

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2016-0065

AMENDING WASTE DISCHARGE REQUIREMENTS
ORDER R5-2013-0072 (NPDES PERMIT NO. CA0084620)
AND RESCISSION OF TIME SCHEDULE ORDER R5-2013-0102

CALAVERAS COUNTY WATER DISTRICT AND SADDLE CREEK GOLF COURSE L.P.
COPPER COVE WASTEWATER RECLAMATION FACILITY
CALAVERAS COUNTY

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

1. On 31 May 2013, the Central Valley Water Board adopted Waste Discharge Requirements Order R5-2013-0072, renewing NPDES Permit No. CA0084260 that prescribes waste discharge requirements for the Calaveras County Water District (CCWD) and Saddle Creek Golf Course L.P., Copper Cove Wastewater Reclamation Facility, Calaveras County. For purposes of this Order, the Calaveras County Water District and Saddle Creek Golf Course L.P. are hereafter collectively referred to as "Discharger" and the Copper Cove Wastewater Reclamation Facility is hereafter referred to as "Facility."
2. Order R5-2013-0072 authorizes the surface water discharge of up to 0.95 million gallons per day of disinfected tertiary treated wastewater to the Jurisdictional Wetlands of the Saddle Creek Golf Course.
3. The Facility is a Publicly-Owned Treatment Works, owned and operated by CCWD. The Facility provides sewerage service for the Copper Cove Community and serves a population of approximately 4200. The treatment system consists of a headworks, two aerated ponds operated in parallel (Ponds 1 and 2), an additional aerated pond for settling and polishing (Pond 4), followed by tertiary filtration and ultraviolet light (UV) disinfection. Disinfected, tertiary treated wastewater is stored on-site in an unlined storage reservoir (Pond 6), which may then be land applied via spray irrigation on 35 acres of spray irrigation fields. The Facility and on-site spray disposal area are permitted by Non-15 WDR Order R5-2010-0070. The permitted average dry weather flow for the tertiary treatment system is 0.95 MGD.

During the discharge season, 1 April through 31 December, Title 22 tertiary treated effluent is collected in a reclaimed water storage tank and then conveyed to Pond NC-2D on the Saddle Creek Golf Course to be used for golf course irrigation or to provide makeup water for the wetland system. The NPDES Permit was required due to discharges to the jurisdictional wetlands, which are waters of the United States. The Saddle Creek Golf Course owns and operates the golf course irrigation system.

Order R5-2013-0072 allows discharges to Pond NC-2D between 1 April and 31 December of each year. The Facility typically starts to convey tertiary treated wastewater to Pond NC-2D starting April 1st and does so until Pond 6 is empty and will treat as flow comes in from the biological plant through the remainder of the year. When the demand for irrigation water exceeds the supply of recycled water, the Discharger provides raw water from Lake Tulloch, which is piped to the recycled water storage tank where it commingles with recycled water, if present, and then is conveyed to Pond NC-2D.

4. Order R5-2013-0072 contains effluent limitations for ammonia and nitrate plus nitrite to protect the beneficial uses of the jurisdictional wetlands. Although the discharge to the wetlands does not occur until after the golf course Pond NC-2D, compliance with all effluent limits is measured at the Facility at monitoring location REC-001. Because some ammonia and nitrate plus nitrite reduction occurs in Pond NC-2D the Discharger collected ammonia and nitrate plus nitrite data in Pond NC-2D to determine if compliance with the effluent limitations could be achieved prior to discharge to the jurisdictional wetlands. The data demonstrated the constituent concentrations are in compliance with the final effluent limits. This Order amends Order R5-2013-0072 to add a new monitoring location, REC-002, that is located in Pond NC-2D prior to discharge to the jurisdictional wetlands. The new monitoring location will provide representative samples of the discharge to the jurisdictional wetland and will be used to evaluate compliance with the effluent limitations for ammonia and nitrate plus nitrite.
5. Order R5-2013-0072 contains effluent limitations for total residual chlorine and dichlorobromomethane and monitoring requirements for total residual chlorine, chloroform, and dichlorobromomethane that were required due to the past use of chlorine (liquid hypochlorite) for disinfection. The Discharger completed construction of a new ultraviolet (UV) disinfection system in September 2006 and has entirely discontinued the use of liquid hypochlorite. All reclaimed water is now disinfected via UV and chlorine is no longer used in any stage of the treatment process. Therefore, the discharge no longer demonstrates reasonable potential to cause or contribute to an exceedance of the applicable water quality objectives for total residual chlorine and dichlorobromomethane, and will not produce disinfection byproducts such as chloroform. This Order amends Order R5-2013-0072 to remove the effluent limitations for total residual chlorine and dichlorobromomethane and the monitoring requirements for total residual chlorine, chloroform, and dichlorobromomethane.
6. Order R5-2013-0072 contains effluent limitations for aluminum and manganese that were established as calendar annual average concentrations based on the Secondary Maximum Contaminant Levels. The Code of Federal Regulations at 40 C.F.R. 122.45(d) requires average weekly and average monthly discharge limitations for publicly-owned treatment works unless impracticable. The Central Valley Water Board finds it is not impracticable to calculate average weekly and average monthly effluent limits for aluminum and manganese. Therefore, this Order recalculates and establishes the effluent limits for aluminum and manganese as average weekly and average monthly per the federal regulations.
7. Time Schedule Order (TSO) R5-2013-0102, was adopted by the Central Valley Water Board on 26 July 2013 and provides compliance schedules for meeting the final effluent limitations for aluminum, ammonia, electrical conductivity, dichlorobromomethane, nitrate plus nitrite, and manganese. The time schedules for these constituents expire on 31 July 2016. The Discharger has completed projects and the Facility can comply with the effluent limitations, therefore, this Order rescinds TSO R5-2013-0102.

8. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) ("CEQA") pursuant to Water Code section 13389, since the adoption or modification of a NPDES permit for an existing source is statutorily exempt and this Order only serves to modify a NPDES permit (*Pacific Water Conditioning Ass'n, Inc. v. City Council of City of Riverside* (1977) 73 Cal.App.3d 546, 555-556.).
9. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to amend the NPDES permit and rescind the TSO for this discharge and has provided them with an opportunity to submit their written views and recommendations.

IT IS HEREBY ORDERED THAT:

1. Time Schedule Order R5-2013-0102 is rescinded upon the effective date of this Order except for enforcement purposes.
2. Waste Discharge Requirements Order R5-2013-0072 (NPDES No. CA0084620) is amended in order to change the point of compliance for ammonia and nitrate plus nitrite effluent limitations, remove effluent limitations for total residual chlorine and dichlorobromomethane, remove regular effluent monitoring requirements for total residual chlorine, chloroform, and dichlorobromomethane, and recalculate and establish average weekly and average monthly effluent limits for aluminum and manganese.

Effective immediately upon adoption, Order R5-2013-0072 is amended as shown in Items 2.a through 2.z below.

- a. Change the Order number throughout to R5-2013-0072-01.
- b. **Cover Page.** Modify the paragraph above the signatory line on the Cover Page as shown in underline/strikeout format below:

I, Pamela C. Creedon, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 31 May 2013, and amended by Order R5-2016-0065 on 19 August 2016.

- c. **Facility Description.** Modify Limitations and Discharge Specifications Section II.B as shown in underline/strikeout format below:

The Discharger owns and operates a POTW. The treatment system consists of a headworks ~~and flow diverter~~, two aerated ponds (Ponds 1 and 2) operated in parallel, ~~followed by an additional aerated pond (Pond 4) for settling and polishing,~~ followed by tertiary filtration and ultraviolet light (UV) disinfection and potassium hypochlorite disinfection. Pond 3 is currently out of service and Pond 5 is only used for emergencies. Disinfected, ~~secondary~~ tertiary treated wastewater is stored on-site in an unlined storage reservoir (Pond 6), which may then be land applied via spray

irrigation on CCWD's 2535 acres of spray irrigation fields. The ~~secondary treatment and storage facilities, Facility~~ and on-site ~~irrigations~~ spray disposal are regulated under separate Waste Discharge Requirements (WDR) Order R5-2010-0070.

During the ~~summer, typically June through August~~ discharge season, 1 April through 31 December, wastewater from Pond 6 ~~is further treated to meet the disinfection requirements of the Department of Public Health Title 22 disinfected tertiary recycled water¹ using Microfloc two-stage (coagulation-flocculation) filtration system, and ultraviolet light (UV) disinfection.~~ The ~~Title 22 disinfected tertiary recycled water~~ is collected in a reclaimed water storage tank and discharged to ~~Pond NC-2D located on the SCGC receiving pond (Pond NC-2D) for golf course irrigation.~~ When the demand for irrigation water exceeds the supply of recycled water, CCWD provides raw water from Lake Tulloch, which is piped to the recycled water storage tank where it commingles with recycled water, if present, and then discharged to Pond NC-2D. The Title 22 disinfected tertiary recycled water in Pond NC-2D is used for golf course irrigation or to provide makeup water for the jurisdictional wetland system, as described below.

The jurisdictional wetland system is regulated by a US Army Corps of Engineers Clean Water Act Section 404 permit (404 permit). The wetland system also includes several man-made and natural lakes, including Mitchell Lake. The 404 permit requires that all ponds and wetland areas have a continuous supply of water to maintain minimum levels. Therefore, SCGC uses water in Pond NC-2D when necessary to supply make-up water to the wetlands, excluding Mitchell Lake which is tributary to Littlejohns Creek.

The Facility discharges tertiary treated wastewater to Discharge Point No. 001 (see table on cover page) to Pond NC-2D, and at times this water is discharged to the jurisdictional wetlands, waters of the United States, within the Middle San Joaquin, Lower Merced, Lower Stanislaus Watershed.

Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

- d. Stringency of Requirements for Individual Pollutants.** Modify Limitations and Discharge Specifications Section II.M as shown in underline/strikeout format below:

M. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on flow and percent removal requirements for 5-day biochemical oxygen demand (BOD₅) and total suspended solids (TSS). The WQBELs consist of restrictions on aluminum, ammonia, BOD₅, ~~chlorine residual, dichlorobromomethane,~~ electrical conductivity, manganese, nitrate plus nitrite, pH, total coliform organisms, and TSS. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order includes effluent limitations

for BOD₅, total coliform organisms, and TSS to meet numeric objectives or protect beneficial uses.

e. **Final Effluent Limitations – Discharge Point No. 001.** Modify Limitations and Discharge Requirements Sections IV.A.1.a,d, g, and h, and Table 6, as shown in underline/strikeout format below:

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001. Compliance with the ammonia and nitrate plus nitrite effluent limitations shall be measured at Monitoring Location REC-002, with compliance with the effluent limitations for the remaining constituents measured at Monitoring Location REC-001 as described in the Monitoring and Reporting Program:

Table 6. Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
<i>Conventional Pollutants</i>						
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	15	20	--	--
	lbs/day ¹	79	119	158	--	--
pH	standard units	--	--	--	6.5	8.5
Total Suspended Solids	mg/L	10	15	20	--	--
	lbs/day ¹	79	119	158	--	--
<i>Priority Pollutants</i>						
Dichlorobromomethane	µg/L	0.56	--	4.6	--	--
<i>Non-Conventional Pollutants</i>						
<u>Aluminum, Total Recoverable</u>	µg/L	<u>310</u>	<u>623</u>	--	--	--
Ammonia Nitrogen, Total (as N)	mg/L	0.74	--	2.2	--	--
	lbs/day	5.9	--	17	--	--
Electrical Conductivity @ 25°C	µmhos/cm	900	--	--	--	--
<u>Manganese, Total Recoverable</u>	µg/L	<u>97</u>	<u>242</u>	--	--	--
Nitrate Plus Nitrite (as N)	mg/L	10	--	--	--	--

¹ Mass-based effluent limitations are based on a flow of 0.95 MGD.

d. Total Residual Chlorine. Effluent total residual chlorine shall not exceed:

- i. ~~0.011 mg/L, as a 4-day average; and~~
- ii. ~~0.019 mg/L, as a 1-hour average.~~

~~**g. Aluminum, Total Recoverable.** For a calendar year, the annual average effluent concentration shall not exceed 200 µg/L.~~

~~**h. Manganese, Total Recoverable.** For a calendar year, the annual average effluent concentration shall not exceed 50 µg/L.~~

f. Compliance Determination. Modify Limitations and Discharge Requirements Section VII.D as shown in underline/strikeout format below:

~~**D. Total Residual Chlorine** Effluent Limitations (Section IV.A.1.d). Continuous monitoring analyzers for chlorine residual or for dechlorination agent residual in the effluent are appropriate methods for compliance determination. A positive residual dechlorination agent in the effluent indicates that chlorine is not present in the discharge, which demonstrates compliance with the effluent limitations. This type of monitoring can also be used to prove that some chlorine residual exceedances are false positives. Continuous monitoring data showing either a positive dechlorination agent residual or a chlorine residual at or below the prescribed limit are sufficient to show compliance with the total residual chlorine effluent limitations, as long as the instruments are maintained and calibrated in accordance with the manufacturer's recommendations.~~

~~Any excursion above the 1-hour average or 4-day average total residual chlorine effluent limitations is a violation. If the Discharger conducts continuous monitoring and the Discharger can demonstrate, through data collected from a back-up monitoring system, that a chlorine spike recorded by the continuous monitor was not actually due to chlorine, then any excursion resulting from the recorded spike will not be considered an exceedance, but rather reported as a false positive. Records supporting validation of false positives shall be maintained in accordance with Section IV Standard Provisions (Attachment D).~~

g. Monitoring Locations. Modify Attachment E Table E-1 as shown in underline/strikeout format below:

3. Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	A location where a representative sample of the influent into the Facility at the headworks can be obtained, prior to entry into any treatment process.
001	REC-001	At a location where a representative sample of the tertiary treated effluent can be obtained, after final treatment and prior to commingling with raw water from Lake Tulloch in the recycled water storage tank.
--	UVS-001	Ultraviolet Light (UV) Disinfection System
<u>001</u>	<u>REC-002</u>	<u>A location in Pond NC-2D where a representative sample of water being used to irrigate the SCGC Jurisdictional Wetlands can be obtained.</u>

h. Effluent Monitoring Requirements. Modify Attachment E Section IV.A. and Table E-3 as shown in underline/strikeout format below:

A. Monitoring Location REC-001 and REC-002

- When discharging to Pond NC-2D, the Discharger shall monitor tertiary treated effluent at Monitoring Location REC-001 and the water being used to irrigate the SCGC Jurisdictional Wetlands at monitoring location REC-002 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level. Where a CTR constituent is listed in Appendix 4 of the SIP, the reporting level specified in Attachment I must be achieved by the laboratory conducting the analysis.

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method	Monitoring Location
Flow	MGD	Meter	Continuous	--	<u>REC-001</u>
Conventional Pollutants					
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	24-hr Composite ¹	1/Week	2	<u>REC-001</u>
	lbs/day	Calculate	1/Week	--	
pH	standard units	Meter	Continuous ³	2,4	<u>REC-001</u>
Total Suspended Solids	mg/L	24-hr Composite ¹	1/Week	2	<u>REC-001</u>
	lbs/day	Calculate	1/Week	--	
Priority Pollutants					
Chloroform	µg/L	Grab	1/Month	2	
Dichlorobromomethane	µg/L	Grab	1/Month	2,5	
Priority Pollutants and Other Constituents of Concern	µg/L	See Attach. I	See Attach. I	2,5	
Non-Conventional Pollutants					
Aluminum, Total Recoverable	µg/L	24-hr Composite ¹	1/Month	2	<u>REC-001</u>
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Week ^{3,6}	2	<u>REC-002</u>
	lbs/day	Calculate	1/Week ^{3,6}	--	
Chlorine, Total Residual	mg/L	Grab	1/Month	2,7	
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Week	2	<u>REC-001</u>
Hardness, Total (as CaCO ₃)	mg/L	Grab	1/Month	2	<u>REC-001</u>
Manganese, Total Recoverable	mg/L	24-hr Composite ¹	1/Month	2	<u>REC-001</u>

ORDER R5-2016-0065
 AMENDING WASTE DISCHARGE REQUIREMENTS ORDER R5-2013-0072
 AND RESCINDING TIME SCHEDULE ORDER R5-2013-0102
 CALAVERAS COUNTY WATER DISTRICT AND SADDLE CREEK GOLF COURSE L.P.
 COPPER COVE WASTEWATER RECLAMATION FACILITY
 CALAVERAS COUNTY

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method	Monitoring Location
Nitrate Nitrogen, Total (as N)	mg/L	Grab	1/Month ⁸⁷	2	<u>REC-002</u>
Nitrite Nitrogen, Total (as N)	mg/L	Grab	1/Month ⁸⁷	2	<u>REC-002</u>
Oil and Grease	mg/L	Grab	1/Quarter ⁹⁸	2	<u>REC-001</u>
Temperature	°F	Grab	1/Week ³	2,4	<u>REC-001</u>
Total Coliform Organisms	MPN/100 m L	Grab	1/Day ¹⁰⁹	2	<u>REC-001</u>

¹ 24-hour flow proportional composite.

² Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136 or by methods approved by the Central Valley Water Board or the State Water Board.

³ pH and temperature shall be recorded at the time of ammonia sample collection.

⁴ A hand-held field meter may be used, provided the meter utilizes a USEPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.

⁵ The maximum Reporting Level (RL) is specified in Attachment I, Table I-1, Priority Pollutants and Other Constituents of Concern.

⁶ Concurrent with whole effluent toxicity monitoring.

~~⁷ Total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of 0.01 mg/L.~~

⁸⁷ Monitoring for nitrate and nitrite shall be conducted concurrently.

⁹⁸ Oil and grease shall be monitored quarterly for the first 2 years following the date of permit adoption at Monitoring Location REC-001.

¹⁰⁹ Samples for total coliform organisms may be collected at any point following disinfection.

- i. Calculation Requirements. Modify Attachment E Section X.B.6.a as shown in underline/strikeout format below:

~~a. **Annual Average Limitations.** For constituents with effluent limitations specified as "annual average" (aluminum and manganese) the Discharger shall report the annual average in the December SMR. The annual average shall be calculated as the average of the samples gathered for the calendar year.~~

- j. **Permit Information.** Modify Attachment F Section I as shown in underline/strikeout format below:

D. This Order was amended by Order 2016-0065 on 19 August 2016 to modify the point of compliance for the effluent limitations for ammonia and nitrate plus nitrite, modify the effluent limits for aluminum and manganese, remove effluent limitations and monitoring requirements for chlorine residual and dichlorobromomethane, and remove the monitoring requirements for chloroform.

- k. Facility Description.** Modify Attachment F Section II.A as shown in underline/strikeout format below:

A. Description of Wastewater and Biosolids Treatment or Controls

The secondary treatment system at the Facility consists of a headworks and flow diverter, two aerated ponds (Ponds 1 and 2) operated in parallel, followed by an additional aerated pond (Pond 4) for settling and polishing, followed by tertiary filtration and ultraviolet light (UV) disinfection. ~~and potassium hypochlorite disinfection.~~ Pond 3 is currently out of service and Pond 5 is only used for emergencies. Disinfected, ~~secondary~~ tertiary treated wastewater is stored on-site in an unlined storage reservoir (Pond 6), which may then be land applied via spray irrigation on CCWD's ~~2535~~ acres of spray irrigation fields. The collection system, secondary treatment and storage facilities, and on-site irrigation are covered under separate WDR Order R5-2010-0070.

~~During the summer, typically June through August discharge season, 1 April through 31 December, wastewater from Pond 6 is further treated to tertiary levels using tertiary filtration and ultraviolet light (UV) disinfection. The Title 22 tertiary treated effluent is collected in a reclaimed water storage tank and then discharged to Pond NC-2D to be used for golf course irrigation or to provide makeup water for the wetland system.~~

This Order allows discharges to Pond NC-2D between 1 April and 31 December of each year. CCWD only discharges to Pond NC-2D ~~for 3 months during the summer during the discharge season, however, thus~~ golf course demand for irrigation water usually exceeds the supply of reclaimed water. When the demand for irrigation water exceeds the supply of recycled water, CCWD provides raw water from Lake Tulloch, which is piped to the recycled water storage tank where it commingles with recycled water, if present, and then discharged to Pond NC-2D.

Sludge treatment and control for the Facility, and land disposal of secondary tertiary treated effluent onsite, are regulated by Order R5-2010-0070.

- l. Planned Changes.** Modify Attachment F Section II.E as shown in underline/strikeout format below:

E. Planned Changes – Not Applicable.

~~1. On 3 December 2012, the Discharger submitted a work plan for the reduction of chloroform and dichlorobromomethane in the effluent. Initial testing from March 2011 through May 2011 indicated that the addition of sodium hypochlorite to Pond 4 effluent prior to entering Pond 6 resulted in increased chloroform and dichlorobromomethane concentrations. Therefore, the Discharger is conducting a pilot project to eliminate the formation of chlorine disinfection byproducts. The pilot project includes modifications to the treatment process to discontinue use of the chlorine disinfection and divert all flows from Pond 4 to the tertiary treatment facility to be disinfected using UV disinfection prior to discharge to either Pond 6 or the SCGC. The pilot project will be conducted during the winter and spring of~~

~~2013 under both high and normal operational flows. Based on the results of the pilot project, the Discharger may design permanent modifications to the Facility to ensure continuous permit compliance.~~

- ~~2. The Discharger uses a coagulant (polyaluminum chloride) in the tertiary treatment process prior to filtration to ensure proper operation of the filters, which is a source of aluminum in the discharge. The Discharger has conducted a study to optimize the use of alum to reduce effluent aluminum without success and has evaluated other non-aluminum-containing polymers for filtration with limited success. The Discharger proposes to continue its study to identify non-aluminum polymers to meet the effluent limitations for aluminum.~~
- ~~3. The Discharger believes that high manganese concentrations in the effluent are due to storm water runoff into Pond 6. Soils in the area are high in manganese and manganese is leached from the soils into storm water that then enters the treatment ponds. The Discharger has proposed to eliminate storm water from entering treatment and storage ponds in order to meet the effluent limitations for manganese.~~

m. Determining the Need for WQBELs. Modify Attachment F Section IV.C.3.b as shown in underline/strikeout format below:

vi. Chlorine Residual

- (a) WQO.** USEPA developed NAWQC for protection of freshwater aquatic life for chlorine residual. The recommended 4-day average (chronic) and 1-hour average (acute) criteria for chlorine residual are 0.011 mg/L and 0.019 mg/L, respectively. These criteria are protective of the Basin Plan's narrative toxicity objective.
- (b) RPA Results.** Federal regulations at 40 CFR 122.44(d)(1)(i) require that, "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." For priority pollutants, the SIP dictates the procedures for conducting the RPA. Chlorine is not a priority pollutant. Therefore, the Central Valley Water Board is not restricted to one particular RPA method. Due to the site-specific conditions of the discharge, the Central Valley Water Board has used its judgment in determining the appropriate method for conducting the RPA for this non-priority pollutant constituent.

USEPA's September 2010 NPDES Permit Writer's Manual, page 6-30, states, "State implementation procedures might allow, or even require, a permit writer to determine reasonable potential through a qualitative assessment process without using available facility-specific effluent monitoring data or when such data are not available...A permitting

authority might also determine that WQBELs are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics (e.g., WQBELs for pathogens in all permits for POTWs discharging to contact recreational waters)." USEPA's TSD also recommends that factors other than effluent data should be considered in the RPA, "When determining whether or not a discharge causes, has the reasonable potential to cause, or contributes to an excursion of a numeric or narrative water quality criterion for individual toxicants or for toxicity, the regulatory authority can use a variety of factors and information where facility-specific effluent monitoring data are unavailable. These factors also should be considered with available effluent monitoring data." With regard to POTWs, USEPA recommends that, "POTWs should also be characterized for the possibility of chlorine and ammonia problems." (TSD, p. 50)

Since the Discharger upgraded the Facility to use UV disinfection for all wastewater, chlorine is no longer used anywhere in the wastewater treatment process. Therefore, the discharge no longer has a reasonable potential to cause or contribute to an in-stream excursion above the NAWQC, and the effluent limitations for residual chlorine have not been retained in this Order. Removal of these effluent limitations is in accordance with federal anti-backsliding regulations (see section IV.D.3 of the Fact Sheet).

vii. Dichlorobromomethane

- (a) **WQO.** The CTR includes a criterion of 0.56 µg/L for dichlorobromomethane for the protection of human health for waters from which both water and organisms are consumed.
- (b) **RPA Results.** Dichlorobromomethane is a disinfection byproduct generated through chlorine contact. Since the Discharger upgraded the Facility to use UV disinfection for all wastewater chlorine is no longer used anywhere in the wastewater treatment process and there is no longer the potential for the generation of dichlorobromomethane. Based on effluent data collected since the facility changes, dichlorobromomethane has not been detected in the effluent. Therefore, the discharge no longer has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criterion for the protection of human health for dichlorobromomethane and the effluent limitations for dichlorobromomethane have not been retained in this Order. Removal of these effluent limitations is in accordance with federal anti-backsliding regulations (see section IV.D.3 of the Fact Sheet).

- n. **Determining the Need for WQBELs.** Modify Attachment F Section IV.C.3.c as shown in underline/strikeout format below:

- c. **Constituents with Reasonable Potential.** The Central Valley Water Board finds that the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for aluminum, ammonia, BOD5, chlorine residual, dichlorobromomethane, electrical conductivity, manganese, nitrate plus nitrite, pH, total coliform organisms, and TSS. WQBELs for these constituents are included in this Order. A summary of the RPA is provided in Attachment G, and a detailed discussion of the RPA for each constituent is provided below.

iv. **Chlorine Residual**

- (a) ~~**WQO.** USEPA developed NAWQC for protection of freshwater aquatic life for chlorine residual. The recommended 4-day average (chronic) and 1-hour average (acute) criteria for chlorine residual are 0.011 mg/L and 0.019 mg/L, respectively. These criteria are protective of the Basin Plan's narrative toxicity objective.~~

- (b) ~~**RPA Results.** Federal regulations at 40 CFR 122.44(d)(1)(i) require that, "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." For priority pollutants, the SIP dictates the procedures for conducting the RPA. Chlorine is not a priority pollutant. Therefore, the Central Valley Water Board is not restricted to one particular RPA method. Due to the site-specific conditions of the discharge, the Central Valley Water Board has used its judgment in determining the appropriate method for conducting the RPA for this non-priority pollutant constituent.~~

~~USEPA's September 2010 NPDES Permit Writer's Manual, page 6-30, states, "State implementation procedures might allow, or even require, a permit writer to determine reasonable potential through a qualitative assessment process without using available facility-specific effluent monitoring data or when such data are not available...A permitting authority might also determine that WQBELs are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics (e.g., WQBELs for pathogens in all permits for POTWs discharging to contact recreational waters)." USEPA's TSD also recommends that factors other than effluent data should be considered in the RPA, "When determining whether or not a discharge causes, has the reasonable potential to cause, or contributes to an excursion of a numeric or narrative water quality criterion for individual toxicants or for toxicity, the regulatory authority can use a variety of factors and information where facility-specific effluent monitoring data are unavailable. These factors also should be considered with available effluent monitoring data." With regard to POTWs, USEPA recommends that,~~

"POTWs should also be characterized for the possibility of chlorine and ammonia problems." (TSD, p. 50)

~~Prior to discharging secondary treated wastewater to Pond 6, the Discharger uses chlorine for disinfection, which is extremely toxic to aquatic organisms. Monitoring data from the term of Order R5-2006-0081 indicated reasonable potential to exceed water quality standards for chlorine, with an MEC of 0.05 mg/L. Due to the existing chlorine use and the potential for chlorine to be discharged, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the NAWQC.~~

~~(c) **WQBELs.** The USEPA *Technical Support Document for Water Quality-Based Toxics Control* [EPA/505/2-90-001] contains statistical methods for converting chronic (4-day) and acute (1-hour) aquatic life criteria to AMELs and MDELs based on the variability of the existing data and the expected frequency of monitoring. However, because chlorine is an acutely toxic constituent that can and will be monitored continuously, an average 1-hour limitation is considered more appropriate than an average daily limitation. This Order contains a 4-day average effluent limitation and 1-hour average effluent limitation for chlorine residual of 0.011 mg/L and 0.019 mg/L, respectively, based on USEPA's NAWQC, which implements the Basin Plan's narrative toxicity objective for protection of aquatic life.~~

~~(d) **Plant Performance and Attainability.** Analysis of effluent data shows that the MEC of 0.05 mg/L is greater than the applicable WQBELs. However, chlorine was only detected once based on sixteen samples from May 2008 through April 2011. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.~~

~~v. **Dichlorobromomethane**~~

~~(a) **WQO.** The CTR includes a criterion of 0.56 µg/L for dichlorobromomethane for the protection of human health for waters from which both water and organisms are consumed.~~

~~(b) **RPA Results.** The MEC for dichlorobromomethane was 2.9 µg/L (minimum MDL 0.16 µg/L, RL 0.5 µg/L) based on 15 samples collected between May 2008 and April 2011. The minimum levels listed in Appendix 4 of the SIP are 1, 2, and 10 µg/L. Background receiving water monitoring data for dichlorobromomethane is not available. Therefore, dichlorobromomethane in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criterion for the protection of human health.~~

~~(c) **WQBELs.** This Order contains a final AMEL and MDEL for dichlorobromomethane of 0.56 µg/L and 1.6 µg/L, respectively, based on the CTR criterion for the protection of human health.~~

~~(d) **Plant Performance and Attainability.** Analysis of effluent data shows that the MEC of 2.9 mg/L is greater than the applicable WQBELs. Based on the sample results for the effluent, the limitations appear to put the Discharger in immediate non-compliance. TSO R5-2012-0055 provides a compliance schedule to achieve compliance with the final effluent limitations for dichlorobromomethane by 31 July 2016.~~

- o. Determining the Need for WQBELs.** Modify Attachment F Section IV.C.3.c.i.(c) and (d) as shown in underline/strikeout format below:

(c) WQBELs. Order R5-2006-0081 included an AMEL and MDEL of 87 µg/L and 174 µg/L, respectively, based on the NAWQC aluminum chronic criterion of 87 µg/L. As discussed in section IV.C.3.c.i.(a), above, the NAWQC chronic criteria of 87 µg/L is overly stringent for the jurisdictional wetlands. ~~Since it is only necessary to determine compliance on an annual average basis, it is impracticable to calculate average weekly and average monthly effluent limitations. Therefore, this Order contains final AWEL and AMEL for aluminum of 623 µg/L and 310 µg/L, respectively, based on the Secondary MCL. includes a final calendar annual average effluent limitation of 200 µg/L, based on the Secondary MCL.~~ The relaxation of the effluent limitations for aluminum is in accordance with federal anti-backsliding regulations (see section IV.D.3 of the Fact Sheet).

(d) Plant Performance and Attainability. Based on analysis of the effluent data, the Central Valley Water Board concludes that immediate compliance with these effluent limitations is feasible. ~~Analysis of the effluent data shows that the maximum annual average effluent concentration of 248 µg/L is greater than applicable WQBELs. Based on the sample results for the effluent, the limitations appear to put the Discharger in immediate non-compliance. In 2009, the Discharger determined that poly-aluminum chloride, which is used for coagulation prior to filtration, is adding to the total aluminum in the final effluent. In 2011, the Discharger began testing alternative coagulants; however, additional time may be needed to find a suitable alternative. TSO R5-2012-0055 provides a compliance schedule to achieve compliance with the final effluent limitations for aluminum by 31 July 2016.~~

- p. Determining the Need for WQBELs.** Modify Attachment F Section IV.C.3.c.vi.as shown in underline/strikeout format below:

vi.iv. Manganese

(a) WQO. The Secondary MCL – Consumer Acceptance Limit for manganese is 50 µg/L, which is used to implement the Basin Plan’s chemical constituent objective for the protection of municipal and domestic supply.

(b) RPA Results. Secondary MCLs are drinking water standards contained in Title 22 of the California Code of Regulations. Title 22 requires compliance with these standards on an annual average basis, when sampling at least quarterly. Manganese is not a priority pollutant and the RPA procedures in section 1.3 of the SIP are not required. To be consistent with how compliance with the standards is determined, the RPA was conducted based on the calendar annual average manganese concentrations. The maximum annual average effluent concentration for manganese was 102 µg/L (minimum RL 5.0 µg/L) based on 17 samples collected between May 2008 and April 2011. Receiving water data for manganese is not available. Therefore, manganese in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Secondary MCL.

(c) WQBELs. ~~Since it is only necessary to determine compliance on an annual average basis, it is impracticable to calculate average weekly and average monthly effluent limitations. Therefore, this Order contains an annual average effluent limitation for manganese of 50 µg/L based on the~~ This Order contains a final AWEL and AMEL for manganese of 242 µg/L and 97 µg/L, respectively, based on the Basin Plan's narrative chemical constituents objective for the protection of the MUN beneficial use.

(d) Plant Performance and Attainability. Based on analysis of the effluent data, the Central Valley Water Board concludes that immediate compliance with these effluent limitations is feasible. Analysis of effluent data shows that the maximum annual average of 102 µg/L is greater than the applicable WQBELs. Based on the sample results for the effluent, the limitations appear to put the Discharger in immediate non-compliance. TSO R5-2012-0055 provides a compliance schedule to achieve compliance with the final effluent limitations for manganese by 31 July 2016.

q. WQBEL Calculations. Modify Attachment F Section IV.C.4.a as shown in underline/strikeout format below:

- a.** This Order includes WQBELs for aluminum, ammonia, BOD5, ~~chlorine residual, dichlorobromomethane,~~ electrical conductivity, manganese, nitrate plus nitrite, pH, total coliform organisms, and TSS. The general methodology for calculating WQBELs based on the different criteria/objectives is described in subsections IV.C.4.b through e, below. See Attachment H for the WQBEL calculations.

r. **Summary of Water Quality Based Effluent Limitations.** Modify Attachment F Table F-10 as shown in underline/strikeout format below:

Table F-10. Summary of Water Quality-Based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Conventional Pollutants						
Biochemical Oxygen Demand (5-day @ 20 C)	mg/L	10	15	20	--	--
	lbs/day ¹	79	119	158	--	--
pH	standard units	--	--	--	6.5	8.5
Total Suspended Solids	mg/L	10	15	20	--	--
	lbs/day ¹	79	119	158	--	--
Priority Pollutants						
Dichlorobromomethane	µg/L	0.56	--	1.6	--	--
Non-Conventional Pollutants						
Aluminum, Total Recoverable	µg/L	<u>310200²</u>	<u>--623</u>	--	--	--
Ammonia Nitrogen, Total (as N)	mg/L	0.74	--	2.2	--	--
	lbs/day ¹	5.9	--	17	--	--
Chlorine, Total Residual	mg/L	--	<u>0.014³</u>	<u>0.019⁴</u>	--	--
Electrical Conductivity @ 25°C	µmhos/cm	900	--	--	--	--
Manganese, Total Recoverable	µg/L	<u>9750²</u>	<u>--242</u>	--	--	--
Nitrate Plus Nitrite (as N)	mg/L	10	--	--	--	--
Total Coliform Organisms	MPN/100 mL	--	2.2 ⁵²	23 ⁶³	--	240

¹ Based upon a design flow of 0.95 MGD.

² ~~Applied as an annual average effluent limitation.~~

³ ~~Applied as a 4-day average effluent limitation.~~

⁴ ~~Applied as a 1-hour average effluent limitation.~~

⁵² Applied as a 7-day median effluent limitation.

⁶³ Not to be exceeded more than once in any 30-day period.

s. **Averaging Period for Effluent Limitations.** Modify Attachment F Section IV.D.2 as shown in underline/strikeout format below:

2. Averaging Periods for Effluent Limitations

40 CFR 122.45 (d) requires average weekly and average monthly discharge limitations for POTWs unless impracticable. However, for toxic pollutants and

pollutant parameters in water quality permitting, USEPA recommends the use of an MDEL in lieu of average weekly effluent limitations for two reasons. *“First, the basis for the 7-day average for POTWs derives from the secondary treatment requirements. This basis is not related to the need for assuring achievement of water quality standards. Second, a 7-day average, which could comprise up to seven or more daily samples, could average out peak toxic concentrations and therefore the discharge’s potential for causing acute toxic effects would be missed.”* (TSD, pg. 96) This Order uses MDELs in lieu of average weekly effluent limitations for ammonia and dichlorobromomethane as recommended by the TSD for the achievement of water quality standards and for the protection of the beneficial uses of the receiving stream. Furthermore, for BOD₅, chlorine residual, pH, total coliform organisms, and TSS, weekly average effluent limitations have been replaced or supplemented with effluent limitations utilizing shorter averaging periods. The rationale for using shorter averaging periods for these constituents is discussed in section IV.C.3 of this Fact Sheet.

~~For effluent limitations for non-priority pollutants based on Primary and Secondary MCLs, this Order includes annual average effluent limitations. The Primary and Secondary MCLs are drinking water standards contained in Title 22 of the California Code of Regulations. Title 22 requires compliance with these standards on an annual average basis (except for nitrate and nitrite), when sampling at least quarterly. Since it is necessary to determine compliance on an annual average basis, it is impracticable to calculate average weekly and average monthly effluent limitations.~~

- t. **Satisfaction of Anti-Backsliding Requirements.** Modify Attachment F Section IV.D.3. as shown in underline/strikeout format below:

3. Satisfaction of Anti-Backsliding Requirements

The CWA specifies that a revised permit may not include effluent limitations that are less stringent than the previous permit unless a less stringent limitation is justified based on exceptions to the anti-backsliding provisions contained in CWA sections 402(o) or 303(d)(4), or, where applicable, 40 CFR 122.44(l).

The effluent limitations in this Order are at least as stringent as the effluent limitations in Order R5-2006-0081, with the exception of effluent limitations for aluminum, ammonia, chlorine residual (~~mass only~~), chlorodibromomethane, chloroform, dichlorobromomethane, iron, manganese, oil and grease, settleable solids, and turbidity. The effluent limitations for these pollutants are less stringent than those in Order R5-2006-0081. This relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

- a. **CWA sections 402(o)(1) and 303(d)(4).** CWA section 402(o)(1) specifies that, in the case of effluent imitations established on the basis of CWA section 301(b)(1)(C) (i.e., WQBELs), a permit may not be renewed, reissued, or modified to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit except in compliance with CWA section

303(d)(4). The effluent limitations for aluminum, ammonia, chlorodibromomethane, chloroform, dichlorobromomethane, iron, manganese, oil and grease, and settleable solids established in Order R5-2006-0081 are WQBELs and may be relaxed if the requirements of CWA section 303(d)(4) are satisfied.

CWA section 303(d)(4) has two parts: paragraph (A) which applies to nonattainment waters and paragraph (B) which applies to attainment waters. For attainment waters, CWA section 303(d)(4)(B) specifies that a limitation based on a water quality standard may be relaxed where the action is consistent with the antidegradation policy. There are no 303(d) listings for the jurisdictional wetlands, as described in section III.D.1 of this Fact Sheet. Thus the receiving water is an attainment water for aluminum, ammonia, chlorine residual (~~mass only~~), chlorodibromomethane, chloroform, dichlorobromomethane (~~mass only~~), iron, manganese, oil and grease, and settleable solids. The removal or relaxation of WQBELs aluminum, ammonia, chlorine residual, chlorodibromomethane, chloroform, dichlorobromomethane, iron, manganese, oil and grease, and settleable solids is consistent with CWA sections 402(o)(1) and 303(d)(4) and, as described in section IV.D.4 of this Fact Sheet, the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16. Therefore, the modifications to these effluent limitations do not violate anti-backsliding requirements.

~~Order R5-2006-0081 established final mass-based effluent limitations for aluminum, chlorine residual, dichlorobromomethane, and manganese. 40 CFR 122.45(f)(1)(ii) states that mass limitations are not required when applicable standards and limitations are expressed in terms of other units of measurement. The numerical effluent limitations for these pollutants established in this Order are based on water quality standards and objectives, which are expressed in terms of concentration. Pursuant to 40 CFR 122.25(f)(1)(ii), expressing the effluent limitations in terms of concentration is in accordance with Federal Regulations. Compliance with the concentration-based limits will ensure that significantly less mass of the pollutants is discharged to the receiving water. Discontinuing mass-based effluent limitations for these parameters is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16. Any impact on existing water quality will be insignificant. Therefore, the modifications to these effluent limitations do not violate anti-backsliding requirements.~~

- b. CWA Section 402(o)(2).** CWA section 402(o)(2) provides several exceptions to the anti-backsliding regulations. CWA 402(o)(2)(B)(i) allows a renewed, reissued, or modified permit to contain a less stringent effluent limitation for a pollutant if information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.

As described further in section IV.C.3.b of this Fact Sheet, updated information that was not available at the time Order R5-2006-0081 was issued indicates that aluminum, chlorine residual, chlorodibromomethane, chloroform, dichlorobromomethane, iron, manganese, oil and grease, and settleable solids do not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives in the receiving water, and Furthermore, updated information supports relaxed effluent limitations for ammonia, aluminum, and manganese. The updated information that supports the relaxation of effluent limitations for these constituents includes the following:

- i. **Aluminum.** Receiving water monitoring data for water quality characteristics (e.g., pH and hardness) collected between May 2008 and April 2011, as well as local environmental conditions and aluminum toxicity results indicates that the recommended NAWQC chronic criterion of 87 µg/L is not applicable to the jurisdictional wetlands. The relaxed effluent limitations in this Order are based on the Secondary MCL of 200 µg/L.
- ii. **Ammonia.** Order R5-2006-0081 established a 1-hour average effluent limitation of 2.14 mg/L based on the NAWQC acute criterion determined using the maximum permitted effluent pH of 8.5 and an AMEL of 0.56 mg/L based on the NAWQC 30-day chronic criterion determined using the maximum permitted effluent pH of 8.5 and the maximum average effluent temperature of 78 F. Consistent with Order R5-2006-0081, the acute criterion used for this Order was determined using the maximum permitted effluent pH of 8.5; however, the chronic criterion was re-calculated using updated paired effluent monitoring data for pH and temperature from May 2008 through April 2011, which resulted in a 30-day chronic criterion of 1.91 mg/L. Whereas the acute and chronic criteria were established directly as 1-hour average and average monthly effluent limitations, this Order includes an MDEL and AMEL calculated according to SIP procedures, as described in section IV.C.3.c.ii.(c). Although the averaging period has been revised from a 1-hour average to an MDEL, the change in averaging period for ammonia is not less stringent than the previous Order because the previous Order required weekly grab samples. Continuous monitoring is necessary to evaluate compliance with a 1-hour average effluent limit. Therefore, the existing 1-hour average effluent limit was effectively a maximum daily effluent limit.
- iii. **Chlorine Residual.** The Discharger has upgraded the Facility to employ UV disinfection to all wastewater leaving the Facility. Chlorine is no longer used anywhere in the wastewater treatment process, therefore, chlorine residual no longer has a reasonable potential to cause or contribute to an in-stream excursion above the NAWQC
- iv. **Chlorodibromomethane.** Effluent monitoring data collected between May 2008 through April 2011 indicates that chlorodibromomethane in the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the CTR human health criteria.

- v. **Chloroform.** Order R5-2006-0081 established effluent limitations for chloroform based on the CalEPA Cancer Potency Factor as a Drinking Water Level of 1.1 µg/L. However, as discussed in section IV.C.3.b.2 of this Fact Sheet, the appropriate water quality objective for the discharge is the Primary MCL for THMs. Effluent monitoring data collected between May 2008 through April 2011 indicates that chloroform in the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the Primary MCL for THMs.
- vi. **Dichlorobromomethane.** Dichlorobromomethane is a disinfection byproduct generated through chlorine contact. Since the Discharger upgraded the Facility to use UV disinfection for all wastewater chlorine is no longer used anywhere in the wastewater treatment process and there is no longer the potential for the generation of dichlorobromomethane. Therefore, the discharge no longer has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criterion for the protection of human health
- vii. **Iron.** Effluent monitoring data collected between May 2008 through April 2011 indicates that iron in the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the Secondary MCL.
- viii. ~~**Manganese.** Order R5-2006-0081 included an AMEL for manganese based on the Secondary MCL of 50 µg/L. Secondary MCLs are drinking water standards contained in Title 22 of the California Code of Regulations. Title 22 requires compliance with these standards on an annual average basis, when sampling at least quarterly. Since it is only necessary to determine compliance on an annual average basis, it is impracticable to calculate average weekly and average monthly effluent limitations. Therefore, this Order revises the averaging period for manganese from an AMEL to an annual average effluent limitation.~~
- ix. **Oil and Grease.** The Discharger upgraded to tertiary treatment during the term of Order R5-2006-0081. Oil and grease is not expected to be present in tertiary treated wastewater at concentrations that will cause or contribute to an exceedance of the narrative water quality objective. Additionally, the Discharger's compliance with the requirements of the FOG control program required by WQO 2006-0003 will ensure minimal amounts of oil and grease are discharged into the Facility.
- x. **Settleable Solids.** Effluent monitoring data collected between May 2008 and April 2011 for settleable solids indicates that the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the Basin Plan narrative objective for settleable solids.

Thus, removal or relaxation of the effluent limitations for aluminum, ammonia, chlorodibromomethane, dichlorobromomethane, chloroform, chlorine residual, iron, ~~manganese~~, oil and grease, and settleable solids from Order R5-2006-0081

is in accordance with CWA section 402(o)(2)(B)(i), which allows for the removal/relaxation of effluent limitations based on information that was not available at the time of permit issuance.

- c. Turbidity.** Order R5-2006-0081 contained effluent limitations for turbidity. The prior limitations were solely an operational check to ensure the treatment system was functioning properly and could meet the limits for solids and coliform. The prior effluent limitations were not intended to regulate turbidity in the receiving water. Rather, turbidity is an operational parameter to determine proper system functioning and not a WQBEL.

This Order contains operational turbidity specifications to be met in lieu of effluent limitations. The revised Order does not include effluent limitations for turbidity. However, the performance-based specification in this Order is an equivalent limit that is not less stringent, and therefore does not constitute backsliding.

The revised operational specifications for turbidity are the same as the effluent limitations in Order R5-2006-0081. These revisions are consistent with State regulations implementing recycled water requirements. The revision in the turbidity limitation is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16 because this Order imposes equivalent or more stringent requirements than Order R5-2006-0081 and therefore does not allow degradation.

- ~~**d. Dichlorobromomethane.** For dichlorobromomethane, the MDEL has changed from the previous Order. However, the effluent limit is not less stringent. In this case, the waste load allocations (WLA)² in this Order and the previous Order are identical. The WLA provides a definition of effluent quality that is necessary to meet the water quality standards of the receiving water and is used to derive WQBELs that are used to enforce the WLA.~~

~~The TSD warns that, “Direct use of a WLA as a permit limit creates a significant risk that the WLA will be enforced incorrectly, since effluent variability and the probability basis for the limit are not considered specifically.” (TSD, p. 96) The SIP and TSD include identical procedures for calculating WQBELs that use the statistical variability of the effluent to convert the WLA to average monthly and maximum daily effluent limits.~~

~~The new effluent data used to calculate WQBELs for this Order has different statistical variability (i.e., coefficient of variation is different) than used in the previous Order. Changes in the coefficient of variation can result in small changes to the effluent limits. However, the slight changes in effluent limits do not allow for an increase in the pollutants discharged. The TSD states, “Since effluents are variable and permit limits are developed based on a low probability of exceedence, the permit limits should consider effluent variability and ensure that the requisite loading from the WLA is not exceeded under normal conditions.~~

~~In effect then, the limits must “force” treatment plant performance, which, after considering acceptable effluent variability, will only have a low statistical probability of exceeding the WLA and will achieve the desired loadings.” (TSD, p. 97) Therefore, although there are slight differences in the effluent limit, the WLA is identical, so the level of treatment needed to maintain compliance with the effluent limit remains the same. Consequently, the effluent limit is not less stringent than the previous Order, and there is no backsliding.~~

~~WQBELs for dichlorobromomethane were calculated based on monitoring data collected between May 2008 and April 2011, which is representative of the Facility performance during the term of Order R5-2006-0081. Therefore, Central Valley Water Board staff considers this effluent data to be the most representative and reliable dataset to use to determine current Facility performance and development of WQBELs.~~

~~The MDEL for dichlorobromomethane in this Order was calculated as a higher value than in previous Order R5-2006-0081. However, the AMEL was calculated as the same value. The WQBELs in both Orders are based on the same WLA (i.e., the WLA is based on the CTR human health criterion for dichlorobromomethane). The reason for the change in the AMEL and MDEL is due to a change in the variability of the effluent data for dichlorobromomethane. The coefficient of variation for the recent effluent data is greater than for the data used in the previous Order. Using the procedures for calculating WQBELs in Section 1.4 of the SIP, for human health criteria, a higher coefficient of variation results in a higher MDEL, but the same AMEL. The WQBELs, however, are equally protective of the beneficial uses. The level of treatment needed to maintain compliance with the effluent limits remains the same. Consequently, the effluent limits are not less stringent than the previous permit, and there is no backsliding.~~

- u. Satisfaction of Antidegradation Policy.** Modify Attachment F Section IV.D.4 as shown in underline/strikeout format below:

4. Satisfaction of Antidegradation Policy

- a. Surface Water.** This Order does not allow for an increase in flow or mass of pollutants to the receiving water. Therefore, a complete antidegradation analysis is not necessary. 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. The permitted surface water 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.
-

This Order removes or relaxes existing effluent limitations for aluminum, chlorine residual (~~mass only~~), chlorodibromomethane, chloroform, dichlorobromomethane (~~mass only~~), iron, manganese, oil and grease, settleable solids, and turbidity ~~based on updated monitoring data which demonstrates that the effluent does not cause or contribute to an exceedance of the applicable water quality criteria or objectives in the receiving water.~~ The Central Valley Water Board finds that the relaxation of the effluent limitations does not result in an allowed increase in pollutants or any additional degradation of the receiving water. Thus, the relaxation of effluent limitations is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

v. Stringency of Requirements for Individual Pollutants. Modify Attachment F Section IV.D.5 as shown in underline/strikeout format below:

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on flow and percent removal requirements for BOD₅ and TSS. The WQBELs consist of restrictions on aluminum, ammonia, BOD₅, ~~chlorine residual, dichlorobromomethane,~~ electrical conductivity, manganese, nitrate plus nitrite, pH, total coliform organisms, and TSS. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order includes effluent limitations for BOD₅, total coliform organisms, and TSS to meet numeric objectives or protect beneficial uses.

w. Summary of Final Effluent Limitations. Modify Table F-12 in Attachment F as shown in underline/strikeout format below:

**Summary of Final Effluent Limitations
 Discharge Point No. 001**

Table F-12. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations					Basis ¹
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Flow	MGD	--	--	0.95	--	--	DC
Conventional Pollutants							
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	15	20	--	--	TTC
	lbs/day ²	79	119	158	--	--	CFR
	% Removal	85	--	--	--	--	CFR
pH	standard units	--	--	--	6.5	8.5	BP
Total Suspended Solids	mg/L	10	15	20	--	--	TTC
	lbs/day ²	79	119	158	--	--	CFR
	% Removal	85	--	--	--	--	CFR
Priority Pollutants							
Dichlorobromomethane	µg/L	0.56	--	1.6	--	--	CTR
Non-Conventional Pollutants							

Parameter	Units	Effluent Limitations					Basis ¹
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Aluminum, Total Recoverable	µg/L	<u>310200</u> ³	<u>--623</u>	--	--	--	SEC MCL
Ammonia Nitrogen, Total (as N)	mg/L	0.74	--	2.2	--	--	NAWQC
	lbs/day ²	5.9	--	17	--	--	
Chlorine, Total Residual	mg/L	--	<u>0.011</u> ⁴	<u>0.019</u> ⁵	--	--	NAWQC
Electrical Conductivity @ 25°C	µmhos/cm	900	--	--	--	--	SEC MCL
Manganese, Total Recoverable	µg/L	<u>9750</u> ³	<u>--242</u>	--	--	--	SEC MCL
Nitrate Plus Nitrite (as N)	mg/L	10	--	--	--	--	MCL
Total Coliform Organisms	MPN/100 mL	--	<u>2.2</u> ⁶³	<u>23</u> ⁷⁴	--	240	Title 22

¹ DC – Based on the design capacity of the Facility.
 TTC – Based on tertiary treatment capability. These effluent limitations reflect the capability of a properly operated tertiary treatment plant.
 CFR – Based on secondary treatment standards contained in 40 CFR Part 133.
 BP – Based on water quality objectives contained in the Basin Plan.
 CTR – Based on water quality criteria contained in the California Toxics Rule and applied as specified in the SIP.
 NAWQC – Based on USEPA’s National Ambient Water Quality Criteria for the protection of freshwater aquatic life.
 SEC MCL – Based on the Secondary Maximum Contaminant Level.
 MCL – Based on the Primary Maximum Contaminant Level.
 Title 22 – Based on CA Department of Public Health Reclamation Criteria, CCR, Division 4, Chapter 3 (Title 22).

² Based on a design average dry weather flow of 0.95 MGD.

³ ~~Applied as an annual average effluent limitation.~~

⁴ ~~Applied as a 4-day average effluent limitation.~~

⁵ ~~Applied as a 1-hour average effluent limitation.~~

⁶³ Applied as a 7-day median effluent limitation.

⁷⁴ Not to be exceeded more than once in any 30-day period.

x. Rational for Monitoring and Reporting Requirements. Modify Attachment F Section VI.B.2 as shown in underline/strikeout format below:

- Effluent monitoring frequencies and sample types for flow (continuous), aluminum (monthly), ammonia (weekly), BOD₅ (weekly), ~~chlorine (monthly), chloroform (monthly), dichlorobromomethane (monthly)~~, electrical conductivity (weekly), hardness (monthly), manganese (monthly), pH (continuous), temperature (weekly), total coliform organisms (daily), and TSS (weekly) have been retained from Order R5-2006-0081 to determine compliance with effluent limitations for these parameters, where applicable, and to characterize the effluent.

y. Attachment G – Summary of Reasonable Potential Analysis for Constituents of Concern. Modify Attachment G as shown in underline/strikeout format below:

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	Reasonable Potential
Dichlorobromomethane	µg/L	2.9 ND	NA	0.56	--	--	0.56	46	--	80 ⁵	Yes No

General Note: All inorganic concentrations are given as a total recoverable.
 MEC = Maximum Effluent Concentration
 B = Maximum Receiving Water Concentration or lowest detection level, if non-detect
 C = Criterion used for Reasonable Potential Analysis
 CMC = Criterion Maximum Concentration (CTR or NTR)
 CCC = Criterion Continuous Concentration (CTR or NTR)
 Water & Org = Human Health Criterion for Consumption of Water & Organisms (CTR or NTR)
 Org. Only = Human Health Criterion for Consumption of Organisms Only (CTR or NTR)
 Basin Plan = Numeric Site-specific Basin Plan Water Quality Objective
 MCL = Drinking Water Standards Maximum Contaminant Level
 NA = Not Available
 ND = Non-detect

Footnotes:
 (1) Represents the maximum observed annual average concentration for comparison with the MCL.
 (2) USEPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 1-hour Average.
 (3) USEPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 4-day Average.
 (4) USEPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 30-day Average.
 (5) Represents the Primary MCL for total trihalomethanes, which includes bromoform, chlorodibromomethane, chloroform, and dichlorobromomethane.
 (6) See section IV.C.3.c of the Fact Sheet.

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z. Attachment H – Calculations of WQBELs. Modify Attachment H as shown in underline/strikeout format below:

Parameter	Units	Most Stringent Criteria			HH Calculations ¹			Aquatic Life Calculations ¹											Final Effluent Limitations	
		HH	CMC	CCC	ECA _{HH} = AMEL _{HH}	AMEL/MDEL Multiplier _{HH}	MDEL _{HH}	ECA _{Acute}	ECA Multiplier _{acute}	LTA _{acute}	ECA _{Chronic}	ECA Multiplier _{chronic}	LTA _{chronic}	Lowest LTA	AMEL Multiplier ₉₅	AMEL _{AL}	MDEL Multiplier ₉₉	MDEL _{AL}	Lowest AMEL	Lowest MDEL
Ammonia Nitrogen, Total (as N)	mg/L	--	2.14	1.91	--	--	--	2.14	0.14	0.3	1.91	0.54	1.03	0.3	2.45	0.74	7.15	2.2	0.74	2.2
Dichlorobromomethane	µg/L	0.56	--	--	0.56	2.92	4.6	--	--	--	--	--	--	--	--	--	--	--	0.56	4.6

¹ As discussed in section IV.C.4 of the Fact Sheet (Attachment F), calculation of effluent limitations for the protection of human health and aquatic life are determined without the allowance of dilution credits.

Secondary MCL WQBEL's Calculations									
Parameter	Units	Criteria	Mean Background Concentration	Dilution Factor	MDEL/AMEL Multiplier	AMEL Multiplier	AMEL	MDEL	AWEL
Aluminum, Total Recoverable	µg/L	200	--	--	2.01	1.55	310 ¹	--	623 ¹
Manganese, Total Recoverable	µg/L	50	--	--	2.50	1.93	97 ¹	--	242 ¹

¹ Calculated by setting the LTA equal to the Secondary MCL and using the AMEL multiplier to set the AMEL. The AWEL was calculated from the AMEL using the MDEL/AMEL multiplier. (Table 2 of the SIP)

T E N T A T I V E

ORDER R5-2016-0065
AMENDING WASTE DISCHARGE REQUIREMENTS ORDER R5-2013-0072
AND RESCINDING TIME SCHEDULE ORDER R5-2013-0102
CALAVERAS COUNTY WATER DISTRICT AND SADDLE CREEK GOLF COURSE L.P.
COPPER COVE WASTEWATER RECLAMATION FACILITY
CALAVERAS COUNTY

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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 **19 August 2016**

ORIGINAL SIGNED BY

PAMELA C. CREEDON, Executive Officer