

Presented below are water quality standards that are in effect for Clean Water Act purposes.

EPA is posting these standards as a convenience to users and has made a reasonable effort to assure their accuracy. Additionally, EPA has made a reasonable effort to identify parts of the standards that are not approved, disapproved, or are otherwise not in effect for Clean Water Act purposes.

For Suisun Marsh, the following objectives shall apply:

DO Objectives	DO concentrations	Applicability
Acute objective	3.8 mg/l minimum (daily average)	Year-round in all sloughs and channels
Chronic objectives	5.0 mg/l minimum (30-day running average)	Year-round in all sloughs and channels
	6.4 mg/l minimum (30-day running average)	January 1 through April 30 in Montezuma, Nurse, and Denverton sloughs only

The following are non-substantive changes to the Water Quality Standards:

2.2 EXISTING AND POTENTIAL BENEFICIAL USES

2.2.1 SURFACE WATERS

Inland surface waters support or could support most of the beneficial uses described above. The specific beneficial uses for inland streams include municipal and domestic supply (MUN), agricultural supply (AGR), commercial and sport fishing (COMM), freshwater replenishment (~~FRESH~~FRSH), industrial process supply (PROC), groundwater recharge (GWR), preservation of rare and endangered species (RARE), water contact recreation (REC1), noncontact water recreation (REC2), wildlife habitat (WILD), cold freshwater habitat (COLD), warm freshwater habitat (WARM), fish migration (MIGR), and fish spawning (SPWN).

2.2.2 GROUNDWATER

Existing and potential beneficial uses applicable to groundwater in the Region include municipal and domestic water supply (MUN), industrial ~~water~~service supply (IND), industrial process supply (PROC), agricultural water supply (AGR), groundwater recharge (GWR), and freshwater replenishment to surface waters (~~FRESH~~FRSH). Table 2-2 lists the 28 identified groundwater basins and seven sub-basins located in the Region and their existing and potential beneficial uses.

Table 2-3: Examples of Existing and Potential Beneficial Uses of Selected Wetlands

BENEFICIAL USE	TYPE OF WETLAND				
	MARINE	ESTUARINE	RIVERINE	LACUSTRINE	PALUSTRINE
AGR		0	0	0	0
COLD			0	0	0
COMM	0	0			
EST		0			
FRESH			0	0	0
GWR	0	0	0	0	0
IND		0	-	-	
MAR	0				
MIGR	0	0	0	0	
NAV	0	0	0	0	0
PROC					
REC-1	0	0	0	0	0
REC-2	0	0	0	0	0
SHELL	0	0	0		
SPWN	0	0	0	0	0
WARM			0	0	0
WILD	0	0	0	0	0
RARE	0	0	0	0	0

NOTE:

- 0 Existing beneficial use
- Potential beneficial use

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, l}			
Cyanide ^g			
Lead ^{b, c, d}	8.1	210	
Mercury ^h	0.025	2.1	
Nickel ^{b, c, d, l}	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) or as specified in note h (below). 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 µg/l (4-day average) and 4.8 µg/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). The 4-day average value for mercury does not apply to San Francisco Bay; instead, the water quality objectives

specified in Table 3-3B apply. The 1-hour average value continues to apply to San Francisco Bay.

- 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 µg/l (4-day average) and 20 µg/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 70000-70004). These criteria are cited for advisory purposes. The draft criteria may be revised. Ambient Aquatic Life Water Quality Criteria for Tributyltin (TBT) – Final (EPA 822-R-03-031, December 2003).~~
- k. The 24-hour average aquatic life protection objective for total PAHs is retained from the 1995 Basin Plan. Source: U.S. EPA 1980. The U.S. EPA (1980) Water Quality Criteria document indicates acute toxicity concentrations for salt water at or below 300 µg/l. An acute-to-chronic ratio of 20 yields an objective of 15 µg/l. Total PAHs are those compounds identified by EPA method 610.
- l. Table 3-3A contains site-specific water quality objectives for copper and nickel applicable to San Francisco Bay segments.

Table 3-3A: Water Quality Objectives for Copper and Nickel in San Francisco Bay Segments (µg/L)¹

Compound	4-day Average (CCC) ⁴²	1-hr Average (CMC) ⁴³	Extent of Applicability
Copper	6.9	10.8	The portion of Lower San Francisco Bay south of the line representing the Hayward Shoals shown on Figure 7.2.1-1. and South San Francisco Bay
Copper	6.0	9.4	The portion of the delta located in the San Francisco Bay Region, Suisun Bay, Carquinez Strait, San Pablo Bay, Central San Francisco Bay, and the portion of Lower San Francisco Bay north of the line representing the Hayward Shoals on Figure 7.2.1-1.
Nickel	11.9	62.4*	South San Francisco Bay

¹The Site-Specific Water Quality Objectives in this table already include the Water Effects Ratio appropriate for each San Francisco Bay segment. See Basin Plan Section 7.2.1.2 for information on translating the dissolved metal concentrations shown in this table to total metal concentrations, if required for NPDES permits.

⁴²Criteria Continuous Concentration

⁴³Criteria Maximum Concentration

*Handbook of Water Quality Standards, 2nd ed. 1994 in Section 3.7.6 states that the CMC = Final Acute/Value/2; 62.4 is the Final Acute Value (resident species database)/2; so the site-specific CMC is lower than the California Toxics Rule value because we are using the resident species database instead of the National Species Database.