CALFED Water Quality Targets for Parameters of Concern

Parameter	Sacramento River	San Joaquin River	Delta
Selenium	Water: 20 µg/l (1 hour maximum) [b,c] 5.0 µg/l (4 day average) [b,c] Tissue: [a] 4-12 ppm (fish, whole body, dry weight) 3-7 ppm (fish food items, food chain, dry weight) Human Health: [m] EPA is not promulgating human health criteria for this contaminant regarding consumption of water and organisms and organisms only. [m,n]	Water: [j] South of Merced River: 20 µg/l (1 hour maximum) [b,c] 5.0 µg/l (4 day average) [b,c] North of Merced River: 12 µg/l (maximum) [b,c] 5.0 µg/l (4 day average) [b,c] Tissue: [m] 4-12 ppm (fish, whole body, dry weight) 3-7 ppm (fish food items, food chain, dry weight) Human Health: [m] EPA is not promulgating human health criteria for this contaminant regarding consumption of water and organisms and organisms only. [m,n]	Water: East of Antioch Bridge: 20 µg/l (1 hour maximum) [b,c] 5.0 µg/l (4 day average) [b,c] West of Antioch Bridge: 20 µg/l (1 hour average) [b,c] 5.0 µg/l (4 day average) [b,c] Tissue: [m] 4-12 ppm (fish, whole body, dry weight) 3-7 ppm (fish food items, food chain, dry weight) Human Health: [m] EPA is not promulgating human health criteria for this contaminant regarding consumption of water and organisms and organisms only. [m,n]

Grasslands, etc., limits

Note:
Water quality targets have no regulatory meaning within the context of CALFED.

FEB-26-1998 15:02 415 744 1078 98% P.02
D-044810
D-044810

CALFED Water Quality Targets for Parameters of Concern

Parameter	Sacramento River	San Joaquin River	Delta
PCB's	Water: 0.014 µg/l (4 day average) [c] (each of 7 congeners) Sediment: [z] 50 ppm (dry weight, total) Tissue: [y] 0.5 µg/l (whole fish, wet weight, total) Human Health: [zz] 0.00017 µg/l (water and organisms) [ddd] 0.00017 µg/l (organisms only) [ddd]	Water: 0.014 µg/l (4 day average) [c] (each of 7 congeners) Sediment: [z] 50 ppm (dry weight, total) Tissue: [y] 0.5 µg/l (whole fish, wet weight, total) Human Health: [zz] 0.00017 µg/l (water and organisms) [ddd] 0.00017 µg/l (organisms only) [ddd]	Water: East of Antioch Bridge: 0.014 µg/l (4 day average) [c] (each of 7 congeners) West of Antioch Bridge: 0.014 µg/l (24 hour average) Sediment: [z] 50 ppm (dry weight, total) Tissue: [y] 0.5 µg/l (whole fish, wet weight, total) Human Health: [zz] 0.00017 µg/l (water and organisms) [ddd] 0.00017 µg/l (organisms only) [ddd]

(sum of congeners)

Note:
Water quality targets have no regulatory meaning within the context of CALFED.

FEB 26 '98 03:51PM US EPA SF
D-044811
D—044811

CALFED Water Quality Targets for Parameters of Concern

Parameter	Sacramento River	San Joaquin River	Delta
Chloride			Water: Agricultural Intakes: For surface irrigation:[1b] SAR: < 3 [cc] For sprinkle irrigation:[dd] < 3 me/l Drinking Water Intakes: 250 mg/l [ii,ff]; 150 mg/l[ii]
Nutrients (Nitrate)			Water: Agricultural Intakes: < 5.0 mg/l Drinking Water Intakes: 10 mg/l [ii]; no increase in nitrate levels[nn]
Salinity (EC_w)			Water: East of Antioch Bridge: West of Antioch Bridge: Agricultural Intakes: < 0.7 dS/m or mmho/cm [ee]
Salinity (EC)	Water: Knights Landing above Colusa Drain:[xx,yy] ≥ 230 mmho/cm (50 percentile) or ≥235 mmho/cm (90 percentile) I Street Bridge:[xx,yy] ≥240 mmho/cm (50 percentile) or ≥340 mmho/cm (90 percentile)	Water: Friant Dam to Gravelly Ford:[xx] ≥ 150 mmho/cm (90 percentile)	

Note:
Water quality targets have no regulatory meaning within the context of CALFED.

D-044812

FEB 26 '98 03:52PM US EPA SF P.5/7

CALFED Water Quality Targets for Parameters of Concern

Parameter	Sacramento River	San Joaquin River	Delta
SAR:EC_w[ff] relationship			Water: Agricultural Intakes: SAR EC_w 0 - 3 > 0.7 3 - 6 > 1.2 6 - 12 > 1.9 12 - 20 > 2.9 20 - 40 > 5.0
Salinity (TDS)	Water:	Water:	Water: East of Antioch Bridge: West of Antioch Bridge: Agricultural Intakes: < 450 mg/l Drinking Water Intakes: <220mg/L (10-yr avg); <440mg/L (monthly avg)[oc]
Dissolved Oxygen	Water: Keswick Dam to Hamilton City, June 1 to August 31: 9.0 mg/l[3/4] Below I Street Bridge: 7.0 mg/l[4]	Water: Between Turner Cut and Stockton, September 1 through November 30: 6.0 mg/l[4]	Water:[3] All Delta waters west of Antioch Bridge: 7000 µg/l (minimum)[4,a] All Delta waters: 5.0 mg/l[4,a]
Pathogens			Water: Drinking Water Intakes: no MCL standard[kk]; <1 oocyst/100L for *Giardia* and *Cryptosporidium*[mo]

See basin plan WQS

Note:
Water quality targets have no regulatory meaning within the context of CALFED.

D-044813

D-044813

CALFED Water Quality Targets for Parameters of Concern

Parameter	Sacramento River	San Joaquin River	Delta
Temperature	Water: Keswick Dam to Hamilton City: < 56° F [d,u] Hamilton City to I Street Bridge: < 68° F [d,u] I Street Bridge to Freeport: < 68°F [d,v] I Street Bridge to Freeport, January 1 through March 31:< 66°F [d,w]	Water: At Vernalis: < 68°F [d,v]	Water: West of Antioch Bridge: < 5°C increase above for receiving water designated as cold or warm freshwater habitat. [x] Alteration of temperature shall not adversely affect beneficial uses. [x] Agricultural Intakes:
Turbidity			Water: West of Antioch Bridge: No adverse effect or > 10 % change Drinking Water Intakes: 0.5 or 1.0 NTU [ll]; 50 NTU [qq] Agricultural Intakes:
Toxicity of Unknown Origin [t]			Water: West of Antioch Bridge: Acute- A median of not less than 90 % survival and a 90 percentile of not less than 70 % survival Chronic - no chronic toxicity in ambient waters

See basin plan WQS

[a] dissolved form
[b] total recoverable form
[c] The effects of these concentrations were measured by exposing test organisms to dissolved aqueous solutions of 40 mg/l hardness that had been filtered through a 0.45 micron membrane filter. Where deviations from 40 mg/l of water hardness occur, the objectives, in mg/l shall be determined using the following formulas:

$Cu = e^{(0.905/\ln hardness)} - 1.612 \times 10^{-3}$

$Zn = e^{(0.818/\ln hardness)} - 0.289 \times 10^{-3}$

$Cd = e^{(1.169/\ln hardness)} - 5.777 \times 10^{-3}$

[d] Central Valley Regional Water Quality Control Plan
[e] General EPA 304(a) guideline

Note:
Water quality targets have no regulatory meaning within the context of CALFED.

D-044814

D-044814