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September 14, 2009

Ms. Cynthia Gorham-Test
California Regional Water Quality Control Board San Diego Region
9174 Sky Park Court, Ste. 100
San Diego, CA 92123-4340

RE: Clean Water Act Sections 305(b) and 303(d) Integrated Report for the San Diego Region Draft Final Staff Report August 2009

Dear Ms. Gorham-Test:

OC Public Works (OCPW) is pleased to provide comments on the Clean Water Act Sections 305(b) and 303(d) Integrated Report for the San Diego Region Draft Final Staff Report August 2009. We would like to commend you on completing this important and extensive data evaluation program. After a thorough review of the report, fact sheets and data provided on the web site, the following comments are offered:

1. The report states "In the 2008 303(d) listing cycle, previously defined shorelines have been split into smaller coastal segments. These segments are now represented as an estimated size of 50 yards (25 yards either side of the sample station location). The 50 yard representation is based on recommendations from the Beach Water Quality Workgroup and are estimates that can be modified if additional monitoring or TMDL work identify more or less of an impacted area." In previous listing cycles, single sampling locations were used to list larger segments of coastline. This change in approach creates inconsistencies with historic listings and current de-listing evaluations. A summary of the proposed changes and inconsistencies observed in shorelines segments is presented in Table 1 below.

   To remain consistent with historic listings, two solutions are recommended:
   a. Revise the historic listings to be consistent with the new policy regarding coastal shoreline segments. Historically listed coastal segments should be redefined as the 25 yards on either side of the sample station location; or
   b. In the context of de-listing sites for indicator bacteria, data from monitoring locations should be applied to the same coastal segment that was used in the original listing.

   Failure to remain consistent with the historic data sampling point and coastal segment pairings will result in a significant and arbitrary increase in sampling efforts if shoreline sampling must be increased to every 50 yards for historically listed segments to meet delisting requirements.

September 14, 2009
Ms. Cynthia Gorham Test

Table 1
Pacific Ocean Shoreline Segments
2006 303(d) Listings vs. Proposed 2008 303(d) Listing Segments

	2006 303(d) List Segment	2008 303(d) Listing Cycle Segment	Station Name	Decision	Inconsistencies
San Joaquin Hills HSA					
Pacific Ocean Shoreline, San Joaquin Hills HSA	at Cameo Cove at Irvine Cove Dr./Riviera Way, Heisler Park-North	at Emerald Bay Beach	OLB10	DELIST – TC, FC, ENT	Cameo Cove at Irvine Cove Dr. is not the same location as Emerald Bay Beach. There are no monitoring locations in Cameo Cove so it appears that this segment was incorrectly described previously.
		at Heisler Park North	OLB05	DELIST – TC, FC, ENT	2006 303(d) list GIS layer incorrectly maps the location of this segment.
Laguna Beach HSA					
Pacific Ocean Shoreline, Laguna Beach HSA	at Main Laguna Beach, Laguna Beach at Ocean Avenue, Laguna Beach at Laguna Avenue, Laguna Beach at Cleo Street, Arch Cove at Bluebird Canyon Road, Laguna Beach at Dumond Drive.	at Main Beach	OLB00	DELIST – TC, FC, ENT	Main Beach segment is Delist, but status of nearby Ocean Ave. segment is not provided.
		at Laguna Hotel	S16	DO NOT LIST – TC, FC, ENT	Decision was Do Not List but segment was already listed in 2006 as at Laguna Ave. Decision should be Delist.
		at Cleo Street	CLEO	NO DECISION – Continue listing Indicator Bacteria	Remains listed for Indicator Bacteria as a group rather than divided into three indicators like other segments. No decision was made despite that considerable additional data are available.
		at Bluebird Canyon	S15	DELIST – TC, FC, ENT	
		at Lagunita Place	S14	DELIST – TC, FC, ENT	Was previously described as part of the Aliso HSA. Status of nearby Dumond Dr. listed segment is not provided.
Aliso HSA					
Pacific Ocean Shoreline, Aliso HAS	at Laguna Beach at Lagunita Place / Blue Lagoon Place, Aliso Beach.	at Blue Lagoon	S13	DELIST - TC, FC, ENT	
		at Aliso Beach - North	S10	DELIST – TC, FC, ENT	
		at Aliso Creek mouth	C1	DO NOT DELIST – TC, FC, ENT	Samples have not been collected at station OCHCA C1 since 2006. OCPW Station ACM1 at the Aliso Creek mouth

					has considerable additional data that can be used for assessment.
		at Aliso Beach middle	S9	DO NOT DELIST – TC DELIST – FC, ENT	
Dana Point HSA					
Pacific Ocean Shoreline, Dana Point HSA	at Aliso Beach at West Street, Aliso Beach at Table Rock Drive, 1000 Steps Beach at Pacific Coast Hwy (Hospital, 9th Ave), Salt Creek (large outlet), Salt Creek Beach at Salt Creek service road, Salt Creek Beach at Dana Strand Road, and Monarch Beach.	at Aliso Beach - south	S8	DELIST – TC, FC, ENT	When compared to 2006 303(d) list GIS layer it appears to be a new listed segment. Decision should be Do Not List.
		at Camel Point	S7	DO NOT LIST – TC, FC, ENT	Decision was Do Not List but segment was already listed in 2006. Decision should be Delist.
		at West Street	WEST	NO DECISION – continue listing Indicator Bacteria	
		at Table Rock Drive	S6	DELIST – TC, FC, ENT	
		at Laguna Lido	S5	DO NOT LIST – TC, FC, ENT	Decision was Do Not List but segment was already listed in 2006. Decision should be Delist.
		at Thousand Steps	S4	DELIST – TC, FC, ENT	
		at Salt Creek outlet at Monarch Beach	OSL25	DO NOT DELIST – TC DELIST – FC, ENT	
		at Salt Creek outlet at Salt Creek Service Road	S2	DELIST – TC, FC, ENT	
		at Dana Strands Surfzone at Dana Strands Road	S1	DELIST – TC, FC, ENT	
Lower San Juan HSA					
Pacific Ocean Shoreline, Lower San Juan HSA	at North Beach Creek, San Juan Creek (large outlet), Capistrano Beach, South Capistrano Beach at Beach Road.	at North Beach Creek	DSB5	DO NOT DELIST – TC, ENT DELIST – FC	
		, at San Juan Creek	SJC1	DO NOT DELIST – TC, FC, ENT	
		at North Doheny State Park Campground	DSB4	LIST – TC, FC, ENT	Segment was already listed in 2006. Decision should be Do Not Delist.
		Pacific Ocean at South Doheny State Park Campground	DSB1	LIST – TC, FC, ENT	When compared to 2006 303(d) list GIS layer it appears to be a new listed segment.
		,at South	CSBMP1	DO NOT	2006 303(d) list GIS

		Capistrano County Beach		DELIST – TC, FC, ENT	layer incorrectly maps the location of this segment.
		,at South Capistrano Beach at Beach Road	CSBBR1	DO NOT DELIST – TC, FC, ENT	2006 303(d) list GIS layer incorrectly maps the location of this segment.
San Clemente HA					
Pacific Ocean Shoreline, San Clemente HA	at Poche Beach (large outlet), Ole Hanson Beach Club Beach at Pico Drain, San Clemente City Beach at El Portal St. Stairs, San Clemente City Beach at Mariposa St., San Clemente City Beach at Linda Lane, San Clemente City Beach at South Linda Lane, San Clemente City Beach at Lifeguard Headquarters, Under San Clemente Municipal Pier, San Clemente City Beach at Trafalgar Canyon (Trafalgar Ln.), San Clemente State Beach at Riviera Beach, San Clemente State Beach at Cypress Shores.	at Poche Beach	S-15	DO NOT DELIST – TC, FC, ENT	
		at Poche Beach near the intersection of Camino Capistrano and PCH	POCHE	LIST – TC, FC, ENT	Segment was already listed in 2006. Decision should be Do Not Delist. Station is only a few hundred feet south of S-15.
		at South Poche Beach at Capistrano Shores	SCCS52	DO NOT LIST – TC, FC, ENT	
		at Capistrano Shores at North Ole Hanson Beach	SCCS17	DELIST – TC, FC, ENT	
		at San Clemente City Beach, North Beach	S-17	LIST – TC DO NOT LIST – FC, ENT	Was previously listed in 2006. Decision should be Do Not Delist TC and Delist FC, ENT.
		at San Clemente City Beach at Mariposa Lane	MARIPO	DELIST – TC, FC, ENT	
		at San Clemente City Beach at Linda Lane	LINDAL	DELIST – TC, FC, ENT	
		San Clemente City Beach at Lifeguard Headquarters	?	NO DECISION – continue listing Indicator Bacteria	San Clemente City Beach 450 ft North of Pier appears to be same location.
		San Clemente City Beach 450 ft North of Pier	S-19	DO NOT LIST – TC, FC, ENT	Was previously listed in 2006. Decision should be Delist. Appears to be the same location as at Lifeguard Headquarters.
		San Clemente City Beach at Pier	PIER	DELIST – TC, FC DO NOT DELIST - ENT	See Item 5 below.
		San Clemente City Beach at Trafalgar St. Beach	OSC01	DO NOT LIST – TC, FC, ENT	
		San Clemente City Beach at Trafalgar Canyon outlet	TRFCYN	DELIST – TC, FC, ENT	
		San Clemente City Beach at South Trafalgar	LADERA	DELIST – TC, FC, ENT	

		St. Beach			
		San Clemente City Beach at Riviera Beach	RIVERA	DELIST – TC, FC, ENT	
		San Clemente State Beach, Projection of Avenida Calafia	S-21	DO NOT LIST – TC, FC, ENT	Was previously listed in 2006. Decision should be Delist.
		San Clemente City Beach at Projection of Las Palmeras	S-23	DO NOT LIST – TC, FC, ENT	Was previously listed in 2006. Decision should be Delist.

2. While several proposed indicator bacteria listings and de-listings are now specific to the type of indicator (enterococcus, fecal coliform, total coliform), other proposed listings are still for the general category of indicator bacteria (see proposed listings for Aliso Creek, Pacific Ocean Shoreline, Dana Point HSA at Aliso Beach at West Street; Pacific Ocean Shoreline, Laguna Beach HSA at Laguna Beach at Cleo; Pacific Ocean Shoreline, San Clemente HSA at San Clemente City Beach at Lifeguard Station Headquarters). All listings should be specific to the type of indicator, and historical listings should be corrected to reflect the specific indicator exceeded at that location.

3. Several new proposed listings for indicator bacteria are within coastal segments that are already included in the Bacteria Impaired Waters TMDLs Project I for Beaches and Creeks (see listings for Pacific Ocean Shoreline, Lower San Juan HSA at North Doheny State Park Campground; Pacific Ocean Shoreline, San Clemente HSA at Poche Beach near the Intersection of Camino Capistrano and Pacific Coast Highway; Pacific Ocean Shoreline, San Clemente HSA at San Clemente City Beach, North Beach). Additional listings within an area already covered by a TMDL are unnecessary.

4. Clarification is needed whether the proposed listing for Pacific Ocean Shoreline, San Clemente HSA at Poche Beach near the Intersection of Camino Capistrano and Pacific Coast Highway is different from the current 2006 listing at Pacific Ocean Shoreline, San Clemente HSA at Poche Beach (large outlet). The Poche Creek outlet is located at Camino Capistrano and Pacific Coast Highway. These two locations and listings appear to be redundant.

5. The Do Not Delist decision for Pacific Ocean Shoreline, San Clemente HSA at San Clemente City Beach, San Clemente Pier is based on an erroneous data evaluation. The fact sheet reports 6 exceedances of the monthly enterococcus geomean standard in 32 total samples. A re-examination of the data cited (OCPW NPDES Coastal Storm Drain Outfall program PIER location 5/04-12/06) indicates 3 exceedances of the monthly enterococcus geomean standard in 32 total samples. The critieria for delisting is 5 exceedances for 31-36 total samples therefore this location should be delisted. Note that the OCPW NPDES monitoring at the PIER location includes weekly sampling in the surfzone at two locations, one 25 yards upcoast of the stormdrain outlet and one 25 yards downcoast of the stormdrain outlet. The results of both samplings were used in our calculations of the geomeans.

6. The data evaluated for the proposed English Canyon and San Juan Creek listings was for dissolved selenium. The California Toxics Rule (CTR) standard is for total recoverable selenium. To be consistent with CTR, total recoverable selenium needs to be measured and evaluated against this standard.

7. The link for Aliso Creek Selenium SWAMP 2007 data is invalid and the data was inaccessible.

8. Historic data should not be utilized for diazinon listings. In 2003 diazinon was banned by EPA for turf, lawn and outdoor application. The pesticide is no longer commercially available to the public. Additionally, diazinon breaks down quickly in the environment with a half-life of a few months or less. The proposed listing of Arroyo Trabuco is based on 6 exceedances of the diazinon criterion which occurred during the period from March 25, 1999 to February 23, 2000. This period included collection of 20 total samples on 9 separate days. Of these 20 samples, all four collected on April 6, 1999 exceeded the diazinon criterion. The fact sheet contains a link to the Department of Pesticide Regulation (DPR) study which contains the data for the assessment. This study includes data beyond the assessment period cited in the fact sheet. There were 14 additional samples collected during 10 days of sampling from March 27, 2000 to January 17, 2001. Of 14 samples, no exceedances of the criterion were observed.
9. The proposed listing of San Juan Creek for diazinon is based on an incorrect evaluation of the data. The fact sheet cites 2 exceedances of 17 total samples including those collect by SWAMP, OCPW NPDES, and DPR. An examination of the cited data showed no exceedances in 4 samples from the SWAMP program, no exceedances in the 5 samples from the OCPW program and 2 exceedances in the 26 samples collected in the DPR program (April 8, 1999 to January 17, 2001). Two exceedances in 35 samples do not meet the listing criteria for toxicants. To list the waterbody, 3 exceedances out of 25-36 total samples are required
10. The data citation for the proposed Dana Point Harbor toxicity listing is incorrect. The Regional Harbor Monitoring Program did not measure aquatic toxicity. The data cited comes from the SCCWRP report *Extent and Magnitude of Copper Contamination in Marinas of the San Diego Region, California*.
11. OCPW NPDES data has been utilized in an inconsistent manner in the 2008 listing process. In many cases the data (e.g. OCPW's bioassessment data for diazinon for Arroyo Trabuco) were not used, citing lack of Quality Assurance Project Plan, but the data was used for San Juan Creek and Prima Deshecha proposed listings. All of the OCPW NPDES data should be considered consistently in the listing process
12. The assessments of toxicity should not consolidate results from tests with different organisms or the results using different toxicity testing endpoints. For example, throughout the fact sheets the results of testing for *Ceriodaphnia* survival tests and *Selenastrum* growth are combined. The results for *Ceriodaphnia* survival and *Ceriodaphnia* reproduction are considered as one test although they are in fact two separate tests.

    The following is an example from which the recommendation was to list San Juan Creek for toxicity. The fact sheet states that 4 of 17 samples exceed the water quality objective for toxicity and that this ratio exceeds the allowable frequency. The cited data sources are SWAMP (stations 901SJSJC5 and 901SJSJC9, 10/02-5/03) and OCPW (stations SJC-74 and SJC-CC, 2003-2007). The following table shows the number exceedances of the toxicity testing criteria relative to the number of tests conducted.

Data Source	Cerio Surv	Cerio Repro	Sele gwth	Hyalella Surv sed	Hyalella gwth sed	Hyalella surv ag
SWAMP	0/8	0/8	2/4*	1/5	1/5	
OCPW	0/15*	0/15*	0/15*			0/15*

*The fact sheet cites 8 tests for *Selenastrum* growth when there were actually only four; it cites 9 samplings conducted by OCPW when there were 9 at SJC-74 and 8 at SJC-CC.

The fact sheet states that there were only 17 tests when there were in fact 90 separate tests. Only one type of testing (*Selenastrum* growth) shows a ratio that is beyond the allowable exceedance frequency. The *Selenastrum* growth test is generally used to assess the presence of aquatic herbicides while the tests with *Ceriodaphnia* and *Hyalella azteca* are used to assess the presence of pesticides. The toxicity listing process should be modified to be specific with respect to the suspected causes of the toxicity. This will enable the responsible parties to focus the efforts on the true causes of toxicity and prevent testing with other organisms so that delisting criteria can be met.

Thank you for the opportunity to provide comments on the 2006 proposed revisions to the California Clean Water Act Section 303(d) List. We look forward to working with the Regional Board in resolving these issues and producing an appropriate and comprehensive list of impaired water bodies in the San Diego Region. Please contact Amanda Carr at (714) 955-0650 if you have any questions regarding these comments.

Very truly yours,

Chris Crompton, Manager
Environmental Resources

cc:

City of Vista

September 14, 2009

Ms. Cynthia Gorham-Test
California Regional Water Quality Control Board,
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Subject: **Recommendations for Changes to the Clean Water Act Sections 305(b) and 303(d) Integrated Report for the San Diego Region, City of Vista Comments**

Dear Ms. Gorham-Test:

Thank you for the opportunity to comment on the 305(b) and 303(d) Integrated Report in support of the 2008 updates. The City supports the letter submitted by the County of San Diego on behalf of the Copermittees in regards to an extension for the public hearing and comment period. However, the City respectfully submits the following comments for your consideration. These comments are organized by water body and pollutant in the order they appear in the Proposed Changes to 2006 303(d) listing table.

Agua Hedionda Creek

1. Phosphorus/Total Nitrogen as N (new listings)
   Decision ID 16308/16309

Listings for Phosphorus and Total Nitrogen as N on the 303(d) list of impaired water body segments are inappropriate at this time. The listing is for impairment of the WARM beneficial use.

The criteria in the Water Quality Control Plan for the San Diego Basin (9) (Basin Plan) states that "water bodies shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths cause nuisance or adversely affect beneficial uses (RWQCB, 2007)." The Basin Plan then establishes goals for phosphorus and nitrogen. While recent water quality data for phosphorus and nitrogen may not meet the *goals*, there is no evidence to indicate that the present concentrations are stimulating growth to the point of nuisance or adversely affecting beneficial uses in Agua Hedionda Creek.

Furthermore, there is a considerable amount of research occurring at the present time which will help to assess nutrients, their impacts on specific water bodies, and develop nutrient numeric endpoint criteria. Data collected under the Lagoon Investigative Order 2006-0076 is currently being assessed by the Southern California Coastal Water

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Research Project (SCCWRP) team in an effort to develop appropriate nutrient numeric endpoint (NNE) criteria that will consider the actual effects of the nutrient loads on the water bodies. Other factors such as dissolved oxygen levels and biomass concentrations will be taken into account to determine what impacts are evident. This research is occurring at the request of the State of CA.

In the San Diego Copermittee's 2007-2008 Annual Urban Runoff Monitoring Report, an analysis was performed to determine the impacts of nutrients on conditions in the receiving waters. Data was collected during the 2007-2008 monitoring period under ambient conditions at the Mass Loading Station (MLS), Temporary Watershed Assessment Station (TWAS), and bioassessment station during fall 2007 and spring 2008, providing spatial and temporal data. The analysis used secondary indicators of nutrient induced eutrophication, as recommended in the NNE methodology (Tetratech 2006). The secondary indicators related to the WARM beneficial use benthic algal biomass, dissolved oxygen, and pH. Concentrations of benthic algal biomass, dissolved oxygen, and pH were within Risk Category I, Presumptive Unimpaired and supporting the WARM beneficial use. Future monitoring and NNE assessments will help to verify these initial findings. (Weston 2009)

Table 1 contains the data collected and NNE assessment findings for the WARM beneficial use in Agua Hedionda Creek (Weston 2009).

Table 1. Nutrient Numeric Endpoint Assessment, Agua Hedionda Creek

Secondary Indicators	Risk Category Boundary	WARM Beneficial Use Benchmarks	AHC MLS		AHC-MLS Risk Category Result*	AHC TWAS		AHC-TWAS Risk Category Result
			9/18/07-9/19/07	5/13/08-5/14/08		9/18/07-9/19/07	5/13/08-5/14/08	
Benthic Algal Biomass (mg chlorophyll-a/m²) maximum	I/II	150	-	55.9	I - Presumptive Unimpaired	-	125.6	I - Presumptive Unimpaired
	II/III	200	-			-	-	
Dissolved Oxygen (mg/l) Streams, mean of 7 daily minimums	I/II	6	-	12.4	I - Presumptive Unimpaired	-	7.3	I - Presumptive Unimpaired
	II/III	4	-	-		-	-	
pH maximum	I/II	9	7.73	8.49	I - Presumptive Unimpaired	7.93	8.01	I - Presumptive Unimpaired
	II/III	9.5	-	-		-	-	

*Beneficial Use Risk-Category I. Presumptive unimpaired (use is supported)
Beneficial Use Risk Category II. Potentially impaired (may require an impairment assessment)
Beneficial Use Risk Category III. Presumptive impaired (use is not supported or highly threatened)

Two of the four supporting Lines of Evidence (LOE) for each pollutant (LOE ID 26573, 26237), for the new listings cite biodiversity impacts, detected in benthic macro invertebrate surveys. While the benthic community does appear to be impacted throughout Southern California's streams, there is often no clear linkage to the cause of these impacts. Low Index of Biological Integrity (IBI) scores can be caused by a variety of factors that may be related to physical conditions (lack of substrate, scouring), chemical conditions, and/or toxicity. In most cases, over many years of stormwater monitoring performed by the San Diego Copermittees, the linkages between the benthic impacts and the other factors have not been clearly defined. In the case of nutrients, the linkage to benthic impacts is not apparent and therefore, the benthic impacts should not

be considered as lines of evidence supporting this listing. If this LOE is considered, references to documented linkages in Agua Hedionda Creek should be provided.

Based on the developing science, lack of observed nutrient related impacts upon initial NNE assessments, and lack of linkage in two of the four supporting LOE, this listing should be re-evaluated and removed. An option may be to include the nutrient listings on the 305(b) list, allowing for further evaluation of the actual impacts related to the nutrient levels in Agua Hedionda Creek as additional data becomes available.

Agua Hedionda Lagoon

1. Indicator Bacteria (delisting)
   Decision ID 6360

The City supports the Regional Board Staff's decision to delist Agua Hedionda Lagoon for indicator bacteria, based on data collected under the Lagoon Investigative Order 2006-0076.

2. Sedimentation/Siltation (delisting)
   Decision ID 6361

The City supports the Regional Board Staff's decision to delist Agua Hedionda Lagoon for sediment, based on the lack of data to support the original listings and the absence of a defined problem at the present time.

Buena Creek

1. Phosphorus/Total Nitrogen as N (new listings)
   Decision ID 16363/16364

Listings for Phosphorus and Total Nitrogen as N on the 303(d) list of impaired water body segments are inappropriate at this time. The listing is for impairment of the WARM beneficial use.

The criteria in the Water Quality Control Plan for the San Diego Basin (9) (Basin Plan) states that "water bodies shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths cause nuisance or adversely affect beneficial uses (RWQCB, 2007)." The Basin Plan then establishes goals for phosphorus and nitrogen. While recent water quality data for phosphorus and nitrogen may not meet the *goals*, there is no evidence to indicate that the present concentrations are stimulating growth to the point of nuisance or adversely affecting beneficial uses in Buena Creek.

Furthermore, there is a considerable amount of research occurring at the present time which will help to assess nutrients, their impacts on specific water bodies, and develop nutrient numeric endpoint criteria. Data collected under the Lagoon Investigative Order 2006-0076 is currently being assessed by the Southern California Coastal Water Research Project (SCCWRP) team in an effort to develop appropriate nutrient numeric endpoint (NNE) criteria that will consider the actual effects of the nutrient loads on the water bodies. Other factors such as dissolved oxygen levels and biomass concentrations will be taken into account to determine what impacts are evident. This research is occurring at the request of the State of CA.

Buena Creek is an upstream tributary to Agua Hedionda Creek. While no specific NNE assessments have been performed at this time, the lack of apparent impacts downstream in Agua Hedionda Creek, as presented above, demonstrate that the nutrients present in Buena Creek do not appear to be causing nuisance or adversely impacting beneficial uses downstream.

The only supporting LOE (LOE ID 6540) is based on concentrations of nutrients alone and the impacts on the water quality have not been demonstrated. Based on the developing science and lack of observed nutrient related impacts in the creek itself, this listing should be re-evaluated and removed.

Buena Vista Creek

1. Dissolved Selenium (new listing)
   Decision ID 16374

Section 3 of the listing policy requires that "in developing the list, the state shall evaluate all existing readily available water quality-related data and information." The policy is also based on a weight of evidence approach as described in Section 1.

Under Order 2007-0001, the San Diego Copermittees have collected water quality data related to Selenium (Se) under ambient and storm conditions at the Temporary Watershed Assessment Station (TWAS) on Buena Vista Creek. This data was collected during the fall, winter, and spring of 2007 and is the most recent Se data available. The samples collected were flow weighted composite samples and are representative of conditions in the creek. All samples analyzed for Dissolved Se were within the establish standard of 5.0 ug/L as referenced in the fact sheet. Table 2 contains the data collected.

Table 2. San Diego Copermittee Selenium Data, Buena Vista Creek

Buena Vista Creek TWAS	Units	Benchmark	Ambient		Storm	
			9/18/07-9/19/07	5/13/08-5/14/08	11/30/08	2/3/08
Dissolved Se	ug/l	5.0	0.9	1.9	0.4	0.3

Decision ID 16374 in the Fact Sheet states that there are three LOE available that support the decision to list. However, LOE 6549 is the only LOE presented. This LOE describes data collected under the Surface Waters Ambient Monitoring Program (SWAMP). The data used to support this listing was collected in 2002. One of the four samples presented was flagged as estimated and noted to be non-compliant with the Quality Assurance Project Plan (QAPP) for the study. Each sample was collected as a grab sample, representative only of the conditions in the water column at the time and location of the sample. Furthermore, the SWAMP data is then compared to a CTR Freshwater Chronic water quality objective. It is inappropriate to compare data from a grab sample to a chronic objective. The chronic objective should be used to evaluate conditions over time at the location and should only be compared to composite samples, i.e. samples collected over a continuous period of time based on flow conditions in the creek. Because of the comparison of the SWAMP data to an inappropriate standard, this single LOE should be excluded from the evaluation.

Given that the Copermittee data collected presented above was collected recently, was obtained from flow weighted composite samples, and is representative of both ambient

and storm conditions, this LOE is strong in demonstrating that there is no impairment caused by Se in Buena Vista Creek.

For these reasons, the City requests a reevaluation of the proposed listing and the removal of Se from the proposed 303(d) list.

Loma Alta Creek

1. Dissolved Selenium (new listing)
   Decision ID 16516

Section 3 of the listing policy requires that "in developing the list, the state shall evaluate all existing readily available water quality-related data and information." The policy is also based on a weight of evidence approach as described in Section 1.

Under Order 2007-0001, the San Diego Copermittees have collected water quality data related to Selenium (Se) under ambient and storm conditions at the Temporary Watershed Assessment Station (TWAS) on Loma Alta Creek. This data was collected during the fall, winter, and spring of 2007 and is the most recent Se data available. The samples collected were flow weighted composite samples and are representative of conditions in the creek. All samples analyzed for Dissolved Se were within the establish standard of 5.0 ug/L as referenced in the fact sheet. Table 3 contains the data collected.

Table 3. San Diego Copermittee Selenium Data, Loma Alta Creek

Loma Alta Creek TWAS	Units	Benchmark	Ambient		Storm	
			9/18/07-9/19/07	5/13/08-5/14/08	11/30/08	2/3/08
Dissolved Se	ug/l	5.0	0.7	1.2	0.2	0.3

Decision ID 16516 in the Fact Sheet presents only one LOE (8875) to support the decision to list the creek for dissolved Se. This LOE describes data collected under the Surface Waters Ambient Monitoring Program (SWAMP). The data used to support this listing was collected in 2002. Each sample was collected as a grab sample, representative only of the conditions in the water column at the time and location of the sample. Furthermore, the SWAMP data is then compared to a CTR Freshwater Chronic water quality objective. It is inappropriate to compare data from a grab sample to a chronic objective. The chronic objective should be used to evaluate conditions over time at the location and should only be compared to composite samples, i.e. samples collected over a continuous period of time based on flow conditions in the creek. Because of the comparison of the SWAMP data to an inappropriate standard, this single LOE should be excluded from the evaluation.

Given that the Copermittee data collected presented above was collected recently, was obtained from flow weighted composite samples, and is representative of both ambient and storm conditions, this LOE is strong in demonstrating that there is no impairment caused by Se in Loma Alta Creek.

For these reasons, the City requests a reevaluation of the proposed listing and the removal of Se from the proposed 303(d) list.

San Luis Rey River

1. Phosphorus/Total Nitrogen as N (new listings)
   Decision ID 17070/17072

Listings for Phosphorus and Total Nitrogen as N on the 303(d) list of impaired water body segments are inappropriate at this time. The listing is for impairment of the WARM beneficial use.

The criteria in the Water Quality Control Plan for the San Diego Basin (9) (Basin Plan) states that "water bodies shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths cause nuisance or adversely affect beneficial uses (RWQCB, 2007)." The Basin Plan then establishes goals for phosphorus and nitrogen. While recent water quality data for phosphorus and nitrogen may not meet the *goals*, there is no evidence to indicate that the present concentrations are stimulating growth to the point of nuisance or adversely affecting beneficial uses in the San Luis Rey River.

Furthermore, there is a considerable amount of research occurring at the present time which will help to assess nutrients, their impacts on specific water bodies, and develop nutrient numeric endpoint criteria. Data collected under the Lagoon Investigative Order 2006-0076 is currently being assessed by the Southern California Coastal Water Research Project (SCCWRP) team in an effort to develop appropriate nutrient numeric endpoint (NNE) criteria that will consider the actual effects of the nutrient loads on the water bodies. Other factors such as dissolved oxygen levels and biomass concentrations will be taken into account to determine what impacts are evident. This research is being conducted for the State of CA.

In the San Diego Copermittee's 2007-2008 Annual Urban Runoff Monitoring Report, an analysis was performed to determine the impacts of nutrients on conditions in the receiving waters. Data was collected during the 2007-2008 monitoring period under ambient conditions at the Mass Loading Station (MLS), Temporary Watershed Assessment Station (TWAS), and bioassessment station during fall 2007 and spring 2008, providing spatial and temporal data. The analysis used secondary indicators of nutrient induced eutrophication, as recommended in the NNE methodology (Tetratech 2006). The secondary indicators related to the WARM beneficial use benthic algal biomass, dissolved oxygen, and pH. Concentrations of benthic algal biomass, dissolved oxygen, and pH were within Risk Category I, Presumptive Unimpaired and supporting the WARM beneficial use. Future monitoring and NNE assessments will help to verify these initial findings. (Weston 2009)

Table 4 contains the data collected and NNE assessment findings for the WARM beneficial use in the San Luis Rey River (Weston 2009).

Table 4. Nutrient Numeric Endpoint Assessment, San Luis Rey River

Secondary Indicators	Risk Category Boundary	WARM Beneficial Use Benchmarks	SLR MLS		AHC-MLS Risk Category Result*	SLR TWAS		AHC-TWAS Risk Category Result
			9/18/07-9/19/07	5/13/08-5/14/08		9/18/07-9/19/07	5/13/08-5/14/08	
Benthic Algal Biomass (mg chlorophyll-a/m^2) maximum	I/II	150		15.4	I - Presumptive Unimpaired		7.3	I - Presumptive Unimpaired
	II/III	200						
Dissolved Oxygen (mg/l) Streams, mean of 7 daily minimums	I/II	6		7.2	I - Presumptive Unimpaired		7.7	I - Presumptive Unimpaired
	II/III	4						
pH maximum	I/II	9	7.74	7.87	I - Presumptive Unimpaired	7.42	7.68	I - Presumptive Unimpaired
	II/III	9.5						

*Beneficial Use Risk-Category I. Presumptive unimpaired (use is supported)
Beneficial Use Risk Category II. Potentially impaired (may require an impairment assessment)
Beneficial Use Risk Category III. Presumptive impaired (use is not supported or highly threatened)

A supporting Line of Evidence (LOE), LOE ID 27028, for the new listings cite biodiversity impacts, detected in benthic macro invertebrate surveys. While the benthic community does appear to be impacted throughout Southern California's streams, there is often no clear linkage to the cause of these impacts. Low Index of Biological Integrity (IBI) scores can be caused by a variety of factors that may be related to physical conditions (lack of substrate, scouring), chemical conditions, and/or toxicity. In most cases, over many years of stormwater monitoring performed by the San Diego Copermittees, the linkages between the benthic impacts and the other factors have not been clearly defined. In the case of nutrients, the linkage to benthic impacts is not apparent and therefore, the benthic impacts should not be considered as lines of evidence supporting this listing. If this LOE is considered, references to documented linkages in the San Luis Rey River should be provided.

Based on the developing science, lack of observed nutrient related impacts upon initial NNE assessments, and lack of linkage in the supporting LOE, this listing should be re-evaluated and removed. An option may be to include the nutrient listings on the 305(b) list, allowing for further evaluation of the actual impacts related to the nutrient levels in the San Luis Rey River as additional data becomes available.

2. Dissolved Selenium (new listing)
   Decision ID 17071

Section 3 of the listing policy requires that "in developing the list, the state shall evaluate all existing readily available water quality-related data and information." The policy is also based on a weight of evidence approach as described in Section 1.

Under Order 2007-0001, the San Diego Copermittees have collected water quality data related to Selenium (Se) under ambient and storm conditions at the Mass Loading Stations (MLS) and Temporary Watershed Assessment Stations (TWAS) on the San Luis Rey River. The storm event data has been collected since 2001 and covers 20 discrete storm events. The ambient data was added under this Order and samples were collected at both stations during the fall of 2007 and spring of 2008. All samples

collected were flow weighted composite samples and are representative of conditions in the creek. This set of data provides spatial coverage of conditions in the watershed, with the addition of the TWAS. The data set also provides a good temporal representation, as samples have been collected for several years over varying conditions and seasonality.

Storm event samples were collected over a period of seven storm seasons from 2001-02 to 2007-08, for three storms per year, with the exception of the 2007-08 season which monitored two storm events. The majority of the data collected was below detection limits for both total and dissolved Se. Of the data for dissolved Se, there were no exceedances of the CTR Freshwater Chronic Criteria of 5.0 ug/L, see Table 5.

Table 5. San Diego Copermittee Selenium Data, Storm Events, San Luis Rey River

Storm Event	Dissolved Se (ug/L)
11/29/01	<0.002
2/17/02	<0.002
3/17/02	<0.002
11/8/02	<0.004
2/11/03	<0.004
2/25/03	<0.004
11/12/03	<0.005
2/2/04	<0.005
2/18/04	<0.005
10/27/04	<0.005
2/11/05	<0.005
2/18/05	<0.005
10/17/05	<0.005
12/31/05	<0.004
2/19/06	<0.005
10/14/06	<0.004
1/31/07	<0.004
2/19/07	<0.004
11/30/07	0.2
11/30/07	0.5
2/4/08	0.5
2/4/2008	0.6

Table 6 contains summary statistics for the storm event data. Where non-detect values were present, ½ the detection limit was used for the analysis.

Table 6. Summary Statistics for Storm Event Data, San Luis Rey River

n	22
Non-detects	18
Mean	1.764
Max	2.5
Min	0.2
Exceedances	0

Order 2007-0001 requires monitoring at the MLS and TWAS stations during ambient conditions as well. These data collected at the San Luis Rey River MLS and TWAS stations are presented below in Table 7. All samples were well below the CTR Freshwater Chronic Criteria for Se.

Table 7. San Diego Copermittee Se Data, Ambient Conditions, San Luis Rey River

SLR	Units	Benchmark	Ambient			
			MLS	TWAS	MLS	TWAS
			9/18/07-9/19/07	9/18/07-9/19/07	5/13/08-5/14/08	5/13/08-5/14/08
Dissolved Se	ug/l	5.0	0.4	0.5	0.7	0.6

Decision ID 17071 in the Fact Sheet presents only one LOE (21182) to support the decision to list the creek for dissolved Se. This LOE describes data collected under Surface Waters Ambient Monitoring Program (SWAMP). The data used to support this listing was collected in 2004 and 2005. Each sample was collected as a grab sample, representative only of the conditions in the water column at the time and location of the sample. Furthermore, the SWAMP data is then compared to a CTR Freshwater Chronic water quality objective. It is inappropriate to compare data from a grab sample to a chronic objective. The chronic objective should be used to evaluate conditions over time at the location and should only be compared to composite samples, i.e. samples collected over a continuous period of time based on flow conditions in the creek. Because of the comparison of the SWAMP data to an inappropriate standard, this single LOE should be excluded from the evaluation. Additionally, one of the three samples that exceeded the water quality objective was flagged as estimated and out of compliance with the QAPP.

Given that the Copermittee data collected presented above was collected recently, was obtained from flow weighted composite samples, and is representative of both ambient and storm conditions, this LOE is strong in demonstrating that there is no impairment caused by Se in the San Luis Rey River. For these reasons, the City requests a reevaluation of the proposed listing and the removal of Se from the proposed 303(d) list.

Please contact me at (760) 726-1340 x1373 with any questions concerning these comments.

Sincerely,

Paul Hartman
Stormwater Program Manager

References:

Regional Water Quality Control Board. 1994, with amendments effective prior to April 25, 2007. Water Quality Control Plan for the San Diego Basin.

Tetratech. 2006. Technical Approach to Develop Nutrient Numeric Endpoints for California. Report Prepared for: US EPA Region IX, California State Water Resource Control Board; Planning and Standards Implementation Unit. July 2006.

Weston Solutions. 2009. San Diego County Municipal Copermittees 2007-2008 Urban Runoff Monitoring Report. January 2009.

cc: Rita L. Geldert, City Manager
Lawrence Pierce, Director of Engineering
Sudi Shoja, Assistant Director of Engineering

September 14, 2009

John R. Odermatt, M.Sc., PG
Senior Engineering Geologist
Water Quality Restoration and Standards Branch - TMDL Unit
California Regional Water Quality
Control Board - San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123

RE: Comments on the 2008 Draft 303(d) List

Dear Mr. Odermatt:

On behalf of the City of Carlsbad (City), please accept the information contained in this letter as formal comment to the 2008 draft 3003(d) list currently posted on your website at http://www.waterboards.ca.gov/sandiego/water_issues/programs/303d_list/index.shtml. Thank you for the opportunity to submit comments and we look forward to your thorough review. Due to the short time allowed for comments, and the City's current focus on preparing the JURMP Annual Report as required by Order No. R9-2007-0001, please consider these only partial comments with more to follow prior to the adoption hearing date.

The City specifically appreciates the efforts of the Regional Water Quality Control Board staff, and supports the decision to delist the following water bodies:

- Agua Hedionda Lagoon – indicator bacteria, sedimentation/siltation: based on seven lines of evidence being considered in the assessment of bacteria as a contaminant, with the data demonstrating that applicable water quality standards are being achieved, and for sediment based upon the weight of evidence presented in the fact sheet.
- Pacific Ocean Shoreline, Buena Vista Creek HA at Buena Vista Lagoon Outlet – enterococcus, fecal coliform, total coliform: based on data presented in the City's delisting application submitted January 31, 2006.
- Pacific Ocean Shoreline, Buena Vista Creek HA, at Carlsbad State Beach at Carlsbad Village – enterococcus, fecal coliform, total coliform: based on data submitted in the City's delisting application submitted January 31, 2006.
- Pacific Ocean Shoreline, Buena Vista Creek HA, at Carlsbad State Beach at Pine Ave. – enterococcus, fecal coliform, total coliform: based on data submitted in the City's delisting application submitted January 31, 2006.

The remaining comments are related to the formal listing of water bodies.

Escondido Creek
Matrix = water
Contaminant = DDT, enterococcus, fecal coliform, selenium, sulfates, total nitrogen as N, toxicity
Comments: Two lines of evidence (LOEs) are listed for the DDT listing. However, LOE #6231 should not be included because it states the number of sample exceedances may not be determined because a detection limit was used that was above the criteria (CTR) being used to determine such exceedances.

The listing for selenium references three LOEs. The first LOE (#3231) references 8 exceedances for selenium out of 15 samples taken in 2002. The second LOEs (#3230) indicates there was no exceedance associated with one sample taken in 1998. Of significance is that LOE #6246 indicates there were no exceedances for selenium out of 18 samples taken between 2003 and 2005. These later data indicate selenium may no longer be a contaminant in this water body.

The second line of the *Weight of Evidence* section of the Supporting Information for sulfates states there are three LOEs available in the administrative record to assess this pollutant. However, only two LOEs (#3243 and 3244) are presented. In addition, the water quality objectives used for finding exceedances and therefore listing sulfates at this location are secondary drinking water standards. Escondido Creek is not used as a municipal domestic drinking water source therefore secondary drinking water standards are an incorrect standard to apply for finding exceedances.

The listing for total Nitrogen as N states three LOEs are available in the administrative record to assess this pollutant. However, a total of five are presented.

The listing for toxicity states four LOEs are available in the administrative record to assess this pollutant. However, a total of five are presented.

The listing for enterococcus and fecal coliform are based on exceedances of water quality objectives from the Water Contact Recreation (REC-1) beneficial use. To our knowledge, Escondido Creek is not used for contact recreation, therefore the REC-1 standard is not an applicable standard to use. The San Diego Basin Plan defines REC-1 water body one that "…*includes uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible,. These uses include, but are not limited to, swimming, wading, water-skiing, skiing and SCUBA diving, surfing, white-water activities, fishing or use of natural hot springs."*

Loma Alta Creek
Matrix = water
Contaminant = selenium and toxicity
Comment: The listing for toxicity states three LOEs are available in the administrative record to assess this pollutant. However, a total of four are presented.

We have no comment on selenium at this time.

Agua Hedionda Creek
Matrix = water
Contaminant = enterococcus, fecal coliform,
Comments: The listing for enterococcus and fecal coliform are based on exceedances of water quality objectives from the Water Contact Recreation (REC-1) beneficial use. To our knowledge, Agua

Hedionda Creek is not used for contact recreation, therefore the REC-1 standard is not an applicable standard to use.

Thank you again for the opportunity to comment on this draft document. We appreciate the amount of work that your agency is doing to help protect water quality in our region. If you have any questions or need further clarification, please do not hesitate to contact me at 760.602.7582.

Best regards,

Elaine M. Lukey, MS, CPEA
Environmental Programs Manager, City of Carlsbad

CC: Jim Elliott, Deputy City Manager, City of Carlsbad
Glenn Pruim, Director Public Works, City of Carlsbad
Linda Kermott, Public Works Manager, City of Carlsbad

City of Carlsbad
Storm Water Protection Program

September 14, 2009

John R. Odermatt, M.Sc., PG
Senior Engineering Geologist
Water Quality Restoration and Standards Branch - TMDL Unit
California Regional Water Quality
Control Board - San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123

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Agua Hedionda Creek
Matrix = water
Contaminant = enterococcus, fecal coliform
Comments: The listing for enterococcus and fecal coliform are based on exceedances of water quality objectives from the Water Contact Recreation (REC-1) beneficial use. To our

knowledge, Agua Hedionda Creek is not used for contact recreation, therefore the REC-1 standard is not an applicable standard to use.

Thank you again for the opportunity to comment on this draft document. We appreciate the amount of work that your agency is doing to help protect water quality in our region. If you have any questions or need further clarification, please do not hesitate to contact me at 760.602.7582.

Best regards,

Elaine M. Lukey, MS, CPEA
Environmental Programs Manager, City of Carlsbad

CC: Jim Elliott, Deputy City Manager, City of Carlsbad
Glenn Pruim, Director Public Works, City of Carlsbad
Linda Kermott, Public Works Manager, City of Carlsbad

County of San Diego

LAND USE AND ENVIRONMENT GROUP

CHANDRA L. WALLAR
DEPUTY CHIEF ADMINISTRATIVE OFFICER

1600 Pacific Highway, Room 212, San Diego, CA 92101
(619) 531-6256
Fax: (619) 531-5476

September 10, 2009

Cynthia Gorham-Test
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

RE: Integrated Report for the San Diego Region: Comments on Draft Section 305(b) and 303(a)

Dear Ms. Gorham-Test:

Thank you for the opportunity to comment on the draft Section 305(b) and 303(d) Integrated Report for the San Diego Region. On behalf of the San Diego Municipal Stormwater Copermittees, I am writing to request an extension of the public comment period and a postponement of the public hearing on this matter. The 303(d) list of impaired water bodies is of critical importance to this region, not only because it sets the stage for future development of total maximum daily loads (TMDLs), but also because it influences how the Copermittees implement many elements of their Jurisdictional and Watershed Urban Runoff Management Programs (URMPs). For example, inspection frequencies and post-construction BMP selection are in many cases determined by the proximity of sites to 303(d)-listed water bodies. Water quality monitoring and watershed management requirements are also directly impacted by 303(d) impairments.

According to the *Notice of Filing and Notice of Public Hearing* issued by your office on August 31, 2009, public comments submitted after September 14, 2009, will not receive a written staff response prior to the public hearing. Two weeks is an insufficient amount of time to conduct a thoughtful and well-reasoned review of a proposed 303(d) list update. Moreover, this coincides with a period in which Copermittees are already heavily burdened with the completion of JURMP annual compliance reports for fiscal year 2008-2009 (which are due on September 30, 2009) and making preparations for the start of the rainy season, which begins October 1, 2009. Given the large number of proposed revised listings (162) and de-listings (116), the significant amount of data provided to support each decision and the need to compare listing decisions to the relatively new guidelines provided in the *Water Quality Control Policy for Developing*

California's Clean Water Act Section 303(d) List, more time is needed to conduct an adequate review of the Integrated Report. It would be of great benefit to the Copermittees, the Regional Water Quality Control Board, and other interested parties to ensure that all significant issues are addressed during the written comment period, and that a staff response to them is prepared with adequate time for public review prior to the hearing. This will ensure a smoother public process and decrease the likelihood that significant new issues will be raised during public testimony.

For the reasons stated above, Copermittees respectfully request that both the written comment period and the public hearing be postponed a minimum of 30 days each. Thank you for your consideration of this request. If you have any questions regarding this request, please contact Todd Snyder, San Diego County Department of Public Works' (DPW) Watershed Protection Program Planning Manager, at (858) 694-3482 or email at Todd.Snyder@sdcounty.ca.gov. Please feel free to contact me, as well, at (619) 531-6256.

Respectfully,

Chandra Wallar

CHANDRA L. WALLAR, Deputy Chief Administrative Officer
Land Use and Environment Group

CLW:cw

cc via email: John L. Snyder, Director, DPW
Richard E. Crompton, Assistant Director, DPW
Cid Tesoro, Watershed Protection Program Manager, DPW
Todd Snyder, Watershed Planning Manager, DPW

Public Works
201 Mata Way
San Marcos, CA 92069-2918

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Web: www.San-Marcos.net

September 21, 2009

Ms. Cynthia Gorham – Test
California Regional Water Quality Control Board
San Diego Region
9174Sky park Court , Suite 100
San Diego, CA 92123-4340

SUBMITTED VIA E-MAIL TO: CTest@waterboards.ca.gov

RE: Recommendations for Changes to the Clean Water Act Sections 305(B) and 303(D) Integrated Report For the San Diego Region – Letter of Support for Agua Hedionda Lagoon De-Listing for Bacteria and Sedimentation

Dear Ms. Gorham – Test:

The City of San Marcos supports the proposed Final Listing Decision for the Agua Hedionda Lagoon for Indicator Bacteria and Sedimentation/Siltation as proposed changes to the 2006 303(d) listing. The following summarizes the lines of evidence for these proposed delistings:

- **Indicator Bacteria:**
  The City of San Marcos supports the recommendation to delist Agua Hedionda Lagoon for indicator bacteria, as the water body meets the water quality standard established for this pollutant. Seven lines of evidence were considered in the assessment of this pollutant-water body combination and the data demonstrate that applicable water quality standards are being achieved.

- **Sedimentation/Siltation:**
  The City of San Marcos supports the recommendation to delist Agua Hedionda Lagoon for sedimentation/siltation based upon the weight of evidence presented in the fact sheet.

The City of San Marcos appreciates the opportunity to provide comments in advance of the October 14, 2009 , public hearing.

Sincerely,

Erica Ryan
City of San Marcos
Stormwater Program Manager
eryan@san-marcos.net
760-744-1050-x 3218

County of San Diego

DEPARTMENT OF PUBLIC WORKS

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RICHARD E. CROMPTON
ASSISTANT DIRECTOR

September 14, 2009

Cynthia Gorham-Test
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Dear Ms. Gorham-Test,

Thank you for the opportunity to comment on the Draft Section 305(b) and 303(d) Integrated Report for the San Diego region. This report is of critical importance to the County, not only because it sets the stage for future development of total maximum daily loads (TMDLs), but also because it influences how the County implements many elements of its Jurisdictional and Watershed Urban Runoff Management Programs (JURMPs). The following are mostly technical comments related to: 1) the quality of data used to determine listing decisions, or 2) conformance with the State Water Resources Control Board's *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List* ("Policy").

GENERAL COMMENTS

1. Information about individual sample controls was not included in the on-line SWAMP database. For example, percent minimum significant difference (pMSD) bounds cannot be calculated because the replicate control results have not been made available in the online SWAMP database. These data are important for verifying the quality of individual test results.

2. Section 6.1.4 of the Policy states: "Data supported by a Quality Assurance Project Plan (QAPP) pursuant to the requirements of 40 CFR 31.45 are acceptable for use in developing the section 303(d) list." Many of the individual sample results included in the listing assessment contained the following note: "Estimated; non-compliant with associated QAPP." These data should be

removed from the listing assessments because the validity of the sample results may be in question. Water body segments to which this comment applies are detailed in the specific comments below.

3. In many of the proposed toxicity listings, sediment and water toxicity samples were combined to determine final exceedance counts and listing determinations. The toxicants found in water and sediment are likely to be different. Additionally, the species used to test toxicity are different for water and sediment. The Policy states: "A water segment shall be placed on the section 303(d) list if the water segment exhibits statistically significant water or sediment toxicity using the binomial distribution..." The Policy does not state that water and sediment toxicity results may be used together to list a water body segment.

SPECIFIC COMMENTS

4. Santa Margarita River (lower)

Two lines of evidence were presented in support of a new toxicity listing in the Santa Margarita River (lower): sediment and water toxicity. The fact sheet states that three of six samples exceeded the water quality objective. This is based on combining: 1) sediment and water toxicity results, and 2) different toxic test endpoints and species (Selenastrum and Ceriodaphnia dubia). Section 3.6 of the Policy states that water segments may be listed for statistically significant water or sediment toxicity. The section does not state that water and sediment toxicity results may be used together to list a water body. The sensitivity of test organisms to pollutants may be quite different in these two matrices; therefore, sediment and water toxicity results should not be combined.

- LOE ID 7501: Four bioassay water samples were collected at one station during four sampling events. The samples were tested for toxicity using Selenastrum and Ceriodaphnia dubia. The fact sheet states that Hyalella azteca were also used as toxicity test species in the water samples, but data from the SWAMP website indicate that no Hyalella were used during testing.

    - Selenastrum: The fact sheet states that three of four water samples were toxic for Selenastrum. Examination of the data reveals that only one sample showed toxicity to Selenastrum (collected 5/13/03). However, this sample was noted as "Estimated; non-compliant with associated QAPP." The validity of this single sample result is questionable and should be removed from the analysis. The other two samples reported as toxic in the fact sheet (collected 1/14/03 and 9/9/03) were not toxic upon further examination. Significantly greater growth of Selenastrum in the sample than in the control was

misinterpreted as indicative of toxicity. Therefore, none of the valid samples were found to be toxic to Selenastrum.

- The fact sheet states that four samples were collected and analyzed for toxicity to Ceriodaphnia dubia reproduction and survival. One sample was received with temperature out of acceptable limits and not included for analysis, resulting in a total of three samples for Ceriodaphnia. Another sample collected on 9/9/2003 was toxic for both reproduction and survival. However, each of the ten replicates in the survival test died and there was no reproduction for any replicate. Site conditions may have affected these test results, as stream conditions on the sample date indicate the stream was not flowing at the sampling location. Additionally, even though test protocols may not require re-analysis of the sample, 100% mortality of all replicates may indicate an issue with sample handling or other cross-interference. This is especially true because the survival was 100% or nearly 100% for all other samples collected at the station. The two remaining samples collected on 1/14/03 and 5/13/03 were noted as "Estimated; non-compliant with associated QAPP." Therefore, there are no valid sample results for toxicity to Ceriodaphnia.

- LOE ID 30287: Two sediment samples were collected and tested for toxicity using Hyalella azteca, and no toxicity was found. This line of evidence does not support listing according to the Policy.

Recommendation

There are no valid sample results for toxicity in the water column. Moreover, the total number of sediment toxicity exceedances is zero; therefore, the Santa Margarita River (lower) should not be listed for toxicity on the 2008 section 303(d) list.

5. Moosa Canyon Creek

One line of evidence was used to list 18 miles of Moosa Creek for toxicity.

- LOE ID 26213: Water samples were tested for toxicity using Selenastrum and Ceriodaphnia dubia. There was no toxicity to Ceriodaphnia, but two of four samples were toxic to Selenastrum. One of the two samples found to be toxic (collected 5/18/04) was noted as "Estimated; non-compliant with associated QAPP." Therefore, the sample does not meet the requirements of Section 6.1.4 of the Policy which states, "Data supported by a Quality Assurance Project Plan....are acceptable for use in developing the section 303(d) list"

and should be removed from the analysis. Therefore, only one of three samples were toxic to Selanastrum.

Recommendation

The revised total number of exceedances of Selenastrum is one of three, which is less than the required number to list the water body according to Table 3-1 of the Policy. It is recommended that Moosa Canyon Creek be removed from the list as the listing criteria of Table 3-1 are not met.

6. Escondido Creek

Five lines of evidence were used to list 26 miles of Escondido Creek for toxicity. Two lines of evidence were based on biodiversity impacts, which may be caused by physical habitat or other factors, and not necessarily toxicity. Of the remaining three lines of evidence, one was based on storm water data, one on ambient water, and another on sediment. Sediment, ambient water, and storm water monitoring data were combined to determine that six of 31 samples exceeded the toxicity water quality objective.

- LOE ID 7486: Fifteen storm water samples were used to test for toxicity to Selenastrum, Hyalella azteca, and Ceriodaphnia dubia. Zero samples were toxic to Selenastrum, zero samples were toxic to Hyalella, and two samples were toxic to Ceriodaphnia. Ceriodaphnia toxicity in the samples collected on 11/29/2001 and 2/17/2002 were shown to be caused by Diazinon (San Diego County Municipal Copermittees 2001-2002 Urban Runoff Monitoring Final Report, January 2003). Because Diazinon has been removed from the marketplace, it is no longer an issue in this water body. Therefore, the two Ceriodaphnia dubia toxicity results should not be included in the listing assessment as recent toxicity data support this. (San Diego County Municipal Copermittees 2001-2002 Urban Runoff Monitoring Final Report, January 2009).

- LOE ID 26480: Eight sediment samples were collected at two monitoring locations (four samples at each location) and tested for toxicity to Hyalella azteca. As stated in the fact sheet, three of the eight samples exhibited toxicity. However, all three of the exceeding samples were noted as "Estimated; non-compliant with the associated QAPP." Therefore, the results should be removed from the analysis per the listing policy. Therefore, no valid sediment samples exhibited toxicity to Hyallella azteca and zero out of 5 sediment samples tested for toxicity.

- LOE ID 25804: Eight ambient water samples were collected at two monitoring locations (four samples at each location) and used to test for toxicity to Selenastrum capricornutum and Ceriodaphnia dubia. One of the eight samples was toxic to Ceriodaphnia survival.

Recommendation

The revised total number of exceedances is zero of 13 for wet weather (two wet weather samples from 11/29/2001 and 2/17/2002 were subtracted from 15), zero of five for sediment, and one of eight for ambient weather. The number of exceedances necessary to list the water body for toxicity is two according to Table 3.1 of the Listing Policy; therefore, this water body does not meet the requirements for listing for toxicity.

7. Los Peñasquitos Creek

Two lines of evidence were used to list Total Nitrogen in Los Peñasquitos Creek. One line of evidence was biodiversity impacts, which may be caused by physical habitat or other factors, and not necessarily total nitrogen concentrations. The other line of evidence was ambient total nitrogen data.

- LOE ID 8813: The fact sheet indicates that 16 of the 19 samples collected exceeded the water quality objective. However, only one of four samples collected exceeded the water quality objective according to results in the SWAMP Urban Runoff Monitoring Report, January 2007. Samples were collected on March 13, April 24, June 5, and September 18, 2002.

Recommendation

According to Table 3.1 of the Policy, a minimum of two samples must exceed the threshold concentration. Because only one of the four samples collected exceeded the water quality objective for total nitrogen, the criteria for listing according to Table 3.1 are not met, and the total nitrogen listing should be removed from the list.

8. Sweetwater River

Four lines of evidence were used to list 50 miles of the Sweetwater River for toxicity. One line of evidence was biodiversity impacts, which may be caused by physical habitat or other factors, and not necessarily toxicity. Of the remaining three lines of evidence, one was for storm water toxicity, one was for ambient water toxicity, and another was for sediment toxicity.

- The distance between the Sweetwater River 3 and Sweetwater River 8 sampling sites appears to be approximately 27 miles, but the water segment listing is for 50 miles. Section 6.1.5.4 of the Policy states: "data shall be aggregated by water body segments as defined in the Basin Plans." The Policy also states that, at a minimum, the RWQCBs should identify stream reaches that may have different pollutant levels based on differences in land use, tributary inflow, or discharge input. Therefore, two separate reaches of the waterbody should be considered for listing, not 50 miles.

- LOE ID 25673: Eight samples from two locations within the Sweetwater River were collected and used to test for toxicity to Selenastrum, Ceriodaphnia, and Hyalella. As noted above, the distance between the two sample locations is approximately 27 miles; therefore, the sample results are evaluated separately here. At the upstream location (Sweetwater River 3) one of four sample results was toxic to Ceriodaphnia for reproduction. Selenastrum and Ceriodaphnia percent survival were not affected (zero of four samples). Three of four samples at Sweetwater River 8 were toxic to Selenastrum, but not for Ceriodaphnia survival or reproduction, or Hyalella survival.

- LOE ID 30291: The fact sheet states that five samples were collected at stations Sweetwater River 3 and 8 and assessed for toxicity to Hyalella azteca. However, the data included in the SWAMP online database included only one sample at each location. Sweetwater River 3 toxicity results show no toxicity to Hyalella for either survival or growth. There is one exceedance for Hyalella growth at Sweetwater River 8.

Recommendation

It is recommended that the water segment be changed to reflect data assessment results at the two monitoring stations. Section 6.1.5.4 of the Water Quality Policy states that, "data shall be aggregated by water body segments as defined in the Basin Plans." Sweetwater River 8 is in hydrological sub area (HSA) 909.12. Sweetwater River 3 is in HSA 909.31. In addition, one of four ambient samples and zero of one sediment samples exceeded toxicity criteria at Sweetwater River 3. This is below the number required to list the water segment for toxicity. Therefore, the listing location should be changed to the reach located at Sweetwater River 8, where 3 of 4 samples were toxic to Selenastrum and one of one samples were toxic for Hyalella growth in sediment.

9. Jamul Creek

Three lines of evidence were used to list Jamul Creek for toxicity. One line of evidence was biodiversity impacts, which may be caused by physical habitat or other factors, and not necessarily toxicity. Of the remaining two lines of evidence, one was ambient water toxicity, and the other was sediment toxicity.

- LOE ID 26511: The fact sheet states that two of three sediment samples were toxic in the LOE summary. However, the detailed data description and the SWAMP data show that zero of two samples caused toxicity to Hyalella growth or survival at one sample location.

- LOE ID 26150: Evaluation of the SWAMP online dataset verified the findings summarized on the fact sheet, which was two of three ambient water samples were toxic.

Recommendation

It is recommended that Jamul Creek not be listed for sediment toxicity, as zero of two samples were found to be toxic.

10. Santa Ysabel Creek

The extent of the listing for toxicity in Santa Ysabel Creek is 37 miles. The extent is based on the distance between the upstream station at SYC#4 and the downstream station (below an impoundment) at SYC#7. Section 6.1.5.4 of the Policy states that, "data shall be aggregated by water body segments as defined in the Basin Plans." The Policy also states that, at a minimum, the RWQCBs should identify stream reaches that may have different pollutant levels based on differences in land use, tributary inflow, or discharge input. Therefore, two separate reaches of the waterbody should be listed, not 37 miles.

Recommendation

It is recommended that the water segment be changed to reflect the data assessment results at the two monitoring stations for toxicity. Section 6.1.5.4 of the Water Quality Policy states that, "data shall be aggregated by water body segments as defined in the Basin Plans."

11. Agua Hedionda Lagoon

The County supports the recommendation to de-list Agua Hedionda Lagoon for indicator bacteria, as the water body meets the water quality standard

established for this pollutant. Seven lines of evidence were considered in the assessment of this pollutant-water body combination and the data demonstrate that applicable water quality standards are being achieved. The County also supports the recommendation to de-list Agua Hedionda Lagoon for sedimentation/siltation based upon the weight of evidence presented in the fact sheet.

Please contact Todd Snyder, Watershed Protection Program Planning Manager, at (858) 694-3482, or e-mail at todd.snyder@sdcounty.ca.gov, with any questions about these comments.

Sincerely,

Cid Tesoro, LUEG Program Manager
Department of Public Works

CT:ti

February 27, 2007

Lesley Dobalian
Julie Chan
San Diego Water Quality Control Board
9174 Sky Park Ct., Suite 100
San Diego, CA 92123-4340
Tel. 858-637-7139, 858-627-3926

Re: Request to Add California Ocean Waters to List of Impaired Waters due to Carbon Dioxide Pollution Resulting in Ocean Acidification; Response to "Notice of Public Solicitation of Water Quality Data and Information for 2008 Integrated Report—List of Impaired Waters and Surface Water Quality Assessment [303(d)/305(b)]."

Dear Lesley Dobalian and Julie Chan,

The Center for Biological Diversity respectfully requests that the San Diego Water Quality Control Board recommend that:

> **All ocean waters under Region 9's jurisdiction be included in the state List of Impaired Waters ("303(d) List") under section 303(d) of the Clean Water Act as impaired for pH due to absorption of anthropogenic carbon dioxide pollution.**

Similar requests are concurrently being filed with each Regional Water Quality Control Board with jurisdiction over ocean waters of California. We seek to have all California ocean segments added to the Clean Water Act's 303(d) List as these waters are impaired for pH due to ocean acidification occurring as a result of past, ongoing, and projected absorption of anthropogenic carbon dioxide pollution.

I. INTRODUCTION

California has taken a leading role in confronting the threats posed by global warming resulting from anthropogenic carbon dioxide emissions. Nevertheless, California still ranks as one of the world's top carbon dioxide emitters. Global warming, however, is not the only significant impact of carbon dioxide emissions. In addition to their contribution to global warming, these same carbon dioxide emissions also pose a severe threat to California and the world's oceans.

Approximately half of the carbon dioxide emitted from fossil fuel burning over the past 200 years has been absorbed by the oceans. The absorption of carbon dioxide by the oceans is altering the basic chemistry of seawater, rendering the oceans more acidic. Anthropogenic emissions have already lowered average ocean pH by 0.11 units, with a pH change of 0.5 units projected by the end of the century under current emission trajectories.

The primary known impact of ocean acidification is to impair the process of calcification, by which animals such as mollusks and corals build shells and skeletons. Other calcifying organisms such as many species of phytoplankton and zooplankton will also be harmed by ocean acidification as acidic waters dissolve their protective structures or inhibit growth. These species represent fundamental components of the marine food web. Absent significant reductions in anthropogenic carbon dioxide emissions, ocean acidification will accelerate, ultimately leading to the collapse of oceanic food webs and catastrophic impacts on the oceans, and by extension the global environment.

The ocean waters of California are a major source of biological diversity, productivity, and social and economic activity. Protection of these waters is of the highest interests of the state and its citizens. Ocean acidification is impairing the water quality of California's ocean waters and the beneficial uses of these waters.

While regulation of carbon dioxide as a "pollutant" under the Clear Air Act is currently subject to litigation, there can be no dispute that pH can be regulated as a pollutant under the Clean Water Act. The Environmental Protection Agency ("EPA") lists pH as a "conventional pollutant" in its regulations. 40 C.F.R. § 401.16. Ocean acidification, the lowering of seawater pH resulting from absorption of anthropogenic carbon dioxide emissions, can and must be regulated pursuant to the Clean Water Act.

Because ocean acidification is impairing the water quality of California's ocean waters and the beneficial uses of these waters, and existing regulations are inadequate to prevent continued acidification, these waters meet the listing criteria for inclusion in the 303(d) List as described by the *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List* ("Water Quality Control Policy"). First, California's ocean waters are on a trend toward declining water quality because of increasing acidity. Second, the California's ocean waters fail to meet the water quality standard set forth in California's Ocean Plan to prevent degradation to marine communities.

California's State and Regional Water Quality Control Boards must act immediately to curb the acidification of ocean waters by listing California's ocean segments on the 303(d) List and prioritizing the creation of a Total Maximum Daily Load ("TMDL") for carbon dioxide.

II. CLEAN WATER ACT BACKGROUND

The purpose of the Clean Water Act is to "restore and maintain the chemical, physical and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). According to the Supreme Court "[T]he Act does not stop at controlling the 'addition' of pollutants,' but deals with 'pollution' generally…which Congress defined to mean 'the manmade or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.'" *S.D. Warren v. Maine Bd. Of Envt'l Protection,*126 S.Ct. 1843, 1852-53 (2006)

The Clean Water Act requires, inter alia, that states set water quality standards that protect designated uses for water bodies. Each state must develop water quality standards that "specify a water body's 'designated uses' and 'water quality criteria,' taking into account the

water's 'use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes . . . .' 303(c)(2)." *Pronsolino v. Nastri*, 291 F.3d 1123, 1127 (9th Cir. 2002). These standards are used to set effluent limits and technology standards, and the Act requires compliance with such measures by requiring a permit for the discharge of any pollutant. 33 U.S.C. §§ 1311, 1342.

Relevant here, the Clean Water Act's section 303(d) requires each state to identify waters for which existing regulations are inadequate to protect water quality—resulting in a "303(d) List." 33 U.S.C. § 1313(d). "Each state shall identify those waters within its boundaries for which the effluent limitations … are not stringent enough to implement any water quality standard applicable to such waters." 33 U.S.C. § 1313(d)(1)(a). A water body failing to meet any numeric criteria, narrative criteria, waterbody uses, or antidegradation requirements shall be included as a water-quality limited segment on the 303(d) List. 40 C.F.R. § 130.7(b)(3).

For waters identified on the 303(d) List, the states "shall" establish a TMDL for pollutants "at a level necessary to implement the applicable water quality standards." 33 U.S.C. § 1313(d)(1)(C). "A TMDL defines the specified maximum amount of a pollutant which can be discharged or 'loaded' into the water at issue from all combined sources." *Dioxin/Organochlorine Center v. Clark*e, 57 F.3d 1517, 1520 (9th Cir. 1995). The 303(d) List shall include a priority ranking for all listed segments still requiring TMDLs. 40 C.F.R. § 130.7(b)(4). "TMDLs serve as a link in an implementation chain that includes federally-regulated point source controls, state or local plans for point and nonpoint source pollution reduction, and assessment of the impact of such measures on water quality, all to the end of attaining water quality goals for the nation's waters." *Pronsolino*, 291 F.3d at 1129.

Additionally, the EPA oversees California's implementation of section 303(d) of the Clean Water Act and must approve the identified impaired water bodies and TMDLs. 33 U.S.C. § 1313(d)(2). If EPA disapproves of either, then EPA shall identify such waters and establish TMDLs as necessary to ensure water quality standards are met. 33 U.S.C. § 1313(d)(2).

III. OCEAN ACIDIFICATION BACKGROUND

Carbon dioxide pollution is degrading water quality and harming marine ecosystems. The oceans readily absorb carbon dioxide pollution and this causes ocean acidification. Increasing acidity is stripping the oceans of important compounds needed by marine species to build shells and skeletons (Ruttimann 2006). Many sea organisms from phytoplankton to snails and crabs are being harmed as acidic waters dissolve protective structures or inhibit growth. (Ruttimann 2006; WBGU 2006). Other marine organisms, such as fish, experience impaired metabolism as their tissues become more acidic (Pörtner 2004, Royal Society 2005). Adverse impacts on these species will reverberate throughout the marine ecosystem.

A. Seawater Chemistry and Carbon Dioxide

The oceans freely exchange carbon dioxide with the atmosphere. The oceans have already taken up about 50% of the carbon dioxide that humans have produced since the industrial revolution, and already this has lowered the average ocean pH by 0.11 units (Sabine 2004).

Although this number sounds small, it represents a significant change in acidity. The ocean takes up about 22 million tons of carbon dioxide each day (Feely 2006). While preindustrial levels of atmospheric carbon dioxide hovered around 280 ppm (Orr 2005), now they have increased to 380 ppm and if current trends continue they will increase another 50% by 2030 (Turley 2006). These rising carbon dioxide levels are irreversible on human timescales (Kleypas et al. 2006). Over time, the ocean will absorb up to 90% of anthropogenic carbon dioxide released into the atmosphere (Kleypas et al. 2006).

When carbon dioxide is dissolved in seawater it becomes reactive and changes seawater chemistry along with many other physical and biological reactions. When carbon dioxide combines with water, it forms carbonic acid and releases hydrogen ions (Royal Society 2005). These hydrogen ions determine the acidity of the ocean, accounting for the change in pH. The slightly alkaline pH of the ocean is becoming more acidic. The naturally occurring pH values for the ocean were on average 8.16 and as a result of carbon dioxide pollution, the average pH value has dropped to 8.05 (Ruttimann 2006).

Carbon dioxide pollution results in more severe pH changes than experienced in the past 300 million years (Caldeira 2003). Under the business-as-usual scenario of greenhouse gas emissions, carbon dioxide will reach 788 ppm by 2100 and pH will drop another 0.3-0.4 units (Orr 2005). Even under the more modest scenario where carbon dioxide emissions are stabilized, atmospheric carbon dioxide will reach 563 ppm by the end of the century with corresponding ocean acidification.

In addition to changes in pH, carbon dioxide changes the carbon chemistry of the ocean. Seawater is naturally saturated with carbonate ions that are important for marine organisms to build shells and skeletons (WBGU 2006). Calcium carbonate is present in the ocean in two common forms used by organisms for shells and skeletons, calcite and aragonite. Dissolved carbon dioxide reacts with seawater to form carbonic acid, which dissociates to form bicarbonate ions (Turley 2006). The effect lowers pH and decreases the availability of carbonate ions (CO^{2-}_3) (Kleypas 2006). This is represented by the following equation:

$$CaCO_3+CO_2+H_20 \Leftrightarrow Ca^{2+} +CO^{2-}_3+CO_2 +H_20 \Leftrightarrow Ca^{2+}+2HCO^{-}_3$$

The ocean acidification that has already occurred, a decline of 0.l1 pH, represents a 30% increase in the concentration of hydrogen ions (Royal Society 2005), and a decrease in the carbonate concentration of 10% (Orr 2005). Changes in carbonate saturation extend below the surface throughout the water column (Orr 2005). These changes in saturation make calcium carbonate unavailable for marine organisms to build their protective shells with adverse effects that will spread throughout the ecosystem.

Carbon dioxide pollution into the ocean is causing California's oceans to have a lower pH, increased dissolved carbon dioxide, lower concentration of carbonate ions, and increased bicarbonate ions (Royal Society 2005). The result is that California's oceans have already been seriously degraded by carbon dioxide pollution.

Table 1. Changes to ocean chemistry and pH estimated using the OCMIP3 models calculated from surface ocean measurements and our understanding of ocean chemistry. Note that the concentration of bicarbonate ion (HCO_3^-) and carbonic acid (H_2CO_3) increase with rising atmospheric concentration of CO_2 while carbonate ion (CO_3^{2-}) decreases. The average pH of the surface ocean waters decreases with increasing atmospheric CO_2 concentration. (Assumptions used in model: Total alkalinity = 2324 mol/kg, temperature = 18° C. All other assumptions as per OCMIP3 (Institut Pierre Simon Laplace 2005). Aragonite and calcite saturation calculated as per Mucci & Morse (1990). Physical oceanographic modelling is based on Bryan (1969) and Cox (1984).

	Pre-industrial	Today	2× pre-industrial	3× pre-industrial	4× pre-industrial	5× pre-industrial	6× pre-industrial
Atmospheric concentration of CO_2	280 ppm	380 ppm	560 ppm	840 ppm	1120 ppm	1400 ppm	1680 ppm
H_2CO_3 (mol/kg)	9	13	19	28	38	47	56
HCO_3^- (mol/kg)	1768	1867	1976	2070	2123	2160	2183
CO_3^{2-} (mol/kg)	225	185	141	103	81	67	57
Total dissolved inorganic carbon (mol/kg)	2003	2065	2136	2201	2242	2272	2296
Average pH of surface oceans	8.18	8.07	7.92	7.77	7.65	7.56	7.49
Calcite saturation	5.3	4.4	3.3	2.4	1.9	1.6	1.3
Aragonite saturation	3.4	2.8	2.1	1.6	1.2	1.0	0.9

Source: Royal Society (2005)

B. The Adverse Impacts of Carbon Dioxide Pollution on the Marine Environment

Scientists agree that carbon dioxide pollution is causing ocean acidification with adverse impacts on many marine organisms. Available evidence suggests that the consequences of anthropogenic carbon dioxide accumulation have already begun in surface waters (Pörtner 2005).

One of the most alarming effects of ocean acidification is the impact on the availability of carbonate for calcifying organisms such as mollusks, crustaceans, echinoderms, corals, calcareous algae, foraminifera and some phytoplankton. Nearly all marine species that build shells or skeletons from calcium carbonate that have been studied have shown deterioration when exposed to increasing carbon dioxide levels in seawater (Feely 2006). Estimates suggest that calcification rates will decrease up to 50% by the end of the century (Ruttimann 2006). Snails, sea urchins, starfish, lobster, crabs, oysters, clams, mussels, and scallops all build shells that are vulnerable to ocean acidification. Other marine species may experience physiological effects from acidification including lowered immune response, metabolic decline, and reproductive and respiratory problems (Feely 2006).

1. Calcifying planktonic organisms are adversely affected by ocean acidification.

Plankton, which play a fundamental role in the marine ecosystem, are threatened by ocean acidification. Carbon dioxide uptake by the ocean causes impaired growth and development for calcifying plankton, and acidification dissolves the protective armor of some plankton. Coccolithophorids, foraminifera, and pteropods are the dominant calcifying planktonic organisms and provide an essential role in marine production.

Coccolithophorids are one of the most important calcite producers and studies show that carbon dioxide in seawater reduces calcification of coccolithophorids (Reibesell 2000). Coccolithophorids are one-celled marine plants in the upper layers of the ocean that bloom in large numbers like many phytoplankton. Phytoplankton, such as coccolithophorids, contribute much of the organic material entering the marine food chain and are responsible for about 50%

of the earth's primary production (Royal Society 2005). Coccolithophorids have calcium carbonate structures surrounding them called coccoliths. Studies of coccolithophorids showed that carbon dioxide related changes to seawater caused reduced calcification, malformed coccoliths, and incomplete coccospheres (Riebesell 2000). These phytoplankton not only provide food for other marine organisms but they also influence the global environment by reflecting light from the ocean.

Another example of plankton at risk from ocean acidification are pteropods. Pteropods form their shells from aragonite. Experiments show that the shells of pteropods dissolve as seawater becomes undersaturated with aragonite (Orr 2005). If carbon dioxide pollution continues unabated then large areas of the ocean, especially at higher latitudes, will become undersaturated with aragonite by 2050 (Orr 2005). Krill, whales, salmon, and other fish eat pteropods, and they contribute significantly to marine production. Ocean acidification impedes the calcification of pteropods and even dissolves their protective shells. Not only are pteropods at risk, but also the many organisms that depend on them for food.

Another important planktonic calcifier, foraminifera, experiences reduced shell mass when exposed to elevated carbon dioxide (Kleypas 2006). There is a strong reduction in foraminifera calcification that corresponds to pH decreases (Royal Society 2005).

Calcification is an essential mechanism in the biology and ecology for many marine species. Coccolithophorids, pteropods, and foraminifera are the major planktonic calcifying groups and they all experience adverse biological reactions as a result of ocean acidification. California's oceans are filled with many of these plankton and they play a significant role in the marine food chain.

2. Large calcifying organisms experience reduced calcification due to ocean acidification.

Larger calcifying animals such as corals, crustaceans, echinoderms, and mollusks are also threatened by ocean acidification. These important members of marine ecosystems are vulnerable to ocean acidification because, like calcifying plankton, they are experiencing reduced calcification and erosion of their protective shells.

Experiments revealed that moderate increases in atmospheric carbon dioxide had significant effects on the survival and growth of sea urchins and snails (Shirayama 2005). These adverse effects on echinoderms and gastropods are alarming because they mimicked long-term exposure to carbon dioxide levels that are likely to be reached within decades, 560 ppm (Shirayama 2005). Echinoderms are especially sensitive to ocean acidification because lower pH inhibits the formation of their skeletons which depend on highly soluble calcite precursors (Royal Society 2005, Shirayama 2004). At a pH change of 0.3 units, echinoderms are significantly impacted (Shirayama 2004). Crustacea also are especially vulnerable to sea chemistry changes during molting (Royal Society 2005). Shallow water benthic organisms such as these are among those that will be the first to experience the adverse impacts of the ocean's uptake of carbon dioxide pollution.

Juvenile calcifying organisms are also more vulnerable to pH changes than adults. Most benthic fauna have a planktonic larval phase when they are especially vulnerable to carbonate undersaturation. For example, young sea urchins were smaller and deformed when grown at a lower pH (Haugan 2006, Shirayama 2004). Also, the success of bivalve larvae is greatly reduced by ocean acidification because they experience high mortality while settling, while undersaturation of carbonates weakens their shells (Royal Society 2005).

Due to ocean acidification, within our lifetimes coral reefs may erode faster than they can rebuild (Feely 2006). Coral reefs provide vital functions for marine ecosystems, and studies reveal that coral is extremely vulnerable to ocean acidification (Gattuso 1997). The combined stresses of warmer temperatures, rising sea levels, and ocean acidification are likely to produce major changes to coral reefs in the decades to come (Royal Society 2005). Cold water corals, some of which were recently discovered in California waters, are long lived, slow growing, and fragile. Based on studies of other corals, it is predicted that calcification of cold-water corals will also be reduced by ocean acidification (Royal Society 2005). Some of the cold water coral species in the Pacific calcify and are vulnerable to impacts from anthropogenic carbon dioxide (Guionette 2006, Morgan 2006). Cold water corals may be even more sensitive to reduced carbonate saturation because they already live in conditions less favorable to calcification (Royal Society 2005; Murray 2006). Moreover, because cold water corals depend on calcifying plankton as food, the productivity of coral prey is also compromised by ocean acidification (Morgan 2006).

3. Fitness of other marine animals is compromised by ocean acidification.

Even marine animals that do not calcify are threatened by carbon dioxide increases in their habitat. Changes in the ocean's carbon dioxide concentration result in accumulation of carbon dioxide in the tissues and fluids of fish and other marine animals, called hypercapnia, and increased acidity in the body fluids, called acidosis. These impacts can cause a variety of problems for marine animals including difficulty with acid-base regulation, calcification, growth, respiration, energy turnover, and mode of metabolism (Pörtner 2004).

An animal's ability to transport oxygen is reduced by pH changes (Pörtner 2005). Water breathing animals have a limited capacity to compensate for changes in the acidity (Haugan 2006). For example, fish that take up oxygen and respire carbon dioxide through their gills are vulnerable because decreased pH can affect the respiratory gas exchange (Royal Society 2005). Changes in metabolic rate are caused by the changes in pH, carbonates, and carbon dioxide in marine animals (Haugan 2006).

Squid, for example, show a very high sensitivity to pH because of their energy intensive manner of swimming (Royal Society 2005). Because of their energy demand, even under a moderate 0.15 pH change squid have reduced capacity to carry oxygen and higher carbon dioxide pressures are likely to be lethal (Pörtner 2004). Even species more tolerant to pH changes experience decreased metabolism from increased carbon dioxide in the water (Pörtner 2004). For example, as much as 50% mortality was observed in copepods after only six days of exposure to waters with a pH level 0.2 units below the control (Pörtner 2005).

In fish, pH also affects circulation. When fish are exposed to high concentrations of carbon dioxide in seawater cardiac failure causes mortality (Ishimatsu 2004). At lower concentrations sublethal effects can be expected that can seriously compromise the fitness of fish. Juvenile and larval stages of fish were found to be even more vulnerable (Ishimatsu 2004).

Increased concentration of carbon dioxide not only produces pH changes that affect animals, but also the internal accumulation of carbon dioxide in the body of the organism adversely impacts many marine species (Haugan 2006). Marine animals are likely to have difficulty reducing carbon dioxide in their bodies with consequent effects on development and reproduction (Turley 2006). Hypercapnia can cause decreased protein synthesis which results in reduced growth and reproduction (Haugan 2006). This effect has been observed in mollusks, crustaceans, and fish (Haugan 2006).

Experiments with elevated carbon dioxide levels have revealed numerous adverse effects on the productivity of a variety of marine organisms (WBGU 2006). Changes were noted in the "productivity of algae, metabolic rates of zooplankton and fish, oxygen supply of squid, reproduction in clams, nitrification by microorganisms, and the uptake of metals" (WBGU 2006; see also Pörtner 2005). Other effects could include decreased motility, inhibition of feeding, reduced growth, reduced recruitment, respiratory distress, decrease in population size, increased susceptibility to infection, shell dissolution, destruction of chemosensory systems, and even mortality (Turley 2006; Royal Society 2005).

Impacts to marine organisms are not confined to the laboratory. Experiments with deep sea injection of carbon dioxide in central California waters killed benthic meiofauna such as nematode worms and amoeba (Barry 2005). Researchers also predict that the long-term hypercapnic conditions caused by absorption of atmospheric carbon dioxide will produce similar physiological stresses for marine organisms (Barry 2005).

Additionally, studies have shown that reproduction can be seriously compromised with pH changes. Studies have found loss of sperm motility for Pacific oysters, decreases in egg production by copepods, decreased hatching of egg sacs for gastropod mollusks, and impacts on reproductive success for silver sea bream and sea urchins (Royal Society 2005).

In sum, ocean acidification can have many adverse effects on marine animals that can reduce their fitness and survival (Royal Society 2005). Many marine animals have low thresholds for long-term carbon dioxide exposure (Pörtner 2005). Studies demonstrate that many marine species are threatened with population declines and changes in species composition due to the decreased fitness of individuals and compromised reproductive success that is occurring or will result from ocean acidification.

4. Ocean acidification impacts entire ecosystems.

Changes caused by ocean acidification such as reduced calcification can compromise the fitness and survival of some species resulting in changes in abundance and diversity of species in marine communities (Royal Society 2005, Kleypas 2006). These shifts can lead to even greater

ecosystem responses that will alter ecosystem productivity, nutrient availability, and carbon cycling (Kleypas 2006).

Declining populations of species that are unable to adjust to ocean acidification will cause major changes in interactions among species in marine ecosystems. For example, the shift from coccolithophores to diatoms in the plankton community can cause a restructuring of the ecosystem at all trophic levels (Royal Society 2005). Additionally, a decrease in pteropod abundance can also increase predation of juvenile fish (Royal Society 2005). Changes to the carbonate chemistry and reduced calcification by plankton will change the amount of sinking and settling to deeper waters, which may reduce delivery of food to deeper waters and benthic organisms (Haugan 2006).

Most of the ocean's biological activity happens near the surface waters, and ocean acidification will have substantial effects on organisms and habitats in those areas. Impacts on surface waters will cycle down to affect deep-ocean communities. Changes in acidity occur more quickly near the surface where most marine organisms occur, but deep-ocean species may be more sensitive to pH changes (Caldeira 2003).

Changes in pH also affect the availability of marine nutrients that are essential for marine production (Turley 2006). Changes in nutrients such as phosphorus and nitrogen could cause eutrophication (Turley 2006). The aggregation of these changes may have potentially devastating effects on marine communities.

Other effects of climate change are also likely to combine synergistically with ocean acidification, intensifying the adverse affects on marine communities. For example, ocean temperatures are already changing, while runoff from more storms may alter salinity. The combined impact of all of these changes will influence the productivity, interactions, and distribution of many phytoplankton and zooplankton, resulting in impacts on the rest of the food chain (Haugan 2006). Ocean acidification can increase organisms' sensitivities to such environmental extremes (Pörtner 2005). For example, decreased metabolism can result in narrowing the thermal tolerance of an organism (Haugan 2006).

Due to the specific habitat tolerances of many species, some species may become imperiled from the impacts of high concentrations of carbon dioxide. Additionally, many threatened and endangered species depend on California's ocean ecosystem and are extremely vulnerable to changes in marine habitat. Ocean acidification jeopardizes the continued existence of some of these species. For example, ocean acidification may dissolve the shell of the endangered white abalone or inhibit shell formation and growth. Also, there are numerous threatened and endangered species such as blue, humpback, and fin whales, and sea otters that prey on calcifying species. Declining fitness of fish due to acidification could not only impact depleted fish populations, but also already imperiled fish-eating species such as the California least tern, California brown pelican, marbled murrelet, Steller sea lion, and Guadalupe fur seal. Similarly, impacts to squid, among the most sensitive of marine species to changes in pH, would likely impact squid-eating species such as sperm whales.

These ecosystem responses will have serious effects on California's ocean biodiversity and productivity. While the worst effects of ocean acidification are forecasted for the future, other impacts are already underway. Changes in pH are a significant threat in marine habitats. At present, the water quality of California's ocean waters is declining due to carbon dioxide pollution, putting entire marine communities at risk.

IV. CALIFORNIA'S OCEAN WATERS ARE IMPAIRED AND MUST BE ADDED TO THE 303(D) LIST

All segments of California's ocean waters must be included on the State's 303(d) List because current measures are not stringent enough to prevent ocean acidification and achieve water quality standards. 33 U.S.C. § 1313(d). The Clean Water Act requires that California protect the water quality for designated uses of its waters. California's Ocean Plan defines the designated uses of ocean waters:

> The beneficial uses of the ocean waters of the State that shall be protected include industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation an enhancement of designated Areas of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish migration; fish spawning and shellfish harvesting.

California Ocean Plan at 3 (2005).

The beneficial uses of California's oceans are threatened by ocean acidification. For example, many marine species are vulnerable to ocean acidification, which can impair the ocean's marine resources and economic activities dependent on these resources such as fishing, mariculture, and shellfish harvesting. Habitat for imperiled species, and their spawning, migration, and forage may be impaired. Even under conservative estimates of future carbon dioxide emissions, scientists predict chemical changes that threaten the ability of marine life to adapt to the acidifying ocean (Orr 2005). All these impacts would severely impair Californians' aesthetic and recreational enjoyment of the ocean waters and sea life they contain.

California's ocean waters meet one or more of the 303(d) listing factors enumerated in California's Water Quality Control Policy ("WQCP"). First, California's ocean waters are experiencing a trend of declining water quality for pH. Second, ocean acidification is causing degradation of marine communities. For these reasons, which are described in detail below and supported by the attached scientific evidence, California's ocean should be placed on the 303(d) List as impaired for pH as a result of anthropogenic carbon dioxide emissions.

A. California's Oceans Are on a Trajectory for Declining Water Quality

The Clean Water Act and California's antidegradation policy prohibits any degradation of water bodies that are currently meeting water quality standards. The increasing acidification of the ocean requires that California's ocean waters be added to the 303(d) List.

> A water segment shall be placed on the section 303(d) list if the water segment exhibits concentrations of pollutants or water body conditions for any listing factor that shows a trend of declining water quality standards attainment.

WQCP § 3.10 (2004). As this listing criterion fulfills the Clean Water Act's antidegradation requirements, a water body must be listed if it has declining water quality even if water quality objectives are not exceeded. WQCP § 3.10.

EPA identifies pH as a conventional pollutant. 40 C.F.R. § 401.16.

At present, California's ocean segments are on a trajectory of declining attainment of water quality standards for pH. California's water quality standard for the ocean states, "the pH shall not be changed at any time more than 0.2 units from that which occurs naturally." California Ocean Plan 6 (2005).[1]

Applying the existing Ocean Plan standard for pH, all California ocean waters must be included on the 303(d) List because they are experiencing degradation. As described above, dissolved carbon dioxide lowers the pH of seawater and acidifies the ocean. Surface ocean pH has already declined by 0.11 units on average from preindustrial values (Caldeira 2003). The naturally occurring pH values for the ocean were on average 8.16 and as a result of carbon dioxide pollution, the average pH value has dropped to 8.05 (Ruttimann 2006). This is a significant change in water quality since each step is a tenfold change in acidity.

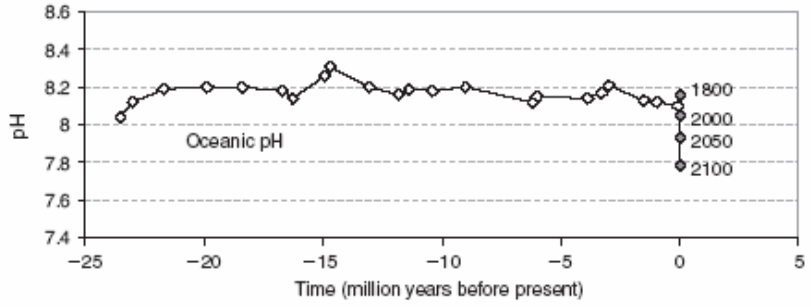


Figure 8.2 Past (white diamonds, data from Pearson and Palmer, 2000) and contemporary variability of marine pH (grey diamonds with dates). Future predictions are model derived values based on IPCC mean scenarios.

Source: Turley 2006

The ongoing acidification of the ocean is the most severe change in ocean pH in several million years (Turley 2006). These changes are occurring at about 100 times the rate of changes seen naturally in geological history. Natural changes occur more slowly with a greater

[1] This standard allowing for a 0.2 unit change from naturally occurring pH is inadequate to fully protect water quality from ocean acidification. The standard assumes localized pH changes that would dilute on a larger scale, but widespread carbon dioxide absorption amounting to a 0.2 pH change will have devastating effects on California's marine life. Therefore, the Center for Biological Diversity is submitting a proposal to the State Water Quality Control Board to modify this water quality standard accordingly to better protect California's ocean waters from ocean acidification. Nevertheless, even under the 0.2 unit standard in the current Ocean Plan, California's ocean waters still meet the criteria for listing on the 303(d) list.

opportunity for the impacts of pH changes to be lessened (Royal Society 2005). A further decline of another 0.09 units will exceed California's water quality standards allowing for a maximum pH change of 0.2.

Meanwhile, human activities continue to release carbon dioxide, and the ocean is continuing to absorb such pollution. With the oceans absorbing about 22 millions of carbon dioxide each day (Feely 2006), seawater pH will continue to decrease. Assuming current trends of greenhouse gas emissions, the global average pH of seawater will drop another 0.3-0.4 units (Orr 2005). Having already absorbed half of anthropogenic carbon dioxide, scientists predict that the oceans will absorb up to 90% (Kleypas et al. 2006). Unabated, carbon dioxide pollution will degrade seawater quality beyond California's water quality standards. By the end of this century, absent significant reductions in carbon dioxide emissions, this will result in a pH change up to 0.5 units (Royal Society 2005).

California is among the largest producers of carbon dioxide pollution. Contributing about 492 million metric tons of greenhouse gases each year, California is the nation's second largest emitter of greenhouse gases and the world's 12th largest contributor (CED 2006). Carbon dioxide accounts for 84% of those emissions, much of which is quickly absorbed into the surface layers of the ocean. California's population is expected to increase from 35 million today to 55 million by 2050. Absent significant per-capita reductions in current carbon dioxide emission rates, California's emissions are likely to increase.

Increasing carbon dioxide in the atmosphere will lead to further ocean acidification.

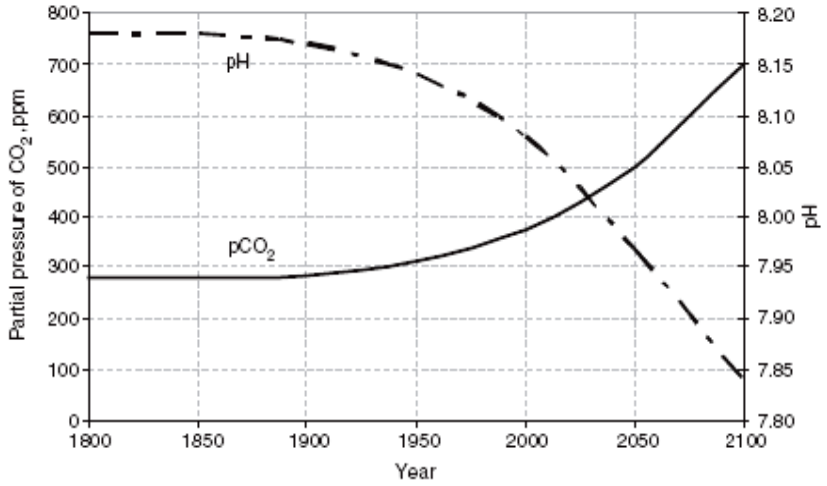


Figure 8.1 The past and projected change in atmospheric CO_2 and seawater pH assuming anthropogenic emissions are maintained at current predictions (redrawn from Zeebe and Wolf-Gladrow 2001).

Source: Turley 2006

As described above, and documented in the scientific literature submitted with this request, carbon dioxide absorption into the ocean is causing California's ocean waters to have a lower pH, increased dissolved carbon dioxide, lower concentration of carbonate ions, and increased bicarbonate ions (Royal Society 2005). The result is that California's ocean waters

have already been degraded by carbon dioxide pollution. California's ocean waters are on a trajectory toward nonattainment of water quality standards and therefore should be added to the 303(d) List.

B. Ocean Acidification Is Impairing Marine Communities

California's ocean waters should also be placed on the 303(d) List because they exceed the narrative water quality criteria for biological characteristics described in California's Ocean Plan. The Ocean Plan provides that "[m]arine communities, including vertebrate, invertebrate, and plant species, shall not be degraded." Ocean Plan at 10.

California's Water Quality Control Policy ("WQCP") explicitly states that a water segment that "exhibits adverse biological response" such as "reduction in growth, reduction in reproductive capacity, abnormal development, histopathological abnormalities, and other adverse conditions" should be placed on the list. WQCP § 3.8. A segment should also be listed "if the water segment exhibits significant degradation in biological populations and/or communities" as evidenced by declining species diversity or individuals in a species. WQCP § 3.9.

As described above, the impacts of ocean acidification on marine organisms, and ultimately, marine communities are significant, diverse, and will greatly increase in severity over time. There is no scientific dispute that anthropogenic atmospheric carbon dioxide is causing ocean acidification and that such acidification will have adverse impacts on many marine organisms. Available evidence suggests that the adverse consequences of anthropogenic carbon dioxide accumulation are already being felt in surface waters (Pörtner 2005).

Ocean acidification is adversely affecting calcifying planktonic organisms such as coccolithophorids, foraminifera, and pteropods, larger calcifying organisms such as crustaceans, echinoderms, corals, and mollusks, non-calcifying organisms such as fish and squid, and such adverse affects will reverberate though the marine ecosystem to marine mammals, seabirds and ultimately human communities reliant upon ocean resources. In short, ocean acidification caused by anthropogenic carbon dioxide is causing degradation of California's marine communities in breach of the water quality standards. As such, California's ocean waters should be added to the 303(d) List as impaired for pH from absorption of anthropogenic atmospheric carbon dioxide.

V. CONCLUSION

While the worst effects of ocean acidification are forecasted for the future, the adverse changes to California's ocean waters from ocean acidification are already underway. These changes will, if not addressed, have serious, and likely catastrophic effects on California's ocean biodiversity, productivity, and ultimately, economy.

All segments of California's ocean waters must be added to the Clean Water Act's 303(d) List as impaired for pH from absorption of anthropogenic atmospheric carbon dioxide. Such listing is necessary because anthropogenic carbon dioxide pollution is degrading water quality and impairing the ocean's designated uses. California's specific listing criteria are met because

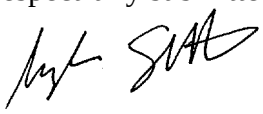
these ocean waters are on a trajectory of declining water quality, and because ocean acidification is degrading California's marine communities.

California's ocean waters are among the most productive, diverse, and ecologically and economically important of any ocean waters in the United States and the world. Ocean acidification threatens the fundamental health of these waters and all species dependent upon them. These waters can only be protected if prompt and decisive action is taken to reduce ocean acidification by reducing anthropogenic atmospheric carbon dioxide emissions.

The goals of the Clean Water Act and California's Ocean Plan can only be met by taking steps to slow ocean acidification. The changing pH of the ocean and associated impacts on marine resources are unlike any that have been experienced on this earth for millions of years. California must take actions now to abate carbon dioxide pollution by listing California's ocean segments as impaired on the 303(d) List and establishing a TMDL for carbon dioxide.

In conclusion, the San Diego Water Quality Control Board must recommend to the State Water Resources Control Board that all ocean segments within its region be added to the 303(d) List as impaired for pH from absorption of anthropogenic atmospheric carbon dioxide.

Respectfully submitted,



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miyoko@biologicaldiversity.org

VI. SOURCES

For supporting documents listed below, please see the attached articles submitted with this letter.

1. Barry, J.P., et al. Utility of Deep Sea CO2 Release Experiments in Understanding the Biology of a High-CO2 Ocean: Effects of Hypercapnia on Deep Sea Meiofauna, *Journal of Geophysical Research* 110:(C09)S12 (2005).
2. Caldeira, K. & Wickett M.E., Anthropogenic Carbon and Ocean pH, *Nature* 425, 365 (2003).
3. Feely, R.A., et al., Carbon Dioxide and Our Ocean Legacy (2006).
4. Feely, R.A., et al., Impact of Anthropogenic CO2 on the CaCO3 System in the Oceans, *Science* 305:362-366 (2004).

5. Gattuso, J.P., et al. Effect of Calcium Carbonate Saturation of Seawater on Coral Calcification, *Global and Planetary Change* 18:37-46 (1998).

6. German Advisory Council on Global Change ("WBGU"), The Future Oceans—Warming Up, Rising High, Turning Sour (2006).

7. Guionette, J.M, et al. Will Human-induced Changes in Seawater Chemistry Alter the Distribution of Deep-Sea Scleractinian Corals?, *Frontiers in Ecol. Environ.* 4: 141-146 (2006).

8. Haugan, P.M, Turley, C., & Poertner H-O, Effects on the Marine Environment of Ocean Acidification Resulting from Elevated Levels of CO2 in the Atmosphere, OSPAR Commission Report (2006)

9. Ishimatsu, Atsushi, Effects of CO2 on Marine Fish: Larvae and Adults. *Journal of Oceanography* 60(4) (2004).

10. Kleypas, J.A., et al., Impacts of Ocean Acidification on Coral Reefs and Other Marine Calcifiers (2006).

11. Kolbert, E., The Darkening Sea, *The New Yorker* (Nov. 11, 2006).

12. Morgan, LE, C-F Tsao, JM Guinotte, Status of Deep Sea Coral in US Waters, with Recommendations for their Conservation and Management (2006).

13. Murray, J.R., et al. Reefs of the Deep: The Biology and Geology of Cold-Water Coral Ecosystems, *Science* 312: 543-547 (2006).

14. Orr, J.C., et al., Anthropogenic Ocean Acidification over the Twenty-first Century and Its Impact on Calcifying Organisms, *Nature* 437:681-686 (2005).

15. Pörtner, H.O., Langenbuch, M. & Reipschläger, A, Biological impact of elevated ocean CO2 concentrations: lessons from animal physiology and earth history, *Journal of Oceanography* 60, 705–718 (2004).

16. Pörtner, Hans O., Synergistic effects of temperature extremes, hypoxia, and increases in CO on marine animals: From Earth history to global change, *Journal of Geophysical Research* 110(c9) (2005).

17. Riebesell, U, et al., Reduced Calcification of Marine Plankton in Response to Increased Atmospheric CO_2, *Nature* 407:364-367 (2000).

18. Royal Society, Ocean Acidification Due to Increasing Atmospheric Carbon Dioxide (2005).

19. Ruttimann, J. Sick Seas, *Nature News Feature* 978-980 (2006).

20. Sabine, C.L., et al. The Oceanic Sink for Anthropogenic CO2, *Science* 305:367-371 (2004).

21. Shirayama, Y., Effect of increased atmospheric CO on shallow water marine benthos, *Journal of Geophysical Research* 110(c9) (2005).

22. Turley, C., et al. Chapter 8: Reviewing the Impact of Increased Atmospheric CO2 on Oceanic pH and the Marine Ecosystem, Avoiding Dangerous Climate Change (2006).

Thompson

CENTER *for* BIOLOGICAL DIVERSITY

Because life is good.

2008 JUN 16 A 11:50

Sent via certified and electronic mail

June 11, 2008

Lesley Dobalian
San Diego Regional Water Board
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San Diego, CA 92123-4340
858-637-7139
ldobalian@waterboards.ca.gov

Re: Request to include ocean waters of California in the 2008 Water Quality Limited Segments List under section 303(d) of the Federal Clean Water Act

On February 27, 2007, the Center for Biological Diversity (the "Center") formally requested the San Diego Regional Water Quality Control board to include all ocean segments under Region Nine's jurisdiction in the state List of Impaired Waters ("303(d) List") under section 303(d) of the Clean Water Act Section as impaired for pH due to absorption of anthropogenic carbon dioxide pollution. To date, we have not received a response to our requests, nor has Region Nine made its draft list available for public comment.

Please take notice of the increasing scientific evidence that strengthens the case. Recently, a cruise conducted by researchers investigating ocean acidification along the California coast confirmed that ocean uptake of anthropogenic carbon dioxide has exceeded scientific predictions, resulting in levels of ocean acidification not expected for decades (R.A. Freely, et al., *Science*, 22 May 2008 (10.1126/science.1155676)). Accordingly, the State Board should take the following action requested in the Center's petition:

1. Include all ocean waters under Region Nine's jurisdiction on the State's 303(d) List as current measures are not sufficient to prevent ocean acidification and achieve the required water quality standards.
    - The Clean Water Act requires that California protect the water quality for designated uses of its waters, and the designated uses of ocean waters, as defined in California's Ocean Plan, are threatened by ocean acidification.
    - The Clean Water Act and California's antidegradation policy prohibits any degradation of water bodies that are currently meeting water quality standards. All California ocean water must be included on the 303(d) list because they are experiencing degradation in the form of increased acidification.

Enclosed for your convenience are several recent scientific articles supporting this petition that should be considered by the Board in preparing its draft and final lists including:

- Antarctic Climate & Ecosystems Cooperative Research Centre (2008) Position Analysis: CO2 emissions and climate change: Ocean impacts and adaptation issues.
- Bibby, Ruth, Polly Cleall-Harding, Simon Rundle, Steve Widdicombe, and John Spicer. (2007) Ocean acidification disrupts induced defences in the intertidal gastropod Littorina littorea. *Biol. Lett.* 3: 699–701.
- Caldiera, Ken et al. (2007). Comment on "Modern-age buildup of CO2 and its effects on seawater acidity and salinity" by Hugo Loaiciga. *Geophysical Research Letters* 34: L18608.
- Cooper, Timothy F. et al (2008).Declining coral calcification in massive Porites in two nearshore regions of the northern Great Barrier Reef. *Global Change Biology* 14: 529–538.
- Cribb, J. (2008) Acid Oceans. *ECOS* 142: 18.
- Fabry, V. J., Seibel, B. A., Feely, R. A., and Orr, J. C. (2008). Impacts of ocean acidification on marine fauna and ecosystem processes. *ICES Journal of Marine Science*, 65: 414–432.
- Feely, R.A., Sabine, C.L., Hernandez-Ayon, J.M., Ianson, D., Hales, B. (2008) Evidence for Upwelling of Corrosive "Acidified" Water onto the Continental Shelf. *Science Express Reports.* Published online 22 May 2008.
- Guinotte, J.M., Fabry, V.J. (2008). Ocean acidification and its potential effects on marine ecosystems. *Ann. N.Y. Acad. Sci.* 1134: 320–342.
- Hall-Spencer, Jason M. et al (2008). Volcanic carbon dioxide vents show ecosystem effects of ocean acidification. *Nature* advance online publication 8 June 2008.
- Hoegh-Guldberg, O. et al. (2007). Coral Reefs under Rapid Climate Change and Ocean Acidification. *Science* 318: 1737-1742.
- Kuffner, I.B., Andersson, A.J., Jokiel, P.L., Rodgers, K.S., Mackenzie, F.T. (2008) Decreased abundance of crustose coralline algae due to ocean acidification. *Nature Geoscience* 1:114.

Thank you for your consideration. Please keep me apprised of any developments with regard to our request. Please note that the Center's contact information has changed, and future correspondence should be sent to:

Emily Jeffers
Center for Biological Diversity

351 California Street, Suite 600
San Francisco, CA 94104
(415) 436-9682
fax (415) 436-9683
ejeffers@endangeredearth.org

Sincerely,

Emily Jeffers

enclosure: CD with electronic articles

CITY OF OCEANSIDE
WATER UTILITIES DEPARTMENT

October 23, 2009

Ms. Cynthia Gorham-Test
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Re: Comments on the 2008 Draft Clean Water Act Sections 305(b) and 303(d) Integrated Report for the San Diego Region

Dear Ms. Gorham-Test,

The City of Oceanside is submitting this letter in response to the request for comments on the 2008 Draft Clean Water Act Sections 305(b) and 303(d) Integrated Report for the San Diego Region. Thank you for the opportunity to comment and the extension of the comment period.

San Luis Rey HU

Overarching comments:

- Throughout the report and lists, there are several references to "Pacific Ocean Shoreline, San Luis Rey HU, Oceanside Pier at..." followed by different sampling locations within the City, only one of which as actually at the pier. This should be changed to "Pacific Ocean Shoreline, San Luis Rey HU, Oceanside at..." to reduce confusion.
- The Lines of Evidence (LOE) that use SWAMP data repeatedly lump the two SWAMP San Luis Rey monitoring stations (903SLSLR2 and 903SLSLR8) together, although they are over 30 miles apart. The assessment area for the listings include only the lower 19 miles, and so SLR2 is outside of this assessment area. More site/impairment details are included below.

Table 1 provides comments on the new draft listings for the lower 19 miles of the San Luis Rey River.

Loma Alta HA

Table 2 provides comments on the draft listings for Loma Alta Creek.

Table 1. San Luis Rey River Draft 303d Listing Comments.

Impairment	Decision ID	LOE ID	Comment
Enterococcus	17074	7494	The link is incorrect. It links to the Santa Margarita Watershed report.
Fecal Coliform	17075	7495	The link is incorrect. It links to the Santa Margarita Watershed report.
Phosphorous	17070	7348	The link is incorrect. It links to the Santa Margarita Watershed report.
		25793	• According to the SWAMP data, two of the four samples (IDs 5399642 and 5411682 from 3/1/05 and 4/20/05, respectively) were below the WQO of 0.1 mg/L. • These four samples were taken from SWAMP station SLR2 which is located over 30 miles inland, outside of the assessment area. This line of evidence should be removed as it is not relevant to the assessment area.
Selenium	17071	21182	"Data Used to Assess WQ": Says "Four of the samples showed excessive **sulfate** concentrations…" • Sulfate should be changed to selenium • Four of the eight sites were from SLR2 which is outside of the assessed area for the listing (the lower 19 miles) and should be removed. • Of the remaining four samples from SLR8, one was marked with "Estimated; non-compliant with associated QAPP" and should be removed from the listing assessment. In addition, more recent Copermittee storm water and ambient MLS and TWAS data does not show any exceedances of the selenium WQO from 2001 through 2008 (0 of 26 samples). The basis for this listing should be reviewed.
Sulfates	17068	23500	• Four of the eight sites were from SLR2 which is outside of the assessed area for the listing (the lower 19 miles) and should be removed. • The Weight of Evidence section references section 3.2 of the Listing Policy which would indicate that sulfate is a conventional pollutant and therefore would require a minimum sample number of 5. Since sulfates are considered a conventional pollutant, then the minimum number of samples would not be met and sulfates should not be listed on the 303d list for this segment.
Total Nitrogen as N	17072	7355	The link is incorrect. It links to the Santa Margarita Watershed report.

Impairment	Decision ID	LOE ID	Comment
		7375	• The SWAMP data indicates that only 5 samples were collected at SWAMP station 903SLSLR2 (as opposed to the 8 stated in the fact sheet). • Of these five, two exceeded 1 mg/L. • Of those two, the 5/19/2004 sample included a nitrate value that was estimated and not compliant with the QAPP. • In addition, this LOE is for samples from SLR2, which is over 30 miles inland and should not be used in the evidence to list the lower 19 miles. This line of evidence should be removed as it is not relevant to the assessment area.
		23502	• The SWAMP data indicates that only 3 samples were collected at SWAMP station 903SLSLR8 (as opposed to the 8 stated in the fact sheet), all of which exceeded the WQO. • Of those three, the 5/18/2004 sample included a nitrate value that was estimated and not compliant with the QAPP, which is part of the Total Nitrogen calculation. Should this data point still be included?

Table 2. Loma Alta Creek Draft 303d Listing Comments.

Impairment	Decision ID	LOE ID	Comment
Selenium	16516	8875	• One of the four samples has the comment, "Estimated; not compliant with QAPP" and should therefore be removed from the listing assessment. More recent Copermittee stormwater and ambient TWAS data does not show any exceedances of the selenium WQO.

Agua Hedionda HA

The City supports the recommendation to de-list Agua Hedionda Lagoon for indicator bacteria, as the water body meets the water quality standard established for this pollutant. Seven lines of evidence were considered in the assessment of this pollutant-water body combination and the data demonstrate that applicable water quality standards are being achieved. The City also supports the recommendation to de-list Agua Hedionda Lagoon for sedimentation/siltation based upon the weight of evidence presented in the fact sheet.

Thank you again for your consideration of these comments. If you have any questions, please contact Alison Witheridge at 760-435-5822.

Sincerely,

M. A. Lahsaiezadeh

Mo Lahsaie, Ph.D., REHS
Clean Water Program Coordinator

City of Encinitas

October 22, 2009

Ms. Cynthia Gorham-Test
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

SUBJECT: COMMENTS ON THE DRAFT 2008 CLEAN WATER ACT SECTION 303(B) AND 303(D) INTEGRATED REPORT FOR THE SAN DIEGO REGION

Dear Ms. Gorham-Test,

On behalf of the City of Encinitas, please accept the following comments regarding the Draft 2008 Clean Water Act Section 303(b) and 303(d) Integrated Report for the San Diego Region (Draft Report).

The Draft Report effectively establishes surface water quality priorities throughout the San Diego Region by identifying water body-pollutant combinations that are causing or contributing to beneficial use impairments. Further, this sets the stage for future actions to address identified water body-pollutant combinations through such processes as Total Maximum Daily Load (TMDL) development. While the *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Listing / De-Listing Policy)* establishes a standardized approach to assessing available data in support of the 303(d) listings, it is critical to take into consideration all factors surrounding proposed as well as existing listings such as data integrity, quality assurance and quality control (QA/QC) measures, and historic, existing and future site conditions.

Thank you for providing the opportunity to comment on the Draft Report and for your consideration of the comments prepared for your review.

Sincerely,

Erik Steenblock
Clean Water Program Manager, City of Encinitas

CC: Phil Cotton, City Manager
Peter Cota-Robles, Director of Engineering Services

Tel 760/633-2600 FAX 760/633-2627, 505 South Vulcan Avenue, Encinitas, CA 92024 TDD 760/633-2700

1. The City of Encinitas supports the De-Listing decision for the following water-body pollutant combinations:

    a. San Elijo Lagoon, Cardiff Outlet – Enterococcus
    b. San Elijo Lagoon, Cardiff Outlet – Fecal Coliform

2. The following comments are specific to water body-pollutant combinations that are proposed for listing or are currently listed on the 303(d) list of impaired water bodies.

Water Body Name:	**Pacific Ocean Shoreline, San Elijo Lagoon HAS, at Cardiff State Beach at San Elijo**
Pollutant:	**Total Coliform**
Beneficial Use Impairment:	**Shellfish Harvesting (SHELL)**
Decision ID:	**17561**
Listing Decision:	**Do Not De-List (Existing)**

Comments:

It is recommended that the water body-pollutant combination of Cardiff State Beach at San Elijo-Total Coliform, be REMOVED or DELAYED from the Draft 2008 Clean Water Act Section 303(b) and 303(d) Integrated Report for the San Diego Region (Draft Report).

In the Draft Report Fact Sheet specific to this water-body pollutant combination, it is stated that "*...RWQCB staff concludes that the water body-pollutant combination should not be removed from the Section 303(d) list because applicable water quality standards for the pollutant are being exceeded.*"

As presented in the Fact Sheet of the Draft Report, a total of 6 Lines of Evidence (LOE) were used to assess this water body-pollutant combination. Of those, it is only LOE's 27417 and 27406 that are identified as those supporting the impairment of the Shellfish Harvesting (SHELL) beneficial use due to Total Coliform exceedances. Notably, LOE 27417 is identified as informational only, and not considered in determination of a listing decision. LOE 27406 identifies 117 of 302 samples exceeding Total Coliform standards for the Shellfish Harvesting.

It is important to note that the conclusions made in the Draft Report are not supported by the Water Quality Control Plan for the San Diego Basin (9) (Basin Plan), as the Shellfish Harvesting Beneficial Use does NOT apply to this water body. In table 2-3 of the Basin Plan, San Elijo Lagoon does not have SHELL identified as a Beneficial Use. Further, the San Elijo Lagoon Ecological Preserve is adjacent to this location, where shellfish harvesting activities are prohibited by State law. As such, it is arguably inappropriate to apply shellfish harvesting total coliform water quality standards to this water body.

Additionally, there is currently a significant effort by a diverse group of stakeholders to address a variety of concerns regarding the San Elijo Lagoon including circulation, hydrodynamics, habitat, and water quality through the San Elijo Lagoon Restoration Project. As this multi-agency

(including participation by the RWQCB) process develops, it is anticipated that significant improvements will be realized in all of these areas, including water quality within and out letting from the lagoon at Cardiff State Beach. Further, much of the water quality concern will be elucidated by vast amounts of data collected by responsible parties associated with Investigative Order No. R9-2006-076 (Carlsbad Hydrologic Unit Lagoon Monitoring Order). A final data report related to this comprehensive lagoon monitoring effort was provided to the RWQCB in June of 2009, therefore should be considered in future 303(d) list development.

Water Body Name:	**Cottonwood Creek (San Marcos Creek Watershed)**
Pollutant:	**DDT**
Beneficial Use Impairment:	**Warm Freshwater Habitat**
Decision ID:	**5345**
Listing Decision:	**Add to 303(d) List (NEW)**

Comments:

It is recommended that the water body-pollutant combination of Cottonwood Creek-DDT be RE-EVALUATED or REMOVED from the Draft Report List.

As presented in the Fact Sheet of the Draft Report, a single (one) LOE was evaluated to assess the water body-pollutant combination of Cottonwood Creek-DDT. LOE 3199 identifies 2 of 4 total samples as exceeding applicable water quality criteria for DDT.

In a review of referenced SWAMP, 2004 data, there is NO result information provided and each (4) sample evaluated includes a QAQC Description of *"Estimated; non-compliant with associated QAPP"*. Based upon the identified discrepancies, the proposed water body-pollutant listing of Cottonwood Creek-DDT should be RE-EVALUATED or REMOVED from the Draft Report List.

Water Body Name:	**Cottonwood Creek (San Marcos Creek Watershed)**
Pollutant:	**Selenium**
Beneficial Use Impairment:	**Warm Freshwater Habitat**
Decision ID:	**16389**
Listing Decision:	**Add to 303(d) List (NEW)**

Comments:

It is recommended that the water body-pollutant combination of Cottonwood Creek-Selenium be RE-EVALUATED for the Draft Report.

As presented in the Fact Sheet of the Draft Report, a single (one) LOE was evaluated to assess the water body-pollutant combination of Cottonwood Creek-Selenium. LOE 8517 identifies 4 of 4 samples exceeding applicable water quality criteria for Selenium.

In a review of referenced SWAMP, 2007 data, it appears that two (2) of four (4) samples include a QAQC Description of *"Estimated; non-compliant with associated QAPP"*, effectively adding some uncertainty to the data supporting the listing. Based upon the identified uncertainties, the

proposed water body-pollutant listing of Cottonwood Creek – Selenium should be RE-EVALUATED for the Draft Report.

Water Body Name:	**Escondido Creek**
Pollutant:	**DDT**
Beneficial Use Impairment:	**Warm Freshwater Habitat**
Decision ID:	**5414**
Listing Decision:	**Add to 303(d) List (NEW)**

Comments:

It is recommended that the water body-pollutant combination of Escondido Creek-DDT be RE-EVALUATED for the Draft Report List.

As presented in the Fact Sheet of the Draft Report, two (2) LOE's were evaluated to assess the water body-pollutant combination of Escondido Creek-DDT. LOE 5414 does not identify any exceedances for DDT, and LOE 3247 identifies 5 of 8 total samples as exceeding applicable water quality criteria for DDT.

In a review of referenced SWAMP, 2004 data, there is NO result information provided and most samples, and a number of samples appear to be duplicative. Based upon the identified discrepancies, the proposed water body-pollutant listing of Escondido Creek-DDT should be RE-EVALUATED for the Draft Report List.

UNITED STATES MARINE CORPS
MARINE CORPS BASE
BOX 555008
CAMP PENDLETON, CALIFORNIA 92055-5008

IN REPLY REFER TO:
5090
ENVSEC
23 Oct 2009

Executive Officer
Attention: Mr. Alan T. Monji
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Subj: CLEAN WATER ACT SECTION 305(b)/303(d) INTEGRATED REPORT – 2008

Marine Corps Base Camp Pendleton supports the Regional Water Quality Control Board's (Regional Board) efforts to promote water quality and appreciates the opportunity to review and comment upon the draft 2008 Clean Water Act (CWA) Section 305(b)/303(d) Integrated Report. Camp Pendleton's resource managers are concerned about the scientific and legal basis for some of the proposed listings, as well as potential consequences to the base's water resources and supply (to include water rights) that could result from the listings contained in the subject draft report. Camp Pendleton respectfully requests that the Regional Board consider the following comments prior to taking further action on the 2008 Integrated Report.

1. While the subject report proposes to de-list Sandia Creek in the Santa Margarita River watershed for nitrogen impairment, Camp Pendleton has data from an ongoing water quality study (2007-2009) that indicate the total nitrogen concentrations in Sandia Creek exceed Basin Plan limits in 24 of 24 samples. The study will not be completed until January 2010; however, the base is willing to share preliminary data regarding Sandia Creek in order to inform the Regional Board's decision. Camp Pendleton requests – as was recently discussed at the October 12, 2009 workshop – that the Board delay consideration of de-listing Sandia Creek until the next listing cycle.

2. While Camp Pendleton supports 303(d) listings and subsequent development of total maximum daily loads (TMDL) where data demonstrates that existing beneficial uses are impaired by excessive pollutant loading, the proposed listing of "invasive species" as a pollutant and source of impairment in San Mateo Creek is inappropriate under Section 303(d) of the CWA. The CWA requires identification and listing of toxic and conventional pollutants that are discharged into navigable waters in excess of water quality standards, however it does not define invasive species as "pollutants." Even if invasive species could be considered pollutants under the CWA, it would be impossible to develop or measure a TDML for invasive fish. Camp Pendleton is committed to protecting rare and endangered species and has well-established federal natural resources programs which more appropriately address Steelhead Trout protection. These programs are structured to meet the requirements of the Endangered Species Act, Invasive

5090
ENVSEC
23 Oct 2009

Species Act and the Sikes Act and are executed by a full-time staff fisheries biologist. Additionally, invasive species are ubiquitous in San Diego County, yet San Mateo Creek is the only proposed invasive species listing. For the foregoing reasons, Camp Pendleton requests that the Regional Board remove the invasive species listing for San Mateo Creek.

3. Although observations regarding the scientific propriety of water quality objectives in the San Diego Basin Plan are beyond the scope of review under Section 303(d) of the CWA, reference stream conditions in the Santa Margarita River watershed appear to contain naturally high levels of nutrients in the absence of anthropogenic loading. This may suggest that current Basin Plan water quality objectives are more stringent than natural conditions in the Santa Margarita River watershed. It is suggested that the Regional Board evaluate the propriety of Basin Plan standards in the Santa Margarita Watershed during the next Triennial Review.

If you have any questions, please contact Ms. Gabrielle Skipper at (760) 725-9760.

Sincerely,

D. F. LEVI
Deputy, Assistant Chief of Staff,
Environmental Security
By direction of the Commanding Officer

cc: Director, Office of Water Resources
Western Area Counsels Office

CITY OF
CHULA VISTA

DEPARTMENT OF PUBLIC WORKS OPERATIONS

October 26, 2009
File # 0780-85-KY181

California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340
Attention: Ms. Cynthia Gorham-Test

SUBJECT: COMMENTS ON THE PROPOSED 2008 FEDERAL CLEAN WATER ACT SECTION 303(D) LIST OF WATER QUALITY LIMITED SEGMENTS

Thank you for the opportunity to provide comments on the proposed 2008 Clean Water Act Section 303(d) list. The City of Chula Vista has carefully reviewed the proposed 303(d) list, Lines of Evidence (LOE), and monitoring data that have been used to list Poggi Canyon Creek and the Sweetwater River. The following are our comments that we trust will meet your consideration before the 303(d) list is finalized. Our comments are organized under each Water Body/Pollutant combination heading.

Poggi Canyon Creek/Selenium

Fact Sheet:
The Fact Sheet states that this pollutant is being considered for placement on Section 303(d) list under Section 3.1 of the Water Quality Control Policy (Listing Policy). One LOE (7427) is presented to support the listing of Poggi Canyon Creek for selenium. The Fact Sheet further states that according to results in California's Surface Water Ambient Monitoring Program (SWAMP) Report, 2007, three water samples were collected at Poggi Creek Station (910OTPOG3) in January, April, and May 2003, and that all three samples exceed the Water Quality Objective for selenium. The Fact Sheet further states that data used satisfies the data quality requirements of Section 6.1.4 of the Listing Policy.

Comment:
In reviewing the SWAMP data, it is evident that test results from samples taken on 04/21/2003 and 05/15/2003 are both "Estimated, non-compliant with associated Quality Assurance Project Plan (QAPP)". Of the three test results on the same sample from 01/21/2003, two of the results are from "Matrix Spike/Matrix Spike duplicate" samples, indicating that they were blanks. Only one test result from a normal grab sample is compliant with the associated QAPP (please see Attachment 1).

1800 Maxwell Rd.
Chula Vista, CA 91911
Phone (619) 397-6000

Conclusion:
Based on the presented data, only one test result on a sample out of the three samples taken is valid and, therefore, the data does not meet the requirements of Table 3.1 of the Listing Policy.

Recommendation:
Since there are insufficient valid sample results from Poggi Canyon Creek, the referenced LOE does not meet the requirements of Table 3.1 of the Listing Policy and, therefore, Poggi Canyon Creek should not be 303(d) listed for selenium.

Poggi Canyon Creek/DDT

Fact Sheet:
The Fact Sheet states that this pollutant is being considered for placement on the Section 303(d) list under Section 3.1 of the Listing Policy. One LOE (3359) is presented to support the listing of Poggi Canyon Creek for DDT. The Fact Sheet further states that according to results in the SWAMP Report, 2004, two of three samples collected from March through September 2002, exceeded the California Toxics Rule (CTR). The Fact Sheet also states that data used satisfies the data quality requirements of Section 6.1.4 of the Listing Policy.

Comment:
In reviewing the SWAMP data, three samples were taken in 2003 on 01/21/2003 (two test results), 04/21/2003 (one test result), and 05/15/2003 (six test results). Please see Attachment 2 for SWAMP test results. Based on the available data in the SWAMP database:

- The two entries from 01/21/2003 both had no result listed.
- The one entry from 04/21/2003 had no result listed and was "Estimated; non-compliant with associated QAPP."
- Out of the six entries from 05/15/2003, four of them were "Matrix Spike/Matrix Spike Duplicate," indicating that they are blank samples. Two of these entries did not have results.

Conclusion:
Based on the presented data, only one sample (taken on 05/15/2003) out of the three samples taken is valid and, therefore, the data does not meet the requirements of Table 3.1 of the Listing Policy.

Recommendation:
Since there are insufficient valid sample results from Poggi Canyon Creek, the referenced LOE does not meet the requirements of Table 3.1 of the Listing Policy and, therefore, Poggi Canyon Creek should not be 303(d) listed for DDT.

Sweetwater River/Sulfate

Fact Sheet:
The Fact Sheet states that this pollutant is being considered for placement on the Section 303(d) list under Section 3.2 of the Listing Policy. Three LOE (25667, 7185, 6519) are presented to support the listing of the Sweetwater River for sulfate. Data used to assess water quality are presented as follows:

1. SWAMP Report, 2007, indicates that four of the eight samples collected at Station 909SSWR03 show excessive sulfate concentrations (Attachment 3).
2. San Diego County Municipal Copermittees' Annual Progress Report, 2007, indicates that eleven of fifteen samples collected exceed the Water Quality Objective for Total Dissolved Solids.
3. SWAMP Report, 2007, indicates that four of the eight samples collected at Station 909SSWR08 show excessive sulfate concentrations (Attachment 4).

Comment:
Station 909SSWR03 is upstream and east of the Sweetwater Reservoir in hydrological sub-area (HSA) 909.31, while Station 909SSWR08 is downstream and west of the Reservoir in HSA 909.12. Section 6.1.5.4 of the Policy states "data shall be aggregated by the water body segments as defined in the Basin Plan." Therefore, LOE 25667 cannot be aggregated with LOE 6519.

According to Table 2-2 of the Basin Plan, HSA 909.12 is exempt from Municipal and Domestic Supply Beneficial Uses. According to Table 3-2 of the Basin Plan, the Water Quality Objective for sulfate in the Lower Sweetwater River is 500 mg/L and not 250 mg/L, as indicated. As can be seen from SWAMP data, none of the test results for sulfate at Station 909SSWR03 exceed 250 mg/L, and test results for sulfate at Station 909SSWR08 do not exceed 500mg/L.

TDS exceedance data from the San Diego County Municipal Copermittees' Annual Progress Report, 2007 was used as a LOE for listing the Sweetwater River as impaired for sulfate. TDS exceedances cannot be attributed to sulfates alone and should not be used as a LOE for listing a water segment for sulfates since TDS exceedances may be due to the presence of different types of salts in water.

Conclusion:
Two of the LOEs referenced do not show exceedances of the Basin Plan Water Quality Objectives. The third line of evidence indicates an exceedance of TDS and not sulfate. The Sweetwater River has been 303(d) listed for TDS elsewhere.

Recommendation:
Since there are no LOEs supporting listing of the Sweetwater River for sulfate, it is recommended to remove this water body/pollutant combination from the proposed 2008 303(d) list.

Sweetwater River/TDS/Salinity/Chloride

Fact Sheet:
The Fact Sheet states that this pollutant is being considered for placement on the Section 303(d) list under Section 3.2 of the Listing Policy. Two LOEs (7185, 6519) are presented to support the listing of the Sweetwater River for TDS/Salinity/Chloride. Data used to assess water quality are presented as follows:

1. San Diego County Municipal Copermittees' Annual Progress Report, 2007, indicates that eleven of fifteen samples collected exceed the Water Quality Objective for Total Dissolved Solids.
2. SWAMP Report, 2007, indicates that four of the eight samples collected at the Sweetwater River show excessive sulfate concentrations.

Comment:
As noted under "Sweetwater River/Sulfate" above, the Water Quality Objective for the Lower Sweetwater River is 500 mg/L and not 250 mg/L as indicated. This fact makes LOE 6519 invalid.

Further, the only one remaining LOE is for TDS exceedance, which does not support listing the Sweetwater River for salinity or chloride.

Conclusion:
The only valid LOE presented in the Fact Sheet supports listing of the Lower Sweetwater River for TDS and not salinity or chloride.

Recommendation:
Since there are no LOE supporting listing of the Sweetwater River for salinity or chloride, it is recommended to remove these water body/pollutant combinations from the proposed 2008 303(d) list.

Sweetwater River/Enterococcus

Fact Sheet:
The Fact Sheet states that this pollutant is being considered for placement on the Section 303(d) list under Section 3.2 of the Listing Policy. One LOE (7184) is presented to support the listing of the Sweetwater River for Enterococcus. The Fact Sheet further states that according to test results from the San Diego County Municipal Copermittees' Annual Progress Report, 2007, all fifteen samples exceed the WQO for Enterococcus. The Fact Sheet also states that data used satisfies the data quality requirements of Section 6.1.4 and 6.1.5 of the Listing Policy.

Comment:
Test samples were taken at the Mass Loading Station in the Sweetwater River, which is located in Hydrologic Sub Area (HSA) 909.12. According to Table 2-2 of the Basin Plan, this HSA has a Potential Beneficial Use of REC-1. The Water Quality Objective used to assess pollutant exceedance is the most stringent of the US EPA bacteriological criteria for Enterococcus of 61 colonies per 100 mL, which is a standard for water contact recreation (REC-1).

According to Section 6.1.5.4 of the Listing Policy, "data shall be aggregated by the water body segments as defined in the Basin Plan". The reach of the Sweetwater River within which samples were taken, has a Potential Beneficial Use of REC-1.

Conclusion:
The Water Quality Objective applied to the Lower Sweetwater River is for contact recreation (REC-1), which is a Potential Beneficial Use for that segment of the river. The correct Water

Quality Objective to be applied is for REC-2 since Potential Beneficial Uses should not be used as a basis for 303(d) listing water bodies or developing TMDLs.

Recommendation:
It is recommended to use the correct Water Quality Objective (REC-2) for comparison of test results and determination of exceedances.

Sweetwater River/Fecal Coliform

Fact Sheet:
The Fact Sheet states that this pollutant is being considered for placement on the Section 303(d) list under Section 3.2 of the Listing Policy. One LOE (7376) is presented to support the listing of the Sweetwater River for Fecal Coliform. The Fact Sheet further states that according to test results from the San Diego County Municipal Copermittees' Annual Progress Report, 2007, thirteen of fifteen samples exceed the WQO for Fecal Coliform. The Fact Sheet also states that data used satisfies the data quality requirements of Section 6.1.4 of the Listing Policy.

Comment:
Test samples were taken at the Mass Loading Station in the Sweetwater River, which is located in Hydrologic Sub Area (HSA) 909.12. According to Table 2-2 of the Basin Plan, this HSA has a Potential Beneficial Use of REC-1. The Water Quality Objective used to assess pollutant exceedance is the Basin Plan Water Quality Objective for contact recreation (REC-1).

According to Section 6.1.5.4 of the Listing Policy, "data shall be aggregated by the water body segments as defined in the Basin Plan". The reach of the Sweetwater River within which samples were taken, has a Potential Beneficial Use of REC-1.

Conclusion:
The Water Quality Objective applied to the Lower Sweetwater River is for contact recreation (REC-1), which is a Potential Beneficial Use for that segment of the river. The correct Water Quality Objective to be applied is for REC-2 since Potential Beneficial Uses are not to be used as a basis for 303(d) listing water bodies or developing TMDLs.

Recommendation:
It is recommended to use the correct Water Quality Objective (REC-2) for comparison of test results and determination of exceedances.

K. Aminpour

KHOSRO AMINPOUR
SENIOR CIVIL ENGINEER

Attachments

C: Richard Hopkins, Director of Public Works
Matt Little, Assistant Director of Public Works
Silvester Evetovich, Principal Civil Engineer

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ATTACHMENT 1
Poggi - Selenium

Project	Station Code	Station Name	Sample Date	Sample Time	Sample Type	Analyte	Fraction	Result	Units	Lab Comments	QaQc Description
Surface Water Ambient Monitoring Program	910OTPOG3	Poggi Creek 3	04/21/2003	11:15	Normal Grab Sample	Selenium	Dissolved	12.8	µg/L	Sample preparation date was 04/22/2003.	Estimated; non-compliant with associated QAPP
Surface Water Ambient Monitoring Program	910OTPOG3	Poggi Creek 3	01/21/2003	11:15	Matrix Spike/Matrix spike duplicate	Selenium	Dissolved	23.6	µg/L	90 %Rec; Expected Result 24.6. Sample preparation date was 01/23/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	910OTPOG3	Poggi Creek 3	05/15/2003	9:30	Normal Grab Sample	Selenium	Dissolved	19.2	µg/L	Sample preparation date was 05/16/2003.	Estimated; non-compliant with associated QAPP
Surface Water Ambient Monitoring Program	910OTPOG3	Poggi Creek 3	01/21/2003	11:15	Normal Grab Sample	Selenium	Dissolved	14.6	µg/L	Sample preparation date was 01/23/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	910OTPOG3	Poggi Creek 3	01/21/2003	11:15	Matrix Spike/Matrix spike duplicate	Selenium	Dissolved	23.5	µg/L	89 %Rec, 0.257 RPD; Expected Result 24.6. Sample preparation date was 01/23/2003.	Compliant with associated QAPP

ATTACHMENT 2
Poggi Creek - DDT

Project	Agency	Station Code	Station Name	Sample Date	Sample Time	Sample Type	Analyte	Fraction	Result	Units	Lab Comments	QaQc Description
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	05/15/2003	9:30	Normal Grab Sample	p,p'-DDT	None		µg/L	Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 05/19/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	05/15/2003	9:30	Matrix Spike/Matrix spike duplicate	o,p'-DDT	None	0.0204	µg/L	Expected Result 0.02. Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 05/19/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	05/15/2003	9:30	Matrix Spike/Matrix spike duplicate	p,p'-DDT	None	0.0248	µg/L	Expected Result 0.02. Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 05/19/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	05/15/2003	9:30	Matrix Spike/Matrix spike duplicate	p,p'-DDT	None	0.0244	µg/L	Expected Result 0.02. Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 05/19/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	01/21/2003	11:15	Normal Grab Sample	p,p'-DDT	None		µg/L	Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 01/25/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	04/21/2003	11:15	Normal Grab Sample	p,p'-DDT	None		µg/L	Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 04/25/2003.	Estimated; non-compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	04/21/2003	11:15	Normal Grab Sample	o,p'-DDT	None		µg/L	Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 04/25/2003.	Estimated; non-compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	01/21/2003	11:15	Normal Grab Sample	o,p'-DDT	None		µg/L	Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 01/25/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	05/15/2003	9:30	Normal Grab Sample	o,p'-DDT	None		µg/L	Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 05/19/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	05/15/2003	9:30	Matrix Spike/Matrix spike duplicate	o,p'-DDT	None	0.0204	µg/L	Expected Result 0.02. Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 05/19/2003.	Compliant with associated QAPP

ATTACHMENT 3
Sweetwater 3 - Sulfate

Project	Station Code	Station Name	Sample Date	Sample Time	Sample Type	Analyte	Fraction	Result	Units	Lab Comments	QaQc Description
Surface Water Ambient Monitoring Program	909SSWR03	Sweetwater River 3	09/07/2005	7:00	Normal Grab Sample	Sulfate	None	83.1	mg/L	1/100 diln; Sample preparation date was 09/08/2005.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	909SSWR03	Sweetwater River 3	06/01/2005	7:10	Normal Grab Sample	Sulfate	None	64	mg/L	1/10 diln; Sample preparation date was 06/02/2005.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	909SSWR03	Sweetwater River 3	01/31/2006	7:00	Normal Grab Sample	Sulfate	None	82	mg/L	1/10 diln; Sample preparation date was 02/01/2006.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	909SSWR03	Sweetwater River 3	04/11/2006	7:00	Normal Grab Sample	Sulfate	None	52.4	mg/L	1/10 diln; Sample preparation date was 04/12/2006.	Compliant with associated QAPP

ATTACHMENT 4
Sweetwater 8 - Sulfate

Project	Station Code	Station Name	Sample Date	Sample Time	Sample Type	Analyte	Fraction	Result	Units	Lab Comments	QaQc Description
Surface Water Ambient Monitoring Program	909SSWR08	Sweetwater River 8	09/06/2005	16:00	Normal Grab Sample	Sulfate	None	448	mg/L	RPD 8.75, 1/200 diln; Sample preparation date was 09/08/2005.	Estimated; non-compliant with associated QAPP
Surface Water Ambient Monitoring Program	909SSWR08	Sweetwater River 8	01/30/2006	17:30	Normal Grab Sample	Sulfate	None	443	mg/L	1/100 diln; Sample preparation date was 02/01/2006.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	909SSWR08	Sweetwater River 8	05/31/2005	17:30	Normal Grab Sample	Sulfate	None	483	mg/L	1/200 diln; Sample preparation date was 06/02/2005.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	909SSWR08	Sweetwater River 8	09/06/2005	16:00	Normal Grab Sample	Sulfate	None	489	mg/L	1/200 diln; Sample preparation date was 09/08/2005.	Estimated; non-compliant with associated QAPP
Surface Water Ambient Monitoring Program	909SSWR08	Sweetwater River 8	04/10/2006	18:00	Normal Grab Sample	Sulfate	None	328	mg/L	1/100 diln; Sample preparation date was 04/12/2006.	Compliant with associated QAPP

CITY OF
CHULA VISTA

DEPARTMENT OF PUBLIC WORKS OPERATIONS

October 26, 2009
File # 0780-85-KY181

California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340
Attention: Ms. Cynthia Gorham-Test

SUBJECT: COMMENTS ON THE PROPOSED 2008 FEDERAL CLEAN WATER ACT SECTION 303(D) LIST OF WATER QUALITY LIMITED SEGMENTS

Thank you for the opportunity to provide comments on the proposed 2008 Clean Water Act Section 303(d) list. The City of Chula Vista has carefully reviewed the proposed 303(d) list, Lines of Evidence (LOE), and monitoring data that have been used to list Poggi Canyon Creek and the Sweetwater River. The following are our comments that we trust will meet your consideration before the 303(d) list is finalized. Our comments are organized under each Water Body/Pollutant combination heading.

Poggi Canyon Creek/Selenium

Fact Sheet:
The Fact Sheet states that this pollutant is being considered for placement on Section 303(d) list under Section 3.1 of the Water Quality Control Policy (Listing Policy). One LOE (7427) is presented to support the listing of Poggi Canyon Creek for selenium. The Fact Sheet further states that according to results in California's Surface Water Ambient Monitoring Program (SWAMP) Report, 2007, three water samples were collected at Poggi Creek Station (910OTPOG3) in January, April, and May 2003, and that all three samples exceed the Water Quality Objective for selenium. The Fact Sheet further states that data used satisfies the data quality requirements of Section 6.1.4 of the Listing Policy.

Comment:
In reviewing the SWAMP data, it is evident that test results from samples taken on 04/21/2003 and 05/15/2003 are both "Estimated, non-compliant with associated Quality Assurance Project Plan (QAPP)". Of the three test results on the same sample from 01/21/2003, two of the results are from "Matrix Spike/Matrix Spike duplicate" samples, indicating that they were blanks. Only one test result from a normal grab sample is compliant with the associated QAPP (please see Attachment 1).

1800 Maxwell Rd.
Chula Vista, CA 91911
Phone (619) 397-6000

Conclusion:
Based on the presented data, only one test result on a sample out of the three samples taken is valid and, therefore, the data does not meet the requirements of Table 3.1 of the Listing Policy.

Recommendation:
Since there are insufficient valid sample results from Poggi Canyon Creek, the referenced LOE does not meet the requirements of Table 3.1 of the Listing Policy and, therefore, Poggi Canyon Creek should not be 303(d) listed for selenium.

Poggi Canyon Creek/DDT

Fact Sheet:
The Fact Sheet states that this pollutant is being considered for placement on the Section 303(d) list under Section 3.1 of the Listing Policy. One LOE (3359) is presented to support the listing of Poggi Canyon Creek for DDT. The Fact Sheet further states that according to results in the SWAMP Report, 2004, two of three samples collected from March through September 2002, exceeded the California Toxics Rule (CTR). The Fact Sheet also states that data used satisfies the data quality requirements of Section 6.1.4 of the Listing Policy.

Comment:
In reviewing the SWAMP data, three samples were taken in 2003 on 01/21/2003 (two test results), 04/21/2003 (one test result), and 05/15/2003 (six test results). Please see Attachment 2 for SWAMP test results. Based on the available data in the SWAMP database:

- The two entries from 01/21/2003 both had no result listed.
- The one entry from 04/21/2003 had no result listed and was "Estimated; non-compliant with associated QAPP."
- Out of the six entries from 05/15/2003, four of them were "Matrix Spike/Matrix Spike Duplicate," indicating that they are blank samples. Two of these entries did not have results.

Conclusion:
Based on the presented data, only one sample (taken on 05/15/2003) out of the three samples taken is valid and, therefore, the data does not meet the requirements of Table 3.1 of the Listing Policy.

Recommendation:
Since there are insufficient valid sample results from Poggi Canyon Creek, the referenced LOE does not meet the requirements of Table 3.1 of the Listing Policy and, therefore, Poggi Canyon Creek should not be 303(d) listed for DDT.

Sweetwater River/Sulfate

Fact Sheet:
The Fact Sheet states that this pollutant is being considered for placement on the Section 303(d) list under Section 3.2 of the Listing Policy. Three LOE (25667, 7185, 6519) are presented to support the listing of the Sweetwater River for sulfate. Data used to assess water quality are presented as follows:

1. SWAMP Report, 2007, indicates that four of the eight samples collected at Station 909SSWR03 show excessive sulfate concentrations (Attachment 3).
2. San Diego County Municipal Copermittees' Annual Progress Report, 2007, indicates that eleven of fifteen samples collected exceed the Water Quality Objective for Total Dissolved Solids.
3. SWAMP Report, 2007, indicates that four of the eight samples collected at Station 909SSWR08 show excessive sulfate concentrations (Attachment 4).

Comment:
Station 909SSWR03 is upstream and east of the Sweetwater Reservoir in hydrological sub-area (HSA) 909.31, while Station 909SSWR08 is downstream and west of the Reservoir in HSA 909.12. Section 6.1.5.4 of the Policy states "data shall be aggregated by the water body segments as defined in the Basin Plan." Therefore, LOE 25667 cannot be aggregated with LOE 6519.

According to Table 2-2 of the Basin Plan, HSA 909.12 is exempt from Municipal and Domestic Supply Beneficial Uses. According to Table 3-2 of the Basin Plan, the Water Quality Objective for sulfate in the Lower Sweetwater River is 500 mg/L and not 250 mg/L, as indicated. As can be seen from SWAMP data, none of the test results for sulfate at Station 909SSWR03 exceed 250 mg/L, and test results for sulfate at Station 909SSWR08 do not exceed 500mg/L.

TDS exceedance data from the San Diego County Municipal Copermittees' Annual Progress Report, 2007 was used as a LOE for listing the Sweetwater River as impaired for sulfate. TDS exceedances cannot be attributed to sulfates alone and should not be used as a LOE for listing a water segment for sulfates since TDS exceedances may be due to the presence of different types of salts in water.

Conclusion:
Two of the LOEs referenced do not show exceedances of the Basin Plan Water Quality Objectives. The third line of evidence indicates an exceedance of TDS and not sulfate. The Sweetwater River has been 303(d) listed for TDS elsewhere.

Recommendation:
Since there are no LOEs supporting listing of the Sweetwater River for sulfate, it is recommended to remove this water body/pollutant combination from the proposed 2008 303(d) list.

Sweetwater River/TDS/Salinity/Chloride

Fact Sheet:
The Fact Sheet states that this pollutant is being considered for placement on the Section 303(d) list under Section 3.2 of the Listing Policy. Two LOEs (7185, 6519) are presented to support the listing of the Sweetwater River for TDS/Salinity/Chloride. Data used to assess water quality are presented as follows:

1. San Diego County Municipal Copermittees' Annual Progress Report, 2007, indicates that eleven of fifteen samples collected exceed the Water Quality Objective for Total Dissolved Solids.
2. SWAMP Report, 2007, indicates that four of the eight samples collected at the Sweetwater River show excessive sulfate concentrations.

Comment:
As noted under "Sweetwater River/Sulfate" above, the Water Quality Objective for the Lower Sweetwater River is 500 mg/L and not 250 mg/L as indicated. This fact makes LOE 6519 invalid.

Further, the only one remaining LOE is for TDS exceedance, which does not support listing the Sweetwater River for salinity or chloride.

Conclusion:
The only valid LOE presented in the Fact Sheet supports listing of the Lower Sweetwater River for TDS and not salinity or chloride.

Recommendation:
Since there are no LOE supporting listing of the Sweetwater River for salinity or chloride, it is recommended to remove these water body/pollutant combinations from the proposed 2008 303(d) list.

Sweetwater River/Enterococcus

Fact Sheet:
The Fact Sheet states that this pollutant is being considered for placement on the Section 303(d) list under Section 3.2 of the Listing Policy. One LOE (7184) is presented to support the listing of the Sweetwater River for Enterococcus. The Fact Sheet further states that according to test results from the San Diego County Municipal Copermittees' Annual Progress Report, 2007, all fifteen samples exceed the WQO for Enterococcus. The Fact Sheet also states that data used satisfies the data quality requirements of Section 6.1.4 and 6.1.5 of the Listing Policy.

Comment:
Test samples were taken at the Mass Loading Station in the Sweetwater River, which is located in Hydrologic Sub Area (HSA) 909.12. According to Table 2-2 of the Basin Plan, this HSA has a Potential Beneficial Use of REC-1. The Water Quality Objective used to assess pollutant exceedance is the most stringent of the US EPA bacteriological criteria for Enterococcus of 61 colonies per 100 mL, which is a standard for water contact recreation (REC-1).

According to Section 6.1.5.4 of the Listing Policy, "data shall be aggregated by the water body segments as defined in the Basin Plan". The reach of the Sweetwater River within which samples were taken, has a Potential Beneficial Use of REC-1.

Conclusion:
The Water Quality Objective applied to the Lower Sweetwater River is for contact recreation (REC-1), which is a Potential Beneficial Use for that segment of the river. The correct Water

Quality Objective to be applied is for REC-2 since Potential Beneficial Uses should not be used as a basis for 303(d) listing water bodies or developing TMDLs.

Recommendation:
It is recommended to use the correct Water Quality Objective (REC-2) for comparison of test results and determination of exceedances.

Sweetwater River/Fecal Coliform

Fact Sheet:
The Fact Sheet states that this pollutant is being considered for placement on the Section 303(d) list under Section 3.2 of the Listing Policy. One LOE (7376) is presented to support the listing of the Sweetwater River for Fecal Coliform. The Fact Sheet further states that according to test results from the San Diego County Municipal Copermittees' Annual Progress Report, 2007, thirteen of fifteen samples exceed the WQO for Fecal Coliform. The Fact Sheet also states that data used satisfies the data quality requirements of Section 6.1.4 of the Listing Policy.

Comment:
Test samples were taken at the Mass Loading Station in the Sweetwater River, which is located in Hydrologic Sub Area (HSA) 909.12. According to Table 2-2 of the Basin Plan, this HSA has a Potential Beneficial Use of REC-1. The Water Quality Objective used to assess pollutant exceedance is the Basin Plan Water Quality Objective for contact recreation (REC-1).

According to Section 6.1.5.4 of the Listing Policy, "data shall be aggregated by the water body segments as defined in the Basin Plan". The reach of the Sweetwater River within which samples were taken, has a Potential Beneficial Use of REC-1.

Conclusion:
The Water Quality Objective applied to the Lower Sweetwater River is for contact recreation (REC-1), which is a Potential Beneficial Use for that segment of the river. The correct Water Quality Objective to be applied is for REC-2 since Potential Beneficial Uses are not to be used as a basis for 303(d) listing water bodies or developing TMDLs.

Recommendation:
It is recommended to use the correct Water Quality Objective (REC-2) for comparison of test results and determination of exceedances.

K. Aminpour

KHOSRO AMINPOUR
SENIOR CIVIL ENGINEER

Attachments

C: Richard Hopkins, Director of Public Works
Matt Little, Assistant Director of Public Works
Silvester Evetovich, Principal Civil Engineer

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ATTACHMENT 1
Poggi - Selenium

Project	Station Code	Station Name	Sample Date	Sample Time	Sample Type	Analyte	Fraction	Result	Units	Lab Comments	QaQc Description
Surface Water Ambient Monitoring Program	910OTPOG3	Poggi Creek 3	04/21/2003	11:15	Normal Grab Sample	Selenium	Dissolved	12.8	µg/L	Sample preparation date was 04/22/2003.	Estimated; non-compliant with associated QAPP
Surface Water Ambient Monitoring Program	910OTPOG3	Poggi Creek 3	01/21/2003	11:15	Matrix Spike/Matrix spike duplicate	Selenium	Dissolved	23.6	µg/L	90 %Rec; Expected Result 24.6. Sample preparation date was 01/23/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	910OTPOG3	Poggi Creek 3	05/15/2003	9:30	Normal Grab Sample	Selenium	Dissolved	19.2	µg/L	Sample preparation date was 05/16/2003.	Estimated; non-compliant with associated QAPP
Surface Water Ambient Monitoring Program	910OTPOG3	Poggi Creek 3	01/21/2003	11:15	Normal Grab Sample	Selenium	Dissolved	14.6	µg/L	Sample preparation date was 01/23/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	910OTPOG3	Poggi Creek 3	01/21/2003	11:15	Matrix Spike/Matrix spike duplicate	Selenium	Dissolved	23.5	µg/L	89 %Rec, 0.257 RPD; Expected Result 24.6. Sample preparation date was 01/23/2003.	Compliant with associated QAPP

ATTACHMENT 2
Poggi Creek - DDT

Project	Agency	Station Code	Station Name	Sample Date	Sample Time	Sample Type	Analyte	Fraction	Result	Units	Lab Comments	QaQc Description
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	05/15/2003	9:30	Normal Grab Sample	p,p'-DDT	None		µg/L	Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 05/19/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	05/15/2003	9:30	Matrix Spike/Matrix spike duplicate	o,p'-DDT	None	0.0204	µg/L	Expected Result 0.02. Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 05/19/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	05/15/2003	9:30	Matrix Spike/Matrix spike duplicate	p,p'-DDT	None	0.0248	µg/L	Expected Result 0.02. Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 05/19/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	05/15/2003	9:30	Matrix Spike/Matrix spike duplicate	p,p'-DDT	None	0.0244	µg/L	Expected Result 0.02. Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 05/19/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	01/21/2003	11:15	Normal Grab Sample	p,p'-DDT	None		µg/L	Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 01/25/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	04/21/2003	11:15	Normal Grab Sample	p,p'-DDT	None		µg/L	Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 04/25/2003.	Estimated; non-compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	04/21/2003	11:15	Normal Grab Sample	o,p'-DDT	None		µg/L	Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 04/25/2003.	Estimated; non-compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	01/21/2003	11:15	Normal Grab Sample	o,p'-DDT	None		µg/L	Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 01/25/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	05/15/2003	9:30	Normal Grab Sample	o,p'-DDT	None		µg/L	Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 05/19/2003.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	State Water Resources Control Board	910OTPOG3	Poggi Creek 3	05/15/2003	9:30	Matrix Spike/Matrix spike duplicate	o,p'-DDT	None	0.0204	µg/L	Expected Result 0.02. Sample preparation date was 01/01/1950.Digest extraction method was EPA 3510C. Extraction date was 05/19/2003.	Compliant with associated QAPP

ATTACHMENT 3
Sweetwater 3 - Sulfate

Project	Station Code	Station Name	Sample Date	Sample Time	Sample Type	Analyte	Fraction	Result	Units	Lab Comments	QaQc Description
Surface Water Ambient Monitoring Program	909SSWR03	Sweetwater River 3	09/07/2005	7:00	Normal Grab Sample	Sulfate	None	83.1	mg/L	1/100 diln; Sample preparation date was 09/08/2005.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	909SSWR03	Sweetwater River 3	06/01/2005	7:10	Normal Grab Sample	Sulfate	None	64	mg/L	1/10 diln; Sample preparation date was 06/02/2005.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	909SSWR03	Sweetwater River 3	01/31/2006	7:00	Normal Grab Sample	Sulfate	None	82	mg/L	1/10 diln; Sample preparation date was 02/01/2006.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	909SSWR03	Sweetwater River 3	04/11/2006	7:00	Normal Grab Sample	Sulfate	None	52.4	mg/L	1/10 diln; Sample preparation date was 04/12/2006.	Compliant with associated QAPP

ATTACHMENT 4
Sweetwater 8 - Sulfate

Project	Station Code	Station Name	Sample Date	Sample Time	Sample Type	Analyte	Fraction	Result	Units	Lab Comments	QaQc Description
Surface Water Ambient Monitoring Program	909SSWR08	Sweetwater River 8	09/06/2005	16:00	Normal Grab Sample	Sulfate	None	448	mg/L	RPD 8.75, 1/200 diln; Sample preparation date was 09/08/2005.	Estimated; non-compliant with associated QAPP
Surface Water Ambient Monitoring Program	909SSWR08	Sweetwater River 8	01/30/2006	17:30	Normal Grab Sample	Sulfate	None	443	mg/L	1/100 diln; Sample preparation date was 02/01/2006.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	909SSWR08	Sweetwater River 8	05/31/2005	17:30	Normal Grab Sample	Sulfate	None	483	mg/L	1/200 diln; Sample preparation date was 06/02/2005.	Compliant with associated QAPP
Surface Water Ambient Monitoring Program	909SSWR08	Sweetwater River 8	09/06/2005	16:00	Normal Grab Sample	Sulfate	None	489	mg/L	1/200 diln; Sample preparation date was 09/08/2005.	Estimated; non-compliant with associated QAPP
Surface Water Ambient Monitoring Program	909SSWR08	Sweetwater River 8	04/10/2006	18:00	Normal Grab Sample	Sulfate	None	328	mg/L	1/100 diln; Sample preparation date was 04/12/2006.	Compliant with associated QAPP

THE CITY OF SAN DIEGO

October 23, 2009

Electronic Delivery: CTest@waterboards.ca.gov

Cynthia Gorham-Test, Environmental Scientist
San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Dear Ms. Gorham-Test:

Subject: Review and Comment of the Draft Clean Water Act Sections 305(b)/303(d) Integrated Report for the San Diego Region

The City of San Diego (City), Storm Water Department is pleased to provide the San Diego Regional Water Quality Control Board (Regional Board) with comments regarding the Draft Clean Water Act Sections 305(b)/303(d) Integrated Report for the San Diego Region. We support the listing program with the goal of protecting and restoring water quality through sound science. A sound science approach is needed to assure that available City resources are used cost effectively and timely to achieve these common goals. The following general comments are based on using sound science approaches in the review of the proposed Impaired Water Body Segment Listing. Additionally, specific comments are included on the attached table titled "City of San Diego Comments on the Draft Clean Water Act Sections 305(b)/303(d) Integrated Report for the San Diego Region."

Review of Section 6.1.4 of the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Policy) states: "Data supported by a Quality Assurance Project Plan (QAPP) pursuant to the requirements of 40 CFR 31.45 are acceptable for use in developing the section 303(d) list" for impaired water body segments. Many of the individual sample results included in the listing assessment contained the following note: "Estimated; non-compliant with associated QAPP." These data should not be included in any listing assessments because the validity of the sample results is in question. The water segments to which this comment applies are detailed in the attached table.

There are several of the Pacific Coastline proposed listings that are located within the La Jolla Area of Special Biological Significance (ASBS) numbers 29 and 31. The listings of concern include Pacific Ocean Shoreline, Scripps HA at Avenida de la Playa at La Jolla Shores Beach, Pacific Ocean Shoreline, Scripps HA at La Jolla Cove, and Pacific Ocean Shoreline, at Vallecitos Court at La Jolla Shores Beach. These ASBS were designated on April 18, 1974 (Resolution No. 74-32) and June 19, 1975 (Resolution No. 75-61). Respectively, the ASBS designation was made prior to the original November 28, 1975 San Diego Basin Plan Shellfish

beneficial use designation. Additionally, the collection or harvesting of shellfish is strictly prohibited and enforced within the ASBS. Therefore, the Shellfish beneficial use is not applicable to the shorelines within the ASBS which has an enforceable institutional control that was in-place prior to the original Basin Plan Shellfish designation. The City recommends that the Shellfish beneficial use standards not be applied to the listed waterbodies within the ASBS.

Quality control data for sample results are important for validation of individual test results. Information about individual toxicity sample controls was not included in the online Surface Water Ambient Monitoring Program (SWAMP) database. For example, the percent minimum significant difference (pMSD) bounds cannot be calculated because the replicate control results have not been made available in the online SWAMP database. The City requests that the quality control data specific to individual toxicity sample results be made available on the SWAMP database for public review.

In many of the proposed toxicity listings, sediment and water toxicity samples were combined to determine the final exceedance count and listing determination. The toxicants found in water and sediment are likely to be different. Additionally, the species used to test toxicity are different for water and sediment. The Policy states: "A water segment shall be placed on the section 303(d) list if the water segment exhibits statistically significant water or sediment toxicity using the binomial distribution..." The Policy does not state that water and sediment toxicity data can be combined.

The total selenium criteria used for comparison of the dissolved selenium sample data was based on the chronic water quality criteria from the California Toxics Rule (CTR) (40 CFR Part 131). The total selenium criterion from the CTR is 5.0 ug/L. There is no acute criterion for total or dissolved selenium included in the CTR. However, the dissolved selenium grab samples collected through the SWAMP program were compared to chronic total selenium criterion for assessment purposes, which is inappropriate and is not a scientifically sound methodology.

The San Diego County Municipal Copermittees have collected recent data that were not included in the listing criteria for dissolved selenium. The majority of the selenium listings were based on dissolved selenium grab sample results collected under the SWAMP and the Copermittees Regional Monitoring. These data were not included in the Lines of Evidence (LOE) in the fact sheets. Water bodies to which this applies are indicated in the attached table. The Copermittees collected ambient condition total and dissolved selenium samples as directed under Regional Water Quality Control Board Order R9-2007-0001 (Permit). These samples were representative of ambient conditions and are comparable to the chronic criterion. Results collected during ambient conditions were collected over a 24 hour period. The samples were collected during fall 2007 and spring 2008 at many locations in northern San Diego County and Chollas Creek. The samples, when compared to the chronic criteria of 5.0 ug/L for selenium, do not indicate any issues with total selenium levels during ambient conditions. This is in direct opposition to the results of the SWAMP monitoring results and listing assessments. Based on Municipal Copermittees current data and the misapplication of chronic criteria on acute grab samples, the City is recommending that the proposed listings be reevaluated or moved to the Category 3 list.

It is not clear from the Fact Sheets how samples were assessed to determine total nitrogen levels. The listing evaluations for total nitrogen incorporated data from the San Diego Copermittees Regional Monitoring data, as applicable. However, the sampling program does not analyze for total nitrogen. Additionally, the term total nitrogen and total nitrogen as N are used interchangeably. The City recommends that the method for determining total nitrogen be included in the Fact Sheets, and the definition of total nitrogen be explicitly defined.

The San Diego Basin plan criterion for un-ionized ammonia of 0.025 mg/L was used for the listing evaluations of ammonia as N in Miramar Reservoir, Lake Hodges, Murray Reservoir, and San Vicente Reservoir. The United States Environmental Protection Agency (USEPA) provides guidance on the criteria for ionized ammonia in its 1999 Update of Ambient Water Quality Criteria for Ammonia, EPA-822-R-99-014. These criteria incorporate temperature, conductivity, and pH into the calculation to determine appropriate ammonia criteria. The USEPA approved method should be used to assess acute ambient levels of ammonia as nitrogen in these water bodies. The un-ionized ammonia criteria should not be used for listing assessments of ammonia as N, and the City recommends that these proposed listings be moved to the Category 3 list.

The Storm Water Department supports the listing program with the goal of protecting and restoring water quality using sound science. In order to assure the City's resources are used cost effectively to reduce identified impairments, we have provided these comments based on sound science approaches. The ultimate management of these listings will require significant City resources. The City will be required to first identify the source of toxicity, and then identify the specific sources of the constituents before management actions can be implemented. When the listing process does not have a sound science approach, significant resources and time will most likely be needed before specific actions can be implemented to address the impairment. For example, where listings are based on the combined water and sediment toxicity results for a single listing, the data should be reevaluated and moved to a Category 3 list. This modification will allow for further studies using data from a combination of regional efforts (e.g. Bight08, Regional Harbor Management Program, Regional Monitoring Program, etc.) and the City's planned special studies to verify potential water quality impairments. These studies will use sound science approaches in addition to obtaining input from the Regional Board. This recommended approach will allow the City to direct its limited resources to higher priority water quality issues and address them in a timely manner.

Sincerely,

Kris McFadden
Deputy Director

KM\rk

Enclosure: Table: City of San Diego Draft Clean Water Act Sections 305(b)/303(d) Integrated Report for the San Diego Region

cc: Tony Heinrichs
Ruth Kolb
Drew Kleis
Cathy Pieroni

THE CITY OF SAN DIEGO

October 23, 2009

Electronic Delivery: CTest@waterboards.ca.gov

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Sincerely,

Kris McFadden
Deputy Director

KM\rk

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cc: Tony Heinrichs
Ruth Kolb
Drew Kleis
Cathy Pieroni

CITY OF SAN DIEGO COMMENTS ON DRAFT 2008 CALIFORNIA 305(b)/303(d) INTEGRATED REPORT, REGIONAL BOARD 9—SAN DIEGO REGION					
Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
Category 5 Waters of the Proposed 2008 California §303(d) List of Water Quality Limited Segments					
Rose Creek Toxicity Decision Recommendation: It is recommended that this water body be listed as Category 3 in the 2008 305(b)/303(d) Integrated Report. Ambient and wet weather monitoring data are currently being collected through the Copermittee Regional Monitoring program and will be available for the assessment for the 2010 integrated list. The quality of the data used in the current assessment is questionable for *H. azteca*, and should not be included in the assessment. A decision to postpone listing this waterbody as Category 5 will allow for more current data to be incorporated into the assessment.					
1	Rose Creek (9064000)	Toxicity (17012)	30285	• SWAMP ambient toxicity testing (chronic) data were used in this LOE. The fact sheet states that four samples were collected between March 2002 and September 2002 and they showed significant toxicity levels (SL) in the following tests: *Hyalella azteca* survival and growth test - three of the four samples were toxic. However, o The data available in the SWAMP online database included only two samples. o Only two samples are available for the Hyalella growth analysis. The two Hyalella growth samples were collected on 4/24/02 and 6/5/02 and both pertain to sediment toxicity study data. Both samples are noted as "Estimated; non-compliant with associated QAPP". Therefore, the samples do not meet the requirements of Section 6.1.4 of the Policy which states, "Data supported by a Quality Assurance Project Plan….are acceptable for use in developing the section 303(d) list". Because the samples were not supported by their associated QAPP, they should not be used in the analysis. o Only two samples are available for the Hyalella survival analysis. Those samples were collected on 4/24/02 and 6/5/02 and both pertain to sediment toxicity study data. The sample from 6/5/02 was not significantly different compared to the negative control. Both samples are noted as "Estimated; non-compliant with associated QAPP". Therefore, the samples do not meet the requirements of Section 6.1.4 of the Policy which states, "Data supported by a Quality Assurance Project Plan….are acceptable for use in developing the section 303(d) list". Because the samples were not supported by their associated QAPP, they should not be used in the analysis.	• All available data (two water samples and two sediment samples) are noted as "Estimated; non-compliant with associated QAPP". This means that neither the water nor sediment samples are appropriate for inclusion in the listing assessment. Please remove them from the analysis. • Section 3.6 of the Policy states that water segments may be listed for statistically significant water or sediment toxicity. The section does not state that water and sediment toxicity results may be used together to list a water body. The sensitivity of test organisms to pollutants may be quite different in these two matrices; therefore, sediment and water toxicity results should not be combined. • Control data were not provided and these need to be evaluated in order to validate sample results.

CITY OF SAN DIEGO COMMENTS ON DRAFT 2008 CALIFORNIA 305(b)/303(d) INTEGRATED REPORT, REGIONAL BOARD 9—SAN DIEGO REGION					
Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
2	Rose Creek (9064000)	Toxicity (17012)	21389	• According to the LOE, samples were collected at Rose Creek station 906LPRSC4 from March 2002 to September 2002 and they showed significant toxicity levels (SL) in the following tests: Selenastrum algae growth test - three of the four samples. Ceriodaphnia dubia survival/reproductive test - two of the four samples were toxic. However, o Four samples are available for the Ceriodaphnia survival analysis. Those samples were collected on 3/13/02, 4/24/02, 6/5/02 and 9/18/02. Only the data from the 4/24/02 sample was found to be significant compared to the negative control. The three remaining samples were not significant. However, in the 4/24/02 sample, each of the ten replicates in the survival test died and there was no reproduction data available for any replicate. Even though test protocols may not require re-analysis of the sample, 100% mortality of all replicates may indicate an issue with sample handling or other cross-interference. This is especially true because the survival was 100% or nearly 100% for all other samples collected at the station. o Of the four samples analyzed using Selenastrum on the SWAMP database; three are significant compared to the control and one is not significant.	• Only Selenastrum results support listing this water body as impaired for toxicity. • One of four Ceriodaphnia results was toxic, and not two of four. This discrepancy should be corrected in the database. • Toxicity endpoints and species should not be combined for listing decisions, as individual species are sensitive to different pollutants and the toxicity endpoints are indicative of different conditions. The scientific justification for this practice should be verified.
Tecolote Creek Nitrogen Decision Recommendation: The methodology for summing nitrogen species should be clarified and the number of exceedances corrected from 33 to 28.					
3	Tecolote Creek (90650000)	Nitrogen (16719)	7379	• This LOE is based on fixed station physical chemistry monitoring (SWAMP data) conducted in 2002. None of the three samples collected exceeded the water quality objective for total nitrogen.	• This LOE does not support listing
4	Tecolote Creek (90650000)	Nitrogen (16719)	7192	• Based on fixed station physical chemistry monitoring (Urban Runoff Monitoring data) conducted between 1994 and 2006. The fact sheet states that thirty-three of 37 samples exceeded the water quality objective. However, total nitrogen was not measured in this monitoring program and the exceedances are assumed to be based on the sum of nitrate, nitrite and TKN. Of the 37 samples, nitrate and nitrite did not exceed their WQO between 1994 and 2006. No WQO for TKN is available for comparison. If the three nutrient values are summed to assess total nitrogen, and assuming a WQO of 1 mg/L, 28 samples exceeded.	• The analysis results for total nitrogen should be corrected, and the methodology for summing the nitrogen species made clear. • It is recommended that number of exceedances be updated.

CITY OF SAN DIEGO COMMENTS ON DRAFT 2008 CALIFORNIA 305(b)/303(d) INTEGRATED REPORT, REGIONAL BOARD 9—SAN DIEGO REGION					
Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
5	Tecolote Creek (90650000)	Selenium (16718)	7579	• The fact sheets state that this listing is based on three lines of evidence. However, only one line of evidence is presented. • Three samples were collected in 2002 under the SWAMP program. All three samples were analyzed for dissolved selenium and exceeded the California Toxics Rule ***chronic*** water quality objective for total Selenium (5µg/L). • Copermittee Regional Monitoring data were not included in the assessment. There were 41 samples collected between 1993 and 2007, zero of which exceeded the chronic condition total selenium criteria. • Current monitoring data for ambient condition are being collected and will be available for the 2010 integrated report.	• The fact sheet should be updated to the correct number of LOEs (one). • Selenium should be compared to the correct criteria; the criterion is for chronic total selenium. The data used in the assessment were acute dissolved selenium • This water body should be listed as Category 3, there are not enough data to adequately assess the condition of the waterbody and not all currently available data were used in the assessment.
6	Soledad Canyon (90610000)	Selenium (17006)	7578	• Four water samples were collected at Soledad Canyon Creek station 906LPSOL2 in March, April, June, and September 2002. Three samples showed excessive selenium concentration according to results in the Surface Water Ambient Monitoring Program Report, 2007. Sample results were between 7.6 µg/L and 9.5 µg/L.	• Selenium should be compared to the correct criteria; the criterion is for chronic total selenium. The data used in the assessment were acute dissolved selenium
7	Los Peñasquitos (90610000)	Enterococcus (16568)	7335	• Fifteen of fifteen samples exceeded the maximum limit at 61 colonies per 100mL (RWQCB, 2007) which is derived from the US EPA criteria for water contact.	• No comment
8	Los Peñasquitos (90610000)	Fecal Coliform (16569)	7370	• Eleven of 15 samples exceeded the WQO of 400 MPN/100mL.	• No comment
Los Peñasquitos Selenium Decision Recommendation: This water body should be listed as Category 3, current ambient monitoring data from the Copermittee Regional Monitoring program are not included in the assessment, and these data show no exceedances of chronic total selenium criteria. Additionally, wet weather data collected between November 2001 to February 2006 do not show any exceedances of chronic total selenium criteria. Finally, Selenium should be compared to the correct criteria; the criterion is for chronic total selenium.					

CITY OF SAN DIEGO COMMENTS ON DRAFT 2008 CALIFORNIA 305(b)/303(d) INTEGRATED REPORT, REGIONAL BOARD 9—SAN DIEGO REGION					
Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
9	Los Peñasquitos (90610000)	Selenium (16570)	7050	• This LOE lists four samples, of which three exceeded CTR freshwater chronic total selenium criteria (5ug/L). These data were collected in 2002 under the SWAMP program and were analyzed for dissolved selenium. One of these samples (9/18/02) was noted "Estimated; non-compliant with associated QAPP" and therefore should not be included in the data assessment. Therefore only two samples out of three exceeded the WQO. Although only one line of evidence is required to list a constituent under section 3.6 of the Listing Policy, selenium samples collected in the intervening seven years have not been assessed. • The Copermittees Regional Monitoring Program (2007-2008) should be considered for inclusion, as a more robust and recent data set. During ambient monitoring in the fall of 2007 and the spring of 2008, there were no exceedances of the CTR total selenium criteria at three stations and two events (six samples in total).	• It is recommended that the dataset be updated to exclude the sample noted as out of compliance with the QAPP. • In addition, it is recommended that recent ambient data collected through the Copermittee Regional Monitoring Program be incorporated into the listing assessment. • Selenium should be compared to the correct criteria; the criterion is for chronic total selenium. The data used in the assessment were acute dissolved selenium • Recent ambient data and wet weather data show that there is no problem with selenium. It is recommended it be categorized as a Category 3 waterbody at this time.
10	Los Peñasquitos (90610000)	Selenium (16570)	26869	• None of the fifteen dissolved selenium samples collected exceed the water quality objective according to results in the San Diego County Municipal Copermittees Urban Runoff Monitoring Report, January 2007. Samples were collected in November 2001 to February 2006.	• The CTR states that the selenium criteria apply to total selenium, and dissolved selenium should not be assessed using standard benchmarks due to the bioaccumulative nature of the substance. • Selenium should be compared to the correct criteria; the criterion is for chronic total selenium. The data used in the assessment were acute dissolved selenium
Los Peñasquitos Total Nitrogen Decision Recommendation: The methodology used to calculate total nitrogen should be articulated in the Fact Sheet.					
11	Los Peñasquitos (90610000)	Total Nitrogen (16696)	8813	• One of 4 samples collected exceeded the water quality objective according to results in the Surface Water Ambient Monitoring Program Urban Runoff Monitoring Report, January 2007. Samples were collected on March 13, April 24, June 5, and September 18, 2002.	• No comment

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Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
12	Los Peñasquitos (90610000)	Total Nitrogen (16696)	7336	• The fact sheet states that 15 of 15 samples exceeded the total nitrogen criteria of 1 mg/L. However, total nitrogen was not measured in this monitoring program and the exceedances are assumed to be based on the sum of nitrate, nitrite and TKN. If the monitoring results from November 2001 through February 2008 are assessed, meaning that nitrate, nitrite, and total kjeldahl nitrogen are summed, then 18 of 20 samples exceed the Basin Plan criteria of 1 mg/L.	• The methodology used to calculate total nitrogen should be stated.
Los Peñasquitos Toxicity Decision Recommendation: No comment					
13	Los Peñasquitos (90610000)	Toxicity (16567)	26872	• Fifteen storm water samples were collected and used to test for toxicity to Selenastrum, Ceriodaphnia dubia, and Hyalella azteca. None of the samples for any species or test were found to be toxic.	• This LOE does not support listing
14	Los Peñasquitos (90610000)	Toxicity (16567)	21387	• Four ambient water samples were collected at one station during 2002. The samples were used to test for toxicity to Selenastrum and Ceriodaphnia dubia. Three of the Selenastrum and one of the four Ceriodaphnia samples were found to be toxic.	• No comment
15	Chollas Creek (90822000)	Phosphorus (116712)	6161	• The LOE states 39 of 40 samples exceeded the Basin Plan WQO of 0.1 mg/L based on data collected at the MLS under the Urban Runoff Monitoring program between 1994 and 2006.	• No comment
Chollas Creek Total Nitrogen Decision Recommendation: No comment					
16	Chollas Creek (90822000)	Total Nitrogen (16713)	7363	• One sample was collected under the SWAMP program in June 2006. This sample exceeded the WQO.	• No comment
17	Chollas Creek (90822000)	Total Nitrogen (16713)	6728	• This LOE states that 37 of 39 samples exceeded Basin Plan WQO based on wet weather data collected under the Urban Runoff Monitoring Program between 1994 and 2006.	• No comment
Mission Bay at Quivira Basin Copper Decision Recommendation: No comment					
18	Mission Bay at Quivira Basin (90752000)	Copper (17484)	30279	• This LOE states that three samples were collected under the Regional Harbor Monitoring Pilot Program. Two of the three samples exceeded the acute criteria (4.8 ppb) and all three exceeded the chronic criteria (3.1 ppb). All three samples, analyzed for total, dissolved and sediment, were above WQOs for copper.	• No comment
19	Mission Bay at Quivira Basin (90752000)	Copper (17484)	30280	• The mean of the three water column samples (therefore one sample location) exceeded the chronic water quality objective but not the acute water quality objective.	• No comment

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Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
20	Miramar Reservoir (90610000)	Ammonia as N (16694)	6161	• A total of 23 samples were analyzed between January 2005 and December 2006. Of these samples, 13 were below detection limit of 0.031 mg/L and were not included in the LOE. • While the remaining ten samples exceeded the WQO of 0.025mg/L, this WQO is based on the Basin Plan level for un-ionized ammonia. The samples were analyzed for ammonia as nitrogen. The U.S EPA WQO for ammonia is based on a combined assessment of temperature, pH and conductivity and provides a better assessment of chronic and acute toxicity for ammonia.	• Samples should not be removed from analysis because they are non-detects. • Ammonia as nitrogen should be compared to acute criteria using the EPA method* that incorporates temperature, pH, and conductivity and not compared to the standard for un-ionized ammonia. • This listing assessment should be re-evaluated using the correct criteria. *(U.S. EPA, 1999 Update of Ambient Water Quality Criteria for Ammonia, EPA-822-R-99-014, December 1999) • This LOE ID (6161) is repeated, the same LOE ID is used in conjunction with decision number 116712.
21	Miramar Reservoir (90610000)	Total Nitrogen as N (16695)	6162	• LOE states that 26 of 28 samples exceeded the WQO.	• No comment

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Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
22	Paleta Creek (90831000)	Total Chromium (16907)	7164	• This LOE states that two of 32 samples exceeded the acute WQO and four of 32 samples exceeded the chronic WQO for total chromium. The samples were collected from one monitoring station in 2007. However, these data were not available for verification in the "Monitoring and Modeling of Chollas, Paleta and Switzer Creeks" report (SCCWRP, 2007). • The sample size for this assessment is stated as 64, however the number of samples is 32, and they were compared to two criteria. This does not make the sample size 64. In fact, if a sample exceeded both the chronic and acute criteria, this should not count as a double exceedance. As the samples were grab samples, and not composited over a long period of time, the acute criteria should only apply. Therefore, 2 of 32 samples exceed criteria. • Additionally, these data were collected at one station during three storm events. According to the Water Quality Policy, Section 6.1.5.3, data collected "…on a single day or during a single short-term natural event (e.g., a storm, flood, or wildfire), the data shall not be used as the primary data set supporting the listing decision".	• Please make these data publicly available • Multiple samples from three storm events were used in this listing assessment; however, they were included in the assessment as discrete and representative samples. They should be aggregated by event (perhaps an EMC or other) and assessed that way. • Individual grab samples should be compared to the acute criteria ONLY, and therefore the number of exceedances would be 2 of 32. This is below the allowable number of 3 exceedances. • It is recommended that this waterbody/pollutant combination NOT be listed on the 2008 §303d list.
23	Paleta Creek (90831000)	Copper (16909)	7166	• 27 of 32 samples exceeded the acute WQO and 31 of 32 samples exceeded the chronic WQO for copper. These copper concentrations were above the WQO. • Comparing the same sample to both the acute and chronic criteria does not double the sample size.	• Please update the sample size to 32 samples, not 64.
24	San Diego Bay Shoreline at Spanish Landing (90821000)	Total Coliform (17002)	27268	• 39 of 231 samples exceeded the shellfish standard for Total Coliform. The allowable number of exceedances is 38.	• No comment
25	Lake Hodges (90521000)	Ammonia as N (16474)	6159	• LOE is based on drinking water quality monitoring samples for Ammonia as N collected by the Water Department between 2005 and 2006. Exceedances were based on the Basin Plan un-ionized ammonia criteria of 0.025mg/L. Thirteen of the 18 samples exceeded this WQO. The EPA criteria for ammonia should be used for assessing the potential impairment of beneficial uses. This criterion is based on assessment of pH, temperature and conductivity in conjunction with un-ionized ammonia concentrations.	• It is recommended that ammonia as nitrogen be compared to acute criteria using the EPA method* that incorporates temperature, pH, and conductivity and not compared to the standard for un-ionized ammonia. **(U.S. EPA, 1999 Update of Ambient Water Quality Criteria for Ammonia, EPA-822-R-99-014, December 1999)*

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Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
26	Murray Reservoir (90711000)	Ammonia as N (17107)	6167	• This LOE is based on drinking water quality monitoring samples for Ammonia as N collected by the Water Department between 2005 and 2006. Exceedances were based on the Basin Plan un-ionized ammonia criteria of 0.025mg/L. All ten samples exceeded this WQO. The EPA criteria for ammonia should be used for assessing the potential impairment of beneficial uses. This criterion is based on assessment of pH, temperature and conductivity in conjunction with un-ionized ammonia concentrations.	• It is recommended that ammonia as nitrogen be compared to acute criteria using the EPA method* that incorporates temperature, pH, and conductivity and not compared to the standard for un-ionized ammonia. **(U.S. EPA, 1999 Update of Ambient Water Quality Criteria for Ammonia, EPA-822-R-99-014, December 1999)*
27	Murray Reservoir (90711000)	Nitrogen (16330)	6169	• This listing is based on one LOE with 22 of 28 samples exceeding Basin Plan	• No comment
San Dieguito River Toxicity Decision Recommendation: It is recommended that data noted as "Estimated; non-compliant with associated QAPP" not be included in any analysis because they do not meet quality standards. LOE 24991 should be updated to correctly reflect the number of samples and exceedances for each species.					
28	San Dieguito River (90511000)	Toxicity (17058)	7492	• This LOE is based on the Urban Runoff Monitoring data collected between 2001 and 2006. The LOE indicated that six of 15 samples collected were toxic to the Ceriodaphnia dubia survival/reproductive test. None of the 15 samples collected for Hyalella azteca survival were found to be toxic. Five of fifteen Selenastrum capricornutum samples were found to be toxic in the growth test.	• No comment
29	San Dieguito River (90511000)	Toxicity (17058)	24991	• This LOE states that it is based on the Urban Runoff Monitoring data collected in 2003. The LOE states: "Selenastrum capricornutum- Four samples were collected and four samples show significant toxicity levels (SL) as determined by the *Selenastrum capricornutum* growth test. *Ceriodaphnia dubia*- Four samples were collected and two samples show significant toxicity levels (SL) as determined by the *Ceriodaphnia dubia* survival/reproductive test. *Hyalella azteca*-Two samples were collected and neither show significant toxicity levels (SL) as determined by the *Hyalella azteca* growth and survival test according to results in the Surface Water Ambient Monitoring Program Annual Progress Report, 2007. Samples were collected in January, April, May and September 2003 and we have the following concerns: o This reference is cited incorrectly and refers to the SWAMP toxicity data of 2003. o Review of these SWAMP data indicates that four of four Selenastrum total cell count tests were toxic. However, one of the samples was noted to be "Estimated; non compliant with associated QAPP". Hyalella survival tests found that neither of the two samples was toxic. Hyalella growth tests showed two of the two samples were not toxic. Toxicity was only recorded in the Ceriodaphnia test where one of three samples was toxic to young/female and two of three samples were toxic to Ceriodaphnia survival.	• Please update the LOE to correctly reflect the number of exceedances and the number of samples. • Data noted as "Estimated; non-compliant with associated QAPP" should not be included in the assessment and therefore the total number of samples for Selenastrum should be three.

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Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
Tijuana River Total Nitrogen as N Decision Recommendation: Total nitrogen as N was not measured for LOE 7384 or 7873. Please provide data for LOE 7384 and provide methodology for the calculation of total nitrogen as N for LOE ID 7383.					
30	Tijuana River (91111000)	Total Nitrogen as N (16916)	7384	• The LOE states that this is based on two samples of two exceeding Basin Plan WQOs. However, analysis of the SWAMP data shows that there is no measured total nitrogen data for the Tijuana River 5 Monitoring Station. Only TKN was measured at this site; neither nitrate nor nitrite were measured therefore total nitrogen cannot be assessed.	• Please provide additional rationale for this recommended listing, provide the total nitrogen data used, or move to Category 3 listing.
31	Tijuana River (91111000)	Total Nitrogen as N (16916)	7383	• This LOE is based on the Urban Runoff Monitoring Program which does not assess total nitrogen. Nitrate concentrations were above the Basin Plan WQO in one of the 15 samples, all nitrate data were below the WQO. No WQO is available for TKN.	• Please provide methodology or note of how the total nitrogen results were obtained.
Tijuana River Toxicity Decision Recommendation: No comment					
32	Tijuana River (91111000)	Toxicity (16671)	7507	• This LOE states that the five of 15 samples collected were found to be toxic for *Hyalella azteca* growth and survival. All 15 samples were toxic to *Ceriodaphnia dubia.* Results were from the San Diego County Municipal Copermittees Annual Progress Report, 2007. -Sites: TJ MLS and Hollister Street Bridge, Jan 2002 to Feb 2006.	• No comment
33	Tijuana River (91111000)	Toxicity (16671)	25808	• This LOE states that 2 of 2 samples collected were found to be toxic for *Hyalella azteca* survival and growth, for site Tijuana River 5, lat/long: 32.55132, -117.08439 on May 31, 2005 and April 10, 2006. Samples and results confirmed – compliant with QAPP. Supplemental data available for Tecate Creek (911TTET02).	• No comment
34	Tijuana River (91111000)	Toxicity (16671)	30292	• This LOE states that 1 of 2 samples collected was found to be toxic for *Selenastrum capricornutum* algae growth and *Ceriodaphnia dubia* survival and reproduction for site Tijuana River 5, lat/long: 32.55132, -117.08439 on May 31, 2005 and April 10, 2006. Samples and results confirmed – compliant with QAPP. Supplemental data available for Tecate Creek (911TTET02).	• No comment
35	Sweetwater River (90931000)	Enterococcus (16919)	7184	• One LOE is provided for enterococcus based on Urban Runoff Monitoring Program with all 15 samples exceeding WQO for enterococcus. Reassessment of these data confirms that 15 exceedances occurred based on the WQO of 61 MPN/100mL.	• No comment
36	Sweetwater River (90931000)	Fecal Coliform (16920)	7376	• One LOE is provided for enterococcus based on Urban Runoff Monitoring Program with 13 of 15 samples exceeding WQO for fecal coliform. Reassessment of these data confirms that 13 exceedances occurred.	• No comment
Sweetwater River Phosphorus Decision Recommendation: No comment					

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37	Sweetwater River (90931000)	Phosphorus (16784)	7377	• Four samples were collected under the SWAMP program, of which zero exceeded.	• This LOE does not support listing
38	Sweetwater River (90931000)	Phosphorus (16784)	7186	• 15 of 15 samples collected under the Urban Runoff Monitoring Program exceeded the Basin Plan WQO of 0.1 mg/L.	• No comment
Sweetwater River Toxicity Decision Recommendation: The distance between the Sweetwater River 3 and Sweetwater River 8 sampling sites is approximately 27 miles, but the water segment listing is for 50 miles. Section 6.1.5.4 of the Policy states that, "data shall be aggregated by water body segments as defined in the Basin Plans." Please update the water body definition to reflect two separate water bodies. The Water Quality Listing Policy states that a minimum of two exceedances is necessary to list a waterbody/pollutant combination on the 303(d) list. The upstream water body (Sweetwater River station 3) should not be listed for toxicity, as one of four water samples showed toxicity, and zero of one sediment samples showed toxicity. This does not meet the minimum requirements for listing.					
39	Sweetwater River (90931000)	Toxicity (16800)	7506	• Data from the Copermittee Regional Monitoring program were assessed. Eight of 15 samples were found to be toxic. Seven of 15 samples were found to be toxic to Selenastrum, five of 15 tests were toxic to Ceriodaphnia dubia, and no samples were toxic to *H. azteca*.	• No comment
40	Sweetwater River (90931000)	Toxicity (16800)	25673	• Eight water samples from two locations within the Sweetwater River were collected and used to test for toxicity to Selenastrum, Ceriodaphnia, and Hyalella. The distance between the two sample locations is approximately 27 miles, and therefore the sample results are evaluated separately here. • At the upstream location (Sweetwater River station 3) one of four sample results was toxic to Ceriodaphnia for reproduction. Selenastrum and Ceriodaphnia percent survival were not affected (zero of four samples). • Three of four samples at Sweetwater River station 8 were toxic to Selenastrum, but not for Ceriodaphnia survival or reproduction, or Hyalella survival.	• The distance between the Sweetwater River 3 and Sweetwater River 8 sampling sites is approximately 27 miles, but the water segment listing is for 50 miles. Section 6.1.5.4 of the Policy states that, "data shall be aggregated by water body segments as defined in the Basin Plans." • In addition, the Policy states that at a minimum the RWQCBs should identify stream reaches that may have different pollutant levels based on differences in land use, tributary inflow, or discharge input. Therefore, two separate reaches of the waterbody should be listed, not 50 miles.

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Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
41	Sweetwater River (90931000)	Toxicity (16800)	30291	• The fact sheet states that five sediment samples were collected at stations Sweetwater River stations 3 and 8 and assessed for toxicity to Hyalella azteca. However, the data included in the SWAMP online database included only one sample at each location. • Sweetwater River station 3 toxicity results show no toxicity to Hyalella for either survival or growth. • There is one exceedance for Hyalella growth at Sweetwater River station 8.	• Sweetwater River 8 is in hydrological sub area (HSA) 909.12, and Sweetwater River 3 is in HSA 909.31. It is recommended that the water segment be changed to reflect the data assessment results at the two monitoring stations. Section 6.1.5.4 of the Water Quality Policy states that, "data shall be aggregated by water body segments as defined in the Basin Plans." • In addition, one of four ambient samples and zero of one sediment samples exceeded toxicity criteria at Sweetwater River 3, and this is below the number required to list the water segment on the Draft 2008 303(d) list. • Therefore, the listing location should be changed to the reach located at Sweetwater River 8 where 3 of 4 samples were toxic to Selenastrum and one of one samples were toxic for Hyalella growth in sediment.
42	San Vicente Reservoir (90721000)	Ammonia as N (17082)	6174	• Exceedances were based on the Basin Plan un-ionized ammonia criteria of 0.025mg/L. Four of the 24 samples exceeded this WQO. The EPA criteria for ammonia should be used for assessing the potential impairment of beneficial uses. This criterion is based on assessment of pH, temperature and conductivity in conjunction with un-ionized ammonia concentrations.	• It is recommended that ammonia as nitrogen be compared to acute criteria using the EPA method* that incorporates temperature, pH, and conductivity and not compared to the standard for un-ionized ammonia. **(U.S. EPA, 1999 Update of Ambient Water Quality Criteria for Ammonia, EPA-822-R-99-014, December 1999)*
43	San Vicente Reservoir (90721000)	Total Nitrogen as N (17084)	6173	• Thirty-two of 37 samples exceed the criteria for total nitrogen	• No comment

CITY OF SAN DIEGO COMMENTS ON DRAFT 2008 CALIFORNIA 305(b)/303(d) INTEGRATED REPORT, REGIONAL BOARD 9—SAN DIEGO REGION					
Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
44	El Capitan Lake (90731000)	Phosphorus (17600)	6158	• Six of seven samples exceed criteria for total phosphorus	• No comment
45	El Capitan Lake (90731000)	Total Nitrogen as N (17602)	6157	• Thirty of 35 samples exceed the criteria for total nitrogen	• No comment
46	Switzer Creek (90822000)	Copper		• No Fact Sheet	• Please provide fact sheets for this listing or remove from Category 5.
47	Switzer Creek (90822000)	Nickel		• No Fact Sheet	• Please provide fact sheets for this listing or remove from Category 5.
48	Switzer Creek (90822000)	Zinc		• No Fact Sheet	• Please provide fact sheets for this listing or remove from Category 5.
49	San Diego River (lower) (90711000)	Enterococcus		• No Fact Sheet	• Please provide fact sheets for this listing or remove from Category 5.
50	San Diego River (lower) (90711000)	Nitrogen		• No Fact Sheet	• Please provide fact sheets for this listing or remove from Category 5.
Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth Total Coliform Decision Recommendation: No comment					
51	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (90610000)	Total Coliform (16336)	3631	• Discusses the Beneficial Use of Water Contact Recreation, not Shellfish Harvesting. • Only addresses one Enterococcus exceedance which is not the pollutant of concern.	• Not clear that this LOE supports listing
52	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (90610000)	Total Coliform (16336)	28190	• Discusses the Beneficial Use of Water Contact Recreation, not Shellfish Harvesting. • States that Health Advisories were posted on the beaches for 35 Exceedances out of 2555 Samples. This gives an exceedance percentage of 1.37% which is below the 4% exceedance percentage for coastal beaches from section 3.3 of the Policy.	• This LOE does not support listing

CITY OF SAN DIEGO COMMENTS ON DRAFT 2008 CALIFORNIA 305(b)/303(d) INTEGRATED REPORT, REGIONAL BOARD 9—SAN DIEGO REGION					
Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
53	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (90610000)	Total Coliform (16336)	26417	• Discusses the Beneficial Use of Water Contact Recreation, not Shellfish Harvesting. • States that there were no exceedances of water quality objectives.	• This LOE does not support listing
54	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (90610000)	Total Coliform (16336)	26418	• Discusses the Beneficial Use of Water Contact Recreation, not Shellfish Harvesting. • States that there were no exceedances of water quality objectives for the calculated monthly geometric means for Anderson Canyon.	• This LOE does not support listing
55	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (90610000)	Total Coliform (16336)	26428	• Discusses the Beneficial Use of Water Contact Recreation, not Shellfish Harvesting. • States that of 93 calculated geometric means for Los Peñasquitos, 2 exceeded. This gives a percentage of 2.15%.	• This LOE does not support listing
56	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (90610000)	Total Coliform (16336)	26429	• Discusses the Beneficial Use of Water Contact Recreation, not Shellfish Harvesting. • Addresses exceedances from storm events only which are isolated events and not indicative of a persistent exceedance of water quality objectives.	• No comment
57	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (90610000)	Total Coliform (16336)	26416	• States that no samples from Anderson Canyon exceeded the water quality objectives for Shellfish Harvesting.	• This LOE does not support listing

CITY OF SAN DIEGO COMMENTS ON DRAFT 2008 CALIFORNIA 305(b)/303(d) INTEGRATED REPORT, REGIONAL BOARD 9—SAN DIEGO REGION					
Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
58	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (90610000)	Total Coliform (16336)	26426	• Sixteen of 21 samples exceed shellfish standards	• No comment
59	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (90610000)	Total Coliform (16336)	26427	• Discusses the Beneficial Use of Water Contact Recreation. • States 11 out of 497 samples from Los Peñasquitos exceeded. This is 2.21% which is below the 4% exceedance percentage for listing coastal beaches from Section 3.3 of the Policy.	• This LOE does not support listing
60	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (90610000)	Total Coliform (16336)	26425	• This dataset includes the storm event samples and exceedances. • There were 120 exceedances and 497 samples (24%).	• No comment
Pacific Ocean Shoreline, Scripps HA at Avenida de la Playa at Loa Jolla Shores Beach Total Coliform Decision Recommendation: The Shellfish beneficial use should not be applied to this waterbody, because it was designated as an ASBS prior to San Diego Basin Plan beneficial use designations, and therefore is subject to an existing institutional control. Comparison of Total Coliform to Water Contact Recreation standards indicates that this water body/pollutant combination is not eligible for 303(d) listing at this time. It is recommended that this waterbody/pollutant combination not be included as a Category 5 decision on the 305(b)/303(d) 2008 Integrated Report.					
61	Pacific Ocean Shoreline, Scripps HA at Avenida de la Playa at La Jolla Shores Beach (90630000)	Total Coliform (16825)	29151	• Discusses the Beneficial Use of Water Contact Recreation, not Shellfish Harvesting. • 1 out of 49 geometric means exceeded which is within the allowable frequency.	• This LOE does not support listing

CITY OF SAN DIEGO COMMENTS ON DRAFT 2008 CALIFORNIA 305(b)/303(d) INTEGRATED REPORT, REGIONAL BOARD 9—SAN DIEGO REGION					
Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
62	Pacific Ocean Shoreline, Scripps HA at Avenida de la Playa at La Jolla Shores Beach (90630000)	Total Coliform (16825)	29177	• Discusses the Beneficial Use of Water Contact Recreation, not Shellfish Harvesting. • 23 out of 2555 samples exceeded for beach postings which is below the allowable frequency of 4% for coastal beaches from section 3.3 of the Policy.	• This LOE does not support listing
63	Pacific Ocean Shoreline, Scripps HA at Avenida de la Playa at La Jolla Shores Beach (90630000)	Total Coliform (16825)	29150	• Discusses the Beneficial Use of Water Contact Recreation, not Shellfish Harvesting. • 2 out of 213 samples exceeded which is below the allowable listing frequency.	• This LOE does not support listing
64	Pacific Ocean Shoreline, Scripps HA at Avenida de la Playa at La Jolla Shores Beach (90630000)	Total Coliform (16825)	29149	• Seven of nine samples exceeded the Shellfish harvesting standard • This area is a California Ocean Plan designated ASBS, designated April 18, 1974 (Resolution No. 74-32) and June 19, 1975 (Resolution No. 75-61). This ASBS designation was made prior to the original November 28, 1975 San Diego Basin Plan shellfish beneficial use designation. As an ASBS the collection of shellfish or any other life, is strictly prohibited and enforced. At this time the California Department of Fish and Game (CDFG) is recommending expansion of the protection of the ASBS under the Marine Life Protection Act. The City of San Diego is recommending the removal of this listing because the shellfish beneficial use does not and will not occur in the ASBS, because it was designated an ASBS prior to the original Basin Plan shellfish designation and is therefore under an existing institutional control.	• This LOE should not be included in the assessment
65	Pacific Ocean Shoreline, Scripps HA at Avenida de la Playa at La Jolla Shores Beach (90630000)	Total Coliform (16825)	29152	• Zero of nine samples exceed the Water Contact Recreation standard.	• This LOE does not support listing

CITY OF SAN DIEGO COMMENTS ON DRAFT 2008 CALIFORNIA 305(b)/303(d) INTEGRATED REPORT, REGIONAL BOARD 9—SAN DIEGO REGION					
Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
66	Pacific Ocean Shoreline, Scripps HA at Avenida de la Playa at La Jolla Shores Beach (90630000)	Total Coliform (16825)	29148	• Twenty-nine of 213 samples exceed the shellfish standard. This is below the number of allowable exceedances of 35. • The assessment results do not support listing • This area is a California Ocean Plan designated ASBS, designated April 18, 1974 (Resolution No. 74-32) and June 19, 1975 (Resolution No. 75-61). This ASBS designation was made prior to the original November 28, 1975 San Diego Basin Plan shellfish beneficial use designation. As an ASBS the collection of shellfish or any other life, is strictly prohibited and enforced. At this time the California Department of Fish and Game (CDFG) is recommending expansion of the protection of the ASBS under the Marine Life Protection Act. The City of San Diego is recommending the removal of this listing because the shellfish beneficial use does not and will not occur in the ASBS, because it was designated an ASBS prior to the original Basin Plan shellfish designation and is therefore under an existing institutional control.	• This LOE should not be included in the listing assessment
Pacific Ocean Shoreline, Scripps HA at Children's Pool Total Coliform Decision Recommendation: Please provide the data used to make this recommended listing.					
67	Pacific Ocean Shoreline, Scripps HA at Children's Pool (90630000)	Indicator Bacteria (17509)	30337	• This LOE is a placeholder to support a 303(d) listing decision made prior to 2006. Does not include any supporting data.	• Please provide additional information on bacteria concentrations
68	Pacific Ocean Shoreline, Scripps HA at Children's Pool (90630000)	Indicator Bacteria (17509)	30195	• This beach was on a year round beach advisory due to the presence of marine mammals and the resulting potential to have high bacteria. It is not clear if there is bacteria data to support listing this location.	• Please provide additional information on bacteria concentrations
Pacific Ocean Shoreline, Scripps HA, at La Jolla Cove Total Coliform Decision Recommendation: The Shellfish beneficial use should not be applied to this waterbody, because it was designated as an ASBS prior to San Diego Basin Plan beneficial use designations, and therefore is subject to an existing institutional control. Comparison of Total Coliform to Water Contact Recreation standards indicates that this water body/pollutant combination is not eligible for 303(d) listing at this time. It is recommended that this waterbody/pollutant combination not be included as a Category 5 decision on the 305(b)/303(d) 2008 Integrated Report.					

CITY OF SAN DIEGO COMMENTS ON DRAFT 2008 CALIFORNIA 305(b)/303(d) INTEGRATED REPORT, REGIONAL BOARD 9—SAN DIEGO REGION					
Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
69	Pacific Ocean Shoreline, Scripps HA, at La Jolla Cove (90630000)	Total Coliform (16842)	29226	• Fifty-nine of 292 samples exceeded the Shellfish Harvesting water quality standards, compared to an allowable 48 exceedances. • This area is a California Ocean Plan designated ASBS, designated April 18, 1974 (Resolution No. 74-32) and June 19, 1975 (Resolution No. 75-61). This ASBS designation was made prior to the original November 28, 1975 San Diego Basin Plan shellfish beneficial use designation. As an ASBS the collection of shellfish or any other life, is strictly prohibited and enforced. At this time the California Department of Fish and Game (CDFG) is recommending expansion of the protection of the ASBS under the Marine Life Protection Act. The City of San Diego is recommending the removal of this listing because the shellfish beneficial use does not and will not occur in the ASBS, because it was designated an ASBS prior to the original Basin Plan shellfish designation and is therefore under an existing institutional control.	• This LOE should not be included in the listing assessment
70	Pacific Ocean Shoreline, Scripps HA, at La Jolla Cove (90630000)	Total Coliform (16842)	29277	• Nine exceedances out of 2555 compared to Water Contact Recreation.	• LOE does not support listing
71	Pacific Ocean Shoreline, Scripps HA, at La Jolla Cove (90630000)	Total Coliform (16842)	29253	• Assessed data for the Beneficial Use of Water Contact Recreation. • Zero exceedances out of 66 Geometric mean calculations	• LOE does not support listing
72	Pacific Ocean Shoreline, Scripps HA, at La Jolla Cove (90630000)	Total Coliform (16842)	29246	• A total of 292 single samples were collected with nine samples correlated with a storm event. Two of the nine samples exceeded the Shellfish Harvesting single sample water quality objective. This information will not be used in determining a listing decision, but is of interest to the Regional Board and has been included here as additional anecdotal information. • This area is a California Ocean Plan designated ASBS, designated April 18, 1974 (Resolution No. 74-32) and June 19, 1975 (Resolution No. 75-61). This ASBS designation was made prior to the original November 28, 1975 San Diego Basin Plan shellfish beneficial use designation. As an ASBS the collection of shellfish or any other life, is strictly prohibited and enforced. At this time the California Department of Fish and Game (CDFG) is recommending expansion of the protection of the ASBS under the Marine Life Protection Act. The City of San Diego is recommending the removal of this listing because the shellfish beneficial use does not and will not occur in the ASBS, because it was designated an ASBS prior to the original Basin Plan shellfish designation and is therefore under an existing institutional control.	• This LOE was not used to make the listing decision • Any comparison to Shellfish Harvesting standards should not be included in listing decisions for this water body

CITY OF SAN DIEGO COMMENTS ON DRAFT 2008 CALIFORNIA 305(b)/303(d) INTEGRATED REPORT, REGIONAL BOARD 9—SAN DIEGO REGION					
Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
73	Pacific Ocean Shoreline, Scripps HA, at La Jolla Cove (90630000)	Total Coliform (16842)	29248	• A total of 292 single samples were collected with 10 samples correlated with a storm event. One of the 10 samples exceeded the Water Contact Recreation single sample water quality objective. This information will not be used in determining a listing decision, but is of interest to the Regional Board and has been included here as additional anecdotal information.	• This LOE was not used to make the listing decision
74	Pacific Ocean Shoreline, Scripps HA, at La Jolla Cove (90630000)	Total Coliform (16842)	29247	• A total of 292 single samples were collected with one sample exceeding the single sample water quality objective.	• LOE does not support listing
Pacific Ocean Shoreline, Scripps HA, at Ravina Total Coliform Decision Recommendation: No comment					
75	Pacific Ocean Shoreline, Scripps HA, at Ravina (90630000)	Total Coliform (16836)	29204	• 54 out of 313 samples exceeded Shellfish Harvesting standards (~17%), compared to an allowable 51 exceedances.	• No comment
76	Pacific Ocean Shoreline, Scripps HA, at Ravina (90630000)	Total Coliform (16836)	29206	• Four of 313 exceeded Water Contact Recreation standards.	• LOE does not support listing
77	Pacific Ocean Shoreline, Scripps HA, at Ravina (90630000)	Total Coliform (16836)	29212	• One of 76 geometric mean calculations exceeded the Water Contact Recreation standard.	• LOE does not support listing
78	Pacific Ocean Shoreline, Scripps HA, at Ravina (90630000)	Total Coliform (16836)	29207	• A total of 313 single samples were collected with 11 samples correlated with a storm event. One of the 11 samples exceeded the single sample water quality objective. This information will not be used in determining a listing decision, but is of interest to the Regional Board and has been included here as additional anecdotal information.	• This LOE was not used in the listing assessment.

CITY OF SAN DIEGO COMMENTS ON DRAFT 2008 CALIFORNIA 305(b)/303(d) INTEGRATED REPORT, REGIONAL BOARD 9—SAN DIEGO REGION					
Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
79	Pacific Ocean Shoreline, Scripps HA, at Ravina (90630000)	Total Coliform (16836)	29272	• Five of 2555 exceeded Water Contact Recreation standards.	• LOE does not support listing
80	Pacific Ocean Shoreline, Scripps HA, at Ravina (90630000)	Total Coliform (16836)	29205	• A total of 313 single samples were collected with 11 samples correlated with a storm event. Five of the 11 samples exceeded the Shellfish Harvesting single sample water quality objective. This information will not be used in determining a listing decision, but is of interest to the Regional Board and has been included here as additional anecdotal information.	• LOE was not used in listing decision
Pacific Ocean Shoreline, Scripps HA at Vallecitos Court at La Jolla Shores Beach Total Coliform Decision Recommendation: The Shellfish beneficial use should not be applied to this waterbody, because it was designated as an ASBS prior to San Diego Basin Plan beneficial use designations, and therefore is subject to an existing institutional control. Comparison of Total Coliform to Water Contact Recreation standards indicates that this water body/pollutant combination is not eligible for 303(d) listing at this time. It is recommended that this waterbody/pollutant combination not be included as a Category 5 decision on the 305(b)/303(d) 2008 Integrated Report.					
81	Pacific Ocean Shoreline, Scripps HA at Vallecitos Court at La Jolla Shores Beach (90630000)	Total Coliform (16921)	29653	• A total of 33 single samples were collected with six samples exceeding the Shellfish Harvesting single sample water quality objective. • This area is a California Ocean Plan designated ASBS, designated April 18, 1974 (Resolution No. 74-32) and June 19, 1975 (Resolution No. 75-61). This ASBS designation was made prior to the original November 28, 1975 San Diego Basin Plan shellfish beneficial use designation. As an ASBS the collection of shellfish or any other life, is strictly prohibited and enforced. At this time the California Department of Fish and Game (CDFG) is recommending expansion of the protection of the ASBS under the Marine Life Protection Act. The City of San Diego is recommending the removal of this listing because the shellfish beneficial use does not and will not occur in the ASBS, because it was designated an ASBS prior to the original Basin Plan shellfish designation and is therefore under an existing institutional control.	• This LOE should not be included in the listing assessment • Any comparison to Shellfish Harvesting standards should not be included in listing decisions for this water body
82	Pacific Ocean Shoreline, Scripps HA at Vallecitos Court at La Jolla Shores Beach (90630000)	Total Coliform (16921)	29654	• A total of 33 single samples were collected with no samples exceeding the Water Contact Recreation single sample water quality objective.	• LOE does not support listing

CITY OF SAN DIEGO COMMENTS ON DRAFT 2008 CALIFORNIA 305(b)/303(d) INTEGRATED REPORT, REGIONAL BOARD 9—SAN DIEGO REGION					
Comment #	**Water Body Name (Calwater Number)**	**Pollutant (Decision ID)**	**LOE ID**	**Reason for Proposed Changes/Comments**	**Comments/Proposed Changes**
83	Pacific Ocean Shoreline, Scripps HA at Vallecitos Court at La Jolla Shores Beach (90630000)	Total Coliform (16921)	29655	• A total of 20 single samples were collected with 19 monthly geometric means calculated. None of the geometric means exceeded the geometric mean Water Contact Recreation water quality objective.	• LOE does not support listing
84	Pacific Ocean Shoreline, Scripps HA at Vallecitos Court at La Jolla Shores Beach (90630000)	Total Coliform (16921)	29672	• One health advisory was issued out of 2555 beach days.	• LOE does not support listing

RANCHO MISSION VIEJO

October 26, 2009

Ms. Cynthia Gorham-Test
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court
Suite 100
San Diego, CA 92123-4340

Reference: Clean Water Act Section 305(B) Integrated Report and Clean Water Act Section 303(D) List

Subject: Rancho Mission Viejo Comments

Dear Ms. Gorham-Test:

Thank you for providing Rancho Mission Viejo (RMV) with the opportunity to review and comment on the Clean Water Act Section 305(B) Integrated Report and proposed changes to the Section 303(D) list of impaired waters. RMV is located in Southern Orange County, California. The Ranch is bound by the existing communities of Rancho Santa Margarita, Mission Viejo, San Juan Capistrano and the undeveloped Cleveland National Forest and MCB Camp Pendleton. Portions of San Juan Creek, Cristianitos Creek and the Arroyo Trabuco (to name just a few of our water resources) run through RMV lands. Since 1882, the O'Neill family has been a responsible steward of the Ranch. We have, and continue to actively manage the Ranch to protect the resources on it, including water quality. We intend to continue this tradition of stewardship into the future.

Background

Over the past several years, RMV in cooperation with the County, U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG) has undertaken three coordinated watershed-level planning efforts to determine the future land uses for south Orange County. These planning processes have resulted in approval of the Ranch Plan by the County, the San Juan Watershed/Western San Mateo Watershed Special Area Management Plan (SAMP) by the USACE, the Southern Subregion Habitat Conservation Plan (SSHCP) by USFWS and a Master Streambed Alteration Agreement (MSAA) for the Ranch Plan by CDFG.

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To support water quality, geomorphic, and habitat goals of the Ranch Plan, SAMP and SSHCP planning processes, RMV developed a comprehensive Water Quality Management Plan (WQMP) that addresses:

- pollutants and conditions of concern through consideration of the existing hydrologic/geomorphic conditions of the RMV watersheds and sub-watersheds,
- pre- and post project flow duration modeling to address hydromodification, and
- pollutant loading modeling.

This WQMP was the first of five levels of WQMP preparation. These levels include the Conceptual WQMP (the Long-Range Regional Water Quality Approach), the Draft and Final Master Area Plan WQMP (for each development Planning Area), the Sub-Area Plan WQMP (for portions of each development Planning Area), and the final Project Specific WQMP (for individual tracts). The Conceptual WQMP set the framework for the future levels of WQMP preparation and identified the site design, source control, treatment control, and hydromodification control WQMP elements that will be implemented for each sub-basin within the RMV Ranch Plan. We believe, as do the participating Federal, state and local agencies, that implementation of the Ranch Plan, SSHCP, SAMP and MSAA and the associated Conceptual WQMP is key to protection of water quality and water bodies in the San Juan Creek and San Mateo watersheds

General Comments

(1) The Regional Board should consider existing planning programs such as the SAMP, HCP, MSAA and technical plans such as the WQMP in determing whether to make changes to the 303(d) list.

(2) The data sets offered by the Regional Board in support of the proposed additions to the 303(d) list are not robust (i.e., too few samples) and in some cases may not represent the current conditions due to the age of the data. The Regional Board should develop more current and extensive data sets before making changes to the 303(d) list.

Specific Comments

(1) Diazinon

The Regional Board proposes to add a 23-mile section of the Arroyo Trabuco and a 1-mile section of San Juan Creek to the 303(d) list for diazinon. As the Regional Board is undoubtedly aware, EPA banned the use of this substance in 2004. The samples taken in the Arroyo Trabuco are ten years old and thus do not represent the current conditions of the Arroyo Trabuco or the best scientific data available. Similar to the Arroyo Trabuco, the early (1999/2000) San Juan Creek data show exceedances, but samples taken in 2003/2004 do not. It is reasonable to postulate that the 2004 ban of diazinon has had some effect on the concentrations of this substance during the last five years. The Regional Board should take new samples to determine current conditions in both the

Arroyo Trabuco and San Juan Creek before acting on any proposal to add these two creek sections to the 303(d) list for diazinon. Furthermore, the Regional Board should consider the value in expending the time, money and effort to develop a TMDL for a substance that has already been banned.

(2) Phosphorus

In the Arroyo Trabuco, according to the data presented by the Regional Board, 9 of 9 wet weather samples taken Dec 2002 to March 2006 exceeded phosphorous WQO of 0.1 mg/L. Depending on the intensity of storms sampled these samples may not be representative of all wet weather events. Please comment on the likelihood of these samples being representative of all wet weather events.

In both cases only 9 samples were taken over the course of 4 years, averaging 2 samples a year. We question whether the Regional Board has collected sufficient data to accurately characterize the concentrations of phosphorous in the Arroyo Trabuco. We recommend additional samples be taken to improve the quality and quantity of available data before the Regional Board acts on any proposal to add the Arroyo Trabuco to the 303(d) list for phosphorous.

(3) Total Nitrogen as N

The data presented by the Regional Board for Total Nitrogen as N notes that eight of nine flow-weighted event mean concentrations in the Arroyo Trabuco exceeded the water quality objective of 1.0 mg/L according to results in the Orange County Stormwater Program annual progress reports. Samples were collected nine times from December 2002 to March 2006. Does the Regional Board have additional data such as evidence of problems with nutrients, like algal blooms?

We note that urban runoff is not a significant source of total nitrogen.

(4) Toxicity

Regarding toxicity, the Regional Board data notes that 6 of 14 samples taken between 1998 and 2005 exceeded toxicity standards in the Arroyo Trabuco. Has the Regional Board considered the possibility that there is a relationship between the toxicity exceedances and diazinon, i.e., that the presence of diazinon in the water column affected the toxicity results? Please comment on this possibility.

(5) Selenium

The Regional Board data for San Juan Creek shows that 2 of 4 samples taken in 2002 and 2003 showed 'excessive' Selenium concentrations. This is a very small sample size taken in a single location [San Juan Creek station (901SJSJC9)]. As the Regional Board is

aware, selenium naturally occurs in certain geologic formations, thus it is possible that the cause of the "excessive" sampling result in San Juan Creek is from naturally occurring selenium. It is also possible that a specific hydrologic event in San Juan Creek, such as a significantly sized storm caused the "excessive" result and represents a hot spot as opposed to being representative of the section of San Juan Creek the Regional Board is proposing to add to the 303(d).

We are also aware of studies which document that the CTR level for selenium of 5 ug/L is in fact too low and there is evidence that in some geographic areas aquatic life is not harmed by higher levels of selenium than the CTR allows (see for example – Orange County Nitrogen Selenium Management Program www.ocnsmp.com)

RMV is very concerned that the Regional Board proposes to use only two sample results of "excessive" selenium to support the proposed addition of this section of San Juan to the 303(d) list. We recommend that the Regional Board: 1) develop a much more robust data set before acting to add this section of San Juan Creek to the 303(d) list for selenium, 2) define what "excessive" is and 3) provide evidence to support a causal link between levels of selenium and the existing health of aquatic life in San Juan Creek.

Thank you again for the opportunity to comment on the Integrated Report and proposed changes to the 303(d) list. Should you have any questions or wish to discuss our comments, please feel free to contact me at (949) 240-3363 Ext 297.

Sincerely,

Laura Coley Eisenberg
Vice President, Open Space & Resource Management

Cc: Richard Broming, RMV

Sent via email and US mail

October 26, 2009

Cynthia Gorham-Test
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Shakoora Azimi-Gaylon
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P.O. Box 100
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Re: Draft Integrated Report San Diego Region

This comment letter responds to the San Diego Regional Water Quality Control Board's request for public input and comments on the draft Clean Water Act §§ 305(b) and 303(d) Integrated Report for the San Diego Region. The Center for Biological Diversity requests that San Diego's ocean water segments be added to the Clean Water Act § 303(d) list of impaired water bodies due to impairment resulting from ocean acidification.

On February 27, 2007, the Center for Biological Diversity submitted scientific information supporting the inclusion of ocean waters on California's 303(d) List to each of the coastal regional water boards. Since then, it has only become more apparent that ocean acidification poses a serious threat to seawater quality which will adversely affect marine life. On February 4, 2009, the Center for Biological Diversity submitted additional scientific information concerning the latest findings on ocean acidification to the Regional Board and State Water Resources Control Board. Nonetheless, San Diego Water Board's draft Integrated Report failed to list ocean waters as impaired from ocean acidification or even discuss how this serious water quality problem will be addressed by the Board.

Section 303(d) of the Clean Water Act requires states to establish a list of impaired water bodies within their boundaries for which existing pollution controls "are not stringent enough to implement any water quality standard applicable to such waters." 33 U.S.C. § 1313(d). EPA regulations mandate that a state's list shall be approved only if it meets the requirements that existing pollution control requirements are stringent enough to ensure waters meet all water quality standards. 40 C.F.R. § 130.7(b)(1) & (d)(2).

Recent EPA actions underscore the authority that states have to address ocean acidification pursuant to the Clean Water Act. EPA announced that it will review the aquatic life criterion for marine pH under the Clean Water Act to determine if a revision is necessary to protect designated uses from the threat of ocean acidification (EPA 2009). On April 15, 2009, EPA issued a notice of data availability in the Federal Register that calls for information and data on ocean acidification that the agency will use to evaluate water-quality criteria under the Clean Water Act. In the notice, EPA acknowledged the threat that ocean acidification poses to marine ecosystems:

> Preliminary projections indicate that oceans will become more acidic over time and overall, the net effect is likely to disrupt the normal functioning of many marine and coastal ecosystems.

(EPA 2009: 17485). EPA is currently reviewing that information and data on ocean acidification pursuant to the Clean Water Act section 304 to determine whether a revision of water quality criteria is needed to better protect seawater from the threat of ocean acidification. Despite what approach EPA ultimately decides to take on ocean acidification, California has an independent obligation under the Clean Water Act to list its ocean waters as threatened or impaired and establish a total maximum daily load.

Although early predictions about ocean acidification painted it as something of a future problem, the future is here as the impacts are already appearing in our ocean waters. The current rates of atmospheric CO_2 increases are 100 times faster than any recorded in the past 1 million years, rapidly changing the ocean chemistry to levels not experienced in hundreds of millions of years. The oceans have absorbed nearly half of the anthropogenically produced CO_2 during the past century (Talmage 2009). Ocean uptake of fossil fuel CO_2 is now proceeding at about 1 million metric tons of CO_2 per hour, and the accumulated burden of fossil fuel CO_2 in ocean waters is now well over 530 billion tons (Brewer 2009). The ocean chemistry changes projected will exceed the range of natural variability, which is likely to be too rapid for many species to adapt. Ocean acidification will affect marine food webs and lead to substantial changes in commercial fish and seafood stocks, threatening food security for millions of people as well as the multi-billion dollar fishing industry (IAP statement 2009). Some of the most recent science confirms that ocean acidification is already affecting marine life and devastating and irreversible impacts are predicted within a decade for the most vulnerable ecosystems.

Coastal estuaries and temperate nearshore ecosystems are among the most biologically productive and maintain some of the most extensive and measurable ecosystem services (e.g., commercial and recreational fisheries, fish and invertebrate nursery grounds, water purification, flood and storm surge protection, human recreation). Because they are shallower, less saline, and have lower alkalinity, these habitats are more susceptible to changes in pH than the open ocean and will likely experience more acute impacts from elevated CO_2 (Miller et al. 2009). These waters are home to many economically and ecologically important species, such as mussels, oysters, and scallops. Acidification has the most damaging direct consequences for calcium carbonate-synthesizing marine organisms, such as these shellfish species and corals. Increased

rates of CO_2 are reported to have had a pronounced negative effect on the survival of shellfish larvae, which in turn dramatically reduces the adult population (Talmage 2009). These species are highly sensitive to increases in the concentration of carbon dioxide (Feely et al. 2008) and may be affected by even intermittent exposure to the corrosive waters noted throughout the water column in recent field measurements. The corrosive effect of ocean acidification on shellfish is well documented. Modern shell weights of foraminifera in the Southern Ocean are 30–35 percent lower than those from preindustrial sediments, which is consistent with reduced calcification induced by ocean acidification (Moy et al. 2009). Aragonite undersaturation in Arctic surface waters is projected to occur within a decade and the shells of mollusks will begin to dissolve more quickly than they can grow (Steinacher et al. 2009).

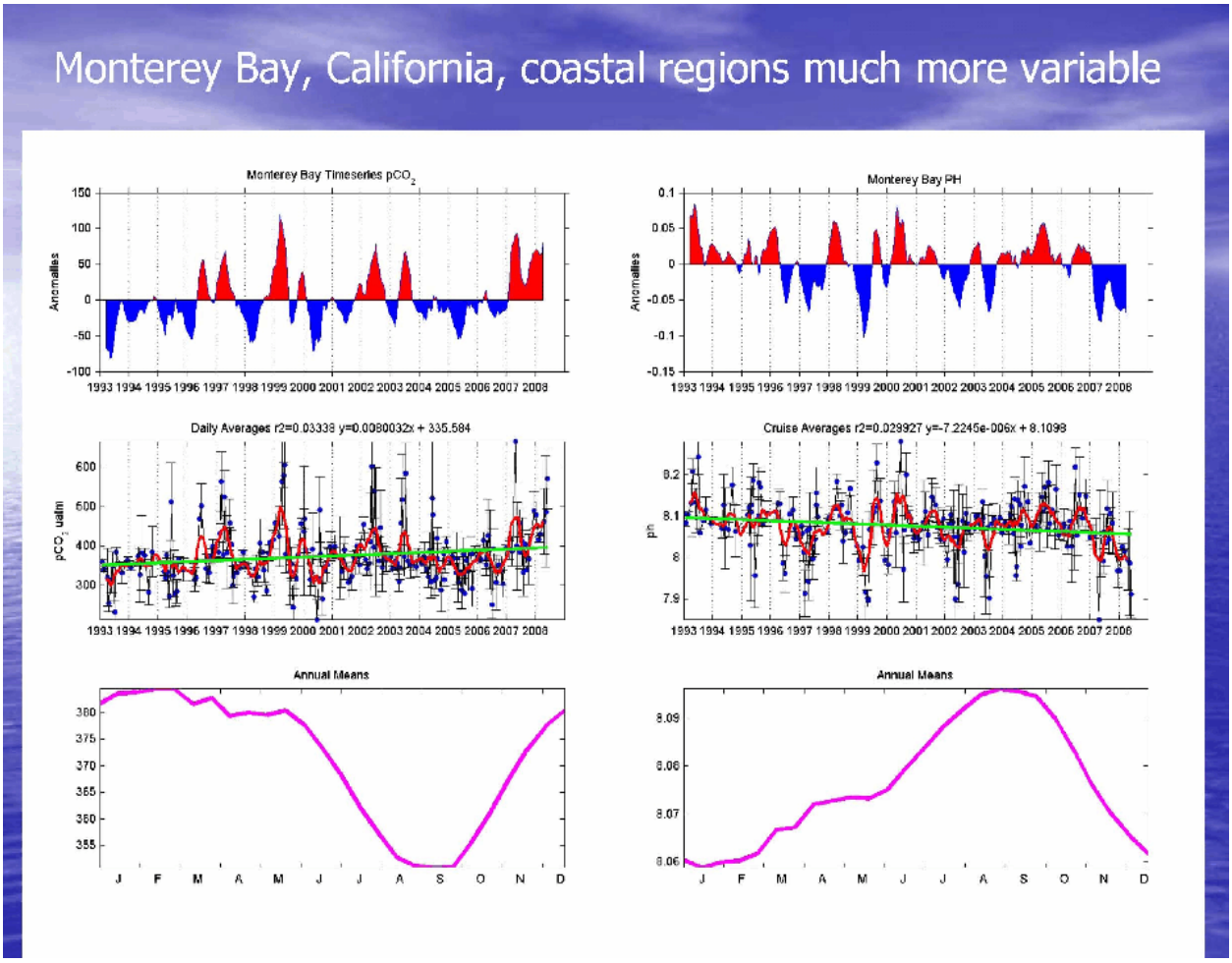
Shell-forming marine life off the coast of Washington has already been documented as being adversely affected, even by seasonal exposure to corrosive water. Documented shellfish species exhibited increased probabilities of replacement by other species and decreasing probabilities of displacing other species as pH decreased (Wootton et al. 2008). Noncalcerous animals showed an opposite response, indicating a shift in the delicate ocean ecosystem (Wootton et al. 2008). Ocean acidification is the likely cause of oyster production problems on the West Coast. Oyster farmers in Washington State have watched over the past four years as corrosive waters have almost completely depleted the oyster stock by drastically altering the development of baby oysters (Welch 2009). This has spread to Oregon hatcheries as well. Two of the largest hatcheries report production rates down by as much as 80% (Miller et al. 2009). In July of 2008, upwelling of waters affected by acidification was the likely cause of a huge mortality event at the Whiskey Creek Shellfish Hatchery in Tillamook, Oregon (Barton et al. 2009). The die-off affected larvae of Pacific and Kumamoto oysters, Manila clams, and Mediterranean mussels, foreshadows the widespread affects that increased upwelling events of corrosive waters will have on the fishing industry. Problems with oyster hatcheries are not isolated in Oregon, but have been reported along the West Coast. Assuming business as usual projections for carbon emissions and a corresponding decline in ocean pH and mollusk harvests, the Pacific coast fishing industry could experience economic losses of up to $600 million by 2060 (Cooley et al. 2009). California mussel beds are a dominant coastal habitat in the northeastern Pacific and provide an important food resource for humans. The California mussel is among the species adversely impacted by seasonal exposures to undersaturated water (Wootton et al. 2008). As mussel beds tend to be robust ecosystems, the sensitivity of these animals to decreasing saturation values may indicate much broader-scale impacts to less hardy ecosystems (Wootton 2008).

The consequences for coral reefs arouse concern as well because lowered carbonate ion concentration directly affects the ability of organisms to precipitate aragonite, which is the basic building block of coral reefs (Brewer 2009). Coral will be more brittle, which will cause its habitat to deteriorate and severely impair the reef building process. Although California does not have coral reefs, scientific findings on the impact of ocean acidification on corals is instructive to impacts on other calcifying organisms. Additionally, cold-water corals such as those found off the coast of California are even more susceptible to ocean acidification because they already inhabit waters less saturated with calcium carbonate.

Changes in ocean acidification are also likely to have impacts on a range of biological processes in addition to calcification, including impacts on photosynthesis, oxygen exchange and reproduction (Vernon 2009). Increased ocean acidification will also cause marine species to reach their physiological limits sooner. The consequences will be dramatic and will vary depending on the marine ecosystem. The most extreme result would be a total die off off all species. For instance, colder deep waters, in which pH and carbonate ion have already been much reduced by the addition of respiratory CO_2, have a far less buffer capacity than surface waters. Thus the changes in both p CO_2 and pH created at depth as the CO_2 invasion moves into abyssal waters will far exceed the surface changes now widely discussed in the ocean acidification literature. There is already clear evidence of expansion of the low oxygen regions of the oceans, and when these are combined with rising CO_2 levels we will likely see true dead zones created (Brewer 2009).

Impacts in California waters are not too far behind as such impacts will grow more widespread as atmospheric carbon dioxide pollution continues to grow. Most significant for California is the Feely et al. cruise that found corrosive waters already affected by ocean acidification upwelling onto the continental shelf along the entire coast of California (Feely et al. 2008). Similarly, a high-resolution multi-year dataset collected off the coast of Washington state showed a rate of pH decline of a magnitude higher than that previously predicted by models (Wootton et al. 2008). California Current System is particularly sensitive to ocean acidification with the pH of surface waters comparatively low and change in pH for a given uptake of anthropogenic CO_2 is particularly high (Hauri et al. 2009). Already the aragonite saturation horizon has shoaled by ~100 m and now reaches the euphotic zone in a few eddies and in near-shore environments during upwelling along the Pacific Coast (Hauri et al. 2009). Additionally, modeling specific to the California Current System predicts rapid changes in pH and aragonite saturation (Hauri et al. 2009). Changes in saturation state may cause substantial changes in overall calcification rates for many species of marine calcifiers, which includes those that are major food source for local juvenile salmon (Feely et al. 2008).

It has also recently come to my attention that there have been detectable measurements of declining pH due to ocean acidification in the Monterey Bay area. According to a presentation by Dr. Francisco Chavez, who presented at the International Marine Conservation Congress in May 2009, declining pH has been documented in the Monterey Bay and that pH is changing at a faster rate than atmospheric carbon dioxide is increasing. As this information is highly relevant to the impact of ocean acidification on California's coastal waters, I would encourage the San Diego Regional Water Quality Control Board and the State Water Resources Control Board to consider this closely. These studies underscore the urgency of the situation and demonstrate that rapid changes in seawater chemistry are already underway (Feely et al. 2008).



The San Diego Regional Board is urged to add ocean waters to its impaired waters list. The Board is encouraged to consider the new information on ocean acidification enclosed here as well as the other supporting information previously submitted by the Center for Biological Diversity in support of the listing.

The peer-reviewed scientific literature submitted to the Water Quality Control Board concerning ocean acidification meets data quality standards. The peer-reviewed scientific information previously submitted and enclosed herein supporting this request meets all data assurances and data quality objectives. The data and information is of high quality and credibility using methods and parameters to control for errors. The regulations governing implementation of the Clean Water Act's section 303(d) *require* that California "evaluate all existing and readily available water quality-related data and information to develop the list." 40 C.F.R. § 130.7(b)(5); *see also Sierra Club v. Leavitt*, 488 F.3d 904 (11th Cir. 2007)

Moreover, EPA's guidance states that the "[l]ack of a State-approved QAPP should not, however, be used as the basis for summarily rejecting data and information submitted by such

organizations, or assuming it is of low quality, regardless of the actual QA/QC protocols employed during the gathering, storage, and analysis of these data" (EPA 2006: 33).

EPA's guidance for listing of impaired waters emphasizes that states should evaluate all data, and that listings may be based on small data sets, data other than site specific monitoring, and data from the public (EPA, Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act at 33-35, 38 (2005) ("EPA 2006")(EPA advised states to use the 2006 Guidance for their 2008 303(d) listings. See Memo from Diane Regas: Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions (Oct. 12, 2006))). Here, the absence of site specific monitoring should not obviate the need to list California's ocean waters as impaired, rather it demonstrates a need for additional coastal monitoring. Recognizing the limited monitoring data available, EPA encourages states to consider a more expansive versus cautious approach to monitoring data (EPA 2006). Site-specific monitoring data is not required for impaired water listing. EPA regulations require that "reports from dilution calculations and predictive modeling" be included in the data and information that a state considers in its assessment process for section 303(d) listing purposes. 40 CFR 130.7(b)(5)(ii)). EPA guides states to consider even very small sample sets to ascertain the attainment status of waters. Moreover, states should use information about observed affects, predictive modeling, and knowledge about pollutant sources and loadings when making its listing determinations (EPA 2006).

Furthermore, EPA regulations and guidance require states to seek public participation in the impaired waters listing process. EPA regulations require that states actively solicit data and information from organizations and individuals, including conservation organizations. 40 C.F.R. 130.7(b)(5)(iii); EPA 2006. Here, the Center for Biological Diversity presents well-documented and highly credible scientific evidence that California's ocean waters are impaired from ocean acidification.

Sincerely,

Miyoko Sakashita

enclosure

Enclosed on compact disc

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CITY OF EL CAJON
www.ci.el-cajon.ca.us
PUBLIC WORKS DEPARTMENT

October 26, 2009

Ms. Cynthia Gorham-Test
California Regional Water Quality Control Board
9147 Sky Park Court, Suite 100
San Diego, CA 92123

Subject: City of El Cajon Comments on Proposed 2008 303(d) Listings for the San Diego Region

Dear Ms. Gorham-Test:

Thank you for providing an opportunity to comment on the 2008 Draft Clean Water Act Sections 303(d) and 305(B) Integrated Report for the San Diego Region. Below please find comments specific to the San Diego River watershed where the City of El Cajon is located:

Item 1:
Observation: Line of Evidence I.D. No. 3336 for Decision 4942 uses data from a spill that occurred in the Forrester Creek Channel on July 5, 2000, to assess water quality.
Comment: The referenced spill caused a temporary condition of extreme pH that resulted from a transient event. The information from the spill is not a reliable source of data to assess water quality since it does not reflect ambient water conditions and should not be used as a line of evidence.

Item 2:
Observation: Line of Evidence I.D. No. 3337 for Decision 4942 uses data from a spill that occurred on May 1, 2001, to assess water quality.
Comment: The referenced spill was a transient event and should not be used as a line of evidence. The information from the spill is not a reliable source of data to assess water quality since it does not reflect ambient water conditions and should not be used as a line of evidence.

The City of El Cajon would like to emphasize that pH conditions are endemic to flow of water in a concrete lined drainage channel. One difference between El Cajon and many other cities in the San Diego area is that El Cajon has constructed an extensive network

of storm drains and drainage channels. Reference reports used as supporting information cited a majority of dry weather tests for pH that exceed the Basin Plan objective, however, there is no information linking high pH condition to any source other than flow in the concrete channel environment.

Sincerely Yours,

Dennis Davies,
Deputy Director of Public Works

Enclosures

Draft 2008 California 303(d)/305(b) Integrated Report Supporting Information

Regional Board 9 - San Diego Region

Water Body Name: **Forester Creek**
Water Body ID: **CAR907130002001092412024O**
Water Body Type: **River & Stream**

Lines of Evidence (LOEs) for Decision ID 4942

LOE ID:	3336
Pollutant:	pH (high)
LOE Subgroup:	Ancillary Evidence Spills
Matrix:	Not Specified
Fraction:	None
Beneficial Use:	Industrial Service Supply
Number of Samples:	0
Number of Exceedances:	0
Data and Information Type:	Not Specified
Data Used to Assess Water Quality:	A letter from the City of El Cajon, by Richard C. Odiorne, City Engineer, was written to Julian Medina at Chem-tronics, Inc, in El Cajon, CA. The letter is dated July 6, 2000 and documents a 1000 gallons sodium hydroxide spill from Chem-tronic, Inc, that occurred on July 5, 2000.The letter from Richard Odiorne (City of El Cajon) asks that Chem-tronics, inc. ensure that they have Best Management Practices in place for spill preventions and cleanup.
Data Reference:	Placeholder reference 2006 303(d)
Water Quality Objective/Criterion:	From the Basin Plan: The pH value shall not be changed at any time more than 0.2 pH units from that which occurs naturally. Changes in normal ambient pH levels shall not exceed 0.2 units in waters with designated marine (MAR), or estuarine (EST), or saline (SAL) beneficial uses. Changes in normal ambient pH levels shall not exceed 0.5 units in fresh waters with designated cold freshwater habitat (COLD) or warm freshwater habitat (WARM) beneficial uses. In bays and estuaries the pH shall not be depressed below 7.0 nor raised above 9.0. In inland surface waters the pH shall not be depressed below 6.5 nor raised above 8.5.
Objective/Criterion Reference:	Placeholder reference 2006 303(d)
Evaluation Guideline:	The corresponding numeric objective for pH from the Basin Plan for inland surface waters with all beneficial uses is 6.5 (minimum) to 8.5 (maximum).
Guideline Reference:	Placeholder reference 2006 303(d)
Spatial Representation:	A sodium hydroxide spill occurred in the Forester Creek Channel from Chem-tronics, Inc. 1150 West Bradley Av., El Cajon, CA 92020.

Temporal Representation:	The spill occurred on July 5, 2000.
Environmental Conditions:	
QAPP Information:	Data used in 2002 assessment. QA=?

Lines of Evidence (LOEs) for Decision ID 4942

LOE ID:	3337
Pollutant:	pH (high)
LOE Subgroup:	Ancillary Evidence Spills
Matrix:	Not Specified
Fraction:	None
Beneficial Use:	Industrial Service Supply
Number of Samples:	0
Number of Exceedances:	0
Data and Information Type:	Not Specified
Data Used to Assess Water Quality:	A County of San Diego Department of Environmental Health referral form indicates that 10-20 gallons of an acid/water/copper mixture (pH of 2-3) spilled into Forester Creek on 05/01/2001. The spill was reported to the County of San Diego DEH by Randy Olms (employee at Chem-tronics). The complaint was referred to the City of El Cajon. It is reported that an emergency response team was on scene to conduct the clean up.County of San Diego DEH referral says that an emergency response team was on the scene to conduct a cleanup of the spill.
Data Reference:	Placeholder reference 2006 303(d)
Water Quality Objective/Criterion:	The pH value shall not be changed at any time more than 0.2 pH units from that which occurs naturally. Changes in normal ambient pH levels shall not exceed 0.2 units in waters with designated marine (MAR), or estuarine (EST), or saline (SAL) beneficial uses. Changes in normal ambient pH levels shall not exceed 0.5 units in fresh waters with designated cold freshwater habitat (COLD) or warm freshwater habitat (WARM) beneficial uses. In bays and estuaries the pH shall not be depressed below 7.0 nor raised above 9.0. In inland surface waters the pH shall not be depressed below 6.5 nor raised above 8.5.
Objective/Criterion Reference:	Placeholder reference 2006 303(d)
Evaluation Guideline:	The corresponding numeric objective for pH from the Basin Plan for inland surface waters with all beneficial uses is 6.5 (minimum) to 8.5 (maximum).
Guideline Reference:	Placeholder reference 2006 303(d)
Spatial Representation:	The spill occurred from 1150 W. Bradley Av., El Cajon, CA 92020 (Chem-tronics, Inc.).
Temporal Representation:	The spill occurred on 05/01/2001.
Environmental Conditions:	It was noted in the referral form that the acid spilled into a dry bed.
QAPP Information:	Data used in 2002 assessment. QA=?
QAPP Information Reference(s):	

October 26, 2009

Ms. Cynthia Gorham-Test
San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Re: Comments on Proposed 2008 303(d) List of Impaired Waters

Dear Ms. Gorham-Test:

San Diego Coastkeeper ("Coastkeeper") is a nonprofit 501(c)(3) organization dedicated to protecting and restoring the region's bays, coastal waters and watersheds. San Diego Coastkeeper members use and enjoy the region's watersheds recreationally in a variety of ways, including: hiking, swimming, fishing, and surfing. Additionally, Coastkeeper members value the aesthetic quality of the watersheds and the wildlife they support. Members are excited to spot birds and fish while hiking along the watersheds with their families. Photographers are inspired by the unique beauty San Diego's watersheds provide. Fish and shellfish from these watersheds are a source of food for some members. San Diego Coastkeeper submits this comment letter on behalf of these members who are interested in ensuring the 303(d) listings are accurate and complete.

We are pleased the 2008 303(d) process has been more inclusive than previous listings and appreciate that more stakeholders have been able to participate in the process. We applaud the Regional Board on using a new, more comprehensive database to compile data. Moving forward, this new approach will ensure improvements in gathering data, which will in turn help improve water quality in the state.

We would like to address two main issues: (1) the listing of water bodies impaired by invasive species; and (2) the need for an export tool from SWAMP/CEDEN to integrate that data into the Cal-WQA database system.

I. Water Bodies Impaired by Invasive Species Should Be Included on the 303(d) List.

We strongly support listing water bodies impaired by invasive species. The U.S. Environmental Protection Agency's (EPA) policy is to place a water segment on the state's 303(d) list if it is shown to be impaired, "unless the state can demonstrate that no pollutant(s) causes or contribute to the impairment.[1] In 2005, the U.S. District Court for the Northern District of California held invasive species are "biological materials" within the definition of "pollutants" as described in the Clean Water Act (CWA).[2]

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[1] Adam P. Schempp & James McElfish, *The Role of Aquatic Invasive Species in State Listing of Impaired Waters and the TMDL Program*, Environmental Law Institute at 6 (May 2008) citing Envtl. Prot. Agency, *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act Sec. V.H.5* (2005).

[2] *Northwest Environmental Advocates, et al. v. US EPA*, 2005 U.S. Dist. LEXIS 5373 (N.D. Cal. 2005).

Since 2005, California has included aquatic invasive species as pollutants in its 303(d) listing methodology.[3] As the first state to do this, California had to establish a methodology for determining when a water segment is impaired by an invasive species. The California Water Resources Control Board applied a method where water segments are listed for invasive species impairment if data indicates a correlation between a rise in invasive species and a decline in water quality.[4] This is usually evidenced by a reduction in native species.[5]

Now, warm-water fish in San Mateo Creek are threatening the critical habitat of the steelhead/rainbow trout. San Mateo Creek is a cold-water habitat for trout, which are considered a "rare and endangered species." The presence of several different species of warm-water fish has made it difficult for the native rainbow trout to feed because the warm-water fish have taken over as top predator in the habitat.[6] Therefore, we strongly support listing San Mateo Creek as being impaired by invasive species.

We agree with the Regional Board's assessment that Invasive Species require a single line of evidence. Under Listing Policy Section 3.8, the Regional Board is required to place a water segment on the 303(d) list if there is a biological response measured in resident individuals as compared to reference conditions and those impacts are associated with pollutants.[7] The policy states, "endpoints for this factor include reduction in growth, reduction in reproductive capacity, abnormal development, histopathological abnormalities, and other adverse conditions."[8] With the trout in San Mateo Creek, the evidence (from fish surveys) shows an increase in invasive fish species and a decrease in the rainbow trout population (the trout has not been surveyed in San Mateo Creek since 2000). A tributary of San Mateo Creek with similar conditions, but without the invasive species, had a much healthier rainbow trout population after 2000, until low water conditions impacted the population. Thus, there is sufficient evidence to support the single line requirement showing the invasive fish species are responsible for the decline of native trout populations. Therefore, San Mateo Creek should be on the 303(d) list because it is impaired by a pollutant – the invasive warm-water fish species.

We understand there is currently no TMDL model for invasive species. However, that should not stop water bodies impaired by invasive species from being listed as required by the Clean Water Act. We encourage the Regional Board to continue listing water bodies that are impaired by invasive species and look forward to the State Board establishing an invasive species TMDL in the near future.[9]

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[3] Adam P. Schempp & James McElfish, *The Role of Aquatic Invasive Species in State Listing of Impaired Waters and the TMDL Program*, Environmental Law Institute at 6 (May 2008).

[4] *Id.* citing *State Water Resources Control Board, Staff Report: Revision of the Clean Water Act Section 303(d) List of Water Quality Limited Segments Vol. I* at 12 (2006).

[5] *Id.*

[6] *See* San Diego Regional Water Quality Control Board Draft 2008 California 303(d)/305(b) Integrated Report for San Mateo Creek.

[7] *See* Listing Policy Section 3.8 (Adverse Biological Response).

[8] *Id.*

[9] California has projected 2019 as the completion date for an invasive species TMDL. *See The Role of Aquatic Invasive Species in State Listing of Impaired Waters and the TMDL Program* at 9. This projection is far too long, and we believe a higher priority needs to be placed on drafting an invasive species TMDL.

II. SWAMP/CEDEN Data Should Be Linked To The Cal-WQA Database System.

At the October 12 303(d) workshop, the staff of the Regional Board introduced the new database (Cal-WQA) that was developed as a decision-making tool for the 303(d) process. It is admirable that the state has developed a database system to better compile and analyze the data for the purpose of streamlining the decision-making process. However, the Cal-WQA database does not interface with the California Data Exchange Network (CEDEN) database, which is the central repository for all of the Copermittee data under the current stormwater permit. Integration of these two databases would also streamline any quality control processing for data input into the Cal-WQA database.

It was stressed at the workshop that this is an issue that needs to be resolved at the state level. To reduce unnecessary redundancy and maximize limited regional board resources, it is critical that this integration become a priority.

Further, as the data systems supporting the 303(d) process continue to develop, the database must be transparent in order for both dischargers and environmental groups to be able to track the decision-making process.

Lastly, many of the links on the regional board website[10] for the Lines of Evidence are broken. We randomly checked ten links for "data reference," and three of the ten links did not work (Buena Vista Creek, San Mateo Creek, Mission Bay Shoreline, at Bonita Cove). We would hate to have a technicality like this prevent any of the proposed listings from being accepted. This error should be fixed immediately.

III. Conclusion

On behalf of its members, San Diego Coastkeeper strongly supports the inclusion of water bodies impaired by invasive species on the 2008 303(d) list. Although there are currently no TMDLs for invasive species, the creation of such TMDLs needs to be a higher priority. Additionally, integration of the Cal-WQA and CEDEN databases needs to be implemented in order to ensure accurate and complete data compilation. These databases must then be transparent to allow dischargers and environmental groups to track the decision-making process. And, finally, the links for the data references in the Lines of Evidence need to be fixed so the listing process can continue to move smoothly.

Individual members of the community will also be submitting comments individually for the watersheds they know best.

Sincerely,

Gabriel Solmer

Gabriel Solmer
Legal Director

[10] *See* 303(d) Fact Sheet, *available at* http://www.swrcb.ca.gov/rwqcb9/water_issues/programs/303d_list/ref_reports/index.shtml.

City of Del Mar

October 26, 2009

Via E-Mail

Ms. Cynthia Gorham-Test
California Regional Water Quality Control Board, San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

CITY OF DEL MAR RECOMMENDATIONS FOR CHANGES TO THE CLEAN WATER ACT SECTIONS 305(B) AND 303(D) INTEGRATED REPORT FOR THE SAN DIEGO REGION

Ms. Gorham-Test:

The City of Del Mar (City) appreciates the opportunity to provide the California Regional Water Quality Control Board, San Diego Region (Regional Board) with comments on the 305(b) and 303(d) Integrated Report in support of the 2008 updates. After careful review of the presented materials, the City is submitting the following comments for your consideration. These comments are presented in tabular format on the following pages, and are organized by water body and pollutant, in the order they appear in the Proposed Changes to the 2006 303(d) listing table. Please note that the City did not provide any information for the proposed listings, or de-listings, in circumstances where the City does not have any specific comments.

If you have any additional questions regarding the City's comments, please feel free to contact me directly by email at jdestefano@delmar.ca.us or by phone at (858) 755-9313 x172.

Respectfully,

JOSEPH M. DE STEFANO II, M.Sc., CPP, CSI, CCIS™
Clean Water Manager

JMD:ns

Attachment(s)

cc: Brian F. Mooney, AICP, Planning Director, Planning and Community Development Department
Mikhail Ogawa, P.E., Mikhail Ogawa Engineering, Technical Consultant, City of Del Mar Clean Water Program
File

References:

Regional Water Quality Control Board, San Diego Region. Water Quality Control Plan for the San Diego Basin. 1994, with amendments effective prior to April 25, 2007.

Weston Solutions. 2009. San Diego County Municipal Copermittees 2007-2008 Urban Runoff Monitoring Report. January 2009.

Attachment – Table 1: City of Del Mar Comments on Draft 2008 California 305(b)/303(d) Integrated Report, Regional Board 9 (San Diego Region)

Comment #	Water Body Name (Calwater Number)	Pollutant (Decision ID)	LOE ID	Reason for Proposed Changes/Comments	Comments/Proposed Changes
San Dieguito River Toxicity Decision Recommendation: It is recommended that data noted as "Estimated; non-compliant with associated QAPP" not be included in any analysis because they do not meet quality standards. LOE 24991 should be updated to correctly reflect the number of samples and exceedances for each species					
1	San Dieguito River (90511000)	Toxicity (17058)	24991	This LOE states that it is based on the Urban Runoff Monitoring data collected in 2003. The LOE states: "Selenastrum capricornutum - Four samples were collected and four samples show significant toxicity levels (SL) as determined by the *Selenastrum capricornutum* growth test. *Ceriodaphnia dubia*- Four samples were collected and two samples show significant toxicity levels (SL) as determined by the *Ceriodaphnia dubia* survival/reproductive test. *Hyalella azteca* -Two samples were collected and neither show significant toxicity levels (SL) as determined by the *Hyalella azteca* growth and survival test according to results in the Surface Water Ambient Monitoring Program Annual Progress Report, 2007. Samples were collected in January, April, May and September 2003 and we have the following concerns: • This reference is cited incorrectly and refers to the SWAMP toxicity data of 2003. • Review of these SWAMP data indicates that four of four *Selenastrum* total cell count tests were toxic. However, one of the samples was noted to be "Estimated; non compliant with associated QAPP". *Hyalella* survival tests found that neither of the two samples was toxic. *Hyalella* growth tests showed two of the two samples were not toxic. Toxicity was only recorded in the *Ceriodaphnia* test where one of three samples was toxic to young/female and two of three samples were toxic to *Ceriodaphnia* survival.	• Please update the LOE to correctly reflect the number of exceedances and the number of samples. • Data noted as "Estimated; non-compliant with associated QAPP" should not be included in the assessment and therefore the total number of samples for Selenastrum should be three.
Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth Total Coliform Decision Recommendation: No comment					

Comment #	Water Body Name (Calwater Number)	Pollutant (Decision ID)	LOE ID	Reason for Proposed Changes/Comments	Comments/Proposed Changes
2	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (90610000))	Total Coliform (16336))	3631	• Discusses the Beneficial Use of Water Contact Recreation, not Shellfish Harvesting. • Only addresses one *Enterococcus* exceedance which is not the pollutant of concern.	• Not clear that this LOE supports listing
3	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (90610000)	Total Coliform (16336))	26417	• Discusses the Beneficial Use of Water Contact Recreation, not Shellfish Harvesting. • States that there were no exceedances of water quality objectives.	• This LOE does not support listing
4	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (9061 0000)	Total Coliform (16336)	26418	• Discusses the Beneficial Use of Water Contact Recreation, not Shellfish Harvesting. • States that there were no exceedances of water quality objectives for the calculated monthly geometric means for Anderson Canyon.	• This LOE does not support listing

Comment #	Water Body Name (Calwater Number)	Pollutant (Decision ID)	LOE ID	Reason for Proposed Changes/Comments	Comments/Proposed Changes
5	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (90610000)	Total Coliform (16336)	26428	• Discusses the Beneficial Use of Water Contact Recreation, not Shellfish Harvesting. • States that of 93 calculated geometric means for Los Peñasquitos, 2 exceeded. This gives a percentage of 2.15%.	• This LOE does not support listing
6	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (90610000)	Total Coliform (16336)	26416	• States that no samples from Anderson Canyon exceeded the water quality objectives for Shellfish Harvesting.	• This LOE does not support listing
7	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Peñasquitos mouth (90610000)	Total Coliform (16336)	26427	• Discusses the Beneficial Use of Water Contact Recreation. • States 11 out of 497 samples from Los Peñasquitos exceeded. This is 2.21% which is below the 4% exceedance percentage for listing coastal beaches from Section 3.3 of the Policy.	• This LOE does not support listing

City of Carlsbad
Public Works – Environmental Programs

October 26, 2009

Cynthia Gorham- Test
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123- 4340

RE: Comments on the 2008 Draft 303(d) List

Dear Ms. Gorham-Test:

On behalf of the City of Carlsbad (City), please accept the information contained in this letter as formal comment to the 2008 draft 3003(d) list currently posted on your website at http://www.waterboards.ca.gov/sandiego/water_issues/programs/303d_list/index.shtml. Thank you for the opportunity to submit comments and we look forward to your thorough review.

The City specifically appreciates the efforts of the Regional Water Quality Control Board staff, and supports the decision to delist the following water bodies:

- Agua Hedionda Lagoon – indicator bacteria, sedimentation/siltation: based on seven lines of evidence being considered in the assessment of bacteria as a contaminant, with the data demonstrating that applicable water quality standards are being achieved, and for sediment based upon the weight of evidence presented in the fact sheet.
- Pacific Ocean Shoreline, Buena Vista Creek HA at Buena Vista Lagoon Outlet – enterococcus, fecal coliform, total coliform: based on data presented in the City's delisting application submitted January 31, 2006.
- Pacific Ocean Shoreline, Buena Vista Creek HA, at Carlsbad State Beach at Carlsbad Village – enterococcus, fecal coliform, total coliform: based on data submitted in the City's delisting application submitted January 31, 2006.
- Pacific Ocean Shoreline, Buena Vista Creek HA, at Carlsbad State Beach at Pine Ave. – enterococcus, fecal coliform, total coliform: based on data submitted in the City's delisting application submitted January 31, 2006.

The remaining comments are related to the formal listing of water bodies.

1635 Faraday Avenue • Carlsbad, CA 92008-7314 • (760) 602-4646 • FAX (760) 602-8562

Escondido Creek
Matrix = water
Contaminant = DDT, enterococcus, fecal coliform, selenium, sulfates, total nitrogen as N, toxicity
Comments: Two lines of evidence (LOEs) are listed for the DDT listing. However, LOE #6231 should not be included because it states the number of sample exceedances may not be determined because a detection limit was used that was above the criteria (CTR) being used to determine such exceedances.

The listing for selenium references three LOEs. The first LOE (#3231) references 8 exceedances for selenium out of 15 samples taken in 2002, from March through September, only a 7 month time period. The second LOEs (#3230) indicates there was no exceedance associated with one sample taken in 1998. Of significance is that LOE #6246 indicates there were no exceedances for selenium out of 18 samples taken over a two year period between 2003 and 2005. These later data collected over a two year period, indicate selenium is no longer a contaminant in this water body, therefore it should not be listed.

The second line of the *Weight of Evidence* section of the Supporting Information for sulfates states there are three LOEs available in the administrative record to assess this pollutant. However, only two LOEs (#3243 and 3244) are presented. In addition, the water quality objectives used for finding exceedances and therefore listing sulfates at this location are secondary drinking water standards. To our knowledge, Escondido Creek is not used as a municipal domestic drinking water source therefore secondary drinking water standards are an incorrect standard to apply for finding exceedances, and it should not be listed.

The listing for enterococcus and fecal coliform are based on exceedances of water quality objectives from the Water Contact Recreation (REC-1) beneficial use. To our knowledge, Escondido Creek is not used for contact recreation, therefore the REC-1 standard is not an applicable standard to use, and it should not be listed. The San Diego Basin Plan defines a REC-1 water body as one that "*...includes uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skiing and SCUBA diving, surfing, white-water activities, fishing or use of natural hot springs.*"

Agua Hedionda Creek
Matrix = water
Contaminant = enterococcus, fecal coliform
Comments: The listing for enterococcus and fecal coliform are based on exceedances of water quality objectives from the Water Contact Recreation (REC-1) beneficial use. To our

knowledge, Agua Hedionda Creek is not used for contact recreation, therefore the REC-1 standard is not an applicable standard to use, and it should not be listed.

Thank you again for the opportunity to comment on this draft document. We appreciate the amount of work that your agency is doing to help protect water quality in our region. If you have any questions or need further clarification, please do not hesitate to contact me at 760.602.7582.

Best regards,

Elaine M. Lukey, MS, CPEA
Environmental Programs Manager, City of Carlsbad

CC: Jim Elliott, Deputy City Manager, City of Carlsbad
Glenn Pruim, Director Public Works, City of Carlsbad
Linda Kermott, Public Works Manager, City of Carlsbad

THE CITY OF SAN DIEGO

October 26, 2009

Ms. Cynthia Gorham-Test, Environmental Scientist
California Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Dear Ms. Gorham-Test:

Subject: Review and Comment of the Draft Clean Water Act Sections 305(b)/303(d) Integrated Report for the San Diego Region

The City of San Diego, Public Utilities Department (Public Utilities Department) is please to provide the San Diego Regional Water Quality Control Board (Regional Board) with comments on the Draft Clean Water Act Sections 305(b)/303(d) Integrated Report for the San Diego Region.

The Public Utilities Department operates the public water supply system serving drinking water to 1.3 million people in the City of San Diego and neighboring communities. The Public Utilities Department owns and operates a system of nine drinking source water reservoirs in San Diego County. These reservoirs capture local runoff from 964 square miles of watershed lands, and also store imported water that has been transported hundreds of miles from the Colorado River and the Sacramento Bay – San Joaquin Delta.

It is the inclusion of the reservoirs on the Clean Water Act Section 303(d) List of Water Quality Limited Segments (aka the Section 303(d) List) that is the focus of this letter.

The adopted 2006 Section 303(d) List included multiple listings of our reservoirs, with eight reservoirs listed for 28 pollutants. The Draft 2009 Section 303(d) List would add the ninth reservoir and 16 new pollutants, while delisting one pollutant, for a total of 43 separate listings of the nine reservoirs.

Protecting the quality of water impounded and stored in our reservoirs is a key element of the multiple barrier approach utilized by the Public Utilities Department to ensure the health and safety of the public water supply. The Public Utilities Department welcomes and encourages the support of Regional Board in helping us protect water quality in our reservoirs and the watersheds that are tributary to the reservoirs.

That said, we do not believe the existing and proposed listings of the reservoirs will benefit regional water quality nor help protect these sources of drinking water, for the following reasons:

That said, we do not believe the existing and proposed listings of the reservoirs will benefit regional water quality nor help protect these sources of drinking water, for the following reasons:

1) The reservoirs are highly managed man-made impoundments subject to impacts from their watersheds, unavoidable natural processes like seasonal stratification, or storage of imported water. Such reservoirs are distinctly different from natural water bodies.

2) Water from the reservoirs is treated to drinking water standards before distribution to consumers. The presence of many of the "pollutants" in the existing and proposed 303(d) listings in no way impair these reservoirs as sources of drinking water.

3) Many of the "pollutants" in the existing and proposed 303(d) listings are constituents that occur naturally in the watersheds or are the result of natural processes within the reservoir. As such, there are no viable solutions for remedying the occurrence of these constituents.

In January 2006 the City of San Diego sent the attached letter to the State Water Resources Control Board regarding the 2006 Section 303(d) List. In this letter the City presented an extensive technical discussion of the inappropriateness of most of these listings. This discussion applies, generally, to the proposed additions in the Draft 2009 Section 303(d) List.

In October 2006 the City of San Diego, the Helix Water District, and the Sweetwater Authority sent a letter to the State Water Resources Control Board regarding describing our agencies joint efforts to resolve the flawed listings of reservoirs in San Diego. Again, the same arguments apply to the Draft 2009 Section 303(d) List.

We look forward to a collaborative resolution of this outstanding issue. If you have questions or need additional information please contact Jeffery Pasek, Watershed Manager, at (619)533-7599 or jpasek@sandiego.gov.

Sincerely,

Marsi A. Steirer
Deputy Director

MAS\jp

Enclosures: January 2006 letter to the State Water Resources Control Board
October 2006 letter to the State Water Resources Control Board

cc: Jeffery Pasek, City of San Diego Watershed Manager
Cathleen Pieroni, City of San Diego Senior Water Resources Specialist
Ruth Kolb, City of San Diego Stormwater Department

ATTACHMENT 2

THE CITY OF SAN DIEGO

January 31, 2006

Email: commentletters@waterboards.ca.gov

Ms. Selica Potter
Acting Clerk to the Board
State Water Resources Control Board
Executive Office
1001 I Street, 24th Floor
Sacramento, CA 95814

Ms Potter:

SUBJECT: Comments Regarding the Revision to Federal Clean Water Act Section 303(d) List of Water Quality Limited Segments for California

The City of San Diego appreciates your extension of the comment period for the Revision to Federal Clean Water Act Section 303(d) List of Water Quality Limited Segments for California. The Metropolitan Wastewater Department / Storm Water Pollution Prevention Division and the Water Department have reviewed the proposed 303(d) list and offer the following comments and recommendations.

Comments and Recommendations by the Storm Water Pollution Prevention Division

The Storm Water Division would like to take this time to thank the State Board for the Water Quality Control Policy for Developing California's Clean Water Act (CWA) Section 303(d) List. We believe that a policy that is consistently applied across the state will help improve water quality. We recommend that all impaired waterbody segment listings be for particular pollutants and not for conditions. We would like to provide comments regarding a few issues to your attention.

REGION 9 - LISTING PROPOSALS

Los Penasquitos Creek: Phosphate and Total Dissolved Solids

These two proposed listings are based upon 2 and 4 samples. These listings do not meet the minimum sample size (5) for conventional pollutants as outlined in State Board Policy,

Table 3.2: *Minimum Number of Measured Exceedances Needed to Place a Water Segment on the Section 303(D) List for Conventional or Other Pollutants.*

San Diego Bay: America's Cup Harbor, Harbor Island East and West, and Marriott Marina

- Recommend that the State Board identify either total or dissolved copper as the pollutant.

REGION 9 - DELISTING PROPOSALS

The City of San Diego supports most of the beach delisting recommendations; however, PB Point is the northern portion of the Tourmaline Surf Park in the Scripps HA, does not meet the criteria for delisting and should not be delisted. Currently, the City of San Diego is conducting a special study, where future management actions can be determined to address bacteria impairments. This study is scheduled to be completed in 2006.

REGION 9 - REQUESTED AREA CHANGES

Chollas Creek: extend area 0.5 miles up the south fork
San Diego River: extend area an additional six miles upstream
We understand that the requested area changes are based upon are-evaluation of existing data. The rationale for the change was not included for review. We would appreciate the opportunity to review this rationale.

It is our understanding that the "Tributary Rule" applies to all upstream tributaries of any 303(d) impaired waterbody segment. If this application of the rule is correct, then how would an upstream expansion of a segment affect the practices of a discharger such as the City of San Diego?

Mission Bay Shoreline
Please provide an explanation of the requested change. The City of San Diego also requests time to review said evidence and be able to provide comments to the State Board regarding this issue.

REGION 9 - 303(D) TMDL SCHEDULE

The City of San Diego recommends updating the project completion dates. Currently there are four TMDLs within our boundaries that have 2005 deadlines identified and they are not completed at this time.

CEQA

Lastly, will the State Board be preparing a CEQA document for public review and comment regarding this proposed 303(d) listing? The City of San Diego requests time to review and comment on the CEQA analysis for this process.

If you have any questions regarding the Storm Water Division's comments or recommendations, please contact Ruth Kolb, Storm Water Specialist, at 619.525.8636 or at rkolb@sandiego.org.

Comments and Recommendations by the San Diego Water Department

The San Diego Water Department [SDWD] has reviewed the Revisions to Clean Water Act Section 303(d) List of Water Quality Impaired Segments for California and has the following comments and recommendations.

In this section we are commenting only on the proposed listing of the San Diego Water Department's source water reservoirs. Specifically, our review and comments are limited to the proposed listings of these water bodies: Barrett, El Capitan, Hodges, Miramar, Morena, Murray, Otay, San Vicente, and Sutherland Reservoirs

Background
The SDWD supplies treated drinking water to 1.3 million people in the City of San Diego and neighboring communities. The SDWD operates nine drinking source water reservoirs in San Diego County. These reservoirs impound local runoff from 926 square miles of watershed lands in San Diego County. They also store water imported into the region. The reservoirs are critical components of the regional water supply system.

The SDWD is concerned about the discharge of pollutants from upstream areas that might degrade water quality in its reservoirs. Clearly, the SDWD, the State Water Resources Control Board, and the San Diego Regional Water Quality Control Board are allies in protecting drinking source waters. We see the Clean Water Act Section 303(d) process as an important tool for protecting drinking water sources. Nonetheless, we believe many of the currently proposed listings of the SDWD reservoirs do not help to protect water quality and do not sustain any beneficial use - and therefore should not be adopted.

It is important to note that for each of the above water bodies all of the monitoring data that led to the existing or proposed listings were collected by the SDWD and supplied to the San Diego Regional Water Quality Control Board. Because we collected the samples, performed the field and laboratory analyses, assessed the results, and maintain the data archive, we are very familiar with these data.

General Comments
The SDWD has five general comments on the existing and proposed 303(d) list for reservoirs and their tributary streams.

1] The proposed listings of the reservoirs are based on only a small portion of the available data. The SDWD has been extensively monitoring its reservoirs for sixteen years. This has resulted in tens of thousands of data points, all of which are available to the State Board and the Regional Board. Only a fraction of these data were considered by State

Board staff - had the full set of data been used there would probably be different outcomes. The SDWD has identified cases where a reservoir has been proposed for listing based on a limit data set, but where consideration of all available data leads to the conclusion that the water body-pollutant combination should not be listed. Examples are detailed in comments #7 and #8, below.

We urge the State Board to consider all available data prior to deciding on the proposed revisions of the 303(d) list.

2] The SDWD believes that listing reservoirs which store imported water as not meeting the water quality standards for Total Dissolved Solids [TDS] and for individual salt constituents does not help to protect water quality and does not sustain any beneficial use. We recommend against listing any reservoir that stores imported water for TDS or individual salt constituents. Details on this matter are in comment #6, below.

3] Many of the proposed listings of the SDWD's reservoirs are for water quality constituents where the exceedances are the result of naturally occurring sources or are the result of a natural process within the reservoir. In these cases the exceedances are not the result of a discharge of a pollutant. The scientific weight-of-evidence approach shows that these exceedances are due to natural causes and, therefore, these water body-pollutant combinations should be dropped from the proposed list. Examples are the proposed listing of reservoirs for color, pH, manganese, and iron, which are detailed in comments #7, #9, and #10, below.

4] To further address our concerns in comments #2 and #3, the SDWD recommends that the State Board's "Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List" be revised to acknowledge that reservoirs with the beneficial use designation "MUN" (or potentially for other beneficial uses) that store imported water, or are effected by natural processes in their watersheds or in the reservoirs, should not be listed as impaired when a scientific weight-of-evidence approach indicates that the exceedance of Basin Plan standards is not caused by discharges in the watershed. Further, we recommend that this approach should be used to reevaluate the proposed 2006 listings before they are adopted.

5] Even though most of the suggested "impairments" of the reservoirs in no way effect the suitability of the reservoirs as sources of drinking water, the SDWD is concerned that these listings of the drinking water sources might alarm the public. It is our understanding that the inclusion of a SDWD reservoir on the 303(d) list does not impose any sort of statutory limitation on the use of the reservoir as a source of supply to our system, and we are confident that suggested "impairments" pose no health risk or operational constraint for these drinking water sources. We recommend that the State Board and San Diego Regional Board explicitly state this in all documents relating to the 303(d) list.

Specific comments

The SDWD has the following specific comments on the proposed 303(d) list for reservoirs and tributary streams.

6] Listing reservoirs which store imported water as not meeting the water quality standard for Total Dissolved Solids [TDS] and for individual salt constituents does not help to protect water quality and does not sustain any beneficial use.

Water imported into the San Diego region by the Metropolitan Water District of Southern California and the San Diego County Water Authority has TDS close to or greater than the water quality objective set in the Water Quality Control Plan for the San Diego Basin (9) (San Diego Basin Plan). Imported water generally has TDS of about 500 mg/l. Evaporative concentration slighfly increases the TDS of stored water. As a result, any reservoir that stores imported water will have TDS of 500 mg/l or greater. The Basin Plan's water quality objective for TDS for the SDWD's reservoirs is 300 mg/l [El Capitan and San Vicente Reservoirs] or 500 mg/l [Miramar and Murray Reservoirs]. Thus, it is essentially impossible for these reservoirs to meet the water quality objective for TDS. The exceedances of TDS at the reservoirs are not the result of the discharge of a pollutant to the reservoirs; rather, the TDS concentrations are an inherent quality of the imported water stored in the reservoirs.

Similar to TDS, the SDWD believes that listing reservoirs for the major salt constituents, specifically chloride and sulfate, does not help to protect of water quality or sustain beneficial uses. Imported water usually carries these salts in concentrations that are greater than the Basin Plan's water quality objectives.

We believe this matter needs to be addressed and remedied in the next Triennial Review of the San Diego Basin Pan; i.e., the Basin Plan should be changed such that it recognizes the inherent characteristics of imported water and sets appropriate water quality standards for reservoirs that store imported water. In the meantime, we recommend that no SDWD reservoirs be listed for TDS, chloride, or sulfate. Specifically, we recommend that the following water body – pollutant combinations be dropped from the proposed 303(d) list:

- El Capitan Lake [Reservoir] - Total Dissolved Solids [Staff Report, Volume 1, p. 28 and Fact Sheets, Region 9, p.60]
- Miramar Reservoir - Sulfates [Staff Report, Volume 1, p. 29 and Fact Sheets, Region 9, p.124]
- Miramar Reservoir - Total Dissolved Solids [Staff Report, Volume 1, p. 29 and Fact Sheets, Region 9, p.126]
- Murray Reservoir - Total Dissolved Solids [Staff Report, Volume 1, p. 229 and Fact Sheets, Region 9, p.134]
- San Vicente Reservoir - Chloride [Staff Report, Volume 1, p. 30 and Fact Sheets, Region 9, p.232]
- San Vicente Reservoir - Sulfates [Staff Report, Volume 1, p. 30 and Fact Sheets, Region 9, p.241]

- San Vicente Reservoir - Total Dissolved Solids [Staff Report, Volume 1, p. 30 and Fact Sheets, Region 9, p.243]

7] The listing of SDWD reservoirs for the pollutant "color" is not protective of any beneficial use of the reservoirs. The San Diego Basin Plan establishes a numerical water quality objective for color for inland surface waters at 20 color units. It is our understanding that this numerical objective for color was derived from state and federal drinking water standards. In this context, color is an optical property of water affecting the aesthetic palpability of treated drinking water, and has meaning only when treated drinking water is dispensed into a container and viewed by a person. In the reservoirs, the numerical measurement of color at the low levels set by the San Diego Basin Plan has no significance as an indicator of water quality - color is not toxic to aquatic organisms; color is not harmful to recreational users; color does not affect the aesthetic quality of raw water in a reservoir.

None of the other basin plans in California establish a numerical standard for color. Rather, each of the other basin plans has a only narrative objective for color, for example "Waste discharges shall not result in coloration of the receiving waters which causes a nuisance or adversely affects beneficial uses" [Water Quality Control Plan, Santa Ana River Basin (8), p. 4-3].

In short, the numerical objective for color in the San Diego Basin Plan, and the proposed listing of reservoirs for color, does nothing to sustain beneficial uses or protect water quality.

The SDWD believes that the numerical standard for color in the San Diego Basin Plan should be eliminated or modified. This should be addressed and remedied in the next Triennial Review of the San Diego Basin Pan. In the meantime, we recommend that no SDWD reservoirs be listed for color. Specifically, we recommend that the following water body – pollutant combinations be dropped from the proposed 303(d) list:

- Barrett Lake [Reservoir] - color [Staff Report, Volume 1, p. 27 and Fact Sheets, Region 9, p.14]
- El Captian Lake [Reservoir] - color [Staff Report, Volume 1, p.28 and Fact Sheets, Region 9, p.52]
- Morena Reservoir - color [Staff Report, Volume 1, p. 29and Fact Sheets, Region 9, p.128]
- Otay Reservoir, Lower - color Staff Report, Volume 1, p.29 and [Fact Sheets, Region 9, p.163]
- San Vicente Reservoir - color [Staff Report, Volume 1, p.30 and Fact Sheets, Region 9, p.234]

8] El Capitan Reservoir is proposed for listing for Antimony and Beryllium [Staff Report, Volume 1, p. 28 and Fact Sheets, Region 9, p. 48 and p. 50, respectively]. We recommend that these two proposed listings be dropped because of errors in assessing the data and

because assessment of all of the available data clearly shows that these constituents do not rise to the level needed to list.

The SD Basin Plan water quality objective [WQO] for Antimony in the El Capitan HA is 0.006 mg/l [SD Basin Plan, Table 3-4, p. 3-9]. The Fact Sheets states that two of ten samples collected between 1996 and 2000 exceeded the WQO. The SDWD's data archive does not support this assessment. In the SDWD's data archives, of 87 samples from El Capitan Reservoir, collected from April 12, 1995 to November 9, 2005, only one exceeded the WQO of 0.006 mg/l. From Table 3.1 of the Listing Policy, for a sample size of 87, the minimum number of exceedances needed to place the water segment – pollutant combination on the 303(d) list is eight. Thus, the water segment – pollutant combination should not be listed.

The SD Basin Plan water quality objective [WQO] for Beryllium in the El Capitan HA is 0.004 mg/l [SD Basin Plan, Table 3-4, p. 3-9]. The Fact Sheets states that two of two samples collected between 1999 and 2000 exceeded the WQO. The SDWD's data archive does not support this assessment. In the SDWD's data archives, of 84 samples from El Capitan Reservoir, collected from April 12, 1995 to November 9, 2005, one exceeded the WQO of 0.004 mg/l. From Table 3.1 of the Listing Policy, for a sample size of 84, the minimum number of exceedances needed to place the water segment – pollutant combination on the 303(d) list is eight. Thus, the water segment – pollutant combination should not be listed.

With regard to the proposed listing of El Capitan Reservoir for Antimony and Beryllium, it is important to note that in more than 80 samples analyzed for each pollutant only one sample measured greater than the WQO, and for both pollutants the exceedance was from the same sample, collected on September 8, 1999. For both exceedances, the measured value was more than one hundred times greater than the next highest measured value in the entire data set. This is an extraordinarily unlikely coincidence, and argues that these results are not representative of the water in El Capitan Reservoir. The high measured values are almost certainly the results of either a] a contaminated sample container, or b] a sample of reservoir water that, by chance, contained suspended mineral particles rich in Antimony and Beryllium; i.e., a non-representative sample.

A report of the SDWD's entire data set for Antimony and Beryllium at El Capitan Reservoir from 1995 to 2005 is in Attachment A.

9] The proposed listing of SDWD reservoirs for the pollutant "pH (high)" is not appropriate because elevated pH results from natural processes in the reservoirs and is not the result of the discharge of a pollutant. Additionally, the proposed listing of the reservoirs for pH (high) is based on only a small portion of the available data. Consideration of the full data sets would likely lead to conclusions not to list.

In the SDWD's reservoirs [and other reservoirs in southern California] pH in surface waters is directly influenced by photosynthesis in the reservoir. Photosynthetic activity of

naturally occurring planktonic algae consumes dissolved carbon dioxide from the water; the depletion of dissolved carbon dioxide shifts the carbonate – bicarbonate equilibrium, which drives pH towards higher values. Because photosynthesis requires abundant sunlight, this process is limited to the well-lit surface waters, and elevated pH values are found only in surface waters. Furthermore, the phenomenon has both a seasonal and a diurnal component. Elevated pH occurs in late-spring through early-fall because there is sufficient sunlight to drive photosynthesis during these seasons. Because photosynthesis requires light it is limited to daylight hours, and at night photosynthesis ceases and respiration dominates; this results in a shift of pH toward lower values. The SDWD's monitoring of its reservoirs is done in the daytime - as a result, our data set captures the elevated pH values but misses the lowered pH values.

The important point of the above discussion is that the elevated pH values we've measured in the reservoirs results from a natural process [photosynthesis] – it is not the result of the discharge of any pollutant.

In assessing pH at the reservoirs the State Board staff only used data from samples collected at the surface of the reservoirs. As described above, measurements of pH at the surface are commonly not representative of pH through the entire depth of a reservoir. The SDWD measures pH in profile at its reservoirs, collecting data at one meter intervals through the water column. These profiles have been done weekly since 1989. This yields a huge data set for measured pH at each reservoir. Our preliminary review shows that, when all data are considered, the number of pH values exceeding the water quality objective does not rise to the level needed to list. We request additional time to complete the assessment of our data sets and forward that assessment to the State Board.

For these reasons, the SDWD recommends that the proposed listing of reservoirs for pH (high) be dropped. Specifically, we recommend that the following water body – pollutant combinations be dropped from the proposed 303(d) list:

- Barrett Lake [Reservoir] - pH (high) [Staff Report, Volume 1, p. 27 and Fact Sheets, Region 9, p.18]
- El Captian Lake [Reservoir] - pH (high) [Staff Report, Volume 1, p. 28 and Fact Sheets, Region 9, p.62]
- Hodges, Lake [Reservoir] - pH (high)) [Staff Report, Volume 1, p. 28 and Fact Sheets, Region 9, p.101]
- Morena Reservoir - pH (high) [Staff Report, Volume 1, p. 29 and Fact Sheets, Region 9, p.132]
- Murray Reservoir - pH (high)) [Staff Report, Volume 1, p. 29 and Fact Sheets, Region 9, p.140]
- Otay Reservoir, Lower - pH (high) [Staff Report, Volume 1, p. 29 and Fact Sheets, Region 9, p.171]
- San Vicente Reservoir - pH (high) [Staff Report, Volume 1, p. 30and Fact Sheets, Region 9, p.243]
-

- Sutherland Reservoir - pH (high)) [Staff Report, Volume 1, p. 30 and Fact Sheets, Region 9, p.260]

10] The proposed listing of SDWD reservoirs for manganese and iron is not appropriate because the elevated levels of iron and manganese result from natural processes occurring within the reservoir, and are not the result of the discharge of a pollutant.

Like other reservoirs in southern California, the SDWD reservoirs have an annual cycle of temperature and density stratification. Beginning in spring, the annual cycle is this:

- surface water, warmed by sunlight energy, becomes less dense and "floats" atop the deep water;
- a distinct thermocline develops separating the surface water from the deep water;
- the surface water is well mixed by wind energy and, from contact with the atmosphere, remains well aerated;
- the deep water is isolated from the atmosphere and becomes "stagnant;"
- these conditions persist through summer and fall;
- by mid-winter the surface water cools to the point that its temperature and density is similar to the deep water; and
- wind energy mixes the entire reservoir from top to bottom.

As a result of seasonal stratification, in the late summer and fall deep water in the reservoir becomes anoxic; i.e., depleted of oxygen. Under anoxic conditions at the sediment / water interface some compounds, including manganese and iron, become soluble and are released from the sediment into the water. Concentrations of the soluble compounds become higher in the deep water. In winter stratification breaks down, the reservoirs mix from top to bottom, and the entire water volume is well oxygenated. Under these conditions the compounds become insoluble and are returned to the sediment as precipitates. Thus, there is an annual cycling of manganese and iron within the reservoir, mediated by natural seasonal stratification. Elevated concentrations of manganese and iron are found only in deep water and peak in summer and fall. As an example of this condition, Attachment B shows average monthly values for manganese at San Vicente Reservoir for 1995 to 2005. These data are typical for other SDWD reservoirs.

The above discussion demonstrates that seasonal concentrations of manganese and iron are the result of natural processes in the reservoirs. They are not the result of the discharge of a pollutant. For these reasons, the SDWD recommends that the proposed listing of reservoirs for manganese and iron be dropped. Specifically, we recommend that the following water body – pollutant combinations be dropped from the proposed 303(d) list:

- Barrett Lake [Reservoir] - Manganese [Staff Report, Volume 1, p. 27 and Fact Sheets, Region 9, p.16]
- El Captian Lake [Reservoir] - Manganese [Staff Report, Volume 1, p. 28 and Fact Sheets, Region 9, p.58]
- Hodges, Lake [Reservoir] - Manganese [Staff Report, Volume 1, p. 28 and Fact

Sheets, Region 9, p.97]

- Morena Reservoir - pH (high) [Staff Report, Volume 1, p. 29 and Fact Sheets, Region 9, p.130]
- Otay Reservoir, Lower - Manganese [Staff Report, Volume 1, p. 29 and Fact Sheets, Region 9, p.167]
- San Vicente Reservoir - Manganese [Staff Report, Volume 1, p. 30and Fact Sheets, Region 9, p.249]
- Sutherland Reservoir - Manganese [Staff Report, Volume 1, p. 30 and Fact Sheets, Region 9, p.258]
- Otay Reservoir, Lower - Iron [Staff Report, Volume 1, p. 29 and Fact Sheets, Region 9, p.165]

If you have any questions regarding the San Diego Water Department's comments or recommendations, please contact Jeffery Pasek, Senior Biologist, at [619]527-7405 or jpasek@sandiego.gov.

Sincerely,

Chris Zirkle
Deputy Director
Metropolitan Wastewater Department
Storm Water Division

Mark Stone
Deputy Director
Water Department
Operations Division

Enclosures: 1. Attachment A: Antimony and Beryllium in El Capitan Reservoir, 1995-2005
2. Attachment B: Average Monthly Mangenese in San Vicente Reservoir, 1995-2005

cc: John Robertus, San Diego Regional Water Quality Control Board
Craig Wilson, State Water Resources Control Board
Mic Stewart, Metropolitan Water District of Southern California
Marcia Torobin, Metropolitan Water District of Southern California
Tim Miller, Deputy City Attorney, City Attorney's Office
Dennis Bostad & Rick Alexander, Sweetwater Authority
Dave Bolland, Association of California Water Agencies
Mark Umphres, Helix Water District

State Water Resources Control Board
January 31, 2005
Attachement A

San Diego Water Department
Water Quality Laboratory
Antimony and Beryllium in El Capitan Reservoir, 1995 - 2005

Sample Date	Source*	Antimony, mg/l	Beryllium, mg/l
12-Apr-95	ECA-0	ND #	ND
21-Nov-95	ECA-0	0.000172	ND
3-Jan-96	ECA-0	ND	ND
5-Jun-96	ECA-0	0.0001	ND
11-Sep-96	ECA-0	0.000126	ND
6-Nov-96	ECA-0	ND	ND
4-Dec-96	ECA-0	ND	ND
5-Feb-97	ECA-0	0.00121	
5-Mar-97	ECA-0	0.000109	ND
7-May-97	ECA-0	ND	ND
4-Jun-97	ECA-0	ND	ND
3-Sep-97	ECA-0	0.000211	ND
3-Dec-97	ECA-0	0.000237	ND
4-Feb-98	ECA-0	0.000575	ND
4-Mar-98	ECA-0	ND	ND
3-Jun-98	ECA-0	0.000289	ND
2-Sep-98	ECA-0	ND	ND
7-Oct-98	ECA-0	ND	ND
2-Dec-98	ECA-0	ND	ND
3-Feb-99	ECA-0	ND	ND
3-Mar-98	ECA-0	ND	ND
2-Jun-99	ECA-0	ND	ND
7-Jul-99	ECA-0	ND	ND
4-Aug-99	ECA-0	ND	ND
8-Sep-99	ECA-0	0.0432	0.0255
8-Dec-99	ECA-0	ND	ND
9-Feb-00	ECA-0	ND	ND
8-Mar-00	ECA-0	ND	ND
3-May-00	ECA-0	ND	ND
7-Jun-00	ECA-0	ND	ND
5-Jul-00	ECA-0	ND	ND
9-Aug-00	ECA-0	ND	ND
6-Sep-00	ECA-0	ND	ND
4-Oct-00	ECA-0	ND	ND
8-Nov-00	ECA-0	ND	ND
6-Dec-00	ECA-0	ND	ND
3-Jan-01	ECA-0	ND	ND
7-Feb-01	ECA-0	ND	ND
7-Mar-01	ECA-0	ND	ND
2-Apr-01	ECA-0	ND	ND
7-May-01	ECA-0	ND	ND
6-Jun-01	ECA-0	ND	ND
2-Jul-01	ECA-0	ND	ND
1-Oct-01	ECA-0	ND	ND
5-Dec-01	ECA-0	ND	ND

WQO for Antimony in El Capitan HA	0.006 mg/l
total number of samples	87
samples >0.006 mg/l	1

WQO for Beryllium in El Capitan HA	0.004 mg/l
total number of samples	84
samples >0.004 mg/l	1

State Water Resources Control Board
January 31, 2005
Attachement A

Sample Date	Source*	Antimony, mg/l	Beryllium, mg/l
9-Jan-02	ECA-0	ND	ND
6-Mar-02	ECA-0	ND	ND
10-Apr-02	ECA-0	ND	ND
5-Jun-02	ECA-0	0.00051	ND
10-Jul-02	ECA-0	ND	ND
9-Oct-02	ECA-0	ND	ND
6-Nov-02	ECA-0	ND	ND
11-Dec-02	ECA-0	ND	ND
8-Jan-03	ECA-0	ND	ND
5-Feb-03	ECA-0	ND	ND
9-Apr-03	ECA-0	ND	ND
7-May-03	ECA-0	ND	ND
4-Jun-03	ECA-0	ND	ND
14-Jul-03	ECA-0	ND	ND
4-Aug-08	ECA-0	ND	ND
10-Sep-03	ECA-0	ND	ND
8-Oct-03	ECA-0	ND	ND
3-Nov-03	ECA-0	ND	ND
3-Dec-03	ECA-0	ND	ND
31-Dec-03	ECA-0	ND	ND
7-Jan-04	ECA-0	ND	ND
4-Feb-04	ECA-0	ND	ND
3-Mar-04	ECA-0	ND	ND
7-Apr-04	ECA-0	ND	ND
5-May-04	ECA-0	ND	
9-Jun-04	ECA-0	ND	ND
7-Jul-04	ECA-0	ND	ND
4-Aug-04	ECA-0	ND	ND
9-Sep-04	ECA-0	ND	ND
6-Oct-04	ECA-0	ND	ND
3-Nov-04	ECA-0	ND	
8-Dec-04	ECA-0	ND	ND
5-Jan-05	ECA-0	ND	ND
9-Feb-05	ECA-0	ND	ND
2-Mar-05	ECA-0	ND	ND
6-Apr-05	ECA-0	ND	ND
4-May-05	ECA-0	ND	ND
8-Jun-05	ECA-0	ND	ND
5-Jul-05	ECA-0	ND	ND
3-Aug-05	ECA-0	ND	ND
14-Sep-05	ECA-0	ND	ND
9-Nov-05	ECA-0	ND	ND

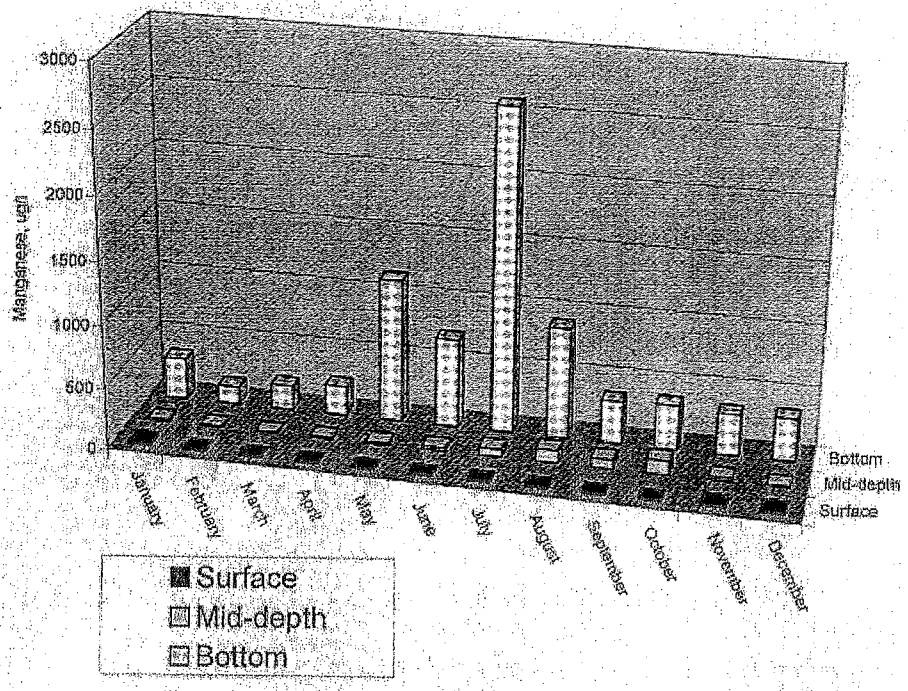
State Water Resources Control Board
January 31, 2005
Attachement B

Water Quality Laboratory

Average Monthly Manganese in San Vicente Reservoir 1995 - 2005

These data are the average of all values for each month
Units are ug/l

Month	SVA-O Station A Surface	SVA-MID Station A Mid-depth	SVA-BTM Station A Bottom
January	34.0	15.6	335
February	11.7	10.4	143
March	4.22	1.49	196
April	4.37	7.78	238
May	3.37	14.3	1154
June	2.29	22.5	718
July	1.98	60.1	2587
August	1.95	101	900
September	1.77	73.2	348
October	1.77	115	365
November	22.5	24.8	336
December	22.3	0.93	353



THE CITY OF SAN DIEGO

Helix Water District

October 18, 2006

Ms. Song Her
Clerk of the Board
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Subject: Comment Letter – Revisions to the Federal Clean Water Act Section 303(d) List of Water Quality Limited Segments in California

Dear Ms. Her:

In January, Sweetwater Authority sent the attached letter to the State Water Resources Control Board regarding comments on the Draft 2006 Section 303(d) List. The purpose of this letter was to express the concerns of reservoir operators and providers of imported water, including Sweetwater Authority and the City of San Diego Water Department, about proposed listings which these entities feel are unreasonable, unrealistic, and unnecessary. The reasons for this view are well described in the attached letter.

Similarly, in January, the City of San Diego sent the attached letter to the State Water Resources Control Board regarding the Draft 2006 Section 303(d) List. In this letter the City of San Diego Water Department stated its concerns about the proposed listing of its nine drinking source water reservoirs, including an extensive technical discussion of the inappropriateness of most of these proposed listings.

The reservoirs of the Sweetwater Authority and the City of San Diego Water Department proposed for Section 303(d) listing are in Attachment 3.

In recent conversations with State Board staff, we have learned that development of the 303(d) list has continued; and that our issues cannot be addressed in the current process because we have identified "standards issues" - that is to say, issues with regional water quality standards - and these standards are established in the regional basin plans. If these

standards are incorrect or impractical, they may only be addressed by amending the basin plan. We believe that affected water agencies would participate in, and support, remedial amendments of the San Diego Basin Plan, but we remain gravely concerned that once drinking water reservoirs and the proposed constituents are placed on the 303(d) list, a laborious and expensive process will follow in a vain attempt to address "pollutants" that:

- Are not the result of discharges;
- Are naturally occurring constituents in our watersheds; or;
- Are the result of natural processes, such as the seasonal stratification of our reservoirs, and;
- In the case of total dissolved solids (TDS), chloride, sulfate, and other salts, result from the importation of water from the Colorado River or the Bay-Delta through the San Diego County Water Authority and the Metropolitan Water District of Southern California.

We would once again stress that drinking water reservoirs are extensively managed, special-purpose water bodies that store local and imported water prior to treatment and distribution. Water quality treatment practices effectively treat or remove regulated constituents from drinking water in accordance with state and federal laws, prior to distribution to ratepayers. These water bodies are also man-made impoundments and are very different in their character than the natural waterways, rivers, lakes, and coastal waters which are the appropriate focus of protection under the Clean Water Act.

We are in the hopes that the State Board will act to remove our reservoirs from the proposed 303(d) list. We suggest that as part of the upcoming triennial review of the San Diego Basin Plan the water agencies can work with the Regional Board to amend the Basin Plan with realistic water quality standards for drinking water reservoirs. Once this is done, if future cycles of the 303(d) listing process show genuine water quality impairments at the reservoirs these may lead to appropriate listings.

We look forward to a collaborative resolution of this issue. Please be in touch if you have questions or comments about this request, or if you need additional information.

Sincerely,

SWEETWATER AUTHORITY	CITY OF SAN DIEGO WATER DEPARTMENT	HELIX WATER DISTRICT
Dennis Bostad General Manager	Jim Barrett Director	Mark Weston General Manager

cc: Art Coe, San Diego Regional Water Quality Control Board
Craig J. Wilson, State Water Resources Control Board
Jeff Pasek, City of San Diego Water Department
Maureen A. Stapleton, San Diego County Water Authority
Debra C. Man, Metropolitan Water District of Southern California
Mark Umphres, Helix Water District
Dave Bolland, ACWA
Michael Bardin, Santa Fe Irrigation District
Rick Alexander, Sweetwater Authority

Attachments:
1. Comment letter from Sweetwater Authority to Ms. Selica Potter dated 1/30/06
2. Comment letter from City of San Diego to Ms. Selica Potter dated 1/31/06
3. List of San Diego Water Department and Sweetwater Authority Drinking Source Water Reservoirs Proposed for Listing as Impaired under CWA Section 303(d)

ORANGE COUNTY
OC Public Works
Our Community. Our Commitment.

Jess A. Carbajal, Interim Director
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Santa Ana, CA

P.O. Box 4048
Santa Ana, CA 92702-4048

Telephone: (714) 834-2300
Fax: (714) 834-5188

October 26, 2009

Ms. Cynthia Gorham-Test
California Regional Water Quality Control Board, San Diego Region
9174 Sky Park Court, Ste. 100
San Diego, CA 92123-4340

RE: Clean Water Act Sections 305(b) and 303(d) Integrated Report for the San Diego Region Draft Final Staff Report August 2009

Dear Ms. Gorham-Test:

OC Public Works (OCPW) is pleased to provide additional comments on the Clean Water Act Sections 305(b) and 303(d) Integrated Report for the San Diego Region Draft Final Staff Report August 2009. We appreciate the willingness of the Regional Board staff to meet with us on October 12, 2009 to discuss our comment letter submitted on September 14, 2009.

Many of our initial comments focused on the decision to split previously defined shorelines into smaller coastal segments and the potential for inconsistencies with historic listings and current de-listing evaluations. As clarified at the October 12th meeting, it is our understanding that all current and historical coastal listings will be revised to reflect the sampling point and 25 yards up coast and down coast of this location. These revisions will address many of our previous comments.

The following additional comments are now offered. A matrix summarizing comments 1-7 and the data used in the analyses is also included as an attachment to this letter.

1. No new decision was rendered for Laguna Beach at Cleo Street (Pacific Ocean Shoreline, Laguna Beach HSA) although ample data are available for this site. As a result, this site remains listed for indicator bacteria. The available data from January 2004–December 2007 (OCPW NPDES Coastal Storm Drain Outfall Program CLEO site) show 327 samples were collected, enabling the calculation of 40 monthly geomeans. Under the REC-1 geomean standards no exceedances were observed. Under the REC-1 single sample maximum standards, there were no exceedances of total coliforms, 4 exceedances of fecal coliforms, and 11 exceedances of *Enterococcus*. Under the SHELL single sample maximum standard for total coliforms, 20 exceedances were observed. Under the SHELL geomean standard, 2 exceedances were observed. These results warrant delisting the location for all indicators.

2. No new decision was rendered for Aliso Beach at West Street (Pacific Ocean Shoreline, Dana Point HSA) although ample data are available for this site. As a result, this site remains listed for indicator bacteria. The available data from January 2004–December 2007 (OCPW NPDES Coastal Storm Drain Outfall Program WEST site) show 392 samples were collected, enabling the calculation of 46 monthly geomeans. Under the REC-1 and SHELL geomean standards, no exceedances were observed. Under the

REC-1 single sample maximum standards, there were no exceedances of total coliforms or fecal coliforms, and 1 exceedance of *Enterococcus*. Under the SHELL single sample maximum standard for total coliforms, 5 exceedances were observed. These results warrant delisting the location for all indicators.

3. No new decision was rendered for Dana Point Harbor regarding indicator bacteria although ample data are available for this site. As a result, this site remains listed for indicator bacteria. The available data from January 2004–December 2007 (County of Orange Health Care Agency Bacteriological Monitoring Program Sites BDP08, BDP12, BDP13, BDP14, BDP15, and BDP17) show 1,295 samples were collected, enabling the calculation of 48 geomeans. Under the REC-1 geomean standards 5 exceedances were observed for *Enterococcus* and no exceedances were observed for total coliforms and fecal coliforms. Under the REC-1 single sample maximum standards, there were 76 exceedances of fecal coliforms and 183 of *Enterococcus*. Under the State Listing Policy, the binomial test indicates that 214 exceedances are allowed when 1,295 samples are collected. These results warrant delisting of Dana Point Harbor for fecal coliforms and *Enterococcus*.

4. A decision was rendered to continue listing Doheny State Beach at North Doheny State Park Campground (Pacific Ocean Shoreline, Lower San Juan HSA, site DSB4) for all three indicator bacteria. The fact sheet for this listing indicated 547 samples were collected from May 2004 – December 2006. A review of the available data from this time period found124 samples were collected, enabling the calculation of 8 monthly geomeans. Under the REC-1 fecal coliform standards, no geomean exceedances were observed, and only 4 samples exceeded the single sample maximum. These results warrant delisting this location for fecal coliforms.

5. A decision was rendered to list Doheny State Beach at South Doheny State Park Campground (Pacific Ocean Shoreline, Lower San Juan HSA, site DSB1) for all three indicator bacteria. The fact sheet for this listing indicated 548 samples were collected from May 2004 – December 2006. A review of the available data from this time period found 211 samples were collected, enabling the calculation of 23 monthly geomeans. Under the REC-1 standards, no total coliform or fecal coliform geomean exceedances were observed, and only 3 fecal coliform samples exceeded the single sample maximum while no single sample exceedances were observed for total coliforms. Under the SHELL standards, 27 single sample maximum and 8 geomean exceedances were observed. These results warrant delisting the location for fecal coliforms.

6. A decision was rendered to continue to list South Capistrano County Beach (Pacific Ocean Shoreline, Lower San Juan HSA, site CSBMP1) for all three indicator bacteria. The fact sheet for this listing indicated 548 samples were collected from May 2004 – December 2006. A review of the available data from this time period found 249 samples were collected, enabling the calculation of 29 monthly geomeans. Under the REC-1 geomean standards, only 1 fecal coliform exceedance was observed while none were observed for total coliforms. REC-1 single sample maximum exceedances included 1 for total coliforms and 4 for fecal coliforms. Under the SHELL standards, 35 single sample maximum and 8 geomean exceedances were observed. These results warrant delisting the location for fecal coliforms.

7. A decision was rendered to continue to list South Capistrano Beach at Beach Road (Pacific Ocean Shoreline, Lower San Juan HSA, site CSBBR1) for all three indicator

bacteria. The fact sheet for this listing indicated 548 samples were collected from May 2004 – December 2006. A review of the available data from this time period found 254 samples were collected, enabling the calculation of 30 monthly geomeans. Under the REC-1 geomean standards, 7 *Enterococcus* exceedances and one fecal coliform exceedance were observed. REC-1 single sample maximum exceedances included 3 for fecal coliforms and 30 for *Enterococcus*, while none were observed for total coliforms. Under the SHELL standards, 22 single sample maximum and 7 geomean exceedances were observed. These results warrant delisting the location for fecal coliforms.

8. A decision was rendered to list Aliso Creek for selenium. The data evaluated for this proposed listing is from the mouth of Aliso Creek only. Therefore, the listing decision should be revised to Aliso Creek (mouth) and not the entire reach of Aliso Creek.

Thank you again for the opportunity to provide comments on the proposed revisions to the California Clean Water Act Section 303(d) List. We look forward to working with the Regional Board in resolving these issues and producing an appropriate and comprehensive list of impaired water bodies in the San Diego Region. Please contact Amanda Carr at (714) 955-0650 if you have any questions regarding these comments.

Very truly yours,

Chris Crompton, Manager
Environmental Resources

Attachment: Comments Matrix/Data Analysis Summary

cc: South Orange County NPDES Permittees

Comments Matrix/Data Analysis Summary
OCPW 303(d) List Comment Letter October 26, 2009

						Number of Exceedances						
Comment	Data Source	Site Name	Beneficial Use	Total Number of Samples	Number of Calculated Monthly Geomeans	Fecal Coliform Single Sample Maximum	Fecal Coliform Geomean	*Enterococcus* Single Sample Maximum	*Enterococcus* Geomean	Total Coliform Single Sample Maximum	Total Coliform Geomean	Recommended Action
#1	OCPW NPDES Jan. 2004-Dec. 2007	CLEO	REC-1	237	40	4	0	11	0	0	0	Delist all indicators
			SHELL	237	40	N/A	N/A	N/A	N/A	20	2	
#2	OCPW NPDES Jan. 2004 – Dec. 2007	WEST	REC-1	392	46	0	0	1	0	0	0	Delist all indicators
			SHELL	392	46	N/A	N/A	N/A	N/A	5	0	
#3	OCHCA Jan. 2004 – Dec. 2007	BDP08, BDP12, BDP13, BDP14, BDP15, BDP17	REC-1	1,295	48	76	0	183	5	6	0	Delist for Fecal Coliforms and *Enterococcus*
			SHELL	1,295	48	N/A	N/A	N/A	N/A	317	28	
#4	OCPW NPDES May 2004 – Dec. 2006	DSB4	REC-1	124	8	4	0	34	3	0	0	Delist for Fecal Coliforms
			SHELL	124	8	N/A	N/A	N/A	N/A	21	3	
#5	OCPW NPDES May 2004 – Dec. 2006	DSB1	REC-1	211	23	3	0	48	7	0	0	Delist for Fecal Coliforms
			SHELL	211	23	N/A	N/A	N/A	N/A	27	8	

						Number of Exceedances						
Comment	Data Source	Site Name	Beneficial Use	Total Number of Samples	Number of Calculated Monthly Geomeans	Fecal Coliform Single Sample Maximum	Fecal Coliform Geomean	*Enterococcus* Single Sample Maximum	*Enterococcus* Geomean	Total Coliform Single Sample Maximum	Total Coliform Geomean	Recommended Action
#6	OCPW NPDES May 2004 – Dec. 2006	CSBMP1	REC-1	249	29	4	1	44	12	1	0	Delist for Fecal Coliforms
			SHELL	249	29	N/A	N/A	N/A	N/A	35	8	
#7	OCPW NPDES May 2004-Dec. 2006	CSBBR1	REC-1	254	30	3	1	30	3	0	0	Delist for Fecal Coliforms
			SHELL	254	30	N/A	N/A	N/A	N/A	22	7	

City of San Marcos
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San Marcos, CA 92069-2918

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October 26, 2009

Ms. Cynthia Gorham – Test
California Regional Water Quality Control Board
San Diego Region
9174Sky park Court , Suite 100
San Diego, CA 92123-4340

SUBMITTED VIA E-MAIL TO: CTest@waterboards.ca.gov

RE: Recommendations for Changes to the Clean Water Act Sections 305(B) and 303(D) Integrated Report For the San Diego Region – San Marcos Creek Sediment Toxicity Listing Decision ID 6757 – Request to Delist – Impairment Listing is Flawed

Water Body Name: ***San Marcos Creek***
Water Body ID: ***CAR9045100020011025132925***
Water Body Type: ***River & Stream***

Dear Ms. Gorham – Test:

The City of San Marcos has reviewed the lines of evidence for the sediment toxicity listing for San Marcos Creek. The sediment toxicity data from the San Marcos Creek SWAMP data do not support a 303(d) listing based on the sediment toxicity lines of evidence (LOE) 3208 and 3209.

- **Lines of Evidence Should Not be Combined for Entire Reach of San Marcos Creek**

These two LOEs are from two distinctly different reaches of San Marcos Creek which are geographically separate and hydrologically separate due to the impoundment of Lake San Marcos. The part of San Marcos Creek upstream of Lake San Marcos is different in character than the portion downstream of the lake due to the effect of the lake and that therefore the two segments (upstream and downstream of the lake) should be evaluated separately. LOE 3208 from SWAMP data location 904CBSAM3 is above Lake San Marcos. LOE 3209 from SWAMP data location 904CBSAM6 is below Lake San Marcos near La Costa, Carlsbad.

- **Only Two Lines of Evidence for Sediment Toxicity**

LOEs 3208 and 3209 are **the only LOEs provided for the sediment toxicity listing**. Lines of evidence (LOE) 3204 – 3207, 26446, and 27029 are all bioassessment studies that did not evaluate sediment toxicity. LOE 21385 is water toxicity data from the same SWAMP study, which is not relevant to sediment toxicity. **Since the other LOEs do not include sediment toxicity data, they do not support a sediment toxicity 303(d) listing.**

- **Lines of Evidence 3208 and 3209 – Data is Non compliant with QAPP/Fact Sheet Incorrect**

LOEs 3208 and 3209 are sediment toxicity data collected by the State's SWAMP program during 2002 at two sites: 904CBSAM3 and 904CBSAM6. The former site is located in San Marcos Creek upstream of Lake San Marcos, and the latter site is located at the downstream end of San Marcos Creek close to the La Costa development in the City of Carlsbad.

Four sediment samples were taken and analyzed for sediment toxicity at each of these sites. Sampling dates were 3/12/2002, 4/23/2002, 6/4/2002, and 9/18/2002. The data for the upper san Marcos Creel location and La Costa should NOT be combined for the single listing based on the effect of Lake San Marcos. The fact sheet for the proposed 303(d) listing states that **only one of the four samples did not meet associated QAPP standard; this appears to be incorrect**.

- **Two of the four tests at *each* of these sites are flagged as "non-compliant with associated QAPP"**

(see attached data file, obtained from: http://bdat.ca.gov/Php/Data_Retrieval/data_retrieval.php).

For LOE 3208: Data shows two out of the four samples were non-compliant with the QAPP and of those two QAPP compliant data, only one data sample showed toxicity. **Per the approved listing policy, one exceedance out of two samples is not sufficient evidence to list a site for toxicity.**

For LOE 3209: Data shows two out of the four samples were non-compliant with the QAPP and of those two QAPP compliant data, only one data sample showed toxicity. **Per the approved listing policy, one exceedance out of two samples is not sufficient evidence to list a site for toxicity.**

The City of San Marcos appreciates the opportunity to provide comments
Sincerely,

Erica Ryan
City of San Marcos
Stormwater Program Manager
eryan@san-marcos.net
760-744-1050-x 3218

ESCONDIDO
City of Choice

Lori Vereker
Director of Utilities
201 North Broadway, Escondido, CA 92025
Phone: 760-839-5432 Fax: 760-839-4597

October 26, 2009

Ms. Cynthia Gorham-Test
California Regional Water Quality Control Board, San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Subject: **Recommendations for Changes to the Clean Water Act Section 303(d) Integrated Report for the San Diego Region, City of Escondido Comments**

Dear Ms. Gorham-Test:

The City appreciates the opportunity to provide comments on the 303(d) Integrated Report in support of the 2008 updates. The City submits the following comments for your consideration. These comments are presented in tabular format on the following pages and are organized by water body and pollutant in the order they appear in the Proposed Changes to 2006 303(d) listing table.

The City did not provide any information for the proposed listings or delistings where the City does not have any comments.

If you should have any questions regarding these comments please contact Vasana Vipatapat at 760-839-6284.

Sincerely,

Cheryl Filar
Environmental Programs Manager

cc: Lori Vereker, Director of Utilities

Table 4-2 (page 4-3) summarizes estimated long-term mean annual groundwater recharge and groundwater outflow terms for the four HSAs, as presented in the City's 1993 HARRF recycled water report of waste discharge. As shown in Table 4-2, streamflow infiltration, precipitation infiltration, and infiltration from applied irrigation waters represent the dominant sources of recharge within the HSAs. Surfacing groundwater and groundwater pumping represent the dominant sources of groundwater outflow within HSA 4.52, HSA 4.62, and HSA 5.23. Within HSA 5.21, subsurface groundwater flow represents an additional dominant outflow.

As shown by comparing mean annual recharge/outflow estimates presented in Table 4-2 (page 4-3) with groundwater storage estimates presented in Table 4-1, mean annual groundwater basin recharge averages approximately 10 percent of the total groundwater volume for alluvium/residuum aquifers (HSAs 4.52, 4.62, and 5.21). (Such a value is typical for San Diego County coastal and inland groundwater basins.)

Table 4-1
Summary of Physical Characteristics
HSAs 4.52, 4.62, 5.21, and 5.23

Characteristic	Eastern Portion of HSA 4.52	HSA 4.62	HSA 5.21	HSA 5.23
Principal surface water course[1]	San Marcos Creek	Escondido Creek	San Dieguito River	Felicita Creek
Approximate area[1]	3.3 sq. miles[3]	44 sq. miles	18 sq. miles	3.3 sq. miles
Predominant Aquifer Type[2]	Alluvium underlain by fractured rock	Alluvium underlain by fractured rock	Alluvium underlain by fractured rock	Fractured rock
Estimated Max. Groundwater Storage Capacity[2]	11,500 AF[3]	70,000 AF	35,000 AF	5,000 AF

1 From U.S. Geological Survey topographic maps (Escondido Quadrangle, San Marcos Quadrangle, Rancho Santa Fe Quadrangle, and Valley Center Quadrangle, 7.5 minute series.)

2 From *City of Escondido Water Reclamation and Reuse Program Report of Waste Discharge* (Montgomery Watson, 1993).

3 While the total area of HSA 4.52 is approximately 14 square miles, the proposed City of Escondido reuse would be limited to the eastern (upstream) portion of the basin. For purposes of assessing impacts of this recycled water use, this study assesses the upstream 2100 acres (3.3 square miles) of HSA 4.52.

Table 4-2
Estimated Long-Term Average Groundwater Recharge and Outflow[1]

Recharge/Outflow Parameter	Mean Annual Recharge/Outflow in AFY[1,2]			
	HSA 4.52[3]	HSA 4.62	HSA 5.21	HSA 5.23
MEAN ANNUAL BASIN RECHARGE				
Infiltrating streamflow	350	500	500	250
Direct precipitation	140	1,750	720	130
Septic tank discharges	10	70	20	20
Infiltrating applied imported water[4]	360	5,100	1,350	360
Infiltrating applied local groundwater[4]	60	600	240	80
Infiltrating applied recycled water[4]	0	0	0	0
Subsurface groundwater inflow	50	0	500	0
SUBTOTAL - BASIN RECHARGE	970	8,020	3,330	840
MEAN ANNUAL BASIN OUTFLOW				
Mean annual groundwater pumping	250	2,500	1,000	350
Phreatophytes & evaporation	60	290	280	80
Estimated surfacing groundwater[5]	560	5,230	750	370
Subsurface outflow	100	0	1,300	40
SUBTOTAL - BASIN OUTFLOWS	970	8,020	3,330	840

1 Mean annual basin recharge and outflow estimates are from the City's 1993 HARRF recycled water report of waste discharge, entitled *City of Escondido Water Reclamation and Reuse Program Report of Waste Discharge* (Montgomery Watson, 1993).

2 Estimated long-term average mean annual groundwater basin recharge and groundwater basin outflow for the respective HSAs, rounded to the nearest 10 AFY. The above long-term average estimates are based on long-term hydrologic data superimposed on existing irrigation and land uses. The estimates are also based on a long-term balance between groundwater recharge and outflows for each respective HSA. It should be noted that groundwater recharge and outflow in any given year is highly variable, and differ considerably from the estimated long-term average. Infiltrating streamflow and precipitation recharge are dependent on local hydrologic conditions, while applied irrigation recharge (imported water, recycled water, and groundwater) is dependent on weather and water availability. Surfacing groundwater and subsurface outflow are dependent on groundwater table elevations, and will vary significantly depending on hydrologic conditions and groundwater pumping. Values rounded to nearest 10 acre-feet per year (AFY).

3 Eastern 2100 acres of Richland HSA 4.52.

4 Based on 70 percent irrigation efficiency. (At an irrigation efficiency of 70 percent, the application of 1000 AF of irrigation water would result in 300 AF of recharge to saturated groundwater.)

5 Sum of groundwater contributions to stream "base flow", and groundwater losses to seeps and springs

1993 report of waste discharge identified one active well within the eastern portion of HSA 4.52. Given the suburban nature of land use within the HSA, however, it is possible that a number of unregistered irrigation wells exist within the eastern portion of HSA 4.52.

Groundwater quality data for HSA 4.52 are sparse. Table 4-4 summarizes groundwater quality within the eastern portion of HSA 4.52, as reported by the City's 1993 HARRF recycled water report of waste discharge. The limited available data indicate that groundwater concentrations within the eastern portion of HSA 4.52 are within assigned Basin Plan water quality objectives, and that assimilative capacity appears to exist within the HSA for boron, iron, and manganese. (Chapter 5 of this report quantitatively assesses the capacity within HSA 4.52 for assimilating additional loads of boron, iron, and manganese while still maintaining compliance with Basin Plan groundwater quality objectives.)

Table 4-4
Groundwater Quality
Richland HSA (HSA 4.52)

Constituent	Concentraton[1] (mg/l)
TDS	810
Chloride	120
Sulfate	230
Boron	0.16
Fluoride	0.19
Iron	0.10
Manganese	0.015

1 February 1991 water quality analyses of groundwater from Well No. 12N/2S-18F1 from *City of Escondido Water Reclamation and Reuse Program Report of Waste Discharge* (Montgomery Watson, 1993).

4.4 Description of Escondido HSA 4.62

The majority of the City of Escondido is located within HSA 4.62. The 44-square-mile HSA 4.62 watershed is drained by Reidy Creek and Escondido Creek.

HSA 4.62 features alluvial aquifers that extend along Escondido Creek and Reidy Creek in the central portion of the HSA. The alluvial aquifers are underlain by a fractured rock aquifer. The fractured rock aquifer extends beyond the alluvium to the foothills along the edges of HSA 4.62. In approximately one-quarter of HSA 4.62, the fractured rock aquifer has been weathered to form a water-bearing residuum (decomposed granite). In the downstream portion of the HSA, the broad alluvium/residuum aquifer is constricted into a

narrow canyon at Harmony Grove. Surfacing groundwater and urban runoff from HSA 4.62 insure year-round surface flows of Escondido Creek as the creek exits the HSA.

City of Escondido studies performed concurrent with preparation of the City's 1993 HARRF recycled water report of waste discharge identified more than 60 wells within HSA 4.62. Table 4-5 (pages 4-7 and 4-8) summarizes groundwater quality data from the identified wells.

As shown in Table 4-5, groundwater concentrations of boron, iron, and manganese are in general compliance with Basin Plan groundwater quality objectives for HSA 4.62. As a result, HSA 4.62 appears to have the capacity to assimilate additional loads of boron, iron, and manganese without causing exceedance of Basin Plan groundwater quality objectives. (Chapter 5 of this report quantitatively assesses the capacity within HSA 5.21 for assimilating additional loads of boron, iron, and manganese while still maintaining compliance with Basin Plan groundwater quality objectives.)

4.5 Description of Del Dios HSA 5.21

HSA 5.21 encompasses the downstream portion of the San Pasqual Valley, and includes Lake Hodges. Groundwater within HSA 5.21 primarily occurs in a deep alluvial aquifer that stretches from Lake Hodges to the San Pasqual Valley "narrows". Due to the depth and extent of the alluvial aquifer, total alluvial groundwater storage in HSA 5.21 is estimated at approximately 35,000 acre-feet (AF).

The alluvial valley of HSA 5.21 is underlain and surrounded to the north and south by foothills that comprised of residuum overlying fractured rock. Lands overlaying the alluvial aquifer are primarily undeveloped, while foothills on either side of the valley are predominantly urban and suburban. (The foothills extend to the southern portion of the City of Escondido and the northern portion of Rancho Bernardo.)

A number of irrigation wells exist within HSA 5.21, including irrigation wells in the valley alluvium in the eastern portion of the HSA (overlying City of San Diego lands) and City of Escondido wells in the vicinity of Kit Carson Park. (The City's 1993 HARRF recycled water report of waste discharge identified 15 active wells within HSA 5.21.)

Table 4-6 (page 4-9) summarizes available groundwater data for the wells. As shown in Table 4-6, concentrations of boron, iron, and manganese are generally within assigned Basin Plan groundwater quality objectives. Consequently, HSA 5.21 appears to have the capacity to assimilate additional loads of boron, iron, and manganese without causing exceedance of Basin Plan groundwater quality objectives. (Chapter 5 of this report quantitatively assesses the capacity within HSA 5.21 for assimilating additional loads of boron, iron, and manganese while still maintaining compliance with Basin Plan groundwater quality objectives.)

Table 4-5
Groundwater Quality, Escondido HSA[1] (HSA 4.62)

Sample Date	Well Number	Concentration in mg/l						
		TDS	Chloride	Sulfate	Boron	Fluoride	Iron	Mn
06/15/87	12S/2N-3M1	1300	330	400	0.13	0.2	0.02	0.02
06/15/87	12S/2N-4Q1	1400	430	370	0.16	0.5	0.02	0.09
06/15/87	12S/2N-9R1	1500	330	470	0.1	0.3	0.02	0.01
06/15/87	12S/2N-10K1	1800	470	640	0.13	0.4	0.02	0.01
06/16/87	12S/1N-18M1	1000	160	360	0.2	0.3	0.008	0.04
06/16/87	12S/2N-12B1	960	180	260	0.13	0.3	0.006	0.001
06/16/87	12S/2N-13E2	785	224	87	0.19	0.1		
06/16/87	12S/2N-15C1	800	240	110	0.09	0.3	0.005	0.015
06/16/87	12S/2N-21N1	4500	1700	1000	0.21	0.3	0.05	0.06
06/16/87	12S/2N-29H2	1300	290	410	0.1	0.3	0.02	0.01
06/16/87	12S/2N-30K1	1100	280	240	0.15	0.2	0.008	0.18
06/17/87	11S/2N-18A1	900	230	220	0.08	0.3	0.004	0.19
06/17/87	11S/2N-34M2	820	250	130	0.07	0.3	0.006	0.032
06/17/87	12S/2N-12K1	720	210	110	0.04	0.7	0.007	1.0
06/17/87	12S/2N-27B4	1200	330	290	0.1	0.3	0.02	0.01
06/15/87	11S/2N-21K3	1100	290	300	0.09	0.3	0.008	0.12
06/15/87	11S/2N-33C1	700	180	170	0.1	0.5	0.011	0.004
06/17/87	12S/1N-6M1	860	180	190	0.14	0.6	0.006	0.002
07/02/87	12S/2N-2Q1	1100	220	300	0.18	0.5	0.005	0.001
07/02/87	12S/2N-17H1	1000	140	390	0.004	0.3	0.004	0.005
01/28/91	11S/1N-31P	1070	420	180	0.05	0.41	0.91	0.038
01/28/91	12S/1N-6M4	840	220	160	0.18	0.41	0.10	0.015
01/28/91	12S/1N-6A	1070	190	270	0.08	0.3	0.10	0.015
01/28/91	12S/2N-12C	1300	260	490	0.13	0.51	0.10	0.015
01/29/91	12S/2N-12E1	1450	390	500	0.075	0.32	0.10	0.015
01/29/91	12S/2N-12E2	1510	320	380	0.14	0.28	0.10	0.015
01/30/91	12S/2N-12L1	1550	330	500	0.11	0.2	0.10	0.015
01/30/91	12S/2N-3L3	1250	280	370	0.062	0.15	0.10	0.015

(Table 4-5 is continued on Page 4-8)

1 From *City of Escondido Water Reclamation and Reuse Program Report of Waste Discharge* (Montgomery Watson, 1993), and *City of Escondido Proposed Basin Plan Amendment, Escondido Hydrologic Subarea 4.62* (Montgomery Watson, 1993).

3.0 Primary Constituents of Concern

Manganese is a natural component of rock and soil. Aquifers that feature manganese-rich media may naturally leach manganese into the groundwater and lake, resulting in naturally high groundwater and lake concentrations of this constituent. An increase of manganese was attributed to the City of Escondido's usage of the local domestic water supply. The Escondido-Vista Water Treatment Plant (WTP) frequently uses a high percentage of water from Lake Wohlford in its potable water production. This source water contributes to higher levels of manganese in recycled water due to residual sludge discharged from WTP. The City is attempting to minimize the manganese source by using chemicals that contain fewer impurities such as manganese. Due to agreements with other agencies, the City of Escondido is obligated to use this local water supply, when available, as a potable water source.

Total dissolved solid (TDS) is another constituent of concern. When Colorado River water is imported to San Diego County Water Authority, the TDS concentration in imported water is higher than local sources and is consistently above 550 mg/l. That leads to high TDS values of over 1000 mg/l coming in to the wastewater treatment plant, which may cause TDS to increase above 1000 mg/l in recycled water. The TDS has been selected as an expression of salinity for determining whether recycled water is acceptable for purposes of reuse in irrigation.

BASELINE SELF-MONITORING REPORT

DISCHARGER: City of Escondido, Hale Avenue Resource Recovery Facility

NPDES Permit No. CAO108944

Sample Station Date	Time of Sample	Flow as CFS	Method Number	Chloroform	Chloro methane	Method Number	Organo-Cl pesticides	PCBs	Method Number	Organo-P Pesticides: Chlorpyrifos	Organo-P Pesticides: Diazinon	Cyanide	Mercury
				as ug/l	as ug/l		as ug/l	as ug/l		as ug/l	as ug/l	as mg/l	as ug/l
Station 912													
2/10/2004	11:45 a.m.	5.61	624	< 5.0	< 10.0	608	< 5.0	< 2.0	8141A	< 0.03	< 0.11		
5/3/2004	10:30 a.m.	5.88	624	< 1.0	< 1.0	608	< 5.0	< 2.0	8141A	< 0.087	< 0.087	< 0.05 J	0.029
8/4/2004	10:50 a.m.	3.34	624	< 1.0	< 1.0	608	< 5.0	< 2.0	8141A	< 0.091	< 0.091		
11/3/2004	11:20 a.m.	6.26	624	< 2.0	< 2.0	608	< 5.0	< 2.0	8141A	< 0.96	< 0.96	< 0.05	0.67
Station 916													
2/10/2004	12:40 p.m.	4.95	624	< 5.0	< 10.0	608	< 5.0	< 2.0	8141A	< 0.03	< 0.11		
5/3/2004	12:12 p.m.	5.29	624	< 1.0	< 1.0	608	< 5.0	< 2.0	8141A	< 0.087	< 0.087	< 0.05 J	0.029
8/4/2004	11:55 a.m.	2.8	624	< 1.0	< 1.0	608	< 5.0	< 2.0	8141A	< 0.091	< 0.091		
11/3/2004	12:40 p.m.	7.03	624	< 2.0	< 2.0	608	< 5.0	< 2.0	8141A	< 0.96	< 0.96	< 0.05	0.69
Station 917													
2/11/2004	10:45 a.m.	1.54	624	< NA	< NA	608	NA	NA	8141A	< NA	< NA		
5/4/2004	10:28 a.m.	4.19	624	< 1.0	< 1.0	608	< 5.0	< 2.0	8141A	< 0.087	< 0.087	< 0.05 J	0.068
8/5/2004	9:12 a.m.	2.55	624	NA	NA	608	NA	NA	8141A	< NA	< NA		
11/4/2004	10:35 a.m.	5.11	624	< 1.0	< 1.0	608	< 5.0	< 2.0	8141A	< 0.96	< 0.96	< 0.05 J	0.47

Station 917 : Location monitored for Volatile Organics, Organo-Chlorine Pesticides, PCBs, Organo-Phosphorus Pesticides, Mercury and Cyanide in 2nd and 4th quarter.
Stations 912 and 916: Locations monitored for Mercury and Cyanide in 2nd and 4th quarter

ND: Not Detected.
ML: Minimum Level
J: Reported betweenML / PQL and MDL.
PQL: Practical Quantitation Limit

BASELINE SELF-MONITORING REPORT

DISCHARGER: City of Escondido, Hale Avenue Resource Recovery Facility

NPDES Permit No. CAO108944

Sample Station Date	Time of Sample	Flow as CFS	Method Number	Chloroform		Chloro methane	Method Number	Organo-Cl pesticides		PCBs	Method Number	Organo-P Pesticides				Cyanide		Mercury
												Chlorpyrifos		Diazinon				
				as ug/l		as ug/l		as ug/l		as ug/l		as ug/l		as ug/l		as mg/l		as ug/l
Station 912																		
2/10/2004	11:45 a.m.	5.61	624	<	5.0	< 10.0	608	<	5.0	< 2.0	8141A	<	0.03	<	0.11			
5/3/2004	10:30 a.m.	5.88	624	<	1.0	< 1.0	608	<	5.0	< 2.0	8141A	<	0.087	<	0.087	< 0.05	J	0.029
8/4/2004	10:50 a.m.	3.34	624	<	1.0	< 1.0	608	<	5.0	< 2.0	8141A	<	0.091	<	0.091			
11/3/2004	11:20 a.m.	6.26	624	<	2.0	< 2.0	608	<	5.0	< 2.0	8141A	<	0.96	<	0.96	< 0.05		0.67
Station 916																		
2/10/2004	12:40 p.m.	4.95	624	<	5.0	< 10.0	608	<	5.0	< 2.0	8141A	<	0.03	<	0.11			
5/3/2004	12:12 p.m.	5.29	624	<	1.0	< 1.0	608	<	5.0	< 2.0	8141A	<	0.087	<	0.087	< 0.05	J	0.029
8/4/2004	11:55 a.m.	2.8	624	<	1.0	< 1.0	608	<	5.0	< 2.0	8141A	<	0.091	<	0.091			
11/3/2004	12:40 p.m.	7.03	624	<	2.0	< 2.0	608	<	5.0	< 2.0	8141A	<	0.96	<	0.96	< 0.05		0.69
Station 917																		
2/11/2004	10:45 a.m.	1.54	624	<	NA	< NA	608		NA	NA	8141A	<	NA	<	NA			
5/4/2004	10:28 a.m.	4.19	624	<	1.0	< 1.0	608	<	5.0	< 2.0	8141A	<	0.087	<	0.087	< 0.05	J	0.068
8/5/2004	9:12 a.m.	2.55	624		NA	NA	608		NA	NA	8141A	<	NA	<	NA			
11/4/2004	10:35 a.m.	5.11	624	<	1.0	< 1.0	608	<	5.0	< 2.0	8141A	<	0.96	<	0.96	< 0.05	J	0.47

Station 917 : Location monitored for Volatile Organics, Organo-Chlorine Pesticides, PCBs, Organo-Phosphorus Pesticides, Mercury and Cyanide in 2nd and 4th quarter.
Stations 912 and 916: Locations monitored for Mercury and Cyanide in 2nd and 4th quarter

ND: Not Detected.
ML: Minimum Level
J: Reported betweenML / PQL and MDL.
PQL: Practical Quantitation Limit

Applied P & CH Laboratories
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	MDL	Analysis Result 040210912 04-01571-4	040210916 04-01571-6	040211917 04-01571-7
Indeno(1,2,3-cd)pyrene	625	µg/L	10	0.45	<9.6	<9.6	-
Isophorone	625	µg/L	10	1.3	<9.6	<9.6	-
2-Methylphenol	625	µg/L	10	1.5	<9.6	<9.6	-
3/4-Methylphenol	625	µg/L	10	1.2	<9.6	<9.6	-
Naphthalene	625	µg/L	10	0.77	<9.6	<9.6	-
Nitrobenzene	625	µg/L	10	1.1	<9.6	<9.6	-
2-Nitrophenol	625	µg/L	10	0.85	<9.6	<9.6	-
4-Nitrophenol	625	µg/L	50	3.1	<48	<48	-
N-Nitroso-di-n-propylamine	625	µg/L	10	1.6	<9.6	<9.6	-
Pentachlorophenol (PCP)	625	µg/L	50	3.6	<48	<48	-
Phenanthrene	625	µg/L	10	0.47	<9.6	<9.6	-
Phenol	625	µg/L	10	1.4	<9.6	<9.6	-
Pyrene	625	µg/L	10	0.67	<9.6	<9.6	-
1,2,4-Trichlorobenzene	625	µg/L	10	0.80	<9.6	<9.6	-
2,4,6-Trichlorophenol	625	µg/L	10	0.40	<9.6	<9.6	-
Organochlorine pesticides & PCBs							
Dilution Factor					0.96	0.96	1
Aldrin	608	µg/L	0.05	0.0032	<0.048	<0.048	-
beta-BHC	608	µg/L	0.05	0.0041	<0.048	<0.048	-
alpha-BHC	608	µg/L	0.05	0.0004	<0.048	<0.048	-
delta-BHC	608	µg/L	0.05	0.0008	<0.048	<0.048	-
gamma-BHC (Lindane)	608	µg/L	0.05	0.0056	<0.048	<0.048	-
Chlordane	608	µg/L	2	0.068	<1.9	<1.9	-
4,4'-DDD	608	µg/L	0.1	0.0008	<0.096	<0.096	-
4,4'-DDE	608	µg/L	0.1	0.0012	<0.096	<0.096	-
4,4'-DDT	608	µg/L	0.1	0.0021	<0.096	<0.096	-
Dieldrin	608	µg/L	0.1	0.0008	<0.096	<0.096	-
Endosulfan I	608	µg/L	0.05	0.0006	<0.048	<0.048	-
Endosulfan II	608	µg/L	0.1	0.0007	<0.096	<0.096	-
Endosulfan sulfate	608	µg/L	0.5	0.0016	<0.48	<0.48	-
Endrin	608	µg/L	0.1	0.0015	<0.096	<0.096	-
Endrin aldehyde	608	µg/L	0.1	0.0040	<0.096	<0.096	-
Heptachlor	608	µg/L	0.05	0.0044	<0.048	<0.048	-
Heptachlor epoxide	608	µg/L	0.05	0.0003	<0.048	<0.048	-
Toxaphene	608	µg/L	5	0.14	<4.8	<4.8	-
Aroclor-1016 (PCB-1016)	608	µg/L	1	0.028	<0.96	<0.96	-
Aroclor-1221 (PCB-1221)	608	µg/L	2	0.12	<1.9	<1.9	-
Aroclor-1232 (PCB-1232)	608	µg/L	1	0.077	<0.96	<0.96	-
Aroclor-1242 (PCB-1242)	608	µg/L	1	0.22	<0.96	<0.96	-
Aroclor-1248 (PCB-1248)	608	µg/L	1	0.028	<0.96	<0.96	-
Aroclor-1254 (PCB-1254)	608	µg/L	1	0.062	<0.96	<0.96	-
Aroclor-1260 (PCB-1260)	608	µg/L	1	0.021	<0.96	<0.96	-

Applied P & CH Laboratories
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	MDL	Analysis Result 040503912 04-02782-3	Analysis Result 040503916 04-02782-5
Indeno(1,2,3-cd)pyrene	625	µg/L	10	1.1	<9.6	<9.6
Isophorone	625	µg/L	10	1.1	<9.6	<9.6
2-Methylphenol	625	µg/L	10	0.81	<9.6	<9.6
3/4-Methylphenol	625	µg/L	10	0.78	<9.6	<9.6
Naphthalene	625	µg/L	10	0.99	<9.6	<9.6
Nitrobenzene	625	µg/L	10	0.65	<9.6	<9.6
2-Nitrophenol	625	µg/L	10	1.2	<9.6	<9.6
4-Nitrophenol	625	µg/L	50	7.4	<48	<48
N-Nitroso-di-n-propylamine	625	µg/L	10	0.96	<9.6	<9.6
Pentachlorophenol (PCP)	625	µg/L	50	16	<48	<48
Phenanthrene	625	µg/L	10	1.0	<9.6	<9.6
Phenol	625	µg/L	10	0.50	<9.6	<9.6
Pyrene	625	µg/L	10	1.0	<9.6	<9.6
1,2,4-Trichlorobenzene	625	µg/L	10	0.95	<9.6	<9.6
2,4,6-Trichlorophenol	625	µg/L	10	2.4	<9.6	<9.6
Organochlorine pesticides & PCBs						
Dilution Factor					0.962	0.962
Aldrin	608	µg/L	0.05	0.0009	<0.048	<0.048
beta-BHC	608	µg/L	0.05	0.0009	<0.048	<0.048
alpha-BHC	608	µg/L	0.05	0.0011	<0.048	<0.048
delta-BHC	608	µg/L	0.05	0.0016	<0.048	<0.048
gamma-BHC (Lindane)	608	µg/L	0.05	0.0015	<0.048	<0.048
Chlordane	608	µg/L	2	0.037	<1.9	<1.9
4,4'-DDD	608	µg/L	0.1	0.0027	<0.096	<0.096
4,4'-DDE	608	µg/L	0.1	0.0021	<0.096	<0.096
4,4'-DDT	608	µg/L	0.1	0.0091	<0.096	<0.096
Dieldrin	608	µg/L	0.1	0.0009	<0.096	<0.096
Endosulfan I	608	µg/L	0.05	0.0008	<0.048	<0.048
Endosulfan II	608	µg/L	0.1	0.0026	<0.096	<0.096
Endosulfan sulfate	608	µg/L	0.5	0.026	<0.48	<0.48
Endrin	608	µg/L	0.1	0.012	<0.096	<0.096
Endrin aldehyde	608	µg/L	0.1	0.0011	<0.096	<0.096
Heptachlor	608	µg/L	0.05	0.0013	<0.048	<0.048
Heptachlor epoxide	608	µg/L	0.05	0.0009	<0.048	<0.048
Toxaphene	608	µg/L	5	0.19	<4.8	<4.8
Aroclor-1016 (PCB-1016)	608	µg/L	1	0.027	<0.96	<0.96
Aroclor-1221 (PCB-1221)	608	µg/L	2	0.17	<1.9	<1.9
Aroclor-1232 (PCB-1232)	608	µg/L	1	0.070	<0.96	<0.96
Aroclor-1242 (PCB-1242)	608	µg/L	1	0.056	<0.96	<0.96
Aroclor-1248 (PCB-1248)	608	µg/L	1	0.040	<0.96	<0.96
Aroclor-1254 (PCB-1254)	608	µg/L	1	0.045	<0.96	<0.96
Aroclor-1260 (PCB-1260)	608	µg/L	1	0.016	<0.96	<0.96

Applied P & CH Laboratories
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	MDL	Analysis Result 040504917 04-02805-3
Indeno(1,2,3-cd)pyrene	625	µg/L	10	1.1	<9.6
Isophorone	625	µg/L	10	1.1	<9.6
2-Methylphenol	625	µg/L	10	0.81	<9.6
3/4-Methylphenol	625	µg/L	10	0.78	<9.6
Naphthalene	625	µg/L	10	0.99	<9.6
Nitrobenzene	625	µg/L	10	0.65	<9.6
2-Nitrophenol	625	µg/L	10	1.2	<9.6
4-Nitrophenol	625	µg/L	50	7.4	<48
N-Nitroso-di-n-propylamine	625	µg/L	10	0.96	<9.6
Pentachlorophenol (PCP)	625	µg/L	50	16	<48
Phenanthrene	625	µg/L	10	1.0	<9.6
Phenol	625	µg/L	10	0.50	<9.6
Pyrene	625	µg/L	10	1.0	<9.6
1,2,4-Trichlorobenzene	625	µg/L	10	0.95	<9.6
2,4,6-Trichlorophenol	625	µg/L	10	2.4	<9.6
Organochlorine pesticides & PCBs					
Dilution Factor					0.962
Aldrin	608	µg/L	0.05	0.0009	<0.048
beta-BHC	608	µg/L	0.05	0.0009	<0.048
alpha-BHC	608	µg/L	0.05	0.0011	<0.048
delta-BHC	608	µg/L	0.05	0.0016	<0.048
gamma-BHC (Lindane)	608	µg/L	0.05	0.0015	<0.048
Chlordane	608	µg/L	2	0.037	<1.9
4,4'-DDD	608	µg/L	0.1	0.0027	<0.096
4,4'-DDE	608	µg/L	0.1	0.0021	<0.096
4,4'-DDT	608	µg/L	0.1	0.0091	<0.096
Dieldrin	608	µg/L	0.1	0.0009	<0.096
Endosulfan I	608	µg/L	0.05	0.0008	<0.048
Endosulfan sulfate	608	µg/L	0.5	0.026	<0.48
Endrin	608	µg/L	0.1	0.012	<0.096
Endrin aldehyde	608	µg/L	0.1	0.0011	<0.096
Heptachlor	608	µg/L	0.05	0.0013	<0.048
Heptachlor epoxide	608	µg/L	0.05	0.0009	<0.048
Toxaphene	608	µg/L	5	0.19	<4.8
Aroclor-1016 (PCB-1016)	608	µg/L	1	0.027	<0.96
Aroclor-1221 (PCB-1221)	608	µg/L	2	0.17	<1.9
Aroclor-1232 (PCB-1232)	608	µg/L	1	0.070	<0.96
Aroclor-1242 (PCB-1242)	608	µg/L	1	0.056	<0.96
Aroclor-1248 (PCB-1248)	608	µg/L	1	0.040	<0.96
Aroclor-1254 (PCB-1254)	608	µg/L	1	0.045	<0.96
Aroclor-1260 (PCB-1260)	608	µg/L	1	0.016	<0.96

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	MDL	Analysis Result 040804912 04-03967-4	040804916 04-03967-6	040805917 04-03967-7
Organochlorine pesticides & PCBs							
Dilution Factor					0.962	0.962	1
Aldrin	608	µg/L	0.05	0.0032	< 0.048	< 0.048	-
beta-BHC	608	µg/L	0.05	0.0011	< 0.048	< 0.048	-
alpha-BHC	608	µg/L	0.05	0.0015	< 0.048	< 0.048	-
delta-BHC	608	µg/L	0.05	0.0022	< 0.048	< 0.048	-
gamma-BHC (Lindane)	608	µg/L	0.05	0.0008	< 0.048	< 0.048	-
Chlordane	608	µg/L	2	0.041	< 1.9	< 1.9	-
4,4'-DDD	608	µg/L	0.1	0.0014	< 0.096	< 0.096	-
4,4'-DDE	608	µg/L	0.1	0.0017	< 0.096	< 0.096	-
4,4'-DDT	608	µg/L	0.1	0.0018	< 0.096	< 0.096	-
Dieldrin	608	µg/L	0.1	0.0012	< 0.096	< 0.096	-
Endosulfan I	608	µg/L	0.05	0.0009	< 0.048	< 0.048	-
Endosulfan II	608	µg/L	0.1	0.0016	< 0.096	< 0.096	-
Endosulfan sulfate	608	µg/L	0.5	0.0080	< 0.48	< 0.48	-
Endrin	608	µg/L	0.1	0.0015	< 0.096	< 0.096	-
Endrin aldehyde	608	µg/L	0.1	0.0010	< 0.096	< 0.096	-
Heptachlor	608	µg/L	0.05	0.0024	< 0.048	< 0.048	-
Heptachlor epoxide	608	µg/L	0.05	0.0013	< 0.048	< 0.048	-
Toxaphene	608	µg/L	5	0.15	< 4.8	< 4.8	-
Aroclor-1016 (PCB-1016)	608	µg/L	1	0.016	< 0.96	< 0.96	-
Aroclor-1221 (PCB-1221)	608	µg/L	2	0.018	< 1.9	< 1.9	-
Aroclor-1232 (PCB-1232)	608	µg/L	1	0.020	< 0.96	< 0.96	-
Aroclor-1242 (PCB-1242)	608	µg/L	1	0.016	< 0.96	< 0.96	-
Aroclor-1248 (PCB-1248)	608	µg/L	1	0.017	< 0.96	< 0.96	-
Aroclor-1254 (PCB-1254)	608	µg/L	1	0.045	< 0.96	< 0.96	-
Aroclor-1260 (PCB-1260)	608	µg/L	1	0.012	< 0.96	< 0.96	-
Organo-phosphorus							
Dilution Factor					1	1	1
Azinphos methyl	8141A	µg/L	2	0.18	< 2	< 2	-
Bolstar (Sulprofos)	8141A	µg/L	1	0.21	< 1	< 1	-
Chlorpyrifos	8141A	µg/L	0.091 [a]	0.091	< 0.091	< 0.091	-
Coumaphos	8141A	µg/L	2	0.17	< 2	< 2	-
Demeton-O	8141A	µg/L	1	0.12	< 1	< 1	-
Demeton-S	8141A	µg/L	1	0.27	< 1	< 1	-
Diazinon	8141A	µg/L	0.091 [a]	0.091	< 0.091	< 0.091	-
Dichlorvos	8141A	µg/L	1	0.071	< 1	< 1	-
Disulfoton	8141A	µg/L	1	0.15	< 1	< 1	-
Ethoprop	8141A	µg/L	1	0.12	< 1	< 1	-
Fensulfothion	8141A	µg/L	1	0.33	< 1	< 1	-
Fenthion	8141A	µg/L	1	0.12	< 1	< 1	-
Merphos	8141A	µg/L	1	0.23	< 1	< 1	-
Methyl Parathion	8141A	µg/L	1	0.14	< 1	< 1	-
Mevinphos	8141A	µg/L	2	0.19	< 2	< 2	-
Naled	8141A	µg/L	2	0.12	< 2	< 2	-
Phorate	8141A	µg/L	1	0.12	< 1	< 1	-
Ronnel	8141A	µg/L	1	0.23	< 1	< 1	-
Tetrachlorvinphos (Stirophos)	8141A	µg/L	1	0.11	< 1	< 1	-
Tokuthion (Prothiofos)	8141A	µg/L	1	0.089	< 1	< 1	-
Trichloronate	8141A	µg/L	1	0.11	< 1	< 1	-

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	MDL	Analysis Result 041104917 04-05310-1
Indeno(1,2,3-cd)pyrene	625	µg/L	10	1.1	<9.6
Isophorone	625	µg/L	10	1.1	<9.6
2-Methylphenol	625	µg/L	10	0.81	<9.6
3/4-Methylphenol	625	µg/L	10	0.78	<9.6
Naphthalene	625	µg/L	10	0.99	<9.6
Nitrobenzene	625	µg/L	10	0.65	<9.6
2-Nitrophenol	625	µg/L	10	1.2	<9.6
4-Nitrophenol	625	µg/L	50	7.4	<48
N-Nitroso-di-n-propylamine	625	µg/L	10	0.96	<9.6
Pentachlorophenol (PCP)	625	µg/L	50	16	<48
Phenanthrene	625	µg/L	10	1.0	<9.6
Phenol	625	µg/L	10	0.50	<9.6
Pyrene	625	µg/L	10	1.0	<9.6
1,2,4-Trichlorobenzene	625	µg/L	10	0.95	<9.6
2,4,6-Trichlorophenol	625	µg/L	10	2.4	<9.6
Organochlorine pesticides & PCBs					
Dilution Factor					0.962
Aldrin	608	µg/L	0.05	0.0006	<0.048
beta-BHC	608	µg/L	0.05	0.0004	<0.048
alpha-BHC	608	µg/L	0.05	0.0003	<0.048
delta-BHC	608	µg/L	0.05	0.0008	<0.048
gamma-BHC	608	µg/L	0.05	0.0002	<0.048
4,4'-DDD	608	µg/L	0.1	0.0019	<0.096
4,4'-DDE	608	µg/L	0.1	0.0008	<0.096
4,4'-DDT	608	µg/L	0.1	0.0013	<0.096
Dieldrin	608	µg/L	0.1	0.0007	<0.096
Endosulfan I	608	µg/L	0.05	0.0005	<0.048
Endosulfan II	608	µg/L	0.1	0.0007	<0.096
Endosulfan sulfate	608	µg/L	0.5	0.0061	<0.48
Endrin	608	µg/L	0.1	0.0007	<0.096
Endrin aldehyde	608	µg/L	0.1	0.0006	<0.096
Heptachlor	608	µg/L	0.05	0.0007	<0.048
Heptachlor epoxide	608	µg/L	0.05	0.0006	<0.048
Chlordane	608	µg/L	2	0.037	<1.9
Toxaphene	608	µg/L	5	0.19	<4.8
Aroclor-1016 (PCB-1016)	608	µg/L	1	0.036	0.9J
Aroclor-1221 (PCB-1221)	608	µg/L	2	0.029	<1.9
Aroclor-1232 (PCB-1232)	608	µg/L	1	0.047	<0.96
Aroclor-1242 (PCB-1242)	608	µg/L	1	0.0080	<0.96
Aroclor-1248 (PCB-1248)	608	µg/L	1	0.012	<0.96
Aroclor-1254 (PCB-1254)	608	µg/L	1	0.013	<0.96
Aroclor-1260 (PCB-1260)	608	µg/L	1	0.0060	<0.96

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APCL Analytical Report

Component Analyzed	Method	Unit	ML	MDL	Analysis Result 041103912 HG CC 04-05305-5	Analysis Result 041103916 HNB 04-05305-7
Organochlorine pesticides & PCBs						
Dilution Factor					0.962	0.962
Aldrin	608	µg/L	0.05	0.0006	< 0.048	< 0.048
beta-BHC	608	µg/L	0.05	0.0004	< 0.048	< 0.048
alpha-BHC	608	µg/L	0.05	0.0003	< 0.048	< 0.048
delta-BHC	608	µg/L	0.05	0.0008	< 0.048	< 0.048
gamma-BHC	608	µg/L	0.05	0.0002	< 0.048	< 0.048
4,4'-DDD	608	µg/L	0.1	0.0019	< 0.096	< 0.096
4,4'-DDE	608	µg/L	0.1	0.0008	< 0.096	< 0.096
4,4'-DDT	608	µg/L	0.1	0.0013	< 0.096	< 0.096
Dieldrin	608	µg/L	0.1	0.0007	< 0.096	< 0.096
Endosulfan I	608	µg/L	0.05	0.0005	< 0.048	< 0.048
Endosulfan II	608	µg/L	0.1	0.0007	< 0.096	< 0.096
Endosulfan sulfate	608	µg/L	0.5	0.0061	< 0.48	< 0.48
Endrin	608	µg/L	0.1	0.0007	< 0.096	< 0.096
Endrin aldehyde	608	µg/L	0.1	0.0006	< 0.096	< 0.096
Heptachlor	608	µg/L	0.05	0.0007	< 0.048	< 0.048
Heptachlor epoxide	608	µg/L	0.05	0.0006	< 0.048	< 0.048
Chlordane	608	µg/L	2	0.037	< 1.9	< 1.9
Toxaphene	608	µg/L	5	0.19	< 4.8	< 4.8
Aroclor-1016 (PCB-1016)	608	µg/L	1	0.036	0.5J	1
Aroclor-1221 (PCB-1221)	608	µg/L	2	0.029	< 1.9	< 1.9
Aroclor-1232 (PCB-1232)	608	µg/L	1	0.047	< 0.96	< 0.96
Aroclor-1242 (PCB-1242)	608	µg/L	1	0.0080	< 0.96	< 0.96
Aroclor-1248 (PCB-1248)	608	µg/L	1	0.012	< 0.96	< 0.96
Aroclor-1254 (PCB-1254)	608	µg/L	1	0.013	< 0.96	< 0.96
Aroclor-1260 (PCB-1260)	608	µg/L	1	0.0060	< 0.96	< 0.96
Organo-phosphorus						
Dilution Factor					0.962	0.962
Azinphos methyl	8141A	µg/L	2	0.18	< 1.9	< 1.9
Bolstar (Sulprofos)	8141A	µg/L	1	0.21	< 0.96	< 0.96
Chlorpyrifos	8141A	µg/L	1	0.091	< 0.96	< 0.96
Coumaphos	8141A	µg/L	2	0.17	< 1.9	< 1.9
Demeton-O	8141A	µg/L	1	0.12	< 0.96	< 0.96
Demeton-S	8141A	µg/L	1	0.27	< 0.96	< 0.96
Diazinon	8141A	µg/L	1	0.091	< 0.96	< 0.96
Dichlorvos	8141A	µg/L	1	0.071	< 0.96	< 0.96
Disulfoton	8141A	µg/L	1	0.15	< 0.96	< 0.96
Ethoprop	8141A	µg/L	1	0.12	< 0.96	< 0.96
Fensulfothion	8141A	µg/L	1	0.33	< 0.96	< 0.96
Fenthion	8141A	µg/L	1	0.12	< 0.96	< 0.96
Merphos	8141A	µg/L	1	0.23	< 0.96	< 0.96
Methyl Parathion	8141A	µg/L	1	0.14	< 0.96	< 0.96
Mevinphos	8141A	µg/L	2	0.19	< 1.9	< 1.9
Naled	8141A	µg/L	2	0.12	< 1.9	< 1.9
Phorate	8141A	µg/L	1	0.12	< 0.96	< 0.96
Ronnel	8141A	µg/L	1	0.23	< 0.96	< 0.96
Tetrachlorvinphos (Stirophos)	8141A	µg/L	1	0.11	< 0.96	< 0.96
Tokuthion (Prothiofos)	8141A	µg/L	1	0.089	< 0.96	< 0.96
Trichloronate	8141A	µg/L	1	0.11	< 0.96	< 0.96

BASELINE SELF-MONITORING REPORT

DISCHARGER: City of Escondido, Hale Avenue Resource Recovery Facility

NPDES Permit No. CAO108944

Sample Station Date	Time of Sample	Flow as CFS	Method Number	Chloroform	Chloro methane	Method Number	Organo-Cl pesticides	PCBs	Method Number	Organo-P Pesticides: Chlorpyrifos	Organo-P Pesticides: Diazinon	Cyanide	Mercury
				as ug/l	as ug/l		as ug/l	as ug/l		as ug/l	as ug/l	as mg/l	as ug/l
Station 912													
2/2/2005	11:20 AM	19.0	624	< 1.0	< 1.0	608	< 5.0	< 2.0	8141A	< 1	< 1	NA	NA
5/3/2005	11:43 AM	13.3	624	< 1.0	< 1.0	608	< 5.0	< 2.0	8141A	< 0.08	< 0.11	< 0.06 J	0.290
8/2/2005	12:03 PM	4.67	624	< 1.0	< 1.0	608	< 5.0	< 2.0	8141A	< 1	< 1	NA	NA
11/8/2005	11:35 AM	3.79	624	< 1.0	< 1.0	608	< 5.1	< 3.0	8141A	< 1	< 1	< 0.06	1.0
Station 916													
2/2/2005	12:25 PM	16.9*	624	< 1.0	< 1.0	608	< 5.0	< 2.0	8141A	< 1	< 1	NA	NA
5/3/2005	1:30 PM	15.7	624	< 1.0	< 1.0	608	< 5.0	< 2.0	8141A	< 0.08	< 0.11	< 0.06 J	0.320
8/2/2005	1:15 PM	3.46	624	< 1.0	< 1.0	608	< 5.0	< 2.0	8141A	< 1	< 1	NA	NA
11/8/2005	12:40 PM	2.91	624	< 1.0	< 1.0	608	< 5.0	< 2.4	8141A	< 1	< 1	< 0.06	1.1
Station 917													
5/4/2005	7:51 AM	8.0	624	< 1.0	< 1.0	608	< 5.0	< 2.0	8141A	< 0.08	< 0.11	< 0.06 J	0.270
11/9/2005	8:48 AM	2.90	624	< 1.0	< 1.0	608	< 5.0	< 2.0	8141A	< 0.08	< 0.11	< 0.06 J	0.28

Station 917 : Location monitored for Volatile Organics, Organo-Chlorine Pesticides, PCBs, Organo-Phosphorus Pesticides, Mercury and Cyanide in 2nd and 4th quarter.

Stations 912 and 916: Locations monitored for Mercury and Cyanide in 2nd and 4th quarter

* Width and depth of creek could not be accurately measured. Flow rate calculated base on estimate.

ND: Not Detected.

ML: Minimum Level

J: Reported betweenML / PQL and MDL.

PQL: Practical Quantitation Limit

Applied P & CH Laboratories
13760 Magnolia Ave., Chino, CA 91710
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APCL Analytical Report

Submitted to:
City of Escondido
Attention: Vasana Vipatapat
1521 S.Hale Ave
Escondido CA 92029
Tel: (760)839-6284 Fax: (760)738-5168

Service ID #: 801-051431B
Collected by: VV
Collected on: 02/03/05

Received: 02/03/05
Extracted: 02/10/05
Tested: 02/07-10/05
Reported: 02/18/05

Sample Description: Water
Project Description: 70038 Baseline

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	MDL	Analysis Result 050203917 05-01431-2	050203920 05-01431-3	050203923 05-01431-4	050203940 05-01431-5
Ammonia (NH_4^+) as N	350.2	mg/L	0.2	0.087	0.25	0.097J	0.32	0.13J
Nitrogen, Total Kjeldahl (TKN)	351.3	mg/L	0.2	0.099	0.68	0.45	0.71	0.60
Phosphorus, Total	365.2	mg/L	0.1	0.039	<0.1	0.044J	0.060J	<0.1

Component Analyzed	Method	Unit	PQL	MDL	Analysis Result 050203300 05-01431-1	050203923 05-01431-4
Organochlorine pesticides & PCBs						
Dilution Factor					1.00	0.962
Aldrin	608	µg/L	0.05	0.0006	-	<0.048
beta-BHC	608	µg/L	0.05	0.0004	-	<0.048
alpha-BHC	608	µg/L	0.05	0.0003	-	<0.048
delta-BHC	608	µg/L	0.05	0.0008	-	<0.048
gamma-BHC (Lindane)	608	µg/L	0.05	0.0002	-	<0.048
Chlordane	608	µg/L	2	0.032	-	<1.9
4,4'-DDD	608	µg/L	0.1	0.0019	-	<0.096
4,4'-DDE	608	µg/L	0.1	0.0008	-	<0.096
4,4'-DDT	608	µg/L	0.1	0.0013	-	<0.096
Dieldrin	608	µg/L	0.1	0.0007	-	<0.096
Endosulfan I	608	µg/L	0.05	0.0005	-	<0.048
Endosulfan II	608	µg/L	0.1	0.0007	-	<0.096
Endosulfan sulfate	608	µg/L	0.5	0.0061	-	<0.48
Endrin	608	µg/L	0.1	0.0007	-	<0.096
Endrin aldehyde	608	µg/L	0.1	0.0006	-	<0.096
Heptachlor	608	µg/L	0.05	0.0007	-	<0.048
Heptachlor epoxide	608	µg/L	0.05	0.0006	-	<0.048
Toxaphene	608	µg/L	5	0.053	-	<4.8

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APCL Analytical Report

Submitted to:
City of Escondido
Attention: Vasana Vipatapat
1521 S.Hale Ave
Escondido CA 92029
Tel: (760)839-6284 Fax: (760)738-5168

Service ID #: 801-051423B
Collected by:
Collected on: 02/02/05

Received: 02/02/05
Extracted: 02/03/05
Tested: 02/04-08/05
Reported: 02/16/05

Sample Description: Water
Project Description: 70038 Baseline

Analysis of Water Samples

Component Analyzed	Method	Unit	ML	MDL	Analysis Result 050202907 05-01423-2	050202910 05-01423-3	050202911 05-01423-4
Ammonia (NH_4^+) as N	350.2	mg/L	0.2	0.087	0.32	0.14J	0.20
Nitrogen, Total Kjeldahl (TKN)	351.3	mg/L	0.2	0.099	0.69	0.65	0.64
Phosphorus, Total	365.2	mg/L	0.1	0.039	0.15	0.11	0.091J

Component Analyzed	Method	Unit	ML	MDL	Analysis Result 050202912 05-01423-5	050202913 05-01423-6	050202916 05-01423-7
Ammonia (NH_4^+) as N	350.2	mg/L	0.2	0.087	0.11J	0.22	0.14J
Nitrogen, Total Kjeldahl (TKN)	351.3	mg/L	0.2	0.099	0.49	0.70	0.54
Phosphorus, Total	365.2	mg/L	0.1	0.039	0.076J	0.086J	0.055J

Component Analyzed	Method	Unit	ML	MDL	Analysis Result 050202912 05-01423-5	050202916 05-01423-7
Organochlorine pesticides & PCBs						
Dilution Factor					0.962	0.962
Aldrin	608	µg/L	0.05	0.0006	< 0.048	< 0.048
beta-BHC	608	µg/L	0.05	0.0004	< 0.048	< 0.048
alpha-BHC	608	µg/L	0.05	0.0003	< 0.048	< 0.048
delta-BHC	608	µg/L	0.05	0.0008	< 0.048	< 0.048
gamma-BHC (Lindane)	608	µg/L	0.05	0.0002	< 0.048	< 0.048
Chlordane	608	µg/L	2	0.032	< 1.9	< 1.9
4,4'-DDD	608	µg/L	0.1	0.0019	< 0.096	< 0.096
4,4'-DDE	608	µg/L	0.1	0.0008	< 0.096	< 0.096
4,4'-DDT	608	µg/L	0.1	0.0013	< 0.096	< 0.096
Dieldrin	608	µg/L	0.1	0.0007	< 0.096	< 0.096
Endosulfan I	608	µg/L	0.05	0.0005	< 0.048	< 0.048
Endosulfan II	608	µg/L	0.1	0.0007	< 0.096	< 0.096
Endosulfan sulfate	608	µg/L	0.5	0.0061	< 0.48	< 0.48
Endrin	608	µg/L	0.1	0.0007	< 0.096	< 0.096
Endrin aldehyde	608	µg/L	0.1	0.0006	< 0.096	< 0.096
Heptachlor	608	µg/L	0.05	0.0007	< 0.048	< 0.048
Heptachlor epoxide	608	µg/L	0.05	0.0006	< 0.048	< 0.048
Toxaphene	608	µg/L	5	0.053	< 4.8	< 4.8

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APCL Analytical Report

Component Analyzed	Method	Unit	ML	MDL	Analysis Result 050503912 05-02575-5	Analysis Result 050503916 05-02575-7
ORGANOCHLORINE PESTICIDES & PCBS						
Dilution Factor					0.962	0.962
ALDRIN	608	µg/L	0.05	0.0027	<0.048	<0.048
BETA-BHC	608	µg/L	0.05	0.0031	<0.048	<0.048
ALPHA-BHC	608	µg/L	0.05	0.0040	<0.048	<0.048
DELTA-BHC	608	µg/L	0.05	0.0010	<0.048	<0.048
GAMMA-BHC (LINDANE)	608	µg/L	0.05	0.0052	<0.048	<0.048
CHLORDANE	608	µg/L	2	0.18	<1.9	<1.9
4,4'-DDD	608	µg/L	0.1	0.0050	<0.096	<0.096
4,4'-DDE	608	µg/L	0.1	0.0009	<0.096	<0.096
4,4'-DDT	608	µg/L	0.1	0.0016	<0.096	<0.096
DIELDRIN	608	µg/L	0.1	0.0012	<0.096	<0.096
ENDOSULFAN I	608	µg/L	0.05	0.0019	<0.048	<0.048
ENDOSULFAN II	608	µg/L	0.1	0.0011	<0.096	<0.096
ENDOSULFAN SULFATE	608	µg/L	0.5	0.0050	<0.48	<0.48
ENDRIN	608	µg/L	0.1	0.0013	<0.096	<0.096
ENDRIN ALDEHYDE	608	µg/L	0.1	0.0009	<0.096	<0.096
HEPTACHLOR	608	µg/L	0.05	0.0083	<0.048	<0.048
HEPTACHLOR EPOXIDE	608	µg/L	0.05	0.0015	<0.048	<0.048
TOXAPHENE	608	µg/L	5	0.61	<4.8	<4.8
AROCLOR-1016 (PCB-1016)	608	µg/L	1	0.088	<0.96	<0.96
AROCLOR-1221 (PCB-1221)	608	µg/L	1	0.19	<0.96	<0.96
AROCLOR-1232 (PCB-1232)	608	µg/L	1	0.082	<0.96	<0.96
AROCLOR-1242 (PCB-1242)	608	µg/L	1	0.16	<0.96	<0.96
AROCLOR-1248 (PCB-1248)	608	µg/L	1	0.16	<0.96	<0.96
AROCLOR-1254 (PCB-1254)	608	µg/L	1	0.093	<0.96	<0.96
AROCLOR-1260 (PCB-1260)	608	µg/L	1	0.061	<0.96	<0.96
PHOSPHORUS PESTICIDES						
Dilution Factor					1	1
AZINPHOS METHYL	8141A	µg/L	2	0.12	<2	<2
BOLSTAR (SULPROFOS)	8141A	µg/L	2	0.34	<2	<2
CHLORPYRIFOS	8141A	µg/L	0.08 (a)	0.08	<0.08	<0.08
COUMAPHOS	8141A	µg/L	2	0.69	<2	<2
DEMETON-O	8141A	µg/L	2	0.53	<2	<2
DEMETON-S	8141A	µg/L	2	0.34	<2	<2
DIAZINON	8141A	µg/L	0.11 (a)	0.11	<0.11	<0.11
DICHLORVOS	8141A	µg/L	1	0.11	<1	<1
DISULFOTON	8141A	µg/L	1	0.32	<1	<1
ETHOPROP	8141A	µg/L	1	0.14	<1	<1
FENSULFOTHION	8141A	µg/L	2	0.38	<2	<2
FENTHION	8141A	µg/L	2	0.42	<2	<2
MERPHOS	8141A	µg/L	1	0.19	<1	<1
METHYL PARATHION	8141A	µg/L	1	0.16	<1	<1
MEVINPHOS	8141A	µg/L	2	0.26	<2	<2
NALED	8141A	µg/L	2	0.24	<2	<2
PHORATE	8141A	µg/L	2	0.51	<2	<2
RONNEL	8141A	µg/L	1	0.31	<1	<1
TETRACHLORVINPHOS (STIROPHOS)	8141A	µg/L	1	0.15	<1	<1
TOKUTHION (PROTHIOFOS)	8141A	µg/L	1	0.12	<1	<1
TRICHLORONATE	8141A	µg/L	1	0.15	<1	<1

Component Analyzed	Method	Unit	ML	MDL	Analysis Result 050803300 05-03630-1	Analysis Result 050803923 05-03630-4
ORGANOCHLORINE PESTICIDES & PCBS						
Dilution Factor					1	0.962
ALDRIN	608	µg/L	0.05	0.0027	-	<0.048
BETA-BHC	608	µg/L	0.05	0.0031	-	<0.048
ALPHA-BHC	608	µg/L	0.05	0.0040	-	<0.048
DELTA-BHC	608	µg/L	0.05	0.0010	-	<0.048
GAMMA-BHC (LINDANE)	608	µg/L	0.05	0.0052	-	<0.048
CHLORDANE	608	µg/L	2	0.18	-	<1.9
4,4'-DDD	608	µg/L	0.1	0.0050	-	<0.096
4,4'-DDE	608	µg/L	0.1	0.0009	-	<0.096
4,4'-DDT	608	µg/L	0.1	0.0016	-	<0.096
DIELDRIN	608	µg/L	0.1	0.0012	-	<0.096
ENDOSULFAN I	608	µg/L	0.05	0.0019	-	<0.048
ENDOSULFAN II	608	µg/L	0.1	0.0011	-	<0.096
ENDOSULFAN SULFATE	608	µg/L	0.5	0.0050	-	<0.48
ENDRIN	608	µg/L	0.1	0.0013	-	<0.096
ENDRIN ALDEHYDE	608	µg/L	0.1	0.0009	-	<0.096
HEPTACHLOR	608	µg/L	0.05	0.0083	-	<0.048
HEPTACHLOR EPOXIDE	608	µg/L	0.05	0.0015	-	<0.048
TOXAPHENE	608	µg/L	5	0.61	-	<4.8
AROCLOR-1016 (PCB-1016)	608	µg/L	1	0.088	-	<0.96
AROCLOR-1221 (PCB-1221)	608	µg/L	1	0.19	-	<0.96
AROCLOR-1232 (PCB-1232)	608	µg/L	1	0.082	-	<0.96
AROCLOR-1242 (PCB-1242)	608	µg/L	1	0.16	-	<0.96
AROCLOR-1248 (PCB-1248)	608	µg/L	1	0.016	-	<0.96
AROCLOR-1254 (PCB-1254)	608	µg/L	1	0.093	-	<0.96
AROCLOR-1260 (PCB-1260)	608	µg/L	1	0.061	-	<0.96
ORGANO-PHOSPHORUS						
Dilution Factor					1	1
AZINPHOS METHYL	8141A	µg/L	2	0.12	-	<2
BOLSTAR (SULPROFOS)	8141A	µg/L	2	0.34	-	<2
CHLORPYRIFOS	8141A	µg/L	1	0.08	-	<1
COUMAPHOS	8141A	µg/L	2	0.09	-	<2
DEMETON-O	8141A	µg/L	2	0.53	-	<2
DEMETON-S	8141A	µg/L	2	0.34	-	<2
DIAZINON	8141A	µg/L	1	0.11	-	<1
DICHLORVOS	8141A	µg/L	1	0.11	-	<1
DISULFOTON	8141A	µg/L	1	0.32	-	<1
ETHOPROP	8141A	µg/L	1	0.14	-	<1
FENSULFOTHION	8141A	µg/L	2	0.38	-	<2
FENTHION	8141A	µg/L	2	0.42	-	<2

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APCL Analytical Report

Component Analyzed	Method	Unit	ML	MDL	Analysis Result 050802905 05-03614-2	050802906 05-03614-3	050802912 05-03614-7	050802916 05-03614-9
Indeno(1,2,3-cd)pyrene	625	µg/L	10	1.1	<10	<10	<10	<10
Isophorone	625	µg/L	10	1.6	<10	<10	<10	<10
2-Methylphenol	625	µg/L	10	0.84	<10	<10	<10	<10
3/4-Methylphenol	625	µg/L	10	0.61	<10	<10	<10	<10
Naphthalene	625	µg/L	10	2.0	<10	<10	<10	<10
Nitrobenzene	625	µg/L	10	1.9	<10	<10	<10	<10
2-Nitrophenol	625	µg/L	10	1.7	<10	<10	<10	<10
4-Nitrophenol	625	µg/L	50	6.4	<50	<50	<50	<50
N-Nitroso-di-n-propylamine	625	µg/L	10	1.5	<10	<10	<10	<10
N-Nitroso-dimethylamine	625	µg/L	10	1.4	<10	<10	<10	<10
N-Nitroso-diphenylamine	625	µg/L	50	9.2	<50	<50	<50	<50
Pentachlorophenol (PCP)	625	µg/L	50	12	<50	<50	<50	<50
Phenanthrene	625	µg/L	10	1.7	<10	<10	<10	<10
Phenol	625	µg/L	10	0.29	<10	<10	<10	<10
Pyrene	625	µg/L	10	0.68	<10	<10	<10	<10
1,2,4-Trichlorobenzene	625	µg/L	10	1.7	<10	<10	<10	<10
2,4,6-Trichlorophenol	625	µg/L	10	2.7	<10	<10	<10	<10
Organochlorine pesticides & PCBs								
Dilution Factor					0.962	0.962	0.962	0.962
Aldrin	608	µg/L	0.05	0.0027	<0.048	<0.048	<0.048	<0.048
beta-BHC	608	µg/L	0.05	0.0031	<0.048	<0.048	<0.048	<0.048
alpha-BHC	608	µg/L	0.05	0.0040	<0.048	<0.048	<0.048	<0.048
delta-BHC	608	µg/L	0.05	0.0010	<0.048	<0.048	<0.048	<0.048
gamma-BHC (Lindane)	608	µg/L	0.05	0.0052	<0.048	<0.048	<0.048	<0.048
Chlordane	608	µg/L	2	0.18	<1.9	<1.9	<1.9	<1.9
4,4'-DDD	608	µg/L	0.1	0.0050	<0.096	<0.096	<0.096	<0.096
4,4'-DDE	608	µg/L	0.1	0.0009	<0.096	<0.096	<0.096	<0.096
4,4'-DDT	608	µg/L	0.1	0.0016	<0.096	<0.096	<0.096	<0.096
Dieldrin	608	µg/L	0.1	0.0012	<0.096	<0.096	<0.096	<0.096
Endosulfan I	608	µg/L	0.05	0.0019	<0.048	<0.048	<0.048	<0.048
Endosulfan II	608	µg/L	0.1	0.0011	<0.096	<0.096	<0.096	<0.096
Endosulfan sulfate	608	µg/L	0.5	0.0050	<0.48	<0.48	<0.48	<0.48
Endrin	608	µg/L	0.1	0.0013	<0.096	<0.096	<0.096	<0.096
Endrin aldehyde	608	µg/L	0.1	0.0009	<0.096	<0.096	<0.096	<0.096
Heptachlor	608	µg/L	0.05	0.0083	<0.048	<0.048	<0.048	<0.048
Heptachlor epoxide	608	µg/L	0.05	0.0015	<0.048	<0.048	<0.048	<0.048
Toxaphene	608	µg/L	5	0.61	<4.8	<4.8	<4.8	<4.8
Aroclor-1016 (PCB-1016)	608	µg/L	1	0.088	<0.96	<0.96	<0.96	<0.96
Aroclor-1221 (PCB-1221)	608	µg/L	1	0.19	<0.96	<0.96	<0.96	<0.96
Aroclor-1232 (PCB-1232)	608	µg/L	1	0.082	<0.96	<0.96	<0.96	<0.96
Aroclor-1242 (PCB-1242)	608	µg/L	1	0.16	<0.96	<0.96	<0.96	<0.96
Aroclor-1248 (PCB-1248)	608	µg/L	1	0.16	<0.96	<0.96	<0.96	<0.96
Aroclor-1254 (PCB-1254)	608	µg/L	1	0.093	<0.96	<0.96	<0.96	<0.96
Aroclor-1260 (PCB-1260)	608	µg/L	1	0.061	<0.96	<0.96	<0.96	<0.96

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APCL Analytical Report

Component Analyzed	Method	Unit	ML	MDL	Analysis Result 051108912 HG 05-04700-5	Analysis Result 051108916 HNB 05-04700-7
ISOPHORONE	625	µg/L	10	1.3	<10	<10
2-METHYLPHENOL	625	µg/L	10	0.9	<10	<10
3/4-METHYLPHENOL	625	µg/L	10	0.72	<10	<10
NAPHTHALENE	625	µg/L	10	2.0	<10	<10
NITROBENZENE	625	µg/L	10	1.9	<10	<10
2-NITROPHENOL	625	µg/L	10	1.6	<10	<10
4-NITROPHENOL	625	µg/L	50	5.6	<50	<50
N-NITROSO-DI-N-PROPYLAMINE	625	µg/L	10	1.2	<10	<10
N-NITROSO-DIMETHYLAMINE	625	µg/L	10	0.81	<10	<10
N-NITROSO-DIPHENYLAMINE	625	µg/L	10	5.90	<10	<10
PENTACHLOROPHENOL (PCP)	625	µg/L	50	4.6	<50	<50
PHENANTHRENE	625	µg/L	10	1.2	<10	<10
PHENOL	625	µg/L	10	0.24	<10	<10
PYRENE	625	µg/L	10	1.4	<10	<10
1,2,4-TRICHLOROBENZENE	625	µg/L	10	1.4	<10	<10
2,4,6-TRICHLOROPHENOL	625	µg/L	10	2.2	<10	<10
ORGANOCHLORINE PESTICIDES & PCBS						
Dilution Factor					1	1
ALDRIN	608	µg/L	0.05	0.0027	<0.05	<0.05
BETA-BHC	608	µg/L	0.05	0.0031	<0.05	<0.05
ALPHA-BHC	608	µg/L	0.05	0.0040	<0.05	<0.05
DELTA-BHC	608	µg/L	0.05	0.0010	<0.05	<0.05
GAMMA-BHC (LINDANE)	608	µg/L	0.05	0.0052	<0.05	<0.05
CHLORDANE	608	µg/L	2	0.005	<2	<2
4,4'-DDD	608	µg/L	0.1	0.0050	0.03J	<0.1
4,4'-DDE	608	µg/L	0.1	0.0009	0.02J	<0.1
4,4'-DDT	608	µg/L	0.1	0.0016	<0.1	<0.1
DIELDRIN	608	µg/L	0.1	0.0012	<0.1	<0.1
ENDOSULFAN I	608	µg/L	0.05	0.0019	<0.05	<0.05
ENDOSULFAN II	608	µg/L	0.1	0.0011	<0.1	<0.1
ENDOSULFAN SULFATE	608	µg/L	0.5	0.0050	<0.5	<0.5
ENDRIN	608	µg/L	0.1	0.0013	<0.1	<0.1
ENDRIN ALDEHYDE	608	µg/L	0.1	0.0009	<0.1	<0.1
HEPTACHLOR	608	µg/L	0.05	0.0083	<0.05	<0.05
HEPTACHLOR EPOXIDE	608	µg/L	0.05	0.0015	<0.05	<0.05
TOXAPHENE	608	µg/L	5	0.61	<5	<5
AROCLOR-1016 (PCB-1016)	608	µg/L	1	0.088	<1	<1
AROCLOR-1221 (PCB-1221)	608	µg/L	1	0.19	<1	<1
AROCLOR-1232 (PCB-1232)	608	µg/L	1	0.082	<1	<1
AROCLOR-1242 (PCB-1242)	608	µg/L	1	0.16	<1	<1
AROCLOR-1248 (PCB-1248)	608	µg/L	1	0.16	<1	<1
AROCLOR-1254 (PCB-1254)	608	µg/L	1	0.093	<1	<1
AROCLOR-1260 (PCB-1260)	608	µg/L	1	0.061	1	0.4J

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Component Analyzed	Method	Unit	ML	MDL	Analysis Result 051109917 05-04722-2
ORGANOCHLORINE PESTICIDES & PCBS					
Dilution Factor					1
ALDRIN	608	µg/L	0.05	0.0027	< 0.05
BETA-BHC	608	µg/L	0.05	0.0031	< 0.05
ALPHA-BHC	608	µg/L	0.05	0.0040	< 0.05
DELTA-BHC	608	µg/L	0.05	0.0010	< 0.05
GAMMA-BHC (LINDANE)	608	µg/L	0.05	0.0052	< 0.05
CHLORDANE	608	µg/L	2	0.18	< 2
4,4'-DDD	608	µg/L	0.1	0.0050	< 0.1
4,4'-DDE	608	µg/L	0.1	0.0009	< 0.1
4,4'-DDT	608	µg/L	0.1	0.0016	< 0.1
DIELDRIN	608	µg/L	0.1	0.0012	< 0.1
ENDOSULFAN I	608	µg/L	0.05	0.0019	< 0.05
ENDOSULFAN II	608	µg/L	0.1	0.0011	< 0.1
ENDOSULFAN SULFATE	608	µg/L	0.5	0.0050	< 0.5
ENDRIN	608	µg/L	0.1	0.0013	< 0.1
ENDRIN ALDEHYDE	608	µg/L	0.1	0.0009	< 0.1
HEPTACHLOR	608	µg/L	0.05	0.0083	< 0.05
HEPTACHLOR EPOXIDE	608	µg/L	0.05	0.0015	< 0.05
TOXAPHENE	608	µg/L	5	0.61	< 5
AROCLOR-1016 (PCB-1016)	608	µg/L	1	0.088	< 1
AROCLOR-1221 (PCB-1221)	608	µg/L	1	0.19	< 1
AROCLOR-1232 (PCB-1232)	608	µg/L	1	0.082	< 1
AROCLOR-1242 (PCB-1242)	608	µg/L	1	0.16	< 1
AROCLOR-1248 (PCB-1248)	608	µg/L	1	0.16	< 1
AROCLOR-1254 (PCB-1254)	608	µg/L	1	0.093	< 1
AROCLOR-1260 (PCB-1260)	608	µg/L	1	0.061	< 1
ORGANO-PHOSPHORUS					
Dilution Factor					1
AZINPHOS METHYL	8141A	µg/L	2	0.12	< 2
BOLSTAR (SULPROFOS)	8141A	µg/L	2	0.34	< 2
CHLORPYRIFOS	8141A	µg/L	0.08 [a]	0.08	< 0.08
COUMAPHOS	8141A	µg/L	2	0.69	< 2
DEMETON-O	8141A	µg/L	2	0.53	< 2
DEMETON-S	8141A	µg/L	2	0.34	< 2
DIAZINON	8141A	µg/L	0.11 [a]	0.11	< 0.11
DICHLORVOS	8141A	µg/L	1	0.11	< 1
DISULFOTON	8141A	µg/L	1	0.32	< 1
ETHOPROP	8141A	µg/L	1	0.14	< 1
FENSULFOTHION	8141A	µg/L	2	0.38	< 2
FENTHION	8141A	µg/L	2	0.42	< 2
MERPHOS	8141A	µg/L	1	0.19	< 1
METHYL PARATHION	8141A	µg/L	1	0.16	< 1
MEVINPHOS	8141A	µg/L	2	0.26	< 2
NALED	8141A	µg/L	2	0.24	< 2
PHORATE	8141A	µg/L	2	0.51	< 2
RONNEL	8141A	µg/L	1	0.31	< 1
TETRACHLORVINPHOS (STIROPHOS)	8141A	µg/L	1	0.15	< 1
TOKUTHION (PROTHIOFOS)	8141A	µg/L	1	0.12	< 1
TRICHLORONATE	8141A	µg/L	1	0.15	< 1

City of Escondido 303 (D) Listing Comments
Draft Final Regional Board Staff Report, August 2009

Comment #	Water Body Name (Water Body ID)	Pollutant (Decision ID)	LOE ID	Reason for Proposed Changes/Comments	Comments/Proposed Changes
1	Escondido Creek (90462000)	Manganese (5413)	8884	• This LOE references that four of the eight samples taken exceed the secondary drinking water standard for manganese according to results in California's Surface Water Ambient Monitoring Report 2007. The secondary drinking water standard for manganese is 0.05 mg/L. • Escondido Creek's beneficial use classification as a municipal domestic water supply is not consistent with the historical use and ephemeral nature of this water body.	• Generally, the creek has low flows, with months of high flows due to rainfall typically occurring in January and February. It is recommended that the creek's beneficial use designation be re-considered.
2	Escondido Creek (90462000)	Manganese (5413)	6240	• .The LOE references two out of eight samples exceeded the water quality objective. These samples were collected by the City of Escondido's Llivestream Discharge quarterly baseline monitoring program for the period 2003 through 2005. However, a persistent and prevalent factor that causes this exceedance is the concentration of manganese in Escondido's groundwater table. • The estimated surface groundwater contribution to Escondido Creek is an average of 5,230 acre feet per year (Attachment 1).	• Since groundwater contributions of manganese are readily introduced into the Creek's surface waters, especially during wet weather events, it is recommended that these recurring dynamics be considered (Attachment 1).
3	Escondido Creek (90462000)	Total Dissolved Solids (5642)	3216	• .One sample collected by the RWQCB9 in 1998. Sample was in exceedance. • A persistent and prevalent factor that causes this exceedance is the concentration of TDS in Escondido's groundwater. • The estimated surface groundwater contribution to Escondido Creek is an average of 5,230 acre feet per year (Attachment 1).	• Since groundwater contributions of TDS are readily introduced into the Creek's surface waters, especially during wet weather events, it is recommended that these recurring dynamics be considered (Attachment 1).

City of Escondido 303 (D) Listing Comments
Draft Final Regional Board Staff Report, August 2009

Comment #	Water Body Name (Water Body ID)	Pollutant (Decision ID)	LOE ID	Reason for Proposed Changes/Comments	Comments/Proposed Changes
4	Escondido Creek (90462000)	DDT (5414)	6231	• Escondido Creek's beneficial use classification as a municipal domestic water supply is not consistent with the historical use and ephemeral nature of this water body. • Data reviewed was from the City of Escondido's Live Stream Discharge monitoring of Escondido Creek. Quarterly sampling occurred between 2004 and 2005. Six samples were collected and analyzed for pesticides; however, the detection limits were less than 5.0 ug//liter, well above the CTR criteria. From the CTR, the DDT criterion for protection of human health is 0.00059ug/L. • The detection limit cited, 0.00059, is not realistic based on the current confidence levels of analytical methodologies. APCL report (Attachment 2) data indicate that DDT concentrations are between 0.19 to 0.01 ug/L. Composite data for pesticides versus focus data for DDT were used. Focus DDT data indicates non-detect levels of less than 0.0021ug/L	• Generally, the creek has low flows, with months of high flows due to rainfall typically occurring in January and February. It is recommended that the creek's beneficial use designation be re-considered. • It is recommended that the APCL Analytical Report (Attachment 2) be evaluated relative to exceedance limitations. • LOE does not support listing.
5	Escondido Creek (90462000)	Enterococcus (16460)	7364	• Samples were collected at the mass loading station located near the lower boundary of the watershed under the Camino Del Norte Bridge east of Rancho Santa Fe Road along a natural channel in Encinitas from 2001 through 2006. Samples were collected during wet weather. • Analysis should consider counts that are generally elevated because of wet weather flows, particularly those associated with primary wet weather season storm events.	• LOE does not support listing
6	Escondido Creek (90462000)	Sulfates (5781)	3243	• Data were collected by DWR from 1998 to 2000. Four of 5 samples were in exceedance. According to the Basin Plan, for inland surface waters and all beneficial uses, the WQO for sulfate is 250 mg/L., which is not to be exceeded more than 10% of the time during any one-year period. • A persistent and prevalent factor that causes sulfate exceedances is the concentration of it in Escondido's groundwater. • Surface groundwater contributions to Escondido Creek are an average of 5,230 acre feet per year (Attachment 1).	• Since groundwater contributions of sulfates are readily introduced into the Creek's surface waters, especially during wet weather events, it is recommended that these recurring dynamics be considered (Attachment 1).

October 21, 2009

Ms. Cynthia Gorham-Test,
California Regional Water Quality Control Board,
San Diego Region,
9174 Sky Park Court,
Suite 100,
San Diego, CA 92123-4340.

Re: City of Santee Comments on Proposed 2008 303(d) Listings for the San Diego Region (TMDL: 656901)

Dear Ms. Gorham-Test,

Thank you for the opportunity to comment on the Draft Section 305 (b) and 303(d) Integrated Report for the San Diego Region. The following comments relate specifically related to the San Diego River watershed where the City of Santee is located. Our comments are presented below:

Item 1
Observation: Appendix A (proposed and revised sections [Attachment 1]) states that the only change for Forester Creek is the listing of Selenium. There are no changes listed for the San Diego River. Appendix B (Summary of Assessed Waterbodies [Attachment 2]) lists Manganese as "List on 303(d)" for San Diego River (upper) on page 85. Appendix B also list Enterococcus, Nitrogen and Toxicity as "List on 303(d)" for San Diego River (lower) also on page 85.
Comment: Appendix A and Appendix B should be consistent. Please clarify which impairments are proposed for the San Diego River and Forester Creek, so that they can be commented on. It is our understanding from a conversation with Mr. Monjii, that if any additions to Appendix A are required, then they would be made available for comment.

Item 2
Observation: Forester Creek was listed on the final 303(d) list for 2006, however the supporting factsheet concludes "Do Not List" Forester Creek for dissolved oxygen. The factsheet for 2008 states that "no new data were assessed for 2008. The decision has not changed." Based on these observations it is concluded that Forester Creek was listed with an impairment for dissolved oxygen through typographical error.
Comment: This error should be corrected and Forester Creek no longer listed with an impairment for dissolved oxygen.

Item 3
Observation: Supporting information for manganese to be listed on the 303(d) list for the San Diego River (upper) (Line of Evidence ID 9015, for Decision ID 17050) states that SWAMP data collected on March, April, June, and September 2002 (from sample location 907SSDR15) were used to support the decision for the listing. A search of the SWAMP database and the referenced SWAMP Report for 2007 did not provide this data.
Comment: At present it is not possible to assess the justification for this listing. Any data used to support the listing of manganese in the upper San Diego River should be provided for review.

Item 4
Observation: Line of Evidence ID 7490 for Decision ID 17046 (states for Nitrogen "List on 303(d)" for San Diego River (lower) that four samples were collected from 907SSDR15. The samples collected on 2/28/05 and 9/13/04 were listed as being "matrix spike/matrix spike duplicate." These were the only data that exceeded the threshold used in the Line of Evidence of 1.0 mg/L. It appears that this data was inappropriately used (see Attachment 4). In addition, the method used to analyze the nitrogen (QC10107062E) appears to be a proprietary analytical method. Insufficient information is available to assess if these is equivalent to EPA Method 351.1 or some other widely-used method and if its use is appropriate.
Comment: This line of evidence cannot be used to justify the nitrogen listing and should be removed.

Item 5
Observation: Line of Evidence ID 7489 for Decision ID 17046 uses samples collected during wet weather. Samples collected during wet weather are not indicative of normal ambient conditions, but reflect the more extreme conditions of a rain event. All exposed areas have rainwater running over them mobilizing natural and man-made sources of nitrogen. This is an event that occurs periodically, and would naturally introduce heavier loads than those observed during dry weather conditions. Many beneficial uses (such as Rec-1 and Rec-2) would not be enjoyed during a rain event, therefore it is incorrect to apply data from conditions where the beneficial use would not be enjoyed.
Comment: Remove data collected from wet weather sampling.

Item 6
Observation: Line of Evidence ID 7487 for Decision ID 17047 uses samples collected during wet weather. Samples collected during wet weather are not indicative of normal ambient conditions, but reflect the more extreme conditions of a rain event. All exposed areas have rainwater running over them mobilizing natural and man-made sources of enteroccoccus. There is a growing body of research that indicates that enterococcus can originate from a number of different sources including plants, animals, and humans. Inferring that a loading of enterococcus

originates from anthropogenic sources and then applying it to determine a listing is not acceptable. The lower San Diego River is already listed for fecal coliforms, therefore sources of human fecal matter will already be addressed. This listing does not add any benefit in working towards improved water quality.

In addition, these samples were collected during rain events. A rain event occurs periodically, and would naturally introduce heavier loads than those observed during dry weather conditions. Many beneficial uses (such as Rec-1 and Rec-2) would not be enjoyed during a rain event, therefore it is incorrect to apply data from conditions where the beneficial use would not be enjoyed.
Comment: Do not list *Enterococcus* for the lower San Diego River.

Item 7
Observation: Toxicity is identified as a potential listing.
Comment: It is inappropriate to include it in the draft report if a decision has still to be made on whether it should be listed or not. Remove this from Appendix B.

Item 8
Observation: Selenium has been added to the 303(d) list for Forester Creek based on four samples collected at 907SDRFC2. Based on information observed in other regions (Attachment 4), selenium occurs naturally in rocks and is mobilized by nitrates in groundwater. No potential source for the selenium has been identified in the factsheet. It is likely that the reported concentrations of selenium are a result of natural conditions in the watershed. The Santiago Formation is reported to be high in selenium and groundwater data presented by the Cities of Santee and El Cajon have shown that there are concentrations of nitrates in groundwater above 10 milligrams per Liter (10 mg/L) within the watershed. It is unreasonable to list Forester Creek for an impairment that requires a TMDL if the condition is naturally-occurring. At a minimum the listing should be under a category where a TMDL is not required (Category 4c for example).

Comment: Do not list selenium in Forester Creek as Category 5. If a listing is required, then list it under a category where a TMDL is not required.

Thank you for the opportunity to comment on these proposed listings. Please contact Helen Perry at (619) 258-4100 x177 if you have any questions about this letter.

Yours sincerely,

Pedro Orso Delgado, P.E.
Deputy City Manager/Director of Development Services

October 26, 2009

Cynthia Gorham-Test
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Dear Ms. Gorham-Test,

Thank you for the opportunity to comment on the Draft Section 305(b) and 303(d) Integrated Report for the San Diego region. The comments and recommendations contained in this letter supplement those offered in previous correspondence from our office dated September 14, 2009. We greatly appreciate the decision to extend the public comment period on this report. The extension has allowed the County of San Diego to more thoroughly review the data and information used to support development of this important document.

KEY ISSUES & RECOMMENDATIONS

1. To increase the transparency of the 303(d) listing process, all data used to support listing decisions should be accessible for public review. Listing and delisting decisions cannot be readily reviewed without access to the data used to support each decision. For example, many of the listings for reservoirs were based on data collected by the City of San Diego Water Department. These data are not accessible Regional Water Quality Control Board (RWQCB) website. We also observed many broken links or links to documents unrelated to the listing decision in question. Examples of inaccessible data are described in Tables 1 and 2 attached.

2. Tables 3.1 and 3.2 from the State's *Water Quality Control Policy for Developing California's Clean Water Act 303(d) List* were used inconsistently. The definitions of toxicants and conventional/other pollutants should be clearly defined to ensure a consistent policy throughout the state. Nitrogen, phosphorous,

and sulfates are examples of pollutants that did not consistently use the same table. It would be helpful if the RWQCB could provide a list indicating whether Table 3.1 or 3.2 was used to determine listing status for each pollutant on the 303(d) list, and whether there are pollutants for which either table can be used under specified circumstances.

3. Appendix A (*Proposed New and Revised 303(d) Listings*) is not comprehensive. We found many instances in which decisions to list new waterbody-pollutant combinations are not shown on Appendix A. By way of example, the San Dieguito River was not listed for any impairments on the 2006 303(d) List, and Appendix A indicates one new listing for toxicity in 2008. However, Appendix B (*Summary of Water Bodies Assessed*) indicates a total of seven new listings for this water body for 2008. Fact sheets for six of the seven new listings were incorrectly filed on the website under "Original Fact Sheets". Someone reviewing only Appendix A would not have noticed this.

4. Clear guidelines should be applied when photo-documentation evidence is used to support a listing. For example, photo-documentation was the only line of evidence used to list the Tijuana River for sedimentation/siltation. Because a link to the data was not provided, the quality and quantity of photo-documentation evidence could not be reviewed. Moreover, the requirement for analytical testing data such as total suspended solids in addition to photodocumentaion would appear to be appropriate in order to support a sedimentation/siltation listing.

5. Data from the State's Surface Water Ambient Monitoring Program (SWAMP) database tagged with "Estimated; non-compliant with associated QAPP" do not meet the requirements of Section 6.1.4 of the State Listing Policy, which states: "Data supported by a Quality Assurance Project Plan….are acceptable for use in developing the section 303(d) list". Tables 1 and 2 provide numerous examples where samples found to be non-compliant with the associated QAPP were used to support a listing decision. Non-compliant data should be not be used to support listing decisions.

6. On occasion, data from the SWAMP database were incorrectly duplicated. This duplication resulted in incorrectly doubling the number of sample results. Tables 1 and 2 provide several examples where this was the case.

7. In some instances, data from widely divergent sampling locations were combined to support the listing of an entire watershed. Examples are the new listings for Sweetwater River, all of which are for a 50-mile extent. As recommended in Table 1, listings should be specific to the appropriate reach where impairment is suggested by monitoring results. Section 6.1.5.4 of the State Listing Policy states: "At a minimum, data shall be aggregated by water body segments as defined in the Basin Plans. In the absence of a Basin Plan segmentation system, the RWQCBs should define distinct reaches based on hydrology and relatively homogenous land use." The two sampling locations used to support 50-mile

listings on the Sweetwater River are approximately 30 miles apart and separated by two major reservoirs (Loveland and Sweetwater).

8. Toxicity listings that do not specify a causal agent are problematic. Numerous controlled toxicity studies have shown species-specific differences among pollutants. For example, *Ceriodaphnia dubia* is much more sensitive than amphipods or algae to the pesticide Chlorpyriphos. Copper and other metals are shown to affect a wide range of tolerances amongst organisms. Pyrethroid pesticides such as Bifenthrin have been shown to cause toxicity to Hyalella and other amphipods in the low part per trillion range, but part per billion range for other organisms. Summarizing toxicity data without respect to specific endpoints and species may lead to false results for toxicity. For example, if two water samples were collected at a station, and one water sample showed toxicity to *Ceriodaphnia dubia* during 2002 and one showed toxicity to *Hyalella azteca* in 2007, then the two toxicity "hits" should not be counted together as two exceedances out of two samples. It is likely that the cause of toxicity in each case would be a different pollutant.

SPECIFIC COMMENTS

The County of San Diego commends RWQCB staff for an intensive effort to produce this revision to the 303(d) list. However, additional quality assurance and review of findings prior to public release would improve stakeholder confidence that data were accurately assessed. Table 1 points out 38 instances in which errors, misinterpretations of data, or improper application of State policy resulted in an inaccurate or inappropriate listing decision. Table 2 notes many more errors that would not result in a change in the listing decision, but should be corrected to ensure that mistakes do not impact future lists.

Please contact Todd Snyder, Watershed Protection Program Planning Manager, at (858) 694-3482, or e-mail at todd.snyder@sdcounty.ca.gov, with any questions about these comments.

Sincerely,

Cid Tesoro, LUEG Program Manager
Department of Public Works

Review of the Proposed 2008 303(d) Listings - County of San Diego

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
Santa Margarita River (lower)	Toxicity	17603	Decision in Progress	**In Progress**	See September 14, 2009, comment letter from the County of San Diego for details. There are no valid sample results for toxicity in the water column. Moreover, the total number of sediment toxicity exceedances is zero.	Santa Margarita River (lower) should not be listed for toxicity.
Sandia Creek	TDS	5553	Original	**Do Not Delist from 303(d) list**	11 of 11 samples collected quarterly from 12/1997 to 06/2000 exceeded the 750 mg/L WQO. Data were collected by LAW Crandall from 1997 to 2000. Sample locations were not reported.	This listing should be placed on hold until more recently collected data are available; no new data were considered for this decision. LAW Crandall data, including sample locations, should be made available for review.
De Luz Creek	Nitrogen	5739	Revised	**List on 303(d) list**	5 of 6 samples collected at De Luz Creek Station 3 exceeded the 1.0 mg/L WQO. • 4 of 4 samples collected in 2003 show excessive nitrogen concentrations (SWAMP, 2007). • 1 of 2 samples collected by LAW Crandall in 1997-1999 exceeded the 10:1 N:P ratio.	This listing should be placed on hold until more recently collected data are available; no new data were considered for this new decision. LAW Crandall data should be made available for review.
Long Canyon Creek	Chlorpyrifos	16520	Revised – New Decision	**List on 303(d) list**	Data used to support this listing were collected at Long Canyon Creek near Murrieta Creek (HUC_12/ 180703020407). That is a different Long Canyon Creek than the one (HUC_12/ 180703020104) whose receiving water is Cottonwood Creek – Temecula Creek.	The chlorpyrifos listing for Long Canyon Creek in HSA 902.83 should be removed.

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
Long Canyon Creek	Iron		Revised – New Decision	**List on 303(d) list**	Data used to support this listing were collected at Long Canyon Creek near Murrieta Creek (HUC_12/ 180703020407). That is a different Long Canyon Creek than the one (HUC_12/ 180703020104) whose receiving water is Cottonwood Creek – Temecula Creek.	The iron listing for Long Canyon Creek in HSA 902.83 should be removed.
Long Canyon Creek	Manganese		Revised – New Decision	**List on 303(d) list**	Data used to support this listing were collected at Long Canyon Creek near Murrieta Creek (HUC_12/ 180703020407). That is a different Long Canyon Creek than the one (HUC_12/ 180703020104) whose receiving water is Cottonwood Creek – Temecula Creek.	The manganese listing for Long Canyon Creek in HSA 902.83 should be removed.
Long Canyon Creek	TDS		Revised – New Decision	**List on 303(d) list**	Data used to support this listing were collected at Long Canyon Creek near Murrieta Creek (HUC_12/ 180703020407). That is a different Long Canyon Creek than the one (HUC_12/ 180703020104) whose receiving water is Cottonwood Creek – Temecula Creek.	The TDS listing for Long Canyon Creek in HSA 902.83 should be removed.
Long Canyon Creek	Fecal Coliform	16560	Revised – New Decision	**List on 303(d) list**	Data used to support this listing were collected at Long Canyon Creek near Murrieta Creek (HUC_12/ 180703020407). That is a different Long Canyon Creek than the one (HUC_12/ 180703020104) whose receiving water is Cottonwood Creek – Temecula Creek.	The fecal coliform listing for Long Canyon Creek in HSA 902.83 should be removed.
Long Canyon Creek	E. coli	16559	Revised – New Decision	**List on 303(d) list**	Data used to support this listing were collected at Long Canyon Creek near Murrieta Creek (HUC_12/ 180703020407). That is a different Long Canyon Creek than the one (HUC_12/ 180703020104) whose receiving water is Cottonwood Creek – Temecula Creek.	The E. coli listing for Long Canyon Creek in HSA 902.83 should be removed.

Review of the Proposed 2008 303(d) Listings - County of San Diego

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
San Luis Rey River	Sulfates	17068	Revised – New Decision	**List on 303(d) list**	The Fact Sheet indicates that 4 of 8 samples collected at San Luis Rey River Stations 903SLSLR2 and 903SLSLR8 in May 2004, September 2004, March 2005, and April 2005 exceeded the secondary drinking water standard of 250 mg/L (SWAMP, 2007). This is based on 8 samples collected from 2 different sites over 30 miles apart: • 4 samples were collected at SWAMP station 903SLSLR2 (over 30 miles inland). All sample results were below the WQO (3/13/04 - 110 mg/L; 5/19/04 - 102 mg/L; 3/1/05 - 36.8 mg/L; 4/20/05 - 35.8 mg/L). • 4 samples were collected at 903SLSLR8.	The segments represented by Stations 903SLSLR2 and 903SLSLR8 should be considered for listing separately since they are 30 miles apart. The segment at station 903SLSLR2 should not be listed for sulfates because 0 of 4 samples exceeded the WQO. The segment at station 903SLSLR8 should not be listed because there are only 4 sample results available. Since sulfates are considered a conventional pollutant, Table 3.2 of the Policy applies, and a minimum number of 5 samples are needed to support listing.
Moosa Canyon Creek	Toxicity	26213	New Listing	**List on 303(d) list**	See the September 14, 2009, comment letter from the County of San Diego for details. After data that are non-compliant with the QAPP are removed from the analysis, only 1 of 3 exceedances for selenastrum were observed. This does not meet the listing criteria of Table 3.1 of the Policy.	Moosa Canyon Creek should not be listed for toxicity.

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
Buena Creek	Sulfates	5362	Revised – New Decision	**List on 303(d) list**	Table 3.1 of the Policy was used to support this listing, which is not consistent with other sulfate listings, where Table 3.2 is used. • LOE ID 3187: 4 of 4 samples collected at two stations on Buena Creek (33.17225, -117.20887) from March through September of 2002 exceeded the 250 mg/L WQO. Although two stations are referenced, only one set of geographic coordinates is given. These data appear to be the same as the data referenced in LOE ID 6538. If it is assumed that these data were obtained from the 2007 SWAMP report, SWAMP sampled only one station (904CBBUR1) at Buena Creek and only 4 samples were collected. • LOE ID 6538: 4 of 4 samples collected at Buena Creek station 904CBBUR1 (Latitude 33.1725, Longitude -117.2082) in March, April, June, and September 2002 exceeded the 250 mg/L WQO (SWAMP, 2007).	Table 3.2 should be used to determine listing status for sulfates on Buena Creek because sulfates are not toxicants. This will ensure consistency with other sulfate listing decisions. Because there are only 4 samples available and because Table 3.2 requires at least 5 samples to support listing, Buena Creek should not be listed for sulfates.
Buena Creek	Phosphorus	16363	Revised – New Decision	**List on 303(d) list**	LOE ID 6540: 4 of 4 samples collected at station 904CBBUR1 (Latitude 33.1725, Longitude -117.2082) in March, April, June, and September 2002 exceeded the 0.1 mg/L WQO. (SWAMP 2007).	Table 3.2 should be used to determine listing status for phosphorous on Buena Creek because phosphorous is not a toxicant. Because there are only 4 samples available, and because Table 3.2 requires at least 5 samples to support listing, Buena Creek should not be listed for phosphorous.

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
Buena Creek	Total Nitrogen	16364	Revised – New Decision	**List on 303(d) list**	LOE ID 6542: 4 of 4 samples collected at station 904CBBUR1 (Latitude 33.1725, Longitude -117.2082) in March, April, June, and September 2002 exceeded the 1.0 mg/L WQO (SWAMP 2007).	Table 3.2 should be used to determine listing status for total nitrogen on Buena Creek because nitrogen is not a toxicant. Because there are only 4 samples available, and because Table 3.2 requires at least 5 samples to support listing, Buena Creek should not be listed for total nitrogen.
Agua Hedionda Creek	Manganese		Old Listing	**List on 303(d) list**	2 of 4 samples collected from March through September 2002 at one station in Agua Hedionda Creek (33.14887, -117.29758) exceeded the 0.05 mg/l Basin Plan WQO (SWAMP 2004). According to the 2007 SWAMP report, these data were collected at Agua Hedionda Creek Station 6 (904CBAQH6). 1 of 4 results in the SWAMP database is flagged as "Estimated; non-compliant with associated QAPP" and should be removed from the analysis. This non-compliant result was 0.051 mg/L, leaving only 1 of the 3 valid results that exceeded the WQO.	After removing samples that were non-compliant with the QAPP from the analysis, only 1 of 3 valid samples exceeded the WQO. This is not enough to support listing of Agua Hedionda Creek for manganese based on Table 3.1.

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
Agua Hedionda Creek	Selenium	5326	Original New Decision	**List on 303(d) list**	LOE ID 3183: 3 of 4 samples from Agua Hedionda Creek (33.14887, -117.29758) from March through September of 2002 exceeded the CTR Freshwater Chronic WQO of 5 µg/L (SWAMP 2004).The 2007 SWAMP report suggests that these data were collected at Agua Hedionda Creek Station 6 (904CBAQH6). In the SWAMP Database, 1 of 4 samples was flagged with "Estimated; non-compliant with associated QAPP." Therefore, 3 of 3 samples exceeded the WQO of 5 ug/l. Readily available data from the San Diego Regional Stormwater Copermittees' Annual Receiving Waters Monitoring Reports were not included in the assessment and are reviewed below: <u>Site: Agua Hedionda Creek MLS</u> • Selenium wet weather exceedance frequency (1998-2008): 1 of 28 samples. No exceedances have been observed in the past 6 monitoring seasons. • Selenium ambient weather exceedance frequency (2007-08): 0 of 2 samples <u>Site: Agua Hedionda Creek TWAS</u> • Selenium wet weather exceedance frequency (2007-08): 0 of 2 samples • Selenium ambient weather exceedance frequency (2007-08): 0 of 2 samples	29 of the most recent samples from Agua Hedionda Creek (from 1998 to 2008) showed no exceedances of the WQO. It is recommended that this listing be put on hold so that Copermittee data that were readily available can be considered in the 2010 listing process.

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
Agua Hedionda Creek	Sulfates	5325	Original	**List on 303(d) list**	8 of 8 samples from Agua Hedionda Creek (33.14887, -117.29758) from March through September 2002 exceeded the secondary MCL of 250 mg/l (SWAMP, 2004).However, according to the SWAMP database, only 4 (not 8) samples were collected from Agua Hedionda Creek sampling station 904CBAQH6 in 2002.	Because there are only 4 samples available, and because Table 3.2 requires at least 5 samples to support listing, Agua Hedionda Creek should not be listed for sulfates.
Escondido Creek	Selenium	5711	Revised	**List on 303(d) list**	• LOE ID 3231: 8 of 12 samples collected at 2 stations at Escondido Creek ESC5, HSA 904.62 (33.08559, -117.15037), and ESC8, HSA 904.61 (33.03393, -117.23565) sampled from March through September 2002 showed exceedances of the 5 ug/l WQO (SWAMP, 2004). • LOE ID 3230: 0 of 1 samples collected at Escondido Creek on 06/03/98 at the intersection of Elfin Forest and Harmony Grove exceeded the WQO. • LOE ID 6246: 0 of 18 samples collected by City of Escondido from 5 stations within Escondido Creek (Stations 910, 912, 916, 917, and 923) quarterly in 2003 through 2005 (Live Stream Discharge baseline quarterly monitoring report)" exceeded the WQO Readily available data from the San Diego Regional Stormwater Copermittees' Annual Receiving Waters Monitoring Reports were not included in the assessment and are reviewed below:	The 18 most recently collected samples from Escondido Creek (2003-05) show no exceedances of the selenium WQO. It is recommended that the listing for selenium on Escondido Creek be put on hold so that Copermittee data that was readily available can be considered in the 2010 listing process.

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
					Site: Escondito Creek MLS • No Selenium wet weather exceedances were detected in 20 samples collected from 1998 through 2008. • Selenium ambient weather exceedance frequency (2007-08): 0 of 2 samples Site: Escondito Creek TWAS • Selenium wet weather exceedance frequency (2007-08): 0 of 2 samples • Selenium ambient weather exceedance frequency (2007-08): 0 of 2 samples	
Escondido Creek	Toxicity	5674	New Listing	**List on 303(d) list**	See the September 14, 2009, County of San Diego comment letter for details. The revised total number of exceedances is 0 of 13 for wet weather (2 wet weather samples were subtracted from 15 because the toxicity was found to be caused by Diazinon, which has since been removed from the marketplace), 0 of 5 for sediment, and 1 of 8 for ambient weather.	The number of exceedances necessary to support listing for toxicity is 2 according to Table 3.1; therefore, Escondido Creek does not meet the requirements for listing for toxicity.
San Dieguito River	Selenium	17053	Original New Decision	**List on 303(d) list**	• LOE ID 9036: 3 of 4 samples collected at Station 907SDFRC2 in May and September 2004, February and April 2005 showed selenium concentrations that exceeded the 5 ug/l WQO (SWAMP, 2007). Results from this location, called Forrester Creek 2 in the SWAMP database, appear to be for Forrester Creek, not San Dieguito River. The geographic	Data from Forrester Creek should be excluded from the analysis of San Dieguito River. There are no valid samples that exceed the 5 ug/l WQO. Therefore, in accordance with Table 3.1, there is insufficient evidence to list Escondido Creek for selenium.

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
					coordinates are not provided in the listing, SWAMP report, or SWAMP database. Also, 1 of the 4 results (5.54 ug/l) is listed as "Estimated; non-compliant with associated QAPP" in the SWAMP database and should be removed from the analysis. • LOE ID: 9022: 3 of 4 samples collected at San Dieguito River Station 905SDSDQ9 (Latitude 32.97885, Longitude -117.23548) on January 2003, April 2003, May 2003, and September 2003 showed selenium concentrations that exceeded 5 ug/l (SWAMP 2007). All 4 results are listed as "Estimated; non-compliant with associated QAPP" in the SWAMP database and should be removed from the analysis. Readily available data from the San Diego Regional Stormwater Copermittees' Annual Receiving Waters Monitoring Reports were not included in the assessment and are reviewed below: <u>Site: San Dieguito River MLS (2001-08)</u> • Selenium wet weather exceedance frequency (1/20 samples exceeded 5 ug/l, 2/17/02, with no exceedances in the past six monitoring seasons) • Selenium ambient weather exceedance frequency (0/2 samples, 2007-08) <u>Site - San Dieguito River TWAS-1 (2007-08)</u>	Readily available Copermittee data were not used in the analysis, but also support not listing San Dieguito River for selenium.

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
					• Selenium wet weather exceedance frequency (0/2 samples) • Selenium ambient weather exceedance frequency (0/2 samples) <u>Site - San Dieguito River TWAS-2 (2007-08)</u> • Selenium wet weather exceedance frequency (0/2 samples) • Selenium ambient weather exceedance frequency (0/2 samples)	
Santa Ysabel Creek	Toxicity	17013	New Listing	**List on 303(d) list**	See September 14, 2009 County of San Diego comment letter for additional details.	It is recommended that the water segment be changed to reflect the data assessment results at the two monitoring stations for toxicity. Section 6.1.5.4 of the Water Quality Policy states that, "data shall be aggregated by water body segments as defined in the Basin Plans."
Los Penasquitos Creek	Total Nitrogen	1696	Revised – New Decision	**List on 303(d) list**	1 of 4 samples collected on March 13, April 24, June 5, and September 18, 2002 exceeded the 1.0 mg/l WQO (SWAMP, 2007). See the September 14, 2009, County of San Diego comment letter for additional details.	According to Table 3.1 of the Policy, a minimum of 2 exceedances are needed to support listing. Because only 1 of 4 samples exceeded the WQO for total nitrogen, the criteria for listing are not met and total nitrogen should be removed from the list.

Review of the Proposed 2008 303(d) Listings - County of San Diego

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
Los Penasquitos Creek	Selenium	16570	Revised – New Decision	**List on 303(d) list**	• 3 of 4 samples collected in March, April, June, and September of 2002 at Los Penasquitos station 906LPLPC6 (Latitude 32.9036775, Longitude -117.2262075) exceeded the 5 ug/l WQO for selenium (SWAMP, 2007). • 0 of 15 samples collected from November 2001 to February 2006 at the Copermittees' mass loading station near the lower watershed boundary (at north end of Sorrento Valley Court, under the Sorrento Valley Court Bridge) exceeded the WQO (San Diego County Municipal Copermittees Urban Runoff Monitoring Report, January 2007).	Readily available data collected from Los Penasquitos Creek by the San Diego Copermittees were not used and indicated no exceedances of the WQO. It is recommended that this listing be put on hold until 2010 so that readily available Copermittee data can be considered.
San Diego River (upper)	Manganese	17050	New Listing	**List on 303(d) list**	The Fact Sheet reports that 5 of 5 samples from 907SSDR15 exceeded the secondary drinking water standard of 0.05 mg/l. In the SWAMP database, only 4 samples were collected, and 1 is flagged as "Estimated; non-compliant with associated QAPP". This leaves 3 of 3 samples exceeding the WQO. Also, 907SSDR15 appears to be located near the mouth of the watershed. It is unclear why this sample location is being used to support listing of the upper San Diego River.	Since this is a secondary drinking standard (based on taste and odor-aesthetics) Table 3.2 should be used, as manganese would not be considered a toxicant if the listing is based on aesthetics. If Table 3.2 of the listing policy is used, there would not be enough results to support listing (at least 5 samples are needed). Based on this evidence, it is recommended that San Diego River (upper) not be listed at this time.
Sweetwater River	Enterococcus	16919	New Listing	**List on 303(d) list**	15 of 15 samples exceeded 60 colonies per 100 ml based on Copermittees' wet weather data from 2002-2006. The Copermittees' wet weather MLS is located in Bonita, adjacent to the Plaza Bonita Road Bridge, and is representative of the Lower Sweetwater Hydrologic Area only.	Based on the location of the Copermittees station, the 50 mile extent of this listing should be reduced to the area above the station and below the Sweetwater Reservoir in the lower Sweetwater River-(HSA 909.10).

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
Sweetwater River	Fecal Coliform	16920	New Listing	**List on 303(d) list**	13 of 15 samples exceeded 400 colonies per 100 ml based on Copermittees' wet weather data from 2002-2006. The Copermittees' wet weather MLS is located in Bonita, adjacent to the Plaza Bonita Road Bridge, and is representative of the Lower Sweetwater Hydrologic Area only.	Based on the location of the Copermittees station, the 50 mile extent of this listing should be reduced to the area above the station and below the Sweetwater Reservoir in the lower Sweetwater River-(HSA 909.10).
Sweetwater River	Phosphorous	7186	New Listing	**List on 303(d) list**	LOE ID: 7377: 0 of 4 samples collected on June 1, 2005; September 7, 2005; January 31, 2006; and April 11, 2006 from the monitoring station Sweetwater River 3 (station id: 909SSWR03 lat/long: 32.97877/-117.23506) exceeded the 0.1 mg/l Basin Plan WQO (SWAMP 2007). LOE ID: 7186 – 5 of 15 samples exceeded the WQO. This is based on Copermittees' wet weather data collected from 2002-2006. The Copermittees' wet weather MLS is located in Bonita, adjacent to the Plaza Bonita Road Bridge, and is representative of the Lower Sweetwater Hydrologic Area only.	Based on the location of the Copermittees station, the 50 mile extent of this listing should be reduced to the area above the station and below the Sweetwater Reservoir in the lower Sweetwater River-(HSA 909.10).
Sweetwater River	Salinity/TDS/ Chloride	16780	New Listing	**List on 303(d) list**	Two lines of evidence were used: • LOE ID 6519 refers to sulfates. 4 of 8 samples collected from Sweetwater River Station 909SSWR08 show excessive sulfate concentrations (SWAMP, 2007). • LOE ID 7185 is for TDS: 11 of 15 samples exceeded the Basin Plan WQO of 1500 mg/l. This is based on the Copermittees' wet weather data collected from 2002-2006. The Copermittees' wet weather MLS is located in Bonita, adjacent to the Plaza Bonita Road Bridge,	LOE ID 6519 should be removed from the analysis since it does not address TDS. Based on the location of the Copermittees' station, the 50 mile extent of this listing should be reduced to the area above the station and below the Sweetwater Reservoir in the lower Sweetwater River-(HSA 909.10). Additionally, listing is based on the TDS WQO; therefore, the listing should be limited to TDS and salinity and chloride should be removed.

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
					and is representative of the Lower Sweetwater Hydrologic Area only.	
Sweetwater River	Selenium	16785	Original New Decision	**List on 303(d) list**	4 lines of evidence were referenced but only 2 were provided in the Fact Sheet: • LOE ID 6518: 5 of 8 samples collected at Sweetwater River station 909SSWR03 in May 2005, September 2005, January 2006, and April 2006 exceeded the selenium WQO of 5 ug/l (SWAMP 2007). Only 4 samples actually collected at this station. 1 of 3 samples exceeded the WQO (1 of the 4 results is missing from the database, but the SWAMP report suggests that 1 of 4 results exceeded). • LOE ID: 25665: 5 of 8 samples collected at Sweetwater River station 909SSWR08 in May 2005, September 2005, January 2006, and April 2006 exceeded the selenium WQO (SWAMP 2007). Only 4 samples were actually collected at this station. 4 of 4 exceeded the WQO. • Readily available data from the San Diego Regional Stormwater Copermittees' Annual Receiving Waters Monitoring Reports were not included in the assessment. The wet weather exceedance frequency for samples collected from 2001-07 was 0 of 18 samples.	According to Section 6.1.5.2 of the Listing Policy samples from stations further than 200 meters apart should be considered separate locations. Since station 909SSWR03 is located 30 miles upstream of 909SSWR08, the two stations actually represent two very different water quality segments and should be considered separately. There should be no lisitng at the upstream station (909SSWR03) as only 1 of 4 samples exceeded the WQO. Readily available data collected from the downstream station by Copermittees were not used and did not indicate exceedances of the selenium WQO. Therefore, it is recommended that this listing be put on hold so that these data can be considered in the 2010 listing process.

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
Sweetwater River	Sulfates	25667	New Listing	**List on 303(d) list**	• LOE ID 25667: 4 of 8 samples collected at 909SSWR03 in January 2003, April 2003, May 2003, and September 2003 exceeded the WQO. However, according to the SWAMP database, only 4 samples were collected from this station and all were below the WQO. • LOE ID 7185: 11 of 15 TDS samples collected by the San Diego Copermittees from 2002-2006 exceeded the WQO. • LOE ID: 6519: 4 of 8 samples collected at 909SSWR08 in January 2003, April 2003, May 2003, and September 2003 exceeded the WQO. However, in the SWAMP database, only 4 samples were collected from this station, 1 of which flagged with "Estimated; non-compliant with associated QAPP". The remaining 3 exceeded the WQO.	LOE ID 25667 should be updated to reflect that 0 of 4 samples exceeded the WQO. LOE ID 7185 should be removed from the analysis because TDS data cannot be used to support a listing for sulfates. Because only 3 of 3 valid samples exceeded the WQO for sulfates, and according to Table 3.2, a minimum of 5 samples are required to support listing, Sweetwater River should not be listed for sulfates.

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)

Sweetwater River	Total Nitrogen as N	7190	New Listing	**List on 303(d) list**	4 lines of evidence are referenced, 2 of which are for IBI data which are not discussed here:
					
					• LOE ID 7190: 13 of 15 samples exceeded the Basin Plan WQO of 1.0 mg/l. This is based on the San Diego Copermittees' wet weather data collected from 2002-2006 at XXX.
					
					• LOE ID 7378: 2 of 4 samples collected on June 1, 2005; September 7, 2005; January 31, 2006; and April 11, 2006 from Sweetwater River 3 (an upstream station) (station id: 909SSWR03 lat/long: 32.97877 / -117.23506) exceeded the WQO (SWAMP, 2007). However, in the SWAMP database, only 3 results are listed:
					  • 6/1/05: TKN of 0.44 mg/L, nitrate-N of 0.62 mg/l (This constitutes a Total N conc. of 0.986 mg/L)
					  • 9/7/05: TKN of 0.33 mg/L
					  • 4/11/06: nitrate-N of 0.546 mg/l
					
					Therefore, 0 of 3 samples exceed the total nitrogen WQO. This is not a valid line of evidence for listing the Sweetwater River 3.
						Because sampling station 909SSWR03 is located approximately 30 miles upstream of the Copermittees' MLS, sampling results should be considered for listing separately for each segment.
						
						Data for 909SSWR03 does not support listing for the upstream segment; therefore, the listing area should be reduced to below the Sweetwater Reservoir in HSA 909.10.

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
Sweetwater River	Toxicity	16800	New Listing	**List on 303(d) list**	See September 14, 2009 County of San Diego comment letter for details.	It is recommended that the water segment be changed to reflect data assessment results at the two monitoring stations. Section 6.1.5.4 of the Water Quality Policy states that, "data shall be aggregated by water body segments as defined in the Basin Plans." Sweetwater River 8 is in HAS 909.12. Sweetwater River 3 is in HSA 909.31. In addition, 1 of 4 ambient samples and 0 of 1 sediment samples exceeded toxicity criteria at Sweetwater River 3. This is below the number required to list the water segment for toxicity. Therefore, the listing location should be changed to the reach located at Sweetwater River 8, where 3 of 4 samples were toxic to Selenastrum and 1 of 1 samples were toxic for Hyalella growth in sediment.
Jamul Creek	Toxicity		New Listing	**List on 303(d) list**	See September 14, 2009 County of San Diego comment letter for details.	It is recommended that Jamul Creek not be listed for sediment toxicity, as 0 of 2 samples were found to be toxic.
Poggi Canyon Creek	Selenium	16966	New Listing	**List on 303(d) list**	3 of 3 samples collected at Poggi Creek station (910OTPOG3) in January, April, and May 2003 exceeded the selenium WQO of 5 ug/l (SWAMP, 2007). In the SWAMP Database, 2 of the 3 samples were flagged as "Estimated; non-compliant with associated QAPP" leaving only 1 of 1 valid samples exceeding the WQO.	At least 2 samples are needed to list based on Table 3.1. Because only 1 sample exceeded the WQO, the listing criteria are not met and Poggi Canyon Creek should not be listed for selenium.
Tijuana River	Sedimentation/siltation		New Listing	**List on 303(d) list**	Based on photos using Section 3.7.2 of the Listing/Delisting Policy: "Water segments may be placed on the section 303(d) list when there is significant nuisance condition compared to reference conditions." The photos used to list are not available for	To maintain a transparent process, this listing should be put on hold until the photos are made available for review.

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
					review.	
Tijuana River	Selenium	16650	Original New Decision	**List on 303(d) list**	The fact sheet references 2 lines of evidence but only 1 is presented: • LOE ID 21201: 2 of 2 samples collected at Tijuana River station 911TTJR05 in May 2004, September 2004, February 2005, and April 2005 exceeded the WQO of 5 ug/l (SWAMP, 2007). • Readily available data from the San Diego Regional Stormwater Copermittees' Annual Receiving Waters Monitoring Reports were not included in the assessment and are reviewed below: <u>Site: Tijuana River MLS (2001-07)</u> • Selenium wet weather exceedance frequency – 0 of 18 samples	The 18 most recently collected samples from the Tijuana River MLS (2001-07) show no exceedances of the selenium WQO. It is recommended that this listing be put on hold so that Copermittee data that were readily available can be considered in the 2010 listing process.
Cottonwood Creek (TJ)	Selenium	16390	Revised – New Decision	**List on 303(d) list**	2 of 2 samples from Cottonwood Creek 10 (911TCWD10) in June 2005 and April 2006 exceeded the selenium WQO of 5 ug/l (SWAMP, 2007).	According to Section 6.1.5.4 of the Listing Policy the RWQCB should define distinct reaches based on hydrology and relatively homogeneous land use. Therefore, the extent of this listing should be greatly reduced from 53 miles to the reach of Cottonwood Creek where sample station 911TCWD10 is located.

Table 1. Comments and Recommendations that Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Comments/ Summary	Recommendation(s)
Pine Valley Creek (Upper)	Phosphorous	5176	Revised – New Decision	**List on 303(d) list**	6 of 51 samples from Pine Valley Creek from January to August 1998 exceeded the 0.1 mg/l WQO for phosphorous.	Table 3.2 should be used to determine listing status for phosphorous on Pine Valley Creek because phosphorous is not a toxicant. For a sample size of 51, Table 3.2 requires at least 9 exceedances to support listing and Table 4.3 requires 8 or fewer exceedances to support delisting. Therefore, Pine Valley Creek should not be listed for phosphorous.

Table 2. Comments and Recommendations that Do Not Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Summary	Comments
Santa Margarita River (Upper)	Phosphorus	5966	Revised	**Do Not Delist from 303(d) list**	4 of 4 samples collected in January through September 2003 exceeded the WQO of 0.1 mg/L according to SWAMP report (2007). Sampling site: Santa Margarita 1 (902SSMR1 lat/long: 33.47404/-117.14148).	The actual Station Code is 902SMSMR1
De Luz Creek	Sulfates	5718	Revised	**List on 303(d) list**	6 of 13 samples exceeded the WQO of 250 mg/L: 2 of 9 samples collected by LAW Crandall from 1997 to 2000 at De Luz Creek near Fallbrook; 4 of 4 samples collected from De Luz Creek station 3 (SWAMP 2007).	When checked against the SWAMP Database, 5 results were available (for 9/9/03 the results are 3.79 mg/L, 3.8 mg/L, 284 mg/L and 286 mg/L; for 1/15/03 – 276 mg/L; for 5/14/03 -267 mg/L; for 4/16/03 – 240 mg/L). The SWAMP (2007) report lists 3 of the 4 stations as exceeding the 250 mg/L Sulfate WQO. This would make for 5 (not 6) of the 13 samples exceeding.
San Luis Rey River	Phosphorus	17070	Revised – New Decision	**List on 303(d) list**	Fact sheet states: "One lines of evidence is available … to assess this pollutant. Twenty three of the samples exceed the water quality objective for phosphorus."	Actually 4 (not one) lines of evidence are presented.
San Luis Rey River	Total N	17072	Revised – New Decision	**List on 303(d) list**	LOE ID 7355: 13 of 15 wet weather samples collected at the MLS station under the Benet Road Bridge, north of Highway 76 exceeded WQO (San Diego County Municipal Copermittees Report, 2007). LOE ID: 7375: 5 of 8 samples collected on May 18-19, 2004, September 13- 14, 2004, March 1- 2, 2005, April 18- 20, 2005 at San Luis Rey River 2 (station id: 903SLSLR2 lat/long: 33.26190/-116.80889) exceeded WQO (SWAMP 2007) LOE ID: 23502: 5 of 8 samples collected on May 18-19, 2004, September 13- 14, 2004, March 1- 2, 2005, April 18- 20, 2005	In LOE 7355 three of the 13 samples exceeding 1 mg/L TN had results for Nitrate and Nitrite that fell below MDL and TKN < 1.0 mg/L so those may have not been "real exceedances." WQO for phosphorus is noted instead of that for TN in the fact sheet but 1 mg/L is actually used for the WQO. In LOE 7375, WQO for phosphorus is noted instead of that for TN in the fact sheet but 1 mg/L is actually used for the WQO. Also, this station is located too far east (not within the listed segment) In LOE 23502, WQO for phosphorus is noted instead of that for TN in the fact sheet but 1 mg/L is actually used for the WQO

Table 2. Comments and Recommendations that Do Not Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Summary	Comments
					at San Luis Rey River 8 (station id: 903SLSLR8 lat/long: 33.21494/-117.36837) exceeded WQO (SWAMP 2007).	
San Luis Rey River	Toxicity	17073	New Listing	**List on 303(d) list**	LOE 23503: Three of 15 water samples were found to exhibit toxicity. *S. capricornutum*- 1 of 15 samples collected were toxic as determined by growth test, *C. dubia* survival/reproductive test. *C. dubia*- 2 of 15 samples were toxic as determined by survival/reproductive test. *H. azteca* – 0 of 15 samples were toxic as determined by the survival test (San Diego County Municipal Copermittees Report, 2007). LOE 7493: 3 of 8 samples exhibited toxicity. *S. capricornutum*- 3 of 8 samples showed significant toxicity levels (SL) as determined by growth test. *C. dubia* – 2 of 8 samples showed significant toxicity levels (SL) as determined by survival/reproductive test. *H. azteca* – 0 of 8 samples showed significant toxicity levels (SL) as determined by survival/growth test according (SWAMP, 2007). Samples were collected at each site on May 18-19, September 13-14, 2004, March 1-2, April 18 and April 20, 2005.	3 lines of evidence are stated for this listing decision. However, there are 4 lines of evidence included on the Fact Sheet. 2 lines of evidence were for biodiversity impacts, which may be caused by physical habitat or other factors, and not necessarily toxicity. Of the remaining 2 lines of evidence, both were for water toxicity.The actual data for water toxicity do not match the statements in the Fact Sheet. The total number of samples is nine, not eight. Ceriodaphnia results for SLR8 include one sample noted as "Estimated; non-compliant with associated QAPP." The sample size for Selenastrum should be 7. It is recommended that the Fact Sheet be updated to accurately reflect the toxicity sample results used in the listing analysis. Samples noted as Estimated; non-compliant with associated QAPP" do not meet the requirements of Section 6.1.4 of the Policy which states, "Data supported by a Quality Assurance Project Plan….are acceptable for use in developing the section 303(d) list" and should be removed from the analysis.
Keys Creek	Selenium	16498	Revised – New Decision	**List on 303(d) list**	2 of 4 samples collected at Keys Creek station 3(903SLKYS3) from May 2004 to April 2005 showed excessive selenium concentration (SWAMP, 2007).	In the SWAMP Database, 1 of the 4 samples was "Estimated; non-compliant with associated QAPP". Therefore, only 2 of 3 samples exceeded the WQO.
Loma Alta	Selenium	16516	Revised – New	**List on 303(d) list**	4 of 4 samples collected at Loma Alta Creek station 904CBLAC3 on March, April, June	In the SWAMP Database, 1 of the 4 samples was "Estimated; non-compliant with

Table 2. Comments and Recommendations that Do Not Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Summary	Comments
Creek			Decision		and September 2002 showed excessive selenium concentration (SWAMP, 2007).	associated QAPP". Therefore, 3 of 3 samples exceeded the WQO.
Buena Vista Creek	Selenium	16374	Revised – New Decision	**List on 303(d) list**	4 of 4 samples from Buena Vista Creek station 904CBBVR4 (Latitude 33.180577, Longitude -117.339035) in March, April, June and September 2002 show excessive selenium concentrations according to SWAMP, 2007.	According to the SWAMP Database 1 of the 4 results were "Estimated; non-compliant with associated QAPP". Therefore, only 3 of 3 samples exceeded the WQO.
San Marcos Creek	Sediment Toxicity	6757	Revised – New Decision	**List on 303(d) list**	LOE ID 3207: 0 of 0 samples LOE ID 21385: 6 of 8 samples collected from stations San Marcos Creek 3 (904CBSAM3) and San Marcos Creek 6 (904CBSAM6) on March, April, June and September 2002 showed significant toxicity levels in the following tests: Selenastrum algae growth test (5 of 8 samples); Ceriodaphnia dubia survival/reproductive test (5 of 8 samples) (SWAMP, 2007). LOE ID 27029: Refers to IBI Data (Co-permitee Data 200-2007) LOE ID 26446: Refers to IBI Data (Fish and Game Data 1998-2000) LOE ID 3205: 0 of 0 samples LOE ID 3204: 0 of 0 samples LOE ID 3209: 2 of 4 samples collected March 2002 - September 2002 from San Marcos Creek 6 displayed statistically significant toxicity to *Hyallela azteca* (SWAMP, 2004). LOE ID 3208: 2 of 4 samples collected March 2002 - September 2002 from San Marcos Creek 3 displayed statistically significant toxicity *Hyallela azteca* (SWAMP, 2004). LOE ID 3206: - 0 of 0 samples	The "Weight of Evidence" line in the fact sheet states that "This pollutant is being considered for removal from the section 303(d) list under section 4.6 and 4.9 of the Listing Policy." Yet the "Final Listing Decision" line states: "List on 303(d) list." This is confusing. Furthermore, the "Weight of Evidence" line in the fact sheet states that "Two lines of evidence are available in the administrative record to assess pollutant. Ten of 16 samples exceed the water quality objective for sediment toxicity." And actually 9 lines of evidence are presented. LOE IDs 3205, 3204 and 3206 refer to 0 of 0 data and should be removed from the anlaysis Link to SWAMP report is broken.

Table 2. Comments and Recommendations that Do Not Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Summary	Comments
San Marcos Creek	Selenium	17066	Original New Decision	**List on 303(d) list**	LOE ID 8878: 7 of 8 samples collected at San Marcos Creek station 904CBSAM6 and 904CBSAM3 (33.129985, -117.19242) on March, April, June and September 2002 showed excessive selenium concentration (SWAMP, 2007).	3 lines of evidence quoted but only 1provided on the fact sheet. It is not clear why 904CBSAM6 and 904CBSAM3 were combined as they are hydrologically separated by the Lake San Marcos Dam and should be evaluated separately. Also, according to the SWAMP Database, 6 (not 7) of the 8 samp1es collected at the two stations actually exceeded the WQO. 1 of the 4 samples collected at 904CBSAM3 was "Estimated; non-compliant with associated QAPP". Therefore, only 2 of 3 samples exceeded the WQO. 1 of the 4 samples collected at 904CBSAM6 was "Estimated; non-compliant with associated QAPP". Therefore, 2 of 3 samples exceeded the WQO.
San Marcos Creek	Toxicity	6750	New Listing	**List on 303(d) list**	LOE 21385: 8 samples were collected in 2002, 4 at San Marcos Creek station 904CBSAM3 and 4 at San Marcos Creek station 904CBSAM6. They showed significant toxicity levels (SL) in the following tests: Selenastrum algae growth test (5 of 8 samples). Ceriodaphnia dubia survival/reproductive test (5 of 8 samples). This LOE states that 6 of 8 samples exceeded sediment toxicity standards. This LOE seems to be a repeat of LOE 3209 and LOE 3208. At San Marcos Creek 3, 2 of 4 *H. azteca*	The Fact Sheet states that two lines of evidence were used to assess this pollutant, and ten of 16 samples exceeded the WQO for sediment toxicity. However, there were 9 LOEs listed on the Fact Sheet, 6 of which were for Macroinvertebrate Bioassessments. LOE 21385 includes *H. azteca* sample results that were noted as "Estimated; non-compliant with associated QAPP." Therefore, the samples do not meet the requirements of Section 6.1.4 of the Policy which states, "Data supported by a Quality

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Impaired Section	Constituent	Decision ID	Status	Decision	Summary	Comments
					samples were "Estimated; non compliant with associated QAPP". Therefore, 1 of 2 samples showed significant toxicity. At San Marcos Creek 6, 2 of 4 *H. azteca* samples were noted as "Estimated; non compliant with associated QAPP". Therefore, 2 of 4 samples showed significant toxicity. LOE 3209: Sediment samples were collected at one station, San Marcos Creek 6. 2 of 4 samples displayed statistically significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%. One of the four samples (collected April 23, 2002) also displayed statistically significant toxicity in the survival endpoint compared to the negative control, but this data point is not included in the total 'toxic' samples as it had a data qualifier. All samples were tested using the 10-day Hyalella azteca test (SWAMP, 2004). The data reference is a placeholder from 2006. LOE 3208: Sediment samples were collected at one station, San Marcos Creek 3. Two out of four samples displayed statistically significant toxicity in the survival endpoint when compared to the negative control based on a statistical test with alpha of less than 5%. 1 of 4 samples (collected April 23, 2002) also displayed statistically significant toxicity in the survival endpoint compared to the negative control, but this data point is not included in the total 'toxic' samples as it had a data	Assurance Project Plan….are acceptable for use in developing the section 303(d) list" and should be removed from the analysis.

Table 2. Comments and Recommendations that Do Not Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Summary	Comments
					qualifier. All samples were tested using the 10-day Hyalella azteca test (SWAMP, 2004).	
San Dieguito River	Nitrogen	17055 7373	New Listing	**List on 303(d) list**	13 of 15 samples exceeded the 1 mg/l Basin Plan standard to prevent the potential growth of algae. Copermittees' TKN values drive this during wet and dry weather.	3 of 4 samples exceeded above benchmark based on SWAMP data. Data link incorrect. It connects to QAPP.
San Dieguito River	Toxicity	17058	New Listing	**List on 303(d)**	2 lines of evidence were used: LOE ID 7492: Based on Copermittees' Urban Runoff Monitoring data collected between 2001 and 2006. 6 of 15 samples were toxic to the Ceriodaphnia dubia survival/reproductive test. 0 of 15 samples were toxic for Hyalella azteca survival. 5 of 15 samples were toxic for the Selenastrum capricornutum growth test. LOE ID 24991: Based on the Urban Runoff Monitoring data collected in 2003. The LOE states: "Selenastrum capricornutum - 4 samples were collected and 4 samples show significant toxicity levels (SL) as determined by the Selenastrum capricornutum growth test. Ceriodaphnia dubia - 4 samples were collected and 2 samples show significant toxicity levels (SL) as determined by the Ceriodaphnia dubia survival/reproductive test. Hyalella azteca - 2 samples were collected and neither show significant toxicity levels (SL) as determined by the Hyalella azteca growth and survival test according to results in the Surface Water Ambient Monitoring Program Annual Progress Report, 2007. Samples were collected in January, April,	Data noted as "Estimated; non-compliant with associated QAPP" should be removed from the anlaysis because they do not meet the requirements of Section 6.1.4 of the Policy, which states: "Data supported by a Quality Assurance Project Plan….are acceptable for use in developing the section 303(d) list". LOE 24991 should be updated to correctly reflect the number of samples and exceedances for each species.

Table 2. Comments and Recommendations that Do Not Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Summary	Comments
					May and September 2003." However, this reference is cited incorrectly and, in fact, refers to the SWAMP toxicity data of 2003. Review of these SWAMP data indicates that 4 of 4 Selenastrum total cell count tests were toxic. However, 1 of the samples was noted to be "Estimated; non compliant with associated QAPP".	
Poway Creek	Selenium	16971	Revised – New Decision	**List on 303(d) list**	4 of 4 samples collected at Poway Creek station 906LPPOW2 in March, April, June, and September 2002 showed excessive selenium concentrations (SWAMP, 2007).	According to the SWAMP database, 1 of the 4 data points was non-compliant with the associated QAPP. Therefore, only 3 of the 4 samples are valid.
San Diego River (lower)	Enterococcus	17047	New Listing	**List on 303(d) list**	The listing appears to be valid; however, the Fact Sheet was found in the wrong location on-line. The fact sheet was attached to the decision to not delist fecal coliform.	The website should be corrected.
San Diego River (lower)	Nitrogen	7489	New Listing	**List on 303(d) list**	The listing appears to be valid; however, the Fact Sheet was found in the wrong location on-line. It was attached to the decision to not delist fecal coliform.	The website should be corrected.
Forester Creek	Selenium	16463	Revised – New Decision	**List on 303(d) list**	4 of 4 samples collected at Forrester Creek station 2 (907SDFRC2) in May 2004, September 2004, April 2005, and February 2005, showed excessive selenium concentrations (SWAMP, 2007).	In the SWAMP Database, 1 of the 4 samples was "Estimated; non-compliant with associated QAPP". Therefore, only 3 of 3 samples exceeded the WQO.
Los Coches Creek	Se	16566	Revised – New Decision	**List on 303(d) list**	3 of 4 samples collected at Los Coches Creek station 2 (907SDLCO2) from May 2004 to April 2005 showed excessive phosphorus concentrations (SWAMP, 2007).	According to the SWAMP 2007 Report for the San Diego River HOU (p. 21, Table 10), 3/4 samples exceeded the criterion of 5 ug/l Selenium. In the SWAMP Database, 1 of the 4 samples was flagged as "Estimated; non-compliant with associated QAPP". Therefore, only 3 valid samples exceeded the WQO.

Table 2. Comments and Recommendations that Do Not Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Summary	Comments
BROKEN OR MIS-DIRECTED LINKS						
San Luis Rey River						LOE 7494, 7495 link to the 2005-2006 Annual Report for the Santa Margarita Watershed
Agua Hedionda Creek						LOE 7309, 7361, 6704 link to the 2005-2006 Annual Report for the Santa Margarita Watershed.
Escondido Creek						LOE 7364 does not provide a link to the data source LOE 7365 links to the 2005-2006 Annual Report for the Santa Margarita Watershed
San Dieguito River						LOE 24991 / Evaluation Guideline: "Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. " BROKEN LINK LOE 27026 / QAPP Information Reference(s): "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams". Environmental Management. Volume 35, number 1 (2005): 1-13. BROKEN LINK LOE 9022 / Data Reference: "Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. " BROKEN LINK LOE 7492, 7311, 7371, 7324 / Data Reference: Urban Runoff Monitoring, Volume 1- Final Report. Takes reader to the Santa Margarita Report

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Impaired Section	Constituent	Decision ID	Status	Decision	Summary	Comments
Green Valley Creek						LOE 9032 / Data Used to Assess Water Quality: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. BROKEN LINK LOE 26391 / Guideline Reference: "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams". Environmental Management. Volume 35, number 1 (2005): 1-13. BROKEN LINK LOE 26391 / QAPP Information Reference(s): State of California, California Monitoring and Assessment Program: "CMAP". Quality Assurance Project Plan for the California Stream Bioassessment Procedure The San Diego Stream Team Quality Assurance Project Plan. BROKEN LINK LOE 9033 / Data Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. BROKEN LINK. LOE 26719 / Guideline Reference: "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams". Environmental Management. Volume 35, number 1 (2005): 1-13. BROKEN LINK
Kit Carson Creek						LOE 26403 / Guideline Reference: "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams". Environmental Management. Volume 35, number 1 (2005): 1-13. BROKEN LINK QAPP Information Reference(s): State of California, California Monitoring and Assessment Program: "CMAP". Quality Assurance Project Plan for the

Table 2. Comments and Recommendations that Do Not Affect Proposed Listing Decisions.

Impaired Section	Constituent	Decision ID	Status	Decision	Summary	Comments
						California Stream Bioassessment Pocedure The San Diego Stream Team Quality Assurance Project Plan. BROKEN LINK
Clover-dale Creek						LOE 9024 / Data Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. BROKEN LINK LOE 9026 / Data Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. BROKEN LINK.
Santa Ysabel Creek						LOE 26468 / Guideline Reference: "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams". Environmental Management. Volume 35, number 1 (2005): 1-13." BROKEN LINK.
Los Pen-asquitos Creek						LOE 8813 / Data Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. Puckett, M. 2002. Quality Assurance Management Plan for the State of California's Surface Water Ambient Monitoring Program. California Department of Fish and Game, Monterey, CA. BROKEN LINK. LOE 26436 / Guideline Reference: "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams". Environmental Management. Volume 35, number 1 (2005): 1-13. BROKEN LINK. LOE 26834 / Guideline Reference: "A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams". Environmental Management. Volume 35,

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Impaired Section	Constituent	Decision ID	Status	Decision	Summary	Comments
						number 1 (2005): 1-13. QAPP Information References: State of California, California Monitoring and Assessment Program: "CMAP". Quality Assurance Project Plan for the California Stream Bioassessment Pocedure The San Diego Stream Team Quality Assurance Project Plan. BROKEN LINK. LOE 26872 / Data Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. BROKEN LINK. LOE 21387 / Data Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. Guideline Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. BROKEN LINK.
Soledad Canyon						LOE 7578 / Data Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. BROKEN LINK. LOE 21390 / Data Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. Guideline Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. BROKEN LINK.
Poway Creek						LOE 7576 / Data Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. BROKEN LINK. LOE 7577 / Data Reference: Surface Water

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Impaired Section	Constituent	Decision ID	Status	Decision	Summary	Comments
						Ambient Monitoring Program. 2007. Monitoring data for Region 9. BROKEN LINK. LOE 21388 / Data Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. Guideline Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. BROKEN LINK.
San Diego River (lower)						LOE 4719 (Fecal Coliform) Placeholders only, no links LOE 7488 Data Used to Assess Water Quality: Urban Runoff Monitoring, Volume 1- Final Report. (Link takes you to Santa Margarita 2005-2006 Annual Report) LOE 7487 (Enterococcus) Data Used to Assess Water Quality: Urban Runoff Monitoring, Volume 1- Final Report. (Link takes you to Santa Margarita 2005-2006 Annual Report) LOE 4720 (Low dissolved Oxygen) Placeholders only, no links LOE 7489 (Total Nitrogen) Data Used to Assess Water Quality: Urban Runoff Monitoring, Volume 1- Final Report. (Link takes you to Santa Margarita 2005-2006 Annual Report) LOE 4721 (Phosphorus) Placeholders only, no links LOE 4721 (Total Dissolved Solids) Placeholders only, no links
Famosa Slough						LOE 4451 Decision ID 6022 (Eutrophic) Placeholders only, no links

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Impaired Section	Constituent	Decision ID	Status	Decision	Summary	Comments
Alvarado Creek						LOE 8925 Decision ID 17605 / Data Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. BROKEN LINK.
Murray Reservoir (Lake Murray)						LOE 903 Decision ID 4608 (pH) Placeholders only, no links
Forrester Creek						LOE 9014 Data Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. BROKEN LINK. LOE 3343 Placeholders only, no links LOE 3336, 3338, 3341, 3340, 3339 and 3337 Placeholders only, no links LOE 4452 Placeholders only, no links LOE 3342 Placeholders only, no links LOE 3344 Placeholders only, no links
San Diego River Upper						LOE 9015 Decision ID 17050 / (Manganese) Data Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. BROKEN LINK.
Los Coches Creek						LOE 26191 Decision ID 16566 / (Selenium) Data Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. BROKEN LINK.
San Vicente Reservoir						LOE 1087Placeholders only, no links LOE 6174 Decision ID 17082 / Data Reference: Surface Water Ambient Monitoring Program. 2007. Monitoring data for Region 9. No link, just typewritten reference to the monitoring report.

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Impaired Section	Constituent	Decision ID	Status	Decision	Summary	Comments
						LOE's 1080, 1081, 1082, 1073, 1078, 1077, 1076, 1075, 1074,1083 and 1079. Decision ID 4814 Placeholders only, no links. LOE 1096 Decision ID 5801Placeholders only, no links. LOE 1091 Decision ID 4726 Placeholders only, no links. LOE 1071 Decision ID 4812 Placeholders only, no links.
El Capitan Reservoir						LOE 1190 Decision ID 5841 Placeholders only, no links. LOE 1193 Decision ID 4478 Placeholders only, no links. LOE 1179, 1180, 1181, 1182, 1183, 1184, 1176, 1177, 1185 and 1186. Decision ID 5910 Placeholders only, no links.

The San Diego River Park Foundation

October 26, 2009

Ms. Cynthia Gorham-Test

San Diego Regional Water Quality Control Board

9174 Sky Park Court,

Suite 100, San Diego, CA 92123-4340

RE: Comments for the 2008 303(d) List of Water Quality Limited Segments

Dear San Diego Regional Water Quality Control Board:

My name is Shannon Quigley and I am a Field Operations Associate for the San Diego River Park Foundation. The San Diego River Park Foundation's mission is to improve, restore and cultivate a healthy river and healthy communities within the 440 square mile San Diego River watershed. The quality of water within the San Diego River watershed is very important to us as that it is vital to our mission of a healthy river. The interconnectedness of environmental systems demand attention to water quality as it affects biota, diversity, habitat and recreational value of the San Diego River and watershed. For this reason we support the additional listing of Selenium on Forester Creek.

The San Diego River offers many beneficial uses that include fishing, outdoor recreation, boating, industry, aquatic habitat and swimming to name a few. The members of the San Diego River Park Foundation work toward advancing these beneficial uses. Our River Watch monitoring program tests water quality monthly at Forester Creek as well as up and down river from the creek. Results consistently demonstrate higher levels of impairment on Forester Creek and at the next monitoring location downstream of Forester Creek's confluence with the San Diego River. Consistently nitrate readings are higher than average and dissolved oxygen is typically low. Moreover, Forester Creek characteristically has high trash and algal levels associated with storm water debris and residue from urban run-off. Additional sources of impairment in Forester Creek are of concern for us and the San Diego River Watershed. The addition of Selenium to the 303(d) list can only aid efforts to improve the health of this tributary and the San Diego River as a whole.

Thank you to the San Diego Regional Water Quality Control Board for your time, acceptance and consideration of our comments. Again, we support listing Selenium on the 303(d) list for Forester Creek. If you have any questions feel free to contact me either by e-mail or phone, 619-297-7380, shannon@sandiegoriver.org.

Sincerely,

Shannon Quigley

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

October 26, 2009

David Gibson
San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

Dear Mr. Gibson:

Thank you for the opportunity to comment on the San Diego Regional Water Board's draft 2008 Clean Water Act Section 303d list. We have reviewed the draft listing decisions and factsheets. We appreciate the time and effort the staff at Regional Board invested to complete assessments for a large number of waterbody pollutant combinations. While we support the overall effort to complete all assessments and thereby help the statewide Integrated Report process move forward, we are seeking clarification and justification on some parts of the Regional Board's draft 303(d) list.

Bacteria Delistings

In 2006, EPA added several coastal beaches to California's 303d list based on our review of available monitoring data; these impairments were identified due to "indicator bacteria." In this listing cycle, Regional Board staff have assessed more recent data and produced specific listing decisions for each indicator; e.g., *enterococcus,* fecal and total coliform. First, we believe this sort of analysis is best performed during the initial TMDL development, as recommended in the State's Impaired Waters Guidance (2005) and should not be part of the 303(d) process. Second, we cannot determine if staff performed and included geomean analysis of available beach data. EPA requests further information on bacteria delistings to clarify that the geomean data has been used to determine impairment in for every waterbody assessed for impairment by indicator bacteria. While single sample maximums are helpful as additional information to inform the waterbody assessment, they may not be assessed to the exclusion of the geomeans. For example, we note proposed delistings for the following waterbodies which we do not see proper justification including geometric mean analyses: 1) Pacific Ocean Shoreline at Aliso Beach – North; 2) Pacific Ocean Shoreline at Dana Point HSA -1000 Steps Beach.

Most importantly, EPA disagrees with the application of the binomial approach (within the State's Listing Policy) to assessment methods for the geomean criterion for pathogens. The geomean represents a 30-day exposure period and thus a single geomean exceedence represents undesirable and prolonged exposure to elevated pathogen levels for recreating swimmers and waders. [It is analogous to a monthly mean concentration, often used for compliance.] For

example, Mission Bay Shoreline at Bahia Point appears to have 4 of 70 geomean exceedences of fecal coliform. EPA disagrees with the staff conclusion to delist this waterbody-pollutant combination. We find similar geomean exceedences at other coastal beaches (Mission Bay Shoreline at Fiesta Island Bridge, San Clemente HSA at Riviera Beach, Pacific Ocean Shoreline, Aliso HSA, at Aliso Beach – middle and Aliso Beach – Blue Lagoon) may have been inappropriately omitted from the draft 303(d) list. Upon receipt of the State's final 2008 list, we will perform an independent evaluation of these waters to determine if these are impaired according to federal listing guidance and warrant addition to the State's list.

Other comments

Additionally, we have other areas of concern. First, for San Diego Bay Shoreline-near sub base, the proposed listing for arsenic in fish tissue is highly questionable if the available results are total arsenic concentrations. Inorganic arsenic is the relevant compound of concern, so if that is not reported or available, then there is insufficient information to provide an assessment conclusion on this waterbody pollutant combination. [See *Arsenic Analysis*, San Diego Creek/Newport Bay Toxics TMDLs, established by EPA in 2002.] Second, for this waterbody, please clarify the delisting proposed for benthic community effects with respect to the continued sediment toxicity.

In conclusion, the staff produced a sound framework for assessing the condition of its waters; however we are primarily concerned with bacterial assessments that may result in complete delisting (of all 3 bacterial indicators) for the waterbody. We urge the Board to make minor revisions and adopt the 303(d) list at the November 2009 board meeting and promptly submit the list to State Board shortly thereafter. If you have any questions concerning our comments, please call me at (415) 972-3448.

Sincerely yours,

Peter Kozelka, Ph.D.
303(d)/TMDL Coordinator
Water Division