THE CITY OF SAN DIEGO

May 12, 2005

HAND DELIVERY

Mr. Jimmy Smith, Environmental Scientist
San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Dear Mr. Smith:

Subject: Total Maximum Daily Load (TMDL) for Copper, Lead and Zinc in the Chollas Creek Watershed and the associated Amendment to the Water Quality Control Plan for the San Diego Region
Proposed Resolution No. R9-2005-0111

The City of San Diego is committed to protecting and improving the water quality of our beaches, bays, and watersheds. We have thoroughly reviewed the technical report and associated documentation posted on the Regional Water Quality Control Board (RWQCB) website about this issue. This letter provides the City's enclosed written comments on the proposed TMDL including a list of questions regarding the Technical Report.

The City understands the concentration limits proposed by the RWQCB for each of the metals are taken from the California Toxics Rule that was approved by the US Environmental Protection Agency (EPA) on May 18, 2000. These standards are proposed to protect the aquatic life in the creek. These limits will require the City and others to reduce concentrations of dissolved copper by 88.5%, dissolved lead by 98.7% and dissolved zinc by 77.4%. Achieving reductions of this magnitude will be a challenge for the following reasons.

Major pollutant sources are controlled by State and Federal regulations. Studies have shown that automobile emissions (from air deposition) are a significant source of metals in storm water. Automobile emissions are regulated by the State Air Resources Control Board. Automobile tires are a major source of zinc and automobile brake pads are a major source of copper. Reduction of metals from their sources is beyond the control of the City. The EPA regulates these materials under the Toxic Substance Control Act. It will take a long time working collaboratively with others (such as the Brake Pad Partnership) to advocate for changes to currently accepted industry standards.

Wet weather flows move rapidly into Chollas Creek due to the urban landscape and steep slopes. The majority of these metals move through the creek during rain events as cited in the Technical

Report on Page 32 "Wet weather comprises at least 99.7 percent of the total load for each metal." The collection and treatment of wet weather flows before they reach the creek will not be easy to accomplish. There is limited open space available near the storm drain outfalls to equalize or detain storm flows for treatment.

Treatment technology does not currently exist that removes metals down to the targeted concentrations. It is our understanding based upon research funded by Caltrans that removal efficiency levels are not great enough to ensure metal reductions of the magnitude needed to comply with the proposed TMDL. It will take time to pilot this technology to meet this mandate.

Removal Efficiency of Various Treatment Systems (%)*

BMP	*Copper*	*Lead*	*Zinc*
Austin Sand Filter	58	39	17
Storm Water Management zeolite/perlite canister system	50	45	41
Wet Ponds where there is at least one week detention time	58	85	60

* Caltrans BMP Retrofit Pilot Program Final Report, January 2004

Implementation of a capital improvement program as a result of this TMDL will potentially cost the City millions of dollars. The City has not yet conducted a planning study in order to determine how many treatment systems will be required and the estimated cost associated with those systems. However, Development and Redevelopment Handbooks published by the California Stormwater Quality Association (CASQA) includes BMP cost information. This handbook states that the "typical" construction cost for a 100 acre-foot wet pond facility is $1,170,000, noting that the actual construction cost depends on the specific site. Furthermore, the handbook notes that Caltrans spent $448,000 for a 0.8 acre wet pond, which is located at Interstate 5 at La Costa Boulevard, as cited in the Caltrans BMP Retrofit Pilot Program Final Report. Needless to say, many BMP locations will be required within the Chollas Creek watershed to comply with this TMDL with the San Diego's land values, the costs to construct these BMPs in the Chollas Creek watershed would be well above the average.

The proposed seven (7) year time period to achieve the targeted concentration limits is simply unrealistic. The proposed 50% reduction in three years is equally unrealistic. The compliance schedule stipulates decreasing limits down to the targeted concentration level at the end of the seven (7) years. To achieve reductions will take time in order to coordinate with other stakeholders, review the available best management practices (BMPs), find potential BMPs locations, go through the required California Environmental Quality Act review process, project design and project construction. The City estimates that it would need at least six (6) years to coordinate with the communities in order to begin implementation of a water quality program of this magnitude.

Based upon the above information, the City of San Diego proposes a phased approach to this issue. The first phase of the two years would consist of the City performing the sampling and technical alternatives review necessary to develop a plan for proposal to the RWQCB. The second phase of 16 years would consist of implementing the proposed plan. A timeline of eighteen years is reasonable given the complexity of the possible solutions and provides adequate time to plan, permit, design and construct a water quality capital improvement program for the Chollas Creek watershed. The challenge of reducing the concentration of dissolved metals in storm water is being recognized elsewhere in the State. For example, the Los Angeles Regional Water Quality Control Board is currently proposing a range of 13 to 18 years for their various metals TMDLs allowing for a variety of compliance approaches to be pursued.

The City of San Diego has taken steps to improve the water quality of Chollas Creek. Our actions to improve water quality in Chollas Creek include providing public outreach about pesticide use, restoring sites in the creek returning it to its natural state and function, sponsoring creek clean up events, and coordinating water quality data and information management into a centralized system that makes information available to the public through a website.

The City of San Diego is concerned that this project's CEQA review is inadequate. The City Attorney's Office may submit separate comments regarding the CEQA review by May 25, 2005.

If you have any questions or require more information, please don't hesitate to contact Storm Water Specialist Ruth Kolb at (619) 525-8636.

Sincerely,

for

Karen Henry
Deputy Director

KH\rk

Enclosure: List of Questions and Concerns about the Technical Report

cc: Scott Tulloch, Metropolitan Wastewater Director
Tim Miller, Deputy City Attorney
Ruth Kolb, Storm Water Specialist

City of San Diego
Storm Water Pollution Prevention Division
Technical Questions and Concerns regarding the
Draft Chollas Creek Metals TMDL Technical Report

Executive Summary
Pg.3: the TMDL is for all upstream tributaries of the creek
This is beyond what is listed in the 303d list.

Pg 13: WER of unity
Please define this term

Page 13: Although the Federal Register provides good reason why this should not be a concern, an explicit MOS was applied in this TMDL to address this possibility.
What is the basis for the explicit MOS if the Federal Register does not support?

Pg 14: a value of 400 mg/L will be used for hardness no matter what the extend of the exceedance.
What is the basis of this limiting factor? When City of San Diego Storm Water Pollution Prevention Division staff was performing permit required Dry Weather Monitoring the average hardness valve for 2003 was 987.4 and 785 in 2003.

Questions and Concerns regarding the Draft Technical Report

Pg 1: …all upstream tributaries to this section are considered in this TMDL?
This is beyond what is listed in the 303d list.

Pg 2: Significant sources of all three metals to urban runoff are thought to include automobile operations (especially brake pads and tires)….
The Air Resources Control Board needs to be involved where auto emissions impact water quality. Why doesn't EPA enforce the Toxic Substance Control Act 15 USCA Section 2601(b) to protect the environment from toxic substances as was the Congressional intent stated in 15 USCA Section 2601(c).

Pg 7: By the end of the seventh year after the OAL approval of this TMDL, the waste load allocations shall be met.
Please explain why 7 years was chosen when many of these sources are outside of our control?

Pg 11: Potential BMPs are mentioned without regard to economic analysis.

Pg 12: Efforts should first be aimed at source control and then at treatment control since treatment control BMPs have a greater potential for adverse environmental impacts. The Air Resources Control Board needs to be involved where auto emissions impact water quality because they are the responsible California EPA agency. Why doesn't EPA enforce the Toxic Substance Control Act (TSCA) 15 USCA Section 2601(b) to protect the environment from toxic substances as was the Congressional intent stated in 15 USCA Section 2601(c). The best place to "control the sources" is if they are part of the formulation and EPA has the authority under TSCA.

Pg 28: 5.1 Urban Runoff Regulation in Chollas Creek Watershed
This section only mentions the regional municipal permit, where's discussion of Caltrans and the US Navy permits?

Pg 32: wet weather comprises at least 99.7 percent of the total load for each metal. Why then on page D-22 was the dry weather creek flow estimated at 2.28 CFS – over 1,000 gallons per minute? Why was the dry weather model design a "steady-state" calibuted for flow?

Pg 37: Table 5.5
What was the number of samples used?

Pg 40 and 41: Tables 5.7 – 5.9
Review of the Santa Clara Valley information shows that 59.5% to 73.7% of the pollutants come from automobiles. How will ARB and EPA through TSAC become involved in this process?

Pg 47: 5.4.5.3 …copper plumbing corrosion in residential homes seems to add a relatively significant amount of copper, 130ug/L to 170 ug/L to the potable water supply. It seems that this TMDL is placing the burden of other programs on the MS4 permits implementors.

Pg 55: Not allowing for this interaction makes the TMDL concentration more conservative.
If the WLA is 90% and the implicit MOS has a safety factor of 2; why cannot we be given some consideration for not having ion exchange because we are not in an area of acid rain?

Pg 58: A flow based approach was used for the Chollas Creek Metals TMDL, and defines critical conditions solely based on freshwater flows rates regardless of the season. This appears to be in conflict will the statement on Pg 18, 3.2 first paragraph *"Extended periods with no surface flows occur during dry weather, although pools of standing water may be present."*

Pg 66: The Municipal Dischargers and Caltrans are responsible to meeting the WLAs in the urban runoff prior to discharge to Chollas Creek…
Where's the US Navy?

Pg 70: the header states "Municipal Dischargers and the Navy".... Text states "Municipal Dischargers and Caltrans"... there is a conflict here.

Pg 79: In order to comply with this TMDL project, emphasis should be placed on BMPs the remove pollutants from runoff.
How will the Air Resources Control Board to be involved where auto emissions impact water quality because they are the responsible California EPA agency. Why doesn't EPA enforce the Toxic Substance Control Act (TSCA) 15 USCA Section 2601(b) to protect the environment from toxic substances as was the Congressional intent stated in 15 USCA Section 2601(c). The best place to "control the sources" is if they are part of the formulation and EPA has the authority under TSCA.

Pg 84 the Regional Board must consider the economic costs of the methods of compliance in this Analysis. The proposed Basin Plan amendment does not include new WQOs but implements existing objectives to protect beneficial uses. The Regional Board is therefore not required to do a formal cost-benefit analysis.
This appears to be in conflict.

Pg D-6: 1.2 Critical Conditions: critical points
Please identify where these "criteria points" are located.

Pg D-8: 2.2 Dry and Wet Weather Critical Flow Conditions: The dry weather critical flow condition was based on predictions of steady-state flows, which were derived through modeling analysis of average dry weather flows in the San Diego region.
This is in conflict with statements on Pg 18, 3.2. Watershed Characteristics: Chollas Creek is an urban creek with highly variable flows. The highest flow rates are associated with storm events. Extended periods with no surface flows occur during dry weather, although pools of standing water may be present.

Pg D-10: 2.4 Model Assumptions/Limitations
What was the number of data points used to prepare the model assumptions?

Pg D-11: Hydrologic Modeling Parameters: These parameters are assumed to be representative of the hydrology of the Chollas Creek watershed, which is presently ungauged and therefore unverified.
This is in conflict with statements on Pg 18, 3.2. Watershed Characteristics: Chollas Creek is an urban creek with highly variable flows. The highest flow rates are associated with storm events. Extended periods with no surface flows occur during dry weather, although pools of standing water may be present. It appears as if the watershed characteristics are known and were discounted.

Pg D-13: The dry weather model was used to estimate the flow rates of urban runoff in the Chollas Creek watershed.
This is in conflict with statements on Pg 18, 3.2. Watershed Characteristics: Chollas Creek is an urban creek with highly variable flows. The highest flow rates are associated

with storm events. Extended periods with no surface flows occur during dry weather, although pools of standing water may be present. It appears as if the watershed characteristics are known and were discounted.

Pg D-15: 3.1.2 Channel Geometry: .... all flow less that 15 cfs was assumed to represent dry weather flow conditions.
This is in conflict with statements on Pg 18, 3.2. Watershed Characteristics: Chollas Creek is an urban creek with highly variable flows. The highest flow rates are associated with storm events. Extended periods with no surface flows occur during dry weather, although pools of standing water may be present. It appears as if the watershed characteristics are known and were discounted.

Pg D-15: 3.1.3 Steady-State Mass Balance Overview: This predictive model represents the stream network as a series of plug-flow reactors, each reactor having a constant, steady state flow a pollutant load.
This is in conflict with statements on Pg 18, 3.2. Watershed Characteristics: Chollas Creek is an urban creek with highly variable flows. The highest flow rates are associated with storm events. Extended periods with no surface flows occur during dry weather, although pools of standing water may be present. It appears as if the watershed characteristics are known and were discounted.

Pg D-17: Model segments are assumed to be well-mixed laterally and vertically at a steady-state condition (constant flow input).
This is in conflict with statements on Pg 18, 3.2. Watershed Characteristics: Chollas Creek is an urban creek with highly variable flows. The highest flow rates are associated with storm events. Extended periods with no surface flows occur during dry weather, although pools of standing water may be present. It appears as if the watershed characteristics are known and were discounted.

Pg D-20: 3.2.2 San Diego Regional Hydrologic Model Calibration and Validation Results: The goal of calibration was to minimize the differences between observed flow and modeled flow at each calibration station location.
How do you calibrate it when the Chollas Creek watershed characteristic is no flow during the dry weather? See page 18, Section 3.2 in this document.

Pg D-22: The resulting overall dry weather flow rate for Chollas Creek was 2.28 cfs. There is currently only one observed flow value available for comparison with the San Diego regional hydrologic model flow results: a flow measurement of 1.0 cfs was recorded at the in-stream dry weather flow dry sample location DW298.
Please provide information on this flow data. DW298 is a City of San Diego station and our records disagree this statement.

Pg D-42: the validation results also showed a good fit between modeled flow rates and observed flow rates, thus confirming the applicability of the calibrated hydrologic parameters to the San Diego region.

Disagree that this is applicable to Chollas Creek Watershed. Refer to measured daily average flow table in Appendix F and statement on Pg F-23 that there is a 47% difference.

Pg G-2: percent reductions table – should be included in the technical report too.