

Appendix B
Cadmium Delisting

Used in the Chollas Creek Metals Total Maximum Daily Loads

California Regional Water Quality Control Board, San Diego Region

Chollas Creek – Cadmium Delisting Hydrologic Subarea 908.22

SUMMARY OF ACTIONS

Non-consideration of dissolved cadmium for Total Maximum Daily Load (TMDL) and subsequent removal from the list of Water Quality Limited Segments [Clean Water Act (CWA) section 303(d)].

TMDL PRIORITY

Non-consideration.

LIST OF WATER QUALITY LIMITED SEGMENTS

Proposed delisting.

WATERSHED CHARACTERISTICS

Chollas Creek is an urban creek that runs through portions of San Diego, La Mesa, and Lemon Grove before emptying into San Diego Bay. Chollas Creek is designated with water contact recreation (REC-1) as a potential beneficial use as well as the following existing beneficial uses: non-contact water recreation (REC-2), warm freshwater habitat (WARM), and wildlife habitat (WILD). San Diego Bay is designated with the following beneficial uses: industrial service supply (IND), navigation (NAV), REC-1, REC-2, commercial and sport fishing (COMM), preservation for biological habitats of special significance (BIOL), estuarine habitat (EST), wildlife habitat (WILD), rare, threatened, or endangered species (RARE), marine habitat (MAR), migration of aquatic organisms (MIGR), and shellfish harvesting (SHELL) (Regional Board, 1994).

EVIDENCE OF NON-IMPAIRMENT

The available data suggests that concentrations of dissolved cadmium in Chollas Creek do not exceed acute or chronic California Toxics Rule (CTR) water quality criteria. Most samples were below detection limits, though some of the detection limit concentrations exceed CTR acute and chronic criteria. Since cadmium does not appear to exceed dissolved CTR criteria, and was not found to cause toxicity in test organisms, it is not considered an agent for the impairment of designated beneficial uses. Based on this evidence, removal of the pollutant/water body combination of cadmium and Chollas Creek from the List of Water Quality Limited Segments will be recommended by the California Regional Water Quality Control Board, San Diego Region (Regional Board).

The United States Environmental Protection Agency (USEPA) has recommended a more stringent dissolved cadmium criteria (USEPA, 2001) that it hopes California will incorporate in to the CTR by 2008. These criteria are approximately ten-fold more stringent than current CTR criteria, and may be exceeded in Chollas Creek. The available cadmium data appears to support inclusion on subsequent Water Quality Limited Segments lists based on this more stringent recommended criteria. When CTR is updated to incorporate these criteria, the Regional Board will re-evaluate the potential listing of Chollas Creek for cadmium.

As shown in the Table D.1 below, with a total of 54 samples collected and analyzed between February 2000 and February 2004, no (0 percent) exceedances of the CTR for dissolved cadmium were recorded.

Table D.1 - Summary of Sampling Evidence for Delisting

CADMIUM							No. of exceedances (CTR)		No. of exceedances (USEPA, 2001)	
Collection Dates	Organization	n	min	max	mean	median	CMC	CCC	CMC	CCC
Feb 94 - Feb 03	MS4 Copermittees	42	0.2 ^a	3.93 ^b	0.8 ^c	0.5 ^c	0 ^d (4)	0 ^d (4)	0 ^d (4)	3 ^d (4)
Feb 00 - Apr 00	CalTrans	4	0.2 ^a	0.3	0.2 ^c	0.2 ^c	NA ^e	NA ^e	NA ^e	NA ^e
Mar 99 - Apr 99	SCCWRP	3	< 0.3	< 2.0	< 2.0	< 2.0	NA ^f	NA ^f	NA ^f	NA ^f
Jun 91 & Mar 92	Regional Board	5	1.0 ^a	< 1.0	0.5 ^c	0.5 ^c	NA ^f	NA ^f	NA ^f	NA ^f

a. Sample below Reporting Limit.

b. Calculated from total concentration.

c. Using all samples (measured dissolved and calculated from total). Samples below detection limit entered as 1/2 detection limit for calculations.

d. Considering only measured dissolved concentrations and samples not below DL or RL. (Number in parenthesis represents available sample pool under these criteria).

e. No associated hardness values available.

f. All samples reported as "less than."

Applying the listing policy (SWRCB, 2004) to the available cadmium data confirms that cadmium should be delisted (Table D.2). In applying the policy, total metal data and metals data without associated hardness were not considered. As seen in the table, when and if the CTR is updated to include the new cadmium criteria from the USEPA, it may be necessary to re-list cadmium. At that future time, additional data should be available to evaluate the concentrations of cadmium in the creek. Until then and in accordance with the listing policy, cadmium should be removed from the current list of water quality limited segments during the next list update.

Table D.2 - 303(d) Listing Summary

	CTR		USEPA, 2001	
	CMC	CCC	CMC	CCC
No. of samples appropriate for 303(d) listing consideration	47	42	41	19
No. of exceedances	0	1	3	13
List Decision	delist	delist	delist	list

EXTENT OF NON-IMPAIRMENT

Major branches of the contributing watershed were sampled as well as the main channel. The exact locations and descriptions are as follows:

- A. **Main Chollas Channel** - Station Name SD8(1). (Longitude: 117 07.2995 Latitude: 32 42.2914) North Fork, south of Imperial Avenue. This station is located in a concrete-lined

section of the creek at the end of the 3300 block of Durant Street, near the intersection of 33rd Street, in the City of San Diego.

- B. **Wabash Avenue Branch of the Main Chollas Channel** - Station Name SD8(2). (Longitude: 117 07.1140 Latitude: 32 43.0917) North Fork, located just north of the State Highway 94 and Interstate-15 Interchange.
- C. **Home Avenue Branch of Main Chollas Channel** - Station Name SD8(3). (Longitude: 117 06.6055 Latitude: 32 43.1619) Located next to the San Diego Police Department canine training field and the Police Pistol Range and is downstream from residential areas. This area tends to remain wet year-round as a result of irrigation runoff from upstream residential areas. This portion of the creek is channelized, but has a natural bottom.
- D. **South Chollas Creek at 38th Street** - Station Name SD8(4). Located in Chollas Creek at the 38th Street Bridge, just north of Beta Street and several blocks east of Interstate 5. The station is located in a channelized portion of the creek and has a natural bottom. It is approximately 4 blocks upstream of the confluence with the north fork of Chollas Creek. This station is located within a designated open space area and the wetland water quality study area for the Chollas Creek Enhancement Project.
- E. **Federal Boulevard Branch of South Chollas Creek** - Station Name SD8(5). (Longitude: 117 04.1844 Latitude: 32 43.6324) Located in Chollas Creek at the 38th Street Bridge, just north of Beta Street and several blocks east of Interstate 5. The station is located in a channelized portion of the creek and has a natural bottom. It is approximately 4 blocks upstream of the confluence with the north fork of Chollas Creek. This station is located within a designated open space area and the wetland water quality study area for the Chollas Creek Enhancement Project.
- F. **Jamacha Road Branch of South Chollas Creek** - Station Name SD8(6). (Longitude: 117 02.9650 Latitude: 32 42.6029) Located just south of Jamacha Road at the 69th Street crossing of South Chollas Creek. The station is located just downstream from Lemon Grove and upstream of designated open space. The station is along a natural portion of the creek within a residential area and is typically wet all year long.

Based on the locations and results of the samples, non-impairment of dissolved cadmium can be determined. Data from all stations indicates that the entire watershed is free from dissolved cadmium impairment.

INFORMATION SOURCES

Regional Board, 1994. *Water Quality Control Plan for the San Diego Basin (9), 1994*. California Regional Water Quality Control Board, San Diego Region.

USEPA, 2001. *2001 Update of Ambient Water Quality Criteria for Cadmium, 2001*. United States Environmental Protection Agency, EPA-822-R-01-001.

SWRCB, 2004. *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List, 2004*. State Water Resources Control Board, September 2004.