

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
 SAN DIEGO REGION**

Errata Sheet

**TENTATIVE ORDER NO. R9-2017-0020
 NPDES NO. CA0108952**

**WASTE DISCHARGE REQUIREMENTS
 FOR THE SWEETWATER AUTHORITY
 RICHARD A. REYNOLDS DESALINATION FACILITY DISCHARGE
 TO THE LOWER SWEETWATER RIVER BASIN**

The following changes are proposed to the revised version of Tentative Order No. R9-2017-0020 included as Supporting Document No. 1 for Item No. 11 on the San Diego Water Board's June 21, 2017 Board Meeting Agenda.

Errata No.	Page and Section Numbers	Revision
1	Page 3, Tables	Deleted reference to Tables 6a, 6b, 7, and 8. Renumbered Table 9 as Table 6.
2	Page 11, Table 9	Renumbered Table 9 as Table 6.
3	Page E-1, Attachment E Tables	Deleted references to Tables E-3, E-4, and E-5. Renumbered Tables E-6, E-7, and E-8 as Tables E-3, E-4, and E-5, respectively.
4	Page F-2, Attachment F Tables	Deleted references to Tables F-10, F-11, F-12b, F-12c, F-12d, F-13b, F-13c, F-13d, F-15b, F-15c, F-15d, F-16b, F-16d, and F-16e. Renumbered the remaining tables accordingly.
5	Page F-6, Attachment F section II.D	Deleted reference to Discharge Point No. 002.
6	Page F-8, Attachment F section II.D	Replaced "Compliance Summary" section with corrected information.
7	Page F-12, Attachment F section IV.A	Deleted references to well purge water.
8	Page F-16, Attachment F section IV.C.2.b	Deleted references to Discharge Point No. 002 and well purge water.
9	Page F-17, Attachment F section IV.C.2.d	Deleted reference to Discharge Point No. 002

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Performance goal constituents shall be monitored at Monitoring Location EFF-001b as described in the MRP (Attachment E). The San Diego Water Board will use the monitoring results for informational purposes only, the results will not be used for compliance determinations.

Table 639. Performance Goals for Discharge Point No. 001b

Parameter	Performance Goals		
	Units ¹	Average Monthly	Maximum Daily
Antimony, Total Recoverable	µg/L	4.30E+03	8.64E+03
	lbs/day	8.97E+01	1.80E+02
Arsenic, Total Recoverable	µg/L	2.94E+01	5.90E+01
	lbs/day	6.13E-01	1.23E+00
Cadmium, Total Recoverable	µg/L	5.97E+00	1.20E+01
	lbs/day	1.24E-01	2.50E-01
Chromium (III) , Total Recoverable	µg/L	5.26E+02	1.06E+03
	lbs/day	1.10E+01	2.20E+01
Chromium (VI) , Total Recoverable	µg/L	7.96E+00	1.60E+01
	lbs/day	1.66E-01	3.33E-01
Lead, Total Recoverable	µg/L	6.96E+00	1.40E+01
	lbs/day	1.45E-01	2.91E-01
Mercury, Total Recoverable	µg/L	5.10E-02	1.03E-01
	lbs/day	1.06E-03	2.14E-03
Nickel, Total Recoverable	µg/L	5.00E+00	1.30E+01
	lbs/day	1.04E-01	2.10E-01
Silver, Total Recoverable	µg/L	1.11E+00	2.23E+00
	lbs/day	2.32E-02	4.66E-02
Thallium, Total Recoverable	µg/L	6.30E+00	1.27E+01
	lbs/day	1.31E-01	2.64E-01
Zinc, Total Recoverable	µg/L	4.73E+01	9.50E+01
	lbs/day	9.87E-01	1.98E+00
Acrolein	µg/L	7.80E+02	1.57E+03
	lbs/day	1.63E+01	3.27E+01
Acrylonitrile	µg/L	6.60E-01	1.33E+00
	lbs/day	1.38E-02	2.77E-02
Benzene	µg/L	7.10E+01	1.43E+02
	lbs/day	1.48E+00	2.98E+00
Bromoform	µg/L	3.60E+02	7.24E+02
	lbs/day	7.51E+00	1.51E+01
Carbon Tetrachloride	µg/L	4.40E+00	8.84E+00
	lbs/day	9.17E-02	1.84E-01
Chlorobenzene	µg/L	2.10E+04	4.22E+04
	lbs/day	4.38E+02	8.80E+02
Chlorodibromomethane	µg/L	3.40E+01	6.83E+01
	lbs/day	7.09E-01	1.42E+00
Dichlorobromomethane	µg/L	4.60E+02	9.25E+01
	lbs/day	9.59E-01	1.93E+00
1,2-Dichloroethane	µg/L	9.90E+01	1.99E+02
	lbs/day	2.06E+00	4.15E+00
1,1-Dichloroethylene	µg/L	3.20E+00	6.43E+00
	lbs/day	6.67E-02	1.34E-01
1,2-Dichloropropane	µg/L	3.90E+01	7.84E+01
	lbs/day	8.13E-01	1.63E+00
1,3-Dichloropropylene	µg/L	1.70E+03	3.42E+03
	lbs/day	3.54E+01	7.12E+01

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B. Discharge Points and Receiving Waters

Effluent from Discharge Point No. 001b enters the Lower Sweetwater River approximately 2,200 feet downstream of the confluence of the Upper Paradise Creek Flood Control Channel and the Lower Sweetwater River. Effluent from Discharge Point No. 001a and Discharge Point No. 002 enter the Upper Paradise Creek Flood Control Channel, a concrete lined conveyance that delivers upstream, ephemeral flow as well as the plant wastewaters to the Lower Sweetwater River Estuary. Discharge Point No. 001a is located approximately 750 feet upstream of the confluence of the Upper Paradise Creek Flood Control Channel with the Lower Sweetwater River. The Facility may discharge through Discharge Point No. 001a during emergencies and maintenance of Discharge Point No. 001b at a discharge rate of 0.8 MGD from June 1st through November 30th and 1.0 MGD from December 1st through May 31st, subject to prior notification to the Executive Officer of the San Diego Water Board.

The salinity and mixing conditions at the locations of Discharge Point Nos. 001b, and 001a in the Lower Sweetwater River ~~and the Upper Paradise Creek Flood Control Channel~~ are such that the San Diego Water Board determined the discharge locations are within the Tidal Prism of San Diego Bay.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in the existing Order for discharges from Discharge Point Nos. 001a and 001b, (Monitoring Locations EFF-001a and 001b) and representative monitoring data from the term of the previous Order are as follows:

Table F-4. Historic Effluent Limitations and Monitoring Data for All Discharge Points

Parameter	Units	Historic Effluent Limitations (Beginning July 1, 2010)		Monitoring Data (From July 27, 2012 through September 30, 2016)	
		Average Monthly	Maximum Daily	Highest Average Monthly	Highest Maximum Daily
Discharge Point No. 001a					
Flow Rate (Jun – Nov)	MGD	0.8	--	0.6 ¹	0.82
Flow Rate (Dec – May)	MGD	0.8	--	0.7 ¹	0.82
Oil and Grease	mg/l	25	75 ²	ND	ND
TSS	mg/l	30	50 ²	7	7
Settleable Solids	mg/l	1.0	3.0 ²	ND	ND
Turbidity	NTU	75	225 ²	0.15	0.15
Temperature Δ	°F	--	Δ 20 °F	--	Δ 15 °F
pH	s.u.	6.0-9.0 ³		7.6-7.8 ³	
Salinity	ppt	7-11	--	8.1-9.0	--
Nitrate Nitrogen, Total (as N)	mg/L	--	5	--	0.1
Nitrogen, Total (as N)	mg/L	--	1.0	--	1.1
Phosphorus, Total (as P)	mg/L	--	0.1	--	0.1

D. Compliance Summary

Review of the Sweetwater Authority's self-monitoring reports reveals 11 noncompliance incidents during the term of the previous order, Order No. R9-2010-0012 as amended by Order No. R9-2014-0014. These noncompliance incidents are generally classified as follows:

- Two deficient monitoring and/or reporting violations, and
- Nine violations of effluent limitations, including effluent limitations for nickel (four times), total dissolved solids (one time), copper (two times), phosphorus (one time), and nitrogen (one time).

The San Diego Water Board has addressed all 11 violations. The San Diego Water Board sent staff enforcement letters to the Sweetwater Authority requiring that steps be taken to prevent the reoccurrence of such violations. Additionally, the San Diego Water Board assessed administrative civil liabilities (ACLs) for effluent limitation violations in February 2012 for \$15,000 and in April 2013 for \$6,000. During the term of the previous Order there were two instances where the Discharger exceeded effluent limitations:

1. On September 11, 2012, the Discharger exceeded the effluent limitations for nitrogen (as N) at Discharge Point No. 001a. The effluent limitation for this monitoring location is 1.0 mg/L and the Discharger reported a result of 1.1 mg/L.
2. On February 3, 2016, the Discharger exceeded effluent limitations for phosphorous (as P) at Discharge Point No. 001b. The effluent limitation for this monitoring location is 0.1 mg/L and the Discharger reported 0.2 mg/L.

E. Planned Changes – NOT APPLICABLE

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U. S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from the Facility to surface waters.

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of chapter 3 of CEQA, (commencing with section 21100) of division 13 of the Public Resources Code.

C. State and Federal Laws, Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The San Diego Water Board adopted a *Water Quality Control Plan for the San Diego Region* (Basin Plan) on September 8, 1994, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for the Sweetwater River, San Diego Bay, and other receiving waters addressed through the plan. Subsequent revisions to the Basin Plan have

- d. Waste discharges shall not cause a blockage of zones of passage required for the migration of anadromous fish.
- e. Nonpoint sources of pollutants shall be controlled to the maximum practicable extent.

As of the date of adoption of this Order, no segment of San Diego Bay has been designated as an area where the protection of beneficial uses requires spatial separation from waste fields. The San Diego Water Board has considered the *Principles for the Management of Water Quality in Enclosed Bays and Estuaries*, in adopting this Order. The terms and conditions of this Order are consistent with the *Principles for the Management of Water Quality in Enclosed Bays and Estuaries*.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the CFR: 40 CFR section 122.44(a) requires that permits include applicable technology-based limitations (TBELs) and standards; and 40 CFR section 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

A. Discharge Prohibitions

Effluent and receiving water limitations in this Order are based on the CWA, Basin Plan, State Water Board plans and policies, USEPA guidance and regulations, and best practicable waste treatment technology. This Order authorizes the discharge of demineralization brine from Discharge Point Nos. 001a (when discharge occurs) and 001b. This Order also authorizes the discharge of storm water runoff, chlorine contact tank water, plant feed-water dump water, and valve pressure relief, ~~and well purge water from Discharge Point No. 002, and well purge water from Discharge Point Nos. 003 through 010~~. It does not authorize any other types of discharges.

1. Prohibition A incorporates by reference Basin Plan Waste Discharge Prohibitions.
2. Prohibitions B, C, and D are based on 40 CFR section 122.21(a) and Water Code section 13260, which require filing an application and ROWD before a discharge can occur. Discharges not described in the application and ROWD, and subsequently in this Order, are prohibited.

B. Technology-Based Effluent Limitations (TBELs)

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with part 125, section 125.3.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

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3. Goal to prevent plant nuisance in streams and other flowing waters, not to be exceeded more than 10% of the time.

- b. **CTR/NTR Criteria.** The CTR and NTR specify numeric aquatic life and human health criteria for numerous priority pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries. Some human health criteria are for consumption of “water and organisms” and others are for consumption of “organisms only.”

Priority pollutant water quality criteria in the CTR are applicable to the tidal prism of San Diego Bay and the Lower Sweetwater River. The CTR contains both saltwater and freshwater criteria. As specified in the CTR, “(1) freshwater criteria apply at salinities of 1 ppt and below at locations where this occurs 95% or more of the time; 2) saltwater criteria apply at salinities of 10 parts per thousand and above at locations where this occurs 95 percent or more of the time; and (3) at salinities between 1 and 10 ppt the more stringent of the two apply unless USEPA approves the application of the freshwater or saltwater criteria based on an appropriate biological assessment.

Demineralization brine from Discharge Point No. 001b enters the Lower Sweetwater River approximately 2,200 feet downstream of the confluence of the Upper Paradise Creek Flood Control Channel and the Lower Sweetwater River, in an area considered within the tidal prism of San Diego Bay. Effluent from Discharge Point No. 001a ~~and Discharge Point No. 002~~ enters the Upper Paradise Creek Flood Control Channel, a concrete lined conveyance that delivers upstream, ephemeral flow as well as the plant wastewaters to the Lower Sweetwater River Estuary. -Therefore, the salinity in the Lower Sweetwater River at Monitoring Locations RSW-001a, RSW-001b, RSW-002a, and RSW-2b, was used to represent ambient salinity to determine whether marine or freshwater criteria apply for Discharge Point No. 001a, ~~and 001b, and 002~~. A total of 34 samples were collected from July 17, 2012 through July 12, 2016. The results demonstrated salinity varied from 3.6 ppt to 32.5 ppt. The salinity concentration at which 95 percent of the results were greater than was 8.4 ppt. The salinity concentration at which 95 percent of the data were below was 32.3 ppt. Since 95 percent of the receiving water salinity results were neither at or below 1 ppt nor at or above 10 ppt, the more stringent of the saltwater or freshwater criteria apply to Discharge Point Nos. 001a, ~~and 001b, and 002~~.

~~Well purge water from Discharge Point Nos. 003, 004, 005, and 006 enters the Lower Sweetwater River at a location upstream of where mixing of tidal and freshwater occurs. For these discharges, CTR and NTR freshwater aquatic and human health criteria apply.~~

~~Well purge water from Discharge Points Nos. 007, 008, 009, and 010 enters San Diego Bay. For these discharges, CTR and NTR saltwater aquatic life criteria apply.~~

- c. **Hardness.** As described in the CTR, most of the data for which hardness dependent criteria equations were developed were based on hardness data between 25 mg/L calcium carbonate (CaCO₃) and 400 mg/L CaCO₃. Further, as stated in the CTR, USEPA recommends that where actual ambient hardness is greater than 400 mg/L CaCO₃, a value of 400 mg/L CaCO₃ may be used to develop protective criteria. At two sampling stations, located upstream of Discharge Point Nos. 001a and 001b, within the Lower Sweetwater River, hardness was analyzed eight times between February 2013 and November 2013. The minimum hardness value measured was 2,155 mg/L CaCO₃.

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The freshwater criteria used in this Order were developed based on a capped hardness of 400 mg/L CaCO₃.

- d. Applicable criteria for Discharge Point Nos. 001a, and 001b, ~~and 002~~ are summarized below for the parameters detected in the effluent.

Table F-9. Summary of Applicable CTR/NTR Criteria at Discharge Point Nos. 001a and 001b: The More Stringent of the Saltwater or Freshwater Criteria

Parameter	Selected Criteria (µg/L)	CTR/NTR Water Quality Criteria (µg/L)				Human Health For Consumption of Organisms only
		Freshwater		Saltwater		
		Acute	Chronic	Acute	Chronic	
Antimony, Total Recoverable	4,300	--	--	--	--	4,300
Arsenic, Total Recoverable	36	340	150	69	36	NA
Cadmium, Total Recoverable	7.31	21.58	7.31	42.25	9.36	NA
Chromium IV, Total Recoverable	11	16	11	1107.75	50.35	NA
Cyanide, Total	1.00	22	5.2	1.00	1.00	220,000
Copper, Total Recoverable	3.73	51.68	30.50	5.78	3.73	NA
Lead, Total Recoverable	8.52	477	18.58	220.82	8.52	NA
Mercury, Total Recoverable	0.051	Reserved	Reserved	Reserved	Reserved	0.051
Nickel, Total Recoverable	8.28	1516	168.54	74.75	8.28	4,600
Selenium, Total Recoverable	5	20	5	290.58	71.14	NA
Silver, Total Recoverable	2.24	44.05	--	2.24	--	NA
Thallium, Total Recoverable	6.3	--	--	--	--	6.3
Zinc, Total Recoverable	85.62	387.83	387.83	95.14	85.62	NA
TCDD Equivalentents	1.4E-08	--	--	--	--	1.4E-08
2,4-Dichlorophenol	790	--	--	--	--	790
3-Methyl-4-Chlorophenol	--	--	--	--	--	34
Pentachlorophenol	0.01	0.01	0.01	13	7.9	8.2
Benzo(a)Anthracene	0.049	--	--	--	--	0.049
Benzo(a)Pyrene	0.049	--	--	--	--	0.049
Benzo(b)Fluoranthene	0.049	--	--	--	--	0.049
Benzo(g,h,i)Perylene	0.049	--	--	--	--	0.049
Benzo(k)Fluoranthene	0.049	--	--	--	--	0.049
Bis(2-Ethylhexyl)Phthalate	5.9	--	--	--	--	5.9
Butylbenzyl Phthalate	5,200	--	--	--	--	5,200
Chrysene	0.049	--	--	--	--	0.049
Dibenzo(a,h)Anthracene	0.049	--	--	--	--	0.049
Diethyl Phthalate	120,000	--	--	--	--	120,000
Dimethyl Phthalate	2,900,000	--	--	--	--	2,900,000
Di-n-Butyl Phthalate	12,000	--	--	--	--	12,000