

Appendix B

Proposed Basin Plan Amendment

showing changes
since September 21, 2023

Revisions indicated in single underline/strikeout represent new or revised language compared to existing version of Basin Plan. Revisions indicated in double underline/strikeout represent new or revised language with respect to the version of the amendment circulated on September 21, 2023.

1. Proposed changes to Table 3-4

Table 3-4: Freshwater^a Water Quality Objectives for Toxic Pollutants for Surface Waters (all values in µg/L)

Compound	4-day Average	1-hr Average
Arsenic ^{b, c, d}	150	340
Cadmium ^{b, d}	e	e
Chromium III ^{c, d, f}		
Chromium VI ^{b, c, d, g}	11	16
Copper ^{b, c, d}	9.0 ^h	13 ^h
Cyanide ⁱ		
Lead ^{b, c, d}	2.5 ^j	65 ^j
Mercury ^k		2.4
Nickel ^{b, c, d}	52 ^l	470 ^l
Selenium ^m		
Silver ^{b, c, d}		3.4 ⁿ
Tributyltin ^o		
Zinc ^{b, c, d}	120 ^p	120 ^p

Notes:

- Freshwaters are those in which the salinity is equal to or less than 1 part per thousand 95% of the time, as set forth in Chapter 4 of the Basin Plan. Unless a site-specific objective has been adopted, these objectives shall apply to all freshwaters except for the South Bay south of Dumbarton Bridge, where the California Toxics Rule (CTR) applies. For waters in which the salinity is between 1 and 10 parts per thousand, the applicable objectives are the more stringent of the marine (Table 3-3) and freshwater objectives.
- Source: 40 CFR Part 131.38 (California Toxics Rule or CTR), May 18, 2000.
- These objectives for metals are expressed in terms of the dissolved fraction of the metal in the water column.
- These objectives are expressed as a function of the water-effect ratio (WER), which is a measure of the toxicity of a pollutant in site water divided by the same measure of the toxicity of the same pollutant in laboratory dilution water. ~~The 1-hr. and 4-day objectives = table value × WER.~~ The table values assume a WER equal to one.
- The objectives for cadmium ~~and other noted metals~~ are expressed in the total recoverable form by formulas where H = ln (hardness) as CaCO₃ in mg/l: The four-day average objective for cadmium is a WER times $e^{(0.7852H-3.490)}$. This is 1.1 µg/l at a hardness of 100 mg/l as CaCO₃. The one-hour average objective for cadmium is a WER times $e^{(1.128H-3.828)}$. This is 3.9 µg/l at a hardness of 100 mg/l as CaCO₃.
- Chromium III criteria were promulgated in the National Toxics Rule (NTR). The NTR criteria specifically apply to San Francisco Bay upstream to and including Suisun Bay and Sacramento-San Joaquin

Delta. Note: at the time of writing, the values are 180 ug/l (4-day average) and 550 ug/l (1-hr. average). The objectives for chromium III are based on hardness. The values in this footnote assume a hardness of 100 mg/l CaCO₃. At other hardnesses, the objectives must be calculated using the following formulas where H = ln (hardness): The 4-day average objective for chromium III is a WER times a conversion factor (CF) times $e^{(0.8190H+1.561)}$. The 1-hour average for chromium III is a WER times a CF times $e^{(0.8190H+3.688)}$. The CF (or "translator") adjusts the criterion expressed as the total recoverable fraction in the water column to an objective expressed as the dissolved fraction in the water column. If a site-specific CF is unavailable, the CTR CF (40 C.F.R. section 131.38(b)(2)(iv), "Table 2 to paragraph (b)(2) of this section") may be used.

- g. This objective may be met as total chromium.
- h. The objectives for copper are based on hardness. The table values assume a hardness of 100 mg/l CaCO₃. At other hardnesses, the objectives must be calculated using the following formulas where H = ln (hardness): The 4-day average objective for copper is a WER times a CF times $e^{(0.8545H-1.702)}$. The 1-hour average for copper is a WER times a CF times $e^{(0.9422H-1.700)}$. If a site-specific CF is unavailable, the CTR CF may be used.
- i. Cyanide criteria were promulgated in the National Toxics Rule (NTR). The NTR criteria specifically apply to San Francisco Bay upstream to and including Suisun Bay and Sacramento-San Joaquin Delta. Note: at the time of writing, the values are 5.2 ug/l (4-day average) and 22 ug/l (1-hr. average).
- j. The objectives for lead are based on hardness. The table values assume a hardness of 100 mg/l CaCO₃. At other hardnesses, the objectives must be calculated using the following formulas where H = ln (hardness): The 4-day average objective is a WER times a CF times $e^{(1.273H-4.705)}$. The 1-hour average for lead is a WER times a CF times $e^{(1.273H-1.460)}$. If a site-specific CF is unavailable, the CTR CF may be used.
- k. Source: U.S. EPA Quality Criteria for Water 1986 (EPA 440/5-86-001). The 1-hour average value continues to apply to waters specified in Table 3-4A. For inland surface waters other than those covered under Table 3-4A, refer to Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California — Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions (Statewide Mercury Provisions).
- l. The objectives for nickel are based on hardness. The table values assume a hardness of 100 mg/l CaCO₃. At other hardnesses, the objectives must be calculated using the following formulas where H = ln (hardness): The 4-day average objective is a WER times a CF times $e^{(0.8460H+0.0584)}$. The 1-hour average objective is a WER times a CF times $e^{(0.8460H+2.255)}$. If a site-specific CF is unavailable, the CTR CF may be used.
- m. Selenium criteria were promulgated for all San Francisco Bay/Delta waters in the National Toxics Rule (NTR). The NTR criteria specifically apply to San Francisco Bay upstream to and including Suisun Bay and Sacramento-San Joaquin Delta. Note: at the time of writing, the values are 5.0 ug/l (4-day average) and 20 ug/l (1-hr. average), expressed in the total recoverable form.
- n. The objective for silver is based on hardness. The table value assumes a hardness of 100 mg/l CaCO₃. At other hardnesses, the objective must be calculated using the following formula where H = ln (hardness): The 1-hour average objective for silver is a WER times a CF times $e^{(1.72H-6.52)}$. If a site-specific CF is unavailable, the CTR CF may be used. U.S. EPA has not developed a 4-day criterion.
- o. Tributyltin is a compound used as an antifouling ingredient in marine paints and toxic to aquatic life in low concentrations. U.S. EPA has published ~~draft~~ criteria for protection of aquatic life, Ambient Aquatic Life Water Quality Criteria for Tributyltin (TBT) – Final (EPA 822-R-03-031, December 2003) (Federal Register, December 27, 2002, Vol. 67, No. 249, Page 79090-79094). These criteria are cited for advisory purposes. ~~The draft criteria may be revised.~~
- p. The objectives for zinc are based on hardness. The table values assume a hardness of 100 mg/l CaCO₃. At other hardnesses, the objectives must be calculated using the following formulas where H = ln (hardness): The 4-day average objective for zinc is a WER times a CF times $e^{(0.8473H+0.884)}$. The 1-hour average for zinc is a WER times a CF times $e^{(0.8473H+0.884)}$. If a site-specific CF is unavailable, the CTR CF may be used.

2. Proposed Change to Section 4.6.1.2

4.6.1.2 Shallow Water Discharges

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However, dilution credit may be granted on a discharger-by-discharger and pollutant-by-pollutant basis. Dilution credits for priority pollutants shall be based on provisions of the "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bay, and Estuaries of California (SIP)." Dilution credits for non-priority pollutants may be based on the SIP or other applicable policies, regulations, or guidance. In making this determination, the Water Board will grant dilution credit on a pollutant-by-pollutant basis if the discharger demonstrates that an aggressive pretreatment and source control program is in place, including the following:

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3. Proposed Change to Section 4.7.2.2

4.7.2.2 Cyanide

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Effluent limits for shallow water dischargers that have been granted an exception to Basin Plan Prohibition 1 shall be based on the dilution credits set forth in Table 4-6. Alternatively, effluent limits for these shallow water dischargers may be based on updated dilution credits derived in accordance with the SIP requirements to account for water conservation or water recycling projects. ~~reflect changes in conditions of the discharge.~~ Setting forth dilution credits in Table 4-6 does not authorize discharges into shallow waters. Each discharger must continue to satisfy all requirements for an exception to Basin Plan Prohibition 1.

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4. Proposed Change to Section 7.2.2.6

7.2.2.6 Mercury TMDL Implementation

Municipal Wastewater

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Effluent mercury trigger concentrations for secondary treatment facilities are a daily maximum of 0.065 µg/L total mercury and monthly average of 0.041 µg/L total mercury. For advanced treatment facilities, effluent mercury trigger concentrations are a daily maximum of 0.021 µg/L total mercury and a monthly average of 0.011 µg/L total mercury. The Water Board may develop and implement alternative performance-based triggers on a discharger-by-discharger basis to account for water conservation or water recycling projects.

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Industrial Wastewater

... Includes an action plan and time schedule to correct and prevent trigger exceedances. Effluent mercury trigger concentrations are a daily maximum of 0.062 µg/L total mercury and monthly average of 0.037 µg/L total mercury. The Water Board may develop and implement alternative performance-based triggers on a discharger-by-discharger basis to account for water recycling projects or when there is material and substantial alteration or addition to the permitted facility.

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