering the major sections of the Fact Sheet.

   - Revisions to Attachment G to correct errors in Table G-1 to reflect only the required priority pollutant metals and the suggested test method(s).

10. The proposed amendment also includes two other additions. A summary of these additions follow:

    - Inclusion of a new Attachment H, that specifies the screening levels for the priority pollutant metals to be used to determine whether reasonable potential to exceed applicable water quality objectives and criteria exists for a discharge.

    - Adding the authorization for use of SLICE (Emamectin benzoate 0.2%), a Investigational New Animal Drug used by certain CAAP facilities to treat *Salmincola californiensis* (copepods) in finfish.

11. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.), in accordance with CWC Section 13389.

12. The Central Valley Water Board has notified the Dischargers and interested agencies and persons of its intent to amend Waste Discharge Requirement for Cold Water Concentrated Aquatic Animal Production Facility Discharges to Surface Waters and has provided them with an opportunity to submit written views and recommendations.

13. Any person adversely affected by this action of the Central Valley Water Board may petition the State Water Resources Control Board to review this action. The petition must be reviewed by the State Water Resources Control Board, Office of the Chief Counsel, P.O. Box 100, Sacramento, CA 95812-0100, within 30 days of the date on which this action was taken. Copies of the law and regulations applicable to filing petitions will be provided on request.

IT IS HEREBY ORDERED THAT:

Waste Discharge Requirements General Order No. R5-2010-0018 (General NPDES No. CAG135001) is amended to allow intake water credits for dischargers of Concentrated Aquatic Animal Production (CAAP) Facilities. General Order No. R5-2010-0018 shall be amended as follows:

1. Limitations and Discharge Specifications, Section I.B.2, Authorized Discharges, is amended as follows:

    2. To be authorized by this Order, CAAP facilities must demonstrate that the discharge meets the following criteria:

        a. ~~If~~ Except for settleable solids, formaldehyde, chlorine, pH, copper, and any pollutant eligible for an intake water credit, for which compliance with water quality-based effluent limitations is required in Sections V.A and V.B of this Order, pollutant concentrations in the discharge do not cause, have a reasonable potential to cause, or contribute to an excursion above any applicable federal water quality criterion established by the U. S. Environmental Protection Agency (USEPA) pursuant to the Clean Water Act (CWA) section 303~~, then the Discharger shall meet the effluent limitations for such pollutants contained in this Order~~.

        b. ~~If~~ Except for settleable solids, formaldehyde, chlorine, pH, copper, and any pollutant eligible for an intake water credit, for which compliance with water quality-based effluent limitations is required in Sections V.A and V.B of this Order, pollutant concentrations in the discharge do not cause, have a reasonable potential to cause, or contribute to an excursion above any

water quality objective adopted by the Central Valley Water Board or State Water Board, including prohibitions of discharge for the receiving waters~~, then the Discharger shall meet the effluent limitations for such pollutants contained in this Order~~.

2. Limitations and Discharge Specifications, Section II.C, Termination of Coverage, is amended as follows:

Upon receiving the NOA, the CAAP facility is subject to the terms and conditions of this Order and is responsible for submitting monitoring reports and the annual fee associated with this Order until a written request for official termination of coverage is received. If the Central Valley Water Board issues an individual NPDES permit or Waste Discharge Requirements (WDRs) with more specific requirements to a CAAP facility, the applicability of this Order is automatically terminated on the effective date of the individual permit.

3. Limitations and Discharge Specifications, Section III.B, Facility Description, the last paragraph is amended as follows:

Some CAAP facilities discharge domestic sewage from hatchery buildings and private residences on-site to septic tank/leachfield systems or sewage lagoons. These discharges to land are regulated by this Order.

4. Limitations and Discharge Specifications, Section III.Q, Monitoring and Reporting, add the following two new paragraphs at the end of the section:

The technical and monitoring reports in this Order are required in accordance with CWC Section 13267, which states the following in subsection (b)(1), "*In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.*"

The monitoring reports required by this Order are necessary to determine compliance with this Order. The need for the monitoring reports is discussed in the Fact Sheet.

5. Limitations and Discharge Specifications, Section V., Effluent Limitations and Discharge Specifications, is amended as follows:

   During the effective period of this Order, the Discharger is authorized to discharge pollutants from the outfall(s) specified in its ROWD or NOI within the limits and subject to the conditions set forth in this Order. This Order authorizes the discharge of only those pollutants resulting from facility processes, waste streams, and operations that have been clearly identified in the ROWD or NOI, including non-production facilities, such as laboratories and domestic waste treatment facilities that discharge to land.

6. Limitations and Discharge Specifications, new Section V.A.2, Final Effluent Limitations – Application of Intake Water Credits, is added as follows:

   2. Final Effluent Limitations – Application of Intake Water Credits

   For pollutants for which intake water credits have been requested as part of the NOI and granted as part of the NOA, the monthly average pollutant concentration and mass in the effluent shall not exceed the corresponding monthly average concentration and mass as measured in the influent.

   Where a facility uses multiple intake sources, the monthly average influent concentration and mass shall be reported based on the flow-weighted amount from each intake source. It shall be assumed that the pollutant concentration from any water sources other than the receiving water has a pollutant concentration that is no greater than the most stringent applicable water quality objective.

7. Limitations and Discharge Specifications, new Section V.B.3.d, Application of Intake Water Credits, is added as follows:

   d. Application of Intake Water Credits

   For Dischargers that have requested an intake water credit for copper as part of the NOI and granted as part of the NOA, and for which the daily maximum effluent copper concentration exceeds a limitation as specified in sections V.B.3.a through V.B.3.c above, shall be considered in compliance with that copper limitation if the measured daily maximum effluent concentration is equal to or less than the respective daily maximum intake concentration (sampled on the same calendar day).

8. Limitations and Discharge Specifications, new Section V.C.2.h, Domestic Sewage Lagoons/Septic Tank Leachfields, is added as follows:

   h. Freeboard of sewage lagoons shall never be less than 2 feet (measured vertically to the lowest point of overflow).

9. Limitations and Discharge Specifications, Section VII.C.2.a, Chemical and Aquaculture Drug Use, is amended as follows:

> **a. Chemical and Aquaculture Drug Use.** This Order authorizes the discharge of Oxytetracycline, penicillin G, florfenicol, amoxycillin trihydrate, erythromycin, vibrio vaccine (not discharged/~~directly injected~~ fish are removed and dipped via nets in vaccine and then returned to the raceway), enteric redmouth bacterin (not discharged/~~directly injected~~fish are removed and dipped via nets in vaccine and then returned to the raceway), Romet-30, MS-222, PVP Iodine, formaldehyde, hydrogen peroxide, potassium permanganate, copper sulfate, sodium chloride, acetic acid, chlorine, ~~and~~ chloramine-T and SLICE (Emamectin benzoate 0.2% administered via medicated feed) to surface waters in accordance with label directions, effluent limitations, Best Management Plan requirements, Monitoring and Reporting requirements and other conditions of this Order and NOA issued by the Executive Officer. Other aquaculture chemicals or drugs that may enter the wastewater discharge can only be authorized if the CAAP facility notifies the Central Valley Water Board in writing of the intent to use a new drug or chemical. The notification shall contain the following supplemental information:

10. The Monitoring and Reporting Program (Attachment C), Section III.A, Table C-2, is amended as follows:

Table C-2. Influent Monitoring (Facilities with Production Greater than 100,000 lbs of Fish)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Suspended Solids	mg/L	Grab	1/month	[1]
Settleable ~~Matter~~Solids	mL/L	Grab	1/month	[1]
pH	S.U.	Grab	1/month	[1]
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/month[2]	[1]
Copper (Total recoverable)	µg/L	Grab	1/month during $CuSO_4$ use	[1]
~~pH~~	~~mg/L~~	~~Grab~~	~~1/month during $CuSO_4$ use~~	~~1~~
Hardness	mg/L	Grab	1/month during $CuSO_4$ use	[1]

[1] Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136.

[2] Samples shall be collected at least once per month. If sodium chloride is used, EC shall be measured at least once per month during treatment.

11. The Monitoring and Reporting Program (Attachment C), Section III.B, Table C-3, is amended as follows:

Table C-3. Influent Monitoring (Facilities with Production Less than 100,000 lbs of Fish)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Settleable ~~Matter~~Solids	mL/L	Grab	1/quarter	[1]
pH	S.U.	Grab	1/month	[1]
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/quarter[2]	[1]
Copper (Total recoverable)	µg/L	Grab	1/quarter during $CuSO_4$ use	[1]
~~pH~~	~~mg/L~~	~~Grab~~	~~1/month during $CuSO_4$ use~~	~~1~~
Hardness	mg/L	Grab	1/~~month~~quarter during $CuSO_4$ use	[1]
Total Suspended Solids	mg/L	Grab	1/year[3]	[1]

[1] Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136.

[2] Samples shall be collected at least once per quarter. If sodium chloride is used, EC shall be measured at least once per quarter during treatment.

[3] Samples shall be collected during the month of highest feeding at the same time as effluent samples.

12. The Monitoring and Reporting Program (Attachment C), new Section III.C, Influent Monitoring for Facilities with Intake Water Credits, is added as follows:

C. Influent Monitoring for Facilities with Intake Water Credits

Influent samples shall be collected and analyzed in accordance with the frequency and type specified in the NOA for flow and each pollutant for which an intake water credit has been granted as specified in the NOA. Samples must be taken simultaneously from the influent and effluent or phased to account for the time that it takes water to travel from the water intake to the discharge point. For every influent sample taken an effluent sample must also be taken.

If multiple water sources are used at the facility, including the receiving water, the flow of each water source must be measured to allow for calculation of flow-weighted influent concentration and mass values.

13. The Monitoring and Reporting Program (Attachment C), Section IV.B.2, Table C-5, the sampling frequency for hardness is amended as follows:

Table C-5. Effluent Monitoring (Facilities with Production Less than 100,000 lbs of Fish):

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Settleable Solids (SS)	ml/L	Grab	1/quarter	[1]
Net Settleable Solids	ml/L	Net	1/quarter	

(effluent minus influent)		Calculation		
Turbidity	NTU	Grab	1/quarter	[1]
pH	S.U.	Grab	1/quarter	[1]
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/quarter[2]	[1]
Copper (Total recoverable)	µg/L	Grab	1/quarter during $CuSO_4$ use[3]	[1]
Hardness	mg/L	Grab	1/~~month~~quarter during $CuSO_4$ use[3]	[1]
Formaldehyde	mg/L	Grab	1/quarter during use[4]	[1]
Chlorine	µg/L	Grab	1/quarter during use[5]	[1]
Total Suspended Solids (TSS)	mg/L	Grab	1/year[6]	[1]
Net TSS (effluent minus influent)	mg/L	Net Calculation	1/year	

[1] Pollutants shall be analyzed using the analytical methods described in 40 CFR sections 136.

[2] Samples shall be collected at least once per quarter. If sodium chloride is used, EC shall be measured at least once per quarter during treatment.

[3] When copper sulfate is added to the waters of the Facility, total recoverable copper concentration shall be measured during copper sulfate use. The highest acceptable ML for calibration purposes is 0.5 µg/L. The sample shall be collected during the time of peak discharge of copper, at least one hour after start of treatment. Effluent hardness and pH shall be measured at the same time as total recoverable copper.

[4] When Formalin is added to the waters of the Facility, formaldehyde concentration shall be measured during time of peak discharge of Formalin, at least one hour after start of treatment.

[5] Total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of 18 µg/L (0.018 mg/L).

[6] Samples shall be collected during the month of highest feeding.

14. The Monitoring and Reporting Program (Attachment C), new Section IV.B.3, Effluent Monitoring for Facilities with Intake Water Credits, is added as follows:

3. Effluent Monitoring for Facilities with Intake Water Credits

Effluent samples shall be collected and analyzed in accordance with the frequency and type specified in the NOA for flow and each pollutant for which an intake water credit has been granted as specified in the NOA. Samples must be taken simultaneously from the influent and effluent or phased to account for the time that it takes water to travel from the water intake to the discharge point. For every effluent sample taken an influent sample must also be taken.

15. The Monitoring and Reporting Program (Attachment C), new Section VI.B, Sewage Lagoons, is amended as follows:

> Facilities with sewage lagoons shall monitor pond freeboard and dissolved oxygen weekly~~monthly~~. Groundwater monitoring for total and fecal coliform shall be conducted as specified in the NOA when depth to groundwater is less than 5 feet as measured from the bottom of the sewage lagoon.

16. The MRP (Attachment C), Section X.B, Table C-8, is amended as follows:

Table C-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
1/week	First week following receipt of NOA	Sunday through Saturday	First day of second calendar month following month of sampling
1/month	First day of calendar month following receipt of NOA	First day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
1/quarter	Closest of 1 January, 1 April, 1 July, or 1 October following (or on) date of receipt of NOA	1 January through 31 March 1 April through 30 June 1 July through 30 September 1 October through 31 December	45 days from the end of the monitoring period
1/year	January 1 following (or on) date of receipt of NOA	January 1 through December 31	45 days from the end of the monitoring period

17. The MRP (Attachment C), Section X.C, Other Reports, is now 'Not Applicable' and the text in the section has been removed.

18. The Fact Sheet (Attachment D) major section numbering has been corrected as follows:

I. PERMIT INFORMATION
II. NOTIFICATION REQUIREMENTS
III. DISCHARGE DESCRIPTION
IV. APPLICABLE PLANS, POLICIES, AND REGULATIONS
~~I~~V. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS
VI. RATIONALE FOR RECEIVING WATER LIMITATIONS
VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS
VIII. RATIONALE FOR PROVISIONS
~~VIII~~IX. PUBLIC PARTICIPATION

For the remainder of this Order, the references for the Fact Sheet are based on the corrected major section numbering above.

19. The Factsheet (Attachment D), Section II.B, General Order Coverage, is amended to add a new third paragraph as follows:

B. General Order Coverage

Upon review of the completed ROWD or NOI, the Executive Officer shall determine the applicability of this Order to the CAAP facility discharge(s). If the CAAP facility is deemed eligible for coverage, the Executive Officer shall issue a Notice of Applicability (NOA) to the facility. The NOA will contain an individual general permit number and serve to notify the CAAP facility that the discharge is authorized under the terms and conditions of this Order. The NOA may specify additional site-specific monitoring and reporting requirements. A new discharge (new source) for which coverage under this Order is being sought shall not commence until after receiving the written NOA or until the Central Valley Water Board has issued an individual NPDES permit for the discharge.

A new discharge for which coverage under this Order is being sought shall not commence until after receiving the Executive Officer's written NOA or until the Central Valley Water Board has issued an individual NPDES permit for the discharge.

Dischargers applying for coverage under this Order are required to analyze the existing or proposed discharge for priority pollutant metals regulated under the California Toxics Rule (CTR) and applicable Basin Plans (listed in Attachment H). The screening levels for the constituents in Attachment H are based on the most restrictive water quality objectives/criteria.

20. The Factsheet (Attachment D), Section IV.C.5, Antidegradation Policy, is amended in the third paragraph as follows:

5. Antidegradation Policy. As specified in the Finding contained at section III.N of this Order the discharge is consistent with the antidegradation provisions of 40 CFR section 131.12 and State Water Board Resolution 68-16.Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Central Valley Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies.

This Order requires compliance with applicable federal technology-based standards and with water quality-based effluent limits (WQBELs) where the discharge could have the reasonable potential to cause or contribute to an exceedance of water quality standards.

This Order allows for the use of aquaculture drugs and chemicals including oxytetracycline, penicillin G, florfenicol, amoxicillin, trihydrate, erythromycin, Romet 30, MS-222, PVP, iodine, hydrogen peroxide, potassium permanganate, acetic acid, copper sulfate, chlorine, ~~and~~ chloramine-T, and SLICE (Emamectin benzoate 0.2% administered via medicated feed). Based on information submitted as part of the application, in studies, and as monitoring directed in the previous individual permits, Central Valley Water Board staff evaluated each of these drugs and chemicals. The requirements in this Order for the control and monitoring of disease control drugs comply with the regulations for their use and are fully supportive of CWA goals and objectives.

21. The Factsheet (Attachment D), Section V.C.3.d, Aquaculture Drugs and Chemicals, is amended by adding a new section xv as follows:

xv. SLICE. The drug SLICE (Emamectin benzoate 0.2% Aquaculture premix) may be used by CAAP facilities to treat Salmincola californiensis (copepods) in finfish. SLICE must be used under an INAD exemption. SLICE is used in a manner that reduces the likelihood of direct discharge to waters of the United States or waters of the State, particularly when CAAP facilities implement BMPs as required by this Order. Medicated feed is prepared by coating SLICE Premix onto the surface of non-medicated fish feed pellets. Feeding occurs to ensure the food is consumed and then metabolized by the fish. Accordingly, this Order does not include water quality-based effluent limitations for SLICE; however, this Order requires monthly

monitoring and reporting of this substance as specified in the attached Monitoring and Reporting Program.

22. The Factsheet (Attachment D), new Section V.C.4.f, Intake Water Credit is added as follows:

f. Intake Water Credit. Central Valley Water Board staff anticipate that due in part to the flow-through configuration of CAAP facilities, there may be instances where certain CAAP facilities may not be eligible for coverage because monitoring data indicate that their effluent demonstrates reasonable potential to cause or contribute to an exceedance of applicable water quality objectives. Based on a review of available data, it appears that in most cases the water intake from the receiving water is the major source of the pollutants. Further, many of the CAAP facilities discharge to receiving waters characterized by low hardness (e.g., 20 mg/L $CaCO_3$), which results in stringent water quality objectives for some metals. In these instances when the source water for CAAP facility is responsible for the reasonable potential to exceed applicable water quality standards, an intake water credit can be granted in accordance with section 1.4.4 of the Policy for Implementation of the Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries in California (SIP).

A CAAP facility may submit a written request for an intake water credit. The written request must be prepared in accordance with the NOI requirements specified in Attachment E, section J. The Executive Officer of the Central Valley Water Board will decide whether to authorize the intake water credit, based on the monitoring data included with the NOI and other information submitted by the facility, and the requirements specified in the SIP, section 1.4.4.

The SIP, section 1.4.4 specifies that a California Water Board may consider an intake water credit on a pollutant-by-pollutant and discharge-by-discharge basis when establishing water-quality based effluent limitations, provided that the discharger satisfactorily demonstrates that the following conditions are met:

i. The observed maximum ambient background concentrations, as determined in section 1.4.3.1 of the SIP, and the intake water concentration of the pollutant exceed the most stringent applicable criterion/objective for the pollutant;

ii. The intake water credits are consistent with any TMDL applicable to the discharge that has been approved by the Central Valley Water Board, the State Water Resources Control Board, and USEPA;

iii. The intake water is from the same water body as the receiving water body. The discharger may demonstrate this condition by showing:

a) the ambient background concentration of the pollutant in the receiving water, excluding any amount of the pollutant in the facility's discharge, is similar to the that of the intake water;

b) there is direct hydrological connection between the intake and discharge points;

c) the water quality characteristics are similar in the intake and receiving waters; and

d) the intake water pollutant would have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effect had it not been diverted by the discharger.

The Central Valley Water Board may also consider other factors when determining whether the intake water is from the same water body as the receiving water body;

iv. The facility does not alter the intake water pollutant chemically or physically in a manner that adversely affects water quality and beneficial uses; and

v. The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water.

23. The Factsheet (Attachment D), Section V.D.1, Mass-based Effluent Limitations, is expanded (added to the end of the section) as follows:

1. Mass-based Effluent Limitations

40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of concentration, as mass limitations are not necessary to protect the beneficial uses of the receiving water.

However, when a CAAP Facility is granted an intake water credit for a pollutant the effluent limits for that pollutant are based on a no net addition of the pollutant. Therefore, the effluent limits are based on mass (i.e., the

pollutant mass in the effluent may not exceed the pollutant mass in the intake water.

24. The Factsheet (Attachment D), section V.D.4, Satisfaction of Antidegradation Policy is expanded (added to the end of the section) as follows:

2. Satisfaction of Antidegradation Policy

The Order requires compliance with applicable federal technology-based standards and with WQBELs where the discharge could have the reasonable potential to cause or contribute to an exceedance of water quality standards. Some CAPP facilities may be granted an intake water credit to account for pollutants in the intake water. Implementation of an intake water credit in accordance with the SIP allows a CAAP facility to discharge a mass and concentration of the intake water pollutants that is no greater than the mass and concentration found in the facility's intake water. If a CAAP facility adds mass of a pollutant to its waste stream, an equal or greater mass must be removed prior to discharge, resulting in no net addition of the pollutant in the discharge compared to the intake water.

The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

25. The Factsheet (Attachment D), Section VII.A., Influent Monitoring, is amended (section VII.A.1 is corrected and sections VII.A.2 and 3 are added to the end of the section) as follows:

1. Influent monitoring is required for TSS, settleable solids, and pH when there is a discharge from the CAAP facility. Influent suspended solids and settleable solids will be subtracted from the effluent concentrations to calculate the net increase. Hardness~~, pH,~~ and copper (as total recoverable) monitoring is required during periods when copper sulfate is used at the Facility. Electrical conductivity monitoring is required during periods when sodium chloride is used at the CAAP facility.

2. In addition, CAPP facilities that have been granted an intake water credit in the NOA must monitor the influent for each applicable pollutant. Influent samples must be taken concurrent with effluent samples. Due to the site-specific situation for each CAAP facility that is granted an intake water credit, the NOA will specify the sample type and frequency that will ensure adequate representation of the influent pollutant mass and concentrations.

3. Where multiple intake water sources are used and an intake water credit is granted, the influent flow from each source must be monitored to calculate a

flow-weighted influent concentration. In accordance with the SIP, the pollutant from the receiving water shall be assumed to have a concentration that is no greater than concentration in the CAAP facilities intake water. Therefore, monitoring of the intake water from the receiving body must be performed for each pollutant. The pollutant concentrations from intake sources other than the receiving water are assumed to have a concentration that is no greater than the most stringent applicable water quality objective. Therefore, monitoring for hardness of the intake water from the receiving water body is also required when the effluent is monitored to derive the most stringent water quality objective for one or more of the hardness-dependent metals contained in the CTR (cadmium, chromium III, copper, lead, nickel, silver, and zinc) and/or applicable Basin Plan. Due to the site-specific situation for each CAAP facility that is granted an intake water credit, the NOA will specify the sample type and frequency that will ensure adequate representation of the influent pollutant mass and concentrations.

26. The Factsheet (Attachment D), Section VII.B.3, Effluent Monitoring, is corrected as follows:

    3. Effluent monitoring for specific conductance is required monthly when salt is added to CAAP facility waters. Monitoring for hardness~~, pH,~~ and copper (as total recoverable) is required when copper sulfate is utilized for treatments. Monitoring for formaldehyde is required when formalin is utilized. Monitoring for chlorine residual is required during chlorine use. Effluent monitoring for turbidity is required to assess the effectiveness of solids removal and impact on the receiving water.

27. The Factsheet (Attachment D), Section VII.B., Effluent Monitoring, is amended by adding a new section as follows:

    4. CAPP facilities that have been granted an intake water credit in the NOA must monitor the effluent for each applicable pollutant. Effluent samples must be taken concurrent with influent samples. Due to the site-specific situation for each CAAP facility that is granted an intake water credit, the NOA will specify the sample type and frequency that will ensure adequate representation of the effluent pollutant mass and concentrations.

28. The Notice of Intent (Attachment E), new Section J, Intake Water Credits, is added as follows:

J. INTAKE WATER CREDITS

*1. Does your facility's intake water exceed applicable numeric water quality criteria**?***
☐ ***Yes*** ☐ ***No***

*2. If **Yes**, will you be applying for an intake water credit?* ☐ ***Yes*** ☐ ***No***

*3. If **Yes**, is the primary source of water for your facility operation the same as the water body that receives your facility's effluent discharge?* ☐ ***Yes*** ☐ ***No***

*If "**No**", you do not need to complete the remainder of this section as your facility is not eligible for an intake water credit.*

*If "**Yes**", continue to question J.4 below.*

*4. a. If you answered "**Yes**" to question J.3., does your facility use multiple water supplies?*
☐ ***Yes*** ☐ ***No***.

*b. If **No**, go to question J.5. If **Yes**, describe the conditions that trigger the use of the supplemental water supply and the frequency and duration that the supplemental water supply is used.*

c. Complete the following table if your facility uses multiple water supplies.

Intake Water Source Name/Description	**Max. Flow** (specify units)	**Min. Flow** (specify units)
1.		
2.		
3.		
4.		
Receiving Water Name		

5. Does your facility alter the pollutant for which you are seeking an intake water credit chemically or physically? ☐ ***Yes*** ☐ ***No***

*If **No**, go to question J.6. If **Yes**, describe how your facility alters the pollutant.*

6. Would the pollutant for which you are seeking an intake water credit have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effects had it not been diverted to your facility? ☐ ***Yes*** ☐ ***No***

Provide an explanation below:

7. Does the timing or location of your discharge cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body?
☐ ***Yes*** ☐ ***No***

Provide an explanation below:

29. The Priority Pollutant Metals Monitoring (Attachment G), Table G-1, is corrected as follows:

Table G-1 – List of Required Priority Pollutant Metals

Constituent	~~Controlling Water Quality Criterion for Surface Waters~~		Criterion Quantitation Limit ug/L	Suggested Test Method
	~~Basis~~	~~Criterion Concentration ug/L~~		
Hardness (as $CaCO_3$)				EPA 130.2
Antimony			5	EPA 6020/200.8
Arsenic	~~Ambient Water Quality~~	~~0.018~~	0.01	EPA 1632
~~Asbestos~~	~~National Toxics Rule/ Primary MCL~~	~~7 MFL~~	~~0.2 MFL >10um~~	~~EPA/600/R-93/116(PCM)~~
~~Barium~~	~~Basin Plan Objective~~	~~100~~	~~100~~	~~EPA 6020/200.8~~
Beryllium	~~Primary MCL~~	~~4~~	1	EPA 6020/200.8
Cadmium	~~Public Health Goal~~	~~0.07~~	0.25	EPA 1638/200.8
Chromium (~~total~~III)	~~Primary MCL~~	~~50~~	2	EPA 6020/200.8
Chromium (VI)	~~Public Health Goal~~	~~0.2~~	0.5	EPA 7199/1636
Copper	~~National Toxics Rule~~	~~4.1 (2)~~	0.5	EPA 6020/200.8
~~Cyanide~~	~~National Toxics Rule~~	~~5.2~~	~~5~~	~~EPA 9012A~~
~~Fluoride~~	~~Public Health Goal~~	~~1000~~	~~0.1~~	~~EPA 300~~
~~Iron~~	~~Secondary MCL~~	~~300~~	~~100~~	~~EPA 6020/200.8~~
Lead	~~Calif. Toxics Rule~~	~~0.92 (2)~~	0.5	EPA 1638
Mercury	~~TMDL Development~~	-	0.0002 (11)	EPA 1669/1631
~~Manganese~~	~~Secondary MCL/ Basin Plan Objective~~	~~50~~	~~20~~	~~EPA 6020/200.8~~
Nickel	~~Calif. Toxics Rule~~	~~24 (2)~~	5	EPA 6020/200.8
Selenium	~~Calif. Toxics Rule~~	~~5 (8)~~	5	EPA 6020/200.8
Silver	~~Calif. Toxics Rule~~	~~0.71 (2)~~	1	EPA 6020/200.8
Thallium	~~National Toxics Rule~~	~~1.7~~	1	EPA 6020/200.8
~~Tributyltin~~	~~Ambient Water Quality~~	~~0.063~~	~~0.002~~	~~EV 024/025~~
Zinc	~~Calif. Toxics Rule/ Basin Plan Objective~~	~~54/ 16 (2)~~	10	EPA 6020/200.8

30. A new Attachment H has been added as follows:

ATTACHMENT H – SCREENING LEVELS FOR PRIORITY POLLUTANT METALS

I. Requirements for All Discharges

Table H-1below contains screening levels for the priority pollutant metals. These screening levels will be compared to effluent monitoring results to determine eligibility for coverage under the General Order.

Table H-1. Screening Levels for Priority Pollutant Metals

Priority Pollutant	Units	Screening Level (Most Stringent Objective/Criterion)	Most Stringent Objective/Criteria		
			Human Health	Chronic Aquatic Life	Acute Aquatic Life
Antimony, Total Recoverable	µg/L	6	6	--	--
Arsenic, Total Recoverable	µg/L	10	10	150	340
Beryllium, Total Recoverable	µg/L	4	4	--	--
Cadmium, Total Recoverable	µg/L	[1]	5	[2]	[2]
Chromium (III)	µg/L	[1]	--	[2]	[2]
Chromium (VI)	µg/L	11	100	11	16
Copper, Total Recoverable	µg/L	[1]	1,300	[2]	[2]
Lead, Total Recoverable	µg/L	[1]	15	[2]	[2]
Mercury, Total Recoverable	µg/L	0.05	0.05	0.77	1.4
Nickel, Total Recoverable	µg/L	[1]	100	[2]	[2]
Selenium, Total Recoverable	µg/L	5.0	20	5.0	20
Silver, Total Recoverable	µg/L	[1]	100	[2]	[2]
Thallium, Total Recoverable	µg/L	1.7	1.7	40	1,400
Zinc, Total Recoverable	µg/L	[1]	5,000	[2]	[2]

[1] The aquatic life objectives/criteria for this pollutant are hardness dependent. The most stringent objective/criteria should be derived subsequent to calculation of the hardness-dependent objective/criterion (see footnote 2 below).

[2] The aquatic life objectives/criteria for this pollutant are hardness dependent. See Table H-2 below for the equations to be used to derive the applicable criterion.

Table H-2. Equations for Derivation of Hardness-Dependent Metals

Parameter	Units	Acute Aquatic Life	Chronic Aquatic Life
Cadmium, Total Recoverable	µg/L	$e^{\{1.128\ [\ln(\text{hardness})] - 3.6867\}}$	$e^{\{0.7852\ [\ln(\text{hardness})] - 2.715\}}$
Chromium (III)	µg/L	$e^{\{0.8190\ [\ln(\text{hardness})] + 3.688\}}$	$e^{\{0.8190\ [\ln(\text{hardness})] + 1.561\}}$
Copper, Total Recoverable	µg/L	$e^{\{0.9422\ [\ln(\text{hardness})] - 1.700\}}$	$e^{\{0.8545\ [\ln(\text{hardness})] - 1.702\}}$
Lead, Total Recoverable	µg/L	$e^{\{1.273\ [\ln(\text{hardness})] - 1.460\}}$	$e^{\{1.273\ [\ln(\text{hardness})] - 4.705\}}$
Nickel, Total Recoverable	µg/L	$e^{\{0.8460\ [\ln(\text{hardness})] + 2.255\}}$	$e^{\{0.8460\ [\ln(\text{hardness})] + 0.0584\}}$
Silver, Total Recoverable	µg/L	$e^{\{1.72\ [\ln(\text{hardness})] - 6.52\}}$	--
Zinc, Total Recoverable	µg/L	$e^{\{0.8473\ [\ln(\text{hardness})] + 0.884\}}$	$e^{\{0.8473\ [\ln(\text{hardness})] + 0.884\}}$

[1] The minimum observed receiving water hardness shall be used in these equations.

II. Requirements for Discharges to Specific Waterbodies

The screening levels contained in Table H-3 below for arsenic, copper, silver, and zinc supercede those contained in Table H-1 for the same parameters for dischargers seeking authorization to discharge under this General Order to the Sacramento River from Keswick Dam to the I Street Bridge at City of Sacramento, American River from Folsom Dam to the Sacramento River, and Folsom Lake.

Table H-3. Screening Levels for Discharges to the Sacramento River from Keswick Dam to the I Street Bridge at City of Sacramento, American River from Folsom Dam to the Sacramento River, and Folsom Lake

Parameter	Units	Screening Level
Arsenic, Total Recoverable	mg/L	0.01
Copper, Total Recoverable	mg/L	0.01[1]
Silver, Total Recoverable	mg/L	0.01
Zinc, Total Recoverable	mg/L	0.1[1]

[1] Does not apply to Sacramento River above the State Highway 32 Bridge at Hamilton City.

For dischargers seeking authorization to discharge under this General Order to the Sacramento River and its tributaries above the State Highway 32 Bridge at Hamilton City, the screening levels contained in Table H-4 for copper, zinc, and cadmium supercede those contained in Table H-1 for the same parameters.

Table H-4. Equations for Derivation of Hardness-Dependent Screening Levels for Discharges to the Sacramento River and Its Tributaries Above the State Highway 32 Bridge at Hamilton City

Parameter	Units	Screening Level/Water Quality Objective
Copper, Total Recoverable	µg/L	$e^{\{0.905\ [\ln(\text{hardness})] - 1.612\}}$
Zinc, Total Recoverable	µg/L	$e^{\{0.830\ [\ln(\text{hardness})] - 0.289\}}$
Cadmium, Total Recoverable	µg/L	$e^{\{1.160\ [\ln(\text{hardness})] - 5.777\}}$

[1] The minimum observed receiving water hardness shall be used in these equations.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 2 February 2012**.**

Original Signed by Kenneth D. Landau for
PAMELA C. CREEDON, Executive Officer