

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

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SPECIAL BOARD ORDER NO. R7-2009-0011 AMENDING
WASTE DISCHARGE REQUIREMENTS ORDER NO. R7-2007-0035
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PERMIT NO. CA0104281 FOR THE
MCCABE UNION SCHOOL DISTRICT, MUNICIPAL WASTEWATER TREATMENT PLANT
IMPERIAL COUNTY

The California Regional Water Quality Control Board, Colorado River Basin Region (hereinafter Regional Water Board), finds:

A. Background.

1. On September 19, 2007, the Regional Water Board adopted Board Order No. R7-2007-0035, NPDES Permit No. CA0104281, prescribing Waste Discharge Requirements (WDRs) for the McCabe Union School District (hereinafter Discharger) Municipal Wastewater Treatment Plant (WWTP) for the discharge of 0.015 million gallons per day (MGD) of equivalent to secondary treated wastewater to the Wildcat Drain, a water of the United States, and a tributary to Rice Drain # 3 which flows into the New River within the Salton Sea watershed. Board Order No. R7-2007-0035 will expire on September 19, 2012.
2. The California Toxics Rule (CTR) (40 Code of Federal Regulations (CFRs) Section 131.38) and the State Water Resource Control Board's (State Water Board) Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP) establish specific criteria for freshwater and saltwater. When the salinity of receiving water is between 1 and 10 parts per thousand, such as is the case for the Wildcat Drain, the CTR and SIP provide for the Regional Water Board to prescribe in a permit the more stringent of the two criteria. Based on the foregoing, Board Order No. R7-2007-0035, as adopted by the Regional Water Board in 2007, includes interim¹ and final effluent limits for copper, nickel, pentachlorophenol, and zinc that were developed based on saltwater and freshwater criteria. The final effluent limit for copper, nickel and zinc are based on saltwater criteria, which is more stringent than freshwater criteria for these pollutants.
3. The Discharger conducted a Biological Assessment at the location of the discharge. The objective of the Biological Assessment is to demonstrate scientifically whether water, plant life, and aquatic life at the discharge location are more typical of a saltwater or a freshwater environment. The areas of observation were approximately 100 meters upstream and 100 meters downstream of the discharge. .
4. On December 3, 2008 the Discharger submitted the results of the Biological Assessment to the U.S. Environmental Protection Agency (USEPA) requesting approval to use alternative freshwater criteria at the location of the discharge pursuant to 40 CFR 131.38(c)(3). This assessment determined that the applicable reach of the Wildcat Drain is dominated by

¹ The effluent limitations for copper, nickel, pentachlorophenol and zinc are applicable on May 18, 2010 provided the Discharger submits an Infeasibility Report for copper, nickel, pentachlorophenol and zinc to the Regional Water Board by October 19, 2007. The Discharger did not submit the Report by the due date, therefore the final effluent limitations for copper, nickel, pentachlorophenol and zinc are in effect for R7-2007-0035. This Amendment revises these final effluent limitations.

freshwater aquatic life and that freshwater criteria are more appropriate; therefore, saltwater aquatic life criteria are not applicable for this reach of the Wildcat Drain.

5. USEPA reviewed the Biological Assessment prepared by the Discharger. On December 29, 2008 USEPA issued a tentative approval of the findings in the Discharger's Biological Assessment and the application of water quality criteria for the protection of freshwater aquatic life.
6. Board Order No. R7-2007-0035 may be modified, rescinded and reissued, for cause. The filing of a request by the Discharger for a Board Order modification, rescission and reissuance, or a notification of planned changes or anticipated noncompliance does not stay any Board Order condition. Causes for modification include, but are not limited to, the promulgation of new regulations, modification of land application plans, or modification in sludge use or disposal practices, or adoption of new regulations by the State Water Board or the Regional Water Board, including revisions to the Basin Plan.
7. This Special Board Order revises Board Order No. R7-2007-0035 to designate the McCabe Union School District's discharge location at the Wildcat Drain as a freshwater environment and establish interim and final effluent limits based on CTR and SIP freshwater criteria for the discharge.
8. In accordance with section 1.3 of the SIP, the Regional Water Board conducted a Reasonable Potential Analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a water quality-based effluent limitation (WQBEL) was required in the Order. For the existing Board Order, R7-2007-0035, the discharge demonstrates a reasonable potential to cause or contribute to an excursion above the applicable water quality standards for copper, nickel, pentachlorophenol and zinc. Based on the exclusion of saltwater criteria, the discharge did not demonstrate a reasonable potential to cause or contribute to an excursion above the applicable water quality standards for nickel and pentachlorophenol; therefore, the effluent limitations for nickel and pentachlorophenol have been discontinued.
9. Pursuant to 40 CFR 124.10(b), and 40 CFR 131.38(c)(3) a thirty (30) day public notice and comment period of USEPA's proposed tentative approval of the Biological Assessment and this revised Board Order is required prior to their becoming final. These public participation requirements are necessary to provide stakeholders potentially affected by this action with an opportunity to object to or comment on the proposed tentative approval and revised Board Order.
10. Pursuant to 40 CFR 124.10(b) and California Water Code (CWC) Section 13167.5, the Regional Water Board published Public Notice No. 7-08-55 for this proposed Board Order on January 9, 2009.
11. The 2006 USEPA 303(d) list of impaired waters (hereinafter 303(d) List) classifies the Wildcat Drain (Imperial Valley Drain) as impaired by toxaphene and selenium. Further, sedimentation/silt had previously been listed as a pollutant impairing Imperial Valley Drains; a sedimentation/siltation Total Maximum Daily Load (TMDL) for the Imperial Valley Drains has been approved by USEPA. The sedimentation/siltation TMDL has established a Waste Load Allocation (WLA) for sediment of twice the current Total Suspended Solids (TSS) loading rate (11.4 tons per year). The TSS effluent limitations contained in this Order comply with the WLA for sediment established in the Imperial Valley Drains sedimentation/siltation TMDL. Further, the New River, to which the Wildcat Drain is

tributary, is listed as impaired by 1,2,4-trimethylbenzene, chlordane, chloroform, chlorpyrifos, DDT, diazinon, dieldrin, mercury, meta-para xylenes, nutrients, dissolved oxygen, o-xylenes, PCBs, p-cymene, p-dichlorobenzene, pesticides, selenium, toluene, toxaphene, toxicity, copper and trash. A pathogen and sedimentation/siltation TMDL have been approved by USEPA for the New River and are implemented in this Order. The pathogen and sedimentation/siltation TMDL's established WLAs for fecal coliform, *E. Coli*, enterococci and sediment. The established fecal coliform, *E. Coli*, enterococci and total suspended solids effluent limitations in this Order comply with the WLAs established in the New River pathogen and sedimentation/siltation TMDLs. Further, there are two TMDLs under development for dissolved oxygen and VOCs for the New River. A Trash TMDL for the New River has been approved by the Regional Water Board, State Water Board, the Office of Administrative Law and the USEPA.

In addition, the 303(d) List classifies the Salton Sea as impaired by nutrients, salt and selenium. Tributaries to the Salton Sea, including the New River, may be affected by the development of TMDLs for the Salton Sea. No TMDL has been developed to date for the Salton Sea, although a nutrient TMDL is under development for the Salton Sea that may impact the permitted discharges to tributaries to the Salton Sea (New River). The nutrient TMDL for the Salton Sea is tentatively scheduled for completion in 2009.

- B. Facility Description.** McCabe Union School District owns the municipal wastewater treatment plant and it is operated by a Contract Operator. The Facility consists of two packaged treatment systems that operate in series. The first system includes flow equalization, an aeration tank, and secondary clarification. The second package system includes dual media filtration and UV disinfection. Biosolids are dried in drying beds prior to disposal.
- C. California Environmental Quality Act (CEQA).** This action to amend an NPDES permit is exempt from the provisions of Chapter 3 of CEQA (commencing with Section 21100) of Division 13 of the California Public Resources Code in accordance with Section 13389 of the CWC.
- D. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations (see Attachment A of this Order for full details on Public Participation).
- E. Consideration of Public Comment.** The Regional Water Board, in a public hearing, heard and considered all comments pertaining to the discharge.
- F. Anti-degradation Policy.** 40 CFR 131.12 requires that state water quality standards include an anti-degradation policy consistent with the federal policy. To comply with this federal requirement, the State Water Board established California's anti-degradation policy in State Water Board Resolution No. 68-16, titled "Policy with Respect to Maintaining High Quality Waters of the State." Resolution No. 68-16 incorporates the federal anti-degradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires discharges to waters of the State be regulated to achieve the "highest water quality consistent with maximum benefit to the people of the State." It also establishes the intent that where waters of the State are of higher quality than that required by state policies, including Water Quality Control Plans, such higher quality "shall be maintained to the maximum extent possible" unless it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in plans and policies (e.g., violation of any water quality

objective). The discharge is also required to meet WDRs that result in the best practicable treatment or control necessary to assure that pollution or nuisance will not occur, and that the highest water quality consistent with maximum benefit to the people will be maintained.

The source water for the McCabe Union School District and the entire Imperial Valley is the Colorado River. Average annual precipitation in the Imperial Valley is insignificant (approximately 2 inches/year). Therefore, the New River is an effluent-dominated surface water that carries discharges from wastewater treatment plants (WWTPs); agricultural returns flows from approximately 30 Imperial Valley Drains that discharge tilewater and tailwater from farmlands; occasional operational spills of irrigation water from adjacent farmlands; and, wastes from Mexicali, Mexico. The wastes from Mexico include agricultural runoff (tailwater), partially treated and untreated municipal and industrial wastewater, stormwater, and urban runoff from the Mexicali Valley. The wastes from Mexico contain pollutants (e.g., pathogens, trash, VOCs, pesticides, nutrients, raw sewage, BOD and metals) that impair the river's beneficial uses. Tailwater is irrigation water that does not percolate into the soil, and exits the lower end of the field into the drain. Tailwater tends to erode fields and thus acquire silt and sediments as it crosses and exits a field. Tilewater is water that has percolated through the soil, but is not absorbed by crops. Tilewater flushes salts from the soil. This highly saline water accumulates in tile lines beneath the fields, wherein it is transported to drains by gravity flow or a sump system. Consequently, "background" water quality in the New River is difficult to establish for the purpose of conducting a typical antidegradation analysis. It is likely that the New River has historically contained "background" water from farmland² and Mexico that contains pollutants at concentrations that violate certain Basin Plan water quality objectives for those pollutants, in particular, pesticides, silt/sediment³, VOCs, nutrients, pathogens and selenium. The nutrients (e.g., phosphorous) discharged into the drains and New River contribute to the nutrient impairment of the Salton Sea.

The discharge from the WWTP contains conventional pollutants (BOD, TSS, fecal coliform bacteria and pH) that are controlled through best practicable control technology currently available (BPT) and best available technology economically achievable (BCT) to prevent exceedances of the receiving water quality objectives for those pollutants and prevent adverse impacts on the REC-I and REC-II beneficial uses of the New River. The discharge also contains TDS, but at concentrations significantly below the 4000 mg/L TDS WQO for the receiving water. Copper and zinc have been measured in the discharge effluent from the treatment facility at concentrations above the numeric criteria for priority toxic pollutants for the State of California. These toxic pollutants are being controlled through WQBELs derived from water quality criteria established in the CTR. The established WQBELs for copper and zinc prevent adverse impacts of the beneficial uses of the river and ensure compliance with the Basin Plan. Nevertheless, the concentrations of BOD, TSS, fecal coliform bacteria, pH, copper and zinc measured in the discharge are likely to lower water quality in the receiving water (i.e., cause degradation). For conventional pollutants, including BOD, TSS, fecal coliform and pH, this degradation is restricted to pollutants associated with domestic wastewater, is localized and will not result in water quality less than that prescribed in the Basin Plan. For toxic pollutants, including copper and zinc, this degradation will not be significant once controlled and will not result in water quality less than that prescribed in the Basin Plan.

The discharge from the WWTP as permitted herein reflects best practicable treatment and control (BPTC) for the subject wastewater. The control is intended to assure that the

² The agricultural return flows, however, have essentially non-detectable levels of BOD and fecal coliform bacteria and have pH levels well within the receiving water quality objective of 6.0 to 9.0 pH Units.

³ Silt/sediment can be measured in terms of TSS.

discharge does not create a condition of pollution or nuisance and that the highest “background” water quality as defined above will be maintained. The WWTP incorporates:

- a. technology for equivalent to secondary treated domestic wastewater;
- b. effluent disinfection;
- c. sludge handling facilities;
- d. an operation and maintenance manual;
- e. staffing to assure proper operation and maintenance; and
- f. standby emergency power generator of sufficient size to operate the necessary treatment units during periods of loss of commercial power.

The discharge is necessary to accommodate economic development in the area and essential public services for McCabe Union School District, which are an important benefit to the State. Based on the foregoing, the discharge as permitted herein is consistent with Resolution No. 68-16.

IT IS HEREBY ORDERED, that Board Order No. R7-2007-0035 is amended in the manner specified below upon the effective date of this Special Board Order, and, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Special Board Order as well as with those portions of Board Order No. R7-2007-0035 that were not amended by this Special Board Order:

1. Page 12, IV.A.1.a, Final Effluent Limitations for Discharge Point 001. Replace Table 6. Effluent Limitations with the following table (New items are underlined and deleted items are shown in strikeout font):

Table 6. Effluent Limitations

Constituent	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	MGD	0.015	---	---	---	---
Hydrogen ion (pH)	standard pH units	---	---	---	6.0	9.0
Biochemical Oxygen Demand (BOD 5-day 20°C)	mg/L	30	45	---	---	---
	lbs/day ¹	3.8	5.6	---	---	---
Total Suspended Solids (TSS)	mg/L	30	45	---	---	---
	lbs/day ¹	3.8	5.6	---	---	---
Copper, Total Recoverable ²	µg/L	<u>25</u>	---	<u>46</u>	---	---
	lbs/day ¹	<u>0.003</u>	---	<u>0.006</u>	---	---
Nickel, Total Recoverable ²	µg/L	<u>132</u>	---	<u>265</u>	---	---
	lbs/day ¹	<u>0.016</u>	---	<u>0.033</u>	---	---
Pentachlorophenol ²	µg/L	<u>1.6</u>	---	<u>3.2</u>	---	---
	lbs/day ¹	<u>0.0002</u>	---	<u>0.0004</u>	---	---
Zinc, Total	µg/L	<u>188</u>	---	<u>371</u>	---	---

Constituent	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Recoverable ²	lbs/day ¹	0.024		0.046		

¹ Based on a design flow of 0.015 MGD.

² ~~The effluent limitations for copper, nickel, pentachlorophenol and zinc are applicable on May 18, 2010 provided the Discharger submits an Infeasibility Report for copper, nickel, pentachlorophenol and zinc to the Regional Water Board by October 19, 2007.~~

2. Page 13, IV. A.2., Interim Effluent Limitations. Delete this entire section and Table 7. Interim Effluent Limitations on Page 14.
3. Page 17, VI. 2. e. Replace this paragraph with the following:
 - e. The Discharger shall immediately notify the Regional Water Board by phone at (760) 346-7491, the local health officer or directors of environmental health with jurisdiction over affected water bodies and the Office of Emergency Services by phone at (800) 852-7550 to report any noncompliance that may endanger human health or the environment as soon as: (1) the Discharger has knowledge of the discharge, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures.

Although States and Regional Water Boards do not have duties as first responders, to ensure that the agencies that do have first responder duties are notified in a timely manner in order to protect public health and beneficial uses, the following notification requirements are to be implemented:

- i. For any discharges of sewage that results in a discharge to a drainage channel or surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the State Office of Emergency Services, the local health officer or directors of environmental health with jurisdiction over affected water bodies, and the Regional Water Board.
- ii. As soon as possible, but no later than twenty-four (24) hours after becoming aware of a discharge to a drainage channel or a surface water, the Discharger shall submit to the Regional Water Board a certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over the affected water bodies have been notified of the discharge.
- iii. During non-business hours, the Discharger shall leave a voice message on the Regional Water Board's voice recorder. A written report shall also be provided within five (5) business days of the time the Discharger becomes aware of the incident. The written report shall contain a description of the noncompliance and its cause, the period of noncompliance, the anticipated time to achieve full compliance, and the steps taken or planned, to reduce, eliminate, and prevent recurrence of the noncompliance. The Discharger shall report all intentional or unintentional spills in excess of one thousand (1,000) gallons occurring within the facility or collection system to the Regional Water Board in accordance with the above time limits.

4. Page E-6, IV.A., Table E-3. Effluent Monitoring EFF-001. Replace Table E-3. with the following table (New items are underlined and deleted items are shown in ~~strikeout font~~):

Table E-3. Effluent Monitoring EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Flow Meter Reading	Continuous	See Footnote 1
Enterococci	MPN ² / 100 ml	Grab	5x/Month ^{3,8}	See Footnote 4
Escherichia Coli (E. Coli)	MPN/ 100 ml	Grab	5x/Month ^{3,8}	See Footnote 4
Fecal Coliform	MPN/ 100 ml	Grab	5x/Month ³	See Footnote 4
Dissolved Oxygen	mg/L	Grab	1x/Month	See Footnote 4
pH	pH Units	Grab	1x/Month	See Footnote 4
Temperature	°F	Grab	1x/Month	See Footnote 4
BOD 5-day 20 °C	mg/L	24-Hr. Composite ⁵	1x/Month	See Footnote 4
	lbs/day			
Copper, Total Recoverable	µg/L	24-Hr. Composite ⁵	1x/Month	See Footnote 4
	lbs/day			
Mercury, Total Recoverable	µg/L	24-Hr. Composite ⁵	1x/Month	See Footnote 4
	lbs/day			
Nickel, Total Recoverable	µg/L	24-Hr. Composite ⁵	1x/Month	See Footnote 4
	lbs/day			
Pentachlorophenol	µg/L	Grab	1x/Month	See Footnote 4
	lbs/day			
Total Dissolved Solids (TDS)	mg/L	24-Hr. Composite ⁵	1x/Month	See Footnote 4
Total Suspended Solids (TSS)	mg/L	24-Hr. Composite ⁵	1x/Month	See Footnote 4
	lbs/day			
Zinc, Total Recoverable	µg/L	24-Hr. Composite ⁵	1x/Month	See Footnote 4
	lbs/day			
Ammonia Nitrogen, Total (as N)	mg/L	Grab	2x/Year	See Footnote 4
Hardness (as CaCO ₃)	mg/L	24-Hr. Composite ⁵	2x/Year	See Footnote 4
Nitrates as Nitrogen (as N)	mg/L	Grab	2x/Year	See Footnote 4
Nitrites as Nitrogen (as N)	mg/L	Grab	2x/Year	See Footnote 4
Nitrogen, Total (as N)	mg/L	Grab	2x/Year	See Footnote 4
Orthophosphate (as P)	mg/L	Grab	2x/Year	See Footnote 4
Phosphate, Total (as P)	mg/L	Grab	2x/Year	See Footnote 4
Sulfates	mg/L	Grab	2x/Year	See Footnote 4
Oil and Grease	mg/L	Grab	1x/Year	See Footnote 4
Priority Pollutants ^{6,7}	µg/L	24-Hr. Composite ⁵	1x/Year	See Footnote 4

¹ Report Total Daily Flow.

² MPN = Most Probable number.

³ Five samples equally spaced over a 30-day period with a minimum of one sample per week.

⁴ Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, included as Attachment H. Where no methods are specified for a given pollutant, pollutants shall be analyzed by methods approved by this Regional Water Board or the State Water Board.

Priority Pollutants as defined by the CTR defined in Finding II.I of the Limitations and Discharge Requirements of this Order, and included as Attachment G.

⁵ Samples shall be flow-proportional composite samples.

⁶ Priority Pollutants as defined by the CTR defined in Finding II.I of the Limitations and Discharge Requirements of this Order, and included as Attachment G. For priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

⁷ Volatile organic samples and samples with holding times of less than 24 hours shall be grab samples; the remainder shall be 24-hour composite samples.

⁸ Compliance monitoring for the E. Coli and Enterococci effluent limit shall begin on July 1, 2009.

5. Fact Sheet, Page F-9, III. C. 10. Anti-degradation Policy. Replace this section with Section F. Anti-degradation Policy beginning on Page 3 of this Special Order.
6. Fact Sheet, Page F-17, IV. C. 2., Table F-8. Applicable Beneficial Uses and Water Quality Criteria and Objectives. Replace Table F-8 with the following table (New items are underlined and deleted items are shown in strikethrough font):

Table F-8. Applicable Beneficial Uses and Water Quality Criteria and Objectives

CTR No.	Parameter	Most Stringent Criteria	CTR/NTR Water Quality Criteria				
			Freshwater		Saltwater		Human Health for Consumption of:
			Acute	Chronic	Acute	Chronic	Organisms only
			µg/L	µg/L	µg/L	µg/L	µg/L
1	Antimony	4,300	--	--	--	--	4300
2	Arsenic	<u>150</u>	340	150	69	36	--
5a	Chromium (III)	618	5,182	618	--	--	--
5b	Chromium (VI)	11.4	16.3	11.4	1108	50.4	--
6	Copper	<u>29.2</u>	49.2	29.2	5.78	3.73	--
7	Lead	<u>17.4</u>	447	17.4	221	8.52	Narrative
8	Mercury	0.051	--	--	--	--	0.051
9	Nickel	<u>161</u>	1,452	161	74.8	8.28	4,600
10	Selenium	5.0		5.0	291	71.1	Narrative
11	Silver	<u>40.3</u>	40.3	--	2.24	--	--
13	Zinc	<u>371</u>	371	371	95.1	85.6	--
14	Cyanide	5.2	22	5.2	--	--	--
26	Chloroform	No Criteria	--	--	--	--	--
53	Pentachlorophenol	2.45	3.19	2.45	13	7.9	8.2

7. Fact Sheet, Page F-18, IV. C. 3. Replace last paragraph prior to Table F-9 with the following:

The RPA was performed on available priority pollutant monitoring data and monthly monitoring data collected by the Discharger from September 2007 through September 2008. Based on the RPA, copper, and zinc demonstrated reasonable potential to cause or contribute to an excursion above a water quality standard. Data used in the RPA are summarized in Table F-9.

8. Fact Sheet, Page F-18, IV. C. 3. Table F-9. Summary of Reasonable Potential Analysis. Replace Table F-9 with the following table (New items are underlined and deleted items are shown in strikethrough font):

Table F-9. Summary of Reasonable Potential Analysis

CTR No.	Priority Pollutant	Applicable Water Quality Criteria (C)	Max Effluent Concentration (MEC)	Maximum Detected Receiving Water Concentration (B)	RPA Result – Limit Required?	Reason
		µg/L	µg/L	µg/L		
1	Antimony	4,300	0.6	--	No	MEC < C
2	Arsenic	36	3	--	No	MEC < C
5a	Chromium (III)	618	1.6	--	No	MEC < C
5b	Chromium (VI)	11.4	5 (DNQ)	--	No	MEC < C
6	Copper	<u>29.2</u>	<u>38</u>	--	Yes	MEC > C
7	Lead	8.52	4.5	--	No	MEC < C
8	Mercury	0.051	0.084 (DNQ)	--	No	Monitoring Required
9	Nickel	<u>161</u>	<u>35</u>	--	No	MEC ≤ C
10	Selenium	5.0	4	--	No	MEC < C
11	Silver	2.24	< 0.25 (ND)	--	No	MEC < C
13	Zinc	<u>371</u>	<u>770</u>	--	Yes	MEC > C
14	Cyanide	5.2	0.003 (DNQ)	--	No	MEC < C
26	Chloroform	No Criteria	0.5	--	No	No Criteria
53	Pentachlorophenol	2.45	<u><0.73</u>	--	No	MEC ≤ C

ND = Not detected at or above detection limit for reporting

DNQ = Detected, but not quantified

“—” = Priority pollutant monitoring data not available

9. Fact Sheet, Page F-19, IV. C. 4. b. WQBELs Calculation Example. Replace this section with the following:

b. WQBELs Calculation Example

Using copper as an example, the following demonstrates how WQBELs based on an aquatic life criterion were established for Order No. R7-2009-0011. The process for developing these limits is in accordance with section 1.4 of the SIP. Attachment I summarizes the development and calculation of all WQBELs for this Order using the process described below.

Step 1: For each constituent requiring an effluent limit, identify the applicable water quality criteria or objective. For each criterion determine the effluent concentration allowance (ECA) using the following steady state equation:

$$ECA = C + D(C-B) \quad \text{when } C > B, \text{ and}$$

$$ECA = C \quad \text{when } C \leq B,$$

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. In this Order a hardness value of 380 mg/L (as CaCO₃) was used for development of hardness-dependant criteria, and a pH of 6.0 was used for pH-dependant

criteria.

D = The dilution credit, and

B = The ambient background concentration

For this Order, dilution was not allowed due to the nature of the receiving water and quantity of the effluent; therefore:

$$ECA = C$$

For copper, the applicable water quality criteria are:

$$ECA_{acute} = 49.2 \mu\text{g/L}$$

$$ECA_{chronic} = 29.2 \mu\text{g/L}$$

$$ECA_{human\ health} = \text{Not Applicable}$$

Step 2: For each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 3 of the SIP and will not be repeated here.

$$LTA_{acute} = ECA_{acute} \times \text{Multiplier}_{acute}$$

$$LTA_{chronic} = ECA_{chronic} \times \text{Multiplier}_{chronic}$$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80% of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6.

For copper, the following data was used to develop the acute and chronic LTA using Table 1 of the SIP:

<u>No. of Samples</u>	<u>CV</u>	<u>Multiplier_{acute}</u>	<u>Multiplier_{chronic}</u>
13	0.48	0.39	0.60

$$LTA_{acute} = 49.2 \mu\text{g/L} \times 0.39 = 19.19 \mu\text{g/L}$$

$$LTA_{chronic} = 29.2 \mu\text{g/L} \times 0.60 = 17.52 \mu\text{g/L}$$

Step 3: Select the most limiting (lowest) of the LTA.

$$LTA = \text{most limiting of } LTA_{acute} \text{ or } LTA_{chronic}$$

For copper, the most limiting LTA was the $LTA_{chronic}$

$$LTA = 17.52 \mu\text{g/L}$$

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as Average Monthly Effluent Limitations (AMEL) and Maximum Daily Effluent Limitations (MDEL). The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the coefficient of variation (CV) of the data set, the

number of samples (for AMEL) and whether it is monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 5 of the SIP and will not be repeated here.

$$\text{AMEL}_{\text{aquatic life}} = \text{LTA} \times \text{AMEL}_{\text{multiplier}}$$

$$\text{MDEL}_{\text{aquatic life}} = \text{LTA} \times \text{MDEL}_{\text{multiplier}}$$

AMEL multipliers are based on a 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4).

For copper, the following data was used to develop the AMEL and MDEL for aquatic life using Table 2 of the SIP:

<u>No. of Samples</u>	<u>CV</u>	<u>Multiplier_{MDEL}</u>	<u>Multiplier_{AMEL}</u>
4	0.48	2.60	1.43

$$\text{AMEL}_{\text{aquatic life}} = 17.52 \times 1.43 = 25.05 \text{ } \mu\text{g/L}$$

$$\text{MDEL}_{\text{aquatic life}} = 17.52 \times 2.60 = 45.55 \text{ } \mu\text{g/L}$$

Step 5: For the ECA based on human health, set the AMEL equal to the ECA_{human health}

$$\text{AMEL}_{\text{human health}} = \text{ECA}_{\text{human health}}$$

For copper:

$$\text{AMEL}_{\text{human health}} = \text{Not Applicable}$$

Step 6: Calculate the MDEL for human health by multiplying the AMEL by the ratio of the Multiplier_{MDEL} to the Multiplier_{AMEL}. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

$$\text{MDEL}_{\text{human health}} = \text{AMEL}_{\text{human health}} \times (\text{Multiplier}_{\text{MDEL}} / \text{Multiplier}_{\text{AMEL}})$$

For copper, the following data was used to develop the MDEL_{human health}:

<u>No. of Samples</u>	<u>CV</u>	<u>Multiplier_{MDEL}</u>	<u>Multiplier_{AMEL}</u>	<u>Ratio</u>
4	0.48	2.6	1.43	1.82

$$\text{MDEL}_{\text{human health}} = \text{Not Applicable}$$

Step 7: Select the lower of the AMEL and MDEL based on aquatic life and human health as the water-quality based effluent limit for the Order.

For copper:

<u>AMEL_{aquatic life}</u>	<u>MDEL_{aquatic life}</u>	<u>AMEL_{human health}</u>	<u>MDEL_{human health}</u>
25 $\mu\text{g/L}$	46 $\mu\text{g/L}$	Not Applicable	Not Applicable

The lowest (most restrictive) effluent limits, those based on aquatic life criteria, were incorporated into this Order.

10. Fact Sheet, Page F-23, Table F-10. Summary of Water Quality-based Effluent Limitations. Replace table F-10 with the following table (New items are underlined and deleted items are shown in strikethrough font):

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

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Copper, Total Recoverable	µg/L	<u>25</u>	--	<u>46</u>	--	--
	lbs/day ¹	<u>0.003</u>	--	<u>0.006</u>	--	--
Nickel, Total Recoverable ¹	µg/L	6.8	--	14	--	--
	lbs/day ²	0.00085	--	0.0018	--	--
Pentachlorophenol ¹	µg/L	0.87	--	1.7	--	--
	lbs/day ²	0.00011	--	0.00021	--	--
Zinc, Total Recoverable ¹	µg/L	<u>188</u>	--	<u>371</u>	--	--
	lbs/day ¹	<u>0.024</u>	--	<u>0.046</u>	--	--
Enterococci	MPN/100mL	33 ²	--	100	--	--
Escherichia Coli (E. Coli)	MPN / 100 mL	126 ²	---	400	---	---
Fecal Coliform	MPN/100mL	200 ^{2,3}	--	400 ³	--	--

~~¹The effluent limitations for copper, nickel, pentachlorophenol and zinc are applicable on May 18, 2010 provided the Discharger submits an Infeasibility Report for copper to the Regional Water Board by October 19, 2007.~~

¹ The mass-based effluent limitations are based on a design capacity of 0.015 MGD.

² Based on a minimum of not less than five samples for any 30-day period.

³ No more than ten percent of the total fecal coliform samples collected during any 30-day period shall exceed 400 MPN per 100 milliliters.

~~⁴ Compliance monitoring for E. Coli and Enterococci effluent limit shall begin on July 1, 2009.~~

11. Fact Sheet, Page F-25, Table F-11. Summary of Final Effluent Limitations. Replace Table F-11 with the following table:

Table F-11. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Flow	MGD	0.015	---	---	---	---	
BOD ₅ @ 20°C	mg/L	30	45	---	---	---	40 CFR
	lbs/day ¹	3.8	5.6	---	---	---	133
TSS	mg/L	30	45	---	---	---	40 CFR
	lbs/day ¹	3.8	5.6	---	---	---	133
pH	pH units	---	---	---	6.0	9.0	40 CFR 133
Copper, Total Recoverable ²	µg/L	25	---	46	---	---	CTR, SIP
	lbs/day ¹	0.003	---	0.006	---	---	
Nickel, Total Recoverable ²	µg/L	132	---	265	---	---	CTR, SIP
	lbs/day ¹	0.016	---	0.033	---	---	
Pentachlorophenol ²	µg/L	1.6	---	3.2	---	---	CTR, SIP
	lbs/day ¹	0.0002	---	0.0004	---	---	
Zinc, Total Recoverable ²	µg/L	188	---	371	---	---	CTR, SIP
	lbs/day ¹	0.024	---	0.046	---	---	

1 The mass-based effluent limitations are based on a design capacity of 0.015 MGD.

2 ~~These effluent limitations are applicable on May 18, 2010 unless the Discharger Discharger fails to submit to the Regional Water Board a Copper, Nickel, Pentachlorophenol and Zinc Infeasibility Report by October 19, 2007. Upon the Regional Water Board's approval of the Infeasibility Report, the interim effluent limitations described in Section IV.A.2 shall be applicable from September 19, 2007 to May 18, 2010.~~

12. Fact Sheet, Page F-27, IV. E. Interim Effluent Limitations. Delete this entire section and Table F-12. Interim Effluent Limitations.

13. Fact Sheet, Page F-31, VI. B. Effluent Monitoring. Replace the last paragraph of this section with the following (New items are underlined and deleted items are shown in strikethrough font):

Monitoring requirements are largely unchanged from the previous Order. Monitoring once per month for copper, ~~nickel, pentachlorophenol~~ and zinc have been established because these pollutants have been detected in the effluent at levels above final WQBELs. In addition, monitoring for enterococci and fecal coliform have been added to be consistent with the requirements of the Basin Plan. Further, the previous Order included a specific effluent monitoring requirement for dioxin. Due to the inclusion of dioxin monitoring in the priority pollutant monitoring required by this Order, the dioxin-specific monitoring requirement has been removed. Finally, annual monitoring for priority pollutants in the effluent is required in accordance with the SIP.

14. Fact Sheet, Page F-34, VII. 7 Compliance Schedules. Delete this entire section.

15. Attachment I, Page I-1, Summary Water Quality-Based Effluent Limit Calculations. Replace the table with the revised Attachment I.

I, Robert E. Perdue, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on March 19, 2009.


 ROBERT E. PERDUE, Executive Officer

Attachment I – Summary Water Quality-Based Effluent Limit Calculations

The water quality-based effluent limits developed for this Board Order are summarized below and were calculated as described in the methodology summarized in Attachment F, Fact Sheet and are contained in Section IV.A.1.c of this Order.

Priority Pollutant	Human Health Calculations			Aquatic Life Calculations											Selected Limits	
	Human Health			Freshwater												
	AMEL = ECA = C hh	MDEL/AMEL multiplier	MDEL hh	ECA acute = C acute	ECA acute multiplier	LTA acute	ECA chronic = C chronic	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aquatic life	MDEL multiplier 99	MDEL aquatic life	AMEL	MDEL
	ug/L		ug/L	ug/L		ug/L	ug/L		ug/L	ug/L		ug/L		ug/L	ug/L	ug/L
Copper	N/A	N/A	N/A	49.2	0.39	19.19	29.2	0.60	17.52	17.52	1.43	25.05	2.6	45.55	25	46
Nickel	4600	2.01	9246	1452	0.321	466.1	161.4	0.527	85.1	85.1	1.55	131.8	3.11	264.5	132	265
Zinc	N/A	N/A	N/A	371	0.331	122.8	371	0.538	199.6	122.8	1.53	187.9	3.02	370.9	188	371
Pentachlorophenol	8.2	2.01	16.5	3.2	0.321	1.0	2.4	0.527	1.3	1.0	1.55	1.6	3.11	3.2	1.6	3.2

Notes:

- C = Water Quality Criteria
- hh = human health
- AMEL = Average monthly effluent limitation
- MDEL = Maximum daily effluent limitation
- ECA = Effluent concentration allowance
- LTA = Long-term average concentration

ATTACHMENT A – PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Colorado River Basin Region (Regional Water Board) is considering the amendment of WDRs that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for McCabe Union School District's Wastewater Treatment Plant. As a step in the WDRs adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDRs adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was published in the following newspapers: Desert Sun and Imperial Valley Press. In addition, copies of the proposed permit were sent to interested agencies and persons.

B. Written Comments

The Regional Water Board staff's determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to the Executive Officer at the Regional Water Board at the address above on the cover page of this Order.

Comments made in reference to the Biological Assessment and USEPA's approval letter should be directed to:

Matthew Mitchell
USEPA
75 Hawthorne Street (WTR-5)
San Francisco, CA 94105

Comments made in reference to the Tentative Board Order should be directed to:

California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

To be fully responded to by staff and considered by the Regional Water Board and USEPA, written comments should be received at the Regional Water Board and USEPA offices by 5:00 p.m. on February 16, 2009.

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: March 19, 2009
Time: 10:00 a.m.
Location: Palm Desert Council Chambers
City of Palm Desert
73-510 Fred Waring Drive
Palm Desert, CA 92260

Interested persons are invited to attend. At the public hearing, the Regional Water Board will take testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, however, a written copy of the proposed oral testimony to be given should be provided prior to or at the hearing.

Please be aware that dates and venues of the Regional Water Board's public meeting and hearing may change. The latest information concerning any scheduling changes can be found at the Regional Water Board's website: <http://www.waterboards.ca.gov/coloradoriver/>.

Any person who is disabled and requires special accommodations to participate in this public meeting and hearing, please contact Hilda Vasquez at (760) 776-8950 no later than ten (10) days before the scheduled event.

D. Waste Discharge Requirements Petitions

Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with Water Code Section 13320 and the 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.

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

Information related to the discharge facility and this proposed amendment, including any comments received on the proposed amendment are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (760) 346-7491.

F. Register of Interested Persons

If you are interested in being placed on the mailing list for information regarding the WDRs and NPDES permit, please contact the Regional Water Board, reference this facility, and provide your name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this draft order should be directed to John Carmona, Senior Water Resources Control Engineer, at (760) 340-4521.