

Appendix B

Proposed Basin Plan Amendment
(showing changes since August 18, 2006)

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Proposed Basin Plan Amendment

Amend the following language in Chapter 3 of the Basin Plan as follows:

Table 3-3: Marine^a Water Quality Objectives for Toxic Pollutants for Surface Waters (all values in µg/l)			
Compound	4-day Average	1-hr Average	24-hr Average
Arsenic ^{b, c, d}	36	69	
Cadmium ^{b, c, d}	9.3	42	
Chromium VI ^{b, c, d, e}	50	1100	
Copper ^{c, d, f}			
Cyanide ^g			
Lead ^{b, c, d}	8.1	210	
Mercury ^h	0.025	2.1	
Nickel ^{b, c, d}	8.2	74	
Selenium ⁱ			
Silver ^{b, c, d}		1.9	
Tributyltin ^j			
Zinc ^{b, c, d}	81	90	
PAHs ^k			15

Notes:

- a. Marine waters are those in which the salinity is equal to or greater than 10 parts 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 marine waters, 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 freshwater (Table 3-4) or marine objectives.
- b. Source: 40 CFR Part 131.38 (California Toxics Rule or CTR), May 18, 2000.
- c. These objectives for metals are expressed in terms of the dissolved fraction of the metal in the water column.
- d. According to the CTR, 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 X WER. The table values assume a WER equal to one.
- e. This objective may be met as total chromium.

- f. Water quality objectives for copper were promulgated by the CTR and may be updated by U.S. EPA without amending the Basin Plan. Note: at the time of writing, the values are 3.1 ug/l (4-day average) and 4.8 ug/l (1-hr. average). The most recent version of the CTR should be consulted before applying these values.
- g. Cyanide criteria were promulgated in the National Toxics Rule (NTR) (Note: at the time of writing, the values are 1.0 µg/l (4-day average) and 1.0 µg/l (1-hr. average) and apply, except that site-specific marine water quality objectives for cyanide have been adopted for San Francisco Bay as set forth in Table 3-3C.
- h. Source: U.S. EPA Ambient Water Quality Criteria for Mercury (1984).
- i. 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).
- j. 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 (Federal Register: December 27, 2002, Vol. 67, No. 249, Page 79090-79091). These criteria are cited for advisory purposes. The draft criteria may be revised.
- k. The 24-hour average aquatic life protection objective for total PAHs is retained from the 1995 Basin Plan. Source: U.S. EPA 1980.

Table 3-3C: Marine ^a Water Quality Objectives for Cyanide in San Francisco Bay ^b (values in µg/l)		
Cyanide	Chronic Objective (4-day Average)	2.9
Cyanide	Acute Objective (1-hour Average)	9.4

Notes:

- a. Marine waters are those in which the salinity is equal to or greater than 10 parts per thousand 95% of the time, as set forth in Chapter 4 of the Basin Plan. For waters in which the salinity is between 1 and 10 parts per thousand, the applicable objectives are the more stringent of the freshwater or marine objectives.
- b. Objectives apply to all segments of San Francisco Bay, including Sacramento/San Joaquin River Delta (within San Francisco Bay region), Suisun Bay, Carquinez Strait, San Pablo Bay, Central San Francisco Bay, Lower San Francisco Bay, and South San Francisco Bay.

Amend the following language in Chapter 4 of the Basin Plan as follows:

SITE-SPECIFIC OBJECTIVES

In some cases, the Water Board may elect to develop and adopt site-specific water quality objectives. These objectives will reflect site-specific conditions and comply with the Antidegradation Policy. This situation may arise when:

It is determined that promulgated water quality standards or objectives are not protective of beneficial uses; or

Site-specific conditions warrant less stringent effluent limits than those based on promulgated water quality standards or objectives, without compromising the beneficial uses of the receiving water.

In the above cases, the Water Board may consider developing and adopting site-specific water quality objectives for the constituent(s) of concern. These site-specific objectives will be developed to provide the same level of environmental protection as intended by national criteria, but will more accurately reflect local conditions. Such objectives are subject to approval by the State Board, Office of Administrative Law, and U.S. EPA.

There may be cases where the promulgated water quality standard or adopted objectives are practically not attainable in the receiving water due to existing high concentrations. In such circumstances, discharges shall not cause impairment of beneficial uses.

Site-specific objectives have been adopted by the Water Board for copper and nickel in Lower South San Francisco Bay, (Table 3-3A) and for cyanide in San Francisco Bay (Table 3-3C).

IMPLEMENTATION OF EFFLUENT LIMITATIONS

In incorporating and implementing effluent limitations in NPDES permits, the following general guidance shall apply:

(A) PERFORMANCE-BASED LIMITS

Where water quality objectives in the receiving water are being met, and an existing effluent limitation for a substance in a discharge is significantly lower than appropriate water quality-based limits, performance-based effluent limitations for that substance may be specified or the effluent limit revised. Any changes are subject to compliance with the state Antidegradation Policy. The performance-based effluent limitation may be either concentration- or mass-based, as appropriate.

(B) SITE-SPECIFIC OBJECTIVE INCORPORATION

Once the Water Board has adopted a site-specific objective for any substance, effluent limitations shall be calculated from that objective in accordance with the methodology in the “Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California” (SIP).

COPPER AND NICKEL IN LOWER SOUTH SAN FRANCISCO BAY

As part of the implementation plan for copper and nickel site-specific objectives, the municipal wastewater dischargers in Lower South San Francisco Bay shall have effluent limits for copper and nickel, derived from the site-specific objectives in Table 3-3A using SIP methodology. The Water Quality Attainment Strategy for copper and nickel in Lower South San Francisco Bay that implements these site-specific objectives is included in Chapter 7.

CYANIDE

Cyanide is present in low levels in all municipal wastewater effluents and most industrial wastewater effluents. Disinfection processes contribute to in-plant formation of cyanide. Therefore, cyanide in the effluent from municipal treatment plants is a combination of cyanide in the influent and cyanide produced during disinfection. Cyanide concentration spikes in the effluent, although rare, are generally caused by accidental high concentration discharges in the collection system.

As part of the implementation plan for marine site-specific objectives for cyanide, all municipal wastewater dischargers that discharge to any segment of San Francisco Bay including Sacramento/San Joaquin River Delta (within San Francisco Bay region), Suisun Bay, Carquinez Strait, San Pablo Bay, Central San Francisco Bay, Lower San Francisco Bay, and South San Francisco Bay shall have effluent limits for cyanide derived from the marine site-specific objectives in Table 3-3C, using the methodology in the SIP. Specifically, under Step 7 of the SIP methodology, effluent limits are necessary considering the nature of cyanide, its use in the disinfection process, and to promote achievement and ensure maintenance of the marine cyanide site-specific objectives.

Industrial wastewater dischargers to San Francisco Bay shall have effluent limits for cyanide derived from the marine site-specific objectives in Table 3-3C, using the methodology in the SIP. However, effluent limits shall not be required, under Step 7 of the SIP alone, where the industrial discharger demonstrates one of the following:

- Cyanide is not detected in its effluent, using a method with a detection limit of 1.0 µg/l
- It does not disinfect any portion of its effluent
- It otherwise demonstrates that cyanide is not used in its industrial process.

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 4-7. Setting forth dilution credits in Table 4-7 does not authorize discharges into shallow waters. Each discharger must continue to satisfy all requirements for an exception to Basin Plan Prohibition 1.

Table 4-7: Dilution Credits for Calculation of Cyanide Water Quality-Based Effluent Limits for Shallow Water Dischargers

Discharger	Discharge Location	Dilution Credit ^a
American Canyon	North Slough	3.25:1
Fairfield-Suisun	Boynton Slough	4.0:1
Hayward Marsh	Hayward Shoreline Regional Park Marsh Basin	3.25:1
Las Gallinas	Miller Creek	3.25:1
Mt. View SD	Peyton Slough	3.25:1
Napa SD	Napa River	3.25:1
Novato SD	San Pablo Bay	3.25:1
City of Palo Alto	Man-made-channel	3.25:1
City of Petaluma	Petaluma River	3.25:1
City of San Jose	Artesian Slough	3.250:1
Sonoma County Water Agency	Schell Slough	3.25:1
City of Sunnyvale	Moffett Channel	4.0:1
USS Posco	New York Slough	3.25:1

^a The dilution credit is expressed as the ratio of total parts mixed (effluent and receiving waters) to one part effluent.

Where cyanide effluent limits are included in an NPDES permit, the discharger shall be required to implement a monitoring and surveillance program. This program shall include influent and effluent monitoring and ambient monitoring in San Francisco Bay. Each discharger shall review sources of cyanide to its influent at least once every five years. Where potential cyanide contributors exist within a discharger's service area, the discharger shall implement a local program to prevent illicit discharges to the sewer system which, at a minimum, shall include inspecting potential contributor sites, developing and distributing educational materials and preparing emergency monitoring and response plans to be implemented if a significant cyanide discharge occurs. Additionally, if ambient monitoring shows cyanide concentrations of 1.0 µg/L or higher, the discharger shall undertake actions to determine and abate identified sources of cyanide in San Francisco Bay.