

## Appendix 3.A

### Detailed Description of Water Quality Priorities

The identification of Water Quality Priorities is an important first step in the EWMP process. The Water Quality Priorities provide the basis for prioritizing implementation and monitoring activities within the EWMP and CIMP and selection and scheduling of BMPs during the RAA. The identification of Water Quality Priorities is required in Section VI.C.5.a of the Permit as part of the development of a EWMP. The Permit defines three categories of WBPCs to support the development of priorities, as shown in **Table 1**. The Permit establishes a four-step process that leads to prioritization and sequencing of the water quality issues within each watershed, ultimately leading to an organized list of Water Quality Priorities, as follows:

- **Step 1:** Water quality characterization (VI.C.5.a.i, pg. 58) based on available monitoring data, TMDLs, 303(d) lists, stormwater annual reports, etc.;
- **Step 2:** Water body-pollutant classification (VI.C.5.a.ii, pg. 59), to identify water body-pollutant combinations that fall into three Permit defined categories;
- **Step 3:** Source assessment (VI.C.5.a.iii, pg. 59) for the water body-pollutant combinations in the three categories; and
- **Step 4:** Prioritization of the water body-pollutant combinations (VI.C.5.a.iv, pg. 60).

**Table 1. Water Body-Pollutant Classification Categories (Permit Section IV.C.5.a.ii)**

Category	Water Body-Pollutant Combinations (WBPCs) Included
1 Highest Priority	WBPCs for which TMDL Water Quality Based Effluent Limits (WQBELs) and/or Receiving Water Limitations (RWLs) are established in Part VI.E and Attachments L and O of the MS4 Permit.
2 High Priority	WBPCs for which data indicate water quality impairment in the receiving water according to the State's Listing Policy, regardless of whether the pollutant is currently on the 303(d) List and for which the MS4 discharges may be causing or contributing.
3 Medium Priority	WBPCs for which there are insufficient data to indicate impairment in the receiving water according to the State's Listing Policy, but which exceed applicable receiving water limitations contained in the MS4 Permit and for which MS4 discharges may be causing or contributing to the exceedance.

## Water Quality Characterization (Step 1)

The following presents a brief summary of the water quality characterization for the ULAR WMA. **Appendix 3.B** provides a more detailed description of the results of the characterization. To conduct water quality characterization, data were obtained from numerous sources. A data request was submitted to the ULAR WMA to gather information necessary to meet the water quality characterization and source assessment requirements outlined in the Permit (see pages 58 and 59). The data requested to support the water quality characterization included:

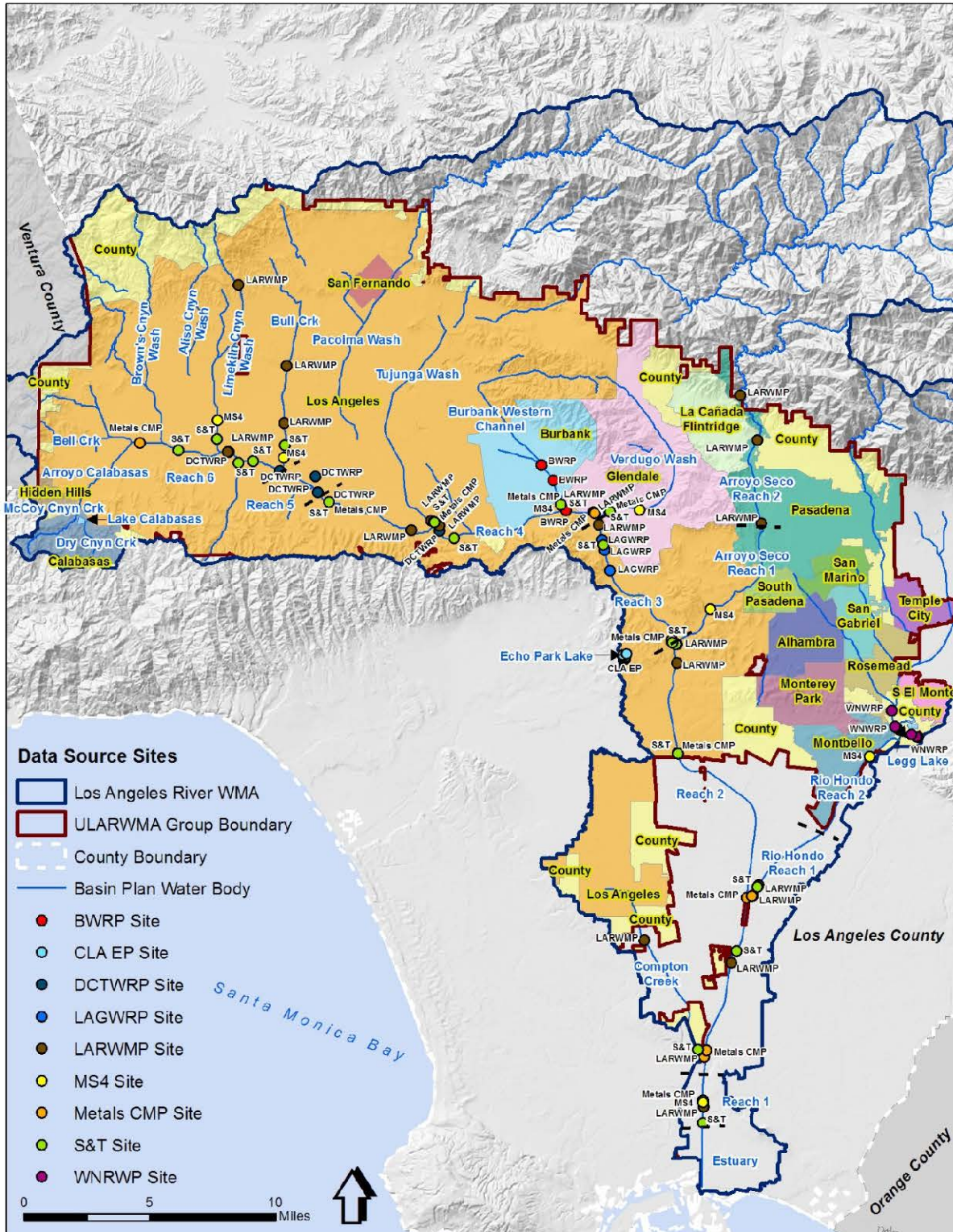
- Monitoring programs, including but not limited to TMDL compliance monitoring and receiving water monitoring;
- Findings from the Permittees' Illicit Connections and Illicit Discharge Eliminations, Industrial/Commercial Facilities, Development Construction, and Public Agency Activities Programs;
- TMDL source investigations; and

- Any other pertinent data, information, or studies related to constituent sources and conditions that could contribute to identification of the highest Water Quality Priorities.

Monitoring data collected within the ULAR WMA were received from the following sources:

- Los Angeles County Department of Public Works (LACDPW)
- DC Tillman, Los Angeles/Glendale, and Burbank Water Reclamation Plants (WRPs)
- City of Los Angeles Status and Trends program
- LA River Metals TMDL Coordinated Monitoring Program
- City of Los Angeles Echo Park Monitoring Program
- Los Angeles River Watershed Monitoring Program (LARWMP)

Over 170,000 data records were compiled and reviewed as part of the data analysis, which likely represents the largest data compilation effort of all the EWMPs in the region. **Figure 1** presents the site locations for the monitoring data received and used for the water quality characterization process.



**Figure 1. Monitoring Site Locations for Data Utilized in the Water Quality Priorities Process**  
 BWRP = Burbank Water Reclamation Plant, CLA EP = City of LA Echo Park Lake, DCTWRP = City of LA Donald C. Tillman Water Reclamation Plant, LARWMP = LA Glendale Water Reclamation Plant, MS4 = LA County M4 Permit, Metals CMP = Metals TMDL Coordinated Monitoring Program, S&T = City of LA Status and Trends, WNRWP = LA County Sanitation District’s Wittier Narrows Water Reclamation Plant.

## Characterization of Receiving Water Quality

Per Part VI.C.5.a.i (page 58) of the Permit, each EWMP shall include an evaluation of existing water quality conditions, including characterization of receiving water quality. **Appendix 3.B** presents additional details on the data analysis approach and results.

Data were compiled to identify constituents exceeding applicable water quality objectives. Applicable water quality objectives were compiled from the California Toxics Rule (CTR), the Basin Plan, and relevant TMDLs. Applicable water quality objectives from the CTR and Basin Plan were selected based on the beneficial uses identified in the Basin Plan.

Generally, the water quality objectives utilized included those established for the protection of aquatic life, contact recreation and human health related to the consumption of organisms. Given the significant number of water quality constituents and corresponding water quality objectives the following steps were taken to identify WBPCs:

- The first step in the analysis was to develop a list of constituents that were sampled for but were never detected in any water body within the EWMP area and therefore would not fall into one of the three Permit categories (see **Table 1**). A list of these constituents is presented in **Appendix 3.B**.
- Next, constituents that were detected, but the sample results never exceeded a corresponding water quality objective and therefore would not fall into one of the three Permit categories were identified. A list of these constituents is presented in **Appendix 3.B**.
- All other constituents (*i.e.*, all constituents detected and with sample results that had at least one result greater than an applicable water quality objective) were subject to further analysis. Summary tables are presented in **Appendix 3.B**.

## Characterization of Discharge Quality

Per Part VI.C.5.a.i (page 58) of the Permit, each EWMP shall include a characterization of stormwater and non-stormwater discharges from the MS4. A characterization was conducted on stormwater and non-stormwater discharges from the MS4 associated with constituents identified in a TMDL, a 303(d) listing, or through the receiving water data analysis described above. The following sources of discharge characterization data were reviewed and are summarized in **Appendix 3.C**:

- TMDL Staff Reports for TMDLs identified in **Appendix 3.B**.
- Los Angeles River Bacteria Source Identification Study (BSI Study) completed by the Cleaner Rivers through Effective Stakeholder-led TMDLs (CREST) group in 2008.
- Data collected as part of the 2007 Southern California Coastal Water Research Project (SCCWRP) Technical Report 510 titled “Sources, patterns and mechanisms of storm water pollutant loading from watersheds and land uses of the greater Los Angeles area, California, USA.”
- Land Use data collected as part of previous MS4 Permit monitoring and presented in the 2000 report titled “Los Angeles County 1994-2000 Integrated Receiving Water Impacts Report.”

## Water Body Pollutant Classification (Step 2)

Based on available information and data analysis, WBPCs were classified in one of the three Permit categories, as described in **Table 1**. To further support development of the EWMP, the three Permit categories were further subdivided into *subcategories* (described in **Table 2**) and each WBPC was assigned to an appropriate subcategory. **Table 3, Table 4, and Table 5** present the ULAR WMG WBPCs in Categories 1, 2 and 3 for the associated Los Angeles River mainstem, Los Angeles River Reaches 1-4 tributaries, and Los Angeles River Reaches 5 and 6 tributaries, respectively. **Table 6** presents a summary of the ULAR WMG WBPCs categories for Lake Calabasas, Legg Lake, and Echo Park Lake. **Table 25 through Table 24** list the applicable RWLs for each identified Category 2 and 3 pollutant. The applicable interim and final WQBELs and RWLs for each identified Category 1 pollutant are presented in Attachment O of the MS4 Permit. Summary tables presenting the data analysis to support the placement of WBPCs into the various subcategories are presented in **Appendix 3.B**.

**Table 2. Details for Water Body-Pollutant Classification Subcategories**

Category	Water Body-Pollutant Combinations (WBPCs)	Description
1	Category 1A: WBPCs with past due or current Permit term TMDL deadlines with exceedances in the past 5 years.	WBPCs with TMDLs with past due or current Permit term interim and/or final limits. These pollutants are the highest priority for the current Permit term.
	Category 1B: WBPCs with TMDL deadlines beyond the Permit term with exceedances in the past 5 years.	The Permit does not require the prioritization of TMDL interim and/or final deadlines outside of the Permit term or USEPA TMDLs, which do not have implementation schedules. To ensure EWMPs consider long term planning requirements and utilize the available compliance mechanisms, these WBPCs should be considered during BMP planning and scheduling, and during CIMP development.
	Category 1C: WBPCs addressed in USEPA TMDL without a Regional Board adopted Implementation Plan.	
	Category 1D: WBPCs with past due or current Permit term TMDL deadlines but have had no exceedances in the past 5 years.	WBPCs where specific actions may end up not being identified because recent exceedances have not been observed and specific actions may not be necessary. The CIMP should address these WBPCs to support future re-prioritization.
2	Category 2A: 303(d) Listed WBPCs or WBPCs that meet 303(d) Listing requirements with exceedances in the past 5 years.	WBPCs with confirmed impairment or exceedances of RWLs. WBPCs in a similar class <sup>1</sup> as those with TMDLs are identified. WBPCs currently on the 303(d) List are differentiated from those that are not to support utilization of EWMP compliance mechanisms.
	Category 2B: 303(d) Listed WBPCs or WBPCs that meet 303(d) Listing requirements that are not a “pollutant” <sup>2</sup> (e.g., toxicity).	WBPCs where specific actions may not be identifiable because the cause of the impairment or exceedances is not resolved. Either routine monitoring or special studies identified in the CIMP should support identification of a “pollutant” linked to the impairment and re-prioritization in the future.
	Category 2C: 303(d) Listed WBPCs or WBPCs that meet 303(d) Listing requirements but there have been no exceedances in the past 5 years.	WBPCs where specific actions for implementation may end up not being identified because recent exceedances have not been observed (and thus specific BMPs may not be necessary.) Pollutants that are in a similar class <sup>1</sup> as those with TMDLs are identified. Either routine monitoring or special studies identified in the CIMP should ensure these WBPCs are addressed to support re-prioritization in the future.
3	Category 3A: All other WBPCs that have exceeded in the past 5 years.	Pollutants that are in a similar class <sup>1</sup> as those with TMDLs are identified.
	Category 3B: All other WBPCs that are not a “pollutant” <sup>2</sup> (e.g., toxicity).	WBPCs where specific actions may not be identifiable because the cause of the impairment or exceedances is not resolved. Either routine monitoring or special studies identified in the CIMP should support identification of a “pollutant” linked to the impairment and re-prioritization in the future.
	Category 3C: All other WBPCs that have exceeded in the past 10 years, but not in past 5 years.	Pollutants that are in a similar class <sup>1</sup> as those with TMDLs are identified.

1 – Pollutants are considered in a similar class if they have similar fate and transport mechanisms, can be addressed via the same types of control measures, and within the same timeline already contemplated as part of the EWMP for the TMDL. (Permit pg. 49, footnote 21).

2 – While pollutants may be contributing to the impairment, it currently is not possible to identify the specific pollutant/stressor.

**Table 3. Summary of Upper Los Angeles River WMA Water Body-Pollutant Categories for Mainstem Reaches**

Constituents	LA River						
	1	2	3 (below LAG)	3 (above LAG)	4	5	6
<b>Category 1A:</b> WBPCs with past due or current Permit term TMDL deadlines <u>with exceedances</u> in the past 5 years. (I = Interim and F = Final Limits)							
Cadmium Total	I (Wet)						
Copper Dissolved	I (Wet)	I (Wet)			I (Wet)	I (Dry)	I (Wet)
Copper Total	I (Wet)	I (Wet)	I (Wet)		I (Wet)	I (Dry)	
Lead Dissolved	I (Wet/Dry)	I (Wet/Dry)	I (Wet/Dry)		I (Wet/Dry)		
Lead Total	I (Wet)	I (Wet)		I (Dry)			
Zinc Dissolved	I (Wet)	I (Wet)			I (Wet)		I (Wet)
Zinc Total	I (Wet)	I (Wet)	I (Wet)		I (Wet)		I (Wet)
Trash	I/F	I/F	I/F	I/F	I/F	I/F	I/F
Sediment: DDTs, PCBs, PAHs <sup>1</sup>	I						
Sediment: Copper, Lead, Zinc <sup>1</sup>	I						
<b>Category 1B:</b> WBPCs with TMDL deadlines beyond the Permit term <u>with exceedances</u> in the past 5 years. (I = Interim and F = Final Limits)							
<i>E. Coli</i>	I/F (Wet/Dry)	I/F (Wet/Dry)	I/F (Wet/Dry)	I/F (Wet/Dry)	I/F (Wet/Dry)	I/F (Wet/Dry)	I/F (Wet/Dry)
Cadmium Total	F (Wet)						
Copper Dissolved	F (Wet)	F (Wet)			F (Wet)	F (Dry)	F (Wet)
Copper Total	F (Wet)	F (Wet)	F (Wet)		F (Wet)	F (Dry)	
Lead Dissolved	F (Wet/Dry)	F (Wet/Dry)	F (Wet/Dry)		F (Wet/Dry)		
Lead Total	F (Wet)	F (Wet)		F (Dry)			
Zinc Dissolved	F (Wet)	F (Wet)			F (Wet)		F (Wet)
Zinc Total	F (Wet)	F (Wet)	F (Wet)		F (Wet)		F (Wet)
Sediment: DDTs, PCBs, PAHs <sup>1</sup>	F						
Sediment: Copper, Lead, Zinc <sup>1</sup>	F						
<b>Category 1C:</b> WBPCs addressed in USEPA TMDL without a Regional Board Adopted Implementation Plan. (WLA = Waste Load Allocation in USEPA TMDL)							
None							
<b>Category 1D:</b> WBPCs with past due or current Permit term TMDL deadlines but <u>have not exceeded in past 5 years.</u>							
Cadmium Total		I (Wet NS)	I (Wet)	I (Wet NS)	I (Wet NS)	I (Wet NS)	I (Wet NS)
Copper Dissolved	I (Dry)	I (Dry)	I (Wet/Dry)	I (Dry/Wet NS)	I (Dry)	I (Wet NS)	I (Dry)
Copper Total	I (Dry)	I (Dry)	I (Dry)	I (Wet/Dry)	I (Dry)	I (Wet NS)	I (Wet/Dry)
Lead Dissolved				I (Dry/Wet NS)		I (Dry/Wet NS)	I (Wet/Dry)



Constituents	LA River						
	1	2	3 (below LAG)	3 (above LAG)	4	5	6
Lead Total	I (Dry)	I (Dry)	I (Wet/Dry)	I (Wet)	I (Wet/Dry)	I (Dry/Wet NS)	I (Wet/Dry)
Zinc Dissolved			I (Wet)	I (Wet NS)		I (Wet NS)	
Zinc Total				I (Wet)		I (Wet NS)	
Ammonia as N	F (Dry/Wet)	F (Dry/Wet NS)	F (Dry/Wet)	F (Dry/Wet)	F (Dry/Wet)	F (Dry/Wet)	F (Dry/Wet)
Nitrate as N	F	F	F	F	F	F	F
Nitrite as N	F	F	F	F	F	F	F
Nitrogen (NO3-N+NO2-N)	F	F	F	F	F	F	F
<b>Category 2A:</b> 303(d) Listed WBPCs or WBPCs that meet 303(d) Listing requirements with exceedances in the past 5 years.							
2,3,7,8-TCDD (Dioxin)			Dry				
Bis(2-ethylhexyl)Phthalate	Dry						
Diazinon						Dry	
Selenium						Dry	Dry
Chloride						Dry	Dry
Sulfate						Dry	Dry
TDS						Dry	
Cyanide	303 Dry/Wet						
<b>Category 2B:</b> 303(d) Listed WBPCs or WBPCs that meet 303(d) Listing requirements that are not a “pollutant” <sup>2</sup> (i.e., toxicity) with exceedances in the past 5 years.							
pH	Dry	Dry					
<b>Category 2C:</b> 303(d) Listed WBPCs or WBPCs that meet 303(d) Listing requirements but have not exceeded in past 5 years.							
Mercury Total	Dry	Dry/Wet (NS)	Dry	Dry	Dry/Wet (NS)		Dry
Thallium Total							Dry (NS)
TDS							Dry (NS)
Oil		Delist				Delist	
Diazinon	Wet (Delist)						
<b>Category 3A:</b> All other WBPCs with exceedances in the past 5 years.							
2,3,7,8-TCDD (Dioxin)			Wet	Wet			
Bis(2-ethylhexyl)Phthalate	Wet						
Diazinon					Dry		
Dibenzo(a,h)Anthracene						Dry	
Indeno(1,2,3-cd)Pyrene						Dry	

Constituents	LA River						
	1	2	3 (below LAG)	3 (above LAG)	4	5	6
4,4-DDD						Dry	
4,4-DDE						Dry	
Nickel Total						Dry	
Selenium Total	Dry						
Zinc Dissolved	Dry						
Zinc Total	Dry		Dry				
Sulfate					Dry		
Cyanide					Dry	Dry	
<b>Category 3B:</b> All other WBPCs that are not a “pollutant” <sup>2</sup> (i.e., toxicity) with exceedances in the past 5 years.							
pH	Wet	Wet (NS)	Dry	Dry		Dry	
Dissolved Oxygen	Wet		Dry		Dry	Dry	Dry
<b>Category 3C:</b> All other WBPCs that have exceeded in the past 10 years, but not in past 5 years.							
2,3,7,8-TCDD (Dioxin)				Dry			Dry (NS)
Benzo(a)Anthracene			Dry				
Bis(2-ethylhexyl)Phthalate			Dry	Dry		Dry	
Chrysene			Dry		Dry		Dry (NS)
Dibenzo(a,h)Anthracene			Dry	Dry			
Dichlorobromomethane			Wet				
Indeno(1,2,3-cd)Pyrene			Dry	Dry			
Heptachlor						Dry	
Mercury Total	Wet		Wet	Wet		Dry	Wet (NS)
Nickel Total				Dry			
Selenium Total				Dry	Dry		
Thallium Total	Dry	Dry (NS)	Dry	Dry	Dry		
Zinc Total					Dry		
Sulfate				Dry			
TDS					Dry		
Chlorine (Total)			Dry	Dry	Dry	Dry	Dry
Cyanide			Dry	Dry			Dry

1 – Pollutants associated with the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL were identified as applicable to Reach 1 of the LA River as the nearest downstream receiving water segment from the EWMP area.

2 – While pollutants may be contributing to the impairment, it currently is not possible to identify the specific pollutant/stressor.

Note that unless explicitly stated as sediment, constituents are associated with the water column.

I/F = Denotes where the Permit includes interim (I) and/or final (F) effluent and/or receiving water limitations.

NS = Not sampled

Dry/Wet = Weather condition was based on the designation provided by the sampling program. If no information was provided by the sampling program, flow records were reviewed and where flow was greater than 500 cubic feet per second (cfs) identified in the LA River Metals TMDL as a wet weather event, the sample was identified as a wet weather sample.

303 = WBPC on the 2010 303(d) List where the listing was confirmed during data analysis.

Delist = WBPC on the 2010 303(d) List that meets the delisting requirements.

**Table 4. Summary of Upper Los Angeles River WMA Water Body-Pollutant Categories for LA River Reaches 1-4 Tributaries**

Constituents	Compton Creek	Rio Hondo			Arroyo Seco	Verdugo Wash	Burbank Western Channel	Tujunga Wash
		1	2	3				
<b>Category 1A:</b> WBPCs with past due or current Permit term TMDL deadlines <u>with exceedances</u> in the past 5 years.								
Copper Dissolved		I (Dry)					I (Dry)	I (Dry)
Copper Total	I (Dry)	I (Dry)				I (Wet) NS	I (Dry)	I (Dry)
Lead Dissolved		I (Dry)			I (Wet/Dry)			
Lead Total	I (Dry)	I (Dry)						I (Dry)
Zinc Total		I (Dry)						
Ammonia as N								F (Dry)
Nitrate as N							F (Dry)	
Nitrite as N					F (Dry)		F (Dry)	
Trash	I/F	I/F	I/F		I/F	I/F	I/F	I/F
<b>Category 1B:</b> WBPCs with TMDL deadlines beyond the Permit term <u>with exceedances</u> in the past 5 years.								
<i>E. Coli</i>	I/F (Wet/Dry)	I/F (Wet/Dry)	I/F (Wet/Dry)	I/F (Wet/Dry)	I/F (Wet/Dry)	I/F (Wet/Dry)	I/F (Wet/Dry)	I/F (Wet/Dry)
Copper Dissolved		F (Dry)					F (Dry)	F (Dry)
Copper Total	F (Dry)	F (Dry)				F (Wet) NS	F (Dry)	F (Dry)
Lead Dissolved		F (Dry)			F (Wet/Dry)			
Lead Total	F (Dry)	F (Dry)						F (Dry)
Zinc Dissolved								
Zinc Total		F (Dry)						
<b>Category 1C:</b> WBPCs addressed in USEPA TMDL without a Regional Board Adopted Implementation Plan. (WLA = Waste Load Allocation in USEPA TMDL)								
None								
<b>Category 1D:</b> WBPCs with past due or current Permit term TMDL deadlines <u>but have not exceeded</u> in past 5 years.								
Cadmium Total	I (Wet NS)	I (Wet NS)	I (Wet NS)		I (Wet NS)	I (Wet NS)	I (Wet NS)	I (Wet NS)
Copper Dissolved	I (Dry/Wet NS)	I (Wet NS)	I (NS)		I (Wet/Dry)	I (Wet)/(Dry NS)	I (Wet NS)	I (Wet NS)
Copper Total	I (Wet NS)	I (Wet NS)	I (NS)		I (Wet/Dry)	I (Dry NS)	I (Wet NS)	I (Wet NS)
Lead Dissolved	I (Dry/Wet NS)	I (Wet NS)	I (NS)			I (Wet/Dry NS)	I (Dry/Wet NS)	I (Dry)/Wet NS)

Constituents	Compton Creek	Rio Hondo			Arroyo Seco	Verdugo Wash	Burbank Western Channel	Tujunga Wash
		1	2	3				
Lead Total	I (Wet NS)	I (Wet NS)	I (NS)		I (Wet/Dry)	I (Wet/Dry NS)	I (Dry/Wet NS)	I (Wet NS)
Zinc Dissolved	I (Wet NS)	I (Dry/Wet NS)	I (Wet NS)		I (Wet)	I (Wet)	I (Wet NS)	I (Wet NS)
Zinc Total	I (Wet NS)	I (Wet NS)	I (Wet NS)		I (Wet)	I (Wet)	I (Wet NS)	I (Wet NS)
Ammonia as N	F (Dry/Wet NS)	F (Dry/Wet NS)	F (NS)		F (Dry/Wet NS)	F (NS)	F (NS)	F (Wet NS)
Nitrate as N	F	F	F (NS)		F	F (NS)	F (Wet)	F
Nitrite as N	F	F	F (NS)		F (Wet NS)	F (NS)	F (Wet)	F
Nitrogen (NO3-N+NO2-N)	F	F	F (NS)		F	F (NS)	F	F
<b>Category 2A:</b> 303(d) Listed WBPCs or WBPCs that meet 303(d) Listing requirements with exceedances in the past 5 years.								
2,3,7,8-TCDD (Dioxin)							Dry	
Bis(2-ethylhexyl)Phthalate							Dry	
Chlorodibromomethane							Dry	
Chloride								Dry
Copper Total				Dry				
Cyanide			303 Dry (NS)					
<b>Category 2B:</b> 303(d) Listed WBPCs or WBPCs that meet 303(d) Listing requirements that are not a “pollutant” <sup>1</sup> (i.e., toxicity) with exceedances in the past 5 years.								
Benthic-Macroinvertebrates	303				303			
Dissolved Oxygen				Dry				
pH				Dry				
<b>Category 2C:</b> 303(d) Listed WBPCs or WBPCs that meet 303(d) Listing requirements but have not exceeded in past 5 years.								
Bis(2-ethylhexyl)Phthalate			Dry /Wet (NS)		Wet (NS)	Dry/Wet (NS)	Wet (NS)	
Selenium Total							Delist	
Chlorine (Total)							Wet	
Cyanide							Delist	
<b>Category 3A:</b> All other WBPCs with exceedances in the past 5 years.								
Benzo(a)Pyrene				Dry			Dry	
Benzo(b)Fluoranthene							Dry	
Benzo(k)Fluoranthene				Dry				

Constituents	Compton Creek	Rio Hondo			Arroyo Seco	Verdugo Wash	Burbank Western Channel	Tujunga Wash
		1	2	3				
Chrysene				Dry				
Diazinon				Dry				
Dibenzo(a,h)Anthracene				Dry				
Indeno(1,2,3-cd)Pyrene				Dry				
Chlorpyrifos	Dry							
Mercury Total							Dry	
Zinc Total								Dry
Chloride	Dry						Dry	
TDS							Dry	Dry
Chlorine (Total)							Dry	
<b>Category 3B:</b> All other WBPCs that are not a “pollutant” <sup>1</sup> (i.e., toxicity) with exceedances in the past 5 years.								
pH			Dry (NS)/Wet (NS)				Dry/Wet (NS)	
<b>Category 3C:</b> All other WBPCs that have exceeded in the past 10 years, but not in past 5 years.								
beta-BHC							Dry	
Bis(2-ethylhexyl)Phthalate					Dry (NS)			
Diazinon			Wet (NS)					
Heptachlor							Dry	
Cadmium Total							Dry	Dry
Copper Dissolved			Dry (NS)					
Copper Total			Dry (NS)					
Lead Total			Dry (NS)					
Mercury Total	Dry/Wet (NS)			Dry	Wet (NS)	Wet (NS)	Wet (NS)	Dry
Thallium Total							Dry	
Zinc Total						Dry (NS)	Dry	
Chloride				Dry				

1 – While pollutants may be contributing to the impairment, it currently is not possible to identify the specific pollutant/stressor.

I/F = Denotes where the Permit includes interim (I) and/or final (F) effluent and/or receiving water limitations.

NS = Not sampled

Dry/Wet = Weather condition was based on the designation provided by the sampling program. If no information was provided by the sampling program, flow records were reviewed and where flow was greater than 500 cubic feet per second (cfs) identified in the LA River Metals TMDL as a wet weather event, the sample was identified as a wet weather sample.

303 = WBPC on the 2010 303(d) List where the listing was confirmed during data analysis.

Delist = WBPC on the 2010 303(d) List that meets the delisting requirements.

**Table 5. Summary of Upper Los Angeles River WMA Water Body-Pollutant Categories for LA River Reaches 5 and 6 Tributaries**

Constituents	Bell Creek	Bull Creek	Caballero Creek	Aliso Canyon Wash	McCoy Canyon	Dry Canyon
<b>Category 1A:</b> WBPCs with past due or current Permit term TMDL deadlines with exceedances in the past 5 years.						
Trash	I/F	I/F	I/F	I/F	I/F	I/F
<b>Category 1B:</b> WBPCs with TMDL deadlines beyond the Permit term with exceedances in the past 5 years.						
<i>E. Coli</i>	I/F (Wet/Dry)	I/F (Wet/Dry)	I/F (Wet/Dry)	I/F (Wet/Dry)	I/F (Wet/Dry)	I/F (Wet/Dry)
<b>Category 1C:</b> WBPCs addressed in USEPA TMDL without a Regional Board Adopted Implementation Plan. (WLA = Waste Load Allocation in USEPA TMDL)						
None						
<b>Category 1D:</b> WBPCs with past due or current Permit term TMDL deadlines but have not exceeded in past 5 years.						
Cadmium Total	I (Wet NS)	I (Wet NS)	I (Wet NS)	I (Wet NS)	I (Wet NS)	I (Wet NS)
Copper Dissolved	I (NS)	I (Dry/Wet NS)	I (NS)	I (Dry)/(Wet NS)	I (NS)	I (NS)
Copper Total	I (NS)	I (Dry/Wet NS)	I (NS)	I (Dry)/(Wet NS)	I (NS)	I (NS)
Lead Dissolved	I (NS)	I (Dry/Wet NS)	I (NS)	I (Dry/Wet NS)	I (NS)	I (NS)
Lead Total	I (NS)	I (Dry/Wet NS)	I (NS)	I (Dry/Wet NS)	I (NS)	I (NS)
Zinc Dissolved	I (Wet NS)	I (Dry/Wet NS)	I (Wet NS)	I (Wet NS)	I (Wet NS)	I (Wet NS)
Zinc Total	I (Wet NS)	I (Dry)/(Wet NS)	I (Wet NS)	I (Wet NS)	I (Wet NS)	I (Wet NS)
Ammonia as N	F (NS)	F (Dry/Wet NS)	F (NS)	F (Dry/Wet NS)	F (NS)	F (NS)
Nitrate as N	F (NS)	F	F (NS)	F	F (NS)	F (NS)
Nitrite as N	F (NS)	F	F (NS)	F	F (NS)	F (NS)
Nitrogen (NO3-N+NO2-N)	F (NS)	F	F (NS)	F	F (NS)	F (NS)
<b>Category 2A:</b> 303(d) Listed WBPCs or WBPCs that meet 303(d) Listing requirements with exceedances in the past 5 years.						
None						
<b>Category 2B:</b> 303(d) Listed WBPCs or WBPCs that meet 303(d) Listing requirements that are not a “pollutant” <sup>1</sup> (i.e., toxicity) with exceedances in the past 5 years.						
None						
<b>Category 2C:</b> 303(d) Listed WBPCs or WBPCs that meet 303(d) Listing requirements but have not exceeded in past 5 years.						
Bis(2-ethylhexyl)Phthalate		Dry (NS)/Wet		Dry (NS)/Wet		
Selenium Total			Dry (NS)	Dry		
<b>Category 3A:</b> All other WBPCs with exceedances in the past 5 years.						
Sulfate				Dry		
TDS				Dry		

Constituents	Bell Creek	Bull Creek	Caballero Creek	Aliso Canyon Wash	McCoy Canyon	Dry Canyon
<b>Category 3B:</b> All other WBPCs that are not a “pollutant” <sup>1</sup> (i.e., toxicity) with exceedances in the past 5 years.						
None						
<b>Category 3C:</b> All other WBPCs that have exceeded in the past 10 years, but not in past 5 years.						
Diazinon				Wet (NS)		
Cadmium Total			Dry (NS)			
Copper Total			Dry (NS)			
Lead Total			Dry (NS)			
Mercury Total			Dry (NS)			
Nickel Total			Dry (NS)			
Zinc Total			Dry (NS)			
Cyanide		Wet (NS)		Wet (NS)		

1 – While pollutants may be contributing to the impairment, it currently is not possible to identify the specific pollutant/stressor.

I/F = Denotes where the Permit includes interim (I) and/or final (F) effluent and/or receiving water limitations.

NS = Not sampled

Dry/Wet = Weather condition was based on the designation provided by the sampling program. If no information was provided by the sampling program, flow records were reviewed and where flow was greater than 500 cubic feet per second (cfs) identified in the LA River Metals TMDL as a wet weather event, the sample was identified as a wet weather sample.

303 = WBPC on the 2010 303(d) List where the listing was confirmed during data analysis.

Delist = WBPC on the 2010 303(d) List that meets the delisting requirements.



**Table 6. Summary of Upper Los Angeles River WMA Water Body-Pollutant Categories Associated with Lakes**

Constituent	Lake		
	Legg	Calabasas	Echo Park
<b>Category 1A:</b> WBPCs with past due or current Permit term TMDL deadlines with exceedances in the past 5 years.			
Trash	I/F	--	--
<b>Category 1C:</b> WBPCs addressed in USEPA TMDL without a Regional Board Adopted Implementation Plan.			
Total-P	X	X	X
Total-N	X	X	X
Trash	--	--	X
PCBs (water and sediment)	--	--	X
Chlordane (water and sediment)	--	--	X
Dieldrin (water and sediment)	--	--	X

I/F – Denotes where the Permit includes interim (I) and/or final (F) limitations.  
 Note that unless explicitly stated as sediment, constituents are associated with the water column.

**Table 7. Aliso Canyon Wash – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
Bis(2-ethylhexyl)Phthalate	Dry	µg/L	5.9	CTR HH Organism
	Wet	µg/L	5.9	CTR HH Organism
Cyanide	Dry	µg/L	5.2	CTR Chronic
	Wet	µg/L	22	CTR Acute
Diazinon	Dry	µg/L	0.17	USEPA Chronic
	Wet	µg/L	0.17	USEPA Acute
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
	Wet	MPN/100mL	126	BP REC1 30-Day
Selenium Total	Dry	µg/L	5	CTR Chronic
	Wet	µg/L	NA	NA
Sulfate	Dry	mg/L	300	BP SSO
	Wet	mg/L	300	BP SSO
TDS	Dry	mg/L	950	BP SSO
	Wet	mg/L	950	BP SSO
Zinc Dissolved	Dry	µg/L	HBC	CTR Chronic
Zinc Total	Dry	µg/L	HBC	CTR Chronic

CTR – California Toxics Rule

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

SSO – Site Specific Objective

**Table 8. Arroyo Seco – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
Benthic-Macroinvertebrates	All	--	1	BP Narrative Objective for Toxicity
Bis(2-ethylhexyl)Phthalate	Dry	µg/L	5.9	CTR HH Organism
	Wet	µg/L	5.9	CTR HH Organism
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
	Wet	MPN/100mL	126	BP REC1 30-Day
Mercury Total	Dry	µg/L	0.051	CTR HH Organism
	Wet	µg/L	0.051	CTR HH Organism
Zinc Total	Dry	µg/L	HBC	CTR Chronic

1. Arroyo Seco Reach 1 is listed as impaired for Benthic-Macroinvertebrate Bioassessments. State Water Resources Control Board (SWRCB) staff concluded that the water quality chemistry and bioassessment data provide a substantial basis that benthic macroinvertebrate populations are impacted by a wide range of anthropogenic stressors. Based on the available data and information, SWRCB staff recommended to list for benthic macroinvertebrate-bioassessment.

CTR – California Toxics Rule

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

**Table 9. Bull Creek – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
Bis(2-ethylhexyl)Phthalate	Dry	µg/L	5.9	CTR HH Organism
	Wet	µg/L	5.9	CTR HH Organism
Cadmium Total	Dry	µg/L	HBC	CTR Chronic
Cyanide	Dry	µg/L	5.2	CTR Chronic
	Wet	µg/L	22	CTR Acute
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
	Wet	MPN/100mL	126	BP REC1 30-Day
Zinc Total	Dry	µg/L	HBC	CTR Chronic

CTR – California Toxics Rule

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

**Table 10. Burbank Western Channel – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
2,3,7,8-TCDD (Dioxin)	Dry	pg/L	0.014	CTR HH Organism
	Wet	NS	0.014	CTR HH Organism
Benzo(a)Pyrene	Dry	µg/L	0.049	CTR HH Organism
	Wet	µg/L	0.049	CTR HH Organism
Benzo(b)Fluoranthene	Dry	µg/L	0.049	CTR HH Organism
	Wet	NS	0.049	CTR HH Organism
beta-BHC	Dry	µg/L	0.046	CTR HH Organism
	Wet	µg/L	0.046	CTR HH Organism
Bis(2-ethylhexyl)Phthalate	Dry	µg/L	5.9	CTR HH Organism
	Wet	µg/L	5.9	CTR HH Organism
Cadmium Total	Dry	µg/L	HBC	CTR Chronic
Chloride	Dry	mg/L	190	BP SSO
	Wet	mg/L	190	BP SSO
Chlorine (Total)	Dry	µg/L	100	BP Aquatic Life Objective
	Wet	µg/L	100	BP Aquatic Life Objective
Chlorodibromomethane	Dry	µg/L	34	CTR HH Organism
	Wet	NS	34	CTR HH Organism

Constituent	W/D	Units	RWL	RWL Source
Cyanide	Dry	µg/L	5.2	CTR Chronic
	Wet	µg/L	22	CTR Acute
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
	Wet	MPN/100mL	126	BP REC1 30-Day
Heptachlor	Dry	µg/L	0.00021	CTR HH Organism
	Wet	µg/L	0.52	CTR HH Acute
Mercury Total	Dry	µg/L	0.051	CTR HH Organism
	Wet	µg/L	0.051	CTR HH Organism
pH	Dry	pH Units	6.5	BP Minimum
	Wet	pH Units	6.5	BP Minimum
Selenium Total	Dry	µg/L	5	CTR Chronic
	Wet	µg/L	NA	NA
TDS	Dry	mg/L	950	BP SSO
	Wet	mg/L	950	BP SSO
Thallium Total	Dry	µg/L	6.3	CTR HH Organism
	Wet	µg/L	6.3	CTR HH Organism
Zinc Dissolved	Dry	µg/L	HBC	CTR Chronic
Zinc Total	Dry	µg/L	HBC	CTR Chronic

CTR – California Toxics Rule

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

SSO – Site Specific Objective

**Table 11. Caballero Creek – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
Cadmium Total	Dry	µg/L	HBC	CTR Chronic
Copper Dissolved	Dry	µg/L	HBC	CTR Chronic
Copper Total	Dry	µg/L	HBC	CTR Chronic
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
	Wet	MPN/100mL	126	BP REC1 30-Day
Lead Total	Dry	µg/L	HBC	CTR Chronic
Mercury Total	Dry	µg/L	0.051	CTR HH Organism
	Wet	µg/L	0.051	CTR HH Organism
Nickel Total	Dry	µg/L	HBC	CTR Chronic
	Wet	µg/L	HBC	CTR Acute
Selenium Total	Dry	µg/L	5	CTR Chronic

Constituent	W/D	Units	RWL	RWL Source
	Wet	µg/L	NA	NA
Zinc Total	Dry	µg/L	HBC	CTR Chronic

CTR – California Toxics Rule

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

**Table 12. Compton Creek – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
Benthic-Macroinvertebrates	All	--	<sup>1</sup>	BP Narrative Objective for Toxicity
Chloride	Dry	mg/L	150	BP SSO
	Wet	NS	150	BP SSO
Chlorpyrifos	Dry	µg/L	0.041	USEPA Chronic
	Wet	NS	0.083	USEPA Acute
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
	Wet	MPN/100mL	126	BP REC1 30-Day
Mercury Total	Dry	µg/L	0.051	CTR HH Organism
	Wet	µg/L	0.051	CTR HH Organism
Zinc Dissolved	Dry	µg/L	HBC	CTR Chronic
Zinc Total	Dry	µg/L	HBC	CTR Chronic

1. Compton Creek is listed as impaired for Benthic-Macroinvertebrate Bioassessments. SWRCB staff concluded that the water quality chemistry and bioassessment data provide a substantial basis that benthic macroinvertebrate populations are impacted by a wide range of anthropogenic stressors. Based on the available data and information, SWRCB staff recommended to list for benthic macroinvertebrate-bioassessment.

CTR – California Toxics Rule

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

SSO – Site Specific Objective

**Table 13. LA River – Reach 1 – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
Bis(2-ethylhexyl)Phthalate	Dry	µg/L	5.9	CTR HH Organism
	Wet	µg/L	5.9	CTR HH Organism
Cadmium Total	Dry	µg/L	HBC	CTR Chronic
Cyanide	Dry	µg/L	5.2	CTR Chronic
	Wet	µg/L	22	CTR Acute
Diazinon	Dry	µg/L	0.17	USEPA Chronic

Constituent	W/D	Units	RWL	RWL Source
	Wet	µg/L	0.17	USEPA Acute
Dissolved Oxygen	Dry	mg/L	5	BP Minimum
	Wet	mg/L	5	BP Minimum
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
	Wet	MPN/100mL	126	BP REC1 30-Day
Mercury Total	Dry	µg/L	0.051	CTR HH Organism
	Wet	µg/L	0.051	CTR HH Organism
pH	Dry	pH Units	8.5	BP Maximum
	Wet	pH Units	8.5	BP Maximum
Selenium Total	Dry	µg/L	5	CTR Chronic
	Wet	µg/L	NA	NA
Thallium Total	Dry	µg/L	6.3	CTR HH Organism
	Wet	µg/L	6.3	CTR HH Organism
Zinc Dissolved	Dry	µg/L	HBC	CTR Chronic
Zinc Total	Dry	µg/L	HBC	CTR Chronic

CTR – California Toxics Rule

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

**Table 14. LA River – Reach 2 – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
Cadmium Total	Dry	µg/L	HBC	CTR Chronic
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
	Wet	MPN/100mL	126	BP REC1 30-Day
Mercury Total	Dry	µg/L	0.051	CTR HH Organism
	Wet	µg/L	0.051	CTR HH Organism
Oil	All	--	<sup>1</sup>	Unspecified
pH	Dry	pH Units	8.5	BP Maximum
	Wet	pH Units	8.5	BP Maximum
Thallium Total	Dry	µg/L	6.3	CTR HH Organism
	Wet	µg/L	6.3	CTR HH Organism
Zinc Dissolved	Dry	µg/L	HBC	CTR Chronic
Zinc Total	Dry	µg/L	HBC	CTR Chronic

1. Los Angeles River Reach 2 is listed as impaired for oil. This listing decision was made prior to 2006. 303(d) listing decisions made prior to 2006 were not held in an assessment database. The Regional Board will update this decision when new data and information become available and are assessed.

CTR – California Toxics Rule

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

**Table 15. LA River – Reach 3, Above LAG – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
2,3,7,8-TCDD (Dioxin)	Dry	pg/L	0.014	CTR HH Organism
	Wet	pg/L	0.014	CTR HH Organism
Ammonia as N	Dry	mg/L	<sup>1</sup>	BP 30-Day Average
	Wet	mg/L	<sup>1</sup>	BP 30-Day Average
Bis(2-ethylhexyl)Phthalate	Dry	µg/L	5.9	CTR HH Organism
	Wet	µg/L	5.9	CTR HH Organism
Chlorine (Total)	Dry	µg/L	100	BP Aquatic Life Objective
	Wet	µg/L	100	BP Aquatic Life Objective
Cyanide	Dry	µg/L	5.2	CTR Chronic
	Wet	µg/L	22	CTR Acute
Dibenzo(a,h)Anthracene	Dry	µg/L	0.049	CTR HH Organism
	Wet	µg/L	0.049	CTR HH Organism
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 Geo
	Wet	MPN/100mL	126	BP REC1 30-Day
Indeno(1,2,3-cd)Pyrene	Dry	µg/L	0.049	CTR HH Organism
	Wet	µg/L	0.049	CTR HH Organism
Mercury Total	Dry	µg/L	0.051	CTR HH Organism
	Wet	µg/L	0.051	CTR HH Organism
Nickel Total	Dry	µg/L	HBC	CTR Chronic
	Wet	µg/L	HBC	CTR Acute
pH	Dry	pH Units	6.5	BP Minimum
	Wet	pH Units	6.5	BP Minimum
Selenium Total	Dry	µg/L	5	CTR Chronic
	Wet	µg/L	NA	NA
Sulfate	Dry	mg/L	300	BP SSO
	Wet	mg/L	300	BP SSO
Thallium Total	Dry	µg/L	6.3	CTR HH Organism
	Wet	µg/L	6.3	CTR HH Organism
Zinc Dissolved	Dry	µg/L	HBC	CTR Chronic
Zinc Total	Dry	µg/L	HBC	CTR Chronic

1. The 30-day chronic-criterion objective is pH and temperature dependent.

CTR – California Toxics Rule

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

SSO – Site Specific Objective

**Table 16. LA River – Reach 3, Below LAG – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
2,3,7,8-TCDD (Dioxin)	Dry	pg/L	0.014	CTR HH Organism
	Wet	pg/L	0.014	CTR HH Organism
Ammonia as N	Dry	mg/L	<sup>1</sup>	BP 30-Day Average
	Wet	mg/L	<sup>1</sup>	BP 30-Day Average
Benzo(a)Anthracene	Dry	µg/L	0.049	CTR HH Organism
	Wet	µg/L	0.049	CTR HH Organism
Bis(2-ethylhexyl)Phthalate	Dry	µg/L	5.9	CTR HH Organism
	Wet	µg/L	5.9	CTR HH Organism
Cadmium Total	Dry	µg/L	HBC	CTR Chronic
Chlorine (Total)	Dry	µg/L	100	BP Aquatic Life Objective
	Wet	µg/L	100	BP Aquatic Life Objective
Chrysene	Dry	µg/L	0.049	CTR HH Organism
	Wet	µg/L	0.049	CTR HH Organism
Cyanide	Dry	µg/L	5.2	CTR Chronic
	Wet	µg/L	22	CTR Acute
Dibenzo(a,h)Anthracene	Dry	µg/L	0.049	CTR HH Organism
	Wet	µg/L	0.049	CTR HH Organism
Dichlorobromomethane	Dry	µg/L	46	CTR HH Organism
	Wet	µg/L	46	CTR HH Organism
Dissolved Oxygen	Dry	mg/L	5	BP Minimum
	Wet	mg/L	5	BP Minimum
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
	Wet	MPN/100mL	126	BP REC1 30-Day
Indeno(1,2,3-cd)Pyrene	Dry	µg/L	0.049	CTR HH Organism
	Wet	µg/L	0.049	CTR HH Organism
Mercury Total	Dry	µg/L	0.051	CTR HH Organism
	Wet	µg/l	0.051	CTR HH Organism
pH	Dry	pH Units	6.5	BP Minimum
	Wet	pH Units	6.5	BP Minimum
Thallium Total	Dry	µg/L	6.3	CTR HH Organism
	Wet	µg/L	6.3	CTR HH Organism



Constituent	W/D	Units	RWL	RWL Source
Zinc Dissolved	Dry	µg/L	HBC	CTR Chronic
Zinc Total	Dry	µg/L	HBC	CTR Chronic

1. The 30-day chronic-criterion objective is pH and temperature dependent.

CTR – California Toxics Rule

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

**Table 17. LA River Reach 4 – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
Ammonia as N	Dry	mg/L	<sup>1</sup>	BP 30-Day Average
	Wet	mg/L	<sup>1</sup>	BP 30-Day Average
Cadmium Total	Dry	µg/L	HBC	CTR Chronic
Chlorine (Total)	Dry	µg/L	100	BP Aquatic Life Objective
	Wet	µg/L	100	BP Aquatic Life Objective
Chrysene	Dry	µg/L	0.049	CTR HH Organism
	Wet	NS	0.049	CTR HH Organism
Cyanide	Dry	µg/L	5.2	CTR Chronic
	Wet	NS	NS	CTR Acute
Diazinon	Dry	µg/L	0.17	CTR Chronic
	Wet	NS	0.17	USEPA Acute
Dissolved Oxygen	Dry	mg/L	5	BP Minimum
	Wet	mg/L	5	BP Minimum
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
	Wet	MPN/100mL	126	BP REC1 30-Day
Mercury Total	Dry	µg/L	0.051	CTR HH Organism
	Wet	µg/L	0.051	CTR HH Organism
Selenium Total	Dry	µg/L	5	CTR Chronic
	Wet	µg/L	NA	NA
Sulfate	Dry	mg/L	300	BP SSO
	Wet	mg/L	300	BP SSO
TDS	Dry	mg/L	950	BP SSO
	Wet	NS	950	BP SSO
Thallium Total	Dry	µg/L	6.3	CTR HH Organism
	Wet	µg/L	6.3	CTR HH Organism
Zinc Dissolved	Dry	µg/L	HBC	CTR Chronic
Zinc Total	Dry	µg/L	HBC	CTR Chronic

1. The 30-day chronic-criterion objective is pH and temperature dependent.

CTR – California Toxics Rule

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

SSO – Site Specific Objective

**Table 18. LA River Reach 5 – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
4,4-DDD	Dry	µg/L	0.00084	CTR HH Organism
	Wet	µg/L	0.00084	CTR HH Organism
4,4-DDE	Dry	µg/L	0.00059	CTR HH Organism
	Wet	µg/L	0.00059	CTR HH Organism
Ammonia as N	Dry	mg/L	<sup>1</sup>	BP 30-Day Average
	Wet	mg/L	<sup>1</sup>	BP 30-Day Average
Bis(2-ethylhexyl)Phthalate	Dry	µg/L	5.9	CTR HH Organism
	Wet	µg/L	5.9	CTR HH Organism
Cadmium Total	Dry	µg/L	HBC	CTR Chronic
Chloride	Dry	mg/L	150	BP SSO LAR and tributaries, upstream SFCB
Chlorine (Total)	Dry	µg/L	100	BP Aquatic Life Objective
	Wet	µg/L	100	BP Aquatic Life Objective
Cyanide	Dry	µg/L	5.2	CTR Chronic
	Wet	NS	22	CTR Acute
Diazinon	Dry	µg/L	0.17	USEPA Chronic
	Wet	µg/L	0.17	USEPA Acute
Dibenzo(a,h)Anthracene	Dry	µg/L	0.049	CTR HH Organism
	Wet	µg/L	0.049	CTR HH Organism
Dissolved Oxygen	Dry	mg/L	5	BP Minimum
	Wet	mg/L	5	BP Minimum
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
	Wet	MPN/100mL	126	BP REC1 30-Day
Heptachlor	Dry	µg/L	0.00021	CTR HH Organism
	Wet	µg/L	0.52	CTR HH Acute
Indeno(1,2,3-cd)Pyrene	Dry	µg/L	0.049	CTR HH Organism
	Wet	µg/L	0.049	CTR HH Organism
Mercury Total	Dry	µg/L	0.051	CTR HH Organism
Nickel Total	Dry	µg/L	HBC	CTR Chronic
Oil	All	--	<sup>2</sup>	Unspecified
pH	Dry	pH Units	6.5	BP Minimum

Constituent	W/D	Units	RWL	RWL Source
	Wet	pH Units	6.5	BP Minimum
Selenium Total	Dry	µg/L	5	CTR Chronic
Sulfate	Dry	mg/L	300	BP SSO
	Wet	mg/L	300	BP SSO
TDS	Dry	mg/L	950	BP SSO
	Wet	mg/L	950	BP SSO

1. The 30-day chronic-criterion objective is pH and temperature dependent.

2. Los Angeles River Reach 5 is listed as impaired for oil. This listing decision was made prior to 2006. 303(d) listing decisions made prior to 2006 were not held in an assessment database. The Regional Board will update this decision when new data and information become available and are assessed.

CTR – California Toxics Rule

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

SSO – Site Specific Objective

**Table 19. LA River – Reach 6 – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
2,3,7,8-TCDD (Dioxin)	Dry	pg/L	0.014	CTR HH Organism
	Wet	pg/L	0.014	CTR HH Organism
Cadmium Total	Dry	µg/L	HBC	CTR Chronic
Chloride	Dry	mg/L	150	BP SSO
	Wet	mg/L	150	BP SSO
Chlorine (Total)	Dry	µg/L	100	BP Objective
	Wet	µg/L	100	BP Objective
Chrysene	Dry	µg/L	0.049	CTR HH Organism
	Wet	NS	0.049	CTR HH Organism
Cyanide	Dry	µg/L	5.2	CTR Chronic
	Wet	NS	22	CTR Acute
Dissolved Oxygen	Dry	mg/L	5	BP Minimum
	Wet	mg/L	5	BP Minimum
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
	Wet	MPN/100mL	126	BP REC1 30-Day
Mercury Total	Dry	µg/L	0.051	CTR HH Organism
	Wet	µg/L	0.051	CTR HH Organism
Selenium Total	Dry	µg/L	5	CTR Chronic
	Wet	µg/L	NA	NA
Sulfate	Dry	mg/L	300	BP SSO

Constituent	W/D	Units	RWL	RWL Source
TDS	Wet	mg/L	300	BP SSO
	Dry	mg/L	950	BP SSO
	Wet	NS	950	BP SSO
Thallium Total	Dry	µg/L	6.3	CTR HH Organism
	Wet	µg/L	6.3	CTR HH Organism
Zinc Dissolved	Dry	µg/L	HBC	CTR Chronic
Zinc Total	Dry	µg/L	HBC	CTR Chronic

CTR – California Toxics Rule

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

SSO – Site Specific Objective

**Table 20. Rio Hondo – Reach 1 – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
	Wet	MPN/100mL	126	BP REC1 30-Day

BP – Basin Plan

**Table 21. Rio Hondo – Reach 2 – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
Bis(2-ethylhexyl)Phthalate	Dry	µg/L	5.9	CTR HH Organism
	Wet	µg/L	5.9	CTR HH Organism
Copper Dissolved	Dry	µg/L	HBC	CTR Chronic
Copper Total	Dry	µg/L	HBC	CTR Chronic
Cyanide	Dry	µg/L	5.2	CTR Aquatic Life Chronic
	Wet	µg/L	22	CTR Aquatic Life Acute
Diazinon	Dry	µg/L	0.17	USEPA Chronic
	Wet	µg/L	0.17	USEPA Acute
Lead Total	Dry	µg/L	HBC	CTR Chronic
pH	Dry	pH Units	6.5	BP Minimum
	Wet	pH Units	6.5	BP Minimum
Zinc Total	Dry	µg/L	HBC	CTR Chronic

CTR – California Toxics Rule

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

**Table 22. Rio Hondo – Reach 3 – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
Benzo(a)Pyrene	Dry	µg/L	0.049	CTR HH Organism
Benzo(k)Fluoranthene	Dry	µg/L	0.049	CTR HH Organism
Chloride	Dry	mg/L	190	BP SSO
Chrysene	Dry	µg/L	0.049	CTR HH Organism
Copper Total	Dry	µg/L	HBC	CTR Chronic
Diazinon	Dry	µg/L	0.17	CTR Acute
Dibenzo(a,h)Anthracene	Dry	µg/L	0.049	CTR HH Organism
Dissolved Oxygen	Dry	mg/L	5	BP Minimum
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
Indeno(1,2,3-cd) Pyrene	Dry	µg/L	0.049	CTR HH Organism
Mercury	Dry	µg/L	0.051	CTR HH Organism
pH	Dry	pH Units	8.5	BP Maximum

CTR – California Toxics Rule

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

SSO – Site Specific Objective

**Table 23. Tujunga Wash – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
Cadmium Total	Dry	µg/L	HBC	CTR Chronic
Chloride	Dry	mg/L	150	BP SSO
	Wet	NS	150	BP SSO
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
	Wet	MPN/100mL	126	BP REC1 30-Day
Mercury Total	Dry	µg/L	0.051	CTR HH Organism
	Wet	µg/L	0.051	CTR HH Organism
TDS	Dry	mg/L	950	BP SSO
	Wet	NS	950	BP SSO
Zinc Total	Dry	µg/L	HBC	CTR Chronic

CTR – California Toxics Rule

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

SSO – Site Specific Objective

**Table 24. Verdugo Wash – Applicable RWLs for Each Identified Category 2 and 3 Pollutant**

Constituent	W/D	Units	RWL	RWL Source
Bis(2-ethylhexyl)Phthalate	Dry	µg/L	5.9	CTR HH Organism
	Wet	µg/L	5.9	CTR HH Organism
Cadmium Total	Dry	µg/L	HBC	CTR Chronic
<i>E. Coli</i>	Dry	MPN/100mL	126	BP REC1 30-Day
	Wet	MPN/100mL	126	BP REC1 30-Day
Mercury Total	Dry	µg/L	0.051	CTR HH Organism
	Wet	µg/L	0.051	CTR HH Organism
Zinc Total	Dry	µg/L	HBC	CTR Chronic

CTR – California Toxics Rule

HBC - Hardness Based Criteria, as defined by CTR

BP – Basin Plan

## Source Assessment (Step 3)

Following classification of WPBCs into Category 1, 2 and 3, the next step in the prioritization process is to conduct a source assessment. The Permit requires that a source assessment be conducted to identify potential sources within the watershed for the WBPCs in Categories 1-3, utilizing existing information. The source assessment also evaluates whether pollutants likely originate from the MS4 versus other sources. Pollutant exceedances may come from point or non-point sources, described below. Often, however, non-point source discharges may flow through the MS4 and thus become associated with the MS4 and subject to the MS4 Permit requirements.

## Permit Requirements

The specific requirements in the Permit for the source assessment are as follows (per section VI.C.5.a.iii, page 59):

“(1) Permittees shall identify known and suspected storm water and non-storm water pollutant sources in discharges to the MS4 and from the MS4 to receiving waters and any other stressors related to MS4 discharges causing or contributing to the Water Quality Priorities. The identification of known and suspected sources of the highest Water Quality Priorities shall consider the following:

- (a) Review of available data, including but not limited to:
  - (i) Findings from the Permittees’ Illicit Connections and Illicit Discharge Elimination Programs;
  - (ii) Findings from the Permittees’ Industrial/Commercial Facilities Programs;
  - (iii) Findings from the Permittees’ Development Construction Programs;
  - (iv) Findings from the Permittees’ Public Agency Activities Programs;
  - (v) TMDL source investigations;

- (vi) Watershed model results;
- (vii) Findings from the Permittees' monitoring programs, including but not limited to TMDL compliance monitoring and receiving water monitoring; and
- (viii) Any other pertinent data, information, or studies related to pollutant sources and conditions that contribute to the highest Water Quality Priorities.

(b) Locations of the Permittees' MS4s, including, at a minimum, all MS4 major outfalls and major structural controls for storm water and non-storm water that discharge to receiving waters.

(c) Other known and suspected sources of pollutants in non-storm water or storm water discharges from the MS4 to receiving waters within the watershed."

The findings from items *VI.C.5.a.iii (1)(a)(i)-(vii)* and item *VI.C.5.a.iii (1)(c)* of the Permit that are pertinent to the Category 1, 2 and 3 pollutants identified in **Table 3**, **Table 4**, **Table 5**, and **Table 6** are summarized below.

Item *VI.C.5.a.iii (1)(b)* will be addressed by the CIMP, as it is included in the discussion of the MS4 database requirements of Part VII.A of Attachment D of the Permit (Monitoring and Reporting Program).

## Point sources

Point sources are discrete conveyances that can carry pollutants to surface waters. Discharges from point sources are regulated by both federal Clean Water Act National Pollutant Discharge Elimination System (NPDES) permits and California's Porter-Cologne Water Quality Control Act Waste Discharge Requirements (WDRs). Combined NPDES/WDR permits are issued for discharges to surface waters. Urban runoff in the ULAR WMA is regulated as a point source under two municipal stormwater NPDES permits that cover MS4 discharges – one for LA County and one for Caltrans.

There are many non-MS4 point sources in the watershed including municipal wastewater from publicly owned treatment works, stormwater from industrial facilities, non-process industrial wastewater, and other non-stormwater and non-wastewater discharges in the watershed including dewatering from construction projects, potable supply wells discharges, groundwater cleanup sites and landfills. The non-MS4 NPDES permits in the ULAR watershed include the general construction stormwater permits, general industrial stormwater permits, and general NPDES permits identified in **Table 25**. **Table 25** also includes the type and number of NPDES permits in the entire LAR watershed.

The three "other major industrial" NPDES discharges identified in **Table 25** include:

- Pacific Terminals, LLC, Dominguez Hills Tank Farm: Hydrostatic test water
- The Boeing Company, Santa Susana Field Lab: Stormwater mixed with industrial wastewater
- Metropolitan Transit Authority, Eastside Light Rail Transit Project: Treated wastewater from underground construction activities

In addition to these three major industrial discharges, NPDES permits identified in **Table 25** include stormwater and treated wastewater for petrochemical facilities, paper production, glass manufacturing, metal fabrication, and water treatment facilities.

The significance of these permitted discharges with respect to their potential contributions of pollutants to the watershed is a function of the volume of flow associated with their discharges and their water quality characteristics. The contributions of these discharges to dry weather runoff or wet weather runoff also varies. For example, discharges governed by General Construction and General Industrial stormwater permits can send contaminated wet weather runoff directly into the LA River and its tributaries, as well as into the MS4. However, during dry weather, their potential for pollutant contribution is expected to be fairly low. A broad assessment of the relative potential for pollutant contribution and runoff condition (wet weather or dry weather) of the discharges typically associated with each of the permit types is also provided in **Table 25**.



**Table 25. NPDES Permits in the Los Angeles River Watershed<sup>1</sup>**

Type of NPDES Permit	Number of Permits	Potential for Pollutant Contribution
Publicly Owned Treatment Works	6	High (dry weather)
Municipal Stormwater	3	High (wet/dry weather)
Industrial Stormwater	1,307	High (wet weather)
Construction Stormwater	204	High (wet weather)
Other Major Industrial NPDES Discharges	3	High (wet weather)
Minor NPDES Discharges	15	Medium (wet/dry weather)
General NPDES Permits:		
Construction and Project Dewatering	35	Medium (wet weather)
Petroleum Fuel Cleanup Sites	7	Medium (dry weather)
VOCs Cleanup Sites	6	Medium (dry weather)
Hydrostatic Test Water	8	Low (wet/dry weather)
Non-Process Wastewater	9	Medium (dry weather)
Potable Water	25	Low (wet/dry weather)
<b>Total</b>	<b>1,628</b>	

1 – The number of permits listed are from the entire LA River watershed. A subset of these apply to the ULAR watershed.

Source: LAR Metals TMDL, 2005

## Non-point sources

Pollutants from non-point sources are conveyed to surface waters in a diffuse manner, i.e., not directly from point source conveyances. However, when contaminants from such non-point sources reach the MS4 system, they often become regulated through the MS4 point source NPDES permits. Non-point sources in the ULAR watershed include:

- Onsite Wastewater Treatment Systems (OWTS, a.k.a. septic systems)
- Runoff from the National and State forests outside of the MS4s into the headwaters of many tributaries
- Sources that occur within the channels of the LA River and tributaries (“in-channel sources”) such as:
  - Groundwater discharges
  - Anthropogenic sources
  - Pet Waste
  - Sanitary sewer leaks/spills
  - Illicit/illegal discharges
  - Wildlife and birds
  - Suspension and/or regrowth of sediment-associated pollutants

## Pollutants, Source Assessment and MS4 Linkage

Based on the source assessment and pollutant linkages to the MS4, the Water Quality Priorities were generated as summarized in **Table 26**. A source assessment discussion of the potential sources of these Category 1, 2 and 3 pollutants identified for the ULAR watershed is provided in **Appendix 3.D**, and the potential linkage of the MS4 system as a significant contributor of these pollutants to the water quality exceedances is indicated in **Table 26**. Unless a pollutant is attributed to a non-MS4 source, such as a water reclamation plant, the EWMP will likely need to identify control measures to address the Water Quality Priorities.

If the findings of the source assessment indicate that there is likely a source other than the MS4 to which the water quality exceedances can be attributed, then the MS4 linkage is noted as “low”. Where TMDLs that have identified waste load allocations for the MS4 exist (Category 1 pollutants), the linkage is “high”. Where there is not a clear determination of positive or negative attribution to the MS4, the linkage is rated as “medium” and a conservative assumption of attribution has been assumed for the purposes of the EWMP.

**Table 26. Water Quality Priorities for ULAR WMA**

Category	Pollutant	Water Body	MS4 Linkage
Category 1	<i>E. Coli</i>	LAR Reaches 1 through 6	High
	Sediment DDTs, PCBs, PAHs	LAR Reach 1	High
	Cadmium, Copper, Lead, Zinc	LAR Reaches 1 through 6 and tributaries	High
	Sediment Copper, Lead, Zinc	LAR Reach 1	High
	Ammonia-N, Nitrate- N, Nitrite-N, Nitrate-N + Nitrite-N	LAR Reaches 1 through 6 and tributaries	Low
	Trash	LAR Reaches 1 through 6 and tributaries	High
Category 2	2,3,7,8-TCDD (Dioxin)	LAR Reach 3 (Below LAG) and Burbank Western Channel	Medium
	Bis(2-ethylhexyl)Phthalate	LAR Reach 1, Rio Hondo Reach 2, Arroyo Seco, Verdugo Wash, Burbank Western Channel, Bull Creek and Aliso Canyon Wash	Low
	Diazinon	LAR Reach 1 <sup>1</sup>	Medium
	Chlorodibromomethane	Burbank Western Channel	Low
	Mercury Total	LAR Reaches 1 through 4 and 6	Medium
	Selenium Total	LAR Reaches 5 and 6, Caballero Creek, Aliso Canyon Wash and Burbank Western Channel <sup>1</sup>	Low
	Thallium Total	LAR Reach 6	Low
	Benthic-Macroinvertebrates	Compton Creek and Arroyo Seco Reach 1	Medium
	Chlorine (Total)	Burbank Western Channel	Low
	Cyanide	LAR Reach 1, Rio Hondo River Reach 2 and Burbank Western Channel <sup>1</sup>	Medium
pH	LAR Reaches 1 and 2	Medium	

Category	Pollutant	Water Body	MS4 Linkage
	Sulfate, TDS	LAR Reaches 5 and 6	Low
	Chloride	LAR Reaches 5 and 6, Tujunga Wash	Low
	Oil <sup>1</sup>	LAR Reaches 2 and 5	Low
<b>Category 3</b>	2,3,7,8-TCDD (Dioxin)	LAR Reaches 3 and 6	High
	4,4'-DDD	LAR Reach 5	High
	Chlorpyrifos	Compton Creek	High
	Heptachlor	LAR Reaches 3 and 5	High
	Benzo(b)Fluoranthene	Burbank Western Channel	High
	beta-BHC	Burbank Western Channel	High
	Dibenzo(a,h)Anthracene	Burbank Western Channel	High
	Diazinon	LAR Reaches 4 and 5	Medium
	Dichlorobromomethane	LA River Reach 3 (below LA Glendale WRP)	Low
	Copper	Rio Hondo Reach 2 (Dissolved and Total) and Caballero Creek (Total)	High
	Lead Total	Rio Hondo Reach 2 and Caballero Creek	High
	Nickel Total	LAR Reaches 3 and 5, and Caballero Creek	High
	Selenium Total	LAR Reaches 3 and 4	Low
	Thallium Total	LAR Reaches 1 through 4, and Burbank Western Channel	Low
	Zinc Total	LAR Reach 1	High
	Chlorine (Total)	LAR Reaches 3 through 6, and Burbank Western Channel	Low
	Chloride	Compton Creek and Burbank Western Channel	Low
	Sulfate	LAR Reaches 3 and 4, and Aliso Canyon Wash	Low
	TDS	LAR Reach 4, Burbank Western Channel, Tujunga Wash and Aliso Canyon Wash	Low

1 – Could be delisted

## Prioritization (Step 4)

The Permit outlines a prioritization process that defines how pollutants in the various categories will be considered in scheduling. The factors to consider in the scheduling include the following based on the compliance approaches outlined in the Permit:

- Regional Board-adopted TMDLs with past due interim and/or final limits and those with interim and/or final limits within the Permit term (schedule according to TMDL schedule)

- Regional Board-adopted TMDLs with interim and/or final limits outside the Permit term (schedule according to TMDL schedule)
- Other receiving water exceedances.

USEPA TMDLs, 303(d) listings without a TMDL adopted, and other exceedances of RWLs do not contain milestones or an implementation schedule. As such, these Water Quality Priorities do not have a defined schedule for implementation. To address this issue for USEPA TMDLs, Part VI.E.3.c of the Permit (page 145) allows MS4 Permittees to propose a schedule in the EWMP. To address this issue for exceedances of RWLs associated with WBPCs not addressed through a TMDL (i.e., 303(d) listings and other exceedances of RWLs), Part VI.C.2.a of the Permit (page 49) specifies how interim numeric milestones and compliance schedules must be set for each WBPC based on its placement in one of the following groups that were developed as part of the EWMP:

- **Group 1:** Pollutants that are in the same class<sup>1</sup> as those addressed in a TMDL in the watershed and for which the water body is identified as impaired on the 303(d) List as of December 28, 2012;
- **Group 2:** Pollutants that are not in the same class as those addressed in a TMDL for the watershed, but for which the water body is identified as impaired on the 303(d) List as of December 28, 2012;
- **Group 3:** Pollutants for which there are exceedances of RWLs, but for which the water body is not identified as impaired on the 303(d) List as of December 28, 2012; or
- **USEPA TMDL:** Pollutants addressed by USEPA TMDL without an implementation plan/schedule.

As such, the process for setting numeric milestones and compliance schedules for the remaining water quality priorities is dependent upon whether or not the water body is identified as impaired on the 303(d) list as of December 28, 2012 and if the pollutants are considered to be in the same class as those pollutants addressed in a TMDL for the watershed. Based on the MS4 Permit Group 1 definition of class, two findings must be made to determine whether or not a pollutant is in the same class as a TMDL pollutant:

- The pollutant must have similar fate and transport mechanisms (e.g., sediment particle associated), and thus, can be addressed via the same types of control measures. These pollutants are in the same “BMP class” as other TMDL pollutants.
- The pollutant is in the same “scheduling class”, that is, it can be addressed within the same timeline already established in an existing TMDL. To be considered in the same scheduling class, the water quality priority must be present in a water body already being addressed by the TMDL

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<sup>1</sup> As defined in Part VI.C.2.a.i of the Permit (page 49), “Pollutants are considered in a similar class if they have similar fate and transport mechanisms, can be addressed via the same types of control measures, and within the same timeline already contemplated as part of the Watershed Management Program for the TMDL.” Due to the need to define the control measures and timelines for addressing the various pollutants per the permit requirements, “classes” are preliminary in nature and may be refined as part of EWMP development.

or upstream of a water body already being addressed by the TMDL and can be addressed on the same time frame as the TMDL pollutant.

To define whether or not a pollutant can be addressed within the same time frame as a TMDL pollutant, it is necessary to consider whether the reductions that will be achieved by the control measures implemented for the TMDL pollutant are expected to be sufficient to achieve the needed reductions for the other pollutants. The “limiting pollutant” analysis of the RAA (**Section 5**) was used to evaluate whether control measures implemented for the Regional Board adopted TMDLs will be sufficient to meet the RWLs for WBPCs that have both the same BMP and scheduling class as the pollutants addressed by each respective Regional Board adopted TMDL. If the limiting pollutant is a TMDL pollutant, then other pollutants in the same class would be expected to be achieved by the final compliance date of the TMDL for the limiting pollutant. If the limiting pollutant is *not* a TMDL pollutant, then the limiting pollutant, and all other pollutants that are more limiting than the TMDL pollutant, do not have the ability to be considered on the same timeframe as those addressed in a TMDL.

In order to be in the same class as a TMDL pollutant, the WBPC must be in both the same “BMP class” and the same “scheduling class” as the TMDL pollutant. An evaluation of whether or not the WBPCs are in the same class as pollutants addressed in an existing TMDL is presented in **Table 27**. All WBPCs classified as Category 1C, 2, and 3 are captured in **Table 27**; except for WBPCs for which the MS4 has been determined to not be a source that may be causing or contributing to observed exceedances or WBPCs are reflective of a condition of pollution (not necessarily a result of MS4 discharge). Additionally, given that Part VI.E.3.c of the Permit (page 145) specifies how interim numeric milestones and compliance schedules must be set for USEPA TMDL WBPCs, USEPA TMDL WBPCs are separately classified.

**Table 27. Initial Classification for 303(d) Listings and Other Exceedances of RWLs Applicable to the Group (RB = Regional Board)**

Constituent	Water Body	Category	Relevant RB TMDL	RB TMDL in Watershed with Same BMP Class <sup>1</sup> ?	RB TMDL in Watershed with Same Scheduling Class?	Classification
Cyanide	LAR Reach 1	2A	LAR Metals TMDL	Yes	Yes	Group 1
	Rio Hondo Reach 2	2A	LAR Metals TMDL	Yes	Yes	Group 1
	Burbank Western Channel	2C	LAR Metals TMDL	Yes	Yes	Group 1
Zinc <sup>2</sup>	LAR Reach 1	3A	LAR Metals TMDL	Yes	Yes	Group 1
Diazinon	LAR Reach 1	2C	Harbors Toxics TMDL	Yes	Yes	Group 1
Oil	LAR Reach 2	2C	None	<b>No</b>	<b>No</b>	Group 2
	LAR Reach 5	2C	None	<b>No</b>	<b>No</b>	Group 2
2,3,7,8-TCDD (Dioxin)	LAR Reach 3	2A (Dry)/ 3A (Wet)	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	LAR Reach 6	3C				
	Burbank Western Channel	2A				
Bis(2-ethylhexyl)Phthalate	LAR Reach 1	2A (Dry)/ 3A (Wet)	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	LAR Reach 3	3C				
	LAR Reach 5	3C				
	Rio Hondo Reach 2	2C				
	Arroyo Seco	3C (Dry)/ 2C (Wet)				
	Verdugo Wash	2C				
	Burbank Western Channel	2A (Dry)/ 2C (Wet)				
	Bull Creek	2C				
	Aliso Canyon Wash	2C				

Constituent	Water Body	Category	Relevant RB TMDL	RB TMDL in Watershed with Same BMP Class <sup>1</sup> ?	RB TMDL in Watershed with Same Scheduling Class?	Classification
Diazinon	LAR Reach 4	3A	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	LAR Reach 5	2A				
	Rio Hondo Reach 2	3C				
	Rio Hondo Reach 3	3A				
	Aliso Canyon Wash	3C				
Chloride	LAR Reach 5	2A	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	LAR Reach 6	2A				
	Compton Creek	3A				
	Rio Hondo Reach 3	3C				
	Burbank Western Channel	3A				
	Tujunga Wash	2A				
Sulfate	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	LAR Reach 4	3A				
	LAR Reach 5	2A				
	LAR Reach 6	2A				
	Aliso Canyon Wash	3A				
TDS	LAR Reach 4	3A	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	LAR Reach 5	2A				
	LAR Reach 6	2C				
	Burbank Western Channel	3A				
	Tujunga Wash	3A				
	Aliso Canyon Wash	3A				

Constituent	Water Body	Category	Relevant RB TMDL	RB TMDL in Watershed with Same BMP Class <sup>1</sup> ?	RB TMDL in Watershed with Same Scheduling Class?	Classification
Mercury Total	LAR Reach 1	2C (Dry)/ 3C (Wet)	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	LAR Reach 2	2C				
	LAR Reach 3	2C (Dry)/ 3C (Wet)				
	LAR Reach 4	2C				
	LAR Reach 5	3C				
	LAR Reach 6	2C (Dry)/ 3C (Wet)				
	Compton Creek	3C				
	Rio Hondo Reach 3	3C				
	Arroyo Seco	3C				
	Verdugo Wash	3C				
	Burbank Western Channel	3A (Dry)/ 3C (Wet)				
	Tujunga Wash	3C				
Caballero Creek	3C					
Thallium Total	LAR Reach 1	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	LAR Reach 2	3C				
	LAR Reach 3	3C				
	LAR Reach 4	3C				
	LAR Reach 6	2C				
	Burbank Western Channel	3C				



Constituent	Water Body	Category	Relevant RB TMDL	RB TMDL in Watershed with Same BMP Class <sup>1</sup> ?	RB TMDL in Watershed with Same Scheduling Class?	Classification
Dibenzo(a,h)Anthracene	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	LAR Reach 5	3A				
	Rio Hondo Reach 3	3A				
Indeno(1,2,3-cd)Pyrene	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	LAR Reach 5	3A				
	Rio Hondo Reach 3	3A				
4,4-DDD	LAR Reach 5	3A	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
4,4-DDE	LAR Reach 5	3A	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Nickel Total	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	LAR Reach 5	3A				
	Caballero Creek	3C				
Zinc <sup>2</sup>	LAR Reach 3	3A	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	LAR Reach 4	3C				
	Verdugo Wash	3C				
	Burbank Western Channel	3C				
	Tujunga Wash	3A				
	Caballero Creek	3C				

Constituent	Water Body	Category	Relevant RB TMDL	RB TMDL in Watershed with Same BMP Class <sup>1</sup> ?	RB TMDL in Watershed with Same Scheduling Class?	Classification
Cyanide	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	LAR Reach 4	3A				
	LAR Reach 5	3A				
	LAR Reach 6	3C				
	Bull Creek	3C				
	Aliso Canyon Wash	3C				
Benzo(a)Anthracene	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Chrysene	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	LAR Reach 4	3C				
	LAR Reach 6	3C				
	Rio Hondo Reach 3	3A				
Heptachlor	LAR Reach 5	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	Burbank Western Channel	3C				
Chlorine (Total)	LAR Reach 3	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	LAR Reach 4	3C				
	LAR Reach 5	3C				
	LAR Reach 6	3C				
	Burbank Western Channel	3A (Dry)/ 2C (Wet)				
Copper <sup>3</sup>	Rio Hondo Reach 2	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	Rio Hondo Reach 3	2A				
	Caballero Creek	3C				

Constituent	Water Body	Category	Relevant RB TMDL	RB TMDL in Watershed with Same BMP Class <sup>1</sup> ?	RB TMDL in Watershed with Same Scheduling Class?	Classification
Benzo(a)Pyrene	Rio Hondo Reach 3	3A	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	Burbank Western Channel	3A				
Benzo(b)Fluoranthene	Burbank Western Channel	3A	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Benzo(k)Fluoranthene	Rio Hondo Reach 3	3A	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Chlorpyrifos	Compton Creek	3A	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
beta-BHC	Burbank Western Channel	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
Cadmium	Burbank Western Channel	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	Tujunga Wash	3C				
	Caballero Creek	3C				
Lead <sup>4</sup>	Rio Hondo Reach 2	3C	Exceedances of RWLs have been observed, but the water body is not identified as impaired on the 303(d) List as of December 28, 2012			Group 3
	Caballero Creek	3C				
Total Phosphorus	Legg Lake	1C	Addressed in USEPA TMDL without a Regional Board Adopted Implementation Plan			USEPA TMDL
	Lake Calabasas	1C				
	Echo Park Lake	1C				
Total Nitrogen	Legg Lake	1C	Addressed in USEPA TMDL without a Regional Board Adopted Implementation Plan			USEPA TMDL
	Lake Calabasas	1C				
	Echo Park Lake	1C				
Trash	Echo Park Lake	1C	Addressed in USEPA TMDL without a Regional Board Adopted Implementation Plan			USEPA TMDL
PCBs (water and sediment)	Echo Park Lake	1C	Addressed in USEPA TMDL without a Regional Board Adopted Implementation Plan			USEPA TMDL

Constituent	Water Body	Category	Relevant RB TMDL	RB TMDL in Watershed with Same BMP Class <sup>1</sup> ?	RB TMDL in Watershed with Same Scheduling Class?	Classification
Chlordane (water and sediment)	Echo Park Lake	1C	Addressed in USEPA TMDL without a Regional Board Adopted Implementation Plan			USEPA TMDL
Dieldrin (water and sediment)	Echo Park Lake	1C	Addressed in USEPA TMDL without a Regional Board Adopted Implementation Plan			USEPA TMDL
Dichlorobromomethane	LAR Reach 3	3C	MS4 determined to not be a source that may be causing or contributing to observed exceedances (water reclamation plant effluent is identified source)			
Chlorodibromomethane	Burbank Western Channel	2A				
Selenium	LAR Reach 1	3A	MS4 determined to not be a source that may be causing or contributing to observed exceedances. As noted in the LAR Metals TMDL, originates from natural sources			
	LAR Reach 3	3C				
	LAR Reach 4	3C				
	LAR Reach 5	2A				
	LAR Reach 6	2A				
	Burbank Western Channel	2C				
	Caballero Creek	2C				
Aliso Canyon Wash	2C					
pH	LAR Reach 1	2B (Dry/ 3B (Wet)	Reflective of a condition of pollution, not necessarily a result of MS4 discharge			
	LAR Reach 2	2B (Dry/ 3B (Wet)				
	LAR Reach 3	3B				
	LAR Reach 5	3B				
	Rio Hondo Reach 2	3B				
	Rio Hondo Reach 3	2B				
	Burbank Western Channel	3B				

Constituent	Water Body	Category	Relevant RB TMDL	RB TMDL in Watershed with Same BMP Class <sup>1</sup> ?	RB TMDL in Watershed with Same Scheduling Class?	Classification
Dissolved Oxygen	LAR Reach 1	3B				Reflective of a condition of pollution, not necessarily a result of MS4 discharge
	LAR Reach 3	3B				
	LAR Reach 5	3B				
	LAR Reach 6	3B				
	Rio Hondo Reach 3	2B				
Benthic-Macroinvertebrates	Compton Creek	2B				Reflective of a condition of pollution, not necessarily a result of MS4 discharge
	Arroyo Seco	2B				

1 – Based on fate and transport mechanisms during wet weather.

2 – The LAR Metals TMDL states that “Dry-weather impairments related to zinc only occur in Rio Hondo Reach 1”. As a result, dry weather impairments related to zinc in other water bodies are not addressed by the Regional Board adopted TMDL.

3 – The LAR Metals TMDL does not address dry weather impairments related to copper or lead in Rio Hondo Reach 2, Rio Hondo Reach 3, or Caballero Creek.

## Approach to Identifying Milestones and Schedules

Based on the information presented in the previous section, the following approach to identifying milestones and schedules for USEPA TMDLs, 303(d) listings without a TMDL, and RWL exceedances was utilized.

1. For USEPA TMDLs, the milestones and schedules are consistent with Regional Board adopted TMDLs for similar pollutants within and outside of the ULAR watershed.
2. For Group 1 pollutants, the milestones and schedules are consistent with the TMDL milestones and schedules for the Regional Board adopted TMDL which shares the same class as the Group 1 pollutant.
3. For Group 2 pollutants, the schedule contains annual specific actions or milestones. Milestones are consistent with the TMDL milestones and schedules for the relevant TMDL. Specific actions are based on information generated from the RAA analysis, as presented in Section 7.
4. For Group 3 pollutants, the schedule contains specific actions and/or milestones. Milestones are consistent with the TMDL milestones and schedules for the relevant TMDL. Specific actions are based on the information generated from the RAA analysis and assessment of monitoring data, as presented in Section 7.

In many instances, the water quality priority analysis may indicate that either (1) a WBPC on the 2010 303(d) List meets the delisting requirements, (2) MS4 discharges are not considered to be a source, or (3) the WBPC is a condition rather than a “pollutant” with the potential to be discharged from the MS4. As a result, the aforementioned approach may not be applied to all WBPCs. Additionally, development of milestones is more complex and requires consideration of the Permit compliance mechanisms. This section describes a general approach to setting milestones for all groups and provides details specific to the milestones and scheduling for each group.

### General Approach to Setting Milestones

The Permit provides four options for complying with TMDL requirements and RWLs:

1. Monitoring data demonstrating water quality objectives are being met in the receiving waters at the compliance monitoring locations outlined in the CIMP.
2. Monitoring data demonstrates water quality objectives are being met at the outfall monitoring locations specified in the CIMP.
3. Monitoring and screening data demonstrates that no discharges are occurring from MS4 outfalls.
4. For interim TMDL requirements and RWL exceedances, implementing an approved EWMP.

Based on these compliance mechanisms, four different types of milestones were considered as appropriate for the WBPCs. To avoid a situation where other sources could impact the ability of the MS4 to demonstrate compliance (such as in the receiving water) or where water quality outcomes progress either faster or slower than projected by the modeling, demonstration of any of the four different types of milestones will result in compliance. Examples of types of milestones that were considered are shown in **Table 28**.

**Table 28. Examples of Milestone Types Considered**

Compliance Path	Interim Milestone Options	Final Milestone Options
RWL	% reduction in concentrations	Meeting water quality objectives
	% reduction in loads	Demonstration that MS4s not causing or contributing to exceedance
WQBEL	% reduction in concentrations or loads	Meeting required percent reductions from outfalls
	Increased number of outfalls meeting WQBELs	Meeting WQBELs at all monitored outfalls
No discharge	Specified reduction in number of outfalls with discharge	No discharge from screened outfalls
	Reduced amount of flow from outfalls with discharge	
EWMP (BMP-based)	% MS4 area treated	Implementation of EWMP program
	Implementation of specified # of BMPs by certain date	

## Detailed Approach to Setting Milestones

Details on the approach and justification for developing milestones and schedules for USEPA TMDL pollutants and Group 1, 2 and 3 pollutants is provided in the following subsections.

### USEPA TMDLs

The USEPA Lakes TMDLs established WLAs for total phosphorus and total nitrogen within Legg Lake, Lake Calabasas, and Echo Park Lake. However, the existing loading rates used to establish the WLAs for total phosphorus and total nitrogen were not established using data collected near inflows to the lake, but instead estimated. As such, if the assumptions used to establish existing loading rates underestimated the existing loading rates, a reduction in loading would be required. To determine the accuracy of the existing loading rates, the results of monitoring conducted will be evaluated three and a half years after TMDL adoption (September 2015). After the evaluation of the monitoring results, revised existing loading rates will be established.

The Regional Board adopted TMDL most similar to the USEPA Lakes TMDLs established to address nutrient-related impairments in Legg Lake, Lake Calabasas, and Echo Park Lake is the Machado Lake Nutrient TMDL. As a result, the compliance schedule used in the Machado Lake Nutrient TMDL is used as the foundation to establish the compliance schedule for the USEPA Lakes TMDLs established to address nutrient-related impairments in Legg Lake, Lake Calabasas, and Echo Park Lake. Similarly, the Regional Board adopted TMDL most similar to the USEPA Lakes TMDLs established to address organochlorine pesticides and PCB-related impairments in Echo Park Lake is the Machado Lake Toxics TMDL. As a result, the compliance schedule used in the Machado Lake Toxics TMDL will be used as the foundation to establish the compliance schedule for the USEPA Lakes TMDLs established to address organochlorine pesticides and PCB-related impairments in Echo Park Lake. The Machado Lake Nutrient TMDL and Machado Lake Toxics TMDL do not include interim or final WQBELs and/or RWLs with compliance deadlines during the Permit term. As such, interim milestones and dates for their achievement have been established during the Permit including a 31% milestone that was established for the Metals TMDL.

The implementation actions which will be taken to address the WBPCs included in the LAR Trash TMDL will also address the WBPCs that are addressed by USEPA Lakes TMDL established to address trash-related impairment in Echo Park Lake. As a result, the schedule for trash in Echo Park Lake is consistent with the LAR Trash TMDL, which already includes interim requirements and numeric milestones and the date(s) for their achievement.

### Group 1: 303(d) Listed WBPCs in the Same Class as a Regional Board TMDL

For the ULAR WMA, the Group 1 WBPCs that are in the same class as Regional Board adopted TMDLs are summarized in **Table 29**; therefore, the Permit requires that these Group 1 WBPCs be assigned interim and final numeric milestones on a schedule which coincides with the current interim and final milestone dates for the applicable Regional Board adopted TMDL. However, the water quality priority analysis indicated that all Group 1 WBPCs not already being addressed by a TMDL are either (1) a WBPC on the 2010 303(d) List that meets the delisting requirements and/or (2) a WBPC for which MS4 discharges are not considered to be a source; therefore, a schedule was not created.

**Table 29. 303(d) Listed WBPCs in the Same Class as Those Addressed in a TMDL**

Constituent	Water Body	RB TMDL in Same Class	Notes
Cyanide	LAR Reach 1	LAR Metals TMDL	MS4 determined to not be a source that may be causing or contributing to observed exceedances (known to have potential laboratory analysis quality assurance/quality control issues).
	Rio Hondo Reach 2	LAR Metals TMDL	MS4 determined to not be a source that may be causing or contributing to observed exceedances (known to have potential laboratory analysis quality assurance/quality control issues).
	Burbank Western Channel	LAR Metals TMDL	MS4 determined to not be a source that may be causing or contributing to observed exceedances (known to have potential laboratory analysis quality assurance/quality control issues). Meets criteria to delist.
Zinc	LAR Reach 1	LAR Metals TMDL	Meets criteria to delist for dry weather impairment and wet weather impairment is being addressed by the LAR Metals TMDL
Diazinon	LAR Reach 1	Harbors Toxics TMDL	Meets criteria to delist

### Group 2: 303(d) Listed WBPCs Not in the Same Class as a Regional Board TMDL

The only WBPCs identified in the initial classification in Group 2 are the oil listings in Los Angeles River Reach 2 and Los Angeles River Reach 5. For these WBPCs, the water quality priority analysis indicated that these WBPCs could be delisted and rarely exceed in the receiving water. However, because MS4 discharges may have caused or contributed to the exceedances, a schedule has been established to support continual attainment of the RWLs. The interim and final schedule milestones are based on the dry and wet weather schedule for the LA River Metals TMDL.

### Group 3: Other Receiving Water Limitation Exceedances

The majority of the WBPCs in the ULAR WMA fall into Group 3. For the WBPCs that are in the same class as a Regional Board adopted TMDL, the limiting pollutant analysis indicates that all WBPCs will be addressed through control measures to implement the Regional Board adopted TMDLs. As a result, the



schedule developed for these constituents is consistent with the Regional Board adopted TMDLs and the scheduling for the RAA (Section 6) and EWMP Implementation Strategy (Section 7) are consistent.

Category 2 WBPCs that meet the requirements to be removed from the 303(d) List and Category 3 WBPCs are the lowest priority given their relatively low exceedance frequency. However, for these WBPCs, where MS4 discharges may have caused or contributed to the exceedances, a schedule has been established to support continual attainment of the RWLs. The interim and final schedule milestones are based on the dry and wet weather schedule for the LA River Metals TMDL. The final dry and wet weather milestones are January 11, 2024 and January 11, 2028, respectively.

For Category 2 and 3 WBPCs where either MS4 discharges are not considered to be a source or the WBPC is a condition rather than a “pollutant” with the potential to be discharged from the MS4, a schedule was not created.

## Numeric Milestones and Compliance Schedule

Part VI.C.5.c of the Permit discusses the compliance schedule requirements associated with the EWMP. The compliance schedule for the ULAR EWMP was developed based on TMDL milestones (i.e., interim and final numeric limits) and other representative Regional Board adopted TMDLs where appropriate. Interim and final compliance dates in the LARWQCB adopted TMDLs are the primary drivers for the ULAR RAA and EWMP implementation schedule. **Table 30** presents the compliance schedule for USEPA TMDLs, 303(d) listings, and other RWL exceedances which fall under Category 1 and Category 2. For simplicity, only the year of each milestone is shown; however, the exact date remains consistent with the milestone dates included in the relevant LARWQCB adopted TMDL. **Table 31** presents the compliance schedule for the Category 2 WBPCs that meet the requirements to be removed from the 303(d) List and Category 3 WBPCs. **Table 15** presents the list of the remaining Category 2 and 3 WBPCs where either MS4 discharges are not considered to be a source or the WBPC is a condition rather than a “pollutant” with the potential to be discharged from the MS4. Available data will be assessed and, if the MS4 discharges are identified as causing or contributing to exceedances for WBPCs identified in **Table 15**, the EWMP will be revised consistent with Part VI.c.2.a.iii (page 51) of the Permit.

**Table 30. Compliance Schedule for Category 1 and 2 Water Quality Priorities that are not Included in a Regional Board Adopted TMDL**

Constituent	WQP Category and Water Body	Compliance Schedule Source	Weather Condition	Compliance Dates and Compliance Milestones (Bolded numbers indicated milestone deadlines within the current Permit term) <sup>1 2</sup>									
				2013	2014	2015	2016	2019	2020	2024	2028	2032	2037
2,3,7,8-TCDD (Dioxin)	C2: Reach 3	LAR Bacteria TMDL	Dry	See Table 13 for Interim and Final Compliance Milestones									
	C2: Burbank Western Channel		Wet										Final
Mercury Total	C2: LAR Reach 1	LAR Metals TMDL	Dry					75%	100%				
	C2: LAR Reach 2												
	C2: LAR Reach 3		Wet						50%	100%			
	C2: LAR Reach 4 C2: LAR Reach 6												
Copper	C2: RH Reach 3	LAR Metals TMDL	Dry					75%	100%				
			Wet						50%	100%			
Thallium Total	C2: LAR Reach 6	LAR Metals TMDL	Dry					75%	100%				
Diazinon	C2: Reach 5	Harbors Toxics	All									Final	
Total Phosphorus	C1 (USEPA): Legg Lake C1 (USEPA): Lake Calabastas C1 (USEPA): Echo Park Lake	Machado Lake Nutrient TMDL	All			<b>Base-line</b>	<b>Interim</b>	50%	100%				
Total Nitrogen	C1 (USEPA): Legg Lake C1 (USEPA): Lake Calabastas C1 (USEPA): Echo Park Lake	Machado Lake Nutrient TMDL	All			<b>Base-line</b>	<b>Interim</b>	50%	100%				
Trash	C1 (USEPA): Echo Park Lake	LAR Trash TMDL	All	<b>80%</b>	<b>90%</b>	<b>96.7%</b>	<b>100%</b>						
PCBs (water and sediment)	C1 (USEPA): Echo Park Lake	Machado Lake Toxics TMDL	All					<b>Interim</b>	Final				
Chlordane (water and sediment)	C1 (USEPA): Echo Park Lake	Machado Lake Toxics TMDL	All					<b>Interim</b>	Final				
Dieldrin (water and sediment)	C1 (USEPA): Echo Park Lake	Machado Lake Toxics TMDL	All					<b>Interim</b>	Final				

<sup>1</sup>The Permit term is assumed to be five years from the Permit effective date or December 27, 2017.

<sup>2</sup>Attainment of the percentages may be demonstrated either as a reduction in exceedance frequency at time of EWMP approval or percent area meeting the RWL or in the case of the USEPA adopted TMDLs reduction from the baseline at the time of TMDL promulgation or percent area meeting the WQBEL or RWL.

**Table 31. Compliance Schedule based on the LA River Metals TMDL for Category 2 and 3 Water Quality Priorities that Do Not Meet the 303(d) Listing Requirements<sup>1</sup>**

Constituent	WQP Category and Water Body	Weather Condition	Dry Weather Schedule <sup>2</sup>		Wet Weather Schedule <sup>2</sup>		Notes
			Interim	Final	Interim	Final	
			2020	2024	2024	2028	
2,3,7,8-TCDD (Dioxin)	C3: LAR Reach 6	Dry	75%	100%			Only 1 of 4 exceedances in last 10 years in LAR Reach 6
Mercury Total	C3 (Dry): LAR Reach 5	Dry/Wet	75%	100%	50%	100%	Only 6 of 156 exceedances in last 10 years in LAR Reach 5, 1 of 16 exceedances in last 10 years in CC during dry weather, 1 of 2 exceedances in last 10 years in CC during wet weather, 2 of 74 exceedances in last 10 years in RH Reach 3, 1 of 6 exceedances in last 10 years in AS, 1 of 6 exceedances in last 10 years in VW, 17 of 244 exceedances in last 10 years in BWC during dry weather, 1 of 7 exceedances in last 10 years in BWC during wet weather, 1 of 15 exceedances in last 10 years in TW, and 1 of 12 exceedances in last 10 years in Caballero Creek
	C3 (Dry/Wet): CC						
	C3 (Dry): RH Reach 3						
	C3 (Wet): AS						
	C3 (Wet): VW						
	C3 (Dry/Wet): BWC						
C3 (Dry): TW							
C3 (Dry): Caballero Creek							
Thallium Total	C3: LAR Reach 1	Dry	75%	100%			Only 3 of 91 exceedances in last 10 years in LAR Reach 1, 2 of 112 exceedances in last 10 years in LAR Reach 2, 4 of 177 exceedances in last 10 years in LAR Reach 3, 2 of 128 exceedances in last 10 years in LAR Reach 4, and 1 of 61 exceedances in last 10 years in BWC
	C3: LAR Reach 2						
	C3: LAR Reach 3						
	C3: LAR Reach 4						
Dibenzo(a,h)Anthracene	C3: LAR Reach 3	Dry	75%	100%			Only 8 of 122 exceedances in last 10 years in LAR Reach 3, 1 of 75 exceedances in last 10 years in LAR Reach 5, and 2 of 43 exceedances in last 10 years in RH Reach 3
	C3: LAR Reach 5						
	C3: RH Reach 3						
Indeno(1,2,3-cd)Pyrene	C3: LAR Reach 3	Dry	75%	100%			Only 3 of 56 exceedances in last 10 years in LAR Reach 3, 1 of 75 exceedances in last 10 years in LAR Reach 5, and 1 of 36 exceedances in last 10 years in RH Reach 3
	C3: LAR Reach 5						
	C3: RH Reach 3						
4,4-DDD	C3: LAR Reach 5	Dry	75%	100%			Only 2 of 72 exceedances in last 10 years in LAR Reach 5
4,4-DDE	C3: LAR Reach 5	Dry	75%	100%			Only 4 of 72 exceedances in last 10 years in LAR Reach 5
Nickel Total	C3: LAR Reach 3	Dry	75%	100%			Only 2 of 140 exceedances in last 10 years in LAR Reach 3, 1 of 72 exceedances in last 10 years in LAR Reach 5, and 1 of 41 exceedances in last 10 years in Caballero Creek
	C3: LAR Reach 5						
	C3: Caballero Creek						
Benzo(a)Anthracene	C3: LAR Reach 3	Dry	75%	100%			Only 1 of 75 exceedances in last 10 years in LAR Reach 3

Constituent	WQP Category and Water Body	Weather Condition	Dry Weather Schedule <sup>2</sup>		Wet Weather Schedule <sup>2</sup>		Notes
			Interim	Final	Interim	Final	
			2020	2024	2024	2028	
Chrysene	C3: LAR Reach 3 C3: LAR Reach 4 C3: LAR Reach 6 C3: RH Reach 3	Dry	75%	100%			Only 1 of 75 exceedances in last 10 years in LAR Reach 3, 1 of 38 exceedances in last 10 years in LAR Reach 4, 1 of 15 exceedances in last 10 years in LAR Reach 6, and 1 of 43 exceedances in last 10 years in RH Reach 3
Heptachlor	C3: LAR Reach 5 C3: BWC	Dry	75%	100%			Only 2 of 72 exceedances in last 10 years in LAR Reach 5 and 1 of 131 exceedances in last 10 years in BWC
Copper <sup>3</sup>	C3: RH Reach 2 C3: Caballero Creek	Dry	75%	100%			Only 1 of 2 exceedances in last 10 years in RH Reach 2 and 4 of 41 exceedances in last 10 years in Caballero Creek
Benzo(a)Pyrene	C3: RH Reach 3 C3: BWC	Dry	75%	100%			Only 1 of 43 exceedances in last 10 years in RH Reach 3 and 2 of 137 exceedances in last 10 years in BWC
Benzo(b)Fluoranthene	C3: BWC	Dry	75%	100%			Only 5 of 135 exceedances in last 10 years in BWC
Benzo(k)Fluoranthene	C3: RH Reach 3	Dry	75%	100%			Only 1 of 43 exceedances in last 10 years in RH Reach 3
Chlorpyrifos	C3: CC	Dry	75%	100%			Only 1 of 4 exceedances in last 10 years in CC
beta-BHC	C3: BWC	Dry	75%	100%			Only 1 of 131 exceedances in last 10 years in BWC
Cadmium	C3: BWC C3: TW C3: Caballero Creek	Dry	75%	100%			Only 1 of 298 exceedances in last 10 years in BWC, 1 of 38 exceedances in last 10 years in TW, and 2 of 41 exceedances in last 10 years in Caballero Creek
Lead <sup>3</sup>	C3: RH Reach 2 C3: Caballero Creek	Dry	75%	100%			Only 1 of 2 exceedances in last 10 years in RH Reach 2 and 2 of 41 exceedances in last 10 years in Caballero Creek
	C3: LAR Reach 1	Dry	75%	100%			Meets criteria to delist for dry weather impairment <sup>2</sup> and wet weather impairment is being addressed by the LAR Metals TMDL
Zinc <sup>4</sup>	C3: LAR Reach 3 C3: LAR Reach 4 C3: VW C3: BWC C3:TW C3: Caballero Creek	Dry	75%	100%			Only 7 of 415 exceedances in last 10 years in LAR Reach 3, 1 of 284 exceedances in last 10 years in LAR Reach 4, 1 of 41 exceedances in last 10 years in VW, 2 of 321 exceedances in last 10 years in BWC, 4 of 70 exceedances in last 10 years in TW, and 2 of 41 exceedances in last 10 years in Caballero Creek
Diazinon	C2: LAR Reach 1	Wet			50%	100%	Meets criteria to delist

Constituent	WQP Category and Water Body	Weather Condition	Dry Weather Schedule <sup>2</sup>		Wet Weather Schedule <sup>2</sup>		Notes
			Interim	Final	Interim	Final	
			2020	2024	2024	2028	
	C3 (Dry): LAR Reach 4 C3 (Wet): RH Reach 2 C3 (Dry): RH Reach 3 C3 (Wet): ACW	Dry/Wet	75%	100%	50%	100%	Only 1 of 7 exceedances in last 10 years in LAR Reach 4, 1 of 4 exceedances in last 10 years in RH Reach 2, 3 of 60 exceedances in last 10 years in RH Reach 3, and 1 of 4 exceedances in last 10 years in ACW

1 – CC (Compton Creek), RH (Rio Hondo), AS (Arroyo Seco), VW (Verdugo Wash), BWC (Burbank Western Channel), TW(Tujunga Wash), ACW (Aliso Canyon Wash), MC (McCoy Canyon Creek), DC (Dry Canyon Creek), BeC (Bell Creek), and BuC (Bull Creek)

2 – Attainment of the percentages may be demonstrated either as a reduction in exceedance frequency at time of EWMP approval or percent area meeting the RWL.

3 – The LAR Metals TMDL does not address dry weather impairments related to copper or lead in Rio Hondo Reach 2, Rio Hondo Reach 3, or Caballero Creek.

4 – The LAR Metals TMDL states that “Dry-weather impairments related to zinc only occur in Rio Hondo Reach 1”. As a result, dry weather impairments related to zinc in other water bodies are not addressed by the Regional Board adopted TMDL and are, therefore, addressed by this EWMP.

**Table32. Water Quality Priorities where either MS4 discharges are not Considered to be a Source or the Water Body Pollutant Combination is a Condition Rather than a “pollutant” with the Potential to be Discharged from the MS4<sup>1</sup>**

Constituent	WQP Category and Water Body	Weather Condition	Notes
Chloride	C2: LAR Reach 5 C2: LAR Reach 6 C3: CC C3: RH Reach 3 C3: BWC C2: TW	Dry	MS4 determined to not be a source that may be causing or contributing to observed exceedances (determined to be a natural source, per Source Assessment). <sup>2</sup>
Cyanide	C2: LAR Reach 1 C2: RH Reach 2	All	MS4 determined to not be a source that may be causing or contributing to observed exceedances (known to have potential laboratory analysis quality assurance/quality control issues). <sup>2</sup>
	C2: BWC	Dry	
Sulfate	C3 (Dry): LAR Reach 3 C3 (Dry): LAR Reach 4 C3 (Dry): LAR Reach 5 C3 (Dry): LAR Reach 6 C3 (Wet): BuC C3 (Wet): ACW	Dry/Wet	MS4 determined to not be a source that may be causing or contributing to observed exceedances (determined to be a natural source, per Source Assessment) . <sup>2</sup>
	C3: LAR Reach 3 C3: LAR Reach 4	Dry	

Constituent	WQP Category and Water Body	Weather Condition	Notes
	C2: LAR Reach 5 C2: LAR Reach 6 C3: ACW		
TDS	C3: LAR Reach 4 C2: LAR Reach 5 C2: LAR Reach 6 C3: BWC C3: TW C3: ACW	Dry	MS4 determined to not be a source that may be causing or contributing to observed exceedances (determined to be a natural source, per Source Assessment). <sup>2</sup>
Bis(2-ethylhexyl)Phthalate	C2: LAR Reach 1 C2: RH Reach 2 C2: AS C2: VW C2: BWC C2: BuC C2: ACW C3: LAR Reach 3 C3: LAR Reach 5	Dry/Wet	MS4 determined to not be a source that may be causing or contributing to observed exceedances (known to have potential laboratory analysis quality assurance/quality control issues). <sup>2</sup>
Oil	C2: LAR Reach 2 C2: LAR Reach 5	Dry/Wet	MS4 determined to not be a source that may be causing or contributing to observed exceedances (determined to be a natural source, as described in Appendix 3.B) <sup>2</sup>
Chlorine (Total)	C3: LAR Reach 3 C3: LAR Reach 4 C3: LAR Reach 5 C3: LAR Reach 6 C2: BWC	Dry/Wet	MS4 determined to not be a source that may be causing or contributing to observed exceedances (water reclamation plant effluent is identified source). <sup>2</sup>
Dichlorobromomethane	C3: LAR Reach 3	Dry/Wet	MS4 determined to not be a source that may be causing or contributing to observed exceedances (water reclamation plant effluent is identified source). <sup>2</sup>
Chlorodibromomethane	C3: BWC	Dry/Wet	MS4 determined to not be a source that may be causing or contributing to observed exceedances (water reclamation plant effluent is identified source). <sup>2</sup>

Constituent	WQP Category and Water Body	Weather Condition	Notes
Selenium	C3: LAR Reach 1 C3: LAR Reach 3 C3: LAR Reach 4 C2: LAR Reach 5 C2: LAR Reach 6 C2: BWC C2: Caballero Creek C2: ACW	Dry/Wet	MS4 determined to not be a source that may be causing or contributing to observed exceedances. As noted in the LAR Metals TMDL, originates from natural sources. <sup>2</sup>
pH	C2: LAR Reach 1 C2: LAR Reach 2 C3: LAR Reach 3 C3: LAR Reach 5 C2: LAR Reach 6 C3: RH Reach 2 C2: RH Reach 3 C3: BWC	Dry/Wet	Reflective of a condition of pollution, not necessarily a result of MS4 discharge.
Dissolved Oxygen	C3: LAR Reach 1 C3: LAR Reach 3 C3: LAR Reach 5 C3: LAR Reach 6 C2: RH Reach 3	Dry/Wet	Reflective of a condition of pollution, not necessarily a result of MS4 discharge.
Benthic-Macroinvertebrates	C2: CC C2: AS	Dry	Reflective of a condition of pollution, not necessarily a result of MS4 discharge.

1 – CC (Compton Creek), RH (Rio Hondo), AS (Arroyo Seco), VW (Verdugo Wash), BWC (Burbank Western Channel), TW(Tujunga Wash), ACW (Aliso Canyon Wash), MC (McCoy Canyon Creek), DC (Dry Canyon Creek), BeC (Bell Creek), and BuC (Bull Creek)

2 – Available data will be assessed to determine if MS4 discharges are causing or contributing to exceedances.

## Appendix 3.B

# Supporting Information for the Receiving Water Data Analysis



Per Part VI.C.5.a.i (pg 58) of the Permit, each EWMP shall include an evaluation of existing water quality conditions, including characterization of receiving water quality. The following provides a summary of the information considered and analysis conducted to support the classification of Waterbody Pollutant Combinations (WBPCs) into the three categories identified in the Permit (**Appendix 3.A**). The characterization process consisted of the following steps, which are discussed in subsections below:

1. Identifying the water bodies within the EWMP area and downstream of the area.
2. Compiling WBPCs with applicable TMDLs listed in the Permit.
3. Compiling 303(d) Listings from the 2010 303(d) List, the most recent approved list.
4. Gathering additional relevant data and information (e.g., water quality data).
5. Conducting data analysis to evaluate attainment of water quality objectives (relevant to TMDL requirements, 303(d) impairment listings, and existing water quality data).

### 3.B.1 EWMP Area

**Figure 2** displays the ULARWMA and the participating jurisdictions, which include the County of Los Angeles and the cities of Alhambra, Burbank, Calabasas, Glendale, Hidden Hills, La Cañada Flintridge, Los Angeles, Montebello, Monterey Park, Pasadena, Rosemead, San Fernando, San Gabriel, San Marino, South Pasadena, and Temple City; and the Los Angeles County Flood Control District. The EWMP area covers the portion of the Los Angeles River located within these jurisdictions. The water bodies named in the Basin Plan are summarized in **Table 33** and presented in **Figure 2**. Beneficial uses for the water bodies listed in **Table 33** can be found in Chapter 3 of the California Water Quality Control Plan, Los Angeles Region (Basin Plan).

**Table 33. Significant Waterbodies Associated with the ULARWMA EWMP and Identified in TMDLs**

Mainstem	Associated Tributaries	Waters Immediately Downstream of EWMP Area
LA River Reach 6	Dry Canyon Creek	
	McCoy Creek	
	Bell Creek	
	Aliso Canyon Wash	
LA River Reach 5	Bull Creek	
LA River Reach 4	Pacoima Wash	
	Tujunga Wash	
LA River Reach 3	Burbank Western Channel	
	Verdugo Wash	
	Arroyo Seco	
LA River Reach 2	Rio Hondo Reach 2 and 3	Rio Hondo Reach 1
	Compton Creek	LA River Reach 1
Lakes		
Echo Park Lake	Legg Lake	Lake Calabasas

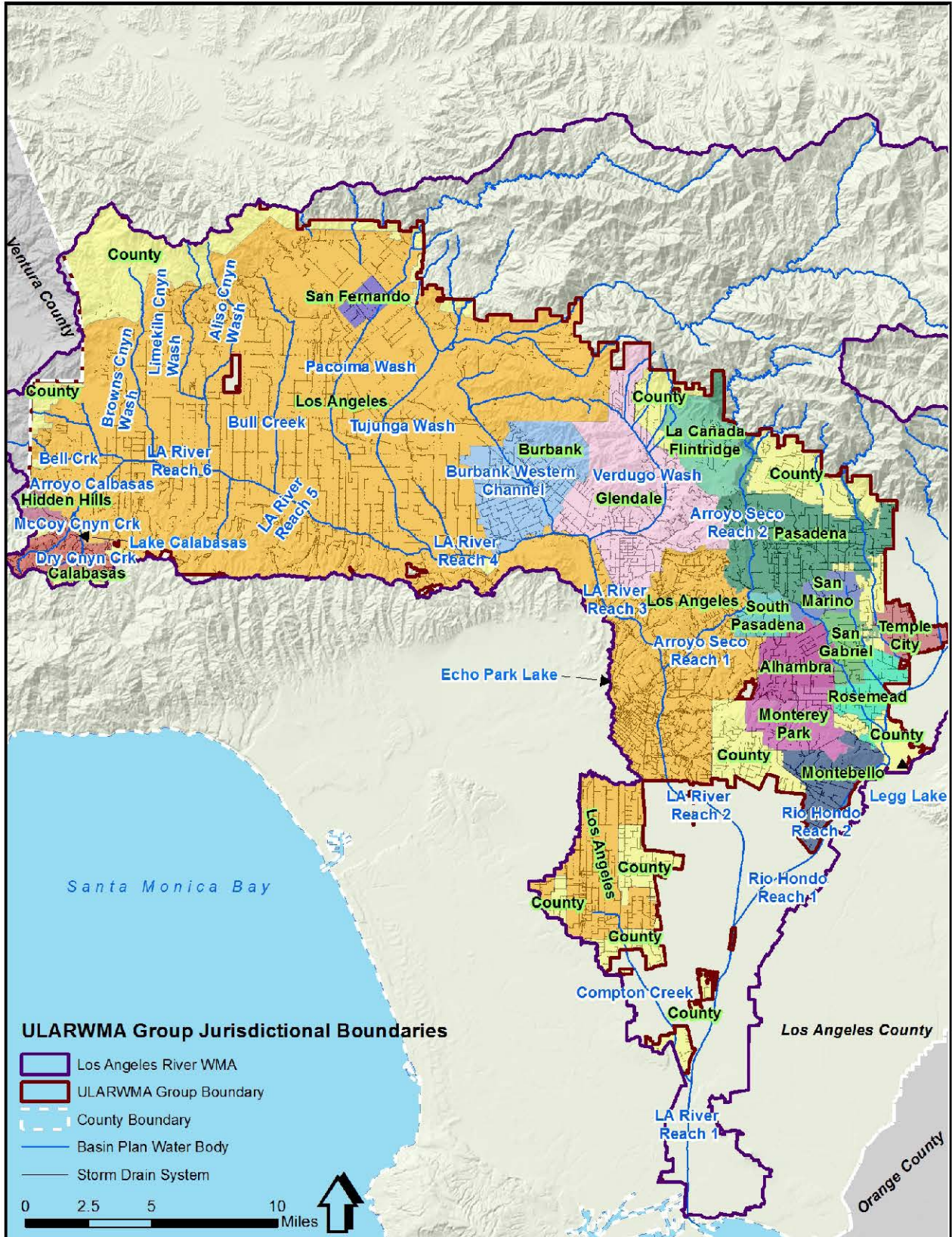


Figure 2. Upper Los Angeles River Watershed Management Area Group

### 3.B.2 Summary of Existing TMDLs and Deadlines

A summary of the existing TMDLs in the watershed is presented in the following tables:

- **Table 34** presents TMDLs developed for water bodies within the ULARWMA and also TMDLs for downstream waterbodies. **Table 34** includes amendments to nutrients and metals TMDLs in the watershed.
- **Table 35** presents interim and final compliance deadlines for the relevant TMDLs except for the dry weather LA River Bacteria TMDL, which are presented in **Table 36**.
- **Table 37** (mainstem and tributaries) and **Table 38** (lakes) show where the Permit assigns water quality-based effluent limits (WQBELs), receiving water limitations (RWLs), or wasteload allocations (WLAs) to Permittees within the ULARWMA. The numeric WQBELs and RWLs as well as the WLAs for the USEPA TMDLs listed in **Table 37** and **Table 38** can be found in Attachments N and O of the Permit.

**Table 34. TMDLs Applicable to the Upper Los Angeles River Watershed Management Area Group**

TMDL	LARWQCB Resolution Number	Effective Date and/or EPA Approval Date
LA River Nitrogen Compounds and Related Effects	2003-009	03/23/2004
	2012-010 (amended)	08/07/2014
Legg Lake Trash TMDL	2007-010	03/06/2008
LA River Trash	2007-012	09/23/2008
	2015-006 (amended)	Not Yet Effective
LA River Metals TMDL	2007-014	10/29/2008
	2010-003	11/03/2011
	2015-004 (amended)	Not Yet Effective
LA River Bacteria TMDL	2010-007	03/23/2012
Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL	2011-008	03/23/2012
Los Angeles Area Lakes TMDLs for Lake Calabasas, Echo Park Lake, and Legg Lake	NA (USEPA TMDL)	03/26/2012

**Table 35. Interim and Final TMDL Compliance Milestones Applicable to the ULARWMA Group (Except for LAR Bacteria Dry Weather)**

TMDL	Waterbodies <sup>1</sup>	Constituents	Compliance Goal	Weather Condition	Compliance Dates and Compliance Milestones (Bolded numbers indicated milestone deadlines within the current Permit term) <sup>1</sup>									
					2012	2013	2014	2015	2016	2020	2024	2028	2032	2037
LAR Nutrients	All Waterbodies	Ammonia-N, Nitrate-N, Nitrite-N, Nitrate-N+Nitrite-N	Meet WQBELs	All	<b>Pre 2012</b>									
					<b>Final</b>									
LAR Trash	All Waterbodies	Trash	% Reduction	All	<b>9/30</b>	<b>9/30</b>	<b>9/30</b>	<b>9/30</b>	<b>9/30</b>					
					<b>70%</b>	<b>80%</b>	<b>90%</b>	<b>96.7%</b>	<b>100%</b>					
Legg Lake Trash	Legg Lake	Trash	% Reduction	All	<b>3/6</b>	<b>3/6</b>	<b>3/6</b>	<b>3/6</b>	<b>3/6</b>					
					<b>20%</b>	<b>40%</b>	<b>60%</b>	<b>80%</b>	<b>100%</b>					
LAR Metals <sup>2</sup>	Reach 1 through 6, CC, RH, AS, VW, BWC, TW, ACW, MC, DC, BeC and BuC	Copper, Lead, Zinc (only RH)	% of MS4 area Meets WQBELs	Dry	<b>1/11</b>						1/11	1/11		
	All Waterbodies	Copper, Lead, Zinc, Cadmium	% of MS4 area Meets WQBELs	Wet	<b>1/11</b>						75%	100%		
LA River Bacteria (Wet Weather)	All Waterbodies	<i>E. coli</i>	Meet WQBELs	Wet										<b>3/23</b>
Dominguez Channel and LA/LB Harbors Toxics	Estuary	Sediment: DDTs, PCBs, Copper, Lead, Zinc, PAHs	Meet WQBELs	All	<b>3/23</b>									3/23
					<b>Interim</b>									Final
USEPA Lakes TMDLs	Lake Calabasas	Total-P, Total-N	Meet WLAs	All										
	Legg Lake	Total-P, Total-N	Meet WLAs	All										
	Echo Park Lake	Total-P, Total-N, Trash Water and Sediment: PCBs, Chlordane, Dieldrin	Meet WLAs	All										

<sup>1</sup> CC (Compton Creek), RH (Rio Hondo), AS (Arroyo Seco), VW (Verdugo Wash), BWC (Burbank Western Channel), TW (Tujunga Wash), ACW (Aliso Canyon Wash), MC (McCoy Canyon Creek), DC (Dry Canyon Creek), BeC (Bell Creek), and BuC (Bull Creek)

<sup>2</sup> The Permit term is assumed to be five years from the Permit effective date or December 27, 2017.

**Table 36. Dry Weather Compliance Milestones for the Los Angeles River Bacteria TMDL Applicable to ULARWMA Group with and without the use of a Load Reduction Strategy (LRS)**

Waterbodies		Compliance Dates and Compliance Milestones											
		2022	2023	2024	2025	2028	2029	2030	2031	2032	2035	2036	2037
Compton Creek	w/o LRS				3/23								
					Final								
	w LRS				3/23					3/23			
					Interim					Final			
Segment B	w/o LRS	3/23											
		Final											
	w LRS	3/23				3/23							
		Interim				Final							
Rio Hondo and Arroyo Seco	w/o LRS		3/23										
			Final										
	w LRS		3/23						3/23				
			Interim						Final				
Segment C	w/o LRS								3/23				
									Final				
	w LRS								3/23				3/23
									Interim				Final
Tujunga Wash, Burbank Western Channel, and Verdugo Wash	w/o LRS								3/23				
									Final				
	w LRS								3/23				3/23
									Interim				Final
Segment D	w/o LRS								3/23				
									Final				
	w LRS								3/23				3/23

Waterbodies	Compliance Dates and Compliance Milestones											
	2022	2023	2024	2025	2028	2029	2030	2031	2032	2035	2036	2037
							Interim					Final
Bull Creek	w/o LRS						3/23					
							Final					
	w LRS						3/23					3/23
								Interim				Final
Segment E	w/o LRS				3/23							
					Final							
	w LRS				3/23			3/23				
					Interim			Final				
Dry Canyon Creek, McCoy Creek, Bell Creek, and Aliso Canyon Wash	w/o LRS						3/23					
							Final					
	w LRS						3/23			3/23		
							Interim			Final		

**Table 37. Applicability of QBELs and RWLs Associated with TMDLs as Identified in the Permit**

TMDL	Constituent	LA River Reaches 1 – 6	Compton Creek	Rio Hondo R1 – R3	Arroyo Seco	Verdugo Wash	Burbank Western Channel	Tujunga Wash	Bell Creek	Bull Creek Aliso Canyon Wash McCoy Canyon Dry Canyon
LAR Trash	Trash	E	E	E	E	E	E	E	E	E
LAR Nutrients	Ammonia -N	E	E	E	E	E	E	E	E	E
	Nitrate – N	E	E	E	E	E	E	E	E	E
	Nitrite – N	E	E	E	E	E	E	E	E	E
	Nitrate as N + Nitrite as N	E	E	E	E	E	E	E	E	E
	Copper and Lead (dry and wet weather)	E	E	E <sup>1</sup>	E	E	E	E	E	--
LAR Metals	Zinc (dry weather)	--	--	E <sup>1</sup>	--	--	--	--	--	--
	Zinc (wet weather)	E	E	E	E	E	E	E	E	--
	Cadmium (wet weather)	E	E	E	E	E	E	E	E	--
DC and LA/LB Harbors Toxics	Sediment: DDTs, PCBs, Copper, Lead, Zinc, PAHs	--	--	--	--	--	--	--	--	--
LAR Bacteria	<i>E. coli</i>	E/R	E/R	E/R	E/R	E/R	E/R	E/R	E/R	E/R

Note that unless explicitly stated as sediment, constituents are associated with the water column

E – Effluent limit established based on a TMDL.

R – Receiving water limit established based on a TMDL.

1 – The dry weather metals limits only apply to Rio Hondo Reach 1.

**Table 38. Applicability of Water Quality Based Effluent Limitations and/or Wasteload Allocations Associated with TMDLs for Lakes as Identified in the Permit**

TMDL	Constituents	Lake		
		Legg	Calabasas	Echo Park
Legg Lake Trash TMDL	Trash	E		
	Total-P	WLA	WLA	WLA
	Total-N	WLA	WLA	WLA
USEPA Lakes TMDLs	Trash			WLA
	PCBs (water and sediment)			WLA
	Chlordane (water and sediment)			WLA
	Dieldrin (water and sediment)			WLA

Note that unless explicitly stated as sediment, constituents are associated with the water column.

E – Effluent limit established based on a TMDL.

WLA – Wasteload Allocation assigned in a USEPA TMDL, but not included as effluent or receiving water limitations.

### 3.B.3 Summary of Existing 303(d) Listings

**Table 39** presents a summary of the WBPCs on the 2010 303(d) List that have not been addressed by a TMDL for waterbodies in and immediately downstream of the ULARWMA. The waterbodies immediately downstream are LA River Reach 1 and Rio Hondo Reach 1.

**Table 39. 2010 303(d) Listed Water Body-Pollutant Combinations in the Los Angeles River Watershed not Addressed by a TMDL**

Constituent	Los Angeles River			Compton Creek	Rio Hondo		Arroyo Seco Reach 1	Burbank Western Channel
	1	2	5		1	2		
Diazinon	W							
Cyanide	W/D					D		D
Toxicity					D			
Selenium								W/D
Benthic-Macroinvertebrates				D			D	
Oil		D	D					

W and D denote whether the listing appears to be associated with wet weather and/or dry weather conditions.



### 3.B.4 Data Gathering

Data were obtained from numerous sources. A data request was submitted to the ULARWMA to gather information necessary to meet the water quality characterization and source assessment requirements outlined in the Permit (pages 58 and 59). The data requested included:

- Monitoring programs, including but not limited to TMDL compliance monitoring and receiving water monitoring;
- Findings from the Permittees' Illicit Connections and Illicit Discharge Eliminations, Industrial/Commercial Facilities, Development Construction, and Public Agency Activities Programs;
- TMDL source investigations; and
- Any other pertinent data, information, or studies related to constituent sources and conditions that could contribute to identification of the highest water quality priorities.

Monitoring data collected within the Los Angeles River Watershed was received from the following sources:

- Los Angeles Department of Public Works (LACDPW)
- DC Tillman, Los Angeles/Glendale, and Burbank Water Reclamation Plants (WRPs)
- City of Los Angeles Status and Trends program
- LA River Metals TMDL Coordinated Monitoring Program
- City of Los Angeles Echo Park Monitoring Program
- Los Angeles River Watershed Monitoring Program (LARWMP)

Over 170,000 data records were compiled and reviewed as part of the data analysis. **Appendix 3.A** presents the site locations for the monitoring data received and used for the water quality characterization process.

### 3.B.5 Receiving Water Data Analysis

Per Part VI.C.5.a.i (pg 58) of the Permit, each EWMP shall include an evaluation of existing water quality conditions, including characterization of receiving water quality. Data were compiled to identify constituents exceeding applicable water quality objectives in the ULARWMA and immediate downstream waterbodies. Applicable water quality objectives were obtained from the California Toxics Rule (CTR), Basin Plan, and relevant TMDLs. Applicable water quality objectives from the CTR and Basin Plan were selected based on the beneficial uses identified in the Basin Plan. Generally, the water quality objectives utilized included those established for the protection of aquatic life, contact recreation and human health related to the consumption of organisms.

In order to characterize receiving water conditions for each WBPC, the following steps were taken:

- The first step in the analysis was to develop a list of constituents that were sampled for but were never detected in any water body within the EWMP area and therefore would not fall into one of

the three Permit categories (see **Table 1**). A list of these constituents is presented in **Attachment 1**.

- Next, constituents that were detected but the sample results never exceeded a corresponding water quality objective and therefore would not fall into one of the three Permit categories were identified. A list of these constituents is presented in **Error! Reference source not found**.
- All other constituents (i.e., all constituents detected and with sample results that had at least one result greater than an applicable water quality objective) were subject to further analysis.
  - Those constituents that exceeded but at a frequency that did not meet the 303(d) listing requirements are presented in summary tables in **Attachment 3**. These tables generally include the following attributes:
    - Applicable water body segments (i.e., tributaries, reaches, etc.)
    - TMDL target or applicable water quality objective (e.g., CTR and/or Basin Plan)
    - Applicable wet or dry weather conditions
    - Date range of data
    - Total number of samples, number of samples exceeding the water quality objectives, percent exceedance frequency, and number of exceedances in the past five years of available data
    - Whether or not the number of exceedances suggested an impairment per the State’s 303(d) Listing Policy<sup>1</sup>
    - Maximum and minimum of sample results
    - Additionally, for those constituents that exceeded at a frequency that met the 303(d) Listing requirements the average and median of the sample results is also provided.

For the analysis presented in **Attachment 3**, the determination of weather condition was based on the designation provided by the sampling program. If no information was provided by the sampling program, flow records were reviewed. If flow on the sample date exceeded the definition of wet weather of 500 cubic feet per second (cfs) identified in the LA River Metals TMDL, it was identified as a wet weather sample.

A large proportion of the data included non-detect values. Using these data to calculate summary statistics requires methods for dealing with the inherent uncertainty in characterizing the true range of water quality conditions. The method used to consider non-detect data results is typically known as regression on order statistics (ROS). Use of the ROS method, when statistical criteria are met, more appropriately estimates actual values than the commonly employed practice of assuming one half the detection limit for non-detect values. Criteria for sufficient data to use the ROS method are: 1) at least 20% and preferably 50% detected data and 2) at least three unique detected values. Instances of insufficient detected data results are noted in the summary tables as <20% detect in **Attachment 3**.

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<sup>1</sup> 2004 Water Quality Control Policy for Developing California’s Clean Water Act Section 303 (d) List.

### 3.B.6 Summary of Key Findings of Receiving Water Data Analysis

The following provides a summary of key findings from the receiving water data analysis. It is not intended to be a detailed discussion of all the results of the data analysis. Instead, the summary highlights outcomes of the data analysis that may have affected the constituents addressed by the EWMP and/or the way the EWMP approached addressing the constituent. For example, some constituents addressed by the Metals TMDL appear to exceed less frequently than in the past and as such, are discussed in this subsection. Conversely, indicator bacteria continue to exceed on a frequent basis and nothing “new” was learned from the data analysis. As such, indicator bacteria are not discussed in this subsection. The key findings are organized as follows:

- Summary of findings related to the LA River Metals TMDL.
- Summary of findings related to the Nutrients TMDL.
- Identification of constituents that are not currently on the 303(d) List, but appear to meet the listing requirements.
- Identification of constituents that exhibited exceedances of relevant water quality objectives, but do not meet the 303(d) listing requirements.
- Identification of current 303(d) listed constituents not addressed by a TMDL that appear to meet the delisting requirements.

#### Key findings related to the LA River Metals TMDL

Wet weather is the primary condition where exceedances of TMDL targets persist. Over the past five years, copper, lead and zinc exceedances of TMDL targets during dry weather are infrequent in the majority of the watershed. Cadmium did not exceed in any of the data reviewed. As noted in the Metals TMDL, frequent selenium exceedances are confined to the upper reaches of the watershed and appear to originate from natural sources. The following provides a generalized summary of the key findings from comparing the data collected over the past five years to the Metals TMDL targets (note that percentages are rounded and presented as a range to represent the range across multiple waterbodies) (see **Attachment 3** for detailed summary):

- Dissolved Cadmium: Zero exceedances in 64 and 83 wet and dry weather samples, respectively.
- Total Cadmium: Zero exceedances in 38 and 220 wet and dry weather samples, respectively.
- Dissolved Copper: Frequently exceeds in wet weather (13-46%), but rarely in dry weather (0%-3%), except for Tujunga Wash (71%).
- Total Copper: Consistently exceeds in wet weather (63-100%), but rarely during dry weather in the majority of the watershed (0-5%), except for Burbank Western Channel (18%), Rio Hondo (64%), and Tujunga Wash (78%).
- Dissolved Lead: Rarely exceeds during wet weather (0-6%) and only one exceedance during dry weather (Rio Hondo Reach 1) of 322 samples.

- Total Lead: Frequently exceeds in wet weather in LA River Reaches 1 and 2 (19 and 17%, respectively) but there were zero exceedances in the 76 samples collected in Reaches 3, 4, and 6. Rarely exceeds during dry weather in the majority of the watershed (0-6%), except for Rio Hondo (43%).
- Dissolved Zinc: Frequently exceeds in wet weather (0%-29%), but rarely in dry weather with only one exceedance (LA River Reach 1) out of 440 samples.
- Total Zinc: Consistently exceeds in wet weather (35%-100%), but rare in dry weather 12 of 662 samples (0%-11%).
- Total Selenium: Consistently exceeds in the upper reaches of the watershed where 66 of 136 dry weather samples collected in Reaches 5 and 6 exceeded. In the remainder of the watershed, only one sample (Reach 1) out of 242 exceeded.

### **Key findings related to the LA River Nutrients TMDL**

Over the past five years ammonia, nitrate and nitrite have rarely exceeded (<0.3%) LA River Nutrient TMDL targets. This is likely due to the fact that the primary sources of these constituents (DC Tillman, LA/Glendale, and Burbank WRPs) all upgraded their facilities to include nitrification/de-nitrification processes more than five years ago. The data analysis suggests that ammonia, nitrate and nitrite are not a water quality issue in the Watershed. The following provides a generalized summary of the key findings from comparing the data collected over the past five years to the Nutrients TMDL targets (see **Attachment 3** for detailed summary):

- Ammonia as N: Of the 2,015 samples collected only one exceeded (Tujunga Wash).
- Nitrate as N: Of the 2,015 samples collected zero samples exceeded.
- Nitrite as N: Of the 2,015 samples collected only one exceeded (Arroyo Seco).
- Nitrogen (NO<sub>3</sub>-N+NO<sub>2</sub>-N): Of the 2,015 samples collected zero samples exceeded.

### **Constituents not on the 303(d) List, but appear to meet listing requirements**

The data analysis identified a number of constituents exceeding relevant water quality objectives, at a frequency that appears to meet the 303(d) listing criteria. **Table 40** identifies the constituents by waterbody and presents the frequency of exceedances during wet and/or dry weather conditions over the past five and ten year periods. A more detailed summary of the analysis can be found in the tables presented in **Attachment 3**.

**Table 40. Summary of Key Findings – Constituents not currently on the 303(d) List, but appear to meet listing criteria**

Waterbody	Constituent	W/D	Date Range of Data		N	% Exceed	Past 5 Years		Source of Water Quality Objective
							N	% Exceed	
Aliso Canyon Wash	Bis(2-ethylhexyl)Phthalate	Dry	10/03	1/04	2	100%	NS	NS	CTR HH Organism
		Wet	10/03	2/04	4	75%	NS	NS	CTR HH Organism
Arroyo Seco	Bis(2-ethylhexyl)Phthalate	Wet	10/03	2/04	4	75%	NS	NS	CTR HH Organism
Bull Creek	Bis(2-ethylhexyl)Phthalate	Dry	10/03	1/04	2	100%	NS	NS	CTR HH Organism
		Wet	10/03	2/04	4	50%	NS	NS	CTR HH Organism
Burbank Western Channel	2,3,7,8-TCDD (Dioxin)	Dry	2/07	8/13	64	44%	40	43%	CTR HH Organism
	Bis(2-ethylhexyl)Phthalate	Dry	10/03	8/13	137	26%	45	18%	CTR HH Organism
		Wet	10/03	2/04	4	75%	NS	NS	CTR HH Organism
	Chlorine (Total)	Wet	2/04	2/12	42	12%	7	0%	BP Aquatic Life Objective
	Chlorodibromomethane	Dry	2/04	10/13	231	12%	123	1%	CTR HH Organism
Echo Park Lake	Mercury Total	Wet	2/04	2/05	6	50%	NS	NS	CTR HH Organism
Rio Hondo Reach 2	Bis(2-ethylhexyl)Phthalate	Dry	10/03	1/04	2	100%	NS	NS	CTR HH Organism
		Wet	10/03	2/04	4	75%	NS	NS	CTR HH Organism
Rio Hondo Reach 2	Copper Total	Dry	1/04	12/12	105	24%	46	7%	CTR Chronic
	Dissolved Oxygen	Dry	1/04	12/12	210	36%	46	41%	Basin Plan Minimum
	pH	Dry	1/04	12/12	210	21%	46	11%	Basin Plan Maximum
Tujunga Wash	Chloride	Dry	6/09	6/11	3	100%	3	100%	BP SSO
Verdugo Wash Reach 1	Bis(2-ethylhexyl)Phthalate	Dry	10/03	1/04	2	100%	NS	NS	CTR HH Organism
		Wet	10/03	2/04	4	75%	NS	NS	CTR HH Organism
LAR Reach 1	Bis(2-ethylhexyl)Phthalate	Dry	10/02	7/13	29	10%	17	6%	CTR HH Organism
	Mercury Total	Dry	6/01	7/13	81	14%	17	0%	CTR HH Organism
	pH	Dry	10/02	7/13	48	67%	16	75%	BP Maximum
LAR Reach 2	Mercury Total	Dry	4/01	6/10	108	19%	2	0%	CTR HH Organism
		Wet	1/01	3/05	9	22%	NS	NS	CTR HH Organism

Waterbody	Constituent	W/D	Date Range of Data		N	% Exceed	Past 5 Years		Source of Water Quality Objective
							N	% Exceed	
	pH	Dry	3/06	2/08	40	75%	NS	NS	BP Maximum
LAR Reach 3, below LAG	2,3,7,8-TCDD (Dioxin)	Dry	8/07	9/13	14	14%	11	18%	CTR HH Organism
	Mercury Total	Dry	4/01	11/13	156	11%	23	0%	CTR HH Organism
LAR Reach 3, above LAG	Mercury Total	Dry	5/01	11/13	11	9%	23	0%	CTR HH Organism
LAR Reach 4	Mercury Total	Dry	4/01	11/13	231	14%	37	0%	CTR HH Organism
		Wet	1/01	3/05	10	20%	NS	NS	CTR HH Organism
LAR Reach 5	Chloride	Dry	5/07	11/13	81	28%	60	28%	BP Maximum
	Diazinon	Dry	5/12	9/13	18	11%	18	11%	USEPA Chronic
	Sulfate	Dry	5/07	11/13	81	36%	60	37%	BP SSO
	TDS	Dry	5/07	8/13	78	32%	57	32%	BP SSO
LAR Reach 6	Chloride	Dry	2/02	6/10	49	43%	1	100%	BP SSO
	Mercury Total	Dry	4/01	6/10	111	12%	2	0%	CTR HH Organism
	Sulfate	Dry	2/02	6/10	49	98%	1	100%	BP SSO
	TDS	Dry	2/02	11/08	28	100%	NS	NS	BP SSO
	Thallium Total	Dry	3/01	8/08	71	8%	NS	NS	CTR HH Organism

BP = Basin Plan

SSO = Site Specific Objective

CTR = California Toxics Rule

NS = Not Sampled

HH Organism = Human Health Organisms only criteria

### **Constituents exceeding objectives, but do not meet the listing requirements**

The data analysis identified a number of constituents as exceeding relevant water quality objectives, but not at a frequency that meets the 303(d) listing criteria. **Table 41** identifies the constituents by waterbody and presents the frequency of exceedances during relevant conditions (e.g., wet and/or dry weather) over the past five and ten year periods. A more detailed summary of the analysis can be found in the tables presented in **Attachment 3**.

**Table 41. Summary of Key Findings – Constituents exceeding objectives, but do not appear to meet listing criteria**

Waterbody	Constituent	W/D	Date Range of Data		N	% Exceed	Past 5 Years		Source of Water Quality Objective
							N	% Exceed	
Aliso Canyon Wash	Cyanide	Wet	10/03	2/04	4	25%	NS	NS	CTR Acute
	Diazinon	Wet	10/03	2/04	4	25%	NS	NS	USEPA Acute
	Sulfate	Dry	10/03	5/09	3	33%	1	100%	BP SSO
	TDS	Dry	10/03	5/09	3	33%	1	100%	BP SSO
Arroyo Seco	Bis(2-ethylhexyl)Phthalate	Dry	10/03	1/04	2	50%	NS	NS	CTR HH Organism
	Mercury Total	Wet	10/03	3/05	6	17%	NS	NS	CTR HH Organism
Bull Creek	Cyanide	Wet	10/03	2/04	4	25%	NS	NS	CTR Acute
Burbank Western Channel	Benzo(a)Pyrene	Dry	10/03	8/13	137	1%	45	2%	CTR HH Organism
	Benzo(b)Fluoranthene	Dry	2/04	8/13	135	4%	45	4%	CTR HH Organism
	beta-BHC	Dry	10/03	8/13	131	1%	39	0%	CTR HH Organism
	Chloride	Dry	10/03	8/13	239	3%	125	3%	BP SSO
	Chlorine (Total)	Dry	10/03	10/13	1299	5%	526	3%	BP Aquatic Life Objective
	Cyanide	Dry	10/03	10/13	206	7%	93	1%	CTR Chronic
	Heptachlor	Dry	10/03	8/13	131	1%	39	0%	CTR HH Organism
	Mercury Total	Dry	10/03	8/13	244	7%	99	1%	CTR HH Organism
	Mercury Total	Wet	10/03	3/05	7	14%	NS	NS	CTR HH Organism
	pH	Dry	10/03	10/13	805	1%	249	0%	BP Minimum
	pH	Wet	10/03	1/08	41	10%	NS	NS	BP Minimum
	TDS	Dry	10/03	8/13	170	1%	55	2%	BP SSO
	Caballero Creek	Thallium Total	Dry	10/03	8/13	61	2%	21	0%
Mercury Total		Dry	2/05	2/06	12	8%	NS	NS	CTR HH Organism
Nickel Total		Dry	2/05	8/08	41	2%	NS	NS	CTR Chronic
Compton Creek	Chloride	Dry	6/09	6/11	4	50%	4	50%	BP SSO
	Chlorpyrifos	Dry	6/09	6/11	4	25%	4	25%	USEPA Chronic
	Mercury Total	Dry	2/05	6/11	16	6%	4	0%	CTR HH Organism
	Mercury Total	Wet	1/05	3/05	2	50%	NS	NS	CTR HH Organism
Echo Park Lake	Mercury Total	Dry	5/03	11/10	87	3%	24	0%	CTR HH Organism
Rio Hondo Reach 2	Cyanide	Dry	10/03	1/04	2	50%	NS	NS	CTR Chronic
	Diazinon	Wet	10/03	2/04	4	25%	NS	NS	USEPA Acute
	pH	Dry	10/03	1/04	2	50%	NS	NS	BP Minimum
	pH	Wet	10/03	2/04	4	25%	NS	NS	BP Minimum



Waterbody	Constituent	W/D	Date Range of Data		N	% Exceed	Past 5 Years		Source of Water Quality Objective
							N	% Exceed	
Rio Hondo Reach 3	Benzo(a)Pyrene	Dry	2/04	8/12	43	2%	9	22%	CTR HH Organism
	Benzo(k)Fluoranthene	Dry	2/04	8/12	43	2%	9	22%	CTR HH Organism
	Chloride	Dry	1/04	12/12	111	1%	52	0%	Basin Plan SSO
	Chrysene	Dry	2/04	8/12	43	2%	9	22%	CTR HH Organism
	Diazinon	Dry	2/04	11/12	60	5%	17	12%	CTR Chronic
	Dibenzo(a,h)Anthracene	Dry	2/04	8/12	43	5%	9	78%	CTR HH Organism
	Indeno(1,2,3-cd)Pyrene	Dry	2/04	8/12	36	3%	8	75%	CTR HH Organism
	Mercury Total	Dry	2/04	12/12	74	3%	41	2%	CTR HH Organism
Tujunga Wash	Mercury Total	Dry	2/05	6/11	15	7%	3	0%	CTR HH Organism
	TDS	Dry	6/09	6/09	1	100%	1	100%	BP SSO
Verdugo Wash Reach 1	Mercury Total	Wet	10/03	3/05	6	17%	NS	NS	CTR HH Organism
LAR Reach 1	Bis(2-ethylhexyl)Phthalate	Wet	11/02	5/13	49	8%	23	4%	CTR HH Organism
	Diazinon	Wet	11/02	5/13	41	2%	16	0%	USEPA Acute
	Dissolved Oxygen	Wet	11/02	5/13	41	2%	17	0%	BP Minimum
	Mercury Total	Wet	11/02	5/13	52	4%	23	0%	CTR HH Organism
	pH	Wet	11/02	1/13	50	4%	23	0%	BP Maximum
LAR Reach 2	Thallium Total	Dry	3/01	7/13	91	3%	23	0%	CTR HH Organism
	pH	Wet	12/07	1/08	4	50%	NS	NS	BP Maximum
	Thallium Total	Dry	3/01	2/06	112	2%	NS	NS	CTR HH Organism
LAR Reach 3, above LAG	2,3,7,8-TCDD (Dioxin)	Dry	8/07	9/13	13	8%	9	0%	CTR HH Organism
	2,3,7,8-TCDD (Dioxin)	Wet	2/10	2/10	2	50%	2	50%	CTR HH Organism
	Bis(2-ethylhexyl)Phthalate	Dry	2/02	9/13	44	2%	14	0%	CTR HH Organism
	Cyanide	Dry	2/02	11/13	64	8%	22	0%	CTR Chronic
	Dibenzo(a,h)Anthracene	Dry	2/02	9/13	47	4%	15	0%	CTR HH Organism
	Indeno(1,2,3-cd)Pyrene	Dry	2/02	9/13	22	5%	9	0%	CTR HH Organism
	Mercury Total	Dry	5/01	11/13	129	9%	23	0%	CTR HH Organism
	Mercury Total	Wet	1/01	2/10	7	14%	1	0%	CTR HH Organism
	Nickel Total	Dry	3/01	8/13	140	1%	19	0%	CTR Chronic
	pH	Dry	1/02	11/13	583	2%	232	5%	BP Minimum
	Sulfate	Dry	2/02	11/13	68	1%	21	0%	BP SSO
Thallium Total	Dry	3/01	8/13	91	2%	18	0%	CTR HH Organism	

Waterbody	Constituent	W/D	Date Range of Data	N	% Exceed	Past 5 Years		Source of Water Quality Objective		
						N	% Exceed			
LAR Reach 3, below LAG	2,3,7,8-TCDD (Dioxin)	Wet	2/10	2/10	2	50%	2	50%	CTR HH Organism	
	Benzo(a)Anthracene	Dry	2/02	9/13	75	1%	16	0%	CTR HH Organism	
	Bis(2-ethylhexyl)Phthalate	Dry	2/02	9/13	70	1%	15	0%	CTR HH Organism	
	Chrysene	Dry	2/02	9/13	75	1%	16	0%	CTR HH Organism	
	Cyanide	Dry	2/02	11/13	102	6%	23	0%	CTR Chronic	
	Dibenzo(a,h)Anthracene	Dry	2/02	9/13	75	8%	16	0%	CTR HH Organism	
	Dichlorobromomethane	Wet	2/10	2/10	1	100%	1	0%	CTR HH Organism	
	Dissolved Oxygen	Dry	1/02	11/13	879	2%	235	0%	BP Minimum	
	Indeno(1,2,3-cd)Pyrene	Dry	2/02	9/13	34	6%	9	0%	CTR HH Organism	
	Mercury Total	Wet	1/01	2/10	8	13%	1	0%	CTR HH Organism	
LAR Reach 4	Thallium Total	Dry	3/01	8/13	86	2%	18	0%	CTR HH Organism	
	Chrysene	Dry	2/02	8/13	38	3%	10	0%	CTR HH Organism	
	Cyanide	Dry	2/02	11/13	123	6%	37	3%	CTR Chronic	
	Diazinon	Dry	6/11	9/13	7	14%	7	14%	CTR Chronic	
	Dissolved Oxygen	Dry	1/02	11/13	901	1%	227	0%	BP Minimum	
	Sulfate	Dry	2/02	11/13	111	9%	21	5%	BP SSO	
	TDS	Dry	2/02	8/13	75	8%	19	0%	BP SSO	
	Thallium Total	Dry	3/01	8/13	128	2%	10	0%	CTR HH Organism	
	LAR Reach 5	4,4-DDD	Dry	2/02	8/13	72	3%	30	3%	CTR HH Organism
		4,4-DDE	Dry	2/02	8/13	72	6%	30	7%	CTR HH Organism
Bis(2-ethylhexyl)Phthalate		Dry	2/02	8/13	84	1%	30	0%	CTR HH Organism	
Cyanide		Dry	2/02	11/13	156	3%	102	1%	CTR Chronic	
Dibenzo(a,h)Anthracene		Dry	2/02	8/13	75	1%	30	3%	CTR HH Organism	
Dissolved Oxygen		Dry	1/02	11/13	1684	8%	674	4%	BP Minimum	
Heptachlor		Dry	2/02	8/13	72	3%	30	0%	CTR HH Organism	
Indeno(1,2,3-cd)Pyrene		Dry	2/02	8/13	75	1%	30	3%	CTR HH Organism	
Mercury Total		Dry	2/02	11/13	156	4%	102	0%	CTR HH Organism	
Nickel Total		Dry	2/02	8/13	72	1%	30	3%	CTR Chronic	
LAR Reach 6	2,3,7,8-TCDD (Dioxin)	Dry	8/07	8/08	4	25%	NS	NS	CTR HH Organism	
	Chlorine (Total)	Dry	1/02	1/09	321	1%	3	0%	BP Aquatic Life Objective	
	Chrysene	Dry	2/02	8/08	15	7%	NS	NS	CTR HH Organism	

Waterbody	Constituent	W/D	Date Range of Data	N	% Exceed	Past 5 Years		Source of Water Quality Objective
						N	% Exceed	
	Cyanide	Dry	2/02 - 1/09	44	2%	1	0%	CTR Chronic
	Mercury Total	Wet	1/01 - 3/05	7	14%	NS	NS	CTR HH Organism

BP = Basin Plan

SSO = Site Specific Objective

CTR = California Toxics Rule

NS = Not Sampled

HH Organism = Human Health Organisms only criteria

### Identification of current 303(d) listed constituents not addressed by a TMDL that meet the delisting requirements

A number of 303(d) listings not addressed by an existing TMDL were identified as potentially meeting delisting requirements as shown in **Table 42**.

**Table 42. 2010 303(d) Listed Water Body-Pollutant Combinations in the Los Angeles River Watershed not Addressed by a TMDL that Appears to Meet Delisting Requirements**

Constituent	Los Angeles River			Burbank Western Channel
	1	2	5	
Diazinon	W			
Cyanide				W/D
Selenium				W/D
Oil		D	D	

W and D denote whether the listing is associated with wet weather and/or dry weather conditions.

**Diazinon – LA River Reach 1:** Diazinon in LA River Reach 1 was listed based on two of 22 samples exceeding criteria developed by the California Department of Fish and Game (DFG) at the LA County mass emission station between October 2000 and April 2003. A review of the past 10 years of data, which includes the data identified in the 303(d) listing fact sheet, indicates that only one of 41 samples during wet weather and zero of 36 dry weather samples exceed USEPA’s recommended criteria for diazinon. Although neither criteria have been formally adopted by California, USEPA’s criteria is utilized rather than the DFG criteria as it was completed in 2005 (five years after DFG’s) and it addresses a transcription error in data utilized in the DFG criteria. The data analysis suggests that diazinon is not a water quality issues in LA River Reach 1. A more detailed summary of the analysis can be found in the tables presented in **Attachment 3**.

**Cyanide – Burbank Western Channel:** Cyanide in Burbank Western Channel was listed based on two of six samples exceeding CTR chronic criterion at a LA County tributary station monitored between October 2003 and February 2004. A review of the past 10 years of data, which includes the data identified in the 2010 303(d) listing fact sheet, indicates that:

- One of the two exceedances noted in the 2010 303(d) listing fact sheet occurred during wet weather and should have been compared to the CTR acute criterion.
- Of the four wet weather samples collected all were below the CTR acute criterion.
- Of the 206 dry weather samples collected over the past 10 years, 15 exceeded the CTR chronic criteria.
- Of the 93 dry weather samples collected in the past five years, only one of 93 (1%), exceeded.

The 303(d) listing guidance indicates that with a sample size as large as 206 a delisting can occur if there are 17 or fewer exceedances. The data analysis suggests that cyanide in the Burbank Western Channel is not a water quality issue based on the past 10 years of available data and, particularly given the past five years of data. A more detailed summary of the analysis can be found in the tables presented in **Attachment 3**.

**Selenium – Burbank Western Channel:** Selenium in Burbank Western Channel was listed based on 12 of 48 samples exceeding CTR chronic criterion at stations sampled by the Burbank WRP during dry weather. A review of the past 10 years of data, which includes the data identified in the 2010 303(d) listing fact sheet, indicates that:

- Of the 235 dry weather samples collected over the past 10 years, 15 exceeded the CTR chronic criteria.
- Of the 99 dry weather samples collected in the past five years, zero exceeded.

The 303(d) listing guidance indicates that with a sample size as large as 235 a delisting can occur if there are 19 or fewer exceedances. The data analysis suggests that selenium in the Burbank Western Channel is not a water quality issue based on the past 10 years of available data and, particularly given the past five years of data. A more detailed summary of the analysis can be found in the tables presented in **Attachment 3**.

**Oil – LA River Reaches 2 and 5:** The 2010 303(d) listing fact sheet does not provide a synopsis of the data used to list oil in LA River Reach 2 or 5. As stated in the fact sheet, “303(d) listing decisions made prior to 2006 were not held in an assessment database. The Regional Boards will update this decision when new data and information become available and are assessed.” Repeated efforts have been made to obtain the historical information utilized to develop the original listing; however, the Regional Board has not provided the information for inclusion in the analysis. Therefore, the following is based information gathered by the City of Los Angeles, Bureau of Sanitation, Watershed Protection Division (WPD). Three relevant studies/correspondences were reviewed:

- Pollution Report (2002), EPA Region IX
- Correspondence (2002) from Michael P. Brown, Manager, Geotechnical Engineering Division, Bureau of Engineering, City of Los Angeles
- Correspondence (2002) from Steven Poole, Claims Manager, United States Coast Guard, National Pollution Funds Center

The source of oil seeping into the River was found to be naturally-occurring crude oil. This conclusion is supported by the results of investigations completed by various agencies, which are summarized as follows. An investigation was conducted following seeps of petroleum hydrocarbons into the LA River in June 2001. Based on lab results and borings, it was concluded that the source of the LA River channel oil seeps is naturally-occurring crude oil from Puente formation sands. Oil was visible in Puente formation seams, partings and fractures, as well as sand lenses, and appeared to have migrated upward into sandy alluvial soils. Gasses encountered included hydrogen sulfide, commonly sources from crude oil reservoirs. The hydrocarbon seeps appeared to be concentrated where the Puente formation contacts with younger, less permeable units or layers.

The EPA On-Scene Coordinator (OSC) conducted subsurface investigations of the oil seeps in the LA River during August and September 2001. Based on the investigation, the OSC found that the oil did not discharge as a result of a spill, leak, or discharge from any facility and that the oil has been discharging to the river since at least 1943 and there is no practical means of preventing this oil seep from discharging to the River.

On April 19, 2002, an email was sent to Steven Pederson of WPD by Steven Poole of the US Coast Guard/National Pollution Funds Center (USGC/NPFC). Mr. Poole stated that City of Los Angeles cannot submit to USGC/NPFC a claim for reimbursement for cost incurred by the City associated with May 2001 oil clean-up efforts in the LA River because Title 1 of the Oil Pollution Act does not allow for reimbursement for **naturally-occurring oil** (natural seepage).

In summary, the reports and correspondence discussed herein, indicate that multiple agencies believe that the oil found in the listed reaches of the LA River is associated with naturally occurring seepage suggesting that a 303(d) listing is not warranted, or at a minimum, not addressable through the MS4 Permit.

## Attachment 1: Constituents that have not been detected in water

Constituents in this attachment were not detected in any available data reviewed.

### Aliso Canyon Wash – Constituents that have not been detected in water

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
1,2,4-Trichlorobenzene	10/03	2/04	6	0.5	0.5	µg/L
1,2-Dichlorobenzene	10/03	2/04	6	0.05	0.05	µg/L
1,2-Diphenylhydrazine	10/03	2/04	6	3	3	µg/L
1,3-Dichlorobenzene	10/03	2/04	6	0.05	0.05	µg/L
1,4-Dichlorobenzene	10/03	2/04	6	0.05	0.05	µg/L
2,4,5-TP	10/03	2/04	6	1	1	µg/L
2,4,6-Trichlorophenol	10/03	2/04	6	1	1	µg/L
2,4-D	10/03	2/04	6	10	10	µg/L
2,4-Dichlorophenol	10/03	2/04	6	2	2	µg/L
2,4-Dimethylphenol	10/03	2/04	6	2	2	µg/L
2,4-Dinitrophenol	10/03	2/04	6	3	3	µg/L
2,4-Dinitrotoluene	10/03	2/04	6	0.05	0.05	µg/L
2,6-Dinitrotoluene	10/03	2/04	6	0.05	0.05	µg/L
2-Chloronaphthalene	10/03	2/04	6	0.1	0.1	µg/L
2-Chlorophenol	10/03	2/04	6	2	2	µg/L
2-Methyl-4,6-Dinitrophenol	10/03	2/04	6	3	3	µg/L
2-Nitrophenol	10/03	2/04	6	3	3	µg/L
3,3-Dichlorobenzidine	10/03	2/04	6	3	3	µg/L
3-Methyl-4-Chlorophenol	10/03	2/04	6	3	3	µg/L
4,4-DDD	10/03	2/04	6	0.1	0.1	µg/L
4,4-DDE	10/03	2/04	6	0.1	0.1	µg/L
4,4-DDT	10/03	2/04	6	0.1	0.1	µg/L
4-Bromophenyl Phenyl Ether	10/03	2/04	6	1	1	µg/L
4-Chlorophenyl Phenyl Ether	10/03	2/04	6	0.1	0.1	µg/L
4-Nitrophenol	10/03	2/04	6	3	3	µg/L
Acenaphthene	10/03	2/04	6	0.05	0.05	µg/L
Acenaphthylene	10/03	2/04	6	0.05	0.05	µg/L
Aldrin	10/03	2/04	6	0.05	0.05	µg/L
alpha-BHC	10/03	2/04	6	0.05	0.05	µg/L
Aluminum Dissolved	10/03	2/04	6	100	100	µg/L
Anthracene	10/03	2/04	6	0.05	0.05	µg/L

**Aliso Canyon Wash – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
Aroclor 1016	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1221	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1232	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1242	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1248	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1254	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1260	10/03	2/04	6	0.5	0.5	µg/L
Atrazine	10/03	2/04	6	2	2	µg/L
Benzidine	10/03	2/04	6	3	3	µg/L
Benzo(a)Anthracene	10/03	2/04	6	0.1	0.1	µg/L
Benzo(a)Pyrene	10/03	2/04	6	0.1	0.1	µg/L
Benzo(k)Fluoranthene	10/03	2/04	6	0.1	0.1	µg/L
Beryllium - Dissolved	10/03	2/06	20	0.4	1	µg/L
Beryllium - Total	10/03	2/06	20	0.4	1	µg/L
beta-BHC	10/03	2/04	6	0.05	0.05	µg/L
Bifenthrin	5/09	5/09	1	0.0005	0.0005	µg/L
Bis(2-chloroethoxy)Methane	10/03	2/04	6	0.1	0.1	µg/L
Bis(2-chloroethyl)Ether	10/03	2/04	6	0.1	0.1	µg/L
Bis(2-chloroisopropyl)Ether	10/03	2/04	6	1	1	µg/L
Bolstar	5/09	5/09	1	0.002	0.002	µg/L
Butylbenzyl Phthalate	10/03	2/04	6	0.3	0.3	µg/L
Chlordane-alpha	10/03	2/04	6	0.05	0.05	µg/L
Chlordane-gamma	10/03	2/04	6	0.05	0.05	µg/L
Chlorpyrifos	10/03	5/09	7	0.001	0.05	µg/L
Chromium (VI) Dissolved	10/03	2/04	6	10	10	µg/L
Chromium (VI) Total	10/03	2/04	6	10	10	µg/L
Chrysene	10/03	2/04	6	0.1	0.1	µg/L
Cyanazine	10/03	2/04	6	2	2	µg/L
Cyfluthrin	5/09	5/09	1	0.0005	0.0005	µg/L
Cypermethrin	5/09	5/09	1	0.0005	0.0005	µg/L
delta-BHC	10/03	2/04	6	0.05	0.05	µg/L
Deltamethrin	5/09	5/09	1	0.0005	0.0005	µg/L
Demeton-S	5/09	5/09	1	0.001	0.001	µg/L
Dibenzo(a,h)Anthracene	10/03	2/04	6	0.1	0.1	µg/L
Dichlorvos	5/09	5/09	1	0.003	0.003	µg/L



**Aliso Canyon Wash – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
Dieldrin	10/03	2/04	6	0.1	0.1	µg/L
Dimethoate	5/09	5/09	1	0.003	0.003	µg/L
Dimethyl Phthalate	10/03	2/04	6	0.5	0.5	µg/L
Di-n-Octyl Phthalate	10/03	2/04	6	1	1	µg/L
Disulfoton	5/09	5/09	1	0.001	0.001	µg/L
Endosulfan I	10/03	2/04	6	0.1	0.1	µg/L
Endosulfan II	10/03	2/04	6	0.1	0.1	µg/L
Endosulfan Sulfate	10/03	2/04	6	0.1	0.1	µg/L
Endrin	10/03	2/04	6	0.1	0.1	µg/L
Endrin Aldehyde	10/03	2/04	6	0.1	0.1	µg/L
Esfenvalerate	5/09	5/09	1	0.0005	0.0005	µg/L
Ethoprop	5/09	5/09	1	0.001	0.001	µg/L
Fensulfothion	5/09	5/09	1	0.001	0.001	µg/L
Fenthion	5/09	5/09	1	0.002	0.002	µg/L
Fenvalerate	5/09	5/09	1	0.0005	0.0005	µg/L
Fluoranthene	10/03	2/04	6	0.1	0.1	µg/L
Fluorene	10/03	2/04	6	0.1	0.1	µg/L
gamma-BHC (Lindane)	10/03	2/04	6	0.05	0.05	µg/L
Glyphosate	10/03	2/04	6	25	25	µg/L
Heptachlor	10/03	2/04	6	0.05	0.05	µg/L
Heptachlor Epoxide	10/03	2/04	6	0.05	0.05	µg/L
Hexachlorobenzene	10/03	2/04	6	0.5	0.5	µg/L
Hexachlorobutadiene	10/03	2/04	6	1	1	µg/L
Hexachlorocyclopentadiene	10/03	2/04	6	3	3	µg/L
Hexachloroethane	10/03	2/04	6	1	1	µg/L
Indeno(1,2,3-cd)Pyrene	10/03	2/04	6	0.1	0.1	µg/L
L-Cyhalothrin	5/09	5/09	1	0.0005	0.0005	µg/L
Malathion	10/03	5/09	7	0.003	2	µg/L
Mercury Dissolved	10/03	5/09	21	0.004	1	µg/L
Merphos	5/09	5/09	1	0.001	0.001	µg/L
Methyl Parathion	5/09	5/09	1	0.001	0.001	µg/L
Mevinphos	5/09	5/09	1	0.008	0.008	µg/L
Naphthalene	10/03	2/04	6	0.05	0.05	µg/L
Nitrobenzene	10/03	2/04	6	0.05	0.05	µg/L
N-Nitrosodimethylamine	10/03	2/04	6	0.3	0.3	µg/L

**Aliso Canyon Wash – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
N-Nitrosodi-n-Propylamine	10/03	2/04	6	0.3	0.3	µg/L
N-Nitrosodiphenylamine	10/03	2/04	6	0.3	0.3	µg/L
Pentachlorophenol	10/03	2/04	6	2	2	µg/L
Permethrin	5/09	5/09	1	0.005	0.005	µg/L
Phenanthrene	10/03	2/04	6	0.05	0.05	µg/L
Phenols (Total)	10/03	2/04	6	1	1	µg/L
Phorate	5/09	5/09	1	0.006	0.006	µg/L
Prometryn	10/03	2/04	6	2	2	µg/L
Pyrene	10/03	2/04	6	0.05	0.05	µg/L
Ronnel	5/09	5/09	1	0.002	0.002	µg/L
Simazine	10/03	2/04	6	2	2	µg/L
Tetrachlorvinphos	5/09	5/09	1	0.002	0.002	µg/L
Tokuthion	5/09	5/09	1	0.003	0.003	µg/L
Toxaphene	10/03	2/04	6	1	1	µg/L
Trichloronate	5/09	5/09	1	0.001	0.001	µg/L

**Arroyo Seco – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
1,2,4-Trichlorobenzene	10/03	2/04	6	0.5	0.5	µg/L
1,2-Dichlorobenzene	10/03	2/04	6	0.05	0.05	µg/L
1,2-Diphenylhydrazine	10/03	2/04	6	3	3	µg/L
1,3-Dichlorobenzene	10/03	2/04	6	0.05	0.05	µg/L
1,4-Dichlorobenzene	10/03	2/04	6	0.05	0.05	µg/L
2,4,5-TP	10/03	2/04	6	1	1	µg/L
2,4,6-Trichlorophenol	10/03	2/04	6	1	1	µg/L
2,4-D	10/03	2/04	6	10	10	µg/L
2,4-Dichlorophenol	10/03	2/04	6	2	2	µg/L
2,4-Dimethylphenol	10/03	2/04	6	2	2	µg/L
2,4-Dinitrophenol	10/03	2/04	6	3	3	µg/L
2,4-Dinitrotoluene	10/03	2/04	6	0.05	0.05	µg/L
2,6-Dinitrotoluene	10/03	2/04	6	0.05	0.05	µg/L
2-Chloronaphthalene	10/03	2/04	6	0.1	0.1	µg/L

**Arroyo Seco – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
2-Chlorophenol	10/03	2/04	6	2	2	µg/L
2-Methyl-4,6-Dinitrophenol	10/03	2/04	6	3	3	µg/L
2-Nitrophenol	10/03	2/04	6	3	3	µg/L
3,3-Dichlorobenzidine	10/03	2/04	6	3	3	µg/L
3-Methyl-4-Chlorophenol	10/03	2/04	6	3	3	µg/L
4,4-DDD	10/03	2/04	6	0.1	0.1	µg/L
4,4-DDE	10/03	2/04	6	0.1	0.1	µg/L
4,4-DDT	10/03	2/04	6	0.1	0.1	µg/L
4-Bromophenyl Phenyl Ether	10/03	2/04	6	1	1	µg/L
4-Chlorophenyl Phenyl Ether	10/03	2/04	6	0.1	0.1	µg/L
4-Nitrophenol	10/03	2/04	6	3	3	µg/L
Acenaphthene	10/03	2/04	6	0.05	0.05	µg/L
Acenaphthylene	10/03	2/04	6	0.05	0.05	µg/L
Aldrin	10/03	2/04	6	0.05	0.05	µg/L
alpha-BHC	10/03	2/04	6	0.05	0.05	µg/L
Aluminum - Dissolved	10/03	2/04	6	100	100	µg/L
Anthracene	10/03	2/04	6	0.05	0.05	µg/L
Aroclor 1016	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1221	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1232	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1242	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1248	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1254	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1260	10/03	2/04	6	0.5	0.5	µg/L
Atrazine	10/03	2/04	6	2	2	µg/L
Benzidine	10/03	2/04	6	3	3	µg/L
Benzo(a)Anthracene	10/03	2/04	6	0.1	0.1	µg/L
Benzo(a)Pyrene	10/03	2/04	6	0.1	0.1	µg/L
Benzo(k)Fluoranthene	10/03	2/04	6	0.1	0.1	µg/L
Beryllium - Dissolved	10/03	2/06	20	0.4	1	µg/L
Beryllium - Total	10/03	2/06	20	0.4	1	µg/L
beta-BHC	10/03	2/04	6	0.05	0.05	µg/L
Bifenthrin	5/09	6/11	6	0.0005	0.001	µg/L
Bis(2-chloroethoxy)Methane	10/03	2/04	6	0.1	0.1	µg/L
Bis(2-chloroethyl)Ether	10/03	2/04	6	0.1	0.1	µg/L

**Arroyo Seco – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Bis(2-chloroisopropyl)Ether	10/03	2/04	6	1	1	µg/L
Bolstar	5/09	6/11	6	0.002	0.002	µg/L
Butylbenzyl Phthalate	10/03	2/04	6	0.3	0.3	µg/L
Chlordane-alpha	10/03	2/04	6	0.05	0.05	µg/L
Chlordane-gamma	10/03	2/04	6	0.05	0.05	µg/L
Chlorpyrifos	10/03	6/11	12	0.001	0.05	µg/L
Chromium (VI) - Dissolved	10/03	2/04	6	10	10	µg/L
Chromium (VI) - Total	10/03	2/04	6	10	10	µg/L
Chrysene	10/03	2/04	6	0.1	0.1	µg/L
cis-Permethrin	6/11	6/11	2	0.005	0.005	µg/L
Cyanazine	10/03	2/04	6	2	2	µg/L
Cyfluthrin	5/09	6/11	6	0.0005	0.001	µg/L
Cypermethrin	5/09	6/11	6	0.0005	0.001	µg/L
delta-BHC	10/03	2/04	6	0.05	0.05	µg/L
Deltamethrin	5/09	6/11	6	0.0005	0.005	µg/L
Demeton-S	5/09	6/11	5	0.001	0.001	µg/L
Dibenzo(a,h)Anthracene	10/03	2/04	6	0.1	0.1	µg/L
Dichlorvos	5/09	6/11	6	0.003	0.003	µg/L
Dieldrin	10/03	2/04	6	0.1	0.1	µg/L
Dimethoate	5/09	7/10	4	0.002	0.003	µg/L
Dimethyl Phthalate	10/03	2/04	6	0.5	0.5	µg/L
Di-n-Octyl Phthalate	10/03	2/04	6	1	1	µg/L
Disulfoton	5/09	6/11	6	0.001	0.001	µg/L
Endosulfan I	10/03	2/04	6	0.1	0.1	µg/L
Endosulfan II	10/03	2/04	6	0.1	0.1	µg/L
Endosulfan Sulfate	10/03	2/04	6	0.1	0.1	µg/L
Endrin	10/03	2/04	6	0.1	0.1	µg/L
Endrin Aldehyde	10/03	2/04	6	0.1	0.1	µg/L
Esfenvalerate	5/09	7/10	4	0.0005	0.0005	µg/L
Ethoprop	5/09	6/11	6	0.001	0.001	µg/L
Fensulfothion	5/09	6/11	6	0.001	0.001	µg/L
Fenthion	5/09	6/11	6	0.002	0.002	µg/L
Fenvalerate	5/09	6/11	8	0.0005	0.001	µg/L
Fluoranthene	10/03	2/04	6	0.1	0.1	µg/L
Fluorene	10/03	2/04	6	0.1	0.1	µg/L

**Arroyo Seco – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
gamma-BHC (Lindane)	10/03	2/04	6	0.05	0.05	µg/L
Glyphosate	10/03	2/04	6	25	25	µg/L
Heptachlor	10/03	2/04	6	0.05	0.05	µg/L
Heptachlor Epoxide	10/03	2/04	6	0.05	0.05	µg/L
Hexachlorobenzene	10/03	2/04	6	0.5	0.5	µg/L
Hexachlorobutadiene	10/03	2/04	6	1	1	µg/L
Hexachlorocyclopentadiene	10/03	2/04	6	3	3	µg/L
Hexachloroethane	10/03	2/04	6	1	1	µg/L
Indeno(1,2,3-cd)Pyrene	10/03	2/04	6	0.1	0.1	µg/L
L-Cyhalothrin	5/09	6/11	6	0.0005	0.001	µg/L
Malathion	10/03	6/11	12	0.003	2	µg/L
Merphos	5/09	7/10	4	0.001	0.001	µg/L
Methyl Parathion	5/09	6/11	6	0.001	0.001	µg/L
Mevinphos	5/09	6/11	6	0.008	0.008	µg/L
Naphthalene	10/03	2/04	6	0.05	0.05	µg/L
Nitrobenzene	10/03	2/04	6	0.05	0.05	µg/L
N-Nitrosodimethylamine	10/03	2/04	6	0.3	0.3	µg/L
N-Nitrosodi-n-Propylamine	10/03	2/04	6	0.3	0.3	µg/L
N-Nitrosodiphenylamine	10/03	2/04	6	0.3	0.3	µg/L
Pentachlorophenol	10/03	2/04	6	2	2	µg/L
Permethrin	5/09	7/10	4	0.005	0.005	µg/L
Phenanthrene	10/03	2/04	6	0.05	0.05	µg/L
Phenols (Total)	10/03	2/04	6	1	1	µg/L
Phorate	5/09	6/11	6	0.006	0.006	µg/L
Prometryn	10/03	2/04	6	2	2	µg/L
Pyrene	10/03	2/04	6	0.05	0.05	µg/L
Ronnel	5/09	6/11	6	0.002	0.002	µg/L
Simazine	10/03	2/04	6	2	2	µg/L
Tetrachlorvinphos	5/09	6/11	6	0.002	0.002	µg/L
Tokuthion	5/09	6/11	6	0.003	0.003	µg/L
Toxaphene	10/03	2/04	6	1	1	µg/L
TPH	10/03	2/04	6	1	1	mg/L
trans-Permethrin	6/11	6/11	2	0.005	0.005	µg/L
Trichloronate	5/09	6/11	6	0.001	0.001	µg/L

**Bull Creek – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
1,2,4-Trichlorobenzene	10/03	2/04	6	0.5	0.5	µg/L
1,2-Dichlorobenzene	10/03	2/04	6	0.05	0.05	µg/L
1,2-Diphenylhydrazine	10/03	2/04	6	3	3	µg/L
1,3-Dichlorobenzene	10/03	2/04	6	0.05	0.05	µg/L
1,4-Dichlorobenzene	10/03	2/04	6	0.05	0.05	µg/L
2,4,5-TP	10/03	2/04	6	1	1	µg/L
2,4,6-Trichlorophenol	10/03	2/04	6	1	1	µg/L
2,4-D	10/03	2/04	6	10	10	µg/L
2,4-Dichlorophenol	10/03	2/04	6	2	2	µg/L
2,4-Dimethylphenol	10/03	2/04	6	2	2	µg/L
2,4-Dinitrophenol	10/03	2/04	6	3	3	µg/L
2,4-Dinitrotoluene	10/03	2/04	6	0.05	0.05	µg/L
2,6-Dinitrotoluene	10/03	2/04	6	0.05	0.05	µg/L
2-Chloronaphthalene	10/03	2/04	6	0.1	0.1	µg/L
2-Chlorophenol	10/03	2/04	6	2	2	µg/L
2-Methyl-4,6-Dinitrophenol	10/03	2/04	6	3	3	µg/L
2-Nitrophenol	10/03	2/04	6	3	3	µg/L
3,3-Dichlorobenzidine	10/03	2/04	6	3	3	µg/L
3-Methyl-4-Chlorophenol	10/03	2/04	6	3	3	µg/L
4,4-DDD	10/03	2/04	6	0.1	0.1	µg/L
4,4-DDE	10/03	2/04	6	0.1	0.1	µg/L
4,4-DDT	10/03	2/04	6	0.1	0.1	µg/L
4-Bromophenyl Phenyl Ether	10/03	2/04	6	1	1	µg/L
4-Chlorophenyl Phenyl Ether	10/03	2/04	6	0.1	0.1	µg/L
4-Nitrophenol	10/03	2/04	6	3	3	µg/L
Acenaphthene	10/03	2/04	6	0.05	0.05	µg/L
Acenaphthylene	10/03	2/04	6	0.05	0.05	µg/L
Aldrin	10/03	2/04	6	0.05	0.05	µg/L
alpha-BHC	10/03	2/04	6	0.05	0.05	µg/L
Aluminum Dissolved	10/03	2/04	6	100	100	µg/L

**Bull Creek – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Anthracene	10/03	2/04	6	0.05	0.05	µg/L
Aroclor 1016	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1221	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1232	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1242	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1248	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1254	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1260	10/03	2/04	6	0.5	0.5	µg/L
Atrazine	10/03	2/04	6	2	2	µg/L
Benzidine	10/03	2/04	6	3	3	µg/L
Benzo(a)Anthracene	10/03	2/04	6	0.1	0.1	µg/L
Benzo(a)Pyrene	10/03	2/04	6	0.1	0.1	µg/L
Benzo(k)Fluoranthene	10/03	2/04	6	0.1	0.1	µg/L
Beryllium - Dissolved	10/03	2/06	20	0.4	1	µg/L
Beryllium Total	10/03	2/06	20	0.4	1	µg/L
beta-BHC	10/03	2/04	6	0.05	0.05	µg/L
Bis(2-chloroethoxy)Methane	10/03	2/04	6	0.1	0.1	µg/L
Bis(2-chloroethyl)Ether	10/03	2/04	6	0.1	0.1	µg/L
Bis(2-chloroisopropyl)Ether	10/03	2/04	6	1	1	µg/L
Bolstar	6/10	6/10	2	0.002	0.002	µg/L
Butylbenzyl Phthalate	10/03	2/04	6	0.3	0.3	µg/L
Chlordane-alpha	10/03	2/04	6	0.05	0.05	µg/L
Chlordane-gamma	10/03	2/04	6	0.05	0.05	µg/L
Chlorpyrifos	10/03	6/10	8	0.001	0.05	µg/L
Chromium (VI) Dissolved	10/03	2/04	6	10	10	µg/L
Chromium (VI) Total	10/03	2/04	6	10	10	µg/L
Chrysene	10/03	2/04	6	0.1	0.1	µg/L
Cyanazine	10/03	2/04	6	2	2	µg/L
Cyfluthrin	6/10	6/10	2	0.0005	0.0005	µg/L
Cypermethrin	6/10	6/10	2	0.0005	0.0005	µg/L

**Bull Creek – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
delta-BHC	10/03	2/04	6	0.05	0.05	µg/L
Deltamethrin	6/10	6/10	2	0.0005	0.0005	µg/L
Dibenzo(a,h)Anthracene	10/03	2/04	6	0.1	0.1	µg/L
Dichlorvos	6/10	6/10	2	0.003	0.003	µg/L
Dieldrin	10/03	2/04	6	0.1	0.1	µg/L
Dimethoate	6/10	6/10	2	0.002	0.002	µg/L
Dimethyl Phthalate	10/03	2/04	6	0.5	0.5	µg/L
Di-n-Octyl Phthalate	10/03	2/04	6	1	1	µg/L
Disulfoton	6/10	6/10	2	0.001	0.001	µg/L
Endosulfan I	10/03	2/04	6	0.1	0.1	µg/L
Endosulfan II	10/03	2/04	6	0.1	0.1	µg/L
Endosulfan Sulfate	10/03	2/04	6	0.1	0.1	µg/L
Endrin	10/03	2/04	6	0.1	0.1	µg/L
Endrin Aldehyde	10/03	2/04	6	0.1	0.1	µg/L
Esfenvalerate	6/10	6/10	2	0.0005	0.0005	µg/L
Ethoprop	6/10	6/10	2	0.001	0.001	µg/L
Fensulfothion	6/10	6/10	2	0.001	0.001	µg/L
Fenthion	6/10	6/10	2	0.002	0.002	µg/L
Fenvalerate	6/10	6/10	2	0.0005	0.0005	µg/L
Fluoranthene	10/03	2/04	6	0.1	0.1	µg/L
Fluorene	10/03	2/04	6	0.1	0.1	µg/L
gamma-BHC (Lindane)	10/03	2/04	6	0.05	0.05	µg/L
Glyphosate	10/03	2/04	6	25	25	µg/L
Heptachlor	10/03	2/04	6	0.05	0.05	µg/L
Heptachlor Epoxide	10/03	2/04	6	0.05	0.05	µg/L
Hexachlorobenzene	10/03	2/04	6	0.5	0.5	µg/L
Hexachlorobutadiene	10/03	2/04	6	1	1	µg/L
Hexachlorocyclopentadiene	10/03	2/04	6	3	3	µg/L
Hexachloroethane	10/03	2/04	6	1	1	µg/L
Indeno(1,2,3-cd)Pyrene	10/03	2/04	6	0.1	0.1	µg/L



**Bull Creek – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Isophorone	10/03	2/04	6	0.05	0.05	µg/L
L-Cyhalothrin	6/10	6/10	2	0.0005	0.0005	µg/L
Malathion	10/03	6/10	8	0.003	2	µg/L
Merphos	6/10	6/10	2	0.001	0.001	µg/L
Methyl Parathion	6/10	6/10	2	0.001	0.001	µg/L
Mevinphos	6/10	6/10	2	0.008	0.008	µg/L
Naphthalene	10/03	2/04	6	0.05	0.05	µg/L
Nitrobenzene	10/03	2/04	6	0.05	0.05	µg/L
N-Nitrosodimethylamine	10/03	2/04	6	0.3	0.3	µg/L
N-Nitrosodi-n-Propylamine	10/03	2/04	6	0.3	0.3	µg/L
N-Nitrosodiphenylamine	10/03	2/04	6	0.3	0.3	µg/L
Pentachlorophenol	10/03	2/04	6	2	2	µg/L
Permethrin	6/10	6/10	2	0.005	0.005	µg/L
Phenanthrene	10/03	2/04	6	0.05	0.05	µg/L
Phenols (Total)	10/03	2/04	6	1	1	µg/L
Phorate	6/10	6/10	2	0.006	0.006	µg/L
Prometryn	10/03	2/04	6	2	2	µg/L
Pyrene	10/03	2/04	6	0.05	0.05	µg/L
Ronnel	6/10	6/10	2	0.002	0.002	µg/L
Simazine	10/03	2/04	6	2	2	µg/L
Tetrachlorvinphos	6/10	6/10	2	0.002	0.002	µg/L
Thallium - Total	10/03	2/06	20	1	5	µg/L
Tokuthion	6/10	6/10	2	0.003	0.003	µg/L
Toxaphene	10/03	2/04	6	1	1	µg/L
TPH	10/03	2/04	6	1	1	mg/L
Trichloronate	6/10	6/10	2	0.001	0.001	µg/L

**Burbank Western Channel – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
1,1,1-Trichloroethane	2/04	10/13	231	0.11	0.5	µg/L
1,1,2,2-Tetrachloroethane	2/04	10/13	231	0.051	0.5	µg/L
1,1,2-Trichloroethane	2/04	10/13	231	0.087	0.5	µg/L
1,1-Dichloroethane	2/04	10/13	231	0.063	0.5	µg/L
1,1-Dichloroethylene	2/04	10/13	231	0.14	0.5	µg/L
1,2,3,4,7,8,9-HpCDF	2/07	8/13	33	0.125	2.57	pg/L
1,2,3,7,8,9-HxCDF	2/07	8/13	33	0.122	1.92	pg/L
1,2,3-Trichloropropane	2/07	8/13	33	0.031	0.36	µg/L
1,2,4-Trichlorobenzene	10/03	8/13	141	0.26	5	µg/L
1,2-Dichlorobenzene	10/03	10/13	237	0.05	0.5	µg/L
1,2-Dichloroethane	2/04	10/13	231	0.063	0.5	µg/L
1,2-Dichloropropane	2/04	10/13	231	0.12	0.5	µg/L
1,2-Diphenylhydrazine	10/03	8/13	141	0.25	3.5	µg/L
1,2-Trans-Dichloroethylene	2/04	10/13	231	0.092	0.5	µg/L
1,3-Dichlorobenzene	10/03	10/13	237	0.05	0.5	µg/L
1,3-Dichloropropylene	11/06	10/13	198	0.24	1	µg/L
1,3-trans-Dichloropropene	2/04	8/06	33	0.03	0.5	µg/L
2,4,5-TP	10/03	8/12	31	0.036	1	µg/L
2,4,5-Trichlorophenol	2/04	2/04	3	5	5	µg/L
2,4-Dichlorophenol	10/03	8/13	141	0.26	7.7	µg/L
2,4-Dimethylphenol	10/03	8/13	141	0.3	8	µg/L
2,4-Dinitrophenol	10/03	8/13	141	0.6	50	µg/L
2,4-Dinitrotoluene	10/03	8/13	141	0.05	5	µg/L
2-Chloroethylvinyl Ether	2/04	10/13	231	0.24	10	µg/L
2-Chloronaphthalene	10/03	8/13	141	0.1	5	µg/L
2-Chlorophenol	10/03	8/13	141	0.28	7.1	µg/L
2-Methyl-4,6-Dinitrophenol	10/03	8/13	141	0.33	10	µg/L
2-Methylnaphthalene	2/04	8/06	12	2	5	µg/L
2-Methylphenol	8/05	8/06	9	5	5	µg/L
2-Nitrophenol	10/03	8/13	141	0.26	8.4	µg/L

**Burbank Western Channel – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
3,3-Dichlorobenzidine	10/03	8/13	141	0.3	10	µg/L
3-Methylphenol	2/06	8/06	6	5	5	µg/L
4,4-DDD	10/03	8/13	135	0.0011	0.1	µg/L
4,4-DDE	10/03	8/13	135	0.0017	0.1	µg/L
4,4-DDT	10/03	8/13	135	0.0009	0.1	µg/L
4-Bromophenyl Phenyl Ether	10/03	8/13	141	0.23	5	µg/L
4-Methylphenol	2/04	8/05	12	2	5	µg/L
Acenaphthene	10/03	8/13	141	0.05	5	µg/L
Acenaphthylene	10/03	8/13	141	0.05	5	µg/L
Acrolein	2/04	10/13	231	0.27	50	µg/L
Acrylonitrile	2/04	10/13	231	0.11	20	µg/L
Aldrin	10/03	8/13	135	0.0015	0.05	µg/L
alpha-BHC	10/03	8/13	135	0.0008	0.05	µg/L
Aluminum Dissolved	10/03	2/04	6	100	100	µg/L
Anthracene	10/03	8/13	141	0.05	5	µg/L
Aroclor 1016	10/03	8/13	135	0.024	0.5	µg/L
Aroclor 1221	10/03	8/13	135	0.06	0.5	µg/L
Aroclor 1232	10/03	8/13	135	0.06	0.75	µg/L
Aroclor 1242	10/03	8/13	135	0.07	0.5	µg/L
Aroclor 1248	10/03	8/13	135	0.025	0.5	µg/L
Aroclor 1254	10/03	8/13	135	0.04	0.5	µg/L
Aroclor 1260	10/03	8/13	135	0.04	0.5	µg/L
Atrazine	10/03	2/04	6	2	2	µg/L
Azinphos-methyl	2/07	8/13	37	0.007	1.2	µg/L
Benzene	2/04	10/13	231	0.11	0.5	µg/L
Benzidine	10/03	8/13	141	0.7	20	µg/L
Benzo(a)Anthracene	10/03	8/13	141	0.1	5	µg/L
Benzo(ghi)Perylene	2/04	8/13	135	0.1	5	µg/L
Benzo(k)Fluoranthene	10/03	8/13	141	0.1	5	µg/L
Beryllium - Dissolved	10/03	2/06	32	0.4	1	µg/L

**Burbank Western Channel – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Bis(2-chloroethyl)Ether	10/03	8/13	141	0.1	4.6	µg/L
Bis(2-chloroisopropyl)Ether	10/03	8/13	141	0.38	4.8	µg/L
Carbon Tetrachloride	2/04	10/13	231	0.089	0.5	µg/L
Chlordane (Total)	2/04	8/13	129	0.003	1	µg/L
Chlordane-alpha	10/03	2/04	6	0.05	0.05	µg/L
Chlordane-gamma	10/03	2/04	6	0.05	0.05	µg/L
Chloroethane	2/04	10/13	231	0.13	0.5	µg/L
Chlorpyrifos	10/03	2/04	6	0.05	0.05	µg/L
Chromium (VI) Dissolved	10/03	2/04	6	10	10	µg/L
Chrysene	10/03	8/13	141	0.1	5	µg/L
cis-1,2-Dichloroethene	2/04	8/06	33	0.052	0.5	µg/L
cis-1,3-Dichloropropene	2/04	8/06	33	0.083	0.5	µg/L
Cyanazine	10/03	2/04	6	2	2	µg/L
delta-BHC	10/03	8/13	135	0.0008	0.05	µg/L
Demeton	2/07	8/13	37	0.014	0.63	µg/L
Demeton-O	8/13	8/13	2	0.007	0.014	µg/L
Demeton-S	8/13	8/13	2	0.007	0.014	µg/L
Dibenzo(a,h)Anthracene	10/03	8/13	141	0.08	5	µg/L
Dieldrin	10/03	8/13	135	0.0014	0.1	µg/L
Endosulfan I	10/03	8/13	135	0.0011	0.1	µg/L
Endosulfan II	10/03	8/13	135	0.0012	0.1	µg/L
Endrin	10/03	8/13	135	0.0015	0.1	µg/L
Endrin Aldehyde	10/03	8/13	135	0.0028	0.1	µg/L
Ethyl Parathion	2/07	8/13	39	0.054	1.2	µg/L
Ethylbenzene	2/04	10/13	231	0.094	0.5	µg/L
Heptachlor Epoxide	10/03	8/13	135	0.0009	0.05	µg/L
Hexachlorobenzene	10/03	8/13	141	0.15	2	µg/L
Hexachlorobutadiene	10/03	8/13	141	0.41	4.1	µg/L
Hexachlorocyclopentadiene	10/03	8/13	141	0.36	50	µg/L
Hexachloroethane	10/03	8/13	141	0.36	5	µg/L

**Burbank Western Channel – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Indeno(1,2,3-cd)Pyrene	10/03	8/13	141	0.1	5	µg/L
Isophorone	10/03	8/13	141	0.05	3.3	µg/L
Malathion	10/03	8/13	43	0.063	2	µg/L
Mercury - Dissolved	10/03	2/06	32	0.022	1	µg/L
Methoxychlor	2/04	8/13	129	0.0009	0.054	µg/L
Methyl Chloride	2/04	10/13	231	0.098	0.5	µg/L
Methyl Parathion	8/13	8/13	2	0.006	0.091	µg/L
Methylene bromide	2/04	8/06	33	0.071	0.5	µg/L
Mirex	2/04	8/13	129	0.005	0.067	µg/L
MTBE	11/03	8/13	72	0.03	0.5	µg/L
Naphthalene	10/03	8/13	162	0.05	5	µg/L
Nitrobenzene	10/03	8/13	141	0.05	3.7	µg/L
N-Nitrosodi-n-Propylamine	10/03	8/13	141	0.3	5	µg/L
N-Nitrosodiphenylamine	10/03	8/13	141	0.19	2.3	µg/L
Phenanthrene	10/03	8/13	141	0.05	5	µg/L
Phenols (Total)	10/03	8/13	141	0.16	3	µg/L
Prometryn	10/03	2/04	6	2	2	µg/L
Pyrene	10/03	8/13	141	0.05	5	µg/L
Simazine	10/03	2/04	6	2	2	µg/L
Styrene	2/04	8/06	33	0.091	0.5	µg/L
Toxaphene	10/03	8/13	135	0.04	4	µg/L
TPH	10/03	2/04	6	1	1	mg/L
Trichloroethylene	2/04	10/13	231	0.079	0.5	µg/L
Vinyl Chloride	2/04	10/13	231	0.064	0.5	µg/L
Xylenes (Total)	2/04	8/06	33	0.29	1	µg/L

**Caballero Creek – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Beryllium Dissolved	1/05	2/06	14	0.4	0.4	µg/L
Beryllium Total	1/05	2/06	14	0.4	0.4	µg/L

**Compton Creek – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Bolstar	6/09	6/11	4	0.002	0.002	µg/L
cis-Permethrin	6/11	6/11	2	0.005	0.005	µg/L
Cyfluthrin	6/09	6/11	4	0.0005	0.001	µg/L
Cypermethrin	6/09	6/11	4	0.0005	0.001	µg/L
Deltamethrin	6/09	6/11	4	0.0005	0.005	µg/L
Demeton-S	6/09	6/11	3	0.001	0.001	µg/L
Diazinon	6/09	6/11	4	0.002	0.002	µg/L
Dichlorvos	6/09	6/11	4	0.003	0.003	µg/L
Dimethoate	6/09	7/10	2	0.002	0.003	µg/L
Disulfoton	6/09	6/11	4	0.001	0.001	µg/L
Esfenvalerate	6/09	7/10	2	0.0005	0.0005	µg/L
Ethoprop	6/09	6/11	4	0.001	0.001	µg/L
Fensulfothion	6/09	6/11	4	0.001	0.001	µg/L
Fenthion	6/09	6/11	4	0.002	0.002	µg/L
Fenvalerate	6/09	6/11	6	0.0005	0.001	µg/L
L-Cyhalothrin	6/09	6/11	4	0.0005	0.001	µg/L
Malathion	6/09	6/11	4	0.003	0.003	µg/L
Merphos	6/09	7/10	2	0.001	0.001	µg/L
Methyl Parathion	6/09	6/11	4	0.001	0.001	µg/L
Mevinphos	6/09	6/11	4	0.008	0.008	µg/L
Nitrate as N	6/09	6/11	4	0.02	0.02	mg/L
Nitrite as N	6/09	6/11	4	0.02	0.02	mg/L
Permethrin	6/09	7/10	2	0.005	0.005	µg/L
Phorate	6/09	6/11	4	0.006	0.006	µg/L
Ronnel	6/09	6/11	4	0.002	0.002	µg/L
Tetrachlorvinphos	6/09	6/11	4	0.002	0.002	µg/L
Tokuthion	6/09	6/11	4	0.003	0.003	µg/L
trans-Permethrin	6/11	6/11	2	0.005	0.005	µg/L
Trichloronate	6/09	6/11	4	0.001	0.001	µg/L

**Echo Park Lake – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Ammonia as N	2/04	2/05	6	0.05	0.1	mg/L

**LA River – Reach 1 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
1,2,4,5-Tetrachlorobenzene	10/04	3/05	6	1	1	µg/L
1,2,4-Trichlorobenzene	10/02	7/13	76	0.33	1	µg/L
1,2-Dichlorobenzene	10/02	7/13	76	0.05	1	µg/L
1,2-Diphenylhydrazine	10/02	7/13	76	0.33	3.00	µg/L
1,3-Dichlorobenzene	10/02	7/13	76	0.05	1	µg/L
1,4-Dichlorobenzene	10/02	7/13	76	0.05	1	µg/L
1-Chloronaphthalene	10/04	3/05	6	0.1	0.1	µg/L
1-Naphthylamine	10/04	3/05	6	3	3	µg/L
2,3,4,6-Tetrachlorophenol	10/04	3/05	6	1	1	µg/L
2,4,5-TP	10/02	7/13	76	0.067	10	µg/L
2,4,5-Trichlorophenol	10/04	3/05	6	1	1	µg/L
2,4,6-Trichlorophenol	10/02	7/13	80	0.4	3.33	µg/L
2,4-D	10/02	7/13	76	0.015	10	µg/L
2,4-DDD	10/06	7/09	17	0.05	0.05	µg/L
2,4-DDE	10/06	7/09	17	0.05	0.05	µg/L
2,4-DDT	10/06	7/09	17	0.005	0.01	µg/L
2,4-Dichlorophenol	10/02	7/13	79	0.33	2	µg/L
2,4-Dimethylphenol	10/02	7/13	79	0.67	2	µg/L
2,4-Dinitrophenol	10/02	7/13	79	1	3	µg/L
2,4-Dinitrotoluene	10/02	7/13	76	0.05	5	µg/L
2,6-Dichlorophenol	10/04	3/05	6	2	2	µg/L
2,6-Dinitrotoluene	10/02	7/13	76	0.05	5	µg/L
2-Chloroethylvinyl Ether	10/05	7/13	67	0.33	2.5	µg/L
2-Chloronaphthalene	10/02	7/13	76	0.1	10	µg/L

**LA River – Reach 1 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
2-Chlorophenol	10/02	7/13	76	0.67	2	µg/L
2-Methylphenol	10/04	3/05	6	3	3	µg/L
2-Naphthylamine	10/04	3/05	6	3	3	µg/L
2-Nitroaniline	10/04	3/05	6	3	3	µg/L
2-Nitrophenol	10/02	7/13	79	1	3	µg/L
2-Picoline	10/04	3/05	6	3	3	µg/L
3,3-Dichlorobenzidine	10/02	7/13	76	1.67	5.00	µg/L
3-Methyl-4-Chlorophenol	10/02	7/13	79	1	3	µg/L
3-Methylcholanthrene	10/04	3/05	6	0.3	0.3	µg/L
3-Nitroaniline	10/04	3/05	6	3	3	µg/L
4,4-DDD	10/02	7/13	58	0.01	0.10	µg/L
4,4-DDE	10/02	7/13	58	0.00	0.10	µg/L
4,4-DDT	10/02	7/13	58	0.01	0.10	µg/L
4-Aminobiphenyl	10/04	3/05	6	3	3	µg/L
4-Bromophenyl Phenyl Ether	10/02	7/13	76	0.4	1.67	µg/L
4-Chloroaniline	10/04	3/05	6	1	1	µg/L
4-Chlorophenyl Phenyl Ether	10/02	7/13	76	0.04	1.67	µg/L
4-Nitroaniline	10/04	3/05	6	3	3	µg/L
4-Nitrophenol	10/02	7/13	79	1	3	µg/L
7,12-Dimethylbenz(a)anthracene	10/04	3/05	6	0.1	0.1	µg/L
Acenaphthene	10/02	7/13	76	0.05	1	µg/L
Acenaphthylene	10/02	7/13	76	0.05	2	µg/L
Acetophenone	10/04	3/05	6	0.3	0.3	µg/L
Aldrin	10/02	7/13	76	0.00	0.05	µg/L
alpha,alpha-Dimethylphenethylamine	10/04	3/05	6	3	3	µg/L
alpha-BHC	10/02	7/13	76	0.003	0.05	µg/L
Aniline	10/04	3/05	6	3	3	µg/L
Anthracene	10/02	7/13	76	0.05	2	µg/L
Aroclor 1016	10/02	7/13	76	0.01	0.5	µg/L
Aroclor 1221	10/02	7/13	81	0.01	0.5	µg/L



**LA River – Reach 1 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Aroclor 1232	10/02	7/13	76	0.01	0.5	µg/L
Aroclor 1242	10/02	7/13	76	0.01	0.5	µg/L
Aroclor 1248	10/02	7/13	76	0.01	0.5	µg/L
Aroclor 1254	10/02	7/13	76	0.01	0.5	µg/L
Aroclor 1260	10/02	7/13	76	0.01	0.5	µg/L
Atrazine	10/02	7/13	76	0.667	2	µg/L
Bentazon	10/04	3/05	6	2	2	µg/L
Benzidine	10/02	7/13	76	1.67	5.00	µg/L
Benzo(a)Anthracene	10/02	7/13	76	0.03	1.67	µg/L
Benzo(a)Pyrene	10/02	7/13	76	0.1	2	µg/L
Benzo(b)Fluoranthene	10/04	7/13	61	0.10	3.33	µg/L
Benzo(ghi)Perylene	10/05	7/13	55	0.2	1.67	µg/L
Benzo(k)Fluoranthene	10/02	7/13	76	0.10	2.00	µg/L
beta-BHC	10/02	7/13	76	0.005	0.05	µg/L
Bifenthrin	6/10	6/10	1	0.0005	0.0005	µg/L
Bis(2-chloroethoxy)Methane	10/02	7/13	82	0.1	5	µg/L
Bis(2-chloroethyl)Ether	10/02	7/13	70	0.1	0.1	µg/L
Bis(2-chloroisopropyl)Ether	10/02	7/13	76	0.67	2	µg/L
Bolstar	6/10	6/10	1	0.002	0.002	µg/L
Butylbenzyl Phthalate	10/02	7/13	76	0.1	3.33	µg/L
Carbofuran	10/04	4/08	13	5	5	µg/L
Chlordane-alpha	10/02	7/13	70	0.033	0.1	µg/L
Chlordane-gamma	10/02	7/13	70	0.033	0.1	µg/L
Chlordanes	10/04	7/13	61	0.01	0.05	µg/L
Chlorpyrifos	10/02	7/13	77	0.001	0.05	µg/L
Chrysene	10/02	7/13	76	0.10	5.00	µg/L
Cyanazine	10/02	7/13	76	0.667	2	µg/L
Cyfluthrin	6/10	6/10	1	0.0005	0.0005	µg/L
Cypermethrin	6/10	6/10	1	0.0005	0.0005	µg/L
delta-BHC	10/02	7/13	76	0.005	0.05	µg/L

**LA River – Reach 1 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Deltamethrin	6/10	6/10	1	0.0005	0.0005	µg/L
Dibenz(a,j)acridine	10/04	3/05	6	0.3	0.3	µg/L
Dibenzo(a,h)Anthracene	10/02	7/13	76	0.03	0.10	µg/L
Dichlorvos	6/10	6/10	1	0.003	0.003	µg/L
Dieldrin	10/02	7/13	76	0.00	0.10	µg/L
Dimethoate	6/10	6/10	1	0.002	0.002	µg/L
Di-n-Octyl Phthalate	10/02	7/13	69	1	10	µg/L
Diphenylamine	10/04	3/05	6	1	1	µg/L
Disulfoton	6/10	6/10	1	0.001	0.001	µg/L
Diuron	10/04	3/05	6	1	1	µg/L
Endosulfan I	10/02	7/13	76	0.01	0.1	µg/L
Endosulfan II	10/02	7/13	76	0.004	0.1	µg/L
Endosulfan Sulfate	10/02	7/13	76	0.05	0.1	µg/L
Endrin	10/02	7/13	76	0.006	0.1	µg/L
Endrin Aldehyde	10/02	7/13	76	0.01	0.1	µg/L
Endrin ketone	10/04	7/09	23	0.1	1	µg/L
Esfenvalerate	6/10	6/10	1	0.0005	0.0005	µg/L
Ethoprop	6/10	6/10	1	0.001	0.001	µg/L
Ethyl methanesulfonate	10/04	3/05	6	0.3	0.3	µg/L
Fensulfothion	6/10	6/10	1	0.001	0.001	µg/L
Fenthion	6/10	6/10	1	0.002	0.002	µg/L
Fenvalerate	6/10	6/10	1	0.0005	0.0005	µg/L
Fluorene	10/02	7/13	76	0.033	0.1	µg/L
gamma-BHC (Lindane)	10/02	7/13	76	0.004	0.05	µg/L
Glyphosate	10/02	7/13	76	5	25	µg/L
Heptachlor	10/02	7/13	76	0.003	0.05	µg/L
Heptachlor Epoxide	10/02	7/13	76	0.01	0.05	µg/L
Hexachlorobenzene	10/02	7/13	76	0.33	1	µg/L
Hexachlorobutadiene	10/02	7/13	76	0.33	1	µg/L
Hexachlorocyclopentadiene	10/02	7/13	76	1.67	5	µg/L

**LA River – Reach 1 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Hexachloroethane	10/02	7/13	76	0.33	1	µg/L
Indeno(1,2,3-cd)Pyrene	10/02	7/13	76	0.02	0.10	µg/L
Isophorone	10/02	7/13	76	0.05	1	µg/L
L-Cyhalothrin	6/10	6/10	1	0.0005	0.0005	µg/L
Malathion	10/02	7/13	76	0.003	2.0	µg/L
Manganese - Dissolved	10/04	3/05	6	30	30	µg/L
Merphos	6/10	6/10	1	0.001	0.001	µg/L
Methoxychlor	10/04	7/13	55	0.5	0.5	µg/L
Methyl methanesulfonate	10/04	3/05	6	0.3	0.3	µg/L
Methyl Parathion	6/10	6/10	1	0.001	0.001	µg/L
Mevinphos	6/10	6/10	1	0.008	0.008	µg/L
Molinate	10/04	3/05	6	2	2	µg/L
Naphthalene	10/02	7/13	76	0.05	0.2	µg/L
Nitrobenzene	10/02	7/13	76	0.05	1	µg/L
N-Nitrosodibutylamine	10/04	3/05	6	0.3	0.3	µg/L
N-Nitrosodimethylamine	10/02	7/13	79	0.3	0.3	µg/L
N-Nitrosodi-n-Propylamine	10/02	7/13	76	0.3	0.3	µg/L
N-Nitrosodiphenylamine	10/02	7/13	79	0.3	1	µg/L
N-Nitrosopiperidine	10/04	3/05	6	1	1	µg/L
Pentachlorophenol	10/02	7/13	76	0.67	2.00	µg/L
Permethrin	6/10	6/10	1	0.005	0.005	µg/L
Phenacetin	10/04	3/05	6	3	3	µg/L
Phenanthrene	10/02	7/13	72	0.017	0.05	µg/L
Phorate	6/10	6/10	1	0.006	0.006	µg/L
Prometryn	10/02	7/13	75	0.67	2	µg/L
Pronamide	10/04	3/05	6	5	5	µg/L
Ronnel	6/10	6/10	1	0.002	0.002	µg/L
Simazine	10/02	7/13	76	0.67	2	µg/L
Tetrachlorvinphos	6/10	6/10	1	0.002	0.002	µg/L
Thiobencarb	10/04	3/05	6	1	1	µg/L

**LA River – Reach 1 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Tokuthion	6/10	6/10	1	0.003	0.003	µg/L
Toxaphene	10/02	7/13	76	0.24	1	µg/L
Trichloronate	6/10	6/10	1	0.001	0.001	µg/L
Vanadium Dissolved	2/01	2/01	1	5	5	µg/L

**LA River – Reach 2 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Ammonia as N	6/09	6/10	2	0.05	0.05	mg/L
Bolstar	6/09	6/10	2	0.002	0.002	µg/L
Chlorpyrifos	6/09	6/10	2	0.001	0.001	µg/L
Cyfluthrin	6/09	6/10	2	0.0005	0.0005	µg/L
Deltamethrin	6/09	6/10	2	0.0005	0.0005	µg/L
Demeton-S	6/09	6/09	1	0.001	0.001	µg/L
Diazinon	6/09	6/10	2	0.002	0.002	µg/L
Dichlorvos	6/09	6/10	2	0.003	0.003	µg/L
Dimethoate	6/09	6/10	2	0.002	0.003	µg/L
Disulfoton	6/09	6/10	2	0.001	0.001	µg/L
Esfenvalerate	6/09	6/10	2	0.0005	0.0005	µg/L
Ethoprop	6/09	6/10	2	0.001	0.001	µg/L
Fensulfothion	6/09	6/10	2	0.001	0.001	µg/L
Fenthion	6/09	6/10	2	0.002	0.002	µg/L
Fenvalerate	6/09	6/10	2	0.0005	0.0005	µg/L
L-Cyhalothrin	6/09	6/10	2	0.0005	0.0005	µg/L
Malathion	6/09	6/10	2	0.003	0.003	µg/L
Merphos	6/09	6/10	2	0.001	0.001	µg/L
Methyl Parathion	6/09	6/10	2	0.001	0.001	µg/L
Mevinphos	6/09	6/10	2	0.008	0.008	µg/L
Permethrin	6/09	6/10	2	0.005	0.005	µg/L
Phorate	6/09	6/10	2	0.006	0.006	µg/L

**LA River – Reach 2 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Ronnel	6/09	6/10	2	0.002	0.002	µg/L
Tetrachlorvinphos	6/09	6/10	2	0.002	0.002	µg/L
Tokuthion	6/09	6/10	2	0.003	0.003	µg/L
Trichloronate	6/09	6/10	2	0.001	0.001	µg/L
Vanadium Dissolved	2/01	2/01	2	5	5	µg/L

**LA River – Reach 3, Above LAG – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
1,1,1-Trichloroethane	8/07	8/13	14	0.05	0.23	µg/L
1,1,2,2-Tetrachloroethane	8/07	8/13	14	0.02	0.19	µg/L
1,1,2-Trichloroethane	8/07	8/13	14	0.05	0.21	µg/L
1,1-Dichloroethane	8/07	8/13	14	0.11	0.16	µg/L
1,1-Dichloroethylene	8/07	8/13	14	0.12	0.2	µg/L
1,2,3,4,6,7,8-HpCDF	8/07	9/13	13	1.5	56	pg/L
1,2,3,4,7,8,9-HpCDF	8/07	9/13	13	0.59	56	pg/L
1,2,3,4,7,8-HxCDD	8/07	9/13	13	0.75	56	pg/L
1,2,3,4,7,8-HxCDF	8/07	9/13	13	0.68	56	pg/L
1,2,3,6,7,8-HxCDD	8/07	9/13	13	0.68	56	pg/L
1,2,3,6,7,8-HxCDF	8/07	9/13	13	0.59	56	pg/L
1,2,3,7,8,9-HxCDD	8/07	9/13	13	0.68	56	pg/L
1,2,3,7,8,9-HxCDF	8/07	9/13	13	0.58	56	pg/L
1,2,3,7,8-PeCDD	8/07	9/13	13	0.95	56	pg/L
1,2,3,7,8-PeCDF	8/07	9/13	13	0.67	56	pg/L
1,2,3-Trichloropropane	8/07	8/13	14	0.13	0.27	µg/L
1,2,4-Trichlorobenzene	2/02	9/13	24	0.08	2	µg/L
1,2-Dichloroethane	8/07	8/13	14	0.03	0.13	µg/L
1,2-Dichloropropane	8/07	8/13	14	0.09	0.13	µg/L
1,2-Trans-Dichloroethylene	8/07	8/13	14	0.07	0.2	µg/L

**LA River – Reach 3, Above LAG – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
1,3-Dichlorobenzene	2/02	9/13	24	0.05	1.5	µg/L
1,3-trans-Dichloropropene	8/07	8/13	14	0.06	0.15	µg/L
1,4-Dichlorobenzene	2/02	9/13	24	0.07	1.8	µg/L
2,3,4,6,7,8-HxCDF	8/07	9/13	13	0.51	56	pg/L
2,3,4,7,8-PeCDF	8/07	9/13	13	0.76	56	pg/L
2,3,7,8-TCDF	8/07	9/13	13	1.8	12	pg/L
2,4,5-TP	8/07	9/13	13	0.11	0.34	µg/L
2,4-D	8/07	9/13	13	0.2	0.8	µg/L
2,4-DDE	3/02	2/07	11	0.001	0.004	µg/L
2,4-DDT	3/02	2/07	11	0.002	0.005	µg/L
2,4-Dichlorophenol	2/02	9/13	24	0.09	6.8	µg/L
2,4-Dimethylphenol	2/02	9/13	24	0.17	6.2	µg/L
2,4-Dinitrophenol	2/02	9/13	24	0.21	31	µg/L
2,4-Dinitrotoluene	2/02	9/13	24	0.08	2.3	µg/L
2,6-Dinitrotoluene	2/02	9/13	24	0.022	1.6	µg/L
2-Chloroethylvinyl Ether	8/07	8/13	14	0.13	0.63	µg/L
2-Chloronaphthalene	2/02	9/13	24	0.07	1.5	µg/L
2-Chlorophenol	2/02	9/13	24	0.09	8.1	µg/L
2-Methyl-4,6-Dinitrophenol	2/02	9/13	24	0.4	8.9	µg/L
2-Nitrophenol	2/02	9/13	24	0.09	7.9	µg/L
3,3-Dichlorobenzidine	2/02	9/13	24	0.11	2.78	µg/L
3-Methyl-4-Chlorophenol	2/02	9/13	24	0.18	6	µg/L
4,4-DDD	3/02	8/13	24	0.001	0.006	µg/L
4,4-DDE	3/02	8/13	24	0.001	0.004	µg/L
4,4-DDT	3/02	8/13	24	0.001	0.007	µg/L
4-Bromophenyl Phenyl Ether	2/02	9/13	24	0.07	1.5	µg/L
4-Chlorophenyl Phenyl Ether	2/02	9/13	24	0.04	2	µg/L
4-Nitrophenol	2/02	9/13	24	0.06	5	µg/L
Acenaphthene	2/02	9/13	24	0.04	1.7	µg/L
Acenaphthylene	2/02	9/13	24	0.06	1.7	µg/L

**LA River – Reach 3, Above LAG – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Acrolein	8/07	8/13	14	0.61	1.96	µg/L
Acrylonitrile	8/07	8/13	14	0.08	0.57	µg/L
Aldrin	3/02	8/13	24	0.001	0.008	µg/L
alpha-BHC	3/02	8/13	24	0.001	0.004	µg/L
Anthracene	2/02	9/13	24	0.06	1.6	µg/L
Aroclor 1016	3/02	8/13	24	0.022	0.081	µg/L
Aroclor 1221	3/02	8/13	24	0.02	0.49	µg/L
Aroclor 1232	3/02	8/13	24	0.028	0.1	µg/L
Aroclor 1242	3/02	8/13	24	0.024	0.23	µg/L
Aroclor 1248	3/02	8/13	24	0.019	0.121	µg/L
Aroclor 1254	3/02	8/13	24	0.017	0.05	µg/L
Aroclor 1260	3/02	8/13	24	0.029	0.1	µg/L
Azinphos-methyl	8/07	9/13	13	0.007	1.7	µg/L
Azobenzene	2/02	9/13	24	0.06	7	µg/L
Benzene	8/07	8/13	14	0.07	0.22	µg/L
Benzidine	2/02	9/13	24	0.3	47	µg/L
Benzo(a)Anthracene	2/02	9/13	49	0.0048	1.2	µg/L
Benzo(a)Pyrene	2/02	9/13	24	0.06	1.6	µg/L
Benzo(b)Fluoranthene	2/02	9/13	24	0.07	1.5	µg/L
Benzo(k)Fluoranthene	2/02	9/13	24	0.11	2.3	µg/L
beta-BHC	3/02	8/13	24	0.0019	0.005	µg/L
Bifenthrin	5/09	5/09	1	0.0005	0.0005	µg/L
Bis(2-chloroethoxy)Methane	2/02	9/13	24	0.05	1.6	µg/L
Bis(2-chloroethyl)Ether	2/02	9/13	24	0.09	1.9	µg/L
Bolstar	5/09	5/09	1	0.002	0.002	µg/L
Bromoform	8/07	8/13	14	0.04	0.19	µg/L
Carbon Tetrachloride	8/07	8/13	14	0.09	0.27	µg/L
Chlordanes	3/02	8/13	24	0.012	0.06	µg/L
Chlorobenzene	8/07	8/13	14	0.06	0.15	µg/L
Chloroethane	8/07	8/13	14	0.04	0.79	µg/L

**LA River – Reach 3, Above LAG – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Chlorpyrifos	5/09	5/09	1	0.001	0.001	µg/L
Chrysene	2/02	9/13	49	0.004	1.5	µg/L
cis-1,3-Dichloropropene	8/07	8/13	14	0.04	0.15	µg/L
Cyfluthrin	5/09	5/09	1	0.0005	0.0005	µg/L
Cypermethrin	5/09	5/09	1	0.0005	0.0005	µg/L
delta-BHC	3/02	8/13	24	0.0007	0.007	µg/L
Deltamethrin	5/09	5/09	1	0.0005	0.0005	µg/L
Demeton-O	8/07	9/13	13	0.007	0.9	µg/L
Demeton-S	8/07	9/13	14	0.001	1.1	µg/L
Diazinon	5/09	9/13	8	0.002	0.006	µg/L
Dichlorvos	5/09	5/09	1	0.003	0.003	µg/L
Dieldrin	3/02	8/13	24	0.0009	0.006	µg/L
Dimethoate	5/09	5/09	1	0.003	0.003	µg/L
Dimethyl Phthalate	2/02	9/13	24	0.08	3	µg/L
Di-n-Octyl Phthalate	2/02	9/13	24	0.15	2.5	µg/L
Disulfoton	5/09	5/09	1	0.001	0.001	µg/L
Endosulfan II	3/02	8/13	24	0.001	0.007	µg/L
Endosulfan Sulfate	3/02	8/13	24	0.002	0.008	µg/L
Endrin	3/02	8/13	24	0.001	0.007	µg/L
Endrin Aldehyde	3/02	8/13	24	0.001	0.006	µg/L
Esfenvalerate	5/09	5/09	1	0.0005	0.0005	µg/L
Ethoprop	5/09	5/09	1	0.001	0.001	µg/L
Ethyl Parathion	8/07	9/13	13	0.085	1.2	µg/L
Ethylbenzene	8/07	8/13	14	0.08	0.17	µg/L
Fensulfothion	5/09	5/09	1	0.001	0.001	µg/L
Fenthion	5/09	5/09	1	0.002	0.002	µg/L
Fenvalerate	5/09	5/09	1	0.0005	0.0005	µg/L
Fluoranthene	2/02	9/13	24	0.02	1.3	µg/L
Fluorene	2/02	9/13	24	0.02	1.6	µg/L
Heptachlor	3/02	8/13	24	0.001	0.008	µg/L



**LA River – Reach 3, Above LAG – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Heptachlor Epoxide	3/02	8/13	24	0.001	0.004	µg/L
Hexachlorobenzene	2/02	9/13	24	0.07	1.1	µg/L
Hexachlorobutadiene	2/02	9/13	24	0.07	2	µg/L
Hexachlorocyclopentadiene	2/02	9/13	24	1.3	3.83	µg/L
Hexachloroethane	2/02	9/13	24	0.07	2	µg/L
L-Cyhalothrin	5/09	5/09	1	0.0005	0.0005	µg/L
Malathion	8/07	9/13	14	0.003	1.1	µg/L
Merphos	5/09	5/09	1	0.001	0.001	µg/L
Methoxychlor	3/02	8/13	24	0.003	0.38	µg/L
Methyl Bromide	8/07	8/13	14	0.11	1.02	µg/L
Methyl Chloride	8/07	8/13	14	0.13	0.37	µg/L
Methyl Parathion	5/09	5/09	1	0.001	0.001	µg/L
Methylene Chloride	8/07	8/13	14	0.08	0.14	µg/L
Mevinphos	5/09	5/09	1	0.008	0.008	µg/L
Mirex	3/02	8/13	24	0.002	0.12	µg/L
Naphthalene	2/02	9/13	24	0.028	2	µg/L
Nitrobenzene	2/02	9/13	24	0.05	1.5	µg/L
N-Nitrosodimethylamine	2/02	9/13	24	0.17	100	µg/L
N-Nitrosodi-n-Propylamine	2/02	9/13	47	0.13	4.5	µg/L
N-Nitrosodiphenylamine	2/02	9/13	24	0.09	1.7	µg/L
OCDF	8/07	9/13	13	2	120	pg/L
Pentachlorophenol	2/02	9/13	24	0.4	8	µg/L
Permethrin	5/09	5/09	1	0.005	0.005	µg/L
Phenanthrene	2/02	9/13	24	0.01	1.5	µg/L
Phenols (Total)	2/02	9/13	24	0.2	8.3	µg/L
Phorate	5/09	5/09	1	0.006	0.006	µg/L
Pyrene	2/02	9/13	24	0.02	1.1	µg/L
Ronnel	5/09	5/09	1	0.002	0.002	µg/L
Tetrachlorvinphos	5/09	5/09	1	0.002	0.002	µg/L
Tokuthion	5/09	5/09	1	0.003	0.003	µg/L

**LA River – Reach 3, Above LAG – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Toxaphene	3/02	8/13	24	0.02	0.354	µg/L
Trichloroethylene	8/07	8/13	14	0.08	0.17	µg/L
Trichloronate	5/09	5/09	1	0.001	0.001	µg/L
Vanadium - Dissolved	2/01	2/01	1	5	5	µg/L
Vinyl Chloride	8/07	8/13	14	0.07	0.26	µg/L

**LA River – Reach 3, Below LAG – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
1,1,1-Trichloroethane	8/07	8/13	16	0.05	0.23	µg/L
1,1,2,2-Tetrachloroethane	8/07	8/13	16	0.02	0.19	µg/L
1,1,2-Trichloroethane	8/07	8/13	16	0.05	0.21	µg/L
1,1-Dichloroethane	8/07	8/13	16	0.11	0.16	µg/L
1,2,3,4,6,7,8-HpCDF	8/07	9/13	13	2.3	50	pg/L
1,2,3,4,7,8,9-HpCDF	8/07	9/13	13	0.21	50	pg/L
1,2,3,4,7,8-HxCDD	8/07	9/13	13	0.55	50	pg/L
1,2,3,4,7,8-HxCDF	8/07	9/13	13	0.49	50	pg/L
1,2,3,6,7,8-HxCDD	8/07	9/13	13	0.62	50	pg/L
1,2,3,6,7,8-HxCDF	8/07	9/13	13	0.44	50	pg/L
1,2,3,7,8,9-HxCDD	8/07	9/13	13	0.45	50	pg/L
1,2,3,7,8,9-HxCDF	8/07	9/13	13	0.51	50	pg/L
1,2,3,7,8-PeCDD	8/07	9/13	13	0.66	50	pg/L
1,2,3,7,8-PeCDF	8/07	9/13	13	0.52	50	pg/L
1,2,3-Trichloropropane	8/07	8/13	16	0.13	0.27	µg/L
1,2,4-Trichlorobenzene	2/02	9/13	37	0.08	2	µg/L
1,2-Dichloroethane	8/07	8/13	16	0.03	0.13	µg/L
1,2-Dichloropropane	8/07	8/13	16	0.09	0.13	µg/L
1,3-Dichlorobenzene	2/02	9/13	37	0.05	1.5	µg/L
1,3-trans-Dichloropropene	8/07	8/13	16	0.06	0.15	µg/L

**LA River – Reach 3, Below LAG – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
1,4-Dichlorobenzene	2/02	9/13	37	0.07	1.8	µg/L
2,3,4,6,7,8-HxCDF	8/07	9/13	13	0.47	50	pg/L
2,3,4,7,8-PeCDF	8/07	9/13	13	0.4	50	pg/L
2,3,7,8-TCDF	8/07	9/13	13	0.27	10	pg/L
2,4,5-TP	8/07	9/13	15	0.11	0.34	µg/L
2,4-D	8/07	9/13	15	0.2	0.8	µg/L
2,4-DDE	3/02	2/07	22	0.001	0.004	µg/L
2,4-DDT	3/02	2/07	22	0.002	0.005	µg/L
2,4-Dichlorophenol	2/02	9/13	37	0.09	6.8	µg/L
2,4-Dimethylphenol	2/02	9/13	37	0.17	6.2	µg/L
2,4-Dinitrophenol	2/02	9/13	37	0.21	31	µg/L
2,4-Dinitrotoluene	2/02	9/13	37	0.08	2.3	µg/L
2,6-Dinitrotoluene	2/02	9/13	37	0.022	1.6	µg/L
2-Chloroethylvinyl Ether	8/07	8/13	16	0.13	0.63	µg/L
2-Chloronaphthalene	2/02	9/13	37	0.07	1.5	µg/L
2-Chlorophenol	2/02	9/13	37	0.09	8.1	µg/L
2-Methyl-4,6-Dinitrophenol	2/02	9/13	37	0.4	8.9	µg/L
2-Nitrophenol	2/02	9/13	37	0.09	7.9	µg/L
3,3-Dichlorobenzidine	2/02	9/13	37	0.11	2.78	µg/L
3-Methyl-4-Chlorophenol	2/02	9/13	37	0.18	6	µg/L
4,4-DDD	3/02	9/13	37	0.001	0.006	µg/L
4,4-DDE	3/02	9/13	37	0.001	0.004	µg/L
4,4-DDT	3/02	9/13	37	0.001	0.007	µg/L
4-Bromophenyl Phenyl Ether	2/02	9/13	37	0.07	1.5	µg/L
4-Chlorophenyl Phenyl Ether	2/02	9/13	37	0.04	2	µg/L
4-Nitrophenol	2/02	9/13	37	0.06	5	µg/L
Acenaphthene	2/02	9/13	37	0.04	1.7	µg/L
Acenaphthylene	2/02	9/13	37	0.06	1.7	µg/L
Acrolein	8/07	8/13	16	0.61	1.96	µg/L
Acrylonitrile	8/07	8/13	16	0.08	0.57	µg/L

## LA River – Reach 3, Below LAG – Constituents that have not been detected in water

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
Aldrin	3/02	9/13	37	0.001	0.008	µg/L
Aroclor 1016	3/02	9/13	37	0.022	0.081	µg/L
Aroclor 1221	3/02	9/13	37	0.02	0.49	µg/L
Aroclor 1232	3/02	9/13	37	0.028	0.1	µg/L
Aroclor 1242	3/02	9/13	37	0.024	0.23	µg/L
Aroclor 1248	3/02	9/13	37	0.019	0.121	µg/L
Aroclor 1254	3/02	9/13	37	0.017	0.05	µg/L
Aroclor 1260	3/02	9/13	37	0.029	0.1	µg/L
Azinphos-methyl	8/07	9/13	15	0.007	1.7	µg/L
Azobenzene	2/02	9/13	37	0.06	7	µg/L
Benzene	8/07	8/13	16	0.07	0.22	µg/L
Benzidine	2/02	9/13	37	0.3	47	µg/L
Benzo(a)Pyrene	2/02	9/13	37	0.06	1.6	µg/L
Benzo(b)Fluoranthene	2/02	9/13	37	0.07	1.5	µg/L
Benzo(k)Fluoranthene	2/02	9/13	37	0.11	2.3	µg/L
beta-BHC	3/02	9/13	37	0.0019	0.005	µg/L
Bis(2-chloroethoxy)Methane	2/02	9/13	37	0.05	1.6	µg/L
Bis(2-chloroethyl)Ether	2/02	9/13	37	0.09	1.9	µg/L
Bromoform	8/07	8/13	16	0.04	0.19	µg/L
Butylbenzyl Phthalate	2/02	9/13	37	0.04	3	µg/L
Chlordanes	3/02	9/13	37	0.012	0.06	µg/L
Chlorobenzene	8/07	8/13	16	0.06	0.15	µg/L
Chloroethane	8/07	8/13	16	0.04	0.79	µg/L
cis-1,3-Dichloropropene	8/07	8/13	16	0.04	0.15	µg/L
delta-BHC	3/02	9/13	37	0.0007	0.007	µg/L
Demeton-O	8/07	9/13	15	0.007	0.9	µg/L
Demeton-S	8/07	9/13	15	0.007	1.1	µg/L
Diazinon	4/12	9/13	7	0.006	0.006	µg/L
Dieldrin	3/02	9/13	37	0.0009	0.006	µg/L
Dimethyl Phthalate	2/02	9/13	37	0.08	3	µg/L

**LA River – Reach 3, Below LAG – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
Endosulfan I	3/02	9/13	37	0.001	0.008	µg/L
Endosulfan II	3/02	9/13	37	0.001	0.007	µg/L
Endosulfan Sulfate	3/02	9/13	37	0.002	0.008	µg/L
Endrin	3/02	9/13	37	0.001	0.007	µg/L
Endrin Aldehyde	3/02	9/13	37	0.001	0.006	µg/L
Ethyl Parathion	8/07	9/13	15	0.085	1.2	µg/L
Ethylbenzene	8/07	8/13	16	0.08	0.17	µg/L
Fluorene	2/02	9/13	37	0.02	1.6	µg/L
Heptachlor Epoxide	3/02	9/13	37	0.001	0.004	µg/L
Hexachlorobenzene	2/02	9/13	37	0.07	1.1	µg/L
Hexachlorobutadiene	2/02	9/13	37	0.07	2	µg/L
Hexachlorocyclopentadiene	2/02	9/13	37	1.3	3.83	µg/L
Hexachloroethane	2/02	9/13	37	0.07	2	µg/L
Malathion	8/07	9/13	15	0.11	1.1	µg/L
Methoxychlor	3/02	9/13	37	0.003	0.38	µg/L
Methyl Bromide	8/07	8/13	16	0.11	1.02	µg/L
Methyl Chloride	8/07	8/13	16	0.13	0.37	µg/L
Methylene Chloride	8/07	8/13	16	0.08	0.14	µg/L
Mirex	3/02	9/13	37	0.002	0.12	µg/L
Naphthalene	2/02	9/13	37	0.028	2	µg/L
Nitrobenzene	2/02	9/13	37	0.05	1.5	µg/L
N-Nitrosodimethylamine	2/02	9/13	37	0.17	100	µg/L
N-Nitrosodi-n-Propylamine	2/02	9/13	75	0.13	4.5	µg/L
N-Nitrosodiphenylamine	2/02	9/13	37	0.09	1.7	µg/L
OCDF	8/07	9/13	13	2.5	100	pg/L
Pentachlorophenol	2/02	9/13	37	0.4	8	µg/L
Phenols (Total)	2/02	9/13	37	0.2	8.3	µg/L
Pyrene	2/02	9/13	37	0.02	1.1	µg/L
Sulfide	3/06	2/08	21	30	30	µg/L
Toxaphene	3/02	9/13	37	0.02	0.354	µg/L

**LA River – Reach 3, Below LAG – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
Vanadium - Dissolved	2/01	2/01	1	5	5	µg/L
Vinyl Chloride	8/07	8/13	16	0.07	0.26	µg/L

**LA River – Reach 4 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
1,1,1-Trichloroethane	8/07	8/13	16	0.05	0.23	µg/L
1,1,2,2-Tetrachloroethane	8/07	8/13	16	0.02	0.14	µg/L
1,1,2-Trichloroethane	8/07	8/13	16	0.05	0.1	µg/L
1,1-Dichloroethane	8/07	8/13	16	0.11	0.16	µg/L
1,1-Dichloroethylene	8/07	8/13	16	0.12	0.2	µg/L
1,2,3-Trichloropropane	8/07	8/13	16	0.13	0.23	µg/L
1,2,4-Trichlorobenzene	2/02	8/13	38	0.08	2	µg/L
1,2-Dichlorobenzene	2/02	8/13	38	0.06	1.5	µg/L
1,2-Dichloroethane	8/07	8/13	16	0.03	0.1	µg/L
1,2-Dichloropropane	8/07	8/13	16	0.09	0.12	µg/L
1,2-Trans-Dichloroethylene	8/07	8/13	16	0.07	0.2	µg/L
1,3-Dichlorobenzene	2/02	8/13	38	0.05	1.5	µg/L
1,3-trans-Dichloropropene	8/07	8/13	16	0.06	0.15	µg/L
1,4-Dichlorobenzene	2/02	8/13	38	0.07	1.8	µg/L
2,3,7,8-TCDD (Dioxin)	8/07	8/08	3	48	160	pg/L
2,4,5-TP	8/07	9/13	16	0.11	0.11	µg/L
2,4-D	8/07	9/13	16	0.2	0.21	µg/L
2,4-DDD	2/02	2/07	22	0.001	0.01	µg/L
2,4-DDE	2/02	2/07	22	0.001	0.004	µg/L
2,4-DDT	2/02	2/07	22	0.002	0.005	µg/L
2,4-Dichlorophenol	2/02	8/13	38	0.09	6.8	µg/L
2,4-Dimethylphenol	2/02	8/13	38	0.17	6.2	µg/L
2,4-Dinitrophenol	2/02	8/13	38	0.21	31	µg/L

**LA River – Reach 4 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
2,4-Dinitrotoluene	2/02	8/13	38	0.08	2.3	µg/L
2,6-Dinitrotoluene	2/02	8/13	38	0.022	1.6	µg/L
2-Chloroethylvinyl Ether	8/07	8/13	16	0.27	0.63	µg/L
2-Chloronaphthalene	2/02	8/13	38	0.07	1.5	µg/L
2-Chlorophenol	2/02	8/13	38	0.09	8.1	µg/L
2-Methyl-4,6-Dinitrophenol	2/02	8/13	38	0.4	8.9	µg/L
2-Nitrophenol	2/02	8/13	38	0.09	7.9	µg/L
3,3-Dichlorobenzidine	2/02	8/13	38	0.11	2.78	µg/L
3-Methyl-4-Chlorophenol	2/02	8/13	38	0.18	6	µg/L
4,4-DDD	2/02	8/13	38	0.001	0.006	µg/L
4,4-DDE	2/02	8/13	38	0.001	0.004	µg/L
4,4-DDT	2/02	8/13	38	0.001	0.007	µg/L
4-Bromophenyl Phenyl Ether	2/02	8/13	38	0.07	1.5	µg/L
4-Chlorophenyl Phenyl Ether	2/02	8/13	38	0.04	2	µg/L
4-Nitrophenol	2/02	8/13	38	0.06	5	µg/L
Acenaphthene	2/02	8/13	38	0.04	1.7	µg/L
Acenaphthylene	2/02	8/13	38	0.06	1.7	µg/L
Acrolein	8/07	8/13	16	0.61	1.96	µg/L
Acrylonitrile	8/07	8/13	16	0.08	0.27	µg/L
Aldrin	2/02	8/13	38	0.001	0.008	µg/L
alpha-BHC	2/02	8/13	38	0.001	0.004	µg/L
Anthracene	2/02	8/13	38	0.06	1.6	µg/L
Aroclor 1016	2/02	8/13	38	0.022	0.081	µg/L
Aroclor 1221	2/02	8/13	38	0.02	0.49	µg/L
Aroclor 1232	2/02	8/13	38	0.028	0.1	µg/L
Aroclor 1242	2/02	8/13	38	0.024	0.23	µg/L
Aroclor 1248	2/02	8/13	38	0.019	0.121	µg/L
Aroclor 1254	2/02	8/13	38	0.017	0.05	µg/L
Aroclor 1260	2/02	8/13	38	0.029	0.1	µg/L
Azinphos-methyl	8/07	9/13	16	0.007	1.7	µg/L

## LA River – Reach 4 – Constituents that have not been detected in water

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
Azobenzene	2/02	8/13	38	0.06	7	µg/L
Benzidine	2/02	8/13	38	0.3	47	µg/L
Benzo(a)Anthracene	2/02	8/13	38	0.09	1.2	µg/L
Benzo(a)Pyrene	2/02	8/13	38	0.06	1.6	µg/L
Benzo(b)Fluoranthene	2/02	8/13	38	0.07	1.5	µg/L
Benzo(ghi)Perylene	2/02	8/13	38	0.03	1.7	µg/L
Benzo(k)Fluoranthene	2/02	8/13	38	0.11	2.3	µg/L
beta-BHC	2/02	8/13	38	0.0019	0.005	µg/L
Bifenthrin	6/11	6/11	1	0.001	0.001	µg/L
Bis(2-chloroethoxy)Methane	2/02	8/13	38	0.05	1.6	µg/L
Bis(2-chloroethyl)Ether	2/02	8/13	38	0.09	1.9	µg/L
Bis(2-chloroisopropyl)Ether	2/02	8/13	38	0.05	3	µg/L
Bolstar	6/11	6/11	1	0.002	0.002	µg/L
Butylbenzyl Phthalate	2/02	8/13	38	0.04	3	µg/L
Carbon Tetrachloride	8/07	8/13	16	0.09	0.27	µg/L
Chlordanes	2/02	8/13	38	0.012	0.06	µg/L
Chlorobenzene	8/07	8/13	16	0.06	0.15	µg/L
Chloroethane	8/07	8/13	16	0.04	0.79	µg/L
Chlorpyrifos	6/11	6/11	1	0.001	0.001	µg/L
cis-1,3-Dichloropropene	8/07	8/13	16	0.04	0.15	µg/L
cis-Permethrin	6/11	6/11	1	0.005	0.005	µg/L
Cyfluthrin	6/11	6/11	1	0.001	0.001	µg/L
Cypermethrin	6/11	6/11	1	0.001	0.001	µg/L
delta-BHC	2/02	8/13	38	0.0007	0.007	µg/L
Deltamethrin	6/11	6/11	1	0.005	0.005	µg/L
Demeton-O	8/07	9/13	16	0.007	0.9	µg/L
Demeton-S	8/07	9/13	17	0.001	1.1	µg/L
Dichlorvos	6/11	6/11	1	0.003	0.003	µg/L
Dieldrin	2/02	8/13	38	0.0009	0.006	µg/L
Diethyl Phthalate	2/02	8/13	38	0.06	3	µg/L



**LA River – Reach 4 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
Dimethyl Phthalate	2/02	8/13	38	0.08	3	µg/L
Disulfoton	6/11	6/11	1	0.001	0.001	µg/L
Endosulfan II	2/02	8/13	38	0.001	0.007	µg/L
Endosulfan Sulfate	2/02	8/13	38	0.002	0.008	µg/L
Endrin Aldehyde	2/02	8/13	38	0.001	0.006	µg/L
Ethoprop	6/11	6/11	1	0.001	0.001	µg/L
Ethyl Parathion	8/07	9/13	16	0.085	1.2	µg/L
Ethylbenzene	8/07	8/13	16	0.08	0.17	µg/L
Fensulfothion	6/11	6/11	1	0.001	0.001	µg/L
Fenthion	6/11	6/11	1	0.002	0.002	µg/L
Fenvalerate	6/11	6/11	2	0.001	0.001	µg/L
Fluoranthene	2/02	8/13	38	0.02	1.3	µg/L
Fluorene	2/02	8/13	38	0.02	1.6	µg/L
Heptachlor	2/02	8/13	38	0.001	0.008	µg/L
Heptachlor Epoxide	2/02	8/13	46	0.001	0.004	µg/L
Hexachlorobenzene	2/02	8/13	38	0.07	1.1	µg/L
Hexachlorobutadiene	2/02	8/13	38	0.07	2	µg/L
Hexachlorocyclopentadiene	2/02	8/13	38	1.3	3.83	µg/L
Hexachloroethane	2/02	8/13	38	0.07	2	µg/L
Indeno(1,2,3-cd)Pyrene	2/02	8/13	38	0.02	1.7	µg/L
L-Cyhalothrin	6/11	6/11	1	0.001	0.001	µg/L
Malathion	8/07	9/13	17	0.003	1.1	µg/L
Methoxychlor	2/02	8/13	38	0.003	0.38	µg/L
Methyl Bromide	8/07	8/13	16	0.11	1.02	µg/L
Methyl Chloride	8/07	8/13	16	0.13	0.37	µg/L
Methyl Parathion	6/11	6/11	1	0.001	0.001	µg/L
Mevinphos	6/11	6/11	1	0.008	0.008	µg/L
Mirex	2/02	8/13	38	0.002	0.12	µg/L
Naphthalene	2/02	8/13	38	0.028	2	µg/L
Nitrobenzene	2/02	8/13	38	0.05	1.5	µg/L

**LA River – Reach 4 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
N-Nitrosodimethylamine	2/02	8/13	38	0.17	100	µg/L
N-Nitrosodi-n-Propylamine	2/02	8/13	38	0.13	4.5	µg/L
N-Nitrosodiphenylamine	2/02	8/13	38	0.09	1.7	µg/L
Pentachlorophenol	2/02	8/13	38	0.4	8	µg/L
Phenols (Total)	2/02	8/13	38	0.2	8.3	µg/L
Phorate	6/11	6/11	1	0.006	0.006	µg/L
Pyrene	2/02	8/13	38	0.02	1.1	µg/L
Ronnel	6/11	6/11	1	0.002	0.002	µg/L
Tetrachloroethylene	5/07	8/13	24	0.09	0.22	µg/L
Tetrachlorvinphos	6/11	6/11	1	0.002	0.002	µg/L
Tokuthion	6/11	6/11	1	0.003	0.003	µg/L
Toxaphene	2/02	8/13	38	0.02	0.354	µg/L
trans-Permethrin	6/11	6/11	1	0.005	0.005	µg/L
Trichloroethylene	8/07	8/13	16	0.08	0.17	µg/L
Trichloronate	6/11	6/11	1	0.001	0.001	µg/L
Vanadium - Dissolved	2/01	2/01	2	5	5	µg/L
Vinyl Chloride	8/07	8/13	16	0.07	0.26	µg/L

**LA River – Reach 5 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
1,1,1-Trichloroethane	8/07	8/13	39	0.05	0.23	µg/L
1,1,2,2-Tetrachloroethane	8/07	8/13	39	0.02	0.14	µg/L
1,1,2-Trichloroethane	8/07	8/13	39	0.05	0.1	µg/L
1,1-Dichloroethane	8/07	8/13	39	0.11	0.16	µg/L
1,1-Dichloroethylene	8/07	8/13	39	0.12	0.2	µg/L
1,2,3-Trichloropropane	8/07	8/13	39	0.13	0.23	µg/L
1,2,4-Trichlorobenzene	2/02	8/13	75	0.08	2	µg/L
1,2-Dichloroethane	8/07	8/13	39	0.03	0.1	µg/L

## LA River – Reach 5 – Constituents that have not been detected in water

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
1,2-Dichloropropane	8/07	8/13	39	0.09	0.12	µg/L
1,2-Trans-Dichloroethylene	8/07	8/13	39	0.07	0.2	µg/L
1,3-Dichlorobenzene	2/02	8/13	75	0.05	1.5	µg/L
1,3-trans-Dichloropropene	8/07	8/13	39	0.06	0.15	µg/L
1,4-Dichlorobenzene	2/02	8/13	75	0.07	1.8	µg/L
2,3,7,8-TCDD (Dioxin)	8/07	9/13	39	0.76	5600	pg/L
2,4,5-TP	8/07	9/13	39	0.11	0.34	µg/L
2,4-D	8/07	9/13	39	0.2	0.8	µg/L
2,4-DDE	2/02	2/07	33	0.001	0.004	µg/L
2,4-Dinitrophenol	2/02	8/13	72	0.21	31	µg/L
2,4-Dinitrotoluene	2/02	8/13	75	0.08	2.3	µg/L
2,6-Dinitrotoluene	2/02	8/13	75	0.022	1.6	µg/L
2-Chloroethylvinyl Ether	8/07	8/13	39	0.27	0.63	µg/L
2-Chloronaphthalene	2/02	8/13	75	0.07	1.5	µg/L
2-Chlorophenol	2/02	8/13	72	0.09	8.1	µg/L
2-Methyl-4,6-Dinitrophenol	2/02	8/13	72	0.4	8.9	µg/L
2-Nitrophenol	2/02	8/13	72	0.09	7.9	µg/L
3,3-Dichlorobenzidine	2/02	8/13	75	0.11	2.78	µg/L
4,4-DDT	2/02	8/13	72	0.001	0.007	µg/L
4-Bromophenyl Phenyl Ether	2/02	8/13	75	0.07	1.5	µg/L
4-Chlorophenyl Phenyl Ether	2/02	8/13	75	0.04	2	µg/L
Acenaphthene	2/02	8/13	75	0.04	1.7	µg/L
Acenaphthylene	2/02	8/13	75	0.06	1.7	µg/L
Acrolein	8/07	8/13	39	0.61	1.96	µg/L
Acrylonitrile	8/07	8/13	39	0.08	0.27	µg/L
Aldrin	2/02	8/13	72	0.001	0.008	µg/L
Anthracene	2/02	8/13	75	0.06	1.6	µg/L
Aroclor 1016	2/02	8/13	72	0.022	0.081	µg/L
Aroclor 1221	2/02	8/13	72	0.02	0.49	µg/L
Aroclor 1232	2/02	8/13	72	0.028	0.1	µg/L

**LA River – Reach 5 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
Aroclor 1242	2/02	8/13	72	0.024	0.23	µg/L
Aroclor 1248	2/02	8/13	72	0.019	0.121	µg/L
Aroclor 1254	2/02	8/13	72	0.017	0.05	µg/L
Aroclor 1260	2/02	8/13	72	0.029	0.1	µg/L
Azinphos-methyl	8/07	9/13	39	0.007	1.7	µg/L
Azobenzene	2/02	8/13	75	0.06	7	µg/L
Benzidine	2/02	8/13	75	0.3	47	µg/L
Benzo(a)Anthracene	2/02	8/13	75	0.09	1.2	µg/L
Benzo(a)Pyrene	2/02	8/13	75	0.06	1.6	µg/L
Benzo(b)Fluoranthene	2/02	8/13	75	0.07	1.5	µg/L
Benzo(k)Fluoranthene	2/02	8/13	75	0.11	2.3	µg/L
beta-BHC	2/02	8/13	72	0.0019	0.005	µg/L
Bis(2-chloroethoxy)Methane	2/02	8/13	75	0.05	1.6	µg/L
Bis(2-chloroethyl)Ether	2/02	8/13	75	0.09	1.9	µg/L
Carbon Tetrachloride	8/07	8/13	39	0.09	0.27	µg/L
Chlordanes	2/02	8/13	69	0.012	0.06	µg/L
Chlorobenzene	8/07	8/13	39	0.06	0.15	µg/L
Chloroethane	8/07	8/13	39	0.04	0.79	µg/L
Chrysene	2/02	8/13	75	0.05	1.5	µg/L
cis-1,3-Dichloropropene	8/07	8/13	39	0.04	0.15	µg/L
delta-BHC	2/02	8/13	72	0.0007	0.007	µg/L
Demeton-O	8/07	9/13	39	0.007	0.9	µg/L
Demeton-S	8/07	9/13	39	0.007	1.1	µg/L
Dieldrin	2/02	8/13	72	0.0009	0.006	µg/L
Dimethyl Phthalate	2/02	8/13	75	0.08	3	µg/L
Endosulfan II	2/02	8/13	72	0.001	0.007	µg/L
Endosulfan Sulfate	2/02	8/13	72	0.002	0.008	µg/L
Endrin	2/02	8/13	72	0.001	0.007	µg/L
Endrin Aldehyde	2/02	8/13	72	0.001	0.006	µg/L
Ethyl Parathion	8/07	9/13	39	0.085	1.2	µg/L

**LA River – Reach 5 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
Ethylbenzene	8/07	8/13	39	0.08	0.17	µg/L
Fluoranthene	2/02	8/13	75	0.02	1.3	µg/L
Fluorene	2/02	8/13	75	0.02	1.6	µg/L
Heptachlor Epoxide	2/02	8/13	84	0.001	0.004	µg/L
Hexachlorobenzene	2/02	8/13	75	0.07	1.1	µg/L
Hexachlorobutadiene	2/02	8/13	75	0.07	2	µg/L
Hexachlorocyclopentadiene	2/02	8/13	75	1.3	3.83	µg/L
Hexachloroethane	2/02	8/13	75	0.07	2	µg/L
Malathion	8/07	9/13	39	0.11	1.2	µg/L
Methoxychlor	2/02	8/13	69	0.003	0.38	µg/L
Methyl Bromide	8/07	8/13	39	0.11	1.02	µg/L
Methyl Chloride	8/07	8/13	39	0.13	0.37	µg/L
Mirex	2/02	8/13	69	0.002	0.12	µg/L
Nitrobenzene	2/02	8/13	75	0.05	1.5	µg/L
N-Nitrosodimethylamine	2/02	8/13	75	0.17	100	µg/L
N-Nitrosodi-n-Propylamine	2/02	8/13	75	0.13	4.5	µg/L
N-Nitrosodiphenylamine	2/02	8/13	75	0.09	1.7	µg/L
Phenanthrene	2/02	8/13	75	0.01	1.5	µg/L
Phenols (Total)	2/02	8/13	72	0.2	8.3	µg/L
Pyrene	2/02	8/13	75	0.02	1.1	µg/L
Tetrachloroethylene	5/07	8/13	51	0.09	0.22	µg/L
Toxaphene	2/02	8/13	72	0.02	0.354	µg/L
Vinyl Chloride	8/07	8/13	39	0.07	0.26	µg/L

## LA River – Reach 6 – Constituents that have not been detected in water

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
1,1,1-Trichloroethane	8/07	8/08	3	0.05	0.23	µg/L
1,1,2,2-Tetrachloroethane	8/07	8/08	3	0.11	0.12	µg/L
1,1,2-Trichloroethane	8/07	8/08	3	0.05	0.1	µg/L
1,1-Dichloroethane	8/07	8/08	3	0.11	0.12	µg/L
1,1-Dichloroethylene	3/06	8/08	43	0.12	0.23	µg/L
1,2,3,4,6,7,8-HpCDD	8/07	8/08	3	6.7	56	pg/L
1,2,3,4,6,7,8-HpCDF	8/07	8/08	3	8.8	14	pg/L
1,2,3,4,7,8,9-HpCDF	8/07	8/08	3	0.91	26	pg/L
1,2,3,4,7,8-HxCDD	8/07	8/08	3	0.96	17	pg/L
1,2,3,4,7,8-HxCDF	8/07	8/08	3	0.76	12	pg/L
1,2,3,6,7,8-HxCDD	8/07	8/08	3	0.64	15	pg/L
1,2,3,6,7,8-HxCDF	8/07	8/08	3	0.56	11	pg/L
1,2,3,7,8,9-HxCDD	8/07	8/08	3	1.3	13	pg/L
1,2,3,7,8,9-HxCDF	8/07	8/08	3	0.6	14	pg/L
1,2,3,7,8-PeCDD	8/07	8/08	3	0.96	25	pg/L
1,2,3,7,8-PeCDF	8/07	8/08	3	0.56	16	pg/L
1,2,3-Trichloropropane	8/07	8/08	3	0.23	0.23	µg/L
1,2,4-Trichlorobenzene	2/02	8/08	15	0.08	2	µg/L
1,2-Dichlorobenzene	2/02	8/08	15	0.06	1.5	µg/L
1,2-Dichloroethane	8/07	8/08	3	0.08	0.1	µg/L
1,2-Dichloropropane	8/07	8/08	3	0.1	0.12	µg/L
1,2-Trans-Dichloroethylene	8/07	8/08	3	0.07	0.15	µg/L
1,3-Dichlorobenzene	2/02	8/08	15	0.05	1.5	µg/L
1,3-trans-Dichloropropene	8/07	8/08	3	0.06	0.09	µg/L
1,4-Dichlorobenzene	2/02	8/08	15	0.07	1.8	µg/L
1,4-Dioxane	8/07	8/08	3	0.15	0.19	µg/L
2,3,4,6,7,8-HxCDF	8/07	8/08	3	0.84	11	pg/L
2,3,4,7,8-PeCDF	8/07	8/08	3	0.59	19	pg/L
2,3,7,8-TCDF	8/07	8/08	3	0.4	8.7	pg/L
2,4,5-TP	8/07	8/08	3	0.11	0.11	µg/L
2,4,6-Trichlorophenol	2/02	8/08	14	0.09	6.9	µg/L
2,4-DDD	2/02	2/07	11	0.001	0.01	µg/L
2,4-DDE	2/02	2/07	11	0.001	0.004	µg/L
2,4-DDT	2/02	2/07	11	0.002	0.005	µg/L

**LA River – Reach 6 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
2,4-Dichlorophenol	2/02	8/08	14	0.09	6.8	µg/L
2,4-Dimethylphenol	2/02	8/08	14	0.17	6.2	µg/L
2,4-Dinitrophenol	2/02	8/08	14	0.21	31	µg/L
2,4-Dinitrotoluene	2/02	8/08	15	0.08	2.3	µg/L
2,6-Dinitrotoluene	2/02	8/08	15	0.022	1.6	µg/L
2-Chloroethylvinyl Ether	8/07	8/08	3	0.27	0.48	µg/L
2-Chloronaphthalene	2/02	8/08	15	0.07	1.5	µg/L
2-Chlorophenol	2/02	8/08	14	0.09	8.1	µg/L
2-Methyl-4,6-Dinitrophenol	2/02	8/08	14	0.4	8.9	µg/L
2-Nitrophenol	2/02	8/08	14	0.09	7.9	µg/L
3,3-Dichlorobenzidine	2/02	8/08	15	0.11	2.5	µg/L
3-Methyl-4-Chlorophenol	2/02	8/08	14	0.18	6	µg/L
4,4-DDD	2/02	8/08	14	0.001	0.006	µg/L
4,4-DDE	2/02	8/08	14	0.0018	0.004	µg/L
4,4-DDT	2/02	8/08	14	0.002	0.006	µg/L
4-Bromophenyl Phenyl Ether	2/02	8/08	15	0.07	1.5	µg/L
4-Chlorophenyl Phenyl Ether	2/02	8/08	15	0.04	2	µg/L
4-Nitrophenol	2/02	8/08	14	0.06	5	µg/L
Acenaphthene	2/02	8/08	15	0.04	1.7	µg/L
Acenaphthylene	2/02	8/08	15	0.06	1.7	µg/L
Acrolein	8/07	8/08	3	0.61	1.96	µg/L
Acrylonitrile	8/07	8/08	3	0.08	0.17	µg/L
Aldrin	2/02	8/08	14	0.001	0.008	µg/L
alpha-BHC	2/02	8/08	14	0.001	0.003	µg/L
Anthracene	2/02	8/08	15	0.06	1.6	µg/L
Aroclor 1016	2/02	8/08	14	0.03	0.08	µg/L
Aroclor 1221	2/02	8/08	14	0.02	0.49	µg/L
Aroclor 1232	2/02	8/08	14	0.033	0.1	µg/L
Aroclor 1242	2/02	8/08	14	0.031	0.2	µg/L
Aroclor 1248	2/02	8/08	14	0.057	0.121	µg/L
Aroclor 1254	2/02	8/08	14	0.017	0.05	µg/L
Aroclor 1260	2/02	8/08	14	0.03	0.1	µg/L
Azinphos-methyl	8/07	8/08	3	0.17	1.2	µg/L
Azobenzene	2/02	8/08	15	0.06	7	µg/L
Benzene	8/07	8/08	3	0.07	0.09	µg/L

**LA River – Reach 6 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Benzidine	2/02	8/08	15	0.3	47	µg/L
Benzo(a)Anthracene	2/02	8/08	15	0.09	1.2	µg/L
Benzo(a)Pyrene	2/02	8/08	15	0.06	1.6	µg/L
Benzo(b)Fluoranthene	2/02	8/08	15	0.07	1.5	µg/L
Benzo(ghi)Perylene	2/02	8/08	15	0.03	1.7	µg/L
Benzo(k)Fluoranthene	2/02	8/08	15	0.11	2.3	µg/L
beta-BHC	2/02	8/08	14	0.0019	0.005	µg/L
Bis(2-chloroethoxy)Methane	2/02	8/08	15	0.05	1.6	µg/L
Bis(2-chloroethyl)Ether	2/02	8/08	15	0.09	1.9	µg/L
Bis(2-chloroisopropyl)Ether	2/02	8/08	15	0.05	3	µg/L
Bolstar	6/10	6/10	1	0.002	0.002	µg/L
Bromoform	8/07	8/08	3	0.07	0.16	µg/L
Butylbenzyl Phthalate	2/02	8/08	15	0.04	3	µg/L
Carbon Tetrachloride	8/07	8/08	3	0.09	0.1	µg/L
Chlordanes	2/02	8/08	14	0.012	0.06	µg/L
Chlorobenzene	8/07	8/08	3	0.06	0.12	µg/L
Chlorodibromomethane	8/07	8/08	3	0.05	0.1	µg/L
Chloroethane	8/07	8/08	3	0.04	0.17	µg/L
Chlorpyrifos	6/10	6/10	1	0.001	0.001	µg/L
cis-1,3-Dichloropropene	8/07	8/08	3	0.09	0.15	µg/L
Cyfluthrin	6/10	6/10	1	0.0005	0.0005	µg/L
Cypermethrin	6/10	6/10	1	0.0005	0.0005	µg/L
Deltamethrin	6/10	6/10	1	0.0005	0.0005	µg/L
Demeton-O	8/07	8/08	3	0.09	0.49	µg/L
Demeton-S	8/07	8/08	3	0.11	0.63	µg/L
Dibenzo(a,h)Anthracene	2/02	8/08	15	0.02	1.9	µg/L
Dichlorobromomethane	8/07	8/08	3	0.06	0.08	µg/L
Dichlorvos	6/10	6/10	1	0.003	0.003	µg/L
Dieldrin	2/02	8/08	14	0.0009	0.006	µg/L
Dimethoate	6/10	6/10	1	0.002	0.002	µg/L
Dimethyl Phthalate	2/02	8/08	15	0.27	3	µg/L
Disulfoton	6/10	6/10	1	0.001	0.001	µg/L
Endosulfan II	2/02	8/08	14	0.001	0.007	µg/L
Endosulfan Sulfate	2/02	8/08	14	0.002	0.005	µg/L
Endrin	2/02	8/08	14	0.004	0.007	µg/L



**LA River – Reach 6 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Endrin Aldehyde	2/02	8/08	14	0.002	0.006	µg/L
Esfenvalerate	6/10	6/10	1	0.0005	0.0005	µg/L
Ethoprop	6/10	6/10	1	0.001	0.001	µg/L
Ethyl Parathion	8/07	8/08	3	0.12	1.2	µg/L
Ethylbenzene	8/07	8/08	3	0.08	0.17	µg/L
Fensulfothion	6/10	6/10	1	0.001	0.001	µg/L
Fenthion	6/10	6/10	1	0.002	0.002	µg/L
Fenvalerate	6/10	6/10	1	0.0005	0.0005	µg/L
Fluoranthene	2/02	8/08	15	0.02	1.3	µg/L
Fluorene	2/02	8/08	15	0.02	1.6	µg/L
Heptachlor	2/02	8/08	14	0.001	0.005	µg/L
Heptachlor Epoxide	2/02	11/08	18	0.001	0.004	µg/L
Hexachlorobenzene	2/02	8/08	15	0.07	1.1	µg/L
Hexachlorobutadiene	2/02	8/08	15	0.07	2	µg/L
Hexachlorocyclopentadiene	2/02	8/08	15	1.3	3	µg/L
Hexachloroethane	2/02	8/08	15	0.07	2	µg/L
Indeno(1,2,3-cd)Pyrene	2/02	8/08	15	0.02	1.7	µg/L
L-Cyhalothrin	6/10	6/10	1	0.0005	0.0005	µg/L
Malathion	8/07	6/10	4	0.003	1.1	µg/L
Merphos	6/10	6/10	1	0.001	0.001	µg/L
Methoxychlor	2/02	8/08	14	0.003	0.38	µg/L
Methyl Bromide	8/07	8/08	3	0.21	0.26	µg/L
Methyl Chloride	8/07	8/08	3	0.16	0.16	µg/L
Methyl Parathion	6/10	6/10	1	0.001	0.001	µg/L
Methylene Chloride	8/07	8/08	3	0.09	0.12	µg/L
Mevinphos	6/10	6/10	1	0.008	0.008	µg/L
Mirex	2/02	8/08	14	0.003	0.12	µg/L
Naphthalene	2/02	8/08	15	0.028	2	µg/L
Nitrobenzene	2/02	8/08	15	0.05	1.5	µg/L
N-Nitrosodimethylamine	2/02	8/08	15	0.17	100	µg/L
N-Nitrosodi-n-Propylamine	2/02	8/08	15	0.13	4.5	µg/L
N-Nitrosodiphenylamine	2/02	8/08	15	0.09	1.7	µg/L
OCDF	8/07	8/08	3	8.4	39	pg/L
Oil + Grease	2/02	1/09	44	3	3	mg/L
Pentachlorophenol	2/02	8/08	14	0.4	8	µg/L

**LA River – Reach 6 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Permethrin	6/10	6/10	1	0.005	0.005	µg/L
Phenanthrene	2/02	8/08	15	0.01	1.5	µg/L
Phenols (Total)	2/02	8/08	14	0.4	8.3	µg/L
Phorate	6/10	6/10	1	0.006	0.006	µg/L
Pyrene	2/02	8/08	15	0.02	1.1	µg/L
Ronnel	6/10	6/10	1	0.002	0.002	µg/L
Tetrachlorvinphos	6/10	6/10	1	0.002	0.002	µg/L
Tokuthion	6/10	6/10	1	0.003	0.003	µg/L
Toluene	8/07	8/08	3	0.06	0.14	µg/L
Toxaphene	2/02	8/08	14	0.02	0.354	µg/L
Trichloronate	6/10	6/10	1	0.001	0.001	µg/L
Vanadium - Dissolved	2/01	2/01	1	5	5	µg/L
Vanadium - Total	2/01	2/01	1	5	5	µg/L
Vinyl Chloride	8/07	8/08	3	0.07	0.22	µg/L

**Rio Hondo – Reach 1 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Beryllium Dissolved	1/05	2/06	13	0.4	0.4	µg/L
Beryllium Total	1/05	2/06	13	0.4	0.4	µg/L
Bolstar	6/09	6/12	4	0.002	0.002	µg/L
Chlorpyrifos	6/09	6/12	4	0.001	0.001	µg/L
cis-Permethrin	6/11	6/12	2	0.005	0.005	µg/L
Deltamethrin	6/09	6/12	4	0.0005	0.005	µg/L
Demeton-S	6/09	6/12	3	0.001	0.001	µg/L
Diazinon	6/09	6/12	4	0.002	0.002	µg/L
Dichlorvos	6/09	6/12	4	0.003	0.003	µg/L
Dimethoate	6/09	7/10	2	0.002	0.003	µg/L
Disulfoton	6/09	6/12	4	0.001	0.001	µg/L
Esfenvalerate	6/09	7/10	2	0.0005	0.0005	µg/L
Ethoprop	6/09	6/12	4	0.001	0.001	µg/L
Fensulfothion	6/09	6/12	4	0.001	0.001	µg/L
Fenthion	6/09	6/12	4	0.002	0.002	µg/L
L-Cyhalothrin	6/09	6/12	4	0.0005	0.001	µg/L
Malathion	6/09	6/12	4	0.003	0.003	µg/L
Merphos	6/09	7/10	2	0.001	0.001	µg/L
Methyl Parathion	6/09	6/12	4	0.001	0.001	µg/L
Mevinphos	6/09	6/12	4	0.008	0.008	µg/L
Nitrite as N	6/09	6/12	4	0.02	0.02	mg/L
Permethrin	6/09	7/10	2	0.005	0.005	µg/L
Phorate	6/09	6/12	4	0.006	0.006	µg/L
Ronnel	6/09	6/12	4	0.002	0.002	µg/L
Tetrachlorvinphos	6/09	6/12	4	0.002	0.002	µg/L
Tokuthion	6/09	6/12	4	0.003	0.003	µg/L
trans-Permethrin	6/11	6/12	2	0.005	0.005	µg/L
Trichloronate	6/09	6/12	4	0.001	0.001	µg/L

**Rio Hondo – Reach 2 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
1,2,4-Trichlorobenzene	10/03	2/04	6	0.5	0.5	µg/L
1,2-Dichlorobenzene	10/03	2/04	6	0.05	0.05	µg/L
1,2-Diphenylhydrazine	10/03	2/04	6	3	3	µg/L
1,3-Dichlorobenzene	10/03	2/04	6	0.05	0.05	µg/L
1,4-Dichlorobenzene	10/03	2/04	6	0.05	0.05	µg/L
2,4,5-TP	10/03	2/04	6	1	1	µg/L
2,4,6-Trichlorophenol	10/03	2/04	6	1	1	µg/L
2,4-D	10/03	2/04	6	10	10	µg/L
2,4-Dichlorophenol	10/03	2/04	6	2	2	µg/L
2,4-Dimethylphenol	10/03	2/04	6	2	2	µg/L
2,4-Dinitrophenol	10/03	2/04	6	3	3	µg/L
2,4-Dinitrotoluene	10/03	2/04	6	0.05	0.05	µg/L
2,6-Dinitrotoluene	10/03	2/04	6	0.05	0.05	µg/L
2-Chloronaphthalene	10/03	2/04	6	0.1	0.1	µg/L
2-Chlorophenol	10/03	2/04	6	2	2	µg/L
2-Nitrophenol	10/03	2/04	6	3	3	µg/L
3,3-Dichlorobenzidine	10/03	2/04	6	3	3	µg/L
3-Methyl-4-Chlorophenol	10/03	2/04	6	3	3	µg/L
4,4-DDD	10/03	2/04	6	0.1	0.1	µg/L
4,4-DDE	10/03	2/04	6	0.1	0.1	µg/L
4,4-DDT	10/03	2/04	6	0.1	0.1	µg/L
4-Bromophenyl Phenyl Ether	10/03	2/04	6	1	1	µg/L
4-Chlorophenyl Phenyl Ether	10/03	2/04	6	0.1	0.1	µg/L
4-Nitrophenol	10/03	2/04	6	3	3	µg/L
Acenaphthene	10/03	2/04	6	0.05	0.05	µg/L
Acenaphthylene	10/03	2/04	6	0.05	0.05	µg/L
Aldrin	10/03	2/04	6	0.05	0.05	µg/L
alpha-BHC	10/03	2/04	6	0.05	0.05	µg/L
Aluminum Dissolved	10/03	2/04	6	100	100	µg/L
Anthracene	10/03	2/04	6	0.05	0.05	µg/L

**Rio Hondo – Reach 2 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
Aroclor 1016	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1221	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1232	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1242	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1248	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1254	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1260	10/03	2/04	6	0.5	0.5	µg/L
Atrazine	10/03	2/04	6	2	2	µg/L
Benzidine	10/03	2/04	6	3	3	µg/L
Benzo(a)Anthracene	10/03	2/04	6	0.1	0.1	µg/L
Benzo(a)Pyrene	10/03	2/04	6	0.1	0.1	µg/L
Benzo(k)Fluoranthene	10/03	2/04	6	0.1	0.1	µg/L
Beryllium Dissolved	10/03	2/04	6	1	1	µg/L
Beryllium Total	10/03	2/04	6	1	1	µg/L
beta-BHC	10/03	2/04	6	0.05	0.05	µg/L
Bis(2-chloroethoxy)Methane	10/03	2/04	6	0.1	0.1	µg/L
Bis(2-chloroethyl)Ether	10/03	2/04	6	0.1	0.1	µg/L
Bis(2-chloroisopropyl)Ether	10/03	2/04	6	1	1	µg/L
Butylbenzyl Phthalate	10/03	2/04	6	0.3	0.3	µg/L
Cadmium Dissolved	10/03	2/04	6	1	1	µg/L
Chlordane-alpha	10/03	2/04	6	0.05	0.05	µg/L
Chlordane-gamma	10/03	2/04	6	0.05	0.05	µg/L
Chlorpyrifos	10/03	2/04	6	0.05	0.05	µg/L
Chromium (VI) - Dissolved	10/03	2/04	6	10	10	µg/L
Chromium (VI) - Total	10/03	2/04	6	10	10	µg/L
Chrysene	10/03	2/04	6	0.1	0.1	µg/L
Cyanazine	10/03	2/04	6	2	2	µg/L
delta-BHC	10/03	2/04	6	0.05	0.05	µg/L
Dibenzo(a,h)Anthracene	10/03	2/04	6	0.1	0.1	µg/L
Dieldrin	10/03	2/04	6	0.1	0.1	µg/L

**Rio Hondo – Reach 2 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
Dimethyl Phthalate	10/03	2/04	6	0.5	0.5	µg/L
Di-n-Butyl Phthalate	10/03	2/04	6	1	1	µg/L
Di-n-Octyl Phthalate	10/03	2/04	6	1	1	µg/L
Endosulfan I	10/03	2/04	6	0.1	0.1	µg/L
Endosulfan II	10/03	2/04	6	0.1	0.1	µg/L
Endosulfan Sulfate	10/03	2/04	6	0.1	0.1	µg/L
Endrin	10/03	2/04	6	0.1	0.1	µg/L
Endrin Aldehyde	10/03	2/04	6	0.1	0.1	µg/L
Fluoranthene	10/03	2/04	6	0.1	0.1	µg/L
Fluorene	10/03	2/04	6	0.1	0.1	µg/L
gamma-BHC (Lindane)	10/03	2/04	6	0.05	0.05	µg/L
Glyphosate	10/03	2/04	6	25	25	µg/L
Heptachlor	10/03	2/04	6	0.05	0.05	µg/L
Heptachlor Epoxide	10/03	2/04	6	0.05	0.05	µg/L
Hexachlorobenzene	10/03	2/04	6	0.5	0.5	µg/L
Hexachlorobutadiene	10/03	2/04	6	1	1	µg/L
Hexachlorocyclopentadiene	10/03	2/04	6	3	3	µg/L
Hexachloroethane	10/03	2/04	6	1	1	µg/L
Indeno(1,2,3-cd)Pyrene	10/03	2/04	6	0.1	0.1	µg/L
Malathion	10/03	2/04	6	2	2	µg/L
Mercury Dissolved	10/03	2/04	6	1	1	µg/L
Mercury Total	10/03	2/04	6	1	1	µg/L
Naphthalene	10/03	2/04	6	0.05	0.05	µg/L
Nitrobenzene	10/03	2/04	6	0.05	0.05	µg/L
N-Nitrosodimethylamine	10/03	2/04	6	0.3	0.3	µg/L
N-Nitrosodi-n-Propylamine	10/03	2/04	6	0.3	0.3	µg/L
N-Nitrosodiphenylamine	10/03	2/04	6	0.3	0.3	µg/L
Pentachlorophenol	10/03	2/04	6	2	2	µg/L
Phenanthrene	10/03	2/04	6	0.05	0.05	µg/L
Phenols (Total)	10/03	2/04	6	1	1	µg/L

**Rio Hondo – Reach 2 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
Prometryn	10/03	2/04	6	2	2	µg/L
Pyrene	10/03	2/04	6	0.05	0.05	µg/L
Silver - Dissolved	10/03	2/04	6	1	1	µg/L
Simazine	10/03	2/04	6	2	2	µg/L
Thallium - Dissolved	10/03	2/04	6	5	5	µg/L
Thallium - Total	10/03	2/04	6	5	5	µg/L
Toxaphene	10/03	2/04	6	1	1	µg/L

**Rio Hondo – Reach 3 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
1,1,1-Trichloroethane	2/04	8/12	33	0.5	1	µg/L
1,1,2,2-Tetrachloroethane	2/04	8/12	34	0.5	1	µg/L
1,1,2-Trichloroethane	2/04	8/12	34	0.5	1	µg/L
1,1-Dichloroethane	2/04	8/12	34	0.5	1	µg/L
1,1-Dichloroethylene	2/04	8/12	35	0.5	1	µg/L
1,2,3,4,7,8-HxCDD	2/04	8/12	60	1	55	pg/L
1,2,3,7,8,9-HxCDD	2/04	8/12	30	1.1	55	pg/L
1,2,3,7,8,9-HxCDF	2/04	8/12	30	0.75	55	pg/L
1,2,3,7,8-PeCDD	2/04	8/12	30	1.9	55	pg/L
1,2,3,7,8-PeCDF	2/04	8/12	30	0.98	55	pg/L
1,2,3-Trichloropropane	5/05	8/12	24	0.005	0.005	µg/L
1,2,4-Trichlorobenzene	2/04	8/12	33	5	5	µg/L
1,2-Dichlorobenzene	2/04	8/12	40	0.5	2	µg/L
1,2-Dichloroethane	2/04	8/12	34	0.5	0.5	µg/L
1,2-Dichloropropane	2/04	8/12	34	0.5	1	µg/L
1,2-Dimethylbenzene	5/05	12/06	20	0.5	1	µg/L
1,2-Diphenylhydrazine	2/04	8/12	18	1	1	µg/L
1,2-Trans-Dichloroethylene	2/04	8/12	34	0.5	1	µg/L
1,3-Dichlorobenzene	2/04	8/12	40	0.5	1	µg/L
1,3-trans-Dichloropropene	2/04	8/09	28	0.5	0.5	µg/L
1,4-Dichlorobenzene	2/04	8/12	53	0.5	1	µg/L
2,3,4,6,7,8-HxCDF	2/04	8/12	30	0.72	55	pg/L
2,3,4,7,8-PeCDF	2/04	8/12	30	1	55	pg/L
2,3,4-Trichlorophenol	6/05	12/06	18	5	5	µg/L
2,3,6-Trichlorophenol	6/05	12/06	18	5	5	µg/L
2,3,7,8-TCDD (Dioxin)	2/04	8/12	30	0.78	13	pg/L
2,3,7,8-TCDF	2/04	8/12	30	1.4	11	pg/L
2,4,5-TP	2/04	11/12	43	0.25	1.2	µg/L

## Rio Hondo – Reach 3 – Constituents that have not been detected in water

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
2,4,5-Trichlorophenol	6/05	12/06	18	5	5	µg/L
2,4,6-Trichlorophenol	2/04	8/12	39	10	10	µg/L
2,4-DDD	2/04	2/09	11	0.01	0.01	µg/L
2,4-DDE	2/04	2/09	11	0.01	0.01	µg/L
2,4-DDT	2/04	2/09	11	0.01	0.01	µg/L
2,4-Dichlorophenol	2/04	8/12	24	5	5	µg/L
2,4-Dimethylphenol	2/04	8/12	24	2	2	µg/L
2,4-Dinitrophenol	2/04	8/12	18	5	5	µg/L
2,4-Dinitrotoluene	2/04	8/12	18	5	5	µg/L
2,6-Dinitrotoluene	2/04	8/12	18	5	5	µg/L
2-Chloroethylvinyl Ether	2/04	8/12	34	0.5	10	µg/L
2-Chloronaphthalene	2/04	8/12	18	10	10	µg/L
2-Chlorophenol	2/04	8/12	18	5	5	µg/L
2-Methyl-4,6-Dinitrophenol	2/04	8/12	18	5	5	µg/L
2-Nitrophenol	2/04	8/12	18	10	10	µg/L
3,3-Dichlorobenzidine	2/04	8/12	18	5	5	µg/L
3,4,5-Trichlorophenol	6/05	12/06	18	5	5	µg/L
3-Methyl-4-Chlorophenol	2/04	8/12	24	1	1	µg/L
4,4-DDD	2/04	8/12	18	0.01	0.01	µg/L
4,4-DDE	2/04	8/12	35	0.01	0.01	µg/L
4,4-DDT	2/04	8/12	35	0.01	0.01	µg/L
4-Bromophenyl Phenyl Ether	2/04	8/12	18	5	5	µg/L
4-Chlorophenyl Phenyl Ether	2/04	8/12	18	5	5	µg/L
4-Methyl-2-Pentanone	6/05	12/06	19	1	10	µg/L
4-Nitrophenol	2/04	8/12	18	10	10	µg/L
Acenaphthene	2/04	8/12	18	1	1	µg/L
Acenaphthylene	2/04	8/12	18	10	10	µg/L
Acrolein	2/04	8/12	18	2	10	µg/L
Acrylonitrile	2/04	8/12	42	2	5	µg/L
Aldrin	2/04	8/12	33	0.005	0.01	µg/L
alpha-BHC	2/04	8/12	34	0.01	0.01	µg/L
Anthracene	2/04	8/12	18	10	10	µg/L
Aroclor 1016	2/04	8/12	34	0.1	0.1	µg/L
Aroclor 1221	2/04	8/12	34	0.1	0.5	µg/L
Aroclor 1232	2/04	8/12	34	0.1	0.3	µg/L
Aroclor 1242	2/04	8/12	34	0.1	0.1	µg/L
Aroclor 1248	2/04	8/12	34	0.1	0.1	µg/L
Aroclor 1254	2/04	8/12	34	0.05	0.05	µg/L
Aroclor 1260	2/04	8/12	34	0.1	0.1	µg/L
Atrazine	6/05	12/06	19	0.5	0.5	µg/L
Bentazon	2/10	2/10	1	2.5	2.5	µg/L
Benzene	2/04	8/12	42	0.5	0.5	µg/L
Benidine	2/04	8/12	18	5	5	µg/L
Benzo(a)Anthracene	2/04	8/12	18	5	5	µg/L
Benzo(ghi)Perylene	2/04	8/12	18	5	5	µg/L



## Rio Hondo – Reach 3 – Constituents that have not been detected in water

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
Beryllium Dissolved	8/10	11/12	10	0.25	0.25	µg/L
beta-BHC	2/04	8/12	34	0.005	0.01	µg/L
Bis(2-chloroethoxy)Methane	2/04	8/12	18	5	5	µg/L
Bis(2-chloroethyl)Ether	2/04	8/12	18	1	1	µg/L
Bis(2-chloroisopropyl)Ether	2/04	8/12	18	2	2	µg/L
Bromoethane	6/05	12/06	17	1	1	µg/L
Butylbenzyl Phthalate	2/04	8/12	18	10	10	µg/L
Carbon Tetrachloride	2/04	8/12	35	0.5	0.5	µg/L
Chlordane (Technical)	2/04	8/12	18	0.05	0.05	µg/L
Chlorobenzene	2/04	8/12	35	0.5	1	µg/L
Chloroethane	2/04	8/12	34	0.5	1	µg/L
Chlorpyrifos	11/09	2/10	2	0.05	0.05	µg/L
cis-1,3-Dichloropropene	2/04	8/09	28	0.5	0.5	µg/L
Dalapon	2/10	2/10	1	0.5	0.5	µg/L
delta-BHC	2/04	8/12	34	0.005	0.01	µg/L
Dicamba	2/10	2/10	1	0.75	0.75	µg/L
Dichlorodifluoromethane	6/05	12/06	19	0.5	1	µg/L
Dichloroprop	2/10	2/10	1	1	1	µg/L
Dieldrin	2/04	8/12	35	0.01	0.01	µg/L
Diethyl Phthalate	2/04	8/12	29	2	2	µg/L
Dimethyl Phthalate	2/04	8/12	18	2	2	µg/L
Di-n-Butyl Phthalate	2/04	8/12	18	10	10	µg/L
Di-n-Octyl Phthalate	2/04	8/12	18	10	10	µg/L
Dinoseb	2/10	2/10	1	0.5	0.5	µg/L
Endosulfan I	2/04	8/12	18	0.01	0.01	µg/L
Endosulfan II	2/04	8/12	18	0.01	0.01	µg/L
Endosulfan Sulfate	2/04	8/12	18	0.01	0.01	µg/L
Endrin	2/04	8/12	35	0.01	0.01	µg/L
Endrin Aldehyde	2/04	8/12	18	0.01	0.01	µg/L
Ethylbenzene	2/04	8/12	35	0.5	1	µg/L
Fluoranthene	2/04	8/12	33	1	1	µg/L
Fluorene	2/04	8/12	18	10	10	µg/L
Heptachlor	2/04	8/12	34	0.01	0.01	µg/L
Heptachlor Epoxide	2/04	8/12	34	0.01	0.01	µg/L
Hexachlorobenzene	2/04	8/12	18	1	1	µg/L
Hexachlorobutadiene	2/04	8/12	18	1	1	µg/L
Hexachlorocyclopentadiene	2/04	8/12	18	5	5	µg/L
Hexachloroethane	2/04	8/12	18	1	1	µg/L
Isophorone	2/04	8/12	18	1	1	µg/L
M+P-XYLENE	5/05	12/06	20	1	1	µg/L
MCPA	2/10	2/10	1	100	100	µg/L
MCPP	2/10	2/10	1	100	100	µg/L
Methoxychlor	2/04	11/12	42	0.01	0.01	µg/L
Methyl Bromide	2/04	8/12	18	0.5	0.5	µg/L
MTBE	2/04	8/12	32	0.5	1	µg/L

**Rio Hondo – Reach 3 – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
Naphthalene	2/04	8/12	18	1	1	µg/L
Nitrobenzene	2/04	8/12	18	1	1	µg/L
N-Nitrosodi-n-Propylamine	2/04	8/12	18	5	5	µg/L
N-Nitrosodiphenylamine	2/04	8/12	18	1	1	µg/L
Pentachlorophenol	2/04	8/12	39	1	5	µg/L
Phenanthrene	2/04	8/12	33	5	5	µg/L
Phenylacetic Acid	6/05	12/06	18	20	20	µg/L
Picloram	6/05	2/10	20	0.75	2	µg/L
Pyrene	2/04	8/12	18	10	10	µg/L
RESMETHRIN	8/04	8/04	1	10	10	µg/L
Silver Dissolved	8/10	11/12	10	0.2	0.2	µg/L
Simazine	6/05	12/06	19	0.5	1	µg/L
Tetrachloroethylene	2/04	8/12	35	0.5	1	µg/L
Toxaphene	2/04	8/12	35	0.5	0.5	µg/L
Trichloroethylene	2/04	8/12	35	0.5	1	µg/L
Trichlorofluoromethane	6/05	12/06	19	0.5	10	µg/L
Vinyl Chloride	2/04	8/12	34	0.5	0.5	µg/L

**Tujunga Wash – Constituents that have not been detected in water**

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Beryllium Dissolved	1/05	2/06	14	0.4	0.4	µg/L
Bolstar	6/09	6/11	3	0.002	0.002	µg/L
Chlorpyrifos	6/09	6/11	3	0.001	0.001	µg/L
cis-Permethrin	6/11	6/11	1	0.005	0.005	µg/L
Cypermethrin	6/09	6/11	3	0.0005	0.001	µg/L
Deltamethrin	6/09	6/11	3	0.0005	0.005	µg/L
Demeton-S	6/09	6/11	2	0.001	0.001	µg/L
Diazinon	6/09	6/11	3	0.002	0.002	µg/L
Dichlorvos	6/09	6/11	3	0.003	0.003	µg/L
Dimethoate	6/09	7/10	2	0.002	0.003	µg/L
Disulfoton	6/09	6/11	3	0.001	0.001	µg/L
Esfenvalerate	6/09	7/10	2	0.0005	0.0005	µg/L
Ethoprop	6/09	6/11	3	0.001	0.001	µg/L
Fensulfothion	6/09	6/11	3	0.001	0.001	µg/L
Fenthion	6/09	6/11	3	0.002	0.002	µg/L
Fenvalerate	6/09	6/11	4	0.0005	0.001	µg/L
L-Cyhalothrin	6/09	6/11	3	0.0005	0.001	µg/L
Malathion	6/09	6/11	3	0.003	0.003	µg/L
Merphos	6/09	7/10	2	0.001	0.001	µg/L
Methyl Parathion	6/09	6/11	3	0.001	0.001	µg/L

## Tujunga Wash – Constituents that have not been detected in water

Constituent	Date Range of Available Data		N	Detection Limit		Units
				Min	Max	
Mevinphos	6/09	6/11	3	0.008	0.008	µg/L
Nitrite as N	6/09	6/11	3	0.02	0.02	mg/L
Permethrin	6/09	7/10	2	0.005	0.005	µg/L
Phorate	6/09	6/11	3	0.006	0.006	µg/L
Ronnel	6/09	6/11	3	0.002	0.002	µg/L
Tetrachlorvinphos	6/09	6/11	3	0.002	0.002	µg/L
Tokuthion	6/09	6/11	3	0.003	0.003	µg/L
trans-Permethrin	6/11	6/11	1	0.005	0.005	µg/L
Trichloronate	6/09	6/11	3	0.001	0.001	µg/L

## Verdugo Wash – Reach 1 – Constituents that have not been detected in water

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
1,2,4-Trichlorobenzene	10/03	2/04	6	0.5	0.5	µg/L
1,2-Dichlorobenzene	10/03	2/04	6	0.05	0.05	µg/L
1,2-Diphenylhydrazine	10/03	2/04	6	3	3	µg/L
1,3-Dichlorobenzene	10/03	2/04	6	0.05	0.05	µg/L
1,4-Dichlorobenzene	10/03	2/04	6	0.05	0.05	µg/L
2,4,5-TP	10/03	2/04	6	1	1	µg/L
2,4,6-Trichlorophenol	10/03	2/04	6	1	1	µg/L
2,4-D	10/03	2/04	6	10	10	µg/L
2,4-Dichlorophenol	10/03	2/04	6	2	2	µg/L
2,4-Dimethylphenol	10/03	2/04	6	2	2	µg/L
2,4-Dinitrophenol	10/03	2/04	6	3	3	µg/L
2,4-Dinitrotoluene	10/03	2/04	6	0.05	0.05	µg/L
2,6-Dinitrotoluene	10/03	2/04	6	0.05	0.05	µg/L
2-Chloronaphthalene	10/03	2/04	6	0.1	0.1	µg/L
2-Chlorophenol	10/03	2/04	6	2	2	µg/L
2-Methyl-4,6-Dinitrophenol	10/03	2/04	6	3	3	µg/L
2-Nitrophenol	10/03	2/04	6	3	3	µg/L
3,3-Dichlorobenzidine	10/03	2/04	6	3	3	µg/L
3-Methyl-4-Chlorophenol	10/03	2/04	6	3	3	µg/L
4,4-DDD	10/03	2/04	6	0.1	0.1	µg/L
4,4-DDE	10/03	2/04	6	0.1	0.1	µg/L
4,4-DDT	10/03	2/04	6	0.1	0.1	µg/L

## Verdugo Wash – Reach 1 – Constituents that have not been detected in water

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
4-Bromophenyl Phenyl Ether	10/03	2/04	6	1	1	µg/L
4-Chlorophenyl Phenyl Ether	10/03	2/04	6	0.1	0.1	µg/L
4-Nitrophenol	10/03	2/04	6	3	3	µg/L
Acenaphthene	10/03	2/04	6	0.05	0.05	µg/L
Acenaphthylene	10/03	2/04	6	0.05	0.05	µg/L
Aldrin	10/03	2/04	6	0.05	0.05	µg/L
alpha-BHC	10/03	2/04	6	0.05	0.05	µg/L
Aluminum Dissolved	10/03	2/04	6	100	100	µg/L
Anthracene	10/03	2/04	6	0.05	0.05	µg/L
Aroclor 1016	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1221	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1232	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1242	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1248	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1254	10/03	2/04	6	0.5	0.5	µg/L
Aroclor 1260	10/03	2/04	6	0.5	0.5	µg/L
Benzidine	10/03	2/04	6	3	3	µg/L
Benzo(a)Anthracene	10/03	2/04	6	0.1	0.1	µg/L
Benzo(a)Pyrene	10/03	2/04	6	0.1	0.1	µg/L
Benzo(k)Fluoranthene	10/03	2/04	6	0.1	0.1	µg/L
Beryllium Dissolved	10/03	2/06	19	0.4	1	µg/L
Beryllium Total	10/03	2/06	20	0.4	1	µg/L
beta-BHC	10/03	2/04	6	0.05	0.05	µg/L
Bis(2-chloroethoxy)Methane	10/03	2/04	6	0.1	0.1	µg/L
Bis(2-chloroethyl)Ether	10/03	2/04	6	0.1	0.1	µg/L
Bis(2-chloroisopropyl)Ether	10/03	2/04	6	1	1	µg/L
Butylbenzyl Phthalate	10/03	2/04	6	0.3	0.3	µg/L
Chlordane-alpha	10/03	2/04	6	0.05	0.05	µg/L
Chlordane-gamma	10/03	2/04	6	0.05	0.05	µg/L
Chromium (VI) - Dissolved	10/03	2/04	6	10	10	µg/L
Chromium (VI) - Total	10/03	2/04	6	10	10	µg/L
Chrysene	10/03	2/04	6	0.1	0.1	µg/L
delta-BHC	10/03	2/04	6	0.05	0.05	µg/L
Dibenzo(a,h)Anthracene	10/03	2/04	6	0.1	0.1	µg/L
Dieldrin	10/03	2/04	6	0.1	0.1	µg/L
Dimethyl Phthalate	10/03	2/04	6	0.5	0.5	µg/L

## Verdugo Wash – Reach 1 – Constituents that have not been detected in water

Constituent	Date Range of Available Data		N	Detection Limits		Units
				Min	Max	
Di-n-Octyl Phthalate	10/03	2/04	6	1	1	µg/L
Endosulfan I	10/03	2/04	6	0.1	0.1	µg/L
Endosulfan II	10/03	2/04	6	0.1	0.1	µg/L
Endosulfan Sulfate	10/03	2/04	6	0.1	0.1	µg/L
Endrin	10/03	2/04	6	0.1	0.1	µg/L
Endrin Aldehyde	10/03	2/04	6	0.1	0.1	µg/L
Fluoranthene	10/03	2/04	6	0.1	0.1	µg/L
Fluorene	10/03	2/04	6	0.1	0.1	µg/L
gamma-BHC (Lindane)	10/03	2/04	6	0.05	0.05	µg/L
Glyphosate	10/03	2/04	6	25	25	µg/L
Heptachlor	10/03	2/04	6	0.05	0.05	µg/L
Heptachlor Epoxide	10/03	2/04	6	0.05	0.05	µg/L
Hexachlorobenzene	10/03	2/04	6	0.5	0.5	µg/L
Hexachlorobutadiene	10/03	2/04	6	1	1	µg/L
Hexachlorocyclopentadiene	10/03	2/04	6	3	3	µg/L
Hexachloroethane	10/03	2/04	6	1	1	µg/L
Indeno(1,2,3-cd)Pyrene	10/03	2/04	6	0.1	0.1	µg/L
Naphthalene	10/03	2/04	6	0.05	0.05	µg/L
Nitrobenzene	10/03	2/04	6	0.05	0.05	µg/L
N-Nitrosodimethylamine	10/03	2/04	6	0.3	0.3	µg/L
N-Nitrosodi-n-Propylamine	10/03	2/04	6	0.3	0.3	µg/L
N-Nitrosodiphenylamine	10/03	2/04	6	0.3	0.3	µg/L
Oil + Grease	10/03	2/04	6	1	1	mg/L
Pentachlorophenol	10/03	2/04	6	2	2	µg/L
Phenanthrene	10/03	2/04	6	0.05	0.05	µg/L
Phenols (Total)	10/03	2/04	6	1	1	µg/L
Pyrene	10/03	2/04	6	0.05	0.05	µg/L
Toxaphene	10/03	2/04	6	1	1	µg/L
TPH	10/03	2/04	6	1	1	mg/L

## Attachment 2: Constituents that have been detected but do not exceed relevant water quality objective

Constituents in this attachment either did not exceed a water quality objective or there is no applicable water quality objective for the constituent.

**Aliso Canyon Wash - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Alkalinity	10/03	5/09	7	7	mg/L	AD	AD	27.5	356	NA	NA
Aluminum Total	10/03	2/04	6	2	µg/L	100	100	108	659	NA	NA
Ammonia as N	10/03	5/09	7	3	mg/L	0.05	0.1	0.132	0.225	pH and Temp Dependent	BP Not SPWN Inland 4-Day Average
Antimony Dissolved	10/03	2/06	20	10	µg/L	2	2	0.9	5.17	NA	NA
Antimony Total	10/03	2/06	20	12	µg/L	2	2	0.91	6.38	4300	CTR HH Organism
Arsenic Dissolved	10/03	5/09	49	49	µg/L	AD	AD	0.4	6	150	CTR Chronic
Arsenic Total	10/03	5/09	49	49	µg/L	AD	AD	0.3	7.2	150	CTR Chronic
Barium Dissolved	1/05	8/08	42	42	µg/L	AD	AD	15.2	74.1	NA	NA
Barium Total	1/05	8/08	42	42	µg/L	AD	AD	51.7	145	NA	NA
BOD	10/03	2/04	6	6	mg/L	AD	AD	7.67	56.2	NA	NA
Cadmium Dissolved	10/03	5/09	49	25	µg/L	0.02	1	0.01	1.8	HBC	CTR Chronic
Cadmium Total	10/03	5/09	49	33	µg/L	0.3	1	0.01	2.19	HBC	CTR Chronic
Chloride	10/03	5/09	7	7	mg/L	AD	AD	7.26	119	150	BP SSO
Chromium Dissolved	10/03	5/09	49	45	µg/L	0.1	0.21	0.1	5.04	NA	NA
Chromium Total	10/03	5/09	49	48	µg/L	0.21	0.21	0.3	16.4	NA	NA
Cobalt Dissolved	1/05	2/06	14	10	µg/L	0.2	0.2	0.2	2	NA	NA
Cobalt Total	1/05	2/06	14	11	µg/L	0.2	0.2	0.2	2.2	NA	NA
COD	10/03	2/04	6	6	mg/L	AD	AD	18	167.5	NA	NA
Di-n-Butyl Phthalate	10/03	2/04	6	1	µg/L	1	1	1.4	1.4	12000	CTR HH Organism
Diethyl Phthalate	10/03	2/04	6	1	µg/L	0.5	0.5	2.1	2.1	23000	CTR HH Organism

**Aliso Canyon Wash - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
Dissolved Organic Carbon	5/09	5/09	1	1	mg/L	AD	AD	6.94	6.94	NA	NA
Dissolved Oxygen	10/03	2/04	6	6	mg/L	AD	AD	8.4	10.98	5	BP Minimum
Enterococcus	1/02	5/09	86	85	MPN/100mL	10	10	10	170000	NA	NA
Fecal Coliform	10/03	2/04	6	6	MPN/100mL	AD	AD	200	110000	NA	NA
Fecal Streptococcus	10/03	2/04	6	6	MPN/100mL	AD	AD	5000	170000	NA	NA
Fluoride	10/03	2/04	6	5	mg/L	0.1	0.1	0.11	0.85	NA	NA
Hardness	10/03	5/09	49	49	mg/L	AD	AD	44.8	1150	NA	NA
Iron Dissolved	10/03	5/09	7	5	µg/L	100	100	56	754	NA	NA
Iron Total	10/03	5/09	7	7	µg/L	AD	AD	151	8000	NA	NA
Isophorone	10/03	2/04	6	1	µg/L	0.05	0.05	0.4	0.4	600	CTR HH Organism
MBAS	10/03	2/04	6	4	µg/L	50	50	52	379	NA	NA
Mercury Total	10/03	5/09	21	2	µg/L	0.022	1	0.014	0.034	0.051	CTR HH Organism
Nickel Dissolved	10/03	5/09	48	48	µg/L	AD	AD	0.1	18.3	HBC	CTR Chronic
Nickel Total	10/03	5/09	49	49	µg/L	AD	AD	0.1	32.2	HBC	CTR Chronic
Nitrate as N	10/03	5/09	7	5	mg/L	0.02	0.5	0.296	2.66	8	LAR Nutrient TMDL
Nitrate as NO3	10/03	2/04	6	5	mg/L	0.1	0.1	1.31	11.8	NA	NA
Nitrite as N	10/03	5/09	7	5	mg/L	0.02	0.03	0.043	0.898	1	LAR Nutrient TMDL
Nitrogen (NO3-N+NO2-N) (Calc)	10/03	5/09	7	6	mg/L	0.02	0.02	0.04	3.56	8	LAR Nutrient TMDL
Oil + Grease	10/03	2/04	6	1	mg/L	1	1	2.3	2.3	NA	NA
Ortho Phosphate (as P)	5/09	5/09	1	1	mg/L	AD	AD	0.05	0.05	NA	NA
pH	10/03	2/04	6	6	pH Units	AD	AD	6.67	7.98	6.5	BP Minimum
Phosphate (Total) as P	5/09	5/09	1	1	mg/L	AD	AD	0.35	0.35	NA	NA
Phosphorus	10/03	2/04	12	12	mg/L	AD	AD	0.16	0.694	NA	NA



**Aliso Canyon Wash - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
Selenium Dissolved	10/03	5/09	49	46	µg/L	5	5	0.36	18.2	NA	NA
Silica	5/09	5/09	1	1	µg/L	AD	AD	28000	28000	NA	NA
Silver Dissolved	10/03	8/08	48	21	µg/L	0.06	1	0.03	0.79	HBC	CTR Chronic
Silver Total	10/03	8/08	48	23	µg/L	0.06	1	0.03	1.42	HBC	CTR Chronic
Thallium Dissolved	10/03	2/06	20	5	µg/L	1	5	1	2	NA	NA
Thallium Total	10/03	2/06	20	2	µg/L	1	5	1	5	6.3	CTR HH Organism
Total Coliform	1/02	5/09	87	87	MPN/100mL	AD	AD	740	500000	NA	NA
Total Kjeldahl Nitrogen	10/03	5/09	7	7	mg/L	AD	AD	0.778	8.16	NA	NA
Total Organic Carbon	10/03	5/09	7	7	mg/L	AD	AD	4.75	56.6	NA	NA
TPH	10/03	2/04	6	1	mg/L	1	1	1	1	NA	NA
TSS	10/03	5/09	7	7	mg/L	AD	AD	5	950	NA	NA
Turbidity	10/03	2/04	6	6	NTU	AD	AD	0.73	124	NA	NA
Volatile Suspended Solids	10/03	2/04	6	6	mg/L	AD	AD	26	137	NA	NA
Zinc Dissolved	10/03	5/09	49	49	µg/L	AD	AD	4.63	106	HBC	CTR Chronic

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**Arroyo Seco - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Alkalinity	10/03	6/11	12	12	mg/L	AD	AD	25.3	210	NA	NA
Aluminum Total	10/03	2/04	6	5	µg/L	100	100	103	2860	NA	NA
Ammonia as N	10/03	6/11	12	4	mg/L	0.05	0.1	0.08	2.09	pH and Temp Dependent	BP Not SPWN Inland 4-Day Average
Antimony Dissolved	10/03	2/06	20	11	µg/L	2	5	0.68	3	NA	NA
Antimony Total	10/03	2/06	20	10	µg/L	2	5	0.69	5.41	4300	CTR HH Organism
Arsenic Dissolved	10/03	6/11	55	54	µg/L	0.4	0.4	0.2	4.44	150	CTR Chronic
Arsenic Total	10/03	6/11	55	54	µg/L	0.4	0.4	0.2	5.53	150	CTR Chronic
Barium Dissolved	1/05	8/08	43	43	µg/L	AD	AD	34	105	NA	NA
Barium Total	1/05	8/08	43	43	µg/L	AD	AD	38	227	NA	NA
BOD	10/03	2/04	6	6	mg/L	AD	AD	4.09	18.6	NA	NA
Cadmium Dissolved	10/03	6/11	55	19	µg/L	0.01	1	0.01	0.94	HBC	CTR Chronic
Cadmium Total	10/03	6/11	55	26	µg/L	0.01	1	0.01	2.29	HBC	CTR Chronic
Chloride	10/03	6/11	12	12	mg/L	AD	AD	4.5	139	150	BP SSO
Chromium Dissolved	10/03	6/11	55	52	µg/L	0.1	0.1	0.1	4.82	NA	NA
Chromium Total	10/03	6/11	55	53	µg/L	0.1	0.1	0.1	17	NA	NA
Cobalt Dissolved	1/05	2/06	14	6	µg/L	0.2	0.2	0.3	0.7	NA	NA
Cobalt Total	1/05	2/06	14	11	µg/L	0.2	0.2	0.2	1.9	NA	NA
COD	10/03	2/04	6	6	mg/L	AD	AD	10.5	73.9	NA	NA
Cyanide	10/03	2/04	6	3	µg/L	10	7	5	18	5.2 and 22	CTR Chronic and Acute
Di-n-Butyl Phthalate	10/03	2/04	6	1	µg/L	1	1	1.7	1.7	12000	CTR HH Organism
Diazinon	10/03	6/11	12	3	µg/L	0.002	0.01	0.036	0.07	0.17	USEPA Acute and Chronic
Diethyl Phthalate	10/03	2/04	6	1	µg/L	0.5	0.5	1.5	1.5	120000	CTR HH Organism

**Arroyo Seco - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Dissolved Organic Carbon	5/09	6/11	6	6	mg/L	AD	AD	2.09	5.8	NA	NA
Dissolved Oxygen	10/03	2/04	6	6	mg/L	AD	AD	6.2	10.12	5	BP Minimum
Enterococcus	1/02	5/09	90	87	MPN/100mL	10	10	30	300000	NA	NA
Fecal Coliform	10/03	2/04	6	6	MPN/100mL	AD	AD	500	110000	NA	NA
Fecal Streptococcus	10/03	2/04	6	6	MPN/100mL	AD	AD	1700	500000	NA	NA
Fluoride	10/03	2/04	6	5	mg/L	0.1	0.1	0.15	0.29	NA	NA
Hardness	10/03	6/11	55	55	mg/L	AD	AD	40	475	NA	NA
Iron Dissolved	10/03	6/11	12	8	µg/L	100	100	11	928	NA	NA
Iron Total	10/03	6/11	12	12	µg/L	AD	AD	51	24400	NA	NA
Isophorone	10/03	2/04	6	1	µg/L	0.05	0.05	0.3	0.3	600	CTR HH Organism
MBAS	10/03	2/04	6	4	µg/L	50	50	65	190	NA	NA
Mercury Dissolved	10/03	6/11	26	1	µg/L	0.0036	1	0.0052	0.0052	NA	NA
Nickel Dissolved	10/03	6/11	55	54	µg/L	1	1	1	8.06	HBC	CTR Chronic
Nickel Total	10/03	6/11	55	55	µg/L	AD	AD	1	18.6	HBC	CTR Chronic
Nitrate as N	10/03	6/11	12	11	mg/L	0.5	0.5	0.25	4.8	8	LAR Nutrient TMDL
Nitrate as NO3	10/03	2/04	6	6	mg/L	AD	AD	0.1	16.3	NA	NA
Nitrogen (NO3-N+NO2-N) (Calc)	10/03	6/11	12	12	mg/L	AD	AD	0.12	6.16	8	LAR Nutrient TMDL
Oil + Grease	10/03	2/04	6	1	mg/L	1	1	2.5	2.5	NA	NA
Ortho Phosphate (as P)	5/09	6/11	6	5	mg/L	0.05	0.05	0.05	0.19	NA	NA
pH	10/03	2/04	6	6	pH Units	AD	AD	6.78	8.07	6.5	BP Minimum
Phosphate (Total) as P	5/09	6/11	6	6	mg/L	AD	AD	0.07	0.24	NA	NA
Phosphorus	10/03	2/04	12	8	mg/L	0.05	0.05	0.292	0.893	NA	NA
Selenium Dissolved	10/03	6/11	55	49	µg/L	0.2	5	0.24	2.4	NA	NA

**Arroyo Seco - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
Silica	5/09	6/11	6	6	µg/L	AD	AD	23500	73800	NA	NA
Silver Dissolved	10/03	8/08	49	22	µg/L	0.06	1	0.03	2	HBC	CTR Chronic
Silver Total	10/03	8/08	49	21	µg/L	0.06	1	0.03	0.71	HBC	CTR Chronic
Sulfate	10/03	6/11	12	12	mg/L	AD	AD	6.22	191	350	BP SSO
TDS	10/03	6/09	9	9	mg/L	AD	AD	70	734	1500	BP SSO
Thallium Dissolved	10/03	2/06	20	3	µg/L	1	5	1	2	NA	NA
Thallium Total	10/03	2/06	20	1	µg/L	1	5	1	1	6.3	CTR HH Organism
Total Coliform	1/02	5/09	91	89	MPN/100mL	100	100	1700	240000	NA	NA
Total Kjeldahl Nitrogen	10/03	6/11	12	12	mg/L	AD	AD	0.2	34	NA	NA
Total Organic Carbon	10/03	6/11	12	12	mg/L	AD	AD	2.12	24.6	NA	NA
TSS	10/03	6/11	11	11	mg/L	AD	AD	1.2	2169	NA	NA
Turbidity	10/03	2/04	6	6	NTU	AD	AD	0.39	359	NA	NA
Volatile Suspended Solids	10/03	2/04	6	6	mg/L	AD	AD	10	469	NA	NA
Zinc Dissolved	10/03	4/12	56	53	µg/L	4	4	1.25	73	HBC	CTR Chronic

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**Bull Creek - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Alkalinity	10/03	6/10	8	8	mg/L	AD	AD	30	154	NA	NA
Aluminum Total	10/03	2/04	6	3	µg/L	100	100	338	3850	NA	NA
Ammonia as N	10/03	6/10	8	1	mg/L	0.05	0.1	1.19	1.19	pH and Temp Dependent	BP Not SPWN Inland 4-Day Average
Antimony Dissolved	10/03	2/06	20	11	µg/L	2	2	0.61	4	NA	NA
Antimony Total	10/03	2/06	20	9	µg/L	2	2	0.66	3.9	4300	CTR HH Organism
Arsenic Dissolved	10/03	6/10	51	49	µg/L	5	5	0.8	8.2	150	CTR Chronic
Arsenic Total	10/03	6/10	51	49	µg/L	5	5	1.56	12.7	150	CTR Chronic
Barium Dissolved	1/05	8/08	43	43	µg/L	AD	AD	14.4	52.6	NA	NA
Barium Total	1/05	8/08	43	43	µg/L	AD	AD	22.4	341	NA	NA
Bifenthrin	6/10	6/10	2	1	µg/L	0.0005	0.0005	0.0025	0.0025	NA	NA
BOD	10/03	2/04	6	6	mg/L	AD	AD	6.48	57.6	NA	NA
Cadmium Dissolved	10/03	6/10	51	21	µg/L	0.02	1	0.01	1.53	HBC	CTR Chronic
Chloride	10/03	6/10	8	8	mg/L	AD	AD	4.99	141	150	BP SSO
Chromium Dissolved	10/03	6/10	51	47	µg/L	0.1	0.21	0.045	5.05	NA	NA
Chromium Total	10/03	6/10	51	49	µg/L	0.1	0.21	0.23	67.7	NA	NA
Cobalt Dissolved	1/05	2/06	14	12	µg/L	0.2	0.2	0.2	1.7	NA	NA
Cobalt Total	1/05	2/06	14	11	µg/L	0.2	0.2	0.3	2.2	NA	NA
COD	10/03	2/04	6	6	mg/L	AD	AD	12.8	92.6	NA	NA
Di-n-Butyl Phthalate	10/03	2/04	6	2	µg/L	1	1	1.1	1.1	12000	CTR HH Organism
Diazinon	10/03	6/10	8	2	µg/L	0.002	0.01	0.045	0.047	0.17	USEPA Acute and Chronic
Diethyl Phthalate	10/03	2/04	6	2	µg/L	0.5	0.5	1.4	1.4	120000	CTR HH Organism
Dissolved Organic Carbon	6/10	6/10	2	2	mg/L	AD	AD	8.4	9.5	NA	NA

**Bull Creek - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Dissolved Oxygen	10/03	2/04	6	6	mg/L	AD	AD	6.6	10.08	5	BP Minimum
Enterococcus	1/02	5/09	90	90	MPN/100mL	AD	AD	10	240000	NA	NA
Fecal Coliform	10/03	2/04	6	6	MPN/100mL	AD	AD	1300	50000	NA	NA
Fecal Streptococcus	10/03	2/04	6	6	MPN/100mL	AD	AD	8000	240000	NA	NA
Fluoride	10/03	2/04	6	6	mg/L	AD	AD	0.12	1.03	NA	NA
Hardness	10/03	6/10	51	51	mg/L	AD	AD	96	1060	NA	NA
Iron Dissolved	10/03	6/10	8	4	µg/L	5	100	8	965	NA	NA
Iron Total	10/03	6/10	8	7	µg/L	5	5	130	58000	NA	NA
Lead Dissolved	10/03	6/10	49	24	µg/L	0.11	5	0.055	8.1	HBC	CTR Chronic
MBAS	10/03	2/04	6	4	µg/L	50	50	50	304	NA	NA
Mercury Dissolved	10/03	6/10	22	3	µg/L	0.022	1	0.025	0.0468	NA	NA
Mercury Total	10/03	6/10	22	3	µg/L	0.022	1	0.031	0.0492	0.051	CTR HH Organism
Nickel Dissolved	10/03	6/10	51	51	µg/L	AD	AD	0.1	18	HBC	CTR Chronic
Nickel Total	10/03	6/10	51	50	µg/L	0.34	0.34	0.1	72	HBC	CTR Chronic
Nitrate as N	10/03	6/10	8	5	mg/L	0.5	0.5	0.07	1.27	8	LAR Nutrient TMDL
Nitrate as NO3	10/03	2/04	6	3	mg/L	0.1	0.1	3.1	5.62	NA	NA
Nitrite as N	10/03	6/10	8	4	mg/L	0.02	0.03	0.049	0.581	1	LAR Nutrient TMDL
Nitrogen (NO3-N+NO2-N) (Calc)	5/09	6/11	12	7	mg/L	0.02	0.02	0.04	0.14	8	LAR Nutrient TMDL
Oil + Grease	10/03	2/04	6	1	mg/L	1	1	1.2	1.2	NA	NA
Ortho Phosphate (as P)	6/10	6/10	2	2	mg/L	AD	AD	0.08	0.08	NA	NA
pH	10/03	2/04	6	6	pH Units	AD	AD	6.54	7.48	6.5	BP Minimum
Phosphate (Total) as P	6/10	6/10	2	2	mg/L	AD	AD	0.25	0.41	NA	NA
Phosphorus	10/03	2/04	12	10	mg/L	0.05	0.05	0.063	0.608	NA	NA

**Bull Creek - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
Selenium Dissolved	10/03	6/10	51	48	µg/L	5	5	0.2	7.1	NA	NA
Selenium Total	10/03	6/10	43	43	µg/L	0.10	0.20	0.3	7.9	5	CTR Chronic (NA during wet weather)
Silica	6/10	6/10	2	2	µg/L	AD	AD	6800	6900	NA	NA
Silver Dissolved	10/03	8/08	48	22	µg/L	0.06	1	0.03	0.71	HBC	CTR Chronic
Silver Total	10/03	8/08	49	22	µg/L	0.06	1	0.03	0.65	HBC	CTR Chronic
Sulfate	10/03	6/10	8	8	mg/L	AD	AD	11.4	200	300	BP SSO LAR and tributaries, upstream SFCB
TDS	10/03	2/04	6	6	mg/L	AD	AD	172	632	950	BP SSO LAR and tributaries, upstream SFCB
Thallium Dissolved	10/03	2/06	20	1	µg/L	1	5	1	1	NA	NA
Total Coliform	1/02	5/09	91	91	MPN/100mL	AD	AD	970	280000	NA	NA
Total Kjeldahl Nitrogen	10/03	6/10	8	8	mg/L	AD	AD	0.17	11.6	NA	NA
Total Organic Carbon	10/03	6/10	8	8	mg/L	AD	AD	4.79	30.4	NA	NA
TSS	10/03	2/04	6	6	mg/L	AD	AD	360	14004	NA	NA
Turbidity	10/03	2/04	6	6	NTU	AD	AD	1.55	4920	NA	NA
Volatile Suspended Solids	10/03	2/04	6	6	mg/L	AD	AD	82	528	NA	NA
Zinc Dissolved	10/03	6/10	50	46	µg/L	4	4	0.76	70	HBC	CTR Chronic

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**Burbank Western Channel - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
1,2,3,4,6,7,8-HpCDD	2/07	8/13	33	29	pg/L	1.32	3.51	1.08	32.3	NA	NA
1,2,3,4,6,7,8-HpCDF	2/07	8/13	33	4	pg/L	0.562	6.1	2.65	19.3	NA	NA
1,2,3,4,7,8-HxCDD	2/07	8/13	33	2	pg/L	0.263	3.43	0.873	1.11	NA	NA
1,2,3,4,7,8-HxCDF	2/07	8/13	33	5	pg/L	0.143	1.78	0.611	0.898	NA	NA
1,2,3,6,7,8-HxCDD	2/07	8/13	33	3	pg/L	0.352	3.66	0.701	3.25	NA	NA
1,2,3,6,7,8-HxCDF	2/07	8/13	33	4	pg/L	0.0819	7.87	0.559	0.983	NA	NA
1,2,3,7,8-PeCDD	2/07	8/13	33	4	pg/L	0.171	3.17	0.625	1.34	NA	NA
1,2,3,7,8-PeCDF	2/07	8/13	33	4	pg/L	0.207	2.95	0.65	0.803	NA	NA
1,2,3,7,8,9-HxCDD	2/07	8/13	33	6	pg/L	0.304	4.12	0.568	3.19	NA	NA
1,4-Dichlorobenzene	10/03	10/13	237	1	µg/L	0.05	0.5	0.1	0.1	2600	CTR HH Organism
1,4-Dioxane	2/07	8/13	33	26	µg/L	0.04	0.19	0.14	2.6	NA	NA
2,3,4,6,7,8-HxCDF	2/07	8/13	33	5	pg/L	0.0909	1.87	0.576	1.18	NA	NA
2,3,4,7,8-PeCDF	2/07	8/13	33	11	pg/L	0.22	5.41	0.718	2.06	NA	NA
2,3,7,8-TCDF	2/07	8/13	33	10	pg/L	0.119	1.49	0.64	1.66	NA	NA
2,4-D	10/03	8/12	31	1	µg/L	0.12	10	3.8	3.8	NA	NA
2,4,6-Trichlorophenol	10/03	8/13	141	2	µg/L	0.22	8.8	0.41	0.5	6.5	CTR HH Organism
2,6-Dinitrotoluene	10/03	8/13	141	10	µg/L	0.05	5	0.25	0.88	NA	NA
3-Methyl-4-Chlorophenol	10/03	8/13	141	2	µg/L	0.23	5	0.52	0.76	NA	NA
4-Chlorophenyl Phenyl Ether	10/03	8/13	141	1	µg/L	0.1	5	0.33	0.33	NA	NA
4-Nitrophenol	10/03	8/13	141	1	µg/L	0.45	67	2.5	2.5	NA	NA
Alkalinity	10/03	2/04	6	6	mg/L	AD	AD	30	152	NA	NA
Aluminum Total	10/03	9/11	22	17	µg/L	100	100	30	880	NA	NA



**Burbank Western Channel - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Ammonia as N	10/03	10/13	879	849	mg/L	0.0032	0.1	0.1	2.43	pH and Temp Dependent	BP 30-Day Average (Dry)
Ammonia as N	10/03	2/12	14	11	mg/L	0.1	0.1	0.11	1.26		BP 4-Day Average (Wet)
Antimony Dissolved	10/03	2/06	32	15	µg/L	2	2	0.6	5	NA	NA
Antimony Total	10/03	8/13	99	87	µg/L	2	2	0.32	21	4300	CTR HH Organism
Arsenic Dissolved	10/03	8/08	60	58	µg/L	0.4	5	0.2	25.7	150	CTR Chronic
Arsenic Total	10/03	8/13	184	175	µg/L	0.07	5	0.23	50.5	150	CTR Chronic
Barium Dissolved	1/05	8/08	55	55	µg/L	AD	AD	23	81	NA	NA
Barium Total	1/05	8/13	125	125	µg/L	AD	AD	26	301	NA	NA
Beryllium Total	10/03	8/13	71	1	µg/L	0.022	1	0.11	0.11	NA	NA
Bis(2-chloroethoxy)Methane	10/03	8/13	141	1	µg/L	0.1	5	2	2	NA	NA
BOD	10/03	8/13	160	98	mg/L	2	3	3	23	NA	NA
Boron	1/07	8/13	115	115	mg/L	AD	AD	0.1	0.7	NA	NA
Bromide	1/08	5/11	33	13	µg/L	5	40	210	19400	NA	NA
Bromoform	2/04	10/13	231	104	µg/L	0.08	0.31	0.31	59	360	CTR HH Organism
Butylbenzyl Phthalate	10/03	8/13	141	22	µg/L	0.29	5	0.29	5.2	5200	CTR HH Organism
Cadmium Dissolved	10/03	10/13	129	98	µg/L	0.02	1	0.01	2	HBC	CTR Chronic
Calcium	1/04	6/13	39	39	µg/L	AD	AD	52000	89000	NA	NA
Chlorobenzene	2/04	10/13	231	1	µg/L	0.064	0.5	1.4	1.4	21000	CTR HH Organism
Chloroform	2/04	10/13	231	145	µg/L	0.055	0.5	0.49	20	NA	NA
Chromium (III) Total	1/07	8/13	168	168	µg/L	AD	AD	0.15	9.96	HBC	CTR Chronic

**Burbank Western Channel - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
Chromium Dissolved	10/03	8/08	61	61	µg/L	AD	AD	0.2	5.76	NA	NA
Chromium Total	10/03	8/13	276	273	µg/L	0.1	0.2	0.48	22.4	NA	NA
Chromium (VI) Total	10/03	8/13	177	158	µg/L	0.0059	10	0.068	8	11.43	CTR Chronic
Cobalt Dissolved	1/05	2/06	26	20	µg/L	0.2	0.2	0.2	1.2	NA	NA
Cobalt Total	1/05	8/06	29	25	µg/L	0.2	0.2	0.2	14.3	NA	NA
COD	10/03	8/13	123	121	mg/L	1.4	1.4	6.4	320	NA	NA
CTAS	1/07	8/13	141	49	mg/L	0.023	0.1	0.037	0.95	NA	NA
Di-n-Butyl Phthalate	10/03	8/13	141	11	µg/L	0.24	5.3	0.27	21	12000	CTR HH Organism
Di-n-Octyl Phthalate	10/03	8/13	141	3	µg/L	0.19	5	0.64	1	NA	NA
Diazinon	10/03	8/13	45	1	µg/L	0.006	0.58	0.02	0.02	0.17	USEPA Acute and Chronic
Dichlorobromomethane	2/04	10/13	231	142	µg/L	0.05	0.50	0.22	35.00	46	CTR HH Organism
Diethyl Phthalate	10/03	8/13	141	18	µg/L	0.15	2.3	0.15	2.5	120000	CTR HH Organism
Dimethyl Phthalate	10/03	8/13	141	1	µg/L	0.18	2.6	0.29	0.29	2900000	CTR HH Organism
Dissolved Organic Carbon	1/04	4/08	36	36	mg/L	AD	AD	5.6	49	NA	NA
Dissolved Oxygen	10/03	10/13	823	823	mg/L	AD	AD	5.15	15.7	5	BP Minimum
Endosulfan Sulfate	10/03	8/13	135	2	µg/L	0.0011	0.1	0.032	0.036	240	CTR HH Organism
Enterococcus	1/02	5/09	101	91	MPN/100mL	10	10	10	170000	NA	NA
Fecal Coliform	10/03	7/09	99	98	MPN/100mL	2	2	23	160000	NA	NA
Fecal Streptococcus	10/03	2/04	6	6	MPN/100mL	AD	AD	20	170000	NA	NA
Fluoranthene	10/03	8/13	141	1	µg/L	0.1	5	0.22	0.22	370	CTR HH Organism
Fluorene	10/03	8/13	141	1	µg/L	0.1	5	0.63	0.63	14000	CTR HH Organism
Fluoride	10/03	8/13	164	162	mg/L	0.1	0.1	0.1	1.6	NA	NA

**Burbank Western Channel - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
gamma-BHC (Lindane)	10/03	8/13	135	1	µg/L	0.0009	0.05	0.0055	0.0055	0.063	CTR HH Organism
Glyphosate	10/03	3/07	10	1	µg/L	1.7	25	3.9	3.9	NA	NA
Hardness	10/03	10/1 3	363	362	mg/L	0.82	0.82	23	460	NA	NA
Iron Dissolved	10/03	2/04	6	1	µg/L	100	100	143	143	NA	NA
Iron Total	10/03	8/13	151	151	µg/L	AD	AD	28	1200	NA	NA
Lead Dissolved	10/03	10/1 3	160	133	µg/L	0.03	1.1	0.04	5	HBC	CTR Chronic
Magnesium	1/04	6/13	39	39	µg/L	AD	AD	18000	42000	NA	NA
Manganese Total	5/06	8/13	40	40	µg/L	AD	AD	1.3	49.6	NA	NA
MBAS	10/03	8/13	158	130	µg/L	19	100	42	2,300	NA	NA
Methyl Bromide	2/04	10/1 3	231	1	µg/L	0.12	1	1	1	4000	CTR HH Organism
Methylene Chloride	2/04	10/1 3	231	7	µg/L	0.17	1	0.17	1	1600	CTR HH Organism
Molybdenum Total	8/06	8/06	3	3	µg/L	AD	AD	15.4	21.9	NA	NA
N-Nitrosodimethylamine	10/03	8/13	141	1	µg/L	0.14	5	0.5	0.5	8.1	CTR HH Organism
Nickel Dissolved	10/03	8/08	61	61	µg/L	AD	AD	1	11	HBC	CTR Chronic
Nickel Total	10/03	8/13	177	177	µg/L	AD	AD	1.4	32	HBC	CTR Chronic
Nitrate as NO3	10/03	2/04	6	6	mg/L	AD	AD	0.83	18.2	NA	NA
Nitrogen (NO3-N+NO2-N) (Calc)	10/03	10/1 3	397	397	mg/L	AD	AD	0.03	14.44	8	LAR Nutrient TMDL
OCDD	2/07	8/13	33	32	pg/L	6.6	6.6	3.58	148	NA	NA
OCDF	2/07	8/13	33	24	pg/L	1.03	2.29	0.539	12.7	NA	NA
Oil + Grease	10/03	8/13	172	3	mg/L	0.88	5	1.6	3.5	NA	NA

**Burbank Western Channel - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
Organic Nitrogen	11/03	10/13	868	866	mg/L	0.5	0.5	0.02	13	NA	NA
Ortho Phosphate (as P)	1/07	8/13	133	133	mg/L	AD	AD	0.13	11	NA	NA
Pentachlorophenol	10/03	8/13	141	4	µg/L	0.19	0.95	0.95	2.1	8.2	CTR HH Organism
Perchlorate	2/07	8/13	33	3	µg/L	0.30	8.20	1.00	8.50	NA	NA
Phosphate (Total)	11/03	8/13	178	176	mg/L	0.1	0.1	0.09	12	NA	NA
Phosphorus	10/03	2/04	12	12	mg/L	AD	AD	0.229	1.99	NA	NA
Potassium	6/10	6/10	2	2	µg/L	AD	AD	10000	17000	NA	NA
Selenium Dissolved	10/03	8/08	61	58	µg/L	5	5	0.2	9	NA	NA
Silver Dissolved	10/03	8/08	60	29	µg/L	0.06	1	0.03	1.6	HBC	CTR Chronic
Silver Total	10/03	8/13	140	98	µg/L	0.027	1	0.03	2.2	HBC	CTR Chronic
Sodium	6/10	6/10	2	2	µg/L	AD	AD	98000	110000	NA	NA
Sulfate	10/03	8/13	226	226	mg/L	AD	AD	5.43	211	300	BP SSO
Temperature	10/03	10/13	842	842	°C	AD	AD	8.888889	31	NA	NA
Tetrachloroethylene	2/04	10/13	231	1	µg/L	0.11	0.93	0.93	0.93	8.85	CTR HH Organism
Thallium Dissolved	10/03	2/06	31	8	µg/L	1	5	1	14	NA	NA
THM	2/04	10/13	269	168	µg/L	1	1.2	0.4	150	NA	NA
Toluene	2/04	10/13	231	6	µg/L	0.069	0.5	0.09	0.87	200000	CTR HH Organism
Total Coliform	1/02	9/11	759	733	MPN/100mL	2	100	2	1600000	NA	NA
Total Kjeldahl Nitrogen	10/03	10/13	879	874	mg/L	0.019	0.5	0.29	13.3	NA	NA
Total Organic Carbon	10/03	8/13	79	79	mg/L	AD	AD	0.45	49	NA	NA

**Burbank Western Channel - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Total Settleable Solids	1/07	8/13	171	16	mL/L	0.1	0.1	0.1	10	NA	NA
TSS	10/03	8/13	212	192	mg/L	0.1	1	1	3744	NA	NA
Turbidity	10/03	10/13	253	253	NTU	AD	AD	0.32	138	NA	NA
Volatile Suspended Solids	10/03	2/04	6	6	mg/L	AD	AD	5	89	NA	NA

NA - No Available adopted water quality objective  
BP – Basin Plan

HBC - Hardness Based Criteria, as defined by CTR  
SSO – Site Specific Objective

AD - All values reported detected, no detection limit provided

**Caballero Creek - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Antimony Dissolved	1/05	2/06	14	7	µg/L	2	2	2	4	NA	NA
Antimony Total	1/05	2/06	14	5	µg/L	2	2	2	5	4300	CTR HH Organism
Arsenic Dissolved	1/05	8/08	45	45	µg/L	AD	AD	0.4	7.2	150	CTR Chronic
Arsenic Total	1/05	8/08	45	45	µg/L	AD	AD	0.7	59.8	150	CTR Chronic
Barium Dissolved	1/05	8/08	45	45	µg/L	AD	AD	14.8	50.2	NA	NA
Barium Total	1/05	8/08	45	45	µg/L	AD	AD	16	707	NA	NA
Cadmium Dissolved	1/05	8/08	45	29	µg/L	0.02	0.33	0.01	1.36	HBC	CTR Chronic
Chromium Dissolved	1/05	8/08	45	36	µg/L	0.1	0.21	0.045	3.25	NA	NA
Chromium Total	1/05	8/08	45	41	µg/L	0.1	0.21	0.045	44	NA	NA
Cobalt Dissolved	1/05	2/06	14	11	µg/L	0.2	0.2	0.2	0.9	NA	NA
Cobalt Total	1/05	2/06	14	12	µg/L	0.2	0.2	0.2	0.9	NA	NA
Enterococcus	7/04	5/09	54	54	MPN/100mL	AD	AD	20	24000	NA	NA
Hardness	1/05	8/08	45	45	mg/L	AD	AD	154	1120	NA	NA

**Caballero Creek - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Lead Dissolved	1/05	8/08	44	24	µg/L	1	1.1	0.055	9.8	HBC	CTR Chronic
Mercury Dissolved	1/05	2/06	13	1	µg/L	0.022	0.022	0.023	0.023	NA	NA
Nickel Dissolved	1/05	8/08	45	45	µg/L	AD	AD	5.81	28.7	HBC	CTR Chronic
Selenium Dissolved	1/05	8/08	45	45	µg/L	AD	AD	1	14.2	NA	NA
Silver Dissolved	1/05	8/08	45	25	µg/L	0.06	0.2	0.03	1.04	HBC	CTR Chronic
Silver Total	1/05	8/08	45	25	µg/L	0.06	0.2	0.03	2.68	HBC	CTR Chronic
Thallium Dissolved	1/05	2/06	14	2	µg/L	1	1	1	2	NA	NA
Thallium Total	1/05	2/06	14	2	µg/L	1	1	1	2	6.3	CTR HH Organism
Total Coliform	7/04	5/09	54	54	MPN/100mL	AD	AD	860	240000	NA	NA
Zinc Dissolved	1/05	8/08	44	39	µg/L	4	4	3.6	28.7	HBC	CTR Chronic

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**Compton Creek - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Alkalinity	6/09	6/11	4	4	mg/L	AD	AD	136	200	NA	NA
Ammonia as N	6/09	6/11	4	1	mg/L	0.05	0.05	0.05	0.05	pH and Temp Dependent	BP Not COLD or MIGR
Antimony Dissolved	2/05	2/06	13	9	µg/L	2	2	2	7	NA	NA
Antimony Total	1/05	2/06	14	10	µg/L	2	2	2	6	4300	CTR HH Organism
Arsenic Dissolved	1/05	6/11	47	47	µg/L	AD	AD	0.6	5.16	150	CTR Chronic
Arsenic Total	1/05	6/11	47	47	µg/L	AD	AD	0.6	4.22	150	CTR Chronic
Barium Dissolved	1/05	8/08	43	43	µg/L	AD	AD	15.7	98.5	NA	NA
Barium Total	1/05	8/08	43	43	µg/L	AD	AD	21.2	134	NA	NA
Beryllium Dissolved	1/05	2/06	14	1	µg/L	0.4	0.4	0.9	0.9	NA	NA
Beryllium Total	1/05	2/06	14	1	µg/L	0.4	0.4	1	1	NA	NA
Bifenthrin	6/09	6/11	4	1	µg/L	0.0005	0.001	0.005	0.005	NA	NA
Cadmium Dissolved	1/05	6/11	47	20	µg/L	0.01	0.33	0.01	0.94	HBC	CTR Chronic
Cadmium Total	1/05	6/11	47	25	µg/L	0.01	0.33	0.01	0.95	HBC	CTR Chronic
Chromium Dissolved	2/05	6/11	46	43	µg/L	0.1	0.1	0.2	4.67	NA	NA
Chromium Total	1/05	6/11	47	46	µg/L	0.1	0.1	0.2	5.97	NA	NA
Cobalt Dissolved	1/05	2/06	14	7	µg/L	0.2	0.2	0.2	0.9	NA	NA
Cobalt Total	1/05	2/06	14	11	µg/L	0.2	0.2	0.2	1.2	NA	NA
Dissolved Organic Carbon	6/09	6/11	4	4	mg/L	AD	AD	8.35	26.9	NA	NA
Enterococcus	1/02	5/09	84	79	MPN/100mL	10	10	10	24000	NA	NA
Hardness	1/05	6/13	78	78	mg/L	AD	AD	32.4	300	NA	NA
Iron Dissolved	6/09	6/11	4	4	µg/L	AD	AD	57.3	311	NA	NA
Iron Total	6/09	6/11	4	4	µg/L	AD	AD	428	1050	NA	NA

**Compton Creek - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Mercury Dissolved	1/05	6/11	18	1	µg/L	0.0036	0.022	0.034	0.034	NA	NA
Nickel Dissolved	1/05	6/11	47	47	µg/L	AD	AD	1.76	15.3	HBC	CTR Chronic
Nickel Total	1/05	6/11	47	47	µg/L	AD	AD	2	18.6	HBC	CTR Chronic
Nitrogen (NO <sub>3</sub> -N+NO <sub>2</sub> -N) (Calc)	10/03	10/13	881	880	mg/L	0.02	0.02	0.03	15.00	8	LAR Nutrient TMDL
Ortho Phosphate (as P)	6/09	6/11	4	4	mg/L	AD	AD	0.17	0.59	NA	NA
Phosphate (Total) as P	6/09	6/11	4	4	mg/L	AD	AD	0.36	0.6	NA	NA
Selenium Dissolved	1/05	6/11	47	44	µg/L	0.2	0.2	0.1	1.1	NA	NA
Silica	6/09	6/11	4	4	µg/L	AD	AD	18400	53900	NA	NA
Silver Dissolved	2/05	8/08	42	23	µg/L	0.06	0.2	0.03	3	HBC	CTR Chronic
Silver Total	1/05	8/08	43	22	µg/L	0.06	0.2	0.03	9.7	HBC	CTR Chronic
Sulfate	6/09	6/11	4	4	mg/L	AD	AD	96.8	160	350	BP SSO
TDS	6/09	6/09	1	1	mg/L	AD	AD	772	772	1500	BP SSO
Thallium Dissolved	1/05	2/06	14	2	µg/L	1	1	1	5	NA	NA
Thallium Total	1/05	2/06	14	2	µg/L	1	1	1	4	6.3	CTR HH Organism
Total Coliform	1/02	5/09	85	85	MPN/100mL	AD	AD	1300	240000	NA	NA
Total Kjeldahl Nitrogen	6/09	6/11	4	4	mg/L	AD	AD	0.51	2.68	NA	NA
Total Organic Carbon	6/09	6/11	4	4	mg/L	AD	AD	8.7	27.8	NA	NA
TSS	6/09	6/11	3	3	mg/L	AD	AD	4.9	84	NA	NA

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective



**Echo Park Lake - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Ammonia as N	5/03	11/10	90	53	mg/L	0.05	0.1	0.05	0.93	pH and Temp Dependent	BP 30-Day Average
Antimony Dissolved	5/03	11/10	92	46	µg/L	1.1	2	0.86	7	NA	NA
Antimony Total	5/03	11/10	93	52	µg/L	1.1	2	0.85	7	4300	CTR HH Organism
Arsenic Dissolved	5/03	11/10	93	93	µg/L	AD	AD	1.1	7.43	150	CTR Chronic
Arsenic Total	5/03	11/10	93	93	µg/L	AD	AD	1.2	8.23	150	CTR Chronic
Barium Dissolved	5/03	11/10	92	92	µg/L	AD	AD	19.8	156	NA	NA
Barium Total	5/03	11/10	93	93	µg/L	AD	AD	20.1	385	NA	NA
Beryllium Dissolved	5/03	11/10	93	15	µg/L	0.006	0.5	0.008	0.4	NA	NA
Beryllium Total	5/03	11/10	93	17	µg/L	0.006	0.5	0.007	0.2	NA	NA
BOD	5/03	11/10	93	44	mg/L	3	4	3	18	NA	NA
Cadmium Dissolved	5/03	11/10	92	31	µg/L	0.01	0.5	0.08	0.7	HBC	CTR Chronic
Chromium Dissolved	5/03	11/10	90	78	µg/L	0.1	1	0.1	4.26	NA	NA
Chromium Total	5/03	11/10	90	82	µg/L	0.1	1	0.36	3.89	NA	NA

**Echo Park Lake - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Cobalt Dissolved	5/03	11/10	89	29	µg/L	0.2	0.5	0.1	0.97	NA	NA
Cobalt Total	5/03	11/10	93	47	µg/L	0.2	0.5	0.05	4	NA	NA
Dissolved Oxygen	11/02	5/11	342	342	mg/L	AD	AD	5.62	15.9	5	BP Minimum
Enterococcus	10/02	11/10	616	549	MPN/100mL	10	100	10	24000	NA	NA
Hardness	11/04	11/10	75	75	mg/L	AD	AD	104	364	NA	NA
Mercury Dissolved	5/03	11/10	93	13	µg/L	0.004	0.022	0.004	0.148	NA	NA
Nickel Dissolved	5/03	11/10	90	86	µg/L	0.24	1	1	8.8	HBC	CTR Chronic
Nickel Total	5/03	11/10	90	87	µg/L	1	1	1.32	8.8	HBC	CTR Chronic
Nitrate as N	5/03	11/10	96	48	mg/L	0.02	0.02	0.02	1.21	10	BP MUN
Nitrite as N	5/03	11/10	96	9	mg/L	0.02	0.1	0.02	0.2	1	BP MUN
Organic Nitrogen	5/03	11/10	96	93	mg/L	0.1	0.1	0.18	3.14	NA	NA
Phosphate (Total)	5/03	11/10	96	92	mg/L	0.05	0.05	0.06	0.51	NA	NA
Selenium Dissolved	5/03	11/10	93	87	µg/L	0.2	0.2	0.1	4.5	NA	NA
Selenium Total	5/03	11/10	93	88	µg/L	0.2	0.2	0.2	4.8	5	CTR Chronic

**Echo Park Lake - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data	N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value	
					Min	Max	Min	Max			
Silver Dissolved	5/03	11/10	90	13	µg/L	0.02	0.5	0.02	0.63	HBC	CTR Chronic
Silver Total	5/03	11/10	90	15	µg/L	0.02	0.5	0.02	0.63	HBC	CTR Chronic
Temperature	11/02	5/11	341	341	°C	AD	AD	12.1	27.6	NA	NA
Thallium Dissolved	5/03	11/10	86	31	µg/L	0.5	9	0.03	4	NA	NA
Thallium Total	5/03	11/10	89	34	µg/L	0.5	9	0.02	4.4	6.3	CTR HH Organism
Total Coliform	10/02	11/10	624	623	MPN/100mL	100	100	100	240000	NA	NA
TSS	5/03	11/10	93	93	mg/L	AD	AD	3	31	NA	NA
Turbidity	8/04	5/11	324	324	NTU	AD	AD	1.7	1346.6	NA	NA
Zinc Dissolved	5/03	11/10	89	70	µg/L	4	4	1.88	36.6	HBC	CTR Chronic

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**LA River – Reach 1 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
2-Methyl-4,6-Dinitrophenol	10/02	7/13	76	7	µg/L	1	5	3	5.2	765	CTR HH Organism
4-Methylphenol	10/04	3/05	6	1	µg/L	3	3	3	3	NA	NA
Alkalinity	10/02	7/13	109	107	mg/L	2	2	6	213	NA	NA
Aluminum Dissolved	10/02	7/13	76	28	µg/L	50	100	52.6	4750	NA	NA
Aluminum Total	10/02	7/13	76	61	µg/L	50	100	50.3	23900	NA	NA
Ammonia	10/04	7/13	58	50	mg/L	0.1	0.121	0.114	4.89	pH and Temp Dependent	BP Not SPWN Inland 4-Day Average
Ammonia as N	10/02	7/13	77	61	mg/L	0.05	0.1	0.1	4.879		BP MIGR
Antimony Dissolved	2/01	7/13	137	84	µg/L	0.2	18	0.56	5	NA	NA
Antimony Total	2/01	7/13	137	90	µg/L	0.2	18	0.59	9.26	4300	CTR HH Organism
Arsenic Dissolved	2/01	7/13	167	148	µg/L	0.2	10	0.3	5	150	CTR Chronic
Arsenic Total	2/01	7/13	167	152	µg/L	0.2	10	0.8	7.99	150	CTR Chronic
Barium Dissolved	2/01	7/13	153	147	µg/L	1	1	1.05	189	NA	NA
Barium Total	2/01	7/13	154	151	µg/L	1	1	2.08	544	NA	NA
Beryllium Dissolved	2/01	7/13	137	16	µg/L	0.006	1	0.01	1	NA	NA
Beryllium Total	2/01	7/13	137	20	µg/L	0.006	1	0.019	2.4	NA	NA
Bicarbonate	10/04	12/04	4	4	µg/L	AD	AD	37600	163700	NA	NA
BOD	10/02	7/13	76	74	mg/L	1	1	2.09	198	NA	NA
Boron	10/04	3/05	12	9	mg/L	0.1	0.1	0.1	1.59	NA	NA
Cadmium Dissolved	2/01	7/13	189	72	µg/L	0.01	1	0.01	2.03	HBC	CTR Chronic
Calcium	10/04	2/08	28	28	µg/L	AD	AD	12000	94300	NA	NA
Carbonate	10/04	3/05	6	1	µg/L	2000	2000	66000	66000	NA	NA
Chloride	10/02	7/13	99	97	mg/L	1	1	6.28	161	190	BP SSO

**LA River – Reach 1 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Chromium Dissolved	2/01	7/13	167	132	µg/L	0.5	10	0.1	13.1	NA	NA
Chromium Total	2/01	7/13	167	147	µg/L	0.21	10	0.7	47.4	NA	NA
Chromium (VI) Dissolved	10/02	7/13	76	18	µg/L	0.25	10	0.26	10	11	CTR Chronic
Chromium (VI) Total	10/02	7/13	76	15	µg/L	0.25	10	0.25	8.54	11.43	CTR Chronic
Cobalt Dissolved	2/01	2/06	58	28	µg/L	0.2	20	0.2	1.3	NA	NA
Cobalt Total	2/01	2/06	58	34	µg/L	0.24	20	0.2	24.9	NA	NA
COD	10/02	7/13	76	73	mg/L	10	10	19.4	578	NA	NA
Cyanide	10/02	7/13	73	58	µg/L	5.00	10.00	5.00	1,200.00	5.2 and 22	CTR Chronic and Acute
Di-n-Butyl Phthalate	10/02	7/13	69	1	µg/L	1	10	1	4.7	12000	CTR HH Organism
Diethyl Phthalate	10/02	7/13	76	1	µg/L	0.5	2	0.5	0.9	120000	CTR HH Organism
Dimethyl Phthalate	10/02	7/13	76	1	µg/L	0.5	2	0.5	1.6	2900000	CTR HH Organism
Dissolved Organic Carbon	3/06	6/10	23	23	mg/L	AD	AD	6.2	12.57	NA	NA
Enterococcus	2/01	7/13	354	348	MPN/100mL	10	100	10	9000000	NA	NA
Fecal Coliform	10/02	7/13	73	71	MPN/100mL	20	20	20	24000000	NA	NA
Fecal Streptococcus	10/02	7/13	73	71	MPN/100mL	20	20	20	9000000	NA	NA
Fluoranthene	10/02	7/13	76	1	µg/L	0.017	0.1	0.1	0.503	370	CTR HH Organism
Fluoride	10/02	7/13	76	70	mg/L	0.1	0.1	0.1	0.892	NA	NA
Hardness	10/02	7/13	188	187	mg/L	2	2	5	434	NA	NA
Iron Dissolved	10/02	7/13	77	49	µg/L	50	100	18	3830	NA	NA
Iron Total	10/02	7/13	77	76	µg/L	100	100	51.9	33200	NA	NA
Magnesium	10/04	2/08	28	28	µg/L	AD	AD	2430	38400	NA	NA
Manganese Total	10/04	3/05	6	4	µg/L	30	30	30.4	228	NA	NA
MBAS	10/02	7/13	76	72	µg/L	10.00	50.00	16.00	2180	NA	NA
Mercury Dissolved	6/01	7/13	133	22	µg/L	0.0036	1	0.006	1	NA	NA

**LA River – Reach 1 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
MTBE	10/05	7/13	56	4	µg/L	0.33	1	1	1	NA	NA
Nickel Dissolved	2/01	7/13	167	139	µg/L	0.5	20	1	31	HBC	CTR Chronic
Nickel Total	2/01	6/10	114	96	µg/L	5	20	3.1	49	HBC	CTR Chronic
Nitrate as N	10/02	7/13	77	64	mg/L	0.03	0.5	0.23	6.75	8	LAR Nutrient TMDL
Nitrate as N	10/02	7/13	77	64	mg/L	0.03	0.5	0.23	6.75	8	LAR Nutrient TMDL
Nitrate as NO3	10/02	7/13	76	63	mg/L	0.1	0.1	0.24	29.9	NA	NA
Nitrogen (NO3-N+NO2-N) (Calc)	5/03	11/10	96	48	mg/L	0.02	0.02	0.02	1.21	5/03	LAR Nutrient TMDL
Oil + Grease	10/02	7/13	73	39	mg/L	0.4	1.44	0.8	11.9	NA	NA
Ortho Phosphate (as P)	6/10	6/10	1	1	mg/L	AD	AD	0.15	0.15	NA	NA
Phenols (Total)	10/02	7/13	126	13	µg/L	0.33	100	1	120	4600000	CTR HH Organism
Phosphate (Total) as P	6/10	6/10	1	1	mg/L	AD	AD	0.34	0.34	NA	NA
Phosphorus	10/02	7/13	151	143	mg/L	0.05	0.05	0.057	8.24	NA	NA
Potassium	10/04	2/08	28	28	µg/L	AD	AD	1960	28300	NA	NA
Pyrene	10/02	7/13	76	1	µg/L	0.017	0.05	0.05	0.413	11000	CTR HH Organism
Selenium Dissolved	2/01	7/13	167	126	µg/L	0.2	30	0.2	6.85	NA	NA
Silica	6/10	6/10	1	1	µg/L	AD	AD	19700	19700	NA	NA
Silver Dissolved	11/02	7/13	164	22	µg/L	0.06	5	0.03	10.8	HBC	CTR Chronic
Silver Total	3/01	7/13	164	57	µg/L	0.06	5	0.03	10.9	HBC	CTR Chronic
Sodium	10/04	2/08	28	28	µg/L	AD	AD	12300	130000	NA	NA
Sulfate	10/02	7/13	99	98	mg/L	0.1	0.1	0.42	265	350	BP SSO
Sulfide	3/06	2/08	22	2	µg/L	30	30	40	40	NA	NA
TDS	10/02	7/13	76	74	mg/L	1	1	70	780	1500	BP SSO
Temperature	3/06	2/08	22	22	°C	AD	AD	12	31	NA	NA

**LA River – Reach 1 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
Thallium Dissolved	2/01	7/13	137	15	µg/L	0.1	25	0.9	17	NA	NA
Total Coliform	2/01	7/13	418	418	MPN/100mL	AD	AD	20	90000000	NA	NA
Total Kjeldahl Nitrogen	10/02	7/13	77	77	mg/L	AD	AD	0.12	30.68	NA	NA
Total Organic Carbon	10/02	7/13	77	75	mg/L	0.4	0.5	1.56	57.1	NA	NA
TPH	10/02	7/13	73	26	mg/L	0.4	5	0.62	4.75	NA	NA
TSS	10/02	7/13	143	141	mg/L	1	1	1	2280	NA	NA
Turbidity	10/02	7/13	76	76	NTU	AD	AD	0.15	211	NA	NA
Vanadium Total	2/01	2/01	1	1	µg/L	AD	AD	6.2	6.2	NA	NA
Volatile Suspended Solids	10/02	7/13	76	74	mg/L	1	1	3	608	NA	NA

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**LA River – Reach 2 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Alkalinity	3/06	6/10	46	46	mg/L	AD	AD	50	212	NA	NA
Antimony Dissolved	1/01	2/06	123	31	µg/L	1.1	18	1.1	13.8	NA	NA
Antimony Total	1/01	2/06	123	37	µg/L	1.1	18	1.2	7.1	4300	CTR HH Organism
Arsenic Dissolved	2/01	6/10	181	163	µg/L	0.4	10	0.6	8.4	150	CTR Chronic
Arsenic Total	2/01	6/10	182	165	µg/L	0.4	10	0.6	9.5	150	CTR Chronic
Barium Dissolved	2/01	8/08	178	178	µg/L	AD	AD	12.4	123	NA	NA
Barium Total	2/01	8/08	178	178	µg/L	AD	AD	13.9	375	NA	NA
Beryllium Dissolved	1/01	2/06	123	14	µg/L	0.006	1	0.02	0.85	NA	NA
Beryllium Total	1/01	2/06	123	16	µg/L	0.006	1	0.02	1.2	NA	NA
Bifenthrin	6/09	6/10	2	2	µg/L	AD	AD	0.0035	0.0051	NA	NA
Cadmium Dissolved	1/01	6/10	183	61	µg/L	0.02	1	0.01	1.6	HBC	CTR Chronic
Calcium	3/06	2/08	44	44	µg/L	AD	AD	32000	95500	NA	NA
Chloride	3/06	6/10	46	46	mg/L	AD	AD	23.6	145	190	BP SSO
Chromium Dissolved	1/01	6/10	183	140	µg/L	0.7	10	0.1	11.5	NA	NA
Chromium Total	1/01	6/10	183	154	µg/L	0.7	10	0.4	53.9	NA	NA
Cobalt Dissolved	1/01	2/06	117	53	µg/L	0.2	20	0.2	2.2	NA	NA
Cobalt Total	1/01	2/06	117	58	µg/L	0.2	20	0.2	24.7	NA	NA
Cypermethrin	6/09	6/10	2	1	µg/L	0.0005	0.0005	0.0071	0.0071	NA	NA
Dissolved Organic Carbon	3/06	6/10	46	46	mg/L	AD	AD	5.55	15	NA	NA
Enterococcus	1/01	5/09	563	540	MPN/100mL	10	100	10	24000	NA	NA
Hardness	1/04	6/13	230	230	mg/L	AD	AD	38.3	456	NA	NA
Iron Dissolved	6/09	6/10	2	2	µg/L	AD	AD	18	61	NA	NA
Iron Total	6/09	6/10	2	2	µg/L	AD	AD	439	772	NA	NA
Magnesium	3/06	2/08	44	44	µg/L	AD	AD	11700	39700	NA	NA



**LA River – Reach 2 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
Mercury Dissolved	1/01	6/10	117	30	µg/L	0.0036	0.3	0.006	0.19	NA	NA
Nickel Dissolved	1/01	6/10	182	144	µg/L	5	20	1	30.1	HBC	CTR Chronic
Nickel Total	1/01	6/10	183	153	µg/L	5	20	2	58.5	HBC	CTR Chronic
Nitrate as N	6/09	6/10	2	2	mg/L	AD	AD	2.37	3.93	8	LAR Nutrient TMDL
Nitrite as N	6/09	6/10	2	1	mg/L	0.02	0.02	0.11	0.11	1	LAR Nutrient TMDL
Nitrogen (NO3-N+NO2-N) (Calc)	10/02	7/13	77	72	mg/L	0.03	0.50	0.03	6.75	8	LAR Nutrient TMDL
Ortho Phosphate (as P)	6/09	6/10	2	2	mg/L	AD	AD	0.19	0.48	NA	NA
Phosphate (Total) as P	6/09	6/10	2	2	mg/L	AD	AD	0.34	0.61	NA	NA
Potassium	3/06	2/08	44	44	µg/L	AD	AD	6180	24600	NA	NA
Selenium Dissolved	1/01	6/10	183	172	µg/L	1	30	0.2	4.19	NA	NA
Selenium Total	1/01	6/10	183	172	µg/L	1	30	0.2	4.45	5	CTR Chronic
Silica	6/09	6/10	2	2	µg/L	AD	AD	16300	16300	NA	NA
Silver Dissolved	1/01	8/08	175	48	µg/L	0.06	5	0.03	2.5	HBC	CTR Chronic
Silver Total	1/01	8/08	177	51	µg/L	0.06	5	0.03	5	HBC	CTR Chronic
Sodium	3/06	2/08	44	44	µg/L	AD	AD	25000	124000	NA	NA
Sulfate	3/06	6/10	46	46	mg/L	AD	AD	65.3	264	350	BP SSO
Sulfide	3/06	2/08	43	2	µg/L	30	30	30	40	NA	NA
TDS	6/09	6/09	1	1	mg/L	AD	AD	626	626	1500	BP SSO
Temperature	3/06	2/08	44	44	°C	AD	AD	11.1	28.7	NA	NA
Thallium Dissolved	1/01	2/06	123	10	µg/L	0.5	25	0.8	7.8	NA	NA
Total Coliform	1/01	9/11	629	629	MPN/100mL	AD	AD	520	240000	NA	NA
Total Kjeldahl Nitrogen	6/09	6/10	2	2	mg/L	AD	AD	2.21	2.4	NA	NA
Total Organic Carbon	6/09	6/10	2	2	mg/L	AD	AD	6.48	7.85	NA	NA

**LA River – Reach 2 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
TSS	3/06	6/09	45	45	mg/L	AD	AD	6	162	NA	NA
Vanadium Total	2/01	2/01	2	1	µg/L	5	5	8.6	8.6	NA	NA

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**LA River – Reach 3, Above LAG - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
1,2-Dichlorobenzene	2/02	9/13	24	3	µg/L	0.06	1.5	0.16	0.2	17000	CTR HH Organism
1,2,3,4,6,7,8-HpCDD	8/07	9/13	13	1	pg/L	4.5	57	230	230	NA	NA
1,4-Dioxane	8/07	9/13	13	13	µg/L	AD	AD	0.28	1	NA	NA
2,4-DDD	3/02	2/07	11	1	µg/L	0.001	0.01	0.003	0.003	NA	NA
2,4,6-Trichlorophenol	2/02	9/13	24	1	µg/L	0.09	6.9	0.16	0.16	6.5	CTR HH Organism
Alkalinity	3/06	5/09	23	23	mg/L	AD	AD	62	418	NA	NA
Antimony Dissolved	1/01	2/06	73	23	µg/L	1.1	18	1.2	6	NA	NA
Antimony Total	1/01	8/13	99	51	µg/L	1.1	18	0.42	7	4300	CTR HH Organism
Arsenic Dissolved	2/01	5/09	102	94	µg/L	0.4	10	0.8	40.1	150	CTR Chronic
Arsenic Total	2/01	8/13	149	140	µg/L	0.06	10	0.9	5.6	150	CTR Chronic
Barium Dissolved	2/01	8/08	100	100	µg/L	AD	AD	0.69	103.03	NA	NA

**LA River – Reach 3, Above LAG - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Barium Total	2/01	8/08	100	100	µg/L	AD	AD	7.83	168	NA	NA
Benzo(ghi)Perylene	2/02	9/13	24	1	µg/L	0.03	1.7	0.09	0.09	NA	NA
Beryllium Dissolved	1/01	2/06	73	9	µg/L	0.006	1	0.008	0.831	NA	NA
Beryllium Total	1/01	8/13	99	15	µg/L	0.006	1	0.01	9	NA	NA
Bis(2-chloroisopropyl)Ether	2/02	9/13	24	1	µg/L	0.05	3	0.21	0.21	170000	CTR HH Organism
BOD	2/02	11/13	48	45	mg/L	3	3	3	51	NA	NA
Boron	5/07	8/13	27	27	mg/L	AD	AD	0.249	0.8	NA	NA
Butylbenzyl Phthalate	2/02	9/13	24	1	µg/L	0.04	3	0.1	0.1	5200	CTR HH Organism
Cadmium Dissolved	1/01	5/09	103	34	µg/L	0.02	1	0.01	1.08	HBC	CTR Chronic
Cadmium Total	1/01	8/13	167	75	µg/L	0.02	1	0.002	4.56	HBC	CTR Chronic
Calcium	3/06	2/08	22	22	µg/L	AD	AD	43700	107000	NA	NA
Chloride	2/02	11/13	72	72	mg/L	AD	AD	35.9	169.52	190	BP SSO
Chlorodibromomethane	8/07	8/13	14	1	µg/L	0.05	0.18	0.12	0.12	34	CTR HH Organism
Chloroform	8/07	8/13	14	10	µg/L	0.06	0.13	0.13	0.95	NA	NA
Chromium (III) Total	5/11	8/13	10	10	µg/L	AD	AD	0.2	2.61	HBC	CTR Chronic
Chromium Dissolved	1/01	5/09	103	67	µg/L	0.1	10	0.1	6.2	NA	NA
Chromium Total	1/01	8/13	151	130	µg/L	0.1	10	0.2	142	NA	NA
Chromium (VI) Total	5/07	11/13	27	3	µg/L	0.5	2	0.5	0.8	11.43	CTR Chronic
Cobalt Dissolved	1/01	2/06	70	33	µg/L	0.2	20	0.2	3.22	NA	NA
Cobalt Total	1/01	2/06	70	39	µg/L	0.2	20	0.2	6.8	NA	NA
COD	5/07	11/13	27	26	mg/L	10	10	12	49	NA	NA

**LA River – Reach 3, Above LAG - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
CTAS	5/07	9/13	26	13	mg/L	0.02	0.1	0.047	0.45	NA	NA
Di-n-Butyl Phthalate	2/02	9/13	24	9	µg/L	0.07	3	0.12	0.56	12000	CTR HH Organism
Dichlorobromomethane	8/07	8/13	14	5	µg/L	0.06	0.12	0.08	0.21	46	CTR HH Organism
Diethyl Phthalate	2/02	9/13	24	2	µg/L	0.06	3	0.12	0.18	120000	CTR HH Organism
Dissolved Organic Carbon	3/06	5/09	23	23	mg/L	AD	AD	6.58	11.8	NA	NA
Dissolved Oxygen	1/02	11/13	575	575	mg/L	AD	AD	5.04	16.6	5	BP Minimum
Endosulfan I	3/02	8/13	24	1	µg/L	0.001	0.008	0.002	0.002	0.056	CTR Chronic
Enterococcus	1/01	5/09	287	285	MPN/100mL	10	100	10	24000	NA	NA
Fecal Coliform	1/02	7/12	503	501	MPN/100mL	9	9	9	53000	NA	NA
Fluoride	5/07	11/13	28	27	mg/L	0.02	0.02	0.32	0.88	NA	NA
gamma-BHC (Lindane)	3/02	8/13	24	2	µg/L	0.001	0.017	0.003	0.007	0.063	CTR HH Organism
Hardness	2/02	8/13	146	146	mg/L	AD	AD	141	448	NA	NA
Iron Dissolved	5/09	5/09	1	1	µg/L	AD	AD	56	56	NA	NA
Iron Total	5/09	5/09	1	1	µg/L	AD	AD	1510	1510	NA	NA
Isophorone	2/02	9/13	24	4	µg/L	0.07	4	0.1	0.21	600	CTR HH Organism
Magnesium	3/06	2/08	22	22	µg/L	AD	AD	21900	46200	NA	NA
MBAS	2/02	11/13	48	48	µg/L	AD	AD	40	350	NA	NA
Mercury Dissolved	1/01	5/09	69	14	µg/L	0.004	0.3	0.006	0.176	NA	NA
MTBE	2/02	8/13	34	4	µg/L	0.08	0.2	0.44	1.28	NA	NA
Nickel Dissolved	1/01	5/09	103	85	µg/L	5	20	1.02	107	HBC	CTR Chronic
Nitrate as N	2/02	11/13	345	345	mg/L	AD	AD	0.97	5.86	8	LAR Nutrient TMDL

**LA River – Reach 3, Above LAG - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Nitrogen (NO <sub>3</sub> -N+NO <sub>2</sub> -N) (Calc)	6/09	6/10	2	2	mg/L	AD	AD	2.37	4.04	8	LAR Nutrient TMDL
OCDD	8/07	9/13	13	2	pg/L	26	120	150	1400	NA	NA
Oil + Grease	2/02	11/13	48	6	mg/L	3	3	3	6	NA	NA
Organic Nitrogen	2/02	11/13	342	341	mg/L	0.1	0.1	0.12	5.09	NA	NA
Ortho Phosphate (as P)	5/07	11/13	28	28	mg/L	AD	AD	0.07	0.75	NA	NA
Perchlorate	8/07	9/13	13	1	µg/L	0.2	1.6	0.62	0.62	NA	NA
Phosphate (Total) as P	5/09	5/09	1	1	mg/L	AD	AD	0.35	0.35	NA	NA
Phosphorus	2/02	11/13	48	48	mg/L	AD	AD	0.15	2.19	NA	NA
Potassium	3/06	2/08	22	22	µg/L	AD	AD	11800	16800	NA	NA
Selenium Dissolved	1/01	5/09	103	97	µg/L	1	30	0.3	5	NA	NA
Silica	5/09	5/09	1	1	µg/L	AD	AD	13800	13800	NA	NA
Silver Dissolved	1/01	8/08	100	23	µg/L	0.06	5	0.03	0.8	HBC	CTR Chronic
Silver Total	1/01	8/13	126	52	µg/L	0.06	5	0.02	4	HBC	CTR Chronic
Sodium	3/06	2/08	22	22	µg/L	AD	AD	34800	128000	NA	NA
Sulfide	3/06	2/08	22	2	µg/L	30	30	30	40	NA	NA
TDS	2/02	8/13	49	49	mg/L	AD	AD	434	910	950	BP SSO
Temperature	1/02	11/13	597	597	°C	AD	AD	4.444444 4	26.1111 1	NA	NA
Tetrachloroethylene	3/07	11/13	39	1	µg/L	0.09	1.3	1.3	1.3	8.85	CTR HH Organism
Thallium Dissolved	1/01	2/06	71	8	µg/L	0.5	25	0.9	6	NA	NA

**LA River – Reach 3, Above LAG - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Toluene	8/07	8/13	14	6	µg/L	0.06	0.15	0.31	0.5	200000	CTR HH Organism
Total Coliform	1/01	9/12	864	863	MPN/100mL	100	100	180	240000	NA	NA
Total Kjeldahl Nitrogen	5/09	5/09	1	1	mg/L	AD	AD	2.8	2.8	NA	NA
Total Organic Carbon	2/02	11/13	49	49	mg/L	AD	AD	5.56	18	NA	NA
Total Settleable Solids	5/07	11/13	26	6	mL/L	0.1	0.1	0.1	0.9	NA	NA
TSS	3/06	11/13	50	50	mg/L	AD	AD	1.6	378	NA	NA
Turbidity	2/02	9/13	47	47	NTU	AD	AD	0.4	16.9	NA	NA
Vanadium Total	2/01	2/01	1	1	µg/L	AD	AD	9.1	9.1	NA	NA

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**LA River – Reach 3, Below LAG - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
1,1-Dichloroethylene	8/07	8/13	16	9	µg/L	AD	AD	0.3	0.79	3.2	CTR HH Organism
1,2-Dichlorobenzene	2/02	9/13	37	3	µg/L	0.06	1.5	0.18	0.29	17000	CTR HH Organism
1,2-Trans-Dichloroethylene	8/07	8/13	16	2	µg/L	0.07	0.2	0.2	0.26	140000	CTR HH Organism
1,2,3,4,6,7,8-HpCDD	8/07	9/13	13	1	pg/L	3.9	50	85	85	NA	NA

**LA River – Reach 3, Below LAG - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
1,4-Dioxane	8/07	9/13	15	15	µg/L	AD	AD	0.2	1.216	NA	NA
2,4-DDD	3/02	2/07	22	1	µg/L	0.001	0.01	0.003	0.003	NA	NA
2,4,6-Trichlorophenol	2/02	9/13	37	3	µg/L	0.09	6.9	0.12	0.18	6.5	CTR HH Organism
Alkalinity	3/06	2/08	22	22	mg/L	AD	AD	58	220	NA	NA
alpha-BHC	3/02	9/13	37	1	µg/L	0.001	0.004	0.003	0.003	0.013	CTR HH Organism
Anthracene	2/02	9/13	37	1	µg/L	0.06	1.6	0.13	0.13	110000	CTR HH Organism
Antimony Dissolved	1/01	2/06	62	16	µg/L	1.1	18	2	5	NA	NA
Antimony Total	1/01	8/13	93	48	µg/L	1.1	18	0.37	5.3	4300	CTR HH Organism
Arsenic Dissolved	2/01	8/08	90	81	µg/L	0.4	10	0.7	5.4	150	CTR Chronic
Arsenic Total	2/01	8/13	163	151	µg/L	0.06	10	0.41	5.4	150	CTR Chronic
Barium Dissolved	2/01	8/08	88	88	µg/L	AD	AD	9.92	50	NA	NA
Barium Total	2/01	8/08	89	89	µg/L	AD	AD	12.3	362	NA	NA
Benzo(ghi)Perylene	2/02	9/13	37	2	µg/L	0.03	1.7	0.06	0.07	NA	NA
Beryllium Dissolved	1/01	2/06	62	8	µg/L	0.006	1	0.006	0.817	NA	NA
Beryllium Total	1/01	8/13	93	12	µg/L	0.006	1	0.011	1.4	NA	NA
Bis(2-chloroisopropyl)Ether	2/02	9/13	37	1	µg/L	0.05	3	0.2	0.2	170000	CTR HH Organism
BOD	2/02	11/13	74	69	mg/L	3	3	3	41	NA	NA
Boron	5/07	8/13	32	32	mg/L	AD	AD	0.252	0.706	NA	NA
Cadmium Dissolved	1/01	8/08	91	31	µg/L	0.02	1	0.01	1.2	HBC	CTR Chronic
Calcium	3/06	2/08	22	22	µg/L	AD	AD	37600	95800	NA	NA
Carbon Tetrachloride	8/07	8/13	16	1	µg/L	0.09	0.27	0.23	0.23	4.4	CTR HH Organism
Chloride	2/02	11/13	97	97	mg/L	AD	AD	29.5	164	190	BP SSO

**LA River – Reach 3, Below LAG - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Chlorodibromomethane	8/07	8/13	16	9	µg/L	AD	AD	0.13	0.74	34	CTR HH Organism
Chloroform	8/07	8/13	16	15	µg/L	0.06	0.06	0.3	3.53	NA	NA
Chromium (III) Total	2/10	8/13	14	14	µg/L	AD	AD	0.1	2.5	HBC	CTR Chronic
Chromium Dissolved	1/01	8/08	91	61	µg/L	0.1	10	0.2	5.6	NA	NA
Chromium Total	1/01	8/13	165	142	µg/L	0.7	10	0.4	29.2	NA	NA
Chromium (VI) Total	5/07	11/13	32	22	µg/L	0.5	2	0.5	1.9	11.43	CTR Chronic
Cobalt Dissolved	1/01	2/06	59	25	µg/L	0.2	20	0.2	1.4	NA	NA
Cobalt Total	1/01	2/06	59	31	µg/L	0.2	20	0.2	24.2	NA	NA
COD	5/07	11/13	32	31	mg/L	10	10	12	34	NA	NA
CTAS	5/07	9/13	31	12	mg/L	0.02	0.1	0.072	0.34	NA	NA
Di-n-Butyl Phthalate	2/02	9/13	37	16	µg/L	0.07	3	0.15	0.69	12000	CTR HH Organism
Di-n-Octyl Phthalate	2/02	9/13	37	1	µg/L	0.15	2.5	0.15	0.15	NA	NA
Diethyl Phthalate	2/02	9/13	37	2	µg/L	0.06	3	0.24	0.94	120000	CTR HH Organism
Dissolved Organic Carbon	3/06	2/08	22	22	mg/L	AD	AD	6.89	15.8	NA	NA
Enterococcus	1/01	5/09	282	275	MPN/100mL	10	100	10	24000	NA	NA
Fecal Coliform	1/02	7/12	824	821	MPN/100mL	9	9	9	80000	NA	NA
Fluoranthene	2/02	9/13	37	1	µg/L	0.02	1.3	0.17	0.17	370	CTR HH Organism
Fluoride	5/07	11/13	33	32	mg/L	0.02	0.02	0.23	0.84	NA	NA
gamma-BHC (Lindane)	3/02	9/13	37	3	µg/L	0.001	0.017	0.004	0.005	0.063	CTR HH Organism
Hardness	2/02	8/13	184	184	mg/L	AD	AD	43.2	443	NA	NA
Heptachlor	3/02	9/13	37	1	µg/L	0.001	0.008	0.008	0.008	0.52	CTR Chronic
Isophorone	2/02	9/13	37	5	µg/L	0.07	4	0.13	0.35	600	CTR HH Organism



**LA River – Reach 3, Below LAG - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Magnesium	3/06	2/08	22	22	µg/L	AD	AD	14300	39800	NA	NA
MBAS	2/02	11/13	73	73	µg/L	AD	AD	20	360	NA	NA
Mercury Dissolved	1/01	2/06	58	13	µg/L	0.02	0.3	0.02	0.22	NA	NA
MTBE	2/02	8/13	58	8	µg/L	0.08	0.2	0.33	4.167	NA	NA
Nickel Dissolved	1/01	8/08	91	71	µg/L	5	20	3	44.7	HBC	CTR Chronic
Nickel Total	1/01	8/13	164	141	µg/L	5	20	2	56.4	HBC	CTR Chronic
Nitrate as N	2/02	11/13	438	438	mg/L	AD	AD	0.99	6.22	8	LAR Nutrient TMDL
Nitrogen (NO3-N+NO2-N) (Calc)	2/02	11/13	345	345	mg/L	AD	AD	1.23	5.98	8	LAR Nutrient TMDL
OCDD	8/07	9/13	13	3	pg/L	21	120	140	1100	NA	NA
Oil + Grease	5/02	11/13	67	3	mg/L	3	3	3	8	NA	NA
Organic Nitrogen	2/02	11/13	436	435	mg/L	0.1	0.1	0.28	4.3	NA	NA
Ortho Phosphate (as P)	5/07	11/13	32	32	mg/L	AD	AD	0.07	1.12	NA	NA
Perchlorate	8/07	9/13	15	1	µg/L	0.2	1.6	2.7	2.7	NA	NA
Phenanthrene	2/02	9/13	37	1	µg/L	0.01	1.5	0.18	0.18	NA	NA
Phosphorus	2/02	11/13	74	74	mg/L	AD	AD	0.15	2.48	NA	NA
Potassium	3/06	2/08	22	22	µg/L	AD	AD	7720	24100	NA	NA
Selenium Dissolved	1/01	8/08	90	84	µg/L	1	30	0.4	4.74	NA	NA
Selenium Total	1/01	8/13	121	115	µg/L	1	30	0.4	4.66	5	CTR Chronic
Silver Dissolved	1/01	8/08	88	21	µg/L	0.06	5	0.03	0.57	HBC	CTR Chronic

**LA River – Reach 3, Below LAG - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
Silver Total	1/01	8/13	120	48	µg/L	0.06	5	0.02	3	HBC	CTR Chronic
Sodium	3/06	2/08	22	22	µg/L	AD	AD	30600	129000	NA	NA
Sulfate	2/02	11/13	97	97	mg/L	AD	AD	69.8	274	300	BP SSO
TDS	2/02	8/13	75	75	mg/L	AD	AD	496	944	950	BP SSO
Temperature	1/02	11/13	920	920	°C	AD	AD	7.22222 2	27.7777 8	NA	NA
Tetrachloroethylene	3/07	11/13	57	34	µg/L	0.09	0.36	0.36	1.92	8.85	CTR HH Organism
Thallium Dissolved	1/01	2/06	62	3	µg/L	0.5	25	1	1	NA	NA
Toluene	8/07	8/13	16	5	µg/L	0.06	0.15	0.18	0.28	200000	CTR HH Organism
Total Coliform	1/01	9/12	1181	1181	MPN/100mL	AD	AD	63	240000	NA	NA
Total Organic Carbon	2/02	11/13	74	74	mg/L	AD	AD	4.8	15	NA	NA
Total Settleable Solids	5/07	11/13	30	5	mL/L	0.1	0.1	0.1	0.4	NA	NA
Trichloroethylene	8/07	8/13	16	13	µg/L	AD	AD	6.81	16.6	81	CTR HH Organism
TSS	3/06	11/13	54	54	mg/L	AD	AD	1.8	157	NA	NA
Turbidity	2/02	9/13	73	73	NTU	AD	AD	0.6	10	NA	NA
Vanadium Total	2/01	2/01	1	1	µg/L	AD	AD	8.9	8.9	NA	NA

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective



**LA River – Reach 4 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
1,4-Dioxane	8/07	8/13	16	13	µg/L	0.15	0.19	0.36	1.28	NA	NA
2,4,6-Trichlorophenol	2/02	8/13	38	1	µg/L	0.09	6.9	0.16	0.16	6.5	CTR HH Organism
Alkalinity	3/06	6/11	38	38	mg/L	AD	AD	66	248	NA	NA
Antimony Dissolved	1/01	2/06	124	31	µg/L	1.1	18	1.2	12.7	NA	NA
Antimony Total	1/01	8/13	140	54	µg/L	1.1	18	0.4	11.2	4300	CTR HH Organism
Arsenic Dissolved	2/01	6/11	172	157	µg/L	0.4	10	0.1	31.6	150	CTR Chronic
Arsenic Total	2/01	8/13	230	213	µg/L	0.4	10	0.1	54.1	150	CTR Chronic
Barium Dissolved	2/01	8/08	169	168	µg/L	0.4	0.4	2.04	58	NA	NA
Barium Total	2/01	8/08	169	168	µg/L	0.4	0.4	5	500	NA	NA
Benzene	8/07	8/13	16	1	µg/L	0.07	0.22	0.24	0.24	71	CTR HH Organism
Beryllium Dissolved	1/01	2/06	124	15	µg/L	0.006	1	0.045	0.9	NA	NA
Beryllium Total	1/01	8/13	140	19	µg/L	0.006	1	0.02	2.1	NA	NA
Bis(2-ethylhexyl)Phthalate	2/02	8/13	46	17	µg/L	0.30	1.90	0.31	4.06	5.9	CTR HH Organism
BOD	2/02	11/13	76	76	mg/L	AD	AD	3	225	NA	NA
Boron Total	5/07	8/13	36	36	mg/L	AD	AD	0.293	0.829	NA	NA
Bromoform	8/07	8/13	16	1	µg/L	0.04	0.19	0.26	0.26	360	CTR HH Organism
Cadmium Dissolved	1/01	6/11	174	61	µg/L	0.02	1	0.01	2.12	HBC	CTR Chronic
Calcium	3/06	2/08	37	37	µg/L	AD	AD	39000	108000	NA	NA
Chloride	2/02	11/13	114	114	mg/L	AD	AD	30.7	166	190	BP SSO
Chlorodibromomethane	8/07	8/13	16	13	µg/L	0.11	0.22	0.22	1.15	34	CTR HH Organism
Chloroform	8/07	8/13	16	15	µg/L	0.13	0.13	1.16	9.53	NA	NA
Chromium Dissolved	1/01	6/11	174	115	µg/L	0.1	10	0.105	3.35	NA	NA

**LA River – Reach 4 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
Chromium Total	1/01	8/13	232	199	µg/L	0.21	10	0.4	42	NA	NA
Cobalt Dissolved	1/01	2/06	118	45	µg/L	0.2	20	0.2	1.4	NA	NA
Cobalt Total	1/01	2/06	118	54	µg/L	0.2	20	0.2	23.9	NA	NA
COD	2/02	11/13	60	60	mg/L	AD	AD	10	382	NA	NA
CTAS	6/07	9/13	33	12	mg/L	0.02	0.1	0.034	0.32	NA	NA
Di-n-Butyl Phthalate	2/02	8/13	38	15	µg/L	0.07	3	0.12	0.63	12000	CTR HH Organism
Di-n-Octyl Phthalate	2/02	8/13	38	3	µg/L	0.15	2.5	0.16	7.44	NA	NA
Dibenzo(a,h)Anthracene	2/02	8/13	38	1	µg/L	0.02	1.90	0.02	0.02	0.049	CTR HH Organism
Dichlorobromomethane	8/07	8/13	16	16	µg/L	AD	AD	0.27	3.32	46	CTR HH Organism
Dissolved Organic Carbon	3/06	6/11	38	38	mg/L	AD	AD	6.48	15	NA	NA
Endosulfan I	2/02	8/13	38	1	µg/L	0.001	0.008	0.002	0.002	0.056	CTR Chronic
Enterococcus	1/01	5/13	633	624	MPN/100mL	10	100	10	87000	NA	NA
Fecal Coliform	1/02	7/12	850	844	MPN/100mL	7	200	17	40000	NA	NA
Fluoride	5/07	8/13	31	31	mg/L	AD	AD	0.36	0.92	NA	NA
gamma-BHC (Lindane)	2/02	8/13	46	7	µg/L	0.001	0.017	0.002	0.014	0.063	CTR HH Organism
Hardness	2/02	11/13	268	268	mg/L	AD	AD	54.7	708	NA	NA
Iron Dissolved	6/11	6/11	1	1	µg/L	AD	AD	24	24	NA	NA
Iron Total	6/11	6/11	1	1	µg/L	AD	AD	3260	3260	NA	NA
Isophorone	2/02	8/13	38	8	µg/L	0.07	4	0.13	0.38	600	CTR HH Organism
Magnesium	3/06	2/08	37	37	µg/L	AD	AD	12700	45200	NA	NA
MBAS	2/02	11/13	76	76	µg/L	AD	AD	20	410	NA	NA
Mercury Dissolved	1/01	6/11	119	32	µg/L	0.004	0.3	0.02	0.2	NA	NA

**LA River – Reach 4 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Start	End				Min	Max	Min	Max		
Methylene Chloride	8/07	8/13	16	1	µg/L	0.08	0.14	0.12	0.12	1600	CTR HH Organism
MTBE	2/02	8/13	57	17	µg/L	0.08	0.2	0.23	3.64	NA	NA
Nickel Dissolved	1/01	6/11	172	138	µg/L	5	20	0.1	103	HBC	CTR Chronic
Nickel Total	1/01	8/13	232	200	µg/L	5	20	1.35	103	HBC	CTR Chronic
Nitrate as N	2/02	11/13	453	453	mg/L	AD	AD	0.08	7.28	8	LAR Nutrient TMDL
Nitrogen (NO3-N+NO2-N) (Calc)	2/02	11/13	438	438	mg/L	AD	AD	1.40	7.35	8	LAR Nutrient TMDL
Oil + Grease	2/02	11/13	144	10	mg/L	3	3	3	14	NA	NA
Organic Nitrogen	2/02	11/13	452	451	mg/L	0.1	0.1	0.75	11	NA	NA
Ortho Phosphate (as P)	5/07	11/13	35	30	mg/L	0.05	0.05	0.05	0.87	NA	NA
Perchlorate	8/07	9/13	16	4	µg/L	0.2	1.6	0.74	4.1	NA	NA
pH	1/02	11/13	958	958	pH Units	AD	AD	7.02	8.9	6.5	BP Minimum
Phenanthrene	2/02	8/13	38	1	µg/L	0.01	1.5	0.01	0.01	NA	NA
Phosphate	2/02	11/13	76	76	mg/L	AD	AD	0.09	4.94	NA	NA
Phosphate (Total) as P	6/11	6/11	1	1	mg/L	AD	AD	0.36	0.36	NA	NA
Potassium	3/06	2/08	37	37	µg/L	AD	AD	6840	19500	NA	NA
Selenium Dissolved	1/01	6/11	173	155	µg/L	0.2	30	0.2	8.3	NA	NA
Silica	6/11	6/11	1	1	µg/L	AD	AD	44500	44500	NA	NA
Silver Dissolved	1/01	8/08	169	49	µg/L	0.06	5	0.03	12	HBC	CTR Chronic
Silver Total	1/01	8/13	187	67	µg/L	0.02	5	0.01	12	HBC	CTR Chronic

**LA River – Reach 4 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Sodium	3/06	2/08	37	37	µg/L	AD	AD	35300	135000	NA	NA
Sulfide	3/06	2/08	37	9	µg/L	30	30	30	70.0000 1	NA	NA
Temperature	1/02	11/1 3	958	958	°C	AD	AD	11.1111 1	30	NA	NA
Thallium Dissolved	1/01	2/06	124	10	µg/L	0.5	25	0.5	7.1	NA	NA
Toluene	8/07	8/13	16	2	µg/L	0.06	0.15	0.41	0.94	200000	CTR HH Organism
Total Coliform	1/01	10/1 3	1489	1488	MPN/100mL	20	20	91	1600000	NA	NA
Total Kjeldahl Nitrogen	6/11	6/11	1	1	mg/L	AD	AD	2.2	2.2	NA	NA
Total Organic Carbon	2/02	11/1 3	77	77	mg/L	AD	AD	5.1	21	NA	NA
Total Settleable Solids	5/07	8/13	33	16	mL/L	0.1	0.1	0.1	3.5	NA	NA
TSS	3/06	11/1 3	106	106	mg/L	AD	AD	1.8	600	NA	NA
Turbidity	2/02	8/13	75	75	NTU	AD	AD	2.12	32.4	NA	NA
Vanadium Total	2/01	2/01	2	2	µg/L	AD	AD	5.2	7.8	NA	NA

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**LA River – Reach 5 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
1,2-Dichlorobenzene	2/02	8/13	75	6	µg/L	0.06	1.5	0.18	0.24	17000	CTR HH Organism
1,4-Dioxane	8/07	8/13	39	26	µg/L	0.15	0.19	0.4	1.89	NA	NA
2,4-DDD	2/02	2/07	33	1	µg/L	0.001	0.01	0.006	0.006	NA	NA
2,4-DDT	2/02	2/07	33	2	µg/L	0.002	0.005	0.005	0.007	NA	NA
2,4-Dichlorophenol	2/02	8/13	72	1	µg/L	0.09	6.8	0.22	0.22	790	CTR HH Organism
2,4-Dimethylphenol	2/02	8/13	72	1	µg/L	0.17	6.2	0.28	0.28	2300	CTR HH Organism
2,4,6-Trichlorophenol	2/02	8/13	72	4	µg/L	0.09	6.9	0.11	0.2	6.5	CTR HH Organism
3-Methyl-4-Chlorophenol	2/02	8/13	72	2	µg/L	0.18	6	0.32	0.98	NA	NA
4-Nitrophenol	2/02	8/13	72	2	µg/L	0.06	5	0.67	2.36	NA	NA
alpha-BHC	2/02	8/13	72	1	µg/L	0.00	0.00	0.01	0.01	0.013	CTR HH Organism
Antimony Total	8/07	8/13	39	39	µg/L	AD	AD	0.36	2.24	4300	CTR HH Organism
Arsenic Total	2/02	8/13	72	69	µg/L	0.4	0.4	1.2	5.5	150	CTR Chronic
Benzene	8/07	8/13	39	2	µg/L	0.07	0.22	0.24	0.27	71	CTR HH Organism
Benzo(ghi)Perylene	2/02	8/13	75	1	µg/L	0.03	1.7	0.66	0.66	NA	NA
Beryllium Total	8/07	8/13	39	4	µg/L	0.02	0.2	0.02	0.5	NA	NA
Bis(2-chloroisopropyl)Ether	2/02	8/13	75	2	µg/L	0.05	3	0.27	0.34	170000	CTR HH Organism
BOD	2/02	11/13	144	137	mg/L	3	3	3	162	NA	NA
Boron	5/07	8/13	81	81	mg/L	AD	AD	0.274	0.9	NA	NA
Bromoform	8/07	8/13	39	7	µg/L	0.04	0.19	0.16	0.45	360	CTR HH Organism
Butylbenzyl Phthalate	2/02	8/13	75	1	µg/L	0.04	3	0.15	0.15	5200	CTR HH Organism
Chlorodibromomethane	8/07	8/13	39	23	µg/L	0.05	0.16	0.14	3.97	34	CTR HH Organism
Chloroform	8/07	8/13	39	33	µg/L	0.06	0.13	0.12	33.2	NA	NA
Chromium Total	2/02	8/13	72	63	µg/L	0.7	10	0.29	4.38	NA	NA



**LA River – Reach 5 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
COD	2/02	11/13	141	137	mg/L	2	30	10	101	NA	NA
Copper Total	2/02	8/13	111	111	µg/L	AD	AD	5	89.2	HBC	CTR Chronic
CTAS	8/07	9/13	39	22	mg/L	0.02	0.1	0.025	0.66	NA	NA
Di-n-Butyl Phthalate	2/02	8/13	75	37	µg/L	0.07	3	0.11	1.22	12000	CTR HH Organism
Di-n-Octyl Phthalate	2/02	8/13	75	3	µg/L	0.15	2.5	0.5	7.17	NA	NA
Dichlorobromomethane	8/07	8/13	39	26	µg/L	0.06	0.34	0.34	11.5	46	CTR HH Organism
Diethyl Phthalate	2/02	8/13	75	8	µg/L	0.06	3	0.1	0.19	120000	CTR HH Organism
Endosulfan I	2/02	8/13	72	1	µg/L	0.001	0.008	0.002	0.002	0.056	CTR Chronic
Fecal Coliform	3/07	7/12	750	740	MPN/100mL	28	200	10	15400	NA	NA
Fluoride	5/07	8/13	72	71	mg/L	0.02	0.02	0.18	0.96	NA	NA
gamma-BHC (Lindane)	2/02	8/13	84	7	µg/L	0.001	0.017	0.002	0.004	0.063	CTR HH Organism
Hardness	5/07	11/13	81	81	mg/L	AD	AD	140	922	NA	NA
Isophorone	2/02	8/13	75	25	µg/L	0.07	4	0.11	0.63	600	CTR HH Organism
Lead Total	2/02	8/13	111	53	µg/L	1	5	0.08	8.9	HBC	CTR Chronic
MBAS	2/02	11/13	144	141	µg/L	5	20	10	500	NA	NA
Methylene Chloride	8/07	8/13	39	5	µg/L	0.08	0.14	0.1	0.57	1600	CTR HH Organism
MTBE	8/07	8/13	39	3	µg/L	0.08	0.16	0.28	0.5	NA	NA
Naphthalene	2/02	8/13	75	1	µg/L	0.028	2	0.14	0.14	NA	NA
Nitrogen (NO <sub>3</sub> -N+NO <sub>2</sub> -N) (Calc)	2/02	11/13	453	453	mg/L	AD	AD	0.08	8.49	8	LAR Nutrient TMDL
Oil + Grease	2/02	11/13	309	17	mg/L	3	3	3	17	NA	NA
Organic Nitrogen	2/02	11/13	1015	1015	mg/L	AD	AD	0.29	6.8	NA	NA
Ortho Phosphate (as P)	5/07	11/13	81	65	mg/L	0.05	0.05	0.05	1	NA	NA

**LA River – Reach 5 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Pentachlorophenol	2/02	8/13	72	2	µg/L	0.4	0.72	0.72	2.82	8.2	CTR HH Organism
Perchlorate	8/07	9/13	39	9	µg/L	0.2	4.1	0.74	3.4	NA	NA
Phosphate	2/02	11/13	144	140	mg/L	0.05	0.05	0.05	2.56	NA	NA
Silver Total	8/07	8/13	39	26	µg/L	0.02	0.08	0.01	0.61	HBC	CTR Chronic
Temperature	1/02	11/13	1719	1719	°C	AD	AD	5.55555 6	28.3333 3	NA	NA
Thallium Total	8/07	8/13	39	31	µg/L	0.01	0.01	0.01	1.37	6.3	CTR HH Organism
Toluene	8/07	8/13	39	2	µg/L	0.06	0.15	0.09	0.19	200000	CTR HH Organism
Total Coliform	1/02	10/13	1522	1513	MPN/100mL	10	1000	10	270000	NA	NA
Total Settleable Solids	5/07	8/13	78	23	mL/L	0.1	0.1	0.1	0.6	NA	NA
Trichloroethylene	8/07	8/13	39	1	µg/L	0.08	0.17	0.26	0.26	81	CTR HH Organism
TSS	5/07	11/13	81	81	mg/L	AD	AD	1.2	77.6	NA	NA
Turbidity	5/07	8/13	78	78	NTU	AD	AD	0.9	37	NA	NA
Zinc Total	2/02	8/13	81	80	µg/L	17.2	17.2	4	85	HBC	CTR Chronic

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**LA River – Reach 6 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
2,4-D	8/07	8/08	3	1	µg/L	0.2	0.2	0.6	0.6	NA	NA
Alkalinity	3/06	6/10	23	23	mg/L	AD	AD	66	324	NA	NA
Ammonia as N	2/02	6/10	137	44	mg/L	0.05	0.2	0.05	0.45	pH and Temp Dependent	BP 30-Day Average
Antimony Dissolved	1/01	2/06	76	27	µg/L	1.1	18	1.1	17	NA	NA
Antimony Total	1/01	8/08	79	28	µg/L	1.1	18	0.58	9	4300	CTR HH Organism
Arsenic Dissolved	2/01	6/10	134	124	µg/L	0.4	10	0.2	4.7	150	CTR Chronic
Arsenic Total	2/01	6/10	158	147	µg/L	0.4	10	0.3	7.4	150	CTR Chronic
Barium Dissolved	2/01	8/08	131	131	µg/L	AD	AD	2.5	68.2	NA	NA
Barium Total	2/01	8/08	132	132	µg/L	AD	AD	2.5	214	NA	NA
Beryllium Dissolved	1/01	2/06	76	7	µg/L	0.006	1	0.077	0.839	NA	NA
Beryllium Total	1/01	8/08	79	8	µg/L	0.006	1	0.037	2.8	NA	NA
Bifenthrin	6/10	6/10	1	1	µg/L	AD	AD	0.0027	0.0027	NA	NA
Bis(2-ethylhexyl)Phthalate	2/02	11/08	19	10	µg/L	AD	AD	0.3	3.9	5.9	CTR HH Organism
BOD	2/02	11/08	28	23	mg/L	2	3	3	29	NA	NA
Boron	5/07	11/08	8	8	mg/L	AD	AD	0.516	0.9	NA	NA
Cadmium Dissolved	1/01	6/10	135	68	µg/L	0.02	1	0.01	2.12	HBC	CTR Chronic
Calcium	3/06	2/08	22	22	µg/L	AD	AD	40200	264000	NA	NA
Chloroform	8/07	8/08	3	1	µg/L	0.06	0.06	0.13	0.13	NA	NA
Chromium Dissolved	1/01	6/10	134	98	µg/L	0.1	10	0.045	24	NA	NA
Chromium Total	1/01	6/10	159	133	µg/L	0.21	10	0.045	43	NA	NA

**LA River – Reach 6 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Cobalt Dissolved	1/01	2/06	73	33	µg/L	0.2	20	0.2	1.8	NA	NA
Cobalt Total	1/01	2/06	73	40	µg/L	0.2	20	0.2	10.9	NA	NA
COD	2/02	11/08	20	19	mg/L	30	30	11	58	NA	NA
CTAS	6/07	11/08	7	2	mg/L	0.02	0.1	0.08	0.2	NA	NA
delta-BHC	2/02	8/08	14	1	µg/L	0.0007	0.007	0.001	0.001	NA	NA
Di-n-Butyl Phthalate	2/02	8/08	15	7	µg/L	0.07	3	0.18	1.09	12000	CTR HH Organism
Di-n-Octyl Phthalate	2/02	8/08	15	2	µg/L	0.15	2.5	6.59	16.5	NA	NA
Diazinon	6/10	6/10	1	1	µg/L	AD	AD	0.0116	0.0116	0.17	USEPA Acute and Chronic
Diethyl Phthalate	2/02	8/08	15	1	µg/L	0.06	3	0.16	0.16	120000	CTR HH Organism
Dissolved Organic Carbon	3/06	6/10	23	23	mg/L	AD	AD	4.98	14.4	NA	NA
Endosulfan I	2/02	8/08	14	1	µg/L	0.001	0.008	0.005	0.005	0.056	CTR Chronic
Enterococcus	1/01	5/09	365	362	MPN/100mL	10	100	10	69000	NA	NA
Fecal Coliform	1/02	1/09	346	345	MPN/100mL	33.3	33.3	33	160000	NA	NA
Fluoride	5/07	11/08	7	7	mg/L	AD	AD	0.39	0.65	NA	NA
gamma-BHC (Lindane)	2/02	11/08	18	1	µg/L	0.001	0.017	0.004	0.004	0.063	CTR HH Organism
Hardness	2/02	6/13	181	181	mg/L	AD	AD	45.4	1220	NA	NA
Iron Dissolved	6/10	6/10	1	1	µg/L	AD	AD	11	11	NA	NA
Iron Total	6/10	6/10	1	1	µg/L	AD	AD	257	257	NA	NA
Isophorone	2/02	8/08	15	3	µg/L	0.07	4	0.12	0.33	600	CTR HH Organism
Lead Dissolved	1/01	6/13	187	94	µg/L	0.11	26	0.01	7.2	HBC	CTR Chronic
Magnesium	3/06	2/08	22	22	µg/L	AD	AD	11600	92600	NA	NA

**LA River – Reach 6 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
MBAS	2/02	11/08	28	28	µg/L	AD	AD	10	300	NA	NA
Mercury Dissolved	1/01	6/10	74	15	µg/L	0.0036	0.3	0.022	0.177	NA	NA
MTBE	2/02	8/08	24	17	µg/L	0.08	0.13	0.45	4.67	NA	NA
Nickel Dissolved	1/01	6/10	134	119	µg/L	5	20	1	73	HBC	CTR Chronic
Nickel Total	1/01	6/10	159	144	µg/L	5	20	4.2	73	HBC	CTR Chronic
Nitrate as N	2/02	6/10	115	115	mg/L	AD	AD	2.39	7.15	8	LAR Nutrient TMDL
Nitrogen (NO <sub>3</sub> -N+NO <sub>2</sub> -N) (Calc)	2/02	11/13	1016	1016	mg/L	AD	AD	0.36	11.12	8	LAR Nutrient TMDL
OCDD	8/07	8/08	3	2	pg/L	30	30	210	250	NA	NA
Organic Nitrogen	2/02	1/09	114	114	mg/L	AD	AD	0.45	9.6	NA	NA
Ortho Phosphate (as P)	5/07	6/10	8	7	mg/L	0.05	0.05	0.06	0.64	NA	NA
Perchlorate	8/07	8/08	3	1	µg/L	0.3	0.45	1.3	1.3	NA	NA
pH	1/02	1/09	371	371	pH Units	AD	AD	7.1	9	6.5	BP Minimum
Phosphate	2/02	11/08	28	24	mg/L	0.05	0.05	0.05	0.79	NA	NA
Phosphate (Total) as P	6/10	6/10	1	1	mg/L	AD	AD	0.17	0.17	NA	NA
Potassium	3/06	2/08	22	22	µg/L	AD	AD	4190	13400	NA	NA
Selenium Dissolved	1/01	4/13	150	142	µg/L	1	30	0.3	22.2	NA	NA
Silica	6/10	6/10	1	1	µg/L	AD	AD	35400	35400	NA	NA
Silver Dissolved	1/01	8/08	132	47	µg/L	0.06	5	0.03	7.4	HBC	CTR Chronic
Silver Total	1/01	8/08	136	46	µg/L	0.02	5	0.03	10.4	HBC	CTR Chronic
Sodium	3/06	2/08	22	22	µg/L	AD	AD	27000	165000	NA	NA
Sulfide	3/06	2/08	22	4	µg/L	30	30	30	59.9	NA	NA
Temperature	1/02	1/09	371	371	°C	AD	AD	6.11	31.7	NA	NA

**LA River – Reach 6 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Start	End				Min	Max	Min	Max		
Tetrachloroethylene	3/06	11/08	47	9	µg/L	0.1	0.22	0.25	0.48	8.85	CTR HH Organism
Thallium Dissolved	1/01	2/06	76	27	µg/L	0.5	25	0.9	29	NA	NA
Total Coliform	1/01	5/09	716	716	MPN/100mL	AD	AD	830	800000	NA	NA
Total Kjeldahl Nitrogen	6/10	6/10	1	1	mg/L	AD	AD	3.65	3.65	NA	NA
Total Organic Carbon	2/02	6/10	29	29	mg/L	AD	AD	4.22	26.9	NA	NA
Total Settleable Solids	5/07	11/08	7	5	mL/L	0.1	0.1	0.1	1	NA	NA
Trichloroethylene	3/06	8/08	43	9	µg/L	0.08	0.17	0.19	0.42	81	CTR HH Organism
TSS	3/06	11/08	29	29	mg/L	AD	AD	3	138	NA	NA
Turbidity	2/02	11/08	28	28	NTU	AD	AD	0.82	8.13	NA	NA

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**Rio Hondo – Reach 1 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Alkalinity	6/09	6/12	4	4	mg/L	AD	AD	48	84	NA	NA
Ammonia as N	6/09	6/12	4	1	mg/L	0.05	0.05	0.15	0.15	pH and Temp Dependent	BP Not SPWN Inland 4-Day Average
Antimony Dissolved	1/05	2/06	13	9	µg/L	2	2	2	4	NA	NA
Antimony Total	1/05	2/06	13	8	µg/L	2	2	2	3	4300	CTR HH Organism
Arsenic Dissolved	1/05	6/12	43	43	µg/L	AD	AD	0.3	5.7	150	CTR Chronic
Arsenic Total	1/05	6/12	43	43	µg/L	AD	AD	1.3	9.6	150	CTR Chronic
Barium Dissolved	1/05	8/08	39	39	µg/L	AD	AD	22.2	132	NA	NA
Barium Total	1/05	8/08	39	39	µg/L	AD	AD	28	158	NA	NA
Bifenthrin	6/09	6/12	4	2	µg/L	0.0005	0.001	0.002	0.0185	NA	NA
Cadmium Dissolved	1/05	6/12	43	26	µg/L	0.01	0.33	0.01	1	HBC	CTR Chronic
Cadmium Total	1/05	6/12	43	31	µg/L	0.3	0.33	0.01	1.51	HBC	CTR Chronic
Chloride	6/09	6/12	4	4	mg/L	AD	AD	68.6	188	190	BP SSO
Chromium Dissolved	1/05	6/12	43	39	µg/L	0.09	0.1	0.3	4.75	NA	NA
Chromium Total	1/05	6/12	43	42	µg/L	0.1	0.1	0.2	6.16	NA	NA
Cobalt Dissolved	1/05	2/06	13	7	µg/L	0.2	0.2	0.2	5.2	NA	NA
Cobalt Total	1/05	2/06	13	11	µg/L	0.2	0.2	0.3	5.5	NA	NA
Cyfluthrin	6/09	6/12	4	1	µg/L	0.0005	0.001	0.028	0.028	NA	NA
Cypermethrin	6/09	6/12	4	1	µg/L	0.0005	0.001	0.013	0.013	NA	NA
Dissolved Organic Carbon	6/09	6/12	4	4	mg/L	AD	AD	3.89	32.9	NA	NA
Enterococcus	1/02	3/09	75	74	MPN/100mL	10	10	10	24000	NA	NA
Fenvalerate	6/09	6/12	6	1	µg/L	0.0005	0.001	0.0007	0.0007	NA	NA
Hardness	1/05	4/13	54	54	mg/L	AD	AD	57	485	NA	NA

**Rio Hondo – Reach 1 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Iron Dissolved	6/09	6/12	4	4	µg/L	AD	AD	11.4	47.8	NA	NA
Iron Total	6/09	6/12	4	4	µg/L	AD	AD	267	3160	NA	NA
Mercury Dissolved	1/05	6/12	17	1	µg/L	0.0036	0.022	0.005	0.005	NA	NA
Mercury Total	1/05	6/12	17	4	µg/L	0.004	0.022	0.0138	0.043	0.051	CTR HH Organism
Nickel Dissolved	1/05	6/12	43	42	µg/L	1	1	1	16.1	HBC	CTR Chronic
Nickel Total	1/05	6/12	43	42	µg/L	1	1	2	21.1	HBC	CTR Chronic
Nitrate as N	6/09	6/12	4	2	mg/L	0.02	0.02	0.07	0.09	8	LAR Nutrient TMDL
Nitrogen (NO <sub>3</sub> -N+NO <sub>2</sub> -N) (Calc)	6/09	6/09	1	0	mg/L	0.02	0.02	ND	ND	8	LAR Nutrient TMDL
Ortho Phosphate (as P)	6/09	6/12	4	4	mg/L	AD	AD	0.05	0.13	NA	NA
Phosphate (Total) as P	6/09	6/12	4	4	mg/L	AD	AD	0.16	0.91	NA	NA
Selenium Dissolved	1/05	6/12	43	42	µg/L	0.2	0.2	0.1	1.9	NA	NA
Selenium Total	1/05	6/12	43	42	µg/L	0.2	0.2	0.1	2	5	CTR Chronic
Silica	6/09	6/12	4	4	µg/L	AD	AD	13000	58000	NA	NA
Silver Dissolved	1/05	8/08	39	19	µg/L	0.06	0.2	0.03	0.52	HBC	CTR Chronic
Silver Total	1/05	8/08	39	19	µg/L	0.06	0.2	0.03	0.7	HBC	CTR Chronic
Sulfate	6/09	6/12	4	4	mg/L	AD	AD	75.7	295	350	BP SSO
TDS	6/09	6/09	1	1	mg/L	AD	AD	546	546	1500	BP SSO
Thallium Dissolved	1/05	2/06	13	1	µg/L	1	1	1	1	NA	NA
Thallium Total	1/05	2/06	13	2	µg/L	1	1	1	1	6.3	CTR HH Organism
Total Coliform	1/02	3/09	76	76	MPN/100mL	AD	AD	440	240000	NA	NA
Total Kjeldahl Nitrogen	6/09	6/12	4	4	mg/L	AD	AD	0.83	5	NA	NA
Total Organic Carbon	6/09	6/12	4	4	mg/L	AD	AD	4.94	35.5	NA	NA
TSS	6/09	6/12	3	3	mg/L	AD	AD	29	282	NA	NA



NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

### Rio Hondo – Reach 2 - Constituents that have been detected but do not exceed relevant water quality objective

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
2-Methyl-4,6-Dinitrophenol	10/03	2/04	6	1	µg/L	3	3	4.3	4.3	765	CTR HH Organism
Alkalinity	10/03	2/04	6	6	mg/L	AD	AD	31.9	116	NA	NA
Aluminum Total	10/03	2/04	6	2	µg/L	100	100	107	750	NA	NA
Ammonia as N	10/03	2/04	6	3	mg/L	0.1	0.1	0.109	3.66	pH and Temp Dependent	BP Not SPWN Inland 4-Day Average
Antimony Dissolved	10/03	2/04	6	6	µg/L	AD	AD	1.05	1.78	NA	NA
Antimony Total	10/03	2/04	6	6	µg/L	AD	AD	1.08	4.81	4300	CTR HH Organism
Arsenic Dissolved	10/03	2/04	6	6	µg/L	AD	AD	1.01	1.83	150	CTR Chronic
Arsenic Total	10/03	2/04	6	6	µg/L	AD	AD	1.36	4.29	150	CTR Chronic
BOD	10/03	2/04	6	6	mg/L	AD	AD	8.6	79.9	NA	NA
Cadmium Total	10/03	2/04	6	1	µg/L	1	1	1.42	1.42	HBC	CTR Chronic
Chloride	10/03	2/04	6	6	mg/L	AD	AD	6.68	80.1	180	BP SSO
Chromium Dissolved	10/03	2/04	6	6	µg/L	AD	AD	1.28	3.33	NA	NA
Chromium Total	10/03	2/04	6	6	µg/L	AD	AD	1.9	15.5	NA	NA
COD	10/03	2/04	6	6	mg/L	AD	AD	23.4	88.2	NA	NA
Diethyl Phthalate	10/03	2/04	6	4	µg/L	0.5	0.5	0.9	1.4	120000	CTR HH Organism
Dissolved Oxygen	10/03	2/04	6	6	mg/L	AD	AD	7.97	10.7	5	BP Minimum

**Rio Hondo – Reach 2 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Enterococcus	10/03	2/04	6	6	MPN/100mL	AD	AD	230	300000	NA	NA
Fecal Coliform	10/03	2/04	6	6	MPN/100mL	AD	AD	1300	500000	NA	NA
Fecal Streptococcus	10/03	2/04	6	6	MPN/100mL	AD	AD	230	500000	NA	NA
Fluoride	10/03	2/04	6	5	mg/L	0.1	0.1	0.1	0.21	NA	NA
Hardness	10/03	2/04	6	6	mg/L	AD	AD	48	175	NA	NA
Iron Dissolved	10/03	2/04	6	1	µg/L	100	100	394	394	NA	NA
Isophorone	10/03	2/04	6	1	µg/L	0.05	0.05	0.3	0.3	600	CTR HH Organism
Lead Dissolved	10/03	2/04	6	6	µg/L	AD	AD	0.76	1.85	HBC	CTR Chronic
MBAS	10/03	2/04	6	6	µg/L	AD	AD	78	195	NA	NA
Nickel Dissolved	10/03	2/04	6	6	µg/L	AD	AD	2.26	9.77	HBC	CTR Chronic
Nickel Total	10/03	2/04	6	6	µg/L	AD	AD	2.58	21.8	HBC	CTR Chronic
Nitrate as N	10/03	2/04	6	5	mg/L	0.5	0.5	0.917	5.26	8	LAR Nutrient TMDL
Nitrate as NO3	10/03	2/04	6	5	mg/L	0.1	0.1	4.06	23.3	NA	NA
Nitrite as N	10/03	2/04	6	4	mg/L	0.03	0.03	0.043	0.304	1	LAR Nutrient TMDL
Nitrogen (NO3-N+NO2-N) (Calc)	6/09	6/12	4	2	mg/L	0.02	0.02	0.07	0.09	8	LAR Nutrient TMDL
Oil + Grease	10/03	2/04	6	2	mg/L	1	1	1.9	2	NA	NA
Phosphorus	10/03	2/04	12	12	mg/L	AD	AD	0.311	1.03	NA	NA
Silver Total	10/03	2/04	6	1	µg/L	1	1	0.808	0.808	HBC	CTR Chronic
Sulfate	10/03	2/04	6	6	mg/L	AD	AD	7.81	86.7	300	BP SSO
TDS	10/03	2/04	6	6	mg/L	AD	AD	80	418	750	BP SSO
Total Coliform	10/03	2/04	6	6	MPN/100mL	AD	AD	3000	500000	NA	NA
Total Kjeldahl Nitrogen	10/03	2/04	6	6	mg/L	AD	AD	1.554	12.8	NA	NA
Total Organic Carbon	10/03	2/04	6	6	mg/L	AD	AD	7.03	14.4	NA	NA

**Rio Hondo – Reach 2 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
TPH	10/03	2/04	6	2	mg/L	1	1	1.1	2.5	NA	NA
TSS	10/03	2/04	6	6	mg/L	AD	AD	91	1186	NA	NA
Turbidity	10/03	2/04	6	6	NTU	AD	AD	0.75	102	NA	NA
Volatile Suspended Solids	10/03	2/04	6	6	mg/L	AD	AD	23	342	NA	NA
Zinc Dissolved	10/03	2/04	6	6	µg/L	AD	AD	8.97	84	HBC	CTR Chronic

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**Rio Hondo – Reach 3 – Constituents that have been detected but do not exceed relevant water quality objectives**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
1,2,3,4,6,7,8-HpCDD	2/04	8/12	30	5	pg/L	2.7	55	1.7	38.1	NA	NA
1,2,3,4,6,7,8-HpCDF	2/04	8/12	30	3	pg/L	1.6	55	0.46	7.2	NA	NA
1,2,3,4,7,8,9-HpCDF	2/04	8/12	30	1	pg/L	0.88	55	5.5	5.5	NA	NA
1,2,3,4,7,8-HxCDF	2/04	8/12	60	1	pg/L	0.83	55	3.6	3.6	NA	NA
1,4-Dioxane	5/05	8/12	24	2	µg/L	0.4	0.5	1	1.2	NA	NA
2,4-D	2/04	11/12	43	2	µg/L	0.49	2.5	0.11	0.61	NA	NA
2-Butanone	6/05	12/06	19	2	µg/L	1	10	0.8	0.8	NA	NA

**Rio Hondo – Reach 3 – Constituents that have been detected but do not exceed relevant water quality objectives**

Constituent	Range of Available Data	N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value	
					Min	Max	Min	Max			
Alkalinity	2/04	12/1 2	177	177	mg/L	AD	AD	67	220	NA	NA
Aluminum Total	5/05	12/0 6	20	20	µg/L	AD	AD	20	670	NA	NA
Ammonia as N	1/04	7/09	175	138	µg/L	0.1	1	0.1	1.9	10.1	LAR Nutrient TMDL
Antimony Total	2/04	11/1 2	49	47	µg/L	0.5	0.5	0.4	3.85	4300	CTR HH Organism
Arsenic Dissolved	8/10	11/1 2	10	10	µg/L	AD	AD	1.46	4.67	150	CTR Chronic
Arsenic Total	2/04	11/1 2	49	49	µg/L	AD	AD	0.8	5.5	150	CTR Chronic
Barium Total	2/04	11/1 2	42	42	µg/L	AD	AD	19	104	NA	NA
Barium Dissolved	8/10	11/1 2	10	10	µg/L	AD	AD	58.2	97.1	NA	NA
Benzo(b)Fluoranthene	2/04	812	30	5	µg/L	0.02	0.02	0.008	0.038	0.049	CTR Human Health Organism
Beryllium Total	2/04	11/1 2	49	5	µg/L	0.25	2.5	0.01	0.1	NA	NA
Bicarbonate	5/05	12/0 6	20	20	µg/L	AD	AD	127000	212000	NA	NA
Bis(2-ethylhexyl)Phthalate	2/04	8/12	33	3	µg/L	2	2	0.4	0.41	5.9	CTR HH Organism
BOD	1/04	12/1 2	105	72	mg/L	2	3	2	12	NA	NA
Boron	1/04	12/1 2	105	99	mg/L	0.2	0.2	0.04	0.46	NA	NA
Bromoform	2/04	8/12	42	2	µg/L	0.5	1	0.3	0.6	360	CTR HH Organism

**Rio Hondo – Reach 3 – Constituents that have been detected but do not exceed relevant water quality objectives**

Constituent	Range of Available Data	N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value	
					Min	Max	Min	Max			
Cadmium Total	2/04	12/1 2	74	48	µg/L	0.2	2.5	0.01	0.2	HBC	CTR Chronic
Cadmium Dissolved	7/10	12/1 2	30	22	µg/L	0.2	0.2	0.02	0.087	HBC	CTR Chronic
Calcium	5/05	12/0 6	20	20	µg/L	AD	AD	39800	81400	NA	NA
Carbon Disulfide	5/05	12/0 6	20	10	µg/L	1	10	0.07	0.3	NA	NA
Chlorate	5/05	12/0 6	20	17	µg/L	10	10	47	1300	NA	NA
Chlorine (Total Residual)	1/04	12/1 2	210	5	µg/L	50	50	50	50	NA	NA
Chlorodibromomethane	2/04	8/12	42	9	µg/L	0.5	1	0.1	0.8	34	CTR HH Organism
Chloroform	2/04	8/12	42	25	µg/L	0.5	1	0.05	1	NA	NA
Chlorophyll	1/04	9/06	135	135	mg/L	AD	AD	0.0004	0.059	NA	NA
Chromium Total	2/04	11/1 2	63	55	µg/L	0.5	50	0.27	3.7	NA	NA
Chromium Dissolved	8/10	11/1 2	10	10	µg/L	AD	AD	0.12	1.64	NA	NA
Chromium (VI) Total	2/04	11/1 2	49	27	µg/L	10	10	0.02	4	11.4345	CTR Chronic
cis-1,2-Dichloroethylene	6/05	8/12	25	1	µg/L	0.5	1	0.1	0.1	NA	NA
COD	1/04	7/09	66	59	mg/L	5	10	7.1	77.8	NA	NA
Color	5/05	12/0 6	20	20	N/A	AD	AD	8	56	NA	NA
Copper Dissolved	7/10	12/1 2	30	30	µg/L	AD	AD	1.17	14.1	HBC	CTR Chronic

**Rio Hondo – Reach 3 – Constituents that have been detected but do not exceed relevant water quality objectives**

Constituent	Range of Available Data	N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value	
					Min	Max	Min	Max			
Cyanide	1/04	11/1 2	80	25	µg/L	5	5	1	2.3	5.2	CTR Chronic
Dichlorobromomethane	2/04	8/12	42	13	µg/L	0.5	1	0.06	0.5	46	CTR HH Organism
Fecal Coliform	1/04	12/1 2	208	208	MPN/100mL	AD	AD	17	300000	NA	NA
Fluoride	1/04	8/12	73	73	mg/L	AD	AD	0.271	0.943	NA	NA
Formaldehyde	5/05	12/0 6	20	5	µg/L	5	5	8	21	NA	NA
gamma-BHC (Lindane)	2/04	8/12	42	4	µg/L	0.01	0.01	0.003	0.006	0.063	CTR HH Organism
Hardness	1/04	12/1 2	402	402	mg/L	AD	AD	65	4600	NA	NA
Iron Total	2/04	8/12	42	38	µg/L	10	550	73	1880	NA	NA
Iron Dissolved	8/10	8/12	5	5	µg/L	AD	AD	23	253	NA	NA
Lead Dissolved	7/10	12/1 2	30	30	µg/L	AD	AD	0.04	1.89	HBC	CTR Chronic
Lead Total	1/04	12/1 2	105	105	µg/L	AD	AD	0.41	9	HBC	CTR Chronic
Magnesium	5/05	12/0 6	20	20	µg/L	AD	AD	9800	25600	NA	NA
Manganese	5/05	12/0 6	20	20	µg/L	AD	AD	12	253	NA	NA
MBAS	1/04	12/1 2	106	41	µg/L	50	100	50	520	NA	NA
Mercury Dissolved	7/10	12/1 2	30	23	µg/L	0.04	0.04	0.01	0.12	NA	NA
Methyl Chloride	2/04	8/12	29	6	µg/L	0.5	0.5	0.07	0.6	NA	NA
Methylene Chloride	2/04	8/12	42	11	µg/L	0.5	10	0.05	0.1	1600	CTR HH Organism

**Rio Hondo – Reach 3 – Constituents that have been detected but do not exceed relevant water quality objectives**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Nickel Dissolved	8/10	11/1 2	10	8	µg/L	1	1	0.44	1.62	HBC	CTR Chronic
Nickel Total	2/04	11/1 2	49	40	µg/L	0.25	20	0.37	4	HBC	CTR Chronic
NID	1/04	12/1 2	106	3	mg/L	0.1	0.2	0.1	0.2	NA	NA
Nitrate as N	1/04	10/1 1	180	152	mg/L	0.05	0.2	0.06	5.06	8	LAR Nutrient TMDL
Nitrate as N + Nitrite as N	1/04	10/1 1	180	152	mg/L	0.05	0.02	0.03	5.58	8	LAR Nutrient TMDL
Nitrite as N	1/04	10/1 1	180	150	mg/L	0.02	0.1	0.03	0.612	1	LAR Nutrient TMDL
Nitrogen	1/04	12/1 2	246	246	mg/L	AD	AD	0.1	8.1	NA	NA
N-Nitrosodimethylamine	2/04	8/12	51	15	µg/L	0.002	5	0.0006	0.0045	8.1	CTR HH Organism
OCDD	2/04	8/12	30	15	pg/L	11	120	13	337	NA	NA
OCDF	2/04	8/12	30	3	pg/L	3	110	1.4	10	NA	NA
Oil + Grease	1/04	12/1 2	105	1	mg/L	4	6.3	12	12	NA	NA
Organic Nitrogen	1/04	7/09	168	165	mg/L	0.1	0.1	0.1	3.36	NA	NA
Ortho Phosphate (as PO4)	1/04	3/10	175	99	mg/L	0.05	1	0.144	1.4	NA	NA
Perchlorate	5/05	8/12	24	4	µg/L	2	10	0.19	2	NA	NA
Phenol	2/04	8/12	33	4	µg/L	1	1	0.57	1.7	4600000	CTR HH Organism
Phosphate (Total)	1/04	12/1 2	208	156	mg/L	0.15	0.5	0.041	3	NA	NA
Potassium	5/05	12/0 6	20	19	µg/L	5000	5000	3100	8700	NA	NA

**Rio Hondo – Reach 3 – Constituents that have been detected but do not exceed relevant water quality objectives**

Constituent	Range of Available Data	N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value	
					Min	Max	Min	Max			
Selenium Total	2/04	11/1 2	49	48	µg/L	1	1	0.1	1.06	5	CTR Chronic
Selenium Dissolved	8/10	11/1 2	10	10	µg/L	AD	AD	0.12	0.7	NA	NA
Silver Total	1/04	11/1 2	80	18	µg/L	0.2	2.5	0.01	0.26	HBC	CTR Chronic
Sodium	5/05	12/0 6	20	20	µg/L	AD	AD	8800	92400	NA	NA
Sulfate	1/04	12/1 2	110	110	mg/L	AD	AD	8.9	300	350	Basin Plan SSO
TDS	1/04	12/1 2	105	105	mg/L	AD	AD	127	692	1500	Basin Plan SSO
TEQ	2/10	2/10	1	1	pg/L	AD	AD	0.014	0.014	NA	NA
Thallium Total	2/04	11/1 2	36	1	µg/L	0.25	1	0.14	0.14	6.3	CTR HH Organism
Thallium Dissolved	8/10	11/1 2	10	1	µg/L	0.25	0.25	0.016	0.016	NA	NA
Toluene	2/04	8/12	42	23	µg/L	0.5	1	0.07	1	200000	CTR HH Organism
Total Coliform	1/04	12/1 2	208	208	MPN/100mL	AD	AD	280	1600000	NA	NA
Total Kjeldahl Nitrogen	1/04	12/1 2	208	205	mg/L	0.1	0.1	0.1	4.6	NA	NA
Total Organic Carbon	5/05	12/0 6	20	20	mg/L	AD	AD	1.84	10.7	NA	NA
Total Settleable Solids	1/04	12/1 2	105	5	mL/L	0.1	0.1	0.1	0.2	NA	NA
TSS	1/04	12/1 2	105	75	mg/L	2.5	10	1	27	NA	NA



**Rio Hondo – Reach 3 – Constituents that have been detected but do not exceed relevant water quality objectives**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Turbidity	1/04	12/1 2	105	105	NTU	AD	AD	0.74	12	NA	NA
Vanadium Total	5/05	12/0 6	20	19	µg/L	10	10	2	13.2	NA	NA
Zinc Dissolved	7/10	12/1 2	30	30	µg/L	AD	AD	1.58	27.8	HBC	CTR Chronic
Zinc Total	1/04	12/1 2	105	104	µg/L	50	50	1	68	HBC	CTR Chronic

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**Tujunga Wash - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Alkalinity	6/09	6/11	3	3	mg/L	AD	AD	0.1	276	NA	NA
Antimony Dissolved	1/05	2/06	14	7	µg/L	2	2	2	3	NA	NA
Antimony Total	1/05	2/06	14	6	µg/L	2	2	2	3	4300	CTR HH Organism
Arsenic Dissolved	1/05	6/11	40	40	µg/L	AD	AD	0.5	10.1	150	CTR Chronic
Arsenic Total	1/05	6/11	40	40	µg/L	AD	AD	0.6	20.5	150	CTR Chronic
Barium Dissolved	1/05	8/08	38	38	µg/L	AD	AD	22	101	NA	NA

**Tujunga Wash - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Barium Total	1/05	8/08	38	38	µg/L	AD	AD	32	1150	NA	NA
Beryllium Total	1/05	2/06	14	1	µg/L	0.4	0.4	1.5	1.5	NA	NA
Bifenthrin	6/09	6/11	3	1	µg/L	0.0005	0.0005	0.002	0.002	NA	NA
Cadmium Dissolved	1/05	6/11	41	19	µg/L	0.01	0.33	0.01	1.69	HBC	CTR Chronic
Chromium Dissolved	1/05	6/11	41	38	µg/L	0.1	0.21	0.1	4.94	NA	NA
Chromium Total	1/05	6/11	41	40	µg/L	0.21	0.21	0.2	72.4	NA	NA
Cobalt Dissolved	1/05	2/06	14	9	µg/L	0.2	0.2	0.2	1	NA	NA
Cobalt Total	1/05	2/06	14	11	µg/L	0.2	0.2	0.2	46.8	NA	NA
Cyfluthrin	6/09	6/11	3	1	µg/L	0.0005	0.001	0.0152	0.0152	NA	NA
Dissolved Organic Carbon	6/09	6/11	3	3	mg/L	AD	AD	28.6	82.7	NA	NA
Enterococcus	1/02	5/09	78	77	MPN/100mL	10	10	10	24000	NA	NA
Hardness	1/05	6/13	73	73	mg/L	AD	AD	65.2	414	NA	NA
Iron Dissolved	6/09	6/11	3	3	µg/L	AD	AD	61.9	108	NA	NA
Iron Total	6/09	6/11	3	3	µg/L	AD	AD	2000	6900	NA	NA
Mercury Dissolved	1/05	6/11	17	4	µg/L	0.022	0.022	0.005	0.052	NA	NA
Nickel Dissolved	1/05	6/11	41	41	µg/L	AD	AD	0.1	9.19	HBC	CTR Chronic
Nickel Total	1/05	6/11	41	41	µg/L	AD	AD	0.1	54	HBC	CTR Chronic
Nitrate as N	6/09	6/11	3	1	mg/L	0.02	0.02	0.9	0.9	8	LAR Nutrient TMDL
Nitrogen (NO3-N+NO2-N) (Calc)	6/11	6/11	4	4	mg/L	AD	AD	0.48	0.54	8	LAR Nutrient TMDL
Ortho Phosphate (as P)	6/09	6/11	3	3	mg/L	AD	AD	0.08	0.53	NA	NA
Phosphate (Total) as P	6/09	6/11	3	3	mg/L	AD	AD	0.43	1.01	NA	NA
Selenium Dissolved	1/05	6/11	40	39	µg/L	0.2	0.2	0.1	0.81	NA	NA
Selenium Total	1/05	6/11	40	40	µg/L	AD	AD	0.1	2.4	5	CTR Chronic

**Tujunga Wash - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Silica	6/09	6/11	3	3	µg/L	AD	AD	31300	70300	NA	NA
Silver Dissolved	1/05	8/08	38	17	µg/L	0.06	0.2	0.03	0.66	HBC	CTR Chronic
Silver Total	1/05	8/08	38	18	µg/L	0.06	0.2	0.03	0.62	HBC	CTR Chronic
Sulfate	6/09	6/11	3	3	mg/L	AD	AD	91.1	172	300	BP SSO
Thallium Dissolved	1/05	2/06	14	2	µg/L	1	1	1	2	NA	NA
Thallium Total	1/05	2/06	14	2	µg/L	1	1	1	2	6.3	CTR HH Organism
Total Coliform	1/02	9/11	143	143	MPN/100mL	AD	AD	200	240000	NA	NA
Total Kjeldahl Nitrogen	6/09	6/11	3	3	mg/L	AD	AD	5.8	10.1	NA	NA
Total Organic Carbon	6/09	6/11	3	3	mg/L	AD	AD	31	96.5	NA	NA
TSS	6/09	6/11	2	2	mg/L	AD	AD	48	188	NA	NA
Zinc Dissolved	1/05	6/13	71	68	µg/L	0.4	4	0.45	63	HBC	CTR Chronic

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**Verdugo Wash – Reach 1 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Alkalinity	10/03	2/04	6	6	mg/L	AD	AD	17.6	241	NA	NA
Aluminum Total	10/03	2/04	6	5	µg/L	100	100	115	5420	NA	NA
Ammonia as N	10/03	2/04	6	3	mg/L	0.1	0.1	0.1	0.28556	pH and Temp Dependent	BP Not SPWN Inland 4-Day Average

**Verdugo Wash – Reach 1 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Min	Max				Min	Max				
Antimony Dissolved	10/03	2/06	20	12	µg/L	2	5	0.58	3	NA	NA
Antimony Total	10/03	2/06	20	9	µg/L	2	5	0.62	4	4300	CTR HH Organism
Arsenic - Dissolved	10/03	8/08	49	44	µg/L	0.4	5	0.2	6.8	150	CTR Chronic
Arsenic Total	10/03	8/08	49	44	µg/L	0.4	5	0.4	6.8	150	CTR Chronic
Atrazine	10/03	2/04	6	1	µg/L	2.00	2.00	2.00	2.00	NA	NA
Barium Dissolved	1/05	8/08	43	43	µg/L	AD	AD	53.7	108	NA	NA
Barium Total	1/05	8/08	43	43	µg/L	AD	AD	68.9	138	NA	NA
BOD	10/03	2/04	6	6	mg/L	AD	AD	4.15	17.7	NA	NA
Cadmium Dissolved	10/03	8/08	49	16	µg/L	0.02	1	0.01	0.76	HBC	CTR Chronic
Chloride	10/03	2/04	6	6	mg/L	AD	AD	2	139	150	BP SSO
Chlorpyrifos	10/03	2/04	6	1	µg/L	0.05	0.05	0.05	0.05	0.041 and 0.083	USEPA Acute and Chronic
Chromium Dissolved	10/03	8/08	49	45	µg/L	0.1	0.21	0.1	4.76	NA	NA
Chromium Total	10/03	8/08	49	45	µg/L	0.1	0.1	0.2	10.9	NA	NA
Cobalt Dissolved	1/05	2/06	14	8	µg/L	0.2	0.2	0.2	0.8	NA	NA
Cobalt Total	1/05	2/06	14	10	µg/L	0.2	0.2	0.3	2.5	NA	NA
COD	10/03	2/04	6	6	mg/L	AD	AD	13.6	56.9	NA	NA
Cyanazine	10/03	2/04	6	1	µg/L	2	2	2	2	NA	NA
Cyanide	10/03	2/04	6	2	µg/L	10	8	8	10	5.2 and 22	CTR Chronic and Acute
Di-n-Butyl Phthalate	10/03	2/04	6	1	µg/L	1	1	1.1	1.1	12000	CTR HH Organism
Diazinon	10/03	2/04	6	4	µg/L	0.01	0.01	0.01	0.088	0.17	USEPA Acute and Chronic
Diethyl Phthalate	10/03	2/04	6	2	µg/L	0.5	0.5	0.9	2.5	120000	CTR HH Organism
Dissolved Oxygen	10/03	2/04	6	6	mg/L	AD	AD	7.3	11.52	5	BP Minimum

**Verdugo Wash – Reach 1 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
						Min	Max	Min	Max		
Enterococcus	1/02	5/09	90	89	MPN/100mL	10	10	72	300000	NA	NA
Fecal Coliform	10/03	2/04	6	6	MPN/100mL	AD	AD	80	500000	NA	NA
Fecal Streptococcus	10/03	2/04	6	6	MPN/100mL	AD	AD	1700	800000	NA	NA
Fluoride	10/03	2/04	6	5	mg/L	0.1	0.1	0.1	0.26	NA	NA
Hardness	10/03	4/12	50	50	mg/L	AD	AD	19.5	420	NA	NA
Iron Dissolved	10/03	2/04	6	2	µg/L	100	100	138	203	NA	NA
Iron Total	10/03	2/04	6	5	µg/L	100	100	195	13100	NA	NA
Isophorone	10/03	2/04	6	1	µg/L	0.05	0.05	0.2	0.2	600	CTR HH Organism
Lead - Dissolved	10/03	4/12	49	24	µg/L	1	5	0.18	3.7	HBC	CTR Chronic
Malathion	10/03	2/04	6	1	µg/L	2.000	2.0	2	2	NA	NA
MBAS	10/03	2/04	6	2	µg/L	50	50	68	113	NA	NA
Mercury Dissolved	10/03	2/06	20	2	µg/L	0.022	1	0.032	1	NA	NA
Nickel Dissolved	10/03	8/08	49	48	µg/L	1	1	0.84	8.55	HBC	CTR Chronic
Nickel Total	10/03	8/08	49	49	µg/L	AD	AD	1	12.2	HBC	CTR Chronic
Nitrate as N	10/03	2/04	6	6	mg/L	AD	AD	0.5	2.27	8	LAR Nutrient TMDL
Nitrate as NO3	10/03	2/04	6	6	mg/L	AD	AD	0.1	10.5	NA	NA
Nitrite as N	10/03	2/04	6	5	mg/L	0.03	0.03	0.03	0.724	1	LAR Nutrient TMDL
Nitrogen (NO3-N+NO2-N) (Calc)	6/09	6/11	3	1	mg/L	0.02	0.02	0.90	0.90	8	LAR Nutrient TMDL
pH	10/03	2/04	6	6	pH Units	AD	AD	6.65	8.24	6.5	BP Minimum
Phosphorus	10/03	2/04	12	12	mg/L	AD	AD	0.093	0.463	NA	NA
Prometryn	10/03	2/04	6	1	µg/L	2	2	2	2	NA	NA
Selenium Dissolved	10/03	8/08	49	43	µg/L	0.2	5	0.2	1.16	NA	NA
Selenium Total	10/03	8/08	49	44	µg/L	0.2	5	0.2	1.16	5	CTR Chronic

**Verdugo Wash – Reach 1 - Constituents that have been detected but do not exceed relevant water quality objective**

Constituent	Range of Available Data		N	N detects	Units	Detection Limits		Detected Values		WQO	Source of Lowest Water Quality Objective (WQO) Value
	Start	End				Min	Max	Min	Max		
Silver Dissolved	10/03	8/08	49	23	µg/L	0.06	1	0.03	4.7	HBC	CTR Chronic
Silver Total	10/03	8/08	49	24	µg/L	0.06	1	0.089	3	HBC	CTR Chronic
Simazine	10/03	2/04	6	1	µg/L	2	2	2	2	NA	NA
Sulfate	10/03	2/04	6	6	mg/L	AD	AD	0.1	134	300	BP SSO
TDS	10/03	2/04	6	6	mg/L	AD	AD	60	746	950	BP SSO
Thallium Dissolved	10/03	2/06	20	7	µg/L	1	5	1	2	NA	NA
Thallium Total	10/03	2/06	20	4	µg/L	1	5	1	2	6.3	CTR HH Organism
Total Coliform	1/02	5/09	91	90	MPN/100mL	100	100	500	900000	NA	NA
Total Kjeldahl Nitrogen	10/03	2/04	6	6	mg/L	AD	AD	0.1	9.02	NA	NA
Total Organic Carbon	10/03	2/04	6	6	mg/L	AD	AD	4.26	16.4	NA	NA
TSS	10/03	2/04	6	6	mg/L	AD	AD	18	614	NA	NA
Turbidity	10/03	2/04	6	6	NTU	AD	AD	0.57	238	NA	NA
Volatile Suspended Solids	10/03	2/04	6	6	mg/L	AD	AD	9	104	NA	NA
Zinc Dissolved	10/03	4/12	50	50	µg/L	AD	AD	2	38	HBC	CTR Chronic

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

## Attachment 3: Constituents that have been detected and have exceeded relevant water quality objectives

Constituents in this attachment exceeded a water quality objective but not at a frequency that meets the 303(d) Listing requirements.

## Aliso Canyon Wash – Constituents that have been detected and have exceeded relevant water quality objectives

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
Bis(2-ethylhexyl) Phthalate	Dry	10/03	1/04	2	2	µg/L	AD	AD	17.2	18.5	Too Few Samples	2	100%	Yes	NS	NS	NS	NS	5.9	CTR HH Organism	
	Wet	10/03	2/04	4	3	µg/L	1	1	44.3	83.8	49.5	46.1	3	75%	Yes	NS	NS	NS	NS	5.9	CTR HH Organism
Copper Dissolved	Dry	10/03	5/09	40	38	µg/L	4	4	3.38	24	13.0	12.7	0	0%	No	1	1	0	0%	HBC	CTR Chronic
	Wet	10/03	12/07	8	8	µg/L	AD	AD	7.52	23.1	10.6	8.92	2	25%	Yes	NS	NS	NS	NS	HBC	CTR Acute
													1	13%	No	NS	NS	NS	NS	11	LAR Metals TMDL
Copper Total	Dry	10/03	5/09	41	41	µg/L	AD	AD	4.00	99	23.5	17.4	15	37%	Yes	1	1	0	0%	HBC	CTR Chronic
	Wet	10/03	12/07	8	8	µg/L	AD	AD	7.00	72.8	21.9	13.8	4	50%	Yes	NS	NS	NS	NS	HBC	CTR Acute
													3	38%	Yes	NS	NS	NS	NS	17	LAR Metals TMDL
Cyanide	Dry	10/03	1/04	2	0	µg/L	10	10	ND	ND			0	0%	No	NS	NS	NS	NS	5.2	CTR Chronic
	Wet	10/03	2/04	4	1	µg/L	10	10	22	22			1	25%	No	NS	NS	NS	NS	22	CTR Acute
Diazinon	Dry	10/03	5/09	3	1	µg/L	0.002	0.01	0.117	0.117			0	0%	No	1	0	0	0%	0.17	USEPA Chronic
	Wet	10/03	2/04	4	1	µg/L	0.01	0.01	0.503	0.503			1	25%	No	NS	NS	NS	NS	0.17	USEPA Acute
<i>E. Coli</i>	Dry	1/02	5/09	74	68	MPN/100mL	100	100	100	33000	2912	1040	67	91%	Yes	4	2	2	50%	126	BP REC1 30-Day
	Wet	12/02	1/09	7	7	MPN/100mL	AD	AD	100	6500	2839	2300	6	86%	Yes	1	1	0	0%	126	BP REC1 30-Day
Lead Dissolved	Dry	10/03	5/09	41	22	µg/L	0.11	5	0.19	10.4			1	2%	No	1	0	0	0%	HBC	CTR Chronic
	Wet	10/03	12/07	8	5	µg/L	1	1	0.6	1.38			0	0%	No	NS	NS	NS	NS	11	LAR Metals TMDL
													0	0%	No	NS	NS	NS	NS	51	LAR Metals TMDL
Lead Total	Dry	10/03	5/09	41	25	µg/L	1	1.1	0.51	19.6			3	7%	No	1	1	0	0%	HBC	CTR Chronic
	Wet	10/03	12/07	8	5	µg/L	1	1	1.1	19			1	2%	No	1	1	0	0%	19	LAR Metals TMDL
													0	0%	No	NS	NS	NS	NS	62	LAR Metals TMDL
Selenium Total	Dry	10/03	5/09	41	41	µg/L	AD	AD	1.11	8.00	4.35	4.30	11	27%	Yes	1	1	0	0%	5	CTR Chronic
	Wet	10/03	12/07	8	5	µg/L	5	5	0.80	21.3	6.07	3.4	0	0%	No	NS	NS	NS	NS	NA	NA
Sulfate	Dry	10/03	5/09	3	3	mg/L	AD	AD	141	375			1	33%	No	1	1	1	100%	300	BP SSO
	Wet	10/03	2/04	4	4	mg/L	AD	AD	5.98	73.9			0	0%	No	NS	NS	NS	NS	300	BP SSO
TDS	Dry	10/03	5/09	3	3	mg/L	AD	AD	592	2490			1	33%	No	1	1	1	100%	950	BP SSO
	Wet	10/03	2/04	4	4	mg/L	AD	AD	114	344			0	0%	No	NS	NS	NS	NS	950	BP SSO
Zinc Dissolved	Dry	10/03	5/09	41	41	µg/L	AD	AD	4.63	46			0	0%	No	1	1	0	0%	HBC	CTR Chronic
	Wet	10/03	12/07	8	8	µg/L	AD	AD	5	106			1	13%	No	NS	NS	NS	NS	HBC	CTR Acute
													1	13%	No	NS	NS	NS	NS	97	LAR Metals TMDL



**Aliso Canyon Wash – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed		
Zinc Total	Dry	10/03	5/09	41	41	µg/L	AD	AD	6.51	159		0	0%	No	1	1	0	0%	HBC	CTR Chronic
	Wet	10/03	12/07	8	8	µg/L	AD	AD	12	289		0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
												1	13%	No	NS	NS	NS	NS	159	LAR Metals TMDL

NA - No Available adopted water quality objective  
HBC - Hardness Based Criteria, as defined by CTR  
AD - All values reported detected, no detection limit provided  
BP – Basin Plan  
SSO – Site Specific Objective

**Arroyo Seco – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
Bis(2-ethylhexyl) Phthalate	Dry	10/03	1/04	2	1	µg/L	1	1	17.4	17.4	Too Few Samples	1	50%	No	NS	NS	NS	NS	5.9	CTR HH Organism	
Copper Dissolved	Wet	10/03	2/04	4	3	µg/L	1	1	47	50	47.8	48.2	3	75%	Yes	NS	NS	NS	NS	5.9	CTR HH Organism
	Wet	10/03	4/12	9	9	µg/L	AD	AD	3.11	12.9	0	0%	No	6	5	0	0%	21	LAR Metals TMDL		
Copper Total	Wet	10/03	4/12	9	9	µg/L	AD	AD	4.33	91.6	Too Few Samples	1	11%	No	1	1	0	0%	11	LAR Metals TMDL	
																					Dry
	Wet	10/03	4/12	9	9	µg/L	AD	AD	4.33	91.6	Too Few Samples	2	22%	Yes	1	1	0	0%	22	LAR Metals TMDL	
Lead Dissolved	Wet	10/03	4/12	9	7	µg/L	1	1	0.32	1.77	Too Few Samples	2	22%	Yes	1	1	0	0%	17	LAR Metals TMDL	
																					Dry
	Wet	10/03	4/12	9	7	µg/L	1	1	0.32	1.77	0	0%	No	1	1	0	0%	7.3	LAR Metals TMDL		
Lead Total	Wet	12/02	1/09	8	8	MPN/100mL	AD	AD	100	25000	6528	3955	6	75%	Yes	1	1	0	0%	126	BP REC1 30-Day
	Wet	10/03	4/12	9	7	µg/L	1	1	0.32	1.77	0	0%	No	1	1	0	0%	51	LAR Metals TMDL		
Lead Total	Dry	10/03	6/11	47	36	µg/L	0.11	1.1	0.055	32.8	4.96	1.57	4	9%	Yes	6	5	0	0%	HBC	CTR Chronic
													8	17%	Yes	6	5	0	0%	11	LAR Metals TMDL

**Arroyo Seco – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
	Wet	10/03	4/12	9	9	µg/L	AD	AD	1.00	292	34.6	2.00	1	11%	No	1	1	0	0%	HBC	CTR Acute
													1	11%	No	1	1	0	0%	62	LAR Metals TMDL
Mercury Total	Dry	10/03	6/11	20	3	µg/L	0.004	1	0.0132	0.0178			0	0%	No	6	3	0	0%	0.051	CTR HH Organism
	Wet	10/03	3/05	6	1	µg/L	0.022	1	0.153	0.153			1	17%	No	NS	NS	NS	NS	0.051	CTR HH Organism
Nitrite as N	Dry	10/03	6/11	8	3	mg/L	0.02	0.02	0.353	1.36			1	13%	No	6	1	1	17%	1	LAR Nutrient TMDL
	Wet	10/03	2/04	4	4	mg/L	AD	AD	0.061	0.222			0	0%	No	NS	NS	NS	NS	1	LAR Nutrient TMDL
Zinc Total	Dry	10/03	6/11	47	47	µg/L	AD	AD	2.74	351			0	0%	No	6	6	0	0%	HBC	CTR Chronic
	Wet	10/03	4/12	9	9	µg/L	AD	AD	7	926			1	11%	No	1	1	0	0%	HBC	CTR Acute
													1	11%	No	1	1	0	0%	159	LAR Metals TMDL

NA - No Available adopted water quality objective  
HBC - Hardness Based Criteria, as defined by CTR  
AD - All values reported detected, no detection limit provided  
BP – Basin Plan  
SSO – Site Specific Objective

**Bull Creek – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
Bis(2-ethylhexyl) Phthalate	Dry	10/03	1/04	2	2	µg/L	AD	AD	13.0	13.0	Too Few Samples	2	100%	Yes	NS	NS	NS	NS	5.9	CTR HH Organism	
	Wet	10/03	2/04	4	2	µg/L	1	1	17.3	78.3	Too Few Samples	2	50%	Yes	NS	NS	NS	NS	5.9	CTR HH Organism	
Cadmium Total	Dry	10/03	6/10	43	27	µg/L	0.02	0.33	0.01	1.42			0	0%	No	2	0	0	0%	HBC	CTR Chronic
	Wet	10/03	12/07	8	5	µg/L	1	1	0.3	3.24			0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
												1	13%	No	NS	NS	NS	NS	3.1	LAR Metals TMDL	
Copper Dissolved	Dry	10/03	6/10	41	39	µg/L	4	4	5.00	21	11.5	11.0	1	2%	No	2	2	0	0%	HBC	CTR Chronic
													0	0%	No	2	2	0	0%	29	LAR Metals TMDL
	Wet	10/03	12/07	8	8	µg/L	AD	AD	3.52	17	8.30	6.90	2	25%	Yes	NS	NS	NS	NS	11	LAR Metals TMDL
Copper Total	Dry	10/03	6/10	43	42	µg/L	1	1	6.00	38	15.9	14.0	7	16%	Yes	2	2	0	0%	HBC	CTR Chronic

**Bull Creek – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
Cyanide												3	7%	No	2	2	0	0%	30	LAR Metals TMDL	
	Wet	10/03	12/07	8	8	µg/L	AD	AD	5.00	77.6	27.0	15.3	3	38%	Yes	NS	NS	NS	NS	HBC	CTR Acute
	Dry	10/03	1/04	2	0	µg/L	10	10	ND	ND			0	0%	No	NS	NS	NS	NS	5.2	CTR Chronic
	Wet	10/03	2/04	4	2	µg/L	10	10	9	23			1	25%	No	NS	NS	NS	NS	22	CTR Acute
<i>E. Coli</i>	Dry	1/02	5/09	77	68	MPN/100m L	100	100	100	8600	1199	520	64	83%	Yes	4	4	4	100%	126	BP REC1 30-Day
	Wet	12/02	1/09	8	7	MPN/100m L	100	100	200	37000	8034	3050	7	88%	Yes	1	1	1	100%	126	BP REC1 30-Day
Lead Total	Dry	10/03	6/10	43	34	µg/L	1	1.1	0.35	26			1	2%	No	2	2	0	0%	HBC	CTR Chronic
													1	2%	No	2	2	0	0%	19	LAR Metals TMDL
	Wet	10/03	12/07	8	5	µg/L	1	1	1.17	203			0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
Zinc Total													1	13%	No	NS	NS	NS	NS	62	LAR Metals TMDL
	Dry	10/03	6/10	43	43	µg/L	AD	AD	6.00	77	24.7	19.0	0	0%	No	2	2	0	0%	HBC	CTR Chronic
	Wet	10/03	12/07	8	8	µg/L	AD	AD	16	324	105	35.0	1	13%	No	NS	NS	NS	NS	HBC	CTR Acute
													2	25%	Yes	NS	NS	NS	NS	159	LAR Metals TMDL

NA - No Available adopted water quality objective  
HBC - Hardness Based Criteria, as defined by CTR  
AD - All values reported detected, no detection limit provided  
BP – Basin Plan  
SSO – Site Specific Objective

**Burbank Western Channel – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
2,3,7,8-TCDD (Dioxin)	Dry	2/07	8/13	64	32	pg/L	0.134	2.3	0.001	2.44	7.37	1.34	28	44%	Yes	40	20	17	43%	0.014	CTR HH Organism
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS			NS	NS	NS	NS	NS	NS	NS	0.014	CTR HH Organism
Benzo(a)Pyrene	Dry	10/03	8/13	137	2	µg/L	0.1	5	0.32	0.41			2	1%	No	45	1	1	2%	0.049	CTR HH Organism
	Wet	10/03	2/04	4	0	µg/L	0.1	0.1	ND	ND			0	0%	No	NS	NS	NS	NS	0.049	CTR HH Organism
Benzo(b) Fluoranthene	Dry	2/04	8/13	135	5	µg/L	0.14	5	0.18	0.32	< 20% Detects		5	4%	No	45	2	2	4%	0.049	CTR HH Organism
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS			NS	NS	NS	NS	NS	NS	NS	0.049	CTR HH Organism

**Burbank Western Channel – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values				Average	Median	N Exceed	% Exceeded	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized
						Min	Max	Min	Max	N	N Detects						N Exceed	% Exceeded				
beta-BHC	Dry	10/03	8/13	131	2	µg/L	0.0011	0.08	0.037	0.047			1	1%	No	39	0	0	0%	0.046	CTR HH Organism	
	Wet	10/03	2/04	4	0	µg/L	0.05	0.05	ND	ND			0	0%	No	NS	NS	NS	NS	0.046	CTR HH Organism	
Bis(2-ethylhexyl) Phthalate	Dry	10/03	8/13	137	73	µg/L	0.21	5	0.36	96	0.270	0.070	35	26%	Yes	45	11	8	18%	5.9	CTR HH Organism	
	Wet	10/03	2/04	4	3	µg/L	1	1	9.40	77.1	26.4	13.6	3	75%	Yes	NS	NS	NS	NS	5.9	CTR HH Organism	
Cadmium Total	Dry	10/03	10/13	298	256	µg/L	0.02	1	0.01	4.4			1	0%	No	123	121	0	0%	HBC	CTR Chronic	
	Wet	10/03	1/08	9	4	µg/L	0.3	1	0.245	0.465			0	0%	No	NS	NS	NS	NS	HBC	CTR Acute	
Chloride	Dry	10/03	8/13	239	239	mg/L	NA	NA	36	489			8	3%	No	125	125	4	3%	190	BP SSO	
	Wet	10/03	2/04	4	4	mg/L	NA	NA	5.24	117			0	0%	No	NS	NS	NS	NS	190	BP SSO	
Chlorine (Total)	Dry	10/03	10/13	1299	59	µg/L	10	100	100	2000	< 20% Detects		59	5%	No	526	18	18	3%	100	BP Aquatic Life Objective	
	Wet	2/04	2/12	42	5	µg/L	10	100	100	600	< 20% Detects		5	12%	Yes	7	0	0	0%	100	BP Aquatic Life Objective	
Chloro-dibromomethane	Dry	2/04	10/13	231	130	µg/L	0.063	0.5	0.13	69	8.91	1.16	27	12%	Yes	123	56	1	1%	34	CTR HH Organism	
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS			NS	NS	NS	NS	NS	NS	NS	34	CTR HH Organism	
Copper Dissolved	Dry	10/03	10/13	166	165	µg/L	0.16	0.16	3.90	57	17.6	14.0	60	36%	Yes	97	96	3	3%	HBC	CTR Chronic	
	Wet	10/03	1/08	16	16	µg/L	AD	AD	7.50	40.3	19.6	16.7	11	69%	Yes	NS	NS	NS	NS	HBC	CTR Acute	
Copper Total	Dry	10/03	10/13	336	336	µg/L	AD	AD	1.20	177	21.8	17.2	145	43%	Yes	152	152	21	14%	HBC	CTR Chronic	
	Wet	10/03	1/08	16	16	µg/L	AD	AD	11.2	139	39.2	30.2	12	75%	Yes	NS	NS	NS	NS	11	LAR Metals TMDL	
Cyanide	Dry	10/03	10/13	206	70	µg/L	0.48	10	0.33	14			15	7%	No	93	24	1	1%	5.2	CTR Chronic	
	Wet	10/03	2/04	4	1	µg/L	10	10	12	12			0	0%	No	NS	NS	NS	NS	22	CTR Acute	
E. Coli	Dry	1/02	10/13	371	345	MPN/100mL	1	100	3.00	240000	2429	626	306	82%	Yes	215	214	199	93%	126	BP REC1 30-Day	
	Wet	12/02	1/09	8	5	MPN/100mL	100	100	100	11000	2362	200	3	38%	No	1	1	0	0%	126	BP REC1 30-Day	
Heptachlor	Dry	10/03	8/13	131	1	µg/L	0.0006	0.05	0.0081	0.0081			1	1%	No	39	0	0	0%	0.00021	CTR HH Organism	
	Wet	10/03	2/04	4	0	µg/L	0.05	0.05	ND	ND			0	0%	No	NS	NS	NS	NS	0.52	CTR HH Acute	
Lead Total	Dry	10/03	10/13	321	304	µg/L	0.031	1.1	0.12	55			6	2%	No	152	149	0	0%	HBC	CTR Chronic	
	Wet	10/03	1/08	9	9	µg/L	AD	AD	0.98	2.85			0	0%	No	NS	NS	NS	NS	9.1	LAR Metals TMDL	

**Burbank Western Channel – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
												0	0%	No	NS	NS	NS	NS	62	LAR Metals TMDL	
Mercury Total	Dry	10/03	8/13	244	178	µg/L	0.0001	1	0.0002	0.43		17	7%	No	99	97	1	1%	0.051	CTR HH Organism	
	Wet	10/03	3/05	7	1	µg/L	0.022	1	0.242	0.242		1	14%	No	NS	NS	NS	NS	0.051	CTR HH Organism	
Nitrate as N	Dry	10/03	10/13	865	863	mg/L	0.02	0.022	0.03	15		0	0%	No	523	522	0	0%	8	LAR Nutrient TMDL	
	Wet	10/03	10/12	14	14	mg/L	AD	AD	0.187	4.54		0	0%	No	1/09	10/12	0	0%	8	LAR Nutrient TMDL	
Nitrite as N	Dry	10/03	10/13	865	228	mg/L	0.002	0.1	0.025	3.1		8	1%	No	523	178	0	0%	1	LAR Nutrient TMDL	
	Wet	10/03	10/12	14	3	mg/L	0.01	0.03	0.07	0.353		0	0%	No	1/09	10/12	0	0%	1	LAR Nutrient TMDL	
pH	Dry	10/03	10/13	805	805	pH Units	AD	AD	6.06	9.9		12	1%	No	249	249	0	0%	6.5	BP Minimum	
	Wet	10/03	1/08	41	41	pH Units	AD	AD	5.38	8.6		4	10%	No	NS	NS	NS	NS	6.5	BP Minimum	
Selenium Total	Dry	10/03	8/13	235	215	µg/L	0.13	0.28	0.2	15.3		15	6%	No	99	95	0	0%	5	CTR Chronic	
	Wet	10/03	1/08	9	6	µg/L	0.1	5	0.3	3.56		0	0%	No	NS	NS	NS	NS	NA	NA	
TDS	Dry	10/03	8/13	170	170	mg/L	AD	AD	380	1480		2	1%	No	55	55	1	2%	950	BP SSO	
	Wet	10/03	2/04	4	4	mg/L	AD	AD	78	520		0	0%	No	NS	NS	NS	NS	950	BP SSO	
Thallium Total	Dry	10/03	8/13	61	16	µg/L	0.02	5	0.02	15		1	2%	No	21	1	0	0%	6.3	CTR HH Organism	
	Wet	10/03	3/05	7	0	µg/L	1	5	ND	ND		0	0%	No	NS	NS	NS	NS	6.3	CTR HH Organism	
Zinc Dissolved	Dry	10/03	10/13	152	151	µg/L	0.13	0.13	1.30	152	52.0	58.0	0	0%	No	97	96	0	0%	HBC	CTR Chronic
	Wet	10/03	1/08	9	9	µg/L	AD	AD	51	109	71.5	60.9	2	22%	Yes	NS	NS	NS	NS	HBC	CTR Acute
Zinc Total	Dry	10/03	10/13	321	321	µg/L	AD	AD	5.50	738		2	1%	No	152	152	0	0%	HBC	CTR Chronic	
	Wet	10/03	1/08	9	9	µg/L	AD	AD	55	130		1	11%	No	NS	NS	NS	NS	HBC	CTR Acute	
												0	0%	No	NS	NS	NS	NS	159	LAR Metals TMDL	

NA - No Available adopted water quality objective  
HBC - Hardness Based Criteria, as defined by CTR  
AD - All values reported detected, no detection limit provided  
BP – Basin Plan  
SSO – Site Specific Objective

**Caballero Creek – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed		
Cadmium Total	Dry	2/05	8/08	41	28	µg/L	0.3	0.33	0.01	24.9		2	5%	No	NS	NS	NS	NS	HBC	CTR Chronic

**Caballero Creek – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
	Wet	1/05	12/07	4	3	µg/L	0.02	0.02	0.4	1	0	0%	No	NS	NS	NS	NS	HBC	CTR Acute		
											0	0%	No	NS	NS	NS	NS	3.1	LAR Metals TMDL		
Copper Dissolved	Dry	2/05	8/08	40	38	µg/L	1	4	3	17	0	0%	No	NS	NS	NS	NS	HBC	CTR Chronic		
	Wet	1/05	12/07	4	4	µg/L	AD	AD	5	12.4	0	0%	No	NS	NS	NS	NS	HBC	CTR Acute		
Copper Total	Dry	2/05	8/08	41	40	µg/L	4	4	4.00	1120	51.1	11.4	4	10%	Yes	NS	NS	NS	HBC	CTR Chronic	
	Wet	1/05	12/07	4	4	µg/L	AD	AD	6.00	15.6	9.40	8.00	0	0%	No	NS	NS	NS	HBC	CTR Acute	
													0	0%	No	NS	NS	NS	17	LAR Metals TMDL	
<i>E. Coli</i>	Dry	7/04	5/09	48	42	MPN/100mL	100	100	100	49000	3000	850	38	79%	Yes	4	2	1	25%	126	BP REC1 30-Day
	Wet	10/04	1/09	6	5	MPN/100mL	100	100	300	15000	3463	580	5	83%	Yes	1	1	1	100%	126	BP REC1 30-Day
Lead Total	Dry	2/05	8/08	41	29	µg/L	1	1.1	0.29	162	0	0%	No	NS	NS	NS	NS	HBC	CTR Chronic		
	Wet	1/05	12/07	4	2	µg/L	1	1	1	2.02	0	0%	No	NS	NS	NS	NS	HBC	CTR Acute		
Mercury Total	Dry	2/05	2/06	12	1	µg/L	0.022	0.022	0.108	0.108	1	8%	No	NS	NS	NS	NS	0.051	CTR HH Organism		
	Wet	1/05	3/05	2	1	µg/L	0.022	0.022	0.027	0.027	0	0%	No	NS	NS	NS	NS	0.051	CTR HH Organism		
Nickel Total	Dry	2/05	8/08	41	41	µg/L	AD	AD	5.96	418	1	2%	No	NS	NS	NS	NS	HBC	CTR Chronic		
	Wet	1/05	12/07	4	4	µg/L	AD	AD	12	17	0	0%	No	NS	NS	NS	NS	HBC	CTR Acute		
Selenium Total	Dry	2/05	8/08	41	41	µg/L	AD	AD	1.10	14.5	3.51	2.80	6	15%	Yes	NS	NS	NS	NS	5	CTR Chronic
	Wet	1/05	12/07	4	4	µg/L	AD	AD	1.30	12.4	5.42	4.75	0	0%	No	NS	NS	NS	NS	NA	NA
Zinc Total	Dry	2/05	8/08	41	41	µg/L	AD	AD	5	2280	2	5%	No	NS	NS	NS	NS	HBC	CTR Chronic		
	Wet	1/05	12/07	4	4	µg/L	AD	AD	11	36.1	0	0%	No	NS	NS	NS	NS	HBC	CTR Acute		
													0	0%	No	NS	NS	NS	NS	159	LAR Metals TMDL

NA - No Available adopted water quality objective  
HBC - Hardness Based Criteria, as defined by CTR  
AD - All values reported detected, no detection limit provided  
BP – Basin Plan  
SSO – Site Specific Objective

**Compton Creek – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed		
Chloride	Dry	6/09	6/11	4	4	mg/L	AD	AD	74	175	2	50%	No	4	4	2	50%	150	BP SSO	

## Compton Creek – Constituents that have been detected and have exceeded relevant water quality objectives

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values				N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max	Average	Median				N	N Detects	N Exceed	% Exceed			
Chlorpyrifos	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	150	BP SSO
	Dry	6/09	6/11	4	1	µg/L	0.001	0.001	0.122	0.122			1	25%	No	4	1	1	25%	0.041	USEPA Chronic
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.083	USEPA Acute
Copper Dissolved	Dry	2/05	6/13	73	69	µg/L	4	4	0.88	19	5.70	4	6	8%	No	32	32	0	0%	HBC	CTR Chronic
	Wet	1/05	1/08	4	4	µg/L	AD	AD	8.00	11.8	1.79	8.20	2	50%	Yes	NS	NS	NS	NS	HBC	CTR Acute
													1	25%	No	NS	NS	NS	NS	11	LAR Metals TMDL
Copper Total	Dry	2/05	6/13	74	74	µg/L	AD	AD	1.30	28	8.43	6.73	11	15%	Yes	32	32	2	6%	HBC	CTR Chronic
													7	9%	Yes	32	32	1	3%	19	LAR Metals TMDL
	Wet	1/05	1/08	4	4	µg/L	AD	AD	13	21.1	3.71	17.3	2	50%	Yes	NS	NS	NS	NS	HBC	CTR Acute
													2	50%	Yes	NS	NS	NS	NS	17	LAR Metals TMDL
E. Coli	Dry	1/02	5/09	77	50	MPN/100mL	100	100	100	170000	6082	305	35	45%	Yes	4	2	1	25%	126	BP REC1 30-Day
	Wet	12/02	1/09	8	8	MPN/100mL	AD	AD	100	240000	44145	13500	7	88%	Yes	1	1	1	100%	126	BP REC1 30-Day
Lead Dissolved	Dry	2/05	6/13	74	71	µg/L	0.11	1.1	0.11	7			3	4%	No	32	32	0	0%	HBC	CTR Chronic
	Dry	2/05	6/13	74	71	µg/L	0.11	1.1	0.11	7			2	3%	No	32	32	0	0%	6	LAR Metals TMDL
	Wet	1/05	1/08	4	3	µg/L	1	1	1	2.09			0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
	Wet	1/05	1/08	4	3	µg/L	1	1	1	2.09			0	0%	No	NS	NS	NS	NS	51	LAR Metals TMDL
Lead Total	Dry	2/05	6/13	74	73	µg/L	1	1	1.17	21.9	4.91	3.87	11	15%	Yes	32	32	2	6%	HBC	CTR Chronic
													7	9%	Yes	32	32	2	6%	8.9	LAR Metals TMDL
	Wet	1/05	1/08	4	4	µg/L	AD	AD	3.00	14.8	5.82	8.80	0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
													0	0%	No	NS	NS	NS	NS	62	LAR Metals TMDL
Mercury Total	Dry	2/05	6/11	16	4	µg/L	0.0036	0.022	0.01	0.434			1	6%	No	4	2	0	0%	0.051	CTR HH Organism
	Wet	1/05	3/05	2	1	µg/L	0.022	0.022	0.27	0.27			1	50%	No	NS	NS	NS	NS	0.051	CTR HH Organism
Zinc Dissolved	Dry	2/05	6/13	74	74	µg/L	AD	AD	2.46	110			0	0%	No	32	32	0	0%	HBC	CTR Chronic
	Wet	1/05	1/08	4	4	µg/L	AD	AD	19	66.9			1	25%	No	NS	NS	NS	NS	HBC	CTR Acute
													0	0%	No	NS	NS	NS	NS	97	LAR Metals TMDL
Zinc Total	Dry	2/05	6/13	74	74	µg/L	AD	AD	5.67	195	33.6	26.5	0	0%	No	32	32	0	0%	HBC	CTR Chronic
	Wet	1/05	1/08	4	4	µg/L	AD	AD	39	143	48.8	83.0	2	50%	Yes	NS	NS	NS	NS	HBC	CTR Acute
													0	0%	No	NS	NS	NS	NS	159	LAR Metals TMDL

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

## Echo Park Lake – Constituents that have been detected and have exceeded relevant water quality objectives

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values				N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max	Average	Median				N	N Detects	N Exceed	% Exceed			
Cadmium Total	Dry	5/03	11/10	87	18	µg/L	0.01	0.5	0.01	4.02			1	1%	No	24	2	0	0%	HBC	CTR Chronic
	Wet	2/04	2/05	6	3	µg/L	0.3	0.3	0.11	0.21			0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
Copper Dissolved	Dry	5/03	11/10	87	78	µg/L	1	4	2.00	28	6.69	5.04	12	14%	Yes	24	24	0	0%	HBC	CTR Chronic
	Wet	2/04	2/05	6	6	µg/L	AD	AD	6.00	13	2.54	9.00	0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
Copper Total	Dry	5/03	11/10	87	87	µg/L	AD	AD	5.70	54	17.3	15.2	38	44%	Yes	24	24	4	17%	HBC	CTR Chronic
	Wet	2/04	2/05	6	6	µg/L	AD	AD	8.80	27	7.14	14.4	1	17%	No	NS	NS	NS	NS	HBC	CTR Acute
<i>E. Coli</i>	Dry	10/02	11/10	582	389	MPN/100mL	100	100	52	15000	536	200	264	45%	Yes	114	85	57	50%	126	BP REC1 30-Day
	Wet	2/03	12/08	42	36	MPN/100mL	100	100	100	17000	1154	250	27	64%	Yes	NS	NS	NS	NS	126	BP REC1 30-Day
Lead Dissolved	Dry	5/03	11/10	86	51	µg/L	0.1	3	0.16	8.00	1.58	0.800	9	10%	Yes	24	17	0	0%	HBC	CTR Chronic
	Wet	2/04	2/05	6	3	µg/L	3	3	2.00	4.00	3.00	3	0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
Lead Total	Dry	5/03	11/10	87	82	µg/L	2	3	1.54	15	5.25	4.68	20	23%	Yes	24	21	1	4%	HBC	CTR Chronic
	Wet	2/04	2/05	6	4	µg/L	3	3	2.00	7.00	4.25	4	0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
Mercury Total	Dry	5/03	11/10	87	23	µg/L	0.004	0.022	0.004	0.084	0.006	0.002	3	3%	No	24	10	0	0%	0.051	CTR HH Organism
	Wet	2/04	2/05	6	3	µg/L	0.022	0.022	0.133	0.143	0.131	0.078	3	50%	Yes	NS	NS	NS	NS	0.051	CTR HH Organism
pH	Dry	11/02	5/11	326	326	pH Units	AD	AD	6.64	9.83	8.34	8.30	77	24%	Yes	126	126	28	22%	8.5	BP Maximum
	Wet	2/03	2/05	16	16	pH Units	AD	AD	4.30	8.63	7.65	8.29	3	19%	No	NS	NS	NS	NS	8.5	BP Maximum
Zinc Total	Dry	5/03	11/10	84	84	µg/L	AD	AD	3.87	296			2	2%	No	21	21	0	0%	HBC	CTR Chronic
	Wet	2/04	2/05	6	6	µg/L	AD	AD	4	13.9			0	0%	No	NS	NS	NS	NS	HBC	CTR Acute

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective



## LA River – Reach 1 – Constituents that have been detected and have exceeded relevant water quality objectives

Constituent	W/ D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
Bis(2-ethylhexyl) Phthalate	Dry	10/02	7/13	29	3	µg/L	1	5	9.90	50.9	< 20% Detects	3	10%	Yes	17	1	1	6%	5.9	CTR HH Organism	
	Wet	11/02	5/13	49	4	µg/L	1	5	8.86	62	< 20% Detects	4	8%	No	23	1	1	4%	5.9	CTR HH Organism	
Cadmium Total	Dry	3/01	7/13	112	52	µg/L	0.08	1	0.002	1.60		0	0%	No	17	12	0	0%	HBC	CTR Chronic	
	Wet	2/01	5/13	78	64	µg/L	0.1	1	0.168	5.17		0	0%	No	46	42	0	0%	HBC	CTR Acute	
Copper Dissolved	Dry	3/01	7/13	143	128	µg/L	0.5	20	3.29	20	9.87	8.40	3	2%	No	46	42	0	0%	HBC	CTR Chronic
													0	0%	No	46	42	0	0%	22	LAR Metals TMDL
	Wet	2/01	5/13	80	75	µg/L	0.5	10	3.25	77.2	11.4	9.60	38	48%	Yes	48	44	30	63%	HBC	CTR Acute
													28	35%	Yes	48	44	22	46%	11	LAR Metals TMDL
Copper Total	Dry	3/01	7/13	144	134	µg/L	0.5	20	1.74	48.6	15.6	12.2	16	11%	Yes	46	45	3	7%	HBC	CTR Chronic
													6	4%	No	46	45	0	0%	23	LAR Metals TMDL
	Wet	2/01	5/13	80	77	µg/L	0.5	10	9.56	424	60.8	39.4	68	85%	Yes	48	46	45	94%	HBC	CTR Acute
													68	85%	Yes	48	46	46	96%	17	LAR Metals TMDL
Cyanide	Dry	10/02	7/13	24	21	µg/L	5	10	6	109	29.5	20.3	21	88%	Yes	13	11	11	85%	5.2	CTR Chronic
	Wet	10/02	1/13	49	37	µg/L	5	10	5	1200	39.8	10.1	10	20%	Yes	24	18	2	8%	22	CTR Acute
Diazinon	Dry	10/02	7/13	36	3	µg/L	0.002	0.01	0.037	0.155			0	0%	No	24	0	0	0%	0.17	USEPA Chronic
	Wet	11/02	5/13	41	5	µg/L	0.003	0.01	0.03	0.179			1	2%	No	16	0	0	0%	0.17	USEPA Acute
Dissolved Oxygen	Dry	10/02	7/13	31	31	mg/L	AD	AD	5.04	22.3			0	0%	No	20	20	0	0%	5	BP Minimum
	Wet	11/02	5/13	41	41	mg/L	AD	AD	2.50	14.2			1	2%	No	17	17	0	0%	5	BP Minimum
<i>E. Coli</i>	Dry	2/01	7/13	342	324	MPN/100mL	100	1000	30	140000	4155	1093	302	88%	Yes	91	90	80	88%	126	BP REC1 30-Day
	Wet	2/01	5/13	36	35	MPN/100mL	100	100	100	240000	17118	5600	34	94%	Yes	6	6	6	100%	126	BP REC1 30-Day
Lead Dissolved	Dry	3/01	7/13	144	78	µg/L	0.11	26	0.16	17			4	3%	No	46	39	0	0%	HBC	CTR Chronic
													4	3%	No	46	39	0	0%	7.6	LAR Metals TMDL
	Wet	2/01	5/13	80	71	µg/L	0.5	5	0.09	82			3	4%	No	48	48	3	6%	HBC	CTR Acute
Lead Total	Dry	3/01	7/13	144	106	µg/L	0.2	26	0.21	37	5.66	2.06	9	6%	No	46	45	2	4%	HBC	CTR Chronic
													6	4%	No	46	45	0	0%	12	LAR Metals TMDL
	Wet	2/01	5/13	80	78	µg/L	1	5	1.57	1070	69.8	26.6	25	31%	Yes	48	48	18	38%	HBC	CTR Acute
													15	19%	Yes	48	48	9	19%	62	LAR Metals TMDL
Nitrite as N	Dry	10/02	7/13	29	26	mg/L	0.03	0.50	0.04	1.60	0.43	0.19	6	21%	Yes	17	14	0	0%	1	LAR Nutrient TMDL
	Wet	11/02	1/13	48	29	mg/L	0.03	0.50	0.01	0.63	0.08	0.03	0	0%	No	23	13	0	0%	1	LAR Nutrient TMDL
Mercury Total	Dry	6/01	7/13	81	17	µg/L	0.0036	1	0.006	0.182	< 20% Detects		11	14%	Yes	17	0	0	0%	0.051	CTR HH Organism
	Wet	11/02	5/13	52	2	µg/L	0.022	1	0.17	0.447	< 20% Detects		2	4%	No	23	0	0	0%	0.051	CTR HH Organism

**LA River – Reach 1 – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
pH	Dry	10/02	7/13	48	48	pH Units	AD	AD	7.05	9.87	8.78	8.93	32	67%	Yes	16	16	12	75%	8.5	BP Maximum
	Wet	11/02	1/13	50	50	pH Units	AD	AD	6.16	9.04	7.17	7.07	2	4%	No	23	23	0	0%	8.5	BP Maximum
Selenium Total	Dry	3/01	7/13	119	107	µg/L	0.5	30	0.2	7.16			2	2%	No	24	18	1	4%	5	CTR Chronic
	Wet	2/01	5/13	48	24	µg/L	0.5	30	0.2	4.73			0	0%	No	16	8	0	0%	NA	NA
Thallium Total	Dry	3/01	7/13	91	11	µg/L	0.1	25	0.108	19			3	3%	No	23	2	0	0%	6.3	CTR HH Organism
	Wet	2/01	5/13	46	3	µg/L	0.1	25	0.114	0.205			0	0%	No	16	3	0	0%	6.3	CTR HH Organism
Zinc Dissolved	Dry	3/01	7/13	143	140	µg/L	1	17.2	4.15	97	43.2	31.8	1	1%	No	46	45	1	2%	HBC	CTR Chronic
	Wet	2/01	5/13	80	80	µg/L	AD	AD	4.00	665	82.6	55.9	23	29%	Yes	48	48	19	40%	HBC	CTR Acute
Zinc Total	Dry	3/01	7/13	144	142	µg/L	10	17.2	14.5	143	71.6	52.3	2	1%	No	46	46	2	4%	HBC	CTR Chronic
	Wet	2/01	5/13	80	80	µg/L	AD	AD	12	2590	326	185	56	70%	Yes	48	48	43	90%	HBC	CTR Acute
													48	60%	Yes	48	48	34	71%	159	LAR Metals TMDL

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**LA River – Reach 2 – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
Cadmium Total	Dry	3/01	6/10	168	60	µg/L	0.02	1	0.002	2.34	0.210	0.060	0	0%	No	2	2	0	0%	HBC	CTR Chronic
	Wet	1/01	1/08	15	9	µg/L	0.08	1	0.2	5.00	0.990	0.440	0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
Copper Dissolved	Dry	3/01	6/13	261	240	µg/L	4	20	2.26	25	8.80	7.80	8	3%	No	89	89	0	0%	HBC	CTR Chronic
	Wet	1/01	4/12	38	36	µg/L	10	10	1.92	26	9.54	8	3	1%	No	89	89	0	0%	21	LAR Metals TMDL
Copper Total	Dry	3/01	6/13	263	247	µg/L	4	20	3.75	39	13.4	11.0	23	9%	Yes	89	89	0	0%	HBC	CTR Chronic
	Wet	1/01	4/12	38	37	µg/L	10	10	9.00	129	39.2	24.8	16	6%	No	89	89	0	0%	22	LAR Metals TMDL
E. Coli	Dry	2/01	9/12	591	568	MPN/100mL	100	100	41	120000	2670	960	564	95%	Yes	94	93	93	99%	126	BP REC1 30-Day
	Wet	1/01	1/09	59	57	MPN/100mL	100	100	100	77000	11649	5500	56	95%	Yes	2	2	1	50%	126	BP REC1 30-Day

**LA River – Reach 2 – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values				N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max	Average	Median				N	N Detects	N Exceed	% Exceed			
Lead Dissolved	Dry	3/01	6/13	263	146	µg/L	0.11	26	0.1	31			4	2%	No	89	83	0	0%	HBC	CTR Chronic
	Wet	1/01	4/12	38	29	µg/L	1	5	0.02	16			4	2%	No	89	83	0	0%	7.3	LAR Metals TMDL
Lead Total	Dry	3/01	6/13	264	184	µg/L	1	26	0.11	57.1	4.17	1.54	11	4%	No	89	89	0	0%	HBC	CTR Chronic
	Wet	1/01	4/12	38	35	µg/L	1	3	1.28	119	23.4	13.1	10	4%	No	89	89	0	0%	51	LAR Metals TMDL
Mercury Total	Dry	4/01	6/10	108	32	µg/L	0.004	0.3	0.0044	0.19	0.040	0.018	7	18%	Yes	23	23	7	30%	HBC	CTR Acute
	Wet	1/01	3/05	9	3	µg/L	0.022	0.3	0.023	0.2	0.046	0.007	4	11%	Yes	23	23	4	17%	62	LAR Metals TMDL
pH	Dry	3/06	2/08	40	40	pH Units	AD	AD	7.47	9.55	8.77	8.75	21	19%	Yes	2	1	0	0%	0.051	CTR HH Organism
	Wet	12/07	1/08	4	4	pH Units	AD	AD	7.91	8.85	8.42	8.46	2	22%	Yes	NS	NS	NS	NS	0.051	CTR HH Organism
Thallium Total	Dry	3/01	2/06	112	8	µg/L	0.5	25	0.8	10.8			30	75%	Yes	NS	NS	NS	NS	8.5	BP Maximum
	Wet	12/07	1/08	4	4	pH Units	AD	AD	7.91	8.85	8.42	8.46	2	50%	No	NS	NS	NS	NS	8.5	BP Maximum
Zinc Dissolved	Dry	3/01	6/13	262	258	µg/L	10	17.2	11.90	74.5	33.2	31.1	2	2%	No	NS	NS	NS	NS	6.3	CTR HH Organism
	Wet	1/01	3/05	11	1	µg/L	0.5	25	1	1			0	0%	No	NS	NS	NS	NS	6.3	CTR HH Organism
Zinc Total	Dry	3/01	6/13	264	260	µg/L	10	17.2	17.7	97	54.4	44.6	0	0%	No	89	89	0	0%	HBC	CTR Chronic
	Wet	1/01	4/12	38	38	µg/L	AD	AD	4.00	249	64.2	37.0	6	16%	Yes	23	23	6	26%	HBC	CTR Acute
Zinc Total	Dry	3/01	6/13	264	260	µg/L	10	17.2	17.7	97	54.4	44.6	7	18%	Yes	23	23	5	22%	97	LAR Metals TMDL
	Wet	1/01	4/12	38	38	µg/L	AD	AD	19	667	203	78.5	21	55%	Yes	23	23	20	87%	HBC	CTR Acute
													23	61%	Yes	23	23	21	91%	159	LAR Metals TMDL

NA - No Available adopted water quality objective  
HBC - Hardness Based Criteria, as defined by CTR  
AD - All values reported detected, no detection limit provided  
BP – Basin Plan  
SSO – Site Specific Objective

**LA River – Reach 3, Above LAG – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values				N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max	Average	Median				N	N Detects	N Exceed	% Exceed			
2,3,7,8-TCDD (Dioxin)	Dry	8/07	9/13	13	1	pg/L	0.48	12	0.015	0.015			1	8%	No	9	0	0	0%	0.014	CTR HH Organism
	Wet	2/10	2/10	2	1	pg/L	0.95	0.95	2.44	2.44			1	50%	No	2	1	1	50%	0.014	CTR HH Organism
Ammonia as N	Dry	2/02	11/13	359	284	mg/L	0.05	0.05	0.05	15.2	1.57	0.190	53	15%	Yes	231	168	0	0%	Ammonia	BP 30-Day Average

## LA River – Reach 3, Above LAG – Constituents that have been detected and have exceeded relevant water quality objectives

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values				Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized
						Min	Max	Min	Max	N	N Detects						N Exceed	% Exceed				
	Wet	2/04	2/12	8	7	mg/L	0.05	0.05	0.12	9.40	1.42	0.295	1	13%	No	4	0	0	0%	Ammonia	BP 30-Day Average	
Bis(2-ethylhexyl) Phthalate	Dry	2/02	9/13	44	10	µg/L	0.3	1.9	0.3	6.88			1	2%	No	14	1	0	0%	5.9	CTR HH Organism	
	Wet	2/04	2/10	3	1	µg/L	0.3	1	0.9	0.9			0	0%	No	1	0	0	0%	5.9	CTR HH Organism	
Chlorine (Total)	Dry	1/02	11/13	562	2	µg/L	50	100	100	130			2	0%	No	231	0	0	0%	100	BP Aquatic Life Objective	
	Wet	11/03	2/12	13	0	µg/L	50	100	ND	ND			0	0%	No	4	0	0	0%	100	BP Aquatic Life Objective	
Copper Dissolved	Dry	3/01	6/13	127	120	µg/L	10	20	3.02	30	11.1	10.7	9	7%	No	30	30	0	0%	HBC	CTR Chronic	
													5	4%	No	30	30	0	0%	22	LAR Metals TMDL	
	Wet	1/01	1/08	8	7	µg/L	10	10	5.00	43.7	14.5	10.6	1	13%	No	NS	NS	NS	NS	HBC	CTR Acute	
													4	50%	Yes	NS	NS	NS	NS	11	LAR Metals TMDL	
Copper Total	Dry	3/01	8/13	189	186	µg/L	10	10	4.97	38	14.5	13.0	33	17%	Yes	50	50	1	2%	HBC	CTR Chronic	
													21	11%	Yes	50	50	0	0%	23	LAR Metals TMDL	
	Wet	1/01	2/10	10	9	µg/L	10	10	6.00	78.4	20.8	15.5	1	10%	No	1	1	0	0%	HBC	CTR Acute	
													5	50%	Yes	1	1	0	0%	17	LAR Metals TMDL	
Cyanide	Dry	2/02	11/13	64	8	µg/L	2	4	2.2	17			5	8%	No	22	0	0	0%	5.2	CTR Chronic	
	Wet	2/04	2/10	2	0	µg/L	4	4	ND	ND			0	0%	No	1	0	0	0%	22	CTR Acute	
Dibenzo(a,h) Anthracene	Dry	2/02	9/13	47	5	µg/L	0.0082	1.9	0.02	0.13	< 20% Detects		2	4%	No	15	1	0	0%	0.049	CTR HH Organism	
	Wet	2/04	2/10	2	0	µg/L	0.02	0.05	ND	ND	ND	ND	0	0%	No	1	0	0	0%	0.049	CTR HH Organism	
<i>E. Coli</i>	Dry	2/01	11/13	665	649	MPN/100m L	1	100	52	87000	1555	514	642	97%	Yes	320	314	309	97%	126	BP REC1 GEo	
	Wet	1/01	2/12	32	32	MPN/100m L	AD	AD	240	58000	7731	3200	32	100%	Yes	5	5	5	100%	126	BP REC1 30-Day	
Indeno (1,2,3-cd)Pyrene	Dry	2/02	9/13	22	1	µg/L	0.02	1.7	0.12	0.12			1	5%	No	9	0	0	0%	0.049	CTR HH Organism	
	Wet	2/04	2/10	2	0	µg/L	0.02	0.07	ND	ND			0	0%	No	1	0	0	0%	0.049	CTR HH Organism	
Lead Dissolved	Dry	3/01	6/13	125	68	µg/L	0.11	26	0.17	36			4	3%	No	30	26	0	0%	HBC	CTR Chronic	
													4	3%	No	30	26	0	0%	7.6	LAR Metals TMDL	
	Wet	1/01	1/08	8	3	µg/L	1	5	0.58	11			0	0%	No	NS	NS	NS	NS	HBC	CTR Acute	
													0	0%	No	NS	NS	NS	NS	51	LAR Metals TMDL	
Lead Total	Dry	3/01	8/13	189	114	µg/L	1	26	0.11	114			9	5%	No	50	41	1	2%	HBC	CTR Chronic	
													8	4%	No	50	41	1	2%	12	LAR Metals TMDL	
	Wet	1/01	2/10	10	6	µg/L	1	3	1.54	23.6			0	0%	No	1	1	0	0%	HBC	CTR Acute	
													0	0%	No	1	1	0	0%	62	LAR Metals TMDL	
Mercury Total	Dry	5/01	11/13	129	32	µg/L	0.004	0.3	0.004	0.176	0.015	0.002	11	9%	Yes	23	5	0	0%	0.051	CTR HH Organism	
	Wet	1/01	2/10	7	2	µg/L	0.022	0.3	0.022	0.2			1	14%	No	1	1	0	0%	0.051	CTR HH Organism	
Nickel Total	Dry	3/01	8/13	140	126	µg/L	5	20	2.8	121			2	1%	No	19	19	0	0%	HBC	CTR Chronic	

**LA River – Reach 3, Above LAG – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
Nitrite as N	Wet	1/01	2/10	10	9	µg/L	20	20	3	40.2		0	0%	No	1	1	0	0%	HBC	CTR Acute	
	Dry	2/02	11/13	339	262	mg/L	0.02	0.02	0.03	2.45		25	7%	No	231	183	0	0%	1	LAR Nutrient TMDL	
pH	Wet	2/04	2/12	6	4	mg/L	0.02	0.02	0.06	1.26		1	17%	No	4	2	0	0%	1	LAR Nutrient TMDL	
	Dry	1/02	11/13	583	583	pH Units	AD	AD	6.1	8.9		11	2%	No	232	232	11	5%	6.5	BP Minimum	
Selenium Total	Wet	11/03	2/12	14	14	pH Units	AD	AD	7.1	8.5		0	0%	No	4	4	0	0%	6.5	BP Minimum	
	Dry	3/01	8/13	120	116	µg/L	30	30	0.3	5.76		2	2%	No	19	19	0	0%	5	CTR Chronic	
Sulfate	Wet	1/01	2/10	9	7	µg/L	1	30	1	9		0	0%	No	1	1	0	0%	NA	NA	
	Dry	2/02	11/13	68	68	mg/L	AD	AD	120	307		1	1%	No	21	21	0	0%	300	BP SSO	
Thallium Total	Wet	2/04	2/10	4	4	mg/L	AD	AD	99.7	239		0	0%	No	1	1	0	0%	300	BP SSO	
	Dry	3/01	8/13	91	32	µg/L	0.01	25	0.01	11.5		2	2%	No	18	16	0	0%	6.3	CTR HH Organism	
Zinc Dissolved	Wet	1/01	2/10	7	0	µg/L	0.01	25	ND	ND		0	0%	No	1	0	0	0%	6.3	CTR HH Organism	
	Dry	3/01	6/13	127	125	µg/L	10	17.2	4.40	80.9	40.1	37.9	0	0%	No	30	30	0	0%	HBC	CTR Chronic
Zinc Total	Wet	1/01	1/08	8	8	µg/L	AD	AD	10	131	50.4	32.6	0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
	Dry	3/01	8/13	189	187	µg/L	10	17.2	16.9	91.8		0	0%	No	50	50	0	0%	HBC	CTR Chronic	
	Wet	1/01	2/10	10	10	µg/L	AD	AD	15	272		0	0%	No	1	1	0	0%	HBC	CTR Acute	
												1	10%	No	1	1	0	0%	159	LAR Metals TMDL	

NA - No Available adopted water quality objective  
HBC - Hardness Based Criteria, as defined by CTR  
AD - All values reported detected, no detection limit provided  
BP – Basin Plan  
SSO – Site Specific Objective

**LA River – Reach 3, Below LAG – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
2,3,7,8-TCDD (Dioxin)	Dry	8/07	9/13	14	2	pg/L	0.72	10	0.025	0.96	< 20% Detects	2	14%	Yes	11	2	2	18%	0.014	CTR HH Organism	
	Wet	2/10	2/10	2	1	pg/L	0.39	0.39	0.014	0.014	Too Few Samples	1	50%	No	2	1	1	50%	0.014	CTR HH Organism	
Ammonia as N	Dry	2/02	11/13	471	464	mg/L	0.05	0.05	0.05	19.4	2.40	0.350	52	11%	Yes	233	230	0	0%	Ammonia	BP 30-Day Average
	Wet	2/04	2/12	11	11	mg/L	AD	AD	0.11	11.2	3.35	1.47	2	18%	Yes	4	4	0	0%	Ammonia	BP 30-Day Average

## LA River – Reach 3, Below LAG – Constituents that have been detected and have exceeded relevant water quality objectives

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
Benzo(a) Anthracene	Dry	2/02	9/13	75	1	µg/L	0.0048	1.2	0.19	0.19			1	1%	No	16	0	0	0%	0.049	CTR HH Organism
	Wet	2/04	2/10	3	0	µg/L	0.09	0.14	ND	ND			0	0%	No	1	0	0	0%	0.049	CTR HH Organism
Bis(2-ethylhexyl) Phthalate	Dry	2/02	9/13	70	15	µg/L	0.3	3	0.3	28.169			1	1%	No	15	2	0	0%	5.9	CTR HH Organism
	Wet	2/04	2/10	5	2	µg/L	0.3	1	0.5	1.2			0	0%	No	1	0	0	0%	5.9	CTR HH Organism
Cadmium Total	Dry	3/01	8/13	183	71	µg/L	0.02	1	0.002	1.65			0	0%	No	21	14	0	0%	HBC	CTR Chronic
	Wet	1/01	2/10	11	8	µg/L	0.3	1	0.14	4.9			0	0%	No	1	1	0	0%	HBC	CTR Acute
Chlorine (Total)	Dry	1/02	11/13	741	3	µg/L	100	100	120	600			3	0%	No	231	0	0	0%	100	BP Aquatic Life Objective
	Wet	11/03	2/12	21	0	µg/L	100	100	ND	ND			0	0%	No	4	0	0	0%	100	BP Aquatic Life Objective
Chrysene	Dry	2/02	9/13	75	1	µg/L	0.004	1.5	0.16	0.16			1	1%	No	16	0	0	0%	0.049	CTR HH Organism
	Wet	2/04	2/10	3	0	µg/L	0.05	0.12	ND	ND			0	0%	No	1	0	0	0%	0.049	CTR HH Organism
Copper Dissolved	Dry	3/01	4/13	113	104	µg/L	4	20	1.91	23	9.06	7.90	12	11%	Yes	28	28	1	4%	HBC	CTR Chronic
	Wet	1/01	4/12	33	32	µg/L	10	10	2.16	18	8.05	7	1	3%	No	25	25	1	4%	HBC	CTR Acute
Copper Total	Dry	3/01	8/13	214	207	µg/L	10	20	3.35	33	14.0	11.8	9	4%	No	49	49	0	0%	HBC	CTR Chronic
	Wet	1/01	4/12	36	35	µg/L	10	10	8.00	118	33.0	30.7	6	18%	Yes	25	25	0	0%	11	LAR Metals TMDL
Cyanide	Dry	2/02	11/13	102	12	µg/L	2	4	2.3	23			6	6%	No	23	0	0	0%	5.2	CTR Chronic
	Wet	2/04	2/10	3	0	µg/L	4	4	ND	ND			0	0%	No	1	0	0	0%	22	CTR Acute
Dibenzo(a,h) Anthracene	Dry	2/02	9/13	75	8	µg/L	0.0082	1.9	0.02	0.4			6	8%	No	16	2	0	0%	0.049	CTR HH Organism
	Wet	2/04	2/10	3	0	µg/L	0.02	0.05	ND	ND			0	0%	No	1	0	0	0%	0.049	CTR HH Organism
Dichloro-bromomethane	Dry	8/07	8/13	15	12	µg/L	0.06	0.08	0.31	1.91			0	0%	No	10	9	0	0%	46	CTR HH Organism
	Wet	2/10	2/10	1	1	µg/L	AD	AD	1.00	1.00	Too Few Samples		1	100%	No	1	1	0	0%	46	CTR HH Organism
Dissolved Oxygen	Dry	1/02	11/13	879	879	mg/L	AD	AD	2.12	15.3			17	2%	No	235	235	0	0%	5	BP Minimum
	Wet	11/03	2/12	19	19	mg/L	AD	AD	7.23	11.2			0	0%	No	4	4	0	0%	5	BP Minimum
<i>E. Coli</i>	Dry	2/01	11/13	739	640	MPN/100m L	100	1000	30	61000	764	199	534	72%	Yes	325	315	249	77%	126	BP REC1 30-Day
	Wet	1/01	2/12	36	34	MPN/100m L	100	100	100	61000	7406	3450	33	92%	Yes	5	4	3	60%	126	BP REC1 30-Day
Indeno (1,2,3-cd)Pyrene	Dry	2/02	9/13	34	3	µg/L	0.02	1.7	0.02	0.09			2	6%	No	9	1	0	0%	0.049	CTR HH Organism
	Wet	2/04	2/10	3	0	µg/L	0.02	0.07	ND	ND			0	0%	No	1	0	0	0%	0.049	CTR HH Organism

**LA River – Reach 3, Below LAG – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
Lead Dissolved	Dry	3/01	4/13	113	60	µg/L	0.11	26	0.14	16.2		3	3%	No	28	24	0	0%	HBC	CTR Chronic	
	Wet	1/01	4/12	32	27	µg/L	1	5	0.12	12		3	3%	No	28	24	0	0%	7.5	LAR Metals TMDL	
Lead Total	Dry	3/01	8/13	214	122	µg/L	1	26	0.12	31.8		6	3%	No	49	38	0	0%	HBC	CTR Chronic	
	Wet	1/01	4/12	36	32	µg/L	1	3	2.03	60.6		6	3%	No	49	38	0	0%	12	LAR Metals TMDL	
Mercury Total	Dry	4/01	11/13	156	43	µg/L	0.0036	0.3	0.004	0.265	0.017	0.002	17	11%	Yes	23	6	0	0%	0.051	CTR HH Organism
	Wet	1/01	2/10	8	2	µg/l	0.022	0.3	0.0085	0.22	< 20% detects		1	13%	No	1	1	0	0%	0.051	Ctr hh organism
Nitrite as N	Dry	2/02	11/13	431	318	mg/L	0.02	0.02	0.02	2.5		31	7%	No	233	178	1	0%	1	LAR Nutrient TMDL	
	Wet	2/04	2/12	7	5	mg/L	0.02	0.02	0.06	0.96		0	0%	No	4	2	0	0%	1	LAR Nutrient TMDL	
pH	Dry	1/02	11/13	899	899	pH Units	AD	AD	6.4	8.6		1	0%	No	235	235	1	0%	6.5	BP Minimum	
	Wet	11/03	2/12	21	21	pH Units	AD	AD	7	8.1		0	0%	No	4	4	0	0%	6.5	BP Minimum	
Thallium Total	Dry	3/01	8/13	86	33	µg/L	0.01	25	0.02	10.7		2	2%	No	18	16	0	0%	6.3	CTR HH Organism	
	Wet	1/01	2/10	7	1	µg/L	0.5	25	0.08	0.08		0	0%	No	1	1	0	0%	6.3	CTR HH Organism	
Zinc Dissolved	Dry	3/01	4/13	112	110	µg/L	10	17.2	13.5	79		0	0%	No	28	28	0	0%	HBC	CTR Chronic	
	Wet	1/01	4/12	33	32	µg/L	4	4	11	136		0	0%	No	25	25	0	0%	HBC	CTR Acute	
Zinc Total	Dry	3/01	8/13	226	224	µg/L	10	17.2	18.7	470	53.8	47.8	7	3%	No	61	61	7	11%	HBC	CTR Chronic
	Wet	1/01	4/12	24	24	µg/L	AD	AD	16	293	137	131	11	46%	Yes	14	14	11	79%	HBC	CTR Acute
												14	58%	Yes	14	14	14	100%	159	LAR Metals TMDL	

NA - No Available adopted water quality objective  
HBC - Hardness Based Criteria, as defined by CTR  
AD - All values reported detected, no detection limit provided  
BP – Basin Plan  
SSO – Site Specific Objective

LA River Reach 4 – Constituents that have been detected and have exceeded relevant water quality objectives

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values				N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max	Average	Median				N	N Detects	N Exceed	% Exceed			
Ammonia as N	Dry	2/02	11/13	486	403	mg/L	0.05	0.05	0.05	18.2	2.34	0.215	105	22%	Yes	228	161	0	0%	Ammonia	BP 30-Day Average
	Wet	1/05	4/11	13	10	mg/L	0.05	0.05	0.22	8.87	2.32	0.330	3	23%	Yes	5	3	0	0%	Ammonia	BP 30-Day Average
Cadmium Total	Dry	3/01	8/13	222	107	µg/L	0.08	1	0.002	2.95	0.350	0.140	0	0%	No	14	11	0	0%	HBC	CTR Chronic
	Wet	1/01	12/07	15	11	µg/L	0.08	1	0.08	5.30	1.25	0.660	0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
Chlorine (Total)	Dry	1/02	11/13	865	3	µg/L	100	100	100	300			3	0%	No	227	0	0	0%	100	BP Aquatic Life Objective
	Wet	11/03	4/11	21	0	µg/L	100	100	ND	ND			0	0%	No	5	0	0	0%	100	BP Aquatic Life Objective
Chrysene	Dry	2/02	8/13	38	1	µg/L	0.05	1.5	0.11	0.11			1	3%	No	10	0	0	0%	0.049	CTR HH Organism
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS			NS	NS	NS	NS	NS	NS	NS	0.049	CTR HH Organism
Copper Dissolved	Dry	3/01	6/13	223	207	µg/L	1	20	2.00	35.8	12.3	10.9	45	20%	Yes	59	59	1	2%	HBC	CTR Chronic
	Wet	1/01	4/12	42	40	µg/L	10	10	2.86	49.9	12.9	9.97	28	13%	Yes	59	59	0	0%	19	LAR Metals TMDL
Copper Total	Dry	3/01	8/13	330	322	µg/L	4	20	4.00	306	19.1	15.5	4	10%	Yes	27	27	2	7%	HBC	CTR Acute
	Wet	1/01	5/13	42	41	µg/L	10	10	16.8	140	42.3	38.3	14	33%	Yes	27	27	5	19%	11	LAR Metals TMDL
Cyanide	Dry	2/02	11/13	123	10	µg/L	2	4	2	17			102	31%	Yes	80	80	3	4%	HBC	CTR Chronic
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS			35	11%	Yes	80	80	0	0%	26	LAR Metals TMDL
Diazinon	Dry	6/11	9/13	7	1	µg/L	0.002	0.006	0.63	0.63			25	60%	Yes	27	27	22	81%	HBC	CTR Acute
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS			39	93%	Yes	27	27	17	63%	17	LAR Metals TMDL
Dissolved Oxygen	Dry	1/02	11/13	901	901	mg/L	AD	AD	2.8	21.2			7	6%	No	37	2	1	3%	5.2	CTR Chronic
	Wet	11/03	4/11	21	21	mg/L	AD	AD	6.1	13.4			NS	NS	NS	NS	NS	NS	NS	NS	CTR Acute
E. Coli	Dry	2/01	11/13	934	789	MPN/100mL	100	1000	20	220000	1735	274	1	14%	No	7	1	1	14%	0.17	CTR Chronic
	Wet	1/01	1/13	108	106	MPN/100mL	100	100	100	41000	4887	3150	NS	NS	NS	NS	NS	NS	NS	0.17	USEPA Acute
Lead Dissolved	Dry	3/01	6/13	219	115	µg/L	0.11	26	0.11	24			8	4%	No	59	52	0	0%	HBC	CTR Chronic
	Wet	1/01	5/13	41	29	µg/L	0.11	5	0.11	8.30			9	4%	No	59	52	0	0%	6.6	LAR Metals TMDL
Lead Total	Dry	3/01	8/13	330	196	µg/L	1	26	0.17	99.5			0	0%	No	26	25	0	0%	HBC	CTR Acute
	Wet	1/01	5/13	42	36	µg/L	1	5	5.00	47.6			0	0%	No	26	25	0	0%	51	LAR Metals TMDL
Lead Total	Dry	3/01	8/13	330	196	µg/L	1	26	0.17	99.5			27	8%	No	80	69	0	0%	HBC	CTR Chronic
	Wet	1/01	5/13	42	36	µg/L	1	5	5.00	47.6			23	7%	No	80	69	0	0%	10	LAR Metals TMDL
Lead Total	Dry	3/01	8/13	330	196	µg/L	1	26	0.17	99.5			0	0%	No	27	27	0	0%	HBC	CTR Acute
	Wet	1/01	5/13	42	36	µg/L	1	5	5.00	47.6			0	0%	No	27	27	0	0%	62	LAR Metals TMDL



## LA River Reach 4 – Constituents that have been detected and have exceeded relevant water quality objectives

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values				N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max	Average	Median				N	N Detects	N Exceed	% Exceed			
Mercury Total	Dry	4/01	11/13	231	81	µg/L	0.0036	0.3	0.0037	0.24	0.025	0.005	32	14%	Yes	37	9	0	0%	0.051	CTR HH Organism
	Wet	1/01	3/05	10	2	µg/L	0.022	0.3	0.17	0.2	< 20% Detects		2	20%	Yes	NS	NS	NS	NS	0.051	CTR HH Organism
Nitrite as N	Dry	2/02	11/13	446	321	mg/L	0.02	0.02	0.02	3.14	0.302	0.090	57	13%	No	228	173	0	0%	1	LAR Nutrient TMDL
	Wet	11/08	4/11	7	6	mg/L	0.02	0.02	0.04	0.11	0.061	0.060	0	0%	No	5	4	0	0%	1	LAR Nutrient TMDL
Selenium Total	Dry	3/01	10/13	237	225	µg/L	1	30	0.3	7.1			7	3%	No	36	36	0	0%	5	CTR Chronic
	Wet	1/01	12/07	15	11	µg/L	1	30	0.5	9.8			0	0%	No	NS	NS	NS	NS	NA	NA
Sulfate	Dry	2/02	11/13	111	111	mg/L	AD	AD	84	636			10	9%	No	21	21	1	5%	300	BP SSO
	Wet	3/06	12/07	3	3	mg/L	AD	AD	119	134			0	0%	No	NS	NS	NS	NS	300	BP SSO
TDS	Dry	2/02	8/13	75	75	mg/L	AD	AD	400	1320			6	8%	No	19	19	0	0%	950	BP SSO
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS			NS	NS	NS	NS	NS	NS	NS	950	BP SSO
Thallium Total	Dry	3/01	8/13	128	23	µg/L	0.01	25	0.02	10.2			2	2%	No	10	8	0	0%	6.3	CTR HH Organism
	Wet	1/01	3/05	12	1	µg/L	0.5	25	1.7	1.7			0	0%	No	NS	NS	NS	NS	6.3	CTR HH Organism
Zinc Dissolved	Dry	3/01	6/13	220	216	µg/L	10	17.2	0.4	135			0	0%	No	59	59	0	0%	HBC	CTR Chronic
	Wet	1/01	4/12	42	42	µg/L	AD	AD	4.00	117			0	0%	No	27	27	0	0%	HBC	CTR Acute
Zinc Total	Dry	3/01	8/13	284	280	µg/L	10	17.2	14.4	344	62.3	55.3	1	0%	No	72	72	0	0%	HBC	CTR Chronic
	Wet	1/01	4/12	42	42	µg/L	AD	AD	44.8	518	148	120	13	31%	Yes	27	27	13	48%	HBC	CTR Acute
													17	40%	Yes	27	27	15	56%	159	LAR Metals TMDL

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**LA River Reach 5 – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values				Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized			
						Min	Max	Min	Max	Average	Median		N Exceed	% Exceed	N	N Detects			N Exceed	% Exceed	
4,4-DDD	Dry	2/02	8/13	72	2	µg/L	0.001	0.006	0.002	0.004	< 20% Detects	2	3%	No	30	1	1	3%	0.00084	CTR HH Organism	
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	0.00084	CTR HH Organism	
4,4-DDE	Dry	2/02	8/13	72	4	µg/L	0.001	0.004	0.002	0.007	< 20% Detects	4	6%	No	30	2	2	7%	0.00059	CTR HH Organism	
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	0.00059	CTR HH Organism	
Ammonia as N	Dry	2/02	11/13	1021	853	mg/L	0.05	0.1	0.05	25.2		76	7%	No	674	547	0	0%	pH and Temp Dependent	BP 30-Day Average	
	Wet	1/05	4/11	18	13	mg/L	0.05	0.1	0.05	0.69		0	0%	No	12	10	0	0%		BP 30-Day Average	
Bis(2-ethylhexyl) Phthalate	Dry	2/02	8/13	84	27	µg/L	0.3	3	0.3	26.027		1	1%	No	30	2	0	0%	5.9	CTR HH Organism	
	Wet	3/05	3/05	3	1	µg/L	0.3	0.3	0.7	0.7		0	0%	No	NS	NS	NS	NS	5.9	CTR HH Organism	
Cadmium Total	Dry	2/02	8/13	81	47	µg/L	0.08	1	0.07	1.84		0	0%	No	39	31	0	0%	HBC	CTR Chronic	
Chloride	Dry	5/07	11/13	81	81	mg/L	AD	AD	90.5	186	138	139	23	28%	Yes	60	60	17	28%	150	BP SSO LAR and tributaries, upstream SFCB
Chlorine (Total)	Dry	1/02	11/13	1634	7	µg/L	100	100	100	500	< 20% Detects	7	0%	No	674	0	0	0%	100	BP Aquatic Life Objective	
	Wet	11/03	4/11	36	0	µg/L	100	100	ND	ND	ND	ND	0	0%	No	12	0	0	0%	100	BP Aquatic Life Objective
Copper Total	Dry	2/02	8/13	111	111	µg/L	AD	AD	5.00	89.2	13.8	11.2	13	12%	Yes	57	57	6	11%	HBC	CTR Chronic
	Dry	2/02	8/13	111	111	µg/L	AD	AD	5.00	89.2	13.8	11.2	8	7%	No	57	57	3	5%	30	LAR Metals TMDL
Cyanide	Dry	2/02	11/13	156	8	µg/L	2	4	2	21		4	3%	No	102	1	1	1%	5.2	CTR Chronic	
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	22	CTR Acute	
Diazinon	Dry	5/12	9/13	18	2	µg/L	0.006	0.03	0.53	0.59	< 20% Detects	2	11%	Yes	18	2	2	11%	0.17	USEPA Chronic	
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	0.17	USEPA Acute	
Dibenzo(a,h) Anthracene	Dry	2/02	8/13	75	1	µg/L	0.02	1.9	0.57	0.57		1	1%	No	30	1	1	3%	0.049	CTR HH Organism	
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	0.049	CTR HH Organism	
Dissolved Oxygen	Dry	1/02	11/13	1684	1684	mg/L	AD	AD	0.46	16.98		128	8%	No	674	674	24	4%	5	BP Minimum	
	Wet	11/03	4/11	36	36	mg/L	AD	AD	6.10	11.3		0	0%	No	12	12	0	0%	5	BP Minimum	
E. Coli	Dry	3/07	11/13	932	843	MPN/100mL	10	100	10	24200	356	146	537	58%	Yes	668	647	363	54%	126	BP REC1 30-Day
	Wet	11/08	4/11	15	15	MPN/100mL	AD	AD	52	1780	499	457	12	80%	Yes	12	12	9	75%	126	BP REC1 30-Day
Heptachlor	Dry	2/02	8/13	72	2	µg/L	0.001	0.008	0.003	0.007		2	3%	No	30	0	0	0%	0.00021	CTR HH Organism	
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	0.52	CTR HH Acute	
Indeno(1,2,3-cd) Pyrene	Dry	2/02	8/13	75	1	µg/L	0.02	1.7	0.45	0.45		1	1%	No	30	1	1	3%	0.049	CTR HH Organism	
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	0.049	CTR HH Organism	
Mercury Total	Dry	2/02	11/13	156	46	µg/L	0.0036	0.3	0.0036	0.586		6	4%	No	102	22	0	0%	0.051	CTR HH Organism	
Nickel Total	Dry	2/02	8/13	72	66	µg/L	5	20	3.4	138		1	1%	No	30	30	1	3%	HBC	CTR Chronic	
Nitrite as N	Dry	2/02	11/13	1001	625	mg/L	0.02	0.02	0.02	5.69		27	3%	No	674	444	0	0%	1	LAR Nutrient TMDL	
	Wet	11/08	4/11	15	9	mg/L	0.02	0.02	0.04	0.15		0	0%	No	12	7	0	0%	1	LAR Nutrient TMDL	

**LA River Reach 5 – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values				N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max	Average	Median				N	N Detects	N Exceed	% Exceed			
Nitrate as N	Dry	2/02	11/13	1001	1001	mg/L	AD	AD	0.34	8.94					674	674	0	0%	8	LAR Nutrient TMDL	
	Wet	11/08	4/11	15	15	mg/L	AD	AD	2.85	5.43					12	12	0	0%	8	LAR Nutrient TMDL	
pH	Dry	1/02	11/13	1684	1684	pH Units	AD	AD	5.5	9					674	674	1	0%	6.5	BP Minimum	
	Wet	11/03	4/11	36	36	pH Units	AD	AD	7.6	8.7					12	12	0	0%	6.5	BP Minimum	
Selenium Total	Dry	5/07	10/13	120	118	µg/L	0.11	0.11	0.26	12.6	3.78	1.88	39	33%	Yes	99	97	32	32%	5	CTR Chronic
Sulfate	Dry	5/07	11/13	81	81	mg/L	AD	AD	91.5	727	281	176	29	36%	Yes	60	60	22	37%	300	BP SSO
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS			NS	NS	NS	NS	NS	NS	300	BP SSO	
TDS	Dry	5/07	8/13	78	78	mg/L	AD	AD	468	1660	854	672	25	32%	Yes	57	57	18	32%	950	BP SSO
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS			NS	NS	NS	NS	NS	NS	950	BP SSO	

NA - No Available adopted water quality objective  
HBC - Hardness Based Criteria, as defined by CTR  
AD - All values reported detected, no detection limit provided  
BP – Basin Plan  
SSO – Site Specific Objective

**LA River – Reach 6 – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values				N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max	Average	Median				N	N Detects	N Exceed	% Exceed			
2,3,7,8-TCDD (Dioxin)	Dry	8/07	8/08	4	1	pg/L	0.46	9.6	0.021	0.021					NS	NS	NS	NS	0.014	CTR HH Organism	
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS					NS	NS	NS	NS	0.014	CTR HH Organism	
Cadmium Total	Dry	3/01	6/10	148	87	µg/L	0.02	1	0.002	4.66					1	0	0	0%	HBC	CTR Chronic	
	Wet	1/01	12/07	12	10	µg/L	0.3	1	0.11	5					NS	NS	NS	NS	HBC	CTR Acute	
Chloride	Dry	2/02	6/10	49	49	mg/L	AD	AD	35.8	219	145	146	21	43%	Yes	1	1	1	100%	150	BP SSO
	Wet	3/06	12/07	2	2	mg/L	AD	AD	26.1	60.9	Too Few Samples		0	0%	No	NS	NS	NS	NS	150	BP SSO
Chlorine (Total)	Dry	1/02	1/09	321	2	µg/L	100	100	100	100					3	0	0	0%	100	BP Objective	
	Wet	11/03	1/09	8	0	µg/L	100	100	ND	ND					1	0	0	0%	100	BP Objective	
Chrysene	Dry	2/02	8/08	15	1	µg/L	0.05	1.5	0.11	0.11					NS	NS	NS	NS	0.049	CTR HH Organism	
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS					NS	NS	NS	NS	0.049	CTR HH Organism	
Copper Dissolved	Dry	3/01	6/13	153	137	µg/L	1	20	1.70	57	8.88	7.63	2	1%	No	30	30	0	0%	HBC	CTR Chronic
													2	1%	No	38	38	0	0%	29	LAR Metals TMDL

## LA River – Reach 6 – Constituents that have been detected and have exceeded relevant water quality objectives

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values				N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max	Average	Median				N	N Detects	N Exceed	% Exceed			
	Wet	1/01	4/12	35	34	µg/L	10	10	4.00	23.2	10.6	9.09	4	11%	Yes	23	23	4	17%	HBC	CTR Acute
													13	37%	Yes	23	23	9	39%	11	LAR Metals TMDL
Copper Total	Dry	3/01	6/13	198	191	µg/L	4	20	1.70	126	15.1	11.9	14	7%	No	31	31	1	3%	HBC	CTR Chronic
													14	7%	No	31	31	1	3%	30	LAR Metals TMDL
	Wet	1/01	3/13	35	34	µg/L	10	10	4.00	82.7	30.7	27.0	17	49%	Yes	23	23	16	70%	HBC	CTR Acute
													25	71%	Yes	23	23	17	74%	17	LAR Metals TMDL
Cyanide	Dry	2/02	1/09	44	3	µg/L	2	4	2.7	16			1	2%	No	1	0	0	0%	5.2	CTR Chronic
													NS	NS	NS	NS	NS	NS	NS	NS	NS
Dissolved Oxygen	Dry	1/02	1/09	340	340	mg/L	AD	AD	2.6	30.4			1	0%	No	3	3	0	0%	5	BP Minimum
													Wet	11/03	1/09	9	9	mg/L	AD	AD	10.5
<i>E. Coli</i>	Dry	2/01	5/09	420	409	MPN/100mL	100	1000	100	240000	2015	969	401	95%	Yes	11	11	9	82%	126	BP REC1 30-Day
													Wet	1/01	1/09	40	39	MPN/100mL	100	100	200
Lead Total	Dry	3/01	6/13	199	112	µg/L	0.11	26	0.14	39			5	3%	No	31	27	0	0%	HBC	CTR Chronic
													3	2%	No	31	27	0	0%	19	LAR Metals TMDL
	Wet	1/01	3/13	35	29	µg/L	1	5	1.45	26.8			0	0%	No	23	23	0	0%	HBC	CTR Acute
													0	0%	No	23	23	0	0%	62	LAR Metals TMDL
Mercury Total	Dry	4/01	6/10	111	36	µg/L	0.0036	0.3	0.004	0.213	0.023	0.005	13	12%	Yes	2	1	0	0%	0.051	CTR HH Organism
													Wet	1/01	3/05	7	1	µg/L	0.022	0.3	0.15
Nitrite as N	Dry	2/02	6/10	112	35	mg/L	0.02	0.04	0.03	1.41			2	2%	No	4	3	0	0%	1	LAR Nutrient TMDL
													Wet	11/08	1/09	2	0	mg/L	0.02	0.02	ND
Selenium Total	Dry	3/01	6/13	183	177	µg/L	1	30	0.3	18.6	7.98	7.47	163	89%	Yes	37	37	34	92%	5	CTR Chronic
													Wet	1/01	12/07	12	10	µg/L	1	30	0.9
Sulfate	Dry	2/02	6/10	49	49	mg/L	AD	AD	123	743	517	517	48	98%	Yes	1	1	1	100%	300	BP SSO
													Wet	3/06	12/07	2	2	mg/L	AD	AD	65.9
TDS	Dry	2/02	11/08	28	28	mg/L	AD	AD	988	1732	1300	1304	28	100%	Yes	NS	NS	NS	NS	950	BP SSO
													Wet	NS	NS	NS	NS	NS	NS	NS	NS
Thallium Total	Dry	3/01	8/08	71	28	µg/L	0.5	25	0.02	29	2.29	0.570	6	8%	Yes	NS	NS	NS	NS	6.3	CTR HH Organism
													Wet	1/01	3/05	8	2	µg/L	1	25	2.60
Zinc Dissolved	Dry	3/01	6/13	154	145	µg/L	0.4	17.2	0.4	163	14.3	10.2	0	0%	No	30	28	0	0%	HBC	CTR Chronic
													Wet	1/01	3/13	35	34	µg/L	4	4	4.00
Zinc Total	Wet	1/01	3/13	35	34	µg/L	4	4	4.00	143	34.1	20.9	4	11%	Yes	23	23	3	13%	97	LAR Metals TMDL
													0	0%	No	30	30	0	0%	HBC	CTR Chronic

**LA River – Reach 6 – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
	Wet	1/01	3/13	35	35	µg/L	AD	AD	11	656	111	108	8	23%	Yes	23	23	8	35%	HBC	CTR Acute
													11	31%	Yes	23	23	11	48%	159	LAR Metals TMDL

NA - No Available adopted water quality objective  
HBC - Hardness Based Criteria, as defined by CTR  
AD - All values reported detected, no detection limit provided  
BP – Basin Plan  
SSO – Site Specific Objective

**Rio Hondo – Reach 1 – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values				N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max	Average	Median				N	N Detects	N Exceed	% Exceed			
Copper Dissolved	Dry	2/05	4/13	51	51	µg/L	AD	AD	0.08	68.9	18.6	16.0	14	27%	Yes	14	14	0	0%	HBC	CTR Chronic
													35	69%	Yes	14	14	5	36%	12	LAR Metals TMDL
	Wet	1/05	1/08	4	4	µg/L	AD	AD	6.00	12.9	8.99	8.54	1	25%	No	NS	NS	NS	NS	HBC	CTR Acute
													1	25%	No	NS	NS	NS	NS	11	LAR Metals TMDL
Copper Total	Dry	2/05	4/13	52	52	µg/L	AD	AD	0.08	85.5	25.6	22.8	29	56%	Yes	14	14	3	21%	HBC	CTR Chronic
													44	85%	Yes	14	14	9	64%	13	LAR Metals TMDL
	Wet	1/05	1/08	4	4	µg/L	AD	AD	7.33	18.1	5.03	11.5	1	25%	No	NS	NS	NS	NS	HBC	CTR Acute
													1	25%	No	NS	NS	NS	NS	17	LAR Metals TMDL
E. Coli	Dry	1/02	3/09	69	66	MPN/100mL	100	100	100	240000	11627	1500	62	90%	Yes	2	2	2	100%	126	BP REC1 30-Day
	Wet	12/02	1/08	7	5	MPN/100mL	100	100	860	160000	26153	3000	5	71%	Yes	NS	NS	NS	NS	126	BP REC1 30-Day
Lead Dissolved	Dry	2/05	4/13	52	42	µg/L	1	1.1	0.06	15.2	2.27	1.19	4	8%	No	14	14	0	0%	HBC	CTR Chronic
													5	10%	Yes	14	14	1	7%	3.7	LAR Metals TMDL
	Wet	1/05	1/08	4	2	µg/L	1	1	0.52	1.94	Too Few Samples		0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
													0	0%	No	NS	NS	NS	NS	51	LAR Metals TMDL
Lead Total	Dry	2/05	4/13	52	49	µg/L	1	1.1	0.06	70.2	7.47	3.61	12	23%	Yes	14	14	4	29%	HBC	CTR Chronic
													23	44%	Yes	14	14	6	43%	5	LAR Metals TMDL
	Wet	1/05	1/08	4	3	µg/L	1	1	1.31	9.77	3.31	1.66	0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
													0	0%	No	NS	NS	NS	NS	62	LAR Metals TMDL
Zinc Dissolved	Dry	2/05	4/13	51	51	µg/L	AD	AD	0.2	259			0	0%	No	14	14	0	0%	HBC	CTR Chronic
													1	2%	No	14	14	0	0%	128	LAR Metals TMDL
	Wet	1/05	1/08	4	4	µg/L	AD	AD	4.00	34.7			0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
													0	0%	No	NS	NS	NS	NS	97	LAR Metals TMDL
Zinc Total	Dry	2/05	4/13	52	52	µg/L	AD	AD	0.2	501			1	2%	No	14	14	1	7%	HBC	CTR Chronic
													4	8%	No	14	14	1	7%	131	LAR Metals TMDL
	Wet	1/05	1/08	4	4	µg/L	AD	AD	8.00	65.4			0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
													0	0%	No	NS	NS	NS	NS	159	LAR Metals TMDL

NA - No Available adopted water quality objective  
HBC - Hardness Based Criteria, as defined by CTR  
AD - All values reported detected, no detection limit provided  
BP – Basin Plan  
SSO – Site Specific Objective

**Rio Hondo – Reach 2 – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data		N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized
							Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed		
Bis(2-ethylhexyl) Phthalate	Dry	10/03	1/04	2	2	µg/L	AD	AD	29.5	35.6	Too Few Samples		2	100%	Yes	NS	NS	NS	NS	5.9	CTR HH Organism
	Wet	10/03	2/04	4	3	µg/L	1	1	20.8	48.2	28.6	28.2	3	75%	Yes	NS	NS	NS	NS	5.9	CTR HH Organism
Copper Dissolved	Dry	10/03	1/04	2	2	µg/L	AD	AD	8.20	12.1	Too Few Samples		1	50%	No	NS	NS	NS	NS	HBC	CTR Chronic
	Wet	10/03	2/04	4	4	µg/L	AD	AD	6.63	12.1	9.53	9.70	3	75%	Yes	NS	NS	NS	NS	HBC	CTR Acute
													2	50%	Yes	NS	NS	NS	NS	11	LAR Metals TMDL
Copper Total	Dry	10/03	1/04	2	2	µg/L	AD	AD	21.2	23.9	Too Few Samples		2	100%	Yes	NS	NS	NS	NS	HBC	CTR Chronic
	Wet	10/03	2/04	4	4	µg/L	AD	AD	12.4	123	42.7	17.6	4	100%	Yes	NS	NS	NS	NS	HBC	CTR Acute
													2	50%	Yes	NS	NS	NS	NS	17	LAR Metals TMDL
Cyanide	Dry	10/03	1/04	2	2	µg/L	AD	AD	5	25	Too Few Samples		1	50%	No	NS	NS	NS	NS	5.2	CTR Aquatic Life Chronic
	Wet	10/03	2/04	4	2	µg/L	10	10	10	10	Too Few Samples		0	0%	No	NS	NS	NS	NS	22	CTR Aquatic Life Acute
Diazinon	Dry	10/03	1/04	2	0	µg/L	0.01	0.01	ND	ND			0	0%	No	NS	NS	NS	NS	0.17	USEPA Chronic
	Wet	10/03	2/04	4	1	µg/L	0.01	0.01	0.202	0.202			1	25%	No	NS	NS	NS	NS	0.17	USEPA Acute
Lead Total	Dry	10/03	1/04	2	2	µg/L	AD	AD	2.09	2.12			1	50%	No	NS	NS	NS	NS	HBC	CTR Chronic
	Wet	10/03	2/04	4	4	µg/L	AD	AD	2.06	71.1			0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
													1	25%	No	NS	NS	NS	NS	62	LAR Metals TMDL
pH	Dry	10/03	1/04	2	2	pH Units	AD	AD	6.49	7.72			1	50%	No	NS	NS	NS	NS	6.5	BP Minimum
	Wet	10/03	2/04	4	4	pH Units	AD	AD	6.49	7.01			1	25%	No	NS	NS	NS	NS	6.5	BP Minimum
Zinc Total	Dry	10/03	1/04	2	2	µg/L	AD	AD	68	87			0	0%	No	NS	NS	NS	NS	HBC	CTR Chronic
	Wet	10/03	2/04	4	4	µg/L	AD	AD	50	395			1	25%	No	NS	NS	NS	NS	HBC	CTR Acute
													1	25%	No	NS	NS	NS	NS	159	LAR Metals TMDL

NA - No Available adopted water quality objective  
HBC - Hardness Based Criteria, as defined by CTR  
AD - All values reported detected, no detection limit provided  
BP – Basin Plan  
SSO – Site Specific Objective

## Rio Hondo – Reach 3 – Constituents that have been detected and have exceeded relevant water quality objectives

Constituents	W/D	Date Range of Available Data		N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized
							Max	Min	Max	Min						N	N Detect	N Exceed	% Exceed		
Benzo(a)Pyrene	Dry	2/11	8/6	43	2	µg/L	0.02	0.02	0.011	0.11			1	2%	No	9	2	1	50%	0.049	CTR HH Organism
Benzo(k) Fluoranthene	Dry	2/11	8/6	43	3	µg/L	0.02	0.02	0.022	0.21			1	2%	No	9	2	1	50%	0.049	CTR HH Organism
Chloride	Dry	1/6	12/17	111	110	mg/L	10	10	1.8	430			1	1%	No	52	51	0	0%	190	BP SSO
Chrysene	Dry	2/11	8/6	43	3	µg/L	0.02	0.02	0.013	0.18			1	2%	No	9	2	1	50%	0.049	CTR HH Organism
Copper Total	Dry	1/6	12/17	105	103	µg/L	100	100	2.41	2500	93.3	5.56	25	24%	Yes	46	46	3	7%	HBC	CTR Chronic
Diazinon	Dry	2/9	11/5	60	3	µg/L	0.05	0.05	0.18	0.75	2.95	1.56	3	5%	No	17	2	2	100%	0.17	CTR Acute
Dibenzo(a,h) Anthracene	Dry	2/11	8/6	43	8	µg/L	0.02	0.02	0.01	0.54	< 20% Detects		2	5%	No	9	7	2	29%	0.049	CTR HH Organism
Dissolved Oxygen	Dry	1/7	12/17	210	210	mg/L	AD	AD	1.5	12.5	5.76	5.6	75	75%	Yes	46	46	19	41%	5	BP Minimum
<i>E. Coli</i>	Dry	12/17	12/17	59	59	MPN/100mL	AD	AD	11	79000	2536	300	43	73%	Yes	46	46	32	70%	126	BP REC1 30-Day
Indeno(1,2,3-cd) Pyrene	Dry	2/11	8/6	36	6	µg/L	0.02	0.02	0.01	0.16			1	3%	No	8	6	1	17%	0.049	CTR HH Organism
Mercury	Dry	2/11	12/17	74	42	µg/L	0.04	0.04	0.01	0.15	0.022	0.01	2	3%	No	41	32	1	3%	0.051	CTR HH Organism
pH	Dry	1/7	12/17	210	210	pH Units	AD	AD	6.84	9.24	8.16	8.09	44	21%	Yes	46	46	5	11%	8.5	BP Maximum

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective



## Tujunga Wash – Constituents that have been detected and have exceeded relevant water quality objectives

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values				N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized		
						Min	Max	Min	Max	Average	Median				N	N Detects	N Exceed	% Exceed				
Ammonia as N	Dry	6/09	6/11	3	2	mg/L	0.05	0.05	1.2	93				1	33%	No	3	2	1	33%	10.7	LAR Nutrient TMDL
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS				NS	NS	NS	NS	NS	NS	NS	NA	NA
Cadmium Total	Dry	2/05	6/11	38	27	µg/L	0.01	0.33	0.01	10.6				1	3%	No	3	1	0	0%	HBC	CTR Chronic
	Wet	1/05	3/06	3	0	µg/L	0.3	0.3	ND	ND				0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
Chloride	Dry	6/09	6/11	3	3	mg/L	AD	AD	338	432	372	346	3	100%	Yes	3	3	3	100%	150	BP SSO	
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS				NS	NS	NS	NS	NS	NS	150	BP SSO	
Copper Dissolved	Dry	2/05	6/13	69	67	µg/L	4	4	1.79	305	27.1	22.7	52	75%	Yes	31	31	21	68%	HBC	CTR Chronic	
	Wet	1/05	3/06	3	3	µg/L	AD	AD	4.00	6.00	Too Few Samples			43	62%	Yes	31	31	22	71%	19	LAR Metals TMDL
Copper Total	Dry	2/05	6/13	70	69	µg/L	4	4	2.27	327	39.0	28.2	60	86%	Yes	32	32	26	81%	HBC	CTR Chronic	
	Wet	1/05	3/06	3	3	µg/L	AD	AD	4.00	10	7.33	8.00	50	71%	Yes	32	32	25	78%	20	LAR Metals TMDL	
E. Coli	Dry	1/02	9/12	159	151	MPN/100mL	100	100	100	73000	3305	1700	148	93%	Yes	90	90	89	99%	126	BP REC1 30-Day	
	Wet	12/02	1/09	7	4	MPN/100mL	100	100	100	92000	41775	37500	3	43%	No	1	1	0	0%	126	BP REC1 30-Day	
Lead Dissolved	Dry	2/05	6/13	68	56	µg/L	0.11	1.1	0.06	8.4	1.36	0.83	6	9%	No	31	30	1	3%	HBC	CTR Chronic	
	Wet	1/05	3/06	3	0	µg/L	1	1	ND	ND	Too Few Samples			2	3%	No	31	30	0	0%	6.6	LAR Metals TMDL
Lead Total	Dry	2/05	6/13	70	64	µg/L	0.11	1.1	0.19	671	16.9	2.17	12	17%	Yes	32	32	4	13%	HBC	CTR Chronic	
	Wet	1/05	3/06	3	2	µg/L	1	1	2.00	2.00	Too Few Samples			7	10%	Yes	32	32	2	6%	10	LAR Metals TMDL
Mercury Total	Dry	2/05	6/11	15	7	µg/L	0.022	0.022	0.01	0.059				1	7%	No	3	3	0	0%	0.051	CTR HH Organism
	Wet	1/05	3/05	2	0	µg/L	0.022	0.022	ND	ND				0	0%	No	NS	NS	NS	NS	0.051	CTR HH Organism
TDS	Dry	6/09	6/09	1	1	mg/L	AD	AD	1130	1130				1	100%	No	1	1	1	100%	950	BP SSO
	Wet	NS	NS	NS	NS	NS	NS	NS	NS	NS				NS	NS	NS	NS	NS	NS	950	BP SSO	
Zinc Total	Dry	2/05	6/13	70	70	µg/L	AD	AD	1.96	868				4	6%	No	32	32	1	3%	HBC	CTR Chronic
	Wet	1/05	3/06	3	3	µg/L	AD	AD	5	26				0	0%	No	NS	NS	NS	NS	HBC	CTR Acute
														0	0%	No	NS	NS	NS	NS	159	LAR Metals TMDL

NA - No Available adopted water quality objective

HBC - Hardness Based Criteria, as defined by CTR

AD - All values reported detected, no detection limit provided

BP – Basin Plan

SSO – Site Specific Objective

**Verdugo Wash – Reach 1 – Constituents that have been detected and have exceeded relevant water quality objectives**

Constituent	W/D	Date Range of Available Data	N	N Detects	Units	Detection Limits		Detected Values		Average	Median	N Exceed	% Exceed	Meets Listing Criteria	In Past 5 Years				WQO	Source of Lowest Water Quality Objective (WQO) Utilized	
						Min	Max	Min	Max						N	N Detects	N Exceed	% Exceed			
Bis(2-ethylhexyl) Phthalate	Dry	10/03	1/04	2	2	µg/L	AD	AD	4.60	27	Too Few Samples	2	100%	Yes	NS	NS	NS	NS	5.9	CTR HH Organism	
	Wet	10/03	2/04	4	3	µg/L	1	1	44.4	86.7	55.5	55.4	3	75%	Yes	NS	NS	NS	5.9	CTR HH Organism	
Cadmium Total	Dry	10/03	8/08	41	17	µg/L	0.02	1	0.01	1.42		0	0%	No	NS	NS	NS	NS	HBC	CTR Chronic	
	Wet	10/03	1/08	8	3	µg/L	0.3	1	0.129	142		1	13%	No	NS	NS	NS	NS	HBC	CTR Acute	
Copper Dissolved	Dry	10/03	8/08	41	35	µg/L	4	4	2.47	23	7.91	8.00	0	0%	No	NS	NS	NS	NS	HBC	CTR Chronic
													1	2%	No	NS	NS	NS	NS	22	LAR Metals TMDL
	Wet	10/03	4/12	9	9	µg/L	AD	AD	4.75	13.3	7.31	7.07	2	22%	Yes	1	1	1	100%	HBC	CTR Acute
Copper Total	Dry	10/03	8/08	41	40	µg/L	4	4	4.00	108	14.0	10.5	1	2%	No	NS	NS	NS	NS	HBC	CTR Chronic
													3	7%	No	NS	NS	NS	NS	20	LAR Metals TMDL
	Wet	10/03	4/12	9	9	µg/L	AD	AD	7.84	62	18.6	12.8	4	44%	Yes	1	1	1	100%	HBC	CTR Acute
<i>E. Coli</i>	Dry	1/02	5/09	77	75	MPN/100mL	100	100	100	52000	3436	1800	74	96%	Yes	4	4	4	100%	126	BP REC1 30-Day
	Wet	12/02	1/09	8	8	MPN/100mL	AD	AD	200	69000	13578	3550	8	100%	Yes	1	1	1	100%	126	BP REC1 30-Day
Lead Total	Dry	10/03	8/08	41	29	µg/L	1	1.1	0.58	23.3			1	2%	No	NS	NS	NS	NS	HBC	CTR Chronic
											1	2%	No	NS	NS	NS	NS	12	LAR Metals TMDL		
	Wet	10/03	4/12	9	9	µg/L	AD	AD	0.98	30.4			1	11%	No	1	1	1	100%	HBC	CTR Acute
Mercury Total	Dry	10/03	2/06	14	1	µg/L	0.022	1	0.038	0.038			0	0%	No	NS	NS	NS	NS	0.051	CTR HH Organism
	Wet	10/03	3/05	6	2	µg/L	0.022	1	0.023	1			1	17%	No	NS	NS	NS	NS	0.051	CTR HH Organism
Zinc Total	Dry	10/03	8/08	41	41	µg/L	AD	AD	5.00	318	33.0	21.0	1	2%	No	NS	NS	NS	NS	HBC	CTR Chronic
	Wet	10/03	4/12	9	9	µg/L	AD	AD	21.2	223	72.6	50.0	2	22%	Yes	1	1	1	100%	HBC	CTR Acute
													1	11%	No	1	1	0	0%	159	LAR Metals TMDL

NA - No Available adopted water quality objective  
HBC - Hardness Based Criteria, as defined by CTR  
AD - All values reported detected, no detection limit provided  
BP – Basin Plan  
SSO – Site Specific Objective

## Appendix 3.C

### Discharge Data Analysis

Per Part VI.C.5.a.i (pg 58) of the Permit, each EWMP shall include a characterization of stormwater and non-stormwater discharges from the MS4. A characterization was conducted on stormwater and non-stormwater discharges from the MS4 associated with constituents identified in a TMDL, a 303(d) listing, or through the receiving water data analysis described above. The following sources of discharge characterization data were reviewed:

- TMDL Staff Reports for TMDLs identified in **Appendix 3.B**.
- Los Angeles River Bacteria Source Identification Study (BSI Study) completed by the Cleaner Rivers through Effective Stakeholder-led TMDLs (CREST) group in 2008.
- Data collected as part of the 2007 Southern California Coastal Water Research Project (SCCWRP) Technical Report 510 titled “*Sources, patterns and mechanisms of storm water pollutant loading from watersheds and land uses of the greater Los Angeles area, California, USA.*”
- Land Use data collected as part of previous MS4 Permit monitoring and presented in the 2000 report titled “*Los Angeles County 1994-2000 Integrated Receiving Water Impacts Report.*”

Utilizing the sources above, several tables of summary information were generated. *E. coli* and fecal coliform summary statistics utilized in the LA River Bacteria TMDL for dry weather discharges are presented in **Table 25**. **Table 26** and **Table 27** present the available average concentration of TMDL, 303(d) listed, and other constituents of interest in stormwater runoff from various land uses collected as part of County of Los Angeles stormwater program (between 1996 and 2000) and SCCWRP Technical Report 510 (collected between 2000 and 2005), respectively. Note that the land use data are not specific to the LA River watershed per se; however, they are considered generally representative. Complete summary statistics for these two sources, including all measured constituents, are presented in **Attachment 4**.

**Table 25. Indicator Bacteria Concentrations in Dry Weather Storm Drain Discharges in the Los Angeles River Watershed<sup>1</sup>**

Indicator Bacteria	N	Concentration (MPN or CFU per 100mL)			% SSM WQO Exceedance <sup>2</sup>
		Median	Min	Max	
Fecal coliform	85	2,300	ND	5,000,000	80%
<i>E. coli</i>	610	970	ND	73,000,000	80%

<sup>1</sup> – Table 33 from the CREST Los Angeles River Bacteria TMDL Source Assessment Appendix.

<sup>2</sup> – The SSM WQOs for *E. coli* and fecal coliform are 235 and 400 MPN/100mL, respectively.

**Table 26. Summary of Mean Concentrations of Constituents in Stormwater Runoff for Relevant Constituents by Land Use Categories Sampled by Los Angeles County Department of Public Works and Presented in the 2000 report titled “Los Angeles County 1994-2000 Integrated Receiving Water Impacts Report”**

Constituents	Units	Commercial	Vacant	High Density Single Family Residential	Transportation	Light Industrial	Educational	Multifamily Residential	Mixed Residential
Ammonia		1.26	0.13	0.41	0.29	0.59	0.33	0.47	0.67
NH3-N		1.04	0.11	0.34	0.24	0.48	0.28	0.39	0.56
Nitrate		2.6	5.2	3.9	2.9	4.1	2.6	5.3	6.8
Nitrate-N		0.48	1.05	0.86	0.7	0.87	0.51	1.1	0.55
Nitrite-N	mg/L	0.16	0.05	0.1	0.09	0.09	0.09	0.1	0.12
Cyanide		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Chloride		50	6.6	5	5.6	12	34	13	3.5
Sulfate		35	17	6.9	9.5	12.6	17.3	15	7.4
Total Dissolved Solids		226	237	58	62	95	147	105	53
pH	pH Units	7	8.1	6.5	6.7	6.8	7	6.9	6.5
Benzo(a) anthracene		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Benzo(a)pyrene		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Benzo(b) fluoranthene		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Bis(2-ethylhexyl) phthalate		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Chlorpyrifos		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Diazinon		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Chrysene	ug/L	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	0.62
Dibenz(a,h) anthracene		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Indeno (1,2,3-cd)pyrene		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Dissolved Cadmium		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Total Cadmium		0.73	S.I.D.	S.I.D.	1.1	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Dissolved Copper		14	S.I.D.	8.5	33	20	13	6.9	12
Total Copper		39	15	15	56	32	24	12	19
Dissolved Lead		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.

Constituents	Units	Commercial	Vacant	High Density Single Family Residential	Transportation	Light Industrial	Educational	Multifamily Residential	Mixed Residential
Total Lead		18	S.I.D.	10	10	17	4.9	5.8	11
Dissolved Mercury		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Total Mercury		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Dissolved Nickel		S.I.D.	S.I.D.	S.I.D.	3.9	5	S.I.D.	S.I.D.	S.I.D.
Total Nickel		15	S.I.D.	S.I.D.	6	9.8	4.7	S.I.D.	S.I.D.
Dissolved Zinc	ug/L	152	S.I.D.	44	192	407	66	83	133
Total Zinc		241	46	79	291	639	138	146	203
Total Selenium		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Total Thallium		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Oil and Grease		3.3	S.I.D.	1.3	3.1	1.7	S.I.D.	S.I.D.	S.I.D.
Organochlorine Pesticides & PCBs		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Fecal Coliform	MPN/ 100ml	528750	1397	933333	328750	338220	S.I.D.	S.I.D.	S.I.D.
Fecal Enterococcus		86250	679	610000	32000	98200	S.I.D.	S.I.D.	S.I.D.
Total Coliform		1140000	9187	1366667	692500	454000	S.I.D.	S.I.D.	S.I.D.

S.I.D. = Statistically Invalid Data, not enough data above detection limit collected.

**Table 27. Summary of Mean Concentrations of Constituents in Runoff for Relevant Constituents by Land Use Categories Sampled by the Southern California Coastal Water Research Project (SCCWRP) as Part of Technical Report 510 titled “Sources, patterns and mechanisms of stormwater pollutant loading from watersheds and land uses of the greater Los Angeles area, California, USA.”**

Constituents	Units	High Density Residential	Low Density Residential	Commercial	Industrial	Recreation	Transportation
Ammonia as N	mg/L	0.56	0.33	1.07	0.76	1.07	0.69
Nitrate + Nitrite as N		0.52	0.25	0.35	0.32	1.05	0.25
Nitrate as N		0.32	0.13	S.I.D.	S.I.D.	0.99	S.I.D.
Nitrite as N		0.36	0.04	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Phosphorus as P		0.78	0.71	0.99	3.36	S.I.D.	0.71
Cadmium		0.68	0.61	1.15	1.80	0.63	0.55
Copper		24.4	32.3	41.7	72.4	32.9	20.0
Lead		17.2	7.38	23.3	24.5	13.3	4.56
Mercury		1.01	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Nickel		5.68	5.75	12.29	14.92	16.19	6.31
Selenium		0.55	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Zinc		173	88	372	597	128	162
Benz(a)anthracene		ug/L	0.15	0.03	0.06	0.05	0.09
Benzo(a)pyrene	0.160		0.051	0.141	0.063	0.031	0.028
Benzo(b)fluoranthene	0.233		0.042	0.115	0.070	0.064	0.036
Chlordane, alpha-	0.05		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Chlordane, gamma-	0.04		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Chlorpyrifos	S.I.D.		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Chrysene	0.206		0.060	0.141	0.135	0.066	0.054
Diazinon	0.14		0.15	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Dibenz(a,h)anthracene	0.061		0.036	0.069	0.106	0.019	S.I.D.
DDD(o,p')	S.I.D.		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
DDD(p,p')	S.I.D.		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
DDE(o,p')	S.I.D.		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
DDE(p,p')	0.15		0.07	S.I.D.	S.I.D.	S.I.D.	S.I.D.
DDT(o,p')	S.I.D.		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
DDT(p,p')	S.I.D.		0.0025	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Dieldrin	S.I.D.		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Heptachlor	S.I.D.		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Indeno(1,2,3-c,d)pyrene	0.146		0.102	0.164	0.132	0.032	0.025
PCB AROCLOR 1016	S.I.D.		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.

Constituents	Units	High Density Residential	Low Density Residential	Commercial	Industrial	Recreation	Transportation
PCB AROCLOR 1221		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
PCB AROCLOR 1232		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
PCB AROCLOR 1242		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
PCB AROCLOR 1248	ug/L	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
PCB AROCLOR 1254		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
PCB AROCLOR 1260		S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
<i>E. coli</i>		5615	S.I.D.	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Enterococcus	MPN/	24086	11963	115880	26074	110115	9022
Fecal Coliforms	100ml	12651	16968	17704	4214	387629	3091
Total Coliforms		329379	115960	528034	185664	1206826	157852

S.I.D. = Statistically Invalid Data, not enough data above detection limit collected.



## Attachment 4. Summary Statistics for Land Use Runoff Water Quality Data

**Summary of Stormwater Runoff by Land Use Categories Sampled by the Southern California Coastal Water Research Project (SCCWRP) as Part of Technical Report 510 titled “Sources, patterns and mechanisms of storm water pollutant loading from watersheds and land uses of the greater Los Angeles area, California, USA.”**

Parameter Code	Result Units	High Density Residential							Low Density Residential						
		No. of Samples	No. of Detects	Percent Detects	Mean of Detects	Median of Detects	Upper 95th Percentile	Lower 95th Percentile	No. of Samples	No. of Detects	Percent Detects	Mean of Detects	Median of Detects	Upper 95th Percentile	Lower 95th Percentile
Acenaphthene	ug/L	42	8	19%	0.04	0.03	0.09	0.02	27	6	22%	0.02	0.01	0.04	0.01
Acenaphthylene	ug/L	42	11	26%	0.02	0.02	0.04	0.01	27	4	15%	0.01	0.01	0.03	0.01
Aldrin	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
Aluminum	ug/L	21	21	100%	720.04	237.00	2940.00	108.00	NA	NA	NA	NA	NA	NA	NA
Ammonia as N	mg/L	62	57	92%	0.56	0.49	1.34	0.09	37	29	78%	0.33	0.34	0.57	0.07
Anthracene	ug/L	42	22	52%	0.06	0.03	0.20	0.01	27	10	37%	0.02	0.02	0.05	0.00
Antimony	ug/L	21	12	57%	0.94	0.83	1.48	0.63	NA	NA	NA	NA	NA	NA	NA
Arsenic	ug/L	66	62	94%	1.79	1.40	3.27	0.93	37	30	81%	2.75	2.25	3.82	1.55
Barium	ug/L	21	21	100%	64.61	11.50	140.00	7.35	NA	NA	NA	NA	NA	NA	NA
Benz(a)anthracene	ug/L	42	30	71%	0.15	0.06	0.57	0.01	27	15	56%	0.03	0.01	0.12	0.00
Benzo(a)pyrene	ug/L	42	30	71%	0.16	0.08	0.56	0.01	27	13	48%	0.05	0.02	0.19	0.01
Benzo(b)fluoranthene	ug/L	42	32	76%	0.23	0.13	0.72	0.01	27	18	67%	0.04	0.02	0.14	0.01
Benzo(e)pyrene	ug/L	42	31	74%	0.18	0.11	0.65	0.02	27	16	59%	0.06	0.02	0.27	0.01
Benzo(g,h,i)perylene	ug/L	42	22	52%	0.27	0.22	0.70	0.03	27	15	56%	0.07	0.02	0.28	0.01
Benzo(k)fluoranthene	ug/L	42	30	71%	0.14	0.08	0.53	0.02	27	17	63%	0.04	0.01	0.15	0.00
Beryllium	ug/L	21	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biphenyl	ug/L	42	20	48%	0.03	0.02	0.05	0.01	27	8	30%	0.03	0.01	0.12	0.01
Bolstar	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/L	66	27	41%	0.68	0.50	1.51	0.20	37	14	38%	0.61	0.40	1.49	0.20
Chlordane, alpha-	ug/L	33	2	6%	0.05	0.05	NA	NA	16	0	0%	NA	NA	NA	NA
Chlordane, gamma-	ug/L	33	2	6%	0.04	0.04	NA	NA	16	0	0%	NA	NA	NA	NA
Chlorpyrifos	ug/L	26	0	0%	NA	NA	NA	NA	7	0	0%	NA	NA	NA	NA
Chromium	ug/L	66	56	85%	5.17	3.51	14.55	1.40	37	24	65%	8.27	5.00	19.48	2.31
Chrysene	ug/L	42	39	93%	0.21	0.06	0.78	0.01	27	21	78%	0.06	0.03	0.15	0.01
Cobalt	ug/L	21	8	38%	1.90	1.58	4.12	0.54	NA	NA	NA	NA	NA	NA	NA
Copper	ug/L	66	66	100%	24.43	15.85	60.07	5.35	37	37	100%	32.34	20.00	77.26	8.82
DDD(o,p')	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
DDD(p,p')	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
DDE(o,p')	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
DDE(p,p')	ug/L	33	4	12%	0.15	0.16	0.18	0.10	16	1	6%	0.07	0.07	NA	NA
DDT(o,p')	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
DDT(p,p')	ug/L	33	0	0%	NA	NA	NA	NA	16	1	6%	0.00	0.00	NA	NA
Demeton-S	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diazinon	ug/L	26	7	27%	0.14	0.14	0.17	0.10	7	4	57%	0.15	0.16	0.24	0.06
Dibenz(a,h)anthracene	ug/L	42	16	38%	0.06	0.06	0.13	0.01	27	5	19%	0.04	0.01	0.09	0.01
Dibenzothiophene	ug/L	19	10	53%	0.02	0.01	0.06	0.01	NA	NA	NA	NA	NA	NA	NA
Dichlorvos	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
Dimethoate	ug/L	26	0	0%	NA	NA	NA	NA	6	1	17%	0.05	0.05	NA	NA
Dimethylnaphthalene, 2,6-	ug/L	42	13	31%	0.03	0.02	0.06	0.01	27	5	19%	0.02	0.02	0.05	0.01
Disulfoton	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E Coli	mpn/100mL	24	24	100%	5614.58	3210.00	23744.00	698.50	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
Endosulfan II	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA

Parameter Code	Result Units	High Density Residential							Low Density Residential						
		No. of Samples	No. of Detects	Percent Detects	Mean of Detects	Median of Detects	Upper 95th Percentile	Lower 95th Percentile	No. of Samples	No. of Detects	Percent Detects	Mean of Detects	Median of Detects	Upper 95th Percentile	Lower 95th Percentile
Endosulfan Sulfate	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
Endrin	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
Endrin Aldehyde	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
Endrin Ketone	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Enterococcus	mpn/100mL	72	72	100%	24086.48	8527.00	43019.00	1107.30	42	42	100%	11962.52	6394.00	33414.60	3597.00
Ethoprop	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fecal Coliforms	mpn/100mL	47	47	100%	12650.56	3654.00	33017.51	158.20	42	42	100%	16967.71	2120.00	29433.50	558.70
Fenclorphos	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fensulfthion	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenthion	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	ug/L	42	42	100%	0.34	0.09	1.04	0.02	27	26	96%	0.09	0.04	0.28	0.02
Fluorene	ug/L	42	11	26%	0.03	0.03	0.08	0.01	27	8	30%	0.02	0.02	0.03	0.01
HCH, alpha	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
HCH, beta	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
HCH, delta	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
HCH, gamma	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
Heptachlor	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
Heptachlor Epoxide	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
Hexachlorobenzene	ug/L	7	0	0%	NA	NA	NA	NA	10	2	20%	0.03	0.03	NA	NA
Indeno(1,2,3-c,d)pyrene	ug/L	42	24	57%	0.15	0.10	0.50	0.01	27	8	30%	0.10	0.04	0.40	0.01
Iron	ug/L	66	64	97%	1271.94	430.00	5269.00	120.00	37	37	100%	1996.38	1060.00	4562.00	332.00
Lead	ug/L	66	66	100%	17.16	6.85	64.63	1.60	37	37	100%	7.38	3.40	15.44	1.46
Malathion	ug/L	26	3	12%	0.12	0.11	0.15	0.10	7	4	57%	0.09	0.08	0.14	0.06
Manganese	ug/L	21	20	95%	49.85	17.05	166.15	5.01	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/L	21	1	5%	1.01	1.01	NA	NA	NA	NA	NA	NA	NA	NA	NA
Merphos	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
Methylnaphthalene, 1-	ug/L	42	19	45%	0.04	0.02	0.10	0.01	27	14	52%	0.01	0.01	0.03	0.00
Methylnaphthalene, 2-	ug/L	42	24	57%	0.04	0.03	0.11	0.01	27	14	52%	0.02	0.01	0.06	0.00
Methylphenanthrene, 1-	ug/L	42	19	45%	0.03	0.02	0.10	0.01	27	8	30%	0.03	0.01	0.08	0.01
Mevinphos	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mirex	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
Molybdenum	ug/L	21	21	100%	1.25	1.13	2.30	0.72	NA	NA	NA	NA	NA	NA	NA
Naphthalene	ug/L	42	19	45%	0.04	0.04	0.10	0.01	27	18	67%	0.02	0.01	0.06	0.01
Nickel	ug/L	66	51	77%	5.68	5.40	12.95	1.13	37	18	49%	5.75	5.65	8.58	3.03
Nitrate + Nitrite as N	mg/L	29	29	100%	0.52	0.45	1.12	0.07	22	22	100%	0.25	0.24	0.33	0.19
Nitrate as N	MG/L	38	35	92%	0.32	0.27	0.68	0.07	17	16	94%	0.13	0.11	0.24	0.07
Nitrite as N	mg/L	26	7	27%	0.36	0.06	1.38	0.04	7	2	29%	0.04	0.04	NA	NA
Nitrogen, Total Kjeldahl	mg/L	62	62	100%	2.36	1.70	6.00	0.70	37	37	100%	1.86	1.00	4.56	0.30
Nonachlor, trans-	ug/L	33	4	12%	0.05	0.05	0.06	0.03	16	0	0%	NA	NA	NA	NA
Oxychlorane	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Parathion, methyl	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 018	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 028	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 031	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 033	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 037	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA

Parameter Code	Result Units	High Density Residential							Low Density Residential						
		No. of Samples	No. of Detects	Percent Detects	Mean of Detects	Median of Detects	Upper 95th Percentile	Lower 95th Percentile	No. of Samples	No. of Detects	Percent Detects	Mean of Detects	Median of Detects	Upper 95th Percentile	Lower 95th Percentile
PCB 044	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 049	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 052	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 066	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 070	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 074	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 077	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 081	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 087	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 095	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 097	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 099	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 101	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 105	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 110	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 114	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 118	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 119	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 123	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 126	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 128	ug/L	7	0	0%	NA	NA	NA	NA	10	0	0%	NA	NA	NA	NA
PCB 128/167	ug/L	26	0	0%	NA	NA	NA	NA	4	0	0%	NA	NA	NA	NA
PCB 132/168	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 138	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 141	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 149	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 151	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 153	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 156	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 157	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 158	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 167	ug/L	7	0	0%	NA	NA	NA	NA	10	0	0%	NA	NA	NA	NA
PCB 169	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 170	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 177	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 180	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 183	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 187	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 189	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 194	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 200	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 201	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB 206	ug/L	33	0	0%	NA	NA	NA	NA	14	0	0%	NA	NA	NA	NA
PCB AROCLOR 1016	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB AROCLOR 1221	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB AROCLOR 1232	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB AROCLOR 1242	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Parameter Code	Result Units	High Density Residential							Low Density Residential						
		No. of Samples	No. of Detects	Percent Detects	Mean of Detects	Median of Detects	Upper 95th Percentile	Lower 95th Percentile	No. of Samples	No. of Detects	Percent Detects	Mean of Detects	Median of Detects	Upper 95th Percentile	Lower 95th Percentile
PCB AROCLOR 1248	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB AROCLOR 1254	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB AROCLOR 1260	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Perylene	ug/L	42	17	40%	0.08	0.04	0.25	0.01	27	6	22%	0.02	0.02	0.04	0.01
Phenanthrene	ug/L	42	40	95%	0.27	0.08	0.57	0.02	27	27	100%	0.07	0.04	0.17	0.02
Phorate	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphate as P	MG/L	40	32	80%	0.19	0.13	0.43	0.06	22	21	95%	0.09	0.09	0.11	0.06
Phosphorus as P	mg/l	35	17	49%	0.78	0.55	2.22	0.30	17	10	59%	0.71	0.64	0.99	0.57
Pyrene	ug/L	42	41	98%	0.33	0.08	0.98	0.02	27	27	100%	0.09	0.04	0.27	0.01
Selenium	ug/L	21	4	19%	0.55	0.54	0.62	0.50	NA	NA	NA	NA	NA	NA	NA
Silver	ug/L	66	16	24%	3.08	0.70	11.25	0.24	37	7	19%	1.63	1.20	3.75	0.25
Strontium	ug/L	21	21	100%	43.62	30.00	81.60	24.70	NA	NA	NA	NA	NA	NA	NA
Tetrachlorvinphos	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	ug/L	21	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	ug/L	21	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Titanium	ug/L	21	21	100%	33.61	11.50	141.00	5.39	NA	NA	NA	NA	NA	NA	NA
Tokuthion	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Coliforms	mpn/100mL	72	72	100%	329379	79305	1299700	10860	42	42	100%	115960	50660	594240	15815
Total Suspended Solids	mg/L	62	60	97%	46.56	18.00	162.05	3.96	38	38	100%	95.16	36.00	220.65	7.51
Toxaphene	ug/L	33	0	0%	NA	NA	NA	NA	16	0	0%	NA	NA	NA	NA
Trichloronate	ug/L	19	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylnaphthalene, 1,6,7-	ug/L	19	11	58%	0.04	0.03	0.06	0.01	NA	NA	NA	NA	NA	NA	NA
Trimethylnaphthalene, 2,3,5-	ug/L	23	3	13%	0.04	0.03	0.06	0.03	27	12	44%	0.04	0.03	0.08	0.01
Vanadium	ug/L	21	21	100%	4.56	2.65	11.60	2.05	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/L	66	66	100%	173.22	149.50	580.00	23.77	37	37	100%	88.27	66.00	155.40	31.20

ParameterCode	ResultUnits	Commercial							Industrial						
		No. of Samples	No. of Detects	Percent Detects	Mean of Detects	Median of Detects	Upper 95th Percentile	Lower 95th Percentile	No. of Samples	No. of Detects	Percent Detects	Mean of Detects	Median of Detects	Upper 95th Percentile	Lower 95th Percentile
Acenaphthene	ug/L	38	2	5%	0.03	0.03	NA	NA	39	4	10%	0.06	0.06	0.09	0.02
Acenaphthylene	ug/L	38	2	5%	0.03	0.03	NA	NA	39	14	36%	0.04	0.03	0.09	0.01
Aldrin	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Aluminum	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia as N	mg/L	47	44	94%	1.07	0.58	4.72	0.25	55	55	100%	0.76	0.45	2.15	0.23
Anthracene	ug/L	39	14	36%	0.03	0.02	0.07	0.01	39	20	51%	0.03	0.02	0.11	0.00
Antimony	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	ug/L	47	34	72%	2.14	1.80	5.18	1.00	55	50	91%	2.91	2.05	4.80	1.05
Barium	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	ug/L	39	23	59%	0.06	0.01	0.25	0.00	39	28	72%	0.05	0.01	0.26	0.01
Benzo(a)pyrene	ug/L	38	14	37%	0.14	0.10	0.46	0.01	39	16	41%	0.06	0.03	0.21	0.01
Benzo(b)fluoranthene	ug/L	38	19	50%	0.11	0.06	0.40	0.01	39	18	46%	0.07	0.02	0.26	0.01
Benzo(e)pyrene	ug/L	39	21	54%	0.14	0.04	0.52	0.01	39	18	46%	0.08	0.03	0.28	0.01
Benzo(g,h,i)perylene	ug/L	38	21	55%	0.19	0.08	0.78	0.02	39	21	54%	0.11	0.05	0.29	0.02
Benzo(k)fluoranthene	ug/L	38	16	42%	0.14	0.11	0.43	0.01	39	18	46%	0.04	0.02	0.21	0.01
Beryllium	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Biphenyl	ug/L	38	15	39%	0.06	0.04	0.15	0.02	39	16	41%	0.04	0.04	0.08	0.00
Bolstar	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/L	47	29	62%	1.15	0.90	3.92	0.24	55	49	89%	1.80	2.10	4.50	0.30
Chlordane, alpha-	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Chlordane, gamma-	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Chlorpyrifos	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/L	47	26	55%	6.40	3.50	26.00	1.92	55	55	100%	6.54	5.15	14.30	2.27
Chrysene	ug/L	39	28	72%	0.14	0.05	0.51	0.01	39	33	85%	0.13	0.07	0.57	0.02
Cobalt	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/L	47	47	100%	41.70	18.00	165.20	7.46	55	55	100%	72.41	40.50	243.00	7.90
DDD(o,p')	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
DDD(p,p')	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
DDE(o,p')	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
DDE(p,p')	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
DDT(o,p')	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
DDT(p,p')	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Demeton-S	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diazinon	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	ug/L	38	5	13%	0.07	0.04	0.15	0.02	39	4	10%	0.11	0.11	0.18	0.03
Dibenzothiophene	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorvos	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Dimethoate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethylnaphthalene, 2,6-	ug/L	38	10	26%	0.20	0.05	0.70	0.03	39	9	23%	0.05	0.04	0.12	0.02
Disulfoton	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E Coli	mpn/100mL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Endosulfan II	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Endosulfan Sulfate	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Endrin	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Endrin Aldehyde	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Endrin Ketone	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Enterococcus	mpn/100mL	51	51	100%	115880.26	8600.00	479150.00	59.80	66	65	98%	26073.52	5200.00	74420.00	736.00
Ethoprop	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fecal Coliforms	mpn/100mL	51	44	86%	17703.84	5298.50	94920.00	12.35	66	65	98%	4213.98	1733.00	15500.00	321.60
Fenclorphos	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fensulfothion	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenthion	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	ug/L	45	40	89%	0.13	0.03	0.50	0.01	39	34	87%	0.17	0.07	0.62	0.02
Fluorene	ug/L	38	7	18%	0.09	0.06	0.18	0.03	39	9	23%	0.04	0.03	0.12	0.01
HCH, alpha	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
HCH, beta	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
HCH, delta	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
HCH, gamma	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Heptachlor	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Heptachlor Epoxide	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Hexachlorobenzene	ug/L	6	0	0%	NA	NA	NA	NA	9	0	0%	NA	NA	NA	NA

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Indeno(1,2,3-c,d)pyrene	ug/L	38	12	32%	0.16	0.11	0.54	0.02	39	3	8%	0.13	0.16	0.17	0.08
Iron	ug/L	47	47	100%	1316.38	390.00	7682.00	70.00	55	55	100%	2586.55	1320.00	8044.00	401.00
Lead	ug/L	47	47	100%	23.32	4.20	158.90	0.90	55	55	100%	24.48	19.00	62.43	6.91
Malathion	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Merphos	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Methylnaphthalene, 1-	ug/L	38	11	29%	0.10	0.03	0.33	0.01	39	19	49%	0.04	0.03	0.08	0.01
Methylnaphthalene, 2-	ug/L	38	14	37%	0.13	0.05	0.53	0.01	39	19	49%	0.06	0.05	0.14	0.02
Methylphenanthrene, 1-	ug/L	38	11	29%	0.04	0.04	0.07	0.01	39	28	72%	0.06	0.04	0.16	0.01
Mevinphos	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mirex	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Molybdenum	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	ug/L	38	6	16%	0.07	0.04	0.18	0.01	39	19	49%	0.07	0.05	0.15	0.03
Nickel	ug/L	47	29	62%	12.29	9.50	39.00	3.22	55	52	95%	14.92	16.00	31.35	3.44
Nitrate + Nitrite as N	mg/L	33	32	97%	0.35	0.24	0.80	0.05	50	49	98%	0.32	0.29	0.84	0.04
Nitrate as N	MG/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite as N	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrogen, Total Kjeldahl	mg/L	46	46	100%	2.88	1.71	7.92	0.53	55	55	100%	4.32	1.95	13.49	0.51
Nonachlor, trans-	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Oxychlorane	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Parathion, methyl	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 018	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 028	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.07	0.07	NA	NA
PCB 031	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.09	0.09	NA	NA
PCB 033	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.06	0.06	NA	NA
PCB 037	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.03	0.03	NA	NA
PCB 044	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.09	0.09	NA	NA
PCB 049	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.08	0.08	NA	NA
PCB 052	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.08	0.08	NA	NA
PCB 066	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.05	0.05	NA	NA
PCB 070	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.07	0.07	NA	NA
PCB 074	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.03	0.03	NA	NA
PCB 077	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 081	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 087	ug/L	6	0	0%	NA	NA	NA	NA	19	1	5%	0.03	0.03	NA	NA
PCB 095	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.04	0.04	NA	NA
PCB 097	ug/L	6	0	0%	NA	NA	NA	NA	19	1	5%	0.07	0.07	NA	NA
PCB 099	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.02	0.02	NA	NA
PCB 101	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.06	0.06	NA	NA
PCB 105	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 110	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.08	0.08	NA	NA
PCB 114	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 118	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.07	0.07	NA	NA
PCB 119	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 123	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA

ParameterCode	ResultUnits	Commercial							Industrial						
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PCB 126	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 128	ug/L	6	0	0%	NA	NA	NA	NA	9	0	0%	NA	NA	NA	NA
PCB 128/167	ug/L	NA	NA	NA	NA	NA	NA	NA	10	0	0%	NA	NA	NA	NA
PCB 132/168	ug/L	6	0	0%	NA	NA	NA	NA	19	1	5%	0.01	0.01	NA	NA
PCB 138	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.08	0.08	NA	NA
PCB 141	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 149	ug/L	6	0	0%	NA	NA	NA	NA	19	1	5%	0.05	0.05	NA	NA
PCB 151	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 153	ug/L	6	0	0%	NA	NA	NA	NA	19	2	11%	0.03	0.03	NA	NA
PCB 156	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 157	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 158	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 167	ug/L	6	0	0%	NA	NA	NA	NA	9	0	0%	NA	NA	NA	NA
PCB 169	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 170	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 177	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 180	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 183	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 187	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 189	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 194	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 200	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 201	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB 206	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
PCB AROCLOR 1016	ug/L	NA	NA	NA	NA	NA	NA	NA	10	0	0%	NA	NA	NA	NA
PCB AROCLOR 1221	ug/L	NA	NA	NA	NA	NA	NA	NA	10	0	0%	NA	NA	NA	NA
PCB AROCLOR 1232	ug/L	NA	NA	NA	NA	NA	NA	NA	10	0	0%	NA	NA	NA	NA
PCB AROCLOR 1242	ug/L	NA	NA	NA	NA	NA	NA	NA	10	0	0%	NA	NA	NA	NA
PCB AROCLOR 1248	ug/L	NA	NA	NA	NA	NA	NA	NA	10	0	0%	NA	NA	NA	NA
PCB AROCLOR 1254	ug/L	NA	NA	NA	NA	NA	NA	NA	10	0	0%	NA	NA	NA	NA
PCB AROCLOR 1260	ug/L	NA	NA	NA	NA	NA	NA	NA	10	0	0%	NA	NA	NA	NA
Perylene	ug/L	39	13	33%	0.06	0.03	0.20	0.01	39	11	28%	0.04	0.03	0.08	0.01
Phenanthrene	ug/L	41	32	78%	0.14	0.04	0.57	0.01	39	29	74%	0.21	0.10	0.75	0.02
Phorate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphate as P	MG/L	20	20	100%	0.08	0.08	0.14	0.05	27	27	100%	0.12	0.09	0.21	0.06
Phosphorus as P	mg/l	27	27	100%	0.99	0.50	2.77	0.22	28	28	100%	3.36	0.77	11.57	0.24
Pyrene	ug/L	42	37	88%	0.18	0.04	0.68	0.01	39	35	90%	0.20	0.10	0.68	0.02
Selenium	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/L	47	15	32%	1.30	1.00	3.21	0.20	55	7	13%	1.04	0.70	2.99	0.20
Strontium	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachlorvinphos	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Titanium	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tokuthion	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Coliforms	mpn/100mL	51	51	100%	528034	88932	2419200	3558	66	65	98%	185664	88200	876540	4021
Total Suspended Solids	mg/L	47	46	98%	56.87	26.50	275.75	9.00	57	57	100%	89.60	43.00	248.60	12.80



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Toxaphene	ug/L	6	0	0%	NA	NA	NA	NA	19	0	0%	NA	NA	NA	NA
Trichloronate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylnaphthalene, 1,6,7-	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylnaphthalene, 2,3,5-	ug/L	38	3	8%	0.22	0.20	0.32	0.15	39	7	18%	0.05	0.03	0.12	0.02
Vanadium	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/L	47	47	100%	371.98	188.00	1268.00	63.30	55	55	100%	597.47	493.50	1279.00	204.40

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Acenaphthene	ug/L	11	1	9%	0.01	0.01	NA	NA	20	1	5%	0.08	0.08	NA	NA
Acenaphthylene	ug/L	11	2	18%	0.01	0.01	NA	NA	20	0	0%	NA	NA	NA	NA
Aldrin	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia as N	mg/L	20	20	100%	1.07	1.06	1.47	0.71	20	20	100%	0.69	0.49	1.02	0.32
Anthracene	ug/L	11	8	73%	0.01	0.01	0.03	0.01	19	7	37%	0.02	0.01	0.05	0.00
Antimony	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	ug/L	20	20	100%	4.44	4.65	5.61	2.86	20	3	15%	3.03	1.20	6.33	1.02
Barium	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	ug/L	11	2	18%	0.09	0.09	NA	NA	20	12	60%	0.02	0.02	0.04	0.01
Benzo(a)pyrene	ug/L	11	11	100%	0.03	0.02	0.10	0.01	20	11	55%	0.03	0.02	0.07	0.01
Benzo(b)fluoranthene	ug/L	11	11	100%	0.06	0.04	0.19	0.02	20	11	55%	0.04	0.02	0.09	0.01
Benzo(e)pyrene	ug/L	11	11	100%	0.04	0.02	0.10	0.01	20	12	60%	0.03	0.02	0.05	0.01
Benzo(g,h,i)perylene	ug/L	11	6	55%	0.03	0.02	0.05	0.01	20	12	60%	0.05	0.04	0.10	0.02
Benzo(k)fluoranthene	ug/L	11	11	100%	0.02	0.01	0.06	0.01	20	10	50%	0.03	0.02	0.05	0.01
Beryllium	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Biphenyl	ug/L	11	1	9%	0.01	0.01	NA	NA	20	3	15%	0.02	0.02	0.03	0.01
Bolstar	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	ug/L	20	3	15%	0.63	0.60	0.78	0.51	20	10	50%	0.55	0.25	1.76	0.20
Chlordane, alpha-	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlordane, gamma-	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorpyrifos	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	ug/L	20	20	100%	15.60	13.50	27.25	8.76	20	13	65%	6.42	2.40	24.60	1.18
Chrysene	ug/L	11	11	100%	0.07	0.04	0.18	0.03	20	16	80%	0.05	0.04	0.15	0.01
Cobalt	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	ug/L	20	20	100%	32.85	32.00	43.75	22.00	20	20	100%	20.03	10.50	37.00	5.96
DDD(o,p')	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDD(p,p')	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDE(o,p')	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDE(p,p')	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDT(o,p')	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DDT(p,p')	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Demeton-S	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diazinon	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	ug/L	11	1	9%	0.02	0.02	NA	NA	20	0	0%	NA	NA	NA	NA

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Dibenzothiophene	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorvos	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethoate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethylnaphthalene, 2,6-	ug/L	11	0	0%	NA	NA	NA	NA	20	1	5%	0.05	0.05	NA	NA
Disulfoton	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E Coli	mpn/100mL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan I	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan II	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endosulfan Sulfate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Ketone	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Enterococcus	mpn/100mL	24	24	100%	110114.50	54850.00	511055.00	15360.60	23	22	96%	9022.32	6107.00	23975.55	2051.45
Ethoprop	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fecal Coliforms	mpn/100mL	24	24	100%	387629.33	448150.00	920250.00	813.30	23	23	100%	3091.17	1000.00	14525.40	21.00
Fenclorphos	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fensulfothion	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fenthion	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	ug/L	11	11	100%	0.11	0.08	0.25	0.06	20	20	100%	0.06	0.05	0.13	0.02
Fluorene	ug/L	11	5	45%	0.01	0.01	0.01	0.01	20	5	25%	0.03	0.03	0.04	0.02
HCH, alpha	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HCH, beta	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HCH, delta	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HCH, gamma	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor Epoxide	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobenzene	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-c,d)pyrene	ug/L	11	7	64%	0.03	0.02	0.08	0.01	20	4	20%	0.02	0.02	0.04	0.01
Iron	ug/L	20	20	100%	12666.00	11200.00	20580.00	6651.50	20	17	85%	377.65	310.00	980.00	38.00
Lead	ug/L	20	20	100%	13.29	11.65	21.95	7.81	20	20	100%	4.56	3.25	8.23	1.59
Malathion	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Merphos	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methoxychlor	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylnaphthalene, 1-	ug/L	11	0	0%	NA	NA	NA	NA	20	1	5%	0.18	0.18	NA	NA
Methylnaphthalene, 2-	ug/L	11	2	18%	0.01	0.01	NA	NA	20	1	5%	0.31	0.31	NA	NA
Methylphenanthrene, 1-	ug/L	11	6	55%	0.01	0.01	0.02	0.01	20	8	40%	0.03	0.02	0.07	0.01
Mevinphos	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mirex	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	ug/L	11	0	0%	NA	NA	NA	NA	20	2	10%	0.29	0.29	NA	NA
Nickel	ug/L	20	20	100%	16.19	15.00	25.15	10.94	20	10	50%	6.31	3.25	19.71	2.23
Nitrate + Nitrite as N	mg/L	20	20	100%	1.05	1.00	2.09	0.06	21	18	86%	0.25	0.12	0.64	0.02
Nitrate as N	MG/L	23	23	100%	0.99	0.98	1.74	0.02	NA	NA	NA	NA	NA	NA	NA
Nitrite as N	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Nitrogen, Total Kjeldahl	mg/L	20	20	100%	7.11	7.30	9.98	2.37	20	20	100%	2.27	1.20	3.48	0.58
Nonachlor, trans-	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxychlorane	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Parathion, methyl	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 018	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 028	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 031	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 033	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 037	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 044	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 049	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 052	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 066	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 070	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 074	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 077	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 081	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 087	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 095	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 097	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 099	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 101	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 105	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 110	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 114	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 118	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 119	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 123	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 126	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 128	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 128/167	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 132/168	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 138	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 141	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 149	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 151	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 153	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 156	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 157	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 158	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 167	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 169	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 170	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 177	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 180	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 183	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 187	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

ParameterCode	ResultUnits	Recreation							Transportation						
		No. of Samples	No. of Detects	Percent Detects	Mean of Detects	Median of Detects	Upper 95th Percentile	Lower 95th Percentile	No. of Samples	No. of Detects	Percent Detects	Mean of Detects	Median of Detects	Upper 95th Percentile	Lower 95th Percentile
PCB 189	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 194	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 200	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 201	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB 206	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB AROCLOR 1016	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB AROCLOR 1221	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB AROCLOR 1232	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB AROCLOR 1242	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB AROCLOR 1248	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB AROCLOR 1254	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB AROCLOR 1260	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Perylene	ug/L	11	6	55%	0.02	0.01	0.03	0.01	20	4	20%	0.02	0.02	0.04	0.01
Phenanthrene	ug/L	11	11	100%	0.05	0.03	0.10	0.02	20	19	95%	0.07	0.05	0.18	0.02
Phorate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphate as P	MG/L	44	44	100%	2.45	0.66	6.84	0.02	10	10	100%	0.03	0.03	0.05	0.02
Phosphorus as P	mg/l	NA	NA	NA	NA	NA	NA	NA	10	10	100%	0.71	0.53	1.78	0.31
Pyrene	ug/L	11	11	100%	0.09	0.06	0.22	0.05	20	20	100%	0.07	0.07	0.20	0.02
Selenium	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	ug/L	20	6	30%	2.27	1.80	4.52	0.83	20	2	10%	0.20	0.20	NA	NA
Strontium	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachlorvinphos	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Thallium	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Titanium	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tokuthion	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Coliforms	mpn/100mL	24	24	100%	1206826	701550	1705900	11188	23	23	100%	157852	25000	685060	4377
Total Suspended Solids	mg/L	17	17	100%	361.29	300.00	1078.80	131.20	20	17	85%	25.29	18.00	69.60	8.40
Toxaphene	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloronate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylnaphthalene, 1,6,7-	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trimethylnaphthalene, 2,3,5-	ug/L	11	0	0%	NA	NA	NA	NA	20	2	10%	0.03	0.03	NA	NA
Vanadium	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	ug/L	20	20	100%	128.45	125.00	181.55	77.60	20	20	100%	162.30	93.50	311.50	57.45

**Notes**

NA = Not enough data above detection limit collected to develop summary statistics.

**Summary of Stormwater Runoff by Land Use Categories Sampled by Los Angeles County Department of Public Works and Presented in the 2000 report titled “Los Angeles County 1994-2000 Integrated Receiving Water Impacts Report**

Constituents	Data Included Since <sup>a</sup>	DL	Units	Commercial						Vacant					
				No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV	No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV
Cyanide	96	0.01	mg/l	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	15	15	0	S.I.D.	S.I.D.	S.I.D.
TPH	94	1	mg/l	8	2	75	3.1	2.9	0.63	21	19	10	S.I.D.	S.I.D.	S.I.D.
Oil and Grease	94	1	mg/l	8	1	88	3.3	2.9	0.51	21	17	19	S.I.D.	S.I.D.	S.I.D.
Total Phenols	94	0.1	mg/l	8	8	0	S.I.D.	S.I.D.	S.I.D.	21	21	0	S.I.D.	S.I.D.	S.I.D.
Total Coliform	94	20	MPN/100ml	8	0	100	1,140,000	1,250,000	0.71	21	1	95	9,187	2,200	1.25
Fecal Coliform	94	20	MPN/100ml	8	0	100	528,750	90,000	1.35	21	2	90	1,397	500	2.6
Ratio Fecal Coliform/Total Coliform	94			0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	0	100	52%	64%	0.79
Fecal Streptococcus	94	20	MPN/100ml	8	0	100	212,875	150,000	1.37	21	1	95	2,254	800	1.57
Fecal Enterococcus	94	20	MPN/100ml	8	0	100	86,250	40,000	1.18	21	1	95	679	500	0.98
Ammonia	94	0.1	mg/l	33	7	79	1.26	0.3	2.11	41	27	34	0.13	0.05	2.48
Calcium	96	1	mg/l	30	0	100	19	11	0.86	39	0	100	50	50	0.09
Magnesium	96	1	mg/l	30	0	100	6.8	3.9	0.92	39	0	100	15	16	0.26
Potassium	94	1	mg/l	36	0	100	4	2.8	0.81	45	0	100	2.4	2.4	0.22
Sodium	96	1	mg/l	33	0	100	37	19	1.03	45	0	100	13	14	0.2
Bicarbonate	94	2	mg/l	33	0	100	48	21	0.93	42	0	100	175	176	0.15
Carbonate	94	2	mg/l	33	33	0	S.I.D.	S.I.D.	S.I.D.	42	36	14	S.I.D.	S.I.D.	S.I.D.
Chloride	94	2	mg/l	33	0	100	50	15.8	1.28	43	0	100	6.6	6.5	0.26
Fluoride	94	0.1	mg/l	33	18	45	0.13	0.05	0.81	43	0	100	0.37	0.36	0.21
Nitrate	94	0.1	mg/l	33	1	97	2.6	2	0.63	43	0	100	5.2	4.6	0.56
Sulfate	94	0.1	mg/l	33	0	100	35	11	1.18	43	0	100	17	15	0.4
Alkalinity	94	4	mg/l	33	0	100	48	21	0.93	42	0	100	169	174	0.13
Hardness	96	2	mg/l	30	0	100	76	42	0.87	39	0	100	185	190	0.11
COD	97	5	mg/l	24	0	100	98	89	0.8	34	15	56	17	11	1.35
pH	94	0-14		33	0	100	7	6.8	0.07	42	0	100	8.1	8.1	0.03
Specific Conductance	94	1	umhos/cm	31	0	100	356	167	0.99	38	0	100	386	390	0.11
Total Dissolved Solids	96	2	mg/l	29	0	100	226	106	0.93	36	0	100	237	240	0.09
Turbidity	94	0.1	NTU	33	0	100	31	24	0.67	41	0	100	69	5.6	2.3
Total Suspended Solids	96	2	mg/l	29	0	100	66	53	0.65	39	1	97	186	18	3.27
Volatile Suspended Solids	94	1	mg/l/hr	31	0	100	32	29	0.54	41	7	83	36	12	2.48
MBAS	97	0.05	mg/l	22	11	50	0.18	0.04	1.52	30	30	0	S.I.D.	S.I.D.	S.I.D.
Total Organic Carbon	94	1	mg/l	35	0	100	10	7.3	0.74	43	0	100	5.3	3.6	0.84
BOD	94	2	mg/l	26	1	96	27	24	0.58	39	4	90	12	5	1.01
Dissolved Phosphorus	94	0.05	mg/l	33	1	97	0.3	0.19	0.86	37	21	43	0.11	0.03	3.38
Total Phosphorus	94	0.05	mg/l	32	1	97	0.39	0.28	0.77	39	16	59	0.16	0.05	2.63
NH3-N	94	0.1	mg/l	33	8	76	1.04	0.25	2.11	41	30	27	0.11	0.05	2.41
Nitrate-N	96	0.1	mg/l	31	7	77	0.48	0.43	0.82	40	1	98	1.05	0.94	0.53
Nitrite-N	94	0.1	mg/l	34	7	79	0.16	0.07	1.74	43	30	30	0.05	0.05	0.2
TKN	96	0.1	mg/l	32	0	100	3.4	2.2	0.94	40	0	100	0.79	0.68	0.6

Constituents	Data Included Since <sup>a</sup>	DL	Units	Commercial						Vacant					
				No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV	No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV
Dissolved Aluminum	96	100	ug/L	33	24	27	241	50	3.19	42	29	31	190	50	2.39
Total Aluminum	96	100	ug/L	33	8	76	4055	295	4.87	42	13	69	1681	234	5.25
Dissolved Antimony	97	5	ug/L	24	24	0	S.I.D.	S.I.D.	S.I.D.	34	34	0	S.I.D.	S.I.D.	S.I.D.
Total Antimony	97	5	ug/L	24	24	0	S.I.D.	S.I.D.	S.I.D.	34	34	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Arsenic	97	5	ug/L	24	23	4	S.I.D.	S.I.D.	S.I.D.	34	34	0	S.I.D.	S.I.D.	S.I.D.
Total Arsenic	97	5	ug/L	24	22	8	S.I.D.	S.I.D.	S.I.D.	34	32	6	S.I.D.	S.I.D.	S.I.D.
Dissolved Barium	97	10	ug/L	24	2	92	39	33	0.81	34	2	94	57	58	0.41
Total Barium	97	10	ug/L	24	2	92	114	41	2.64	34	2	94	83	62	1.59
Dissolved Beryllium	97	1	ug/L	17	17	0	S.I.D.	S.I.D.	S.I.D.	22	22	0	S.I.D.	S.I.D.	S.I.D.
Total Beryllium	97	1	ug/L	24	23	4	S.I.D.	S.I.D.	S.I.D.	34	33	3	S.I.D.	S.I.D.	S.I.D.
Dissolved Boron	97	100	ug/L	24	3	88	198	188	0.49	32	14	56	121	116	0.65
Total Boron	97	100	ug/L	24	1	96	261	254	0.41	32	8	75	178	170	0.59
Dissolved Cadmium	97	1	ug/L	24	21	13	S.I.D.	S.I.D.	S.I.D.	34	34	0	S.I.D.	S.I.D.	S.I.D.
Total Cadmium	97	1	ug/L	24	19	21	0.73	0.5	0.71	34	34	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Chromium	97	5	ug/L	24	24	0	S.I.D.	S.I.D.	S.I.D.	34	34	0	S.I.D.	S.I.D.	S.I.D.
Total Chromium	97	5	ug/L	24	18	25	27	2.5	4.18	34	33	3	S.I.D.	S.I.D.	S.I.D.
Dissolved Chromium +6	94	10	ug/L	33	33	0	S.I.D.	S.I.D.	S.I.D.	41	41	0	S.I.D.	S.I.D.	S.I.D.
Total Chromium +6	94	10	ug/L	33	33	0	S.I.D.	S.I.D.	S.I.D.	41	41	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Copper	97	5	ug/L	24	3	88	14	11	0.84	34	31	9	S.I.D.	S.I.D.	S.I.D.
Total Copper	97	5	ug/L	24	0	100	39	22	1.57	34	15	56	15	5.5	3.14
Dissolved Iron	94	100	ug/L	39	17	56	382	106	2.81	45	35	22	202	50	3.27
Total Iron	94	100	ug/L	40	2	95	5319	587	5.24	45	14	69	3003	233	5.23
Dissolved Lead	97	5	ug/L	24	20	17	S.I.D.	S.I.D.	S.I.D.	34	34	0	S.I.D.	S.I.D.	S.I.D.
Total Lead	97	5	ug/L	24	15	38	18	2.5	2.8	34	31	9	S.I.D.	S.I.D.	S.I.D.
Dissolved Manganese	98	100	ug/L	14	14	0	S.I.D.	S.I.D.	S.I.D.	18	18	0	S.I.D.	S.I.D.	S.I.D.
Total Manganese	98	100	ug/L	14	13	7	S.I.D.	S.I.D.	S.I.D.	18	14	22	67	50	0.48
Dissolved Mercury	94	1	ug/L	37	35	5	S.I.D.	S.I.D.	S.I.D.	42	42	0	S.I.D.	S.I.D.	S.I.D.
Total Mercury	94	1	ug/L	37	35	5	S.I.D.	S.I.D.	S.I.D.	43	42	2	S.I.D.	S.I.D.	S.I.D.
Dissolved Nickel	97	5	ug/L	24	21	13	S.I.D.	S.I.D.	S.I.D.	34	34	0	S.I.D.	S.I.D.	S.I.D.
Total Nickel	97	5	ug/L	24	16	33	15	2.5	3.69	34	29	15	S.I.D.	S.I.D.	S.I.D.
Dissolved Selenium	94	5	ug/L	40	40	0	S.I.D.	S.I.D.	S.I.D.	45	45	0	S.I.D.	S.I.D.	S.I.D.
Total Selenium	94	5	ug/L	40	35	13	S.I.D.	S.I.D.	S.I.D.	45	44	2	S.I.D.	S.I.D.	S.I.D.
Dissolved Silver	97	1	ug/L	24	23	4	S.I.D.	S.I.D.	S.I.D.	34	34	0	S.I.D.	S.I.D.	S.I.D.
Total Silver	97	1	ug/L	24	22	8	S.I.D.	S.I.D.	S.I.D.	34	34	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Thallium	97	5	ug/L	24	24	0	S.I.D.	S.I.D.	S.I.D.	34	34	0	S.I.D.	S.I.D.	S.I.D.
Total Thallium	97	5	ug/L	24	24	0	S.I.D.	S.I.D.	S.I.D.	34	34	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Zinc	94	50	ug/L	40	4	90	152	130	0.66	45	43	4	S.I.D.	S.I.D.	S.I.D.
Total Zinc	94	50	ug/L	40	0	100	241	192	0.71	45	33	27	46	25	1.67
Bis(2-ethylhexyl)phthalate	99	1	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Acenaphthene	99	0.05	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.

Constituents	Data Included Since <sup>a</sup>	DL	Units	Commercial						Vacant					
				No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV	No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV
Acenaphthylene	99	0.05	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	6	14	S.I.D.	S.I.D.	S.I.D.
Antracene	99	0.05	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Benzo(a)anthracene	99	0.1	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Benzo(a)pyrene	99	0.1	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Benzo(b)fluoranthene	99	0.1	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Benzo(k)fluoranthene	99	0.1	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Chrysene	99	0.1	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Dibenz(a,h)anthracene	99	0.1	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Fluoranthene	99	0.1	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	6	14	S.I.D.	S.I.D.	S.I.D.
Fluorene	99	0.1	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Indeno (1,2,3-cd)pyrene	99	0.1	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Naphthalene	99	0.05	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	6	14	S.I.D.	S.I.D.	S.I.D.
Phenanthrene	99	0.05	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Pyrene	99	0.05	ug/L	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	7	6	14	S.I.D.	S.I.D.	S.I.D.
All other SVOCs	94	0.05-5.0	ug/L	23	23	0	S.I.D.	S.I.D.	S.I.D.	34	34	0	S.I.D.	S.I.D.	S.I.D.
Organochlorine Pesticides & PCBs	94	0.05-1.0	ug/L	19	19	0	S.I.D.	S.I.D.	S.I.D.	38	38	0	S.I.D.	S.I.D.	S.I.D.
Carbofuran	96	5	ug/L	28	28	0	S.I.D.	S.I.D.	S.I.D.	38	38	0	S.I.D.	S.I.D.	S.I.D.
Glyphosate	98	25	ug/L	14	14	0	S.I.D.	S.I.D.	S.I.D.	18	18	0	S.I.D.	S.I.D.	S.I.D.
Diazinon	96	0.01	ug/L	24	21	13	S.I.D.	S.I.D.	S.I.D.	36	36	0	S.I.D.	S.I.D.	S.I.D.
Chlorpyrifos	96	0.05	ug/L	24	24	0	S.I.D.	S.I.D.	S.I.D.	36	36	0	S.I.D.	S.I.D.	S.I.D.
Thiobencarb	96	1	ug/L	24	24	0	S.I.D.	S.I.D.	S.I.D.	36	36	0	S.I.D.	S.I.D.	S.I.D.
All other N- and P- Pesticides	94	1.0-2.0	ug/L	28	28	0	S.I.D.	S.I.D.	S.I.D.	39	39	0	S.I.D.	S.I.D.	S.I.D.
2,4-D	96	10	ug/L	17	17	0	S.I.D.	S.I.D.	S.I.D.	35	35	0	S.I.D.	S.I.D.	S.I.D.
2,4,5-TP	96	1	ug/L	17	17	0	S.I.D.	S.I.D.	S.I.D.	35	35	0	S.I.D.	S.I.D.	S.I.D.
Bentazon	96	2	ug/L	17	17	0	S.I.D.	S.I.D.	S.I.D.	35	35	0	S.I.D.	S.I.D.	S.I.D.

Constituents	Data Included Since <sup>a</sup>	DL	Units	Transportation						Light Industrial					
				No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV	No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV
Cyanide	96	0.01	mg/l	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
TPH	94	1	mg/l	4	0	100	3.1	2.8	0.47	5	1	80	1.7	1.4	0.68
Oil and Grease	94	1	mg/l	4	0	100	3.1	2.8	0.47	5	1	80	1.7	1.4	0.68
Total Phenols	94	0.1	mg/l	4	4	0	S.I.D.	S.I.D.	S.I.D.	5	5	0	S.I.D.	S.I.D.	S.I.D.
Total Coliform	94	20	MPN/100ml	4	0	100	692,500	600,000	0.82	5	0	100	454,000	160,000	1.42
Fecal Coliform	94	20	MPN/100ml	4	0	100	328,750	205,000	1.22	5	0	100	338,220	30,000	2.09
Ratio Fecal Coliform/Total Coliform	94			0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Fecal Streptococcus	94	20	MPN/100ml	4	0	100	176,000	195,000	0.68	5	0	100	253,000	160,000	1.46
Fecal Enterococcus	94	20	MPN/100ml	4	0	100	32,000	32,000	0.65	5	0	100	98,200	130,000	0.73
Ammonia	94	0.1	mg/l	62	16	74	0.29	0.16	1.52	47	7	85	0.59	0.32	1.35
Calcium	96	1	mg/l	61	0	100	8.4	7.7	0.46	40	0	100	12	8.8	1.01
Magnesium	96	1	mg/l	61	4	93	1.6	1.5	0.48	40	0	100	2.3	1.9	1.13

Constituents	Data Included Since <sup>a</sup>	DL	Units	Transportation						Light Industrial					
				No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV	No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV
Potassium	94	1	mg/l	63	2	97	2.1	1.7	0.56	50	1	98	2.7	2.2	0.59
Sodium	96	1	mg/l	62	0	100	8.3	6.4	0.81	47	0	100	14	12	0.69
Bicarbonate	94	2	mg/l	63	0	100	20	18	0.57	47	0	100	26	20	0.92
Carbonate	94	2	mg/l	63	63	0	S.I.D.	S.I.D.	S.I.D.	47	47	0	S.I.D.	S.I.D.	S.I.D.
Chloride	94	2	mg/l	64	3	95	5.6	4.4	0.82	47	0	100	12	8.6	0.8
Fluoride	94	0.1	mg/l	64	41	36	0.1	0.05	0.97	47	22	53	0.13	0.11	0.94
Nitrate	94	0.1	mg/l	64	2	97	2.9	1.8	1.27	47	0	100	4.1	2.4	1.09
Sulfate	94	0.1	mg/l	64	0	100	9.5	6.4	1.07	47	0	100	12.6	9.2	1.02
Alkalinity	94	4	mg/l	63	0	100	20	16	0.55	47	0	100	25	19	0.94
Hardness	96	2	mg/l	61	0	100	27	24	0.46	40	0	100	39	30	1.02
COD	97	5	mg/l	52	7	87	50	33	0.99	36	4	89	80	51	0.92
pH	94	0-14		63	0	100	6.7	6.6	0.05	47	0	100	6.8	6.8	0.06
Specific Conductance	94	1	umhos/cm	63	0	100	99	84	0.66	43	0	100	147	119	0.77
Total Dissolved Solids	96	2	mg/l	61	0	100	62	54	0.69	40	0	100	95	77	0.8
Turbidity	94	0.1	NTU	64	0	100	31	22	1.25	47	0	100	76	55	1.59
Total Suspended Solids	96	2	mg/l	61	0	100	78	50	1.3	41	0	100	240	129	1.36
Volatile Suspended Solids	94	1	mg/l/hr	63	1	98	31	20	1.22	43	0	100	57	46	0.79
MBAS	97	0.05	mg/l	51	30	41	2.6	0.025	6.95	32	10	69	0.13	0.11	0.9
Total Organic Carbon	94	1	mg/l	63	0	100	8.7	6.8	0.71	47	0	100	11.9	9.8	0.77
BOD	94	2	mg/l	54	0	100	21	19	0.8	37	0	100	20	17	0.67
Dissolved Phosphorus	94	0.05	mg/l	59	3	95	0.34	0.28	0.79	46	4	91	0.27	0.2	1.01
Total Phosphorus	94	0.05	mg/l	59	1	98	0.44	0.32	0.84	45	2	96	0.41	0.3	0.92
NH3-N	94	0.1	mg/l	62	19	69	0.24	0.14	1.51	48	9	81	0.48	0.26	1.36
Nitrate-N	96	0.1	mg/l	61	15	75	0.7	0.4	1.68	43	2	95	0.87	0.52	1.32
Nitrite-N	94	0.1	mg/l	64	10	84	0.09	0.06	0.72	47	9	81	0.09	0.06	0.73
TKN	96	0.1	mg/l	61	0	100	1.9	1.3	0.93	45	0	100	3	2.3	0.72
Dissolved Aluminum	96	100	ug/L	62	29	53	159	107	1.18	47	23	51	460	117	1.96
Total Aluminum	96	100	ug/L	63	10	84	672	354	1.65	47	7	85	1824	470	2.37
Dissolved Antimony	97	5	ug/L	54	53	2	S.I.D.	S.I.D.	S.I.D.	37	37	0	S.I.D.	S.I.D.	S.I.D.
Total Antimony	97	5	ug/L	54	53	2	S.I.D.	S.I.D.	S.I.D.	37	37	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Arsenic	97	5	ug/L	54	54	0	S.I.D.	S.I.D.	S.I.D.	37	37	0	S.I.D.	S.I.D.	S.I.D.
Total Arsenic	97	5	ug/L	54	52	4	S.I.D.	S.I.D.	S.I.D.	37	34	8	S.I.D.	S.I.D.	S.I.D.
Dissolved Barium	97	10	ug/L	54	15	72	19	17	0.75	37	6	84	34	26	0.81
Total Barium	97	10	ug/L	54	9	83	34	27	0.88	37	4	89	68	36	1.38
Dissolved Beryllium	97	1	ug/L	40	40	0	S.I.D.	S.I.D.	S.I.D.	34	34	0	S.I.D.	S.I.D.	S.I.D.
Total Beryllium	97	1	ug/L	54	54	0	S.I.D.	S.I.D.	S.I.D.	37	37	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Boron	97	100	ug/L	54	16	70	146	132	0.55	37	18	51	122	102	0.71
Total Boron	97	100	ug/L	54	5	91	219	214	0.5	36	10	72	187	181	0.63
Dissolved Cadmium	97	1	ug/L	54	50	7	S.I.D.	S.I.D.	S.I.D.	37	34	8	S.I.D.	S.I.D.	S.I.D.
Total Cadmium	97	1	ug/L	54	32	41	1.1	0.5	1.04	37	30	19	S.I.D.	S.I.D.	S.I.D.



Constituents	Data Included Since <sup>a</sup>	DL	Units	Transportation						Light Industrial					
				No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV	No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV
Dissolved Chromium	97	5	ug/L	54	51	6	S.I.D.	S.I.D.	S.I.D.	37	33	11	S.I.D.	S.I.D.	S.I.D.
Total Chromium	97	5	ug/L	54	40	26	4.8	2.5	1.15	37	25	32	6.8	2.5	1.6
Dissolved Chromium +6	94	10	ug/L	63	63	0	S.I.D.	S.I.D.	S.I.D.	47	47	0	S.I.D.	S.I.D.	S.I.D.
Total Chromium +6	94	10	ug/L	63	63	0	S.I.D.	S.I.D.	S.I.D.	47	47	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Copper	97	5	ug/L	54	0	100	33	27	0.63	37	5	86	20	14	1.07
Total Copper	97	5	ug/L	54	0	100	56	39	1.15	37	0	100	32	21	1.03
Dissolved Iron	94	100	ug/L	65	34	48	200	50	1.9	51	25	51	698	104	2.99
Total Iron	94	100	ug/L	65	2	97	1188	512	1.74	51	5	90	6504	600	4.26
Dissolved Lead	97	5	ug/L	54	48	11	S.I.D.	S.I.D.	S.I.D.	37	32	14	S.I.D.	S.I.D.	S.I.D.
Total Lead	97	5	ug/L	54	29	46	10	2.5	1.57	37	18	51	17	5.1	1.88
Dissolved Manganese	98	100	ug/L	27	25	7	S.I.D.	S.I.D.	S.I.D.	26	23	12	S.I.D.	S.I.D.	S.I.D.
Total Manganese	98	100	ug/L	27	25	7	S.I.D.	S.I.D.	S.I.D.	26	23	12	S.I.D.	S.I.D.	S.I.D.
Dissolved Mercury	94	1	ug/L	63	63	0	S.I.D.	S.I.D.	S.I.D.	48	48	0	S.I.D.	S.I.D.	S.I.D.
Total Mercury	94	1	ug/L	63	62	2	S.I.D.	S.I.D.	S.I.D.	48	45	6	S.I.D.	S.I.D.	S.I.D.
Dissolved Nickel	97	5	ug/L	54	41	24	3.9	2.5	0.93	37	23	38	5	2.5	0.9
Total Nickel	97	5	ug/L	54	29	46	6	2.5	1.07	37	15	59	9.8	6	1.47
Dissolved Selenium	94	5	ug/L	65	65	0	S.I.D.	S.I.D.	S.I.D.	51	51	0	S.I.D.	S.I.D.	S.I.D.
Total Selenium	94	5	ug/L	65	61	6	S.I.D.	S.I.D.	S.I.D.	51	48	6	S.I.D.	S.I.D.	S.I.D.
Dissolved Silver	97	1	ug/L	54	54	0	S.I.D.	S.I.D.	S.I.D.	37	37	0	S.I.D.	S.I.D.	S.I.D.
Total Silver	97	1	ug/L	54	54	0	S.I.D.	S.I.D.	S.I.D.	37	37	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Thallium	97	5	ug/L	54	54	0	S.I.D.	S.I.D.	S.I.D.	37	37	0	S.I.D.	S.I.D.	S.I.D.
Total Thallium	97	5	ug/L	54	54	0	S.I.D.	S.I.D.	S.I.D.	37	37	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Zinc	94	50	ug/L	65	5	92	192	152	0.74	51	3	94	407	303	1.18
Total Zinc	94	50	ug/L	65	0	100	291	218	0.99	51	0	100	639	366	1.53
Bis(2-ethylhexyl)phthalate	99	1	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Acenaphthene	99	0.05	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Acenaphthylene	99	0.05	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Antracene	99	0.05	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Benzo(a)anthracene	99	0.1	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Benzo(a)pyrene	99	0.1	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Benzo(b)fluoranthene	99	0.1	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Benzo(k)fluoranthene	99	0.1	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Chrysene	99	0.1	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Dibenz(a,h)anthracene	99	0.1	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Fluoranthene	99	0.1	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Fluorene	99	0.1	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Indeno (1,2,3-cd)pyrene	99	0.1	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Naphthalene	99	0.05	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Phenanthrene	99	0.05	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Pyrene	99	0.05	ug/L	1	1	0	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.

Constituents	Data Included Since <sup>a</sup>	DL	Units	Transportation						Light Industrial					
				No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV	No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV
All other SVOCs	94	0.05-5.0	ug/L	40	40	0	S.I.D.	S.I.D.	S.I.D.	24	24	0	S.I.D.	S.I.D.	S.I.D.
Organochlorine Pesticides & PCBs	94	0.05-1.0	ug/L	37	37	0	S.I.D.	S.I.D.	S.I.D.	20	20	0	S.I.D.	S.I.D.	S.I.D.
Carbofuran	96	5	ug/L	60	60	0	S.I.D.	S.I.D.	S.I.D.	45	45	0	S.I.D.	S.I.D.	S.I.D.
Glyphosate	98	25	ug/L	27	25	7	S.I.D.	S.I.D.	S.I.D.	26	26	0	S.I.D.	S.I.D.	S.I.D.
Diazinon	96	0.01	ug/L	57	56	2	S.I.D.	S.I.D.	S.I.D.	40	40	0	S.I.D.	S.I.D.	S.I.D.
Chlorpyrifos	96	0.05	ug/L	57	57	0	S.I.D.	S.I.D.	S.I.D.	40	40	0	S.I.D.	S.I.D.	S.I.D.
Thiobencarb	96	1	ug/L	57	57	0	S.I.D.	S.I.D.	S.I.D.	40	40	0	S.I.D.	S.I.D.	S.I.D.
All other N- and P- Pesticides	94	1.0-2.0	ug/L	58	58	0	S.I.D.	S.I.D.	S.I.D.	43	43	0	S.I.D.	S.I.D.	S.I.D.
2,4-D	96	10	ug/L	37	37	0	S.I.D.	S.I.D.	S.I.D.	22	22	0	S.I.D.	S.I.D.	S.I.D.
2,4,5-TP	96	1	ug/L	37	37	0	S.I.D.	S.I.D.	S.I.D.	22	22	0	S.I.D.	S.I.D.	S.I.D.
Bentazon	96	2	ug/L	37	37	0	S.I.D.	S.I.D.	S.I.D.	22	22	0	S.I.D.	S.I.D.	S.I.D.

Constituents	Data Included Since <sup>a</sup>	DL	Units	Multifamily Residential						Mixed Residential					
				No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV	No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV
Cyanide	96	0.01	mg/l	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	1	0	100	S.I.D.	S.I.D.	S.I.D.
TPH	94	1	mg/l	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	1	0	100	S.I.D.	S.I.D.	S.I.D.
Oil and Grease	94	1	mg/l	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Total Phenols	94	0.1	mg/l	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	1	1	0	S.I.D.	S.I.D.	S.I.D.
Total Coliform	94	20	MPN/100ml	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	1	0	100	S.I.D.	S.I.D.	S.I.D.
Fecal Coliform	94	20	MPN/100ml	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	1	0	100	S.I.D.	S.I.D.	S.I.D.
Ratio Fecal Coliform/Total Coliform	94			0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Fecal Streptococcus	94	20	MPN/100ml	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	1	0	100	S.I.D.	S.I.D.	S.I.D.
Fecal Enterococcus	94	20	MPN/100ml	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Ammonia	94	0.1	mg/l	38	9	76	0.47	0.29	1.44	42	4	90	0.67	0.39	1.13
Calcium	96	1	mg/l	35	0	100	19.3	8	1.2	39	1	97	7.5	6.4	0.7
Magnesium	96	1	mg/l	35	9	74	3.3	1.9	1.24	39	7	82	1.7	1.5	0.82
Potassium	94	1	mg/l	44	4	91	2.3	2.1	0.65	45	6	87	2.2	2.1	0.89
Sodium	96	1	mg/l	44	1	98	10	5.4	1.2	45	2	96	6.5	4.8	1.31
Bicarbonate	94	2	mg/l	39	0	100	39	17	1.19	40	0	100	17	14	0.82
Carbonate	94	2	mg/l	39	39	0	S.I.D.	S.I.D.	S.I.D.	40	40	0	S.I.D.	S.I.D.	S.I.D.
Chloride	94	2	mg/l	37	8	78	13	3	1.49	38	10	74	3.5	2.7	0.93
Fluoride	94	0.1	mg/l	37	20	46	0.16	0.05	1.07	38	25	34	0.11	0.05	0.98
Nitrate	94	0.1	mg/l	37	1	97	5.3	3.6	0.87	38	3	92	6.8	2.3	3.74
Sulfate	94	0.1	mg/l	37	0	100	15	4.1	1.52	38	0	100	7.4	5	0.94
Alkalinity	94	4	mg/l	39	0	100	37	17	1.18	40	0	100	16	14	0.73
Hardness	96	2	mg/l	35	0	100	55	26	1.11	39	1	97	25	20	0.75
COD	97	5	mg/l	43	6	86	60	26	2.02	45	8	82	64	34	1.27
pH	94	0-14		39	0	100	6.9	6.6	0.1	40	0	100	6.5	6.4	0.05
Specific Conductance	94	1	umhos/cm	33	0	100	169	61	1.18	40	1	98	85	58	0.85
Total Dissolved Solids	96	2	mg/l	33	0	100	105	42	1.19	40	1	98	53	37	0.88

Constituents	Data Included Since <sup>a</sup>	DL	Units	Multifamily Residential						Mixed Residential					
				No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV	No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV
Turbidity	94	0.1	NTU	39	0	100	23	10	1.55	40	0	100	21	15	1.06
Total Suspended Solids	96	2	mg/l	36	1	97	46	24	1.41	38	0	100	63	40	1.19
Volatile Suspended Solids	94	1	mg/l/hr	36	2	94	19	13	1.01	37	2	95	35	25	1.33
MBAS	97	0.05	mg/l	36	26	28	0.049	0.025	1.13	39	25	36	0.068	0.025	1.86
Total Organic Carbon	94	1	mg/l	37	0	100	6.9	6	0.85	43	0	100	8.8	6.8	0.74
BOD	94	2	mg/l	31	2	94	11	9	0.91	34	0	100	18	14	0.9
Dissolved Phosphorus	94	0.05	mg/l	30	1	97	0.16	0.1	1.04	39	2	95	0.2	0.14	0.87
Total Phosphorus	94	0.05	mg/l	30	1	97	0.19	0.14	1	39	1	97	0.26	0.18	0.99
NH3-N	94	0.1	mg/l	38	9	76	0.39	0.24	1.43	42	5	88	0.56	0.33	1.13
Nitrate-N	96	0.1	mg/l	37	12	68	1.1	0.8	1.01	38	13	66	0.55	0.44	0.91
Nitrite-N	94	0.1	mg/l	37	10	73	0.1	0.05	1.65	38	7	82	0.12	0.06	1.47
TKN	96	0.1	mg/l	41	0	100	2	1.5	1.11	43	1	98	2.5	1.7	0.95
Dissolved Aluminum	96	100	ug/L	45	33	27	115	50	1.58	44	33	25	182	50	2.72
Total Aluminum	96	100	ug/L	45	5	89	387	300	0.91	45	6	87	513	271	1.89
Dissolved Antimony	97	5	ug/L	45	45	0	S.I.D.	S.I.D.	S.I.D.	45	45	0	S.I.D.	S.I.D.	S.I.D.
Total Antimony	97	5	ug/L	45	45	0	S.I.D.	S.I.D.	S.I.D.	45	44	2	S.I.D.	S.I.D.	S.I.D.
Dissolved Arsenic	97	5	ug/L	45	44	2	S.I.D.	S.I.D.	S.I.D.	45	45	0	S.I.D.	S.I.D.	S.I.D.
Total Arsenic	97	5	ug/L	45	44	2	S.I.D.	S.I.D.	S.I.D.	45	45	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Barium	97	10	ug/L	45	18	60	20	14	0.92	45	19	58	18	14	1.11
Total Barium	97	10	ug/L	45	13	71	25	20	0.81	45	12	73	29	22	1.45
Dissolved Beryllium	97	1	ug/L	31	31	0	S.I.D.	S.I.D.	S.I.D.	31	31	0	S.I.D.	S.I.D.	S.I.D.
Total Beryllium	97	1	ug/L	45	45	0	S.I.D.	S.I.D.	S.I.D.	45	45	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Boron	97	100	ug/L	42	12	71	148	128	0.65	44	21	52	114	111	0.66
Total Boron	97	100	ug/L	43	7	84	202	168	0.58	44	11	75	164	161	0.58
Dissolved Cadmium	97	1	ug/L	45	44	2	S.I.D.	S.I.D.	S.I.D.	45	43	4	S.I.D.	S.I.D.	S.I.D.
Total Cadmium	97	1	ug/L	45	44	2	S.I.D.	S.I.D.	S.I.D.	45	43	4	S.I.D.	S.I.D.	S.I.D.
Dissolved Chromium	97	5	ug/L	45	43	4	S.I.D.	S.I.D.	S.I.D.	45	44	2	S.I.D.	S.I.D.	S.I.D.
Total Chromium	97	5	ug/L	45	39	13	S.I.D.	S.I.D.	S.I.D.	45	42	7	S.I.D.	S.I.D.	S.I.D.
Dissolved Chromium +6	94	10	ug/L	45	45	0	S.I.D.	S.I.D.	S.I.D.	45	45	0	S.I.D.	S.I.D.	S.I.D.
Total Chromium +6	94	10	ug/L	45	45	0	S.I.D.	S.I.D.	S.I.D.	45	45	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Copper	97	5	ug/L	45	20	56	6.9	5	0.91	45	17	62	12	8	1.42
Total Copper	97	5	ug/L	45	4	91	12	12	0.54	45	1	98	19	13	1.29
Dissolved Iron	94	100	ug/L	45	33	27	194	50	2.4	45	33	27	353	50	3.45
Total Iron	94	100	ug/L	45	9	80	791	350	2.14	45	10	78	1475	400	2.67
Dissolved Lead	97	5	ug/L	45	41	9	S.I.D.	S.I.D.	S.I.D.	45	40	11	S.I.D.	S.I.D.	S.I.D.
Total Lead	97	5	ug/L	45	31	31	5.8	2.5	1.48	45	23	49	11	2.5	2.6
Dissolved Manganese	98	100	ug/L	21	21	0	S.I.D.	S.I.D.	S.I.D.	20	18	10	S.I.D.	S.I.D.	S.I.D.
Total Manganese	98	100	ug/L	21	20	5	S.I.D.	S.I.D.	S.I.D.	20	18	10	S.I.D.	S.I.D.	S.I.D.
Dissolved Mercury	94	1	ug/L	40	40	0	S.I.D.	S.I.D.	S.I.D.	44	44	0	S.I.D.	S.I.D.	S.I.D.
Total Mercury	94	1	ug/L	40	40	0	S.I.D.	S.I.D.	S.I.D.	44	44	0	S.I.D.	S.I.D.	S.I.D.

Constituents	Data Included Since <sup>a</sup>	DL	Units	Multifamily Residential						Mixed Residential					
				No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV	No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV
Dissolved Nickel	97	5	ug/L	45	44	2	S.I.D.	S.I.D.	S.I.D.	45	42	7	S.I.D.	S.I.D.	S.I.D.
Total Nickel	97	5	ug/L	45	39	13	S.I.D.	S.I.D.	S.I.D.	45	42	7	S.I.D.	S.I.D.	S.I.D.
Dissolved Selenium	94	5	ug/L	45	45	0	S.I.D.	S.I.D.	S.I.D.	45	45	0	S.I.D.	S.I.D.	S.I.D.
Total Selenium	94	5	ug/L	45	45	0	S.I.D.	S.I.D.	S.I.D.	45	44	2	S.I.D.	S.I.D.	S.I.D.
Dissolved Silver	97	1	ug/L	45	45	0	S.I.D.	S.I.D.	S.I.D.	45	45	0	S.I.D.	S.I.D.	S.I.D.
Total Silver	97	1	ug/L	45	45	0	S.I.D.	S.I.D.	S.I.D.	45	45	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Thallium	97	5	ug/L	45	45	0	S.I.D.	S.I.D.	S.I.D.	45	45	0	S.I.D.	S.I.D.	S.I.D.
Total Thallium	97	5	ug/L	45	45	0	S.I.D.	S.I.D.	S.I.D.	45	45	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Zinc	94	50	ug/L	45	21	53	83	53	1.53	45	9	80	133	89	1.33
Total Zinc	94	50	ug/L	45	5	89	146	89	1.37	45	1	98	203	125	1.35
Bis(2-ethylhexyl)phthalate	99	1	ug/L	6	6	0	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Acenaphthene	99	0.05	ug/L	6	6	0	S.I.D.	S.I.D.	S.I.D.	7	6	14	S.I.D.	S.I.D.	S.I.D.
Acenaphthylene	99	0.05	ug/L	6	6	0	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Antracene	99	0.05	ug/L	6	6	0	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Benzo(a)anthracene	99	0.1	ug/L	6	6	0	S.I.D.	S.I.D.	S.I.D.	7	4	43	0.38	0.05	1.7
Benzo(a)pyrene	99	0.1	ug/L	6	6	0	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Benzo(b)fluoranthene	99	0.1	ug/L	6	6	0	S.I.D.	S.I.D.	S.I.D.	7	6	14	S.I.D.	S.I.D.	S.I.D.
Benzo(k)fluoranthene	99	0.1	ug/L	6	6	0	S.I.D.	S.I.D.	S.I.D.	7	6	14	S.I.D.	S.I.D.	S.I.D.
Chrysene	99	0.1	ug/L	6	6	0	S.I.D.	S.I.D.	S.I.D.	7	2	71	0.62	0.3	1.32
Dibenz(a,h)anthracene	99	0.1	ug/L	6	6	0	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Fluoranthene	99	0.1	ug/L	6	4	33	0.17	0.05	1.54	7	2	71	0.29	0.27	1
Fluorene	99	0.1	ug/L	6	6	0	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Indeno (1,2,3-cd)pyrene	99	0.1	ug/L	6	6	0	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Naphthalene	99	0.05	ug/L	6	6	0	S.I.D.	S.I.D.	S.I.D.	7	7	0	S.I.D.	S.I.D.	S.I.D.
Phenanthrene	99	0.05	ug/L	6	4	33	0.21	0.025	2.08	7	2	71	0.5	0.24	1.43
Pyrene	99	0.05	ug/L	6	4	33	0.2	0.025	1.95	7	2	71	0.35	0.3	1.03
All other SVOCs	94	0.05-5.0	ug/L	30	30	0	S.I.D.	S.I.D.	S.I.D.	33	33	0	S.I.D.	S.I.D.	S.I.D.
Organochlorine Pesticides & PCBs	94	0.05-1.0	ug/L	36	36	0	S.I.D.	S.I.D.	S.I.D.	39	39	0	S.I.D.	S.I.D.	S.I.D.
Carbofuran	96	5	ug/L	43	43	0	S.I.D.	S.I.D.	S.I.D.	44	44	0	S.I.D.	S.I.D.	S.I.D.
Glyphosate	98	25	ug/L	21	20	5	S.I.D.	S.I.D.	S.I.D.	20	20	0	S.I.D.	S.I.D.	S.I.D.
Diazinon	96	0.01	ug/L	37	37	0	S.I.D.	S.I.D.	S.I.D.	39	33	15	S.I.D.	S.I.D.	S.I.D.
Chlorpyrifos	96	0.05	ug/L	37	37	0	S.I.D.	S.I.D.	S.I.D.	39	39	0	S.I.D.	S.I.D.	S.I.D.
Thiobencarb	96	1	ug/L	37	37	0	S.I.D.	S.I.D.	S.I.D.	39	39	0	S.I.D.	S.I.D.	S.I.D.
All other N- and P- Pesticides	94	1.0-2.0	ug/L	37	37	0	S.I.D.	S.I.D.	S.I.D.	39	39	0	S.I.D.	S.I.D.	S.I.D.
2,4-D	96	10	ug/L	33	33	0	S.I.D.	S.I.D.	S.I.D.	39	39	0	S.I.D.	S.I.D.	S.I.D.
2,4,5-TP	96	1	ug/L	33	33	0	S.I.D.	S.I.D.	S.I.D.	39	39	0	S.I.D.	S.I.D.	S.I.D.
Bentazon	96	2	ug/L	33	33	0	S.I.D.	S.I.D.	S.I.D.	39	39	0	S.I.D.	S.I.D.	S.I.D.

Constituents	Data Included Since	DL	Units	High Density Single Family Residential						Educational					
				No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV	No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV
Cyanide	96	0.01	mg/l	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
TPH	94	1	mg/l	3	0	100	1.3	1.2	0.23	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Oil and Grease	94	1	mg/l	3	0	100	1.3	1.2	0.23	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Total Phenols	94	0.1	mg/l	3	3	0	S.I.D.	S.I.D.	S.I.D.	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Total Coliform	94	20	MPN/100ml	3	0	100	1,366,667	1,600,000	0.3	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Fecal Coliform	94	20	MPN/100ml	3	0	100	933,333	900,000	0.7	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Ratio Fecal Coliform/Total Coliform	94			0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Fecal Streptococcus	94	20	MPN/100ml	3	0	100	1,233,333	1,600,000	0.51	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Fecal Enterococcus	94	20	MPN/100ml	3	0	100	610,000	140,000	1.41	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Ammonia	94	0.1	mg/l	34	6	82	0.41	0.3	1.05	40	12	70	0.33	0.18	1.62
Calcium	96	1	mg/l	32	1	97	6.7	5.8	0.55	39	0	100	16	10	0.71
Magnesium	96	1	mg/l	32	8	75	1.5	1.2	0.66	39	8	79	3.2	2.4	0.96
Potassium	94	1	mg/l	38	0	100	3.6	2.9	0.66	41	0	100	3.4	2.7	0.49
Sodium	96	1	mg/l	36	0	100	6.2	5	0.81	41	0	100	26	8	2.21
Bicarbonate	94	2	mg/l	35	0	100	21	13	1.04	40	0	100	39	28	0.76
Carbonate	94	2	mg/l	35	35	0	S.I.D.	S.I.D.	S.I.D.	40	40	0	S.I.D.	S.I.D.	S.I.D.
Chloride	94	2	mg/l	33	2	94	5	4.2	0.69	40	4	90	34	4.6	2.89
Fluoride	94	0.1	mg/l	33	27	18	S.I.D.	S.I.D.	S.I.D.	40	24	40	0.14	0.05	1.21
Nitrate	94	0.1	mg/l	33	1	97	3.9	2.1	1.38	40	2	95	2.6	2.2	0.73
Sulfate	94	0.1	mg/l	33	0	100	6.9	3.8	1.05	40	0	100	17.3	9.3	1.23
Alkalinity	94	4	mg/l	35	0	100	20	13	0.91	40	0	100	36	26	0.72
Hardness	96	2	mg/l	31	0	100	23	20	0.53	39	0	100	52	40	0.79
COD	97	5	mg/l	32	5	84	89	39	1.87	40	10	75	37	34	0.85
pH	94	0-14		35	0	100	6.5	6.5	0.06	40	0	100	7	6.9	0.07
Specific Conductance	94	1	umhos/cm	33	0	100	90	61	0.77	39	0	100	243	111	1.41
Total Dissolved Solids	96	2	mg/l	32	0	100	58	38	0.8	39	0	100	147	68	1.35
Turbidity	94	0.1	NTU	34	0	100	34	19	1.17	41	0	100	64	36	1.14
Total Suspended Solids	96	2	mg/l	30	0	100	95	61	1.16	39	0	100	95	61	1.05
Volatile Suspended Solids	94	1	mg/l/hr	31	0	100	48	31	0.91	39	0	100	23	21	0.69
MBAS	97	0.05	mg/l	29	26	10	S.I.D.	S.I.D.	S.I.D.	38	33	13	S.I.D.	S.I.D.	S.I.D.
Total Organic Carbon	94	1	mg/l	38	0	100	9.8	7.1	0.76	42	0	100	7.5	6.5	0.5
BOD	94	2	mg/l	27	0	100	16	15	0.68	34	0	100	13	12	0.68
Dissolved Phosphorus	94	0.05	mg/l	32	0	100	0.29	0.25	0.57	37	1	97	0.27	0.2	0.86
Total Phosphorus	94	0.05	mg/l	32	0	100	0.39	0.32	0.77	37	0	100	0.31	0.23	0.65
NH3-N	94	0.1	mg/l	34	7	79	0.34	0.25	1.04	40	12	70	0.28	0.15	1.58
Nitrate-N	96	0.1	mg/l	32	11	66	0.86	0.46	1.51	39	12	69	0.51	0.48	0.86
Nitrite-N	94	0.1	mg/l	33	12	64	0.1	0.05	1.01	39	13	67	0.09	0.05	1.41
TKN	96	0.1	mg/l	35	0	100	2.9	2	1.04	39	0	100	1.6	1.3	0.73
Dissolved Aluminum	96	100	mg/l	36	26	28	105	50	1.03	42	11	74	397	248	1.21
Total Aluminum	96	100	mg/l	36	6	83	599	287	1.08	42	2	95	881	720	0.83

Constituents	Data Included Since	DL	Units	High Density Single Family Residential						Educational					
				No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV	No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV
Dissolved Antimony	97	5	mg/l	32	32	0	S.I.D.	S.I.D.	S.I.D.	42	42	0	S.I.D.	S.I.D.	S.I.D.
Total Antimony	97	5	mg/l	32	32	0	S.I.D.	S.I.D.	S.I.D.	42	42	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Arsenic	97	5	mg/l	32	32	0	S.I.D.	S.I.D.	S.I.D.	42	39	7	S.I.D.	S.I.D.	S.I.D.
Total Arsenic	97	5	mg/l	32	29	9	S.I.D.	S.I.D.	S.I.D.	42	39	7	S.I.D.	S.I.D.	S.I.D.
Dissolved Barium	97	10	mg/l	32	17	47	14	5	0.92	42	6	86	28	26	0.72
Total Barium	97	10	mg/l	32	11	66	21	21	0.72	42	6	86	37	33	0.74
Dissolved Beryllium	97	1	mg/l	19	19	0	S.I.D.	S.I.D.	S.I.D.	29	29	0	S.I.D.	S.I.D.	S.I.D.
Total Beryllium	97	1	mg/l	32	32	0	S.I.D.	S.I.D.	S.I.D.	42	42	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Boron	97	100	mg/l	32	12	63	126	125	0.58	42	5	88	189	153	0.65
Total Boron	97	100	mg/l	32	5	84	181	171	0.52	42	4	90	254	227	0.58
Dissolved Cadmium	97	1	mg/l	32	31	3	S.I.D.	S.I.D.	S.I.D.	42	40	5	S.I.D.	S.I.D.	S.I.D.
Total Cadmium	97	1	mg/l	32	30	6	S.I.D.	S.I.D.	S.I.D.	42	34	19	S.I.D.	S.I.D.	S.I.D.
Dissolved Chromium	97	5	mg/l	32	32	0	S.I.D.	S.I.D.	S.I.D.	42	41	2	S.I.D.	S.I.D.	S.I.D.
Total Chromium	97	5	mg/l	32	29	9	S.I.D.	S.I.D.	S.I.D.	42	33	21	3.6	2.5	0.74
Dissolved Chromium +6	94	10	mg/l	36	36	0	S.I.D.	S.I.D.	S.I.D.	43	43	0	S.I.D.	S.I.D.	S.I.D.
Total Chromium +6	94	10	mg/l	36	36	0	S.I.D.	S.I.D.	S.I.D.	43	43	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Copper	97	5	mg/l	32	15	53	8.5	6.7	0.95	42	8	81	13	9.9	0.94
Total Copper	97	5	mg/l	32	2	94	15	11	0.57	42	0	100	24	15	1.49
Dissolved Iron	94	100	mg/l	38	27	29	123	50	1.2	42	15	64	454	190	2.3
Total Iron	94	100	mg/l	38	7	82	1117	546	1.36	42	4	90	2705	625	3.32
Dissolved Lead	97	5	mg/l	32	28	13	S.I.D.	S.I.D.	S.I.D.	42	40	5	S.I.D.	S.I.D.	S.I.D.
Total Lead	97	5	mg/l	32	14	56	10	5.4	1.03	42	30	29	4.9	2.5	1.09
Dissolved Manganese	98	100	mg/l	11	10	9	S.I.D.	S.I.D.	S.I.D.	17	17	0	S.I.D.	S.I.D.	S.I.D.
Total Manganese	98	100	mg/l	11	10	9	S.I.D.	S.I.D.	S.I.D.	17	17	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Mercury	94	1	mg/l	35	35	0	S.I.D.	S.I.D.	S.I.D.	40	40	0	S.I.D.	S.I.D.	S.I.D.
Total Mercury	94	1	mg/l	35	34	3	S.I.D.	S.I.D.	S.I.D.	40	40	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Nickel	97	5	mg/l	32	32	0	S.I.D.	S.I.D.	S.I.D.	42	38	10	S.I.D.	S.I.D.	S.I.D.
Total Nickel	97	5	mg/l	32	27	16	S.I.D.	S.I.D.	S.I.D.	42	26	38	4.7	2.5	0.69
Dissolved Selenium	94	5	mg/l	38	38	0	S.I.D.	S.I.D.	S.I.D.	42	42	0	S.I.D.	S.I.D.	S.I.D.
Total Selenium	94	5	mg/l	38	38	0	S.I.D.	S.I.D.	S.I.D.	42	42	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Silver	97	1	mg/l	32	32	0	S.I.D.	S.I.D.	S.I.D.	42	42	0	S.I.D.	S.I.D.	S.I.D.
Total Silver	97	1	mg/l	32	31	3	S.I.D.	S.I.D.	S.I.D.	42	42	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Thallium	97	5	mg/l	32	32	0	S.I.D.	S.I.D.	S.I.D.	42	42	0	S.I.D.	S.I.D.	S.I.D.
Total Thallium	97	5	mg/l	32	32	0	S.I.D.	S.I.D.	S.I.D.	42	42	0	S.I.D.	S.I.D.	S.I.D.
Dissolved Zinc	94	50	mg/l	38	30	21	44	25	1.42	42	19	55	66	56	0.83
Total Zinc	94	50	mg/l	38	13	66	79	66	0.75	42	5	88	138	98	1.73
Bis(2-ethylhexyl)phthalate	99	1	mg/l	5	5	0	S.I.D.	S.I.D.	S.I.D.	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Acenaphthene	99	0.05	mg/l	5	5	0	S.I.D.	S.I.D.	S.I.D.	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Acenaphthylene	99	0.05	mg/l	5	5	0	S.I.D.	S.I.D.	S.I.D.	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Anthracene	99	0.05	mg/l	5	5	0	S.I.D.	S.I.D.	S.I.D.	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.

Constituents	Data Included Since	DL	Units	High Density Single Family Residential						Educational					
				No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV	No. of Samples	No. of Non-detects	Percent Detects	Mean	Median	CV
Benzo(a)anthracene	99	0.1	mg/l	5	4	20	S.I.D.	S.I.D.	1.24	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Benzo(a)pyrene	99	0.1	mg/l	5	5	0	S.I.D.	S.I.D.	S.I.D.	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Benzo(b)fluoranthene	99	0.1	mg/l	5	4	20	S.I.D.	S.I.D.	1.29	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Benzo(k)fluoranthene	99	0.1	mg/l	5	4	20	S.I.D.	S.I.D.	1.18	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Chrysene	99	0.1	mg/l	5	4	20	S.I.D.	S.I.D.	1.18	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Dibenz(a,h)anthracene	99	0.1	mg/l	5	5	0	S.I.D.	S.I.D.	S.I.D.	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Fluoranthene	99	0.1	mg/l	5	3	40	0.53	0.05	1.67	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Fluorene	99	0.1	mg/l	5	5	0	S.I.D.	S.I.D.	S.I.D.	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Indeno (1,2,3-cd)pyrene	99	0.1	mg/l	5	5	0	S.I.D.	S.I.D.	S.I.D.	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Naphthalene	99	0.05	mg/l	5	3	40	0.04	0.025	0.59	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Phenanthrene	99	0.05	mg/l	5	3	40	0.13	0.025	1.66	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
Pyrene	99	0.05	mg/l	5	1	80	0.83	0.37	1.44	0	0	S.I.D.	S.I.D.	S.I.D.	S.I.D.
All other SVOCs	94	0.05-5.0	mg/l	26	26	0	S.I.D.	S.I.D.	S.I.D.	23	23	0	S.I.D.	S.I.D.	S.I.D.
Organochlorine Pesticides & PCBs	94	0.05-1.0	mg/l	31	31	0	S.I.D.	S.I.D.	S.I.D.	22	22	0	S.I.D.	S.I.D.	S.I.D.
Carbofuran	96	5	mg/l	32	32	0	S.I.D.	S.I.D.	S.I.D.	43	43	0	S.I.D.	S.I.D.	S.I.D.
Glyphosate	98	25	mg/l	11	11	0	S.I.D.	S.I.D.	S.I.D.	17	15	12	S.I.D.	S.I.D.	S.I.D.
Diazinon	96	0.01	mg/l	30	28	7	S.I.D.	S.I.D.	S.I.D.	39	39	0	S.I.D.	S.I.D.	S.I.D.
Chlorpyrifos	96	0.05	mg/l	30	30	0	S.I.D.	S.I.D.	S.I.D.	39	39	0	S.I.D.	S.I.D.	S.I.D.
Thiobencarb	96	1	mg/l	30	30	0	S.I.D.	S.I.D.	S.I.D.	39	39	0	S.I.D.	S.I.D.	S.I.D.
All other N- and P- Pesticides	94	1.0-2.0	mg/l	32	32	0	S.I.D.	S.I.D.	S.I.D.	39	39	0	S.I.D.	S.I.D.	S.I.D.
2,4-D	96	10	mg/l	27	27	0	S.I.D.	S.I.D.	S.I.D.	24	24	0	S.I.D.	S.I.D.	S.I.D.
2,4,5-TP	96	1	mg/l	27	27	0	S.I.D.	S.I.D.	S.I.D.	24	24	0	S.I.D.	S.I.D.	S.I.D.
Bentazon	96	2	mg/l	27	27	0	S.I.D.	S.I.D.	S.I.D.	24	24	0	S.I.D.	S.I.D.	S.I.D.

**Notes**

CV = Coefficient of variation

DL = Detection Limit

S.I.D. = Statistically Invalid Data, not enough data above detection limit collected

a) Detection limits have changed throughout the monitoring process. Only data matching the current detection limit is displayed in this table. The Data Included Since field indicates the first year of the storm season with the current detection limit.

Appendix 3.D  
Source Assessment



The following are common sources of key pollutants identified for the Upper Los Angeles River Watershed Management Area.

## 3.D.1 Bacteria

### 3.D.1.1 *Escherichia coli*

The sources identified in the LA River Bacteria TMDL source assessment “include, but are not limited to, domestic pets, horses, direct human inputs all contributing to the bacteria in the urban runoff, leaks and overflows from wastewater collection systems, illicit connections, failing septic systems, and sediments” (LARWQCB 2010). Because many of these sources are conveyed through the MS4 and discharged to the LA River, there is a linkage between MS4 discharges and bacteria loadings in the LA River.

The LA River Watershed Bacteria TMDL Source Assessment states “A myriad of bacteria sources are present in the Watershed and can potentially degrade the quality of storm drain discharges, including sewage sources, homeless persons, domestic pets, food waste, trash, horses, wildlife, illicit discharges, sediment, and regrowth”. The source assessment for the Long Beach City beaches and LA River Estuary TMDL also identifies MS4 discharges as a significant source of bacteria loading, in addition to Caltrans facilities, vessels covered under the Vessel Discharge Permit, facilities operating under the Statewide General Industrial and Construction Storm Water permits, general NPDES permits, and various nonpoint sources (USEPA 2012).

Bacteria loads associated with MS4 and Caltrans Stormwater Permits, minor and general NPDES permits (Table 2-13 above) are largely unknown due to lack of monitoring for bacteria; however the main contributor of flow and associated bacteria loading is the stormwater conveyance system.

## 3.D.2 Current and Historical Organics

Urban storm water has been recognized as a substantial source of organic pollutants such as PAHs, PCBs and organochlorine compounds (Suffet and Stenstrom, 1997). This is also reflected in routine storm water monitoring performed by LACDPW under the MS4 permit (LACDPW, 2002).

The predominant source of PAHs in urban storm water in the greater Los Angeles area is from aerial deposition and subsequent wash-off of PAHs associated with combustion byproducts (Stein et. al., 2006). The loadings of pesticides, PCBs and dioxins reflect historic uses in Los Angeles River watershed. Although the uses of these compounds are banned, these legacy pollutants continue to remain elevated in sediments. DDT and PCB loadings appear to have declined over the last 30 years (Stein et al., 2003).

In summary, the major contributor of associated organochlorine compounds, pesticides, PCBs and PAHs loading to Los Angeles River is believed to be wet-weather runoff discharged from the storm water conveyance system (USEPA and CA RWQCB, 2005; USEPA, 2012). In the highly urbanized areas of the watershed, the contribution of stormwater runoff and storm-borne sediment loads from these areas drain to the MS4 system.

### 3.D.2.1 Pesticides (DDT, DDE, DDD, Chlorpyrifos, Diazinon and Beta-BHC)

DDT is an organochlorine insecticide that was widely used on agricultural crops and to control disease-carrying insects. In California, DDT was used primarily for agricultural activities. The use of DDT was banned in the U.S. in 1972, except for public health emergencies involving insect diseases and control of body lice. Although DDT is no longer used, it persists in the environment, adhering strongly to soil particles. Total DDT consists of two isomers (p,p-DDT and o,p-DDT) and several degradation products (p,p-DDE, o,p-DDE, p,p-DDD, and o,p-DDD).

Chlorpyrifos is a broad-spectrum, chlorinated organophosphate (OP) insecticide. Chlorpyrifos was first registered for use in the U.S. in 1965. Chlorpyrifos is used on agricultural food and feed crops, cattle ear tags, golf course turf, industrial plants and vehicles, non-structural wood treatments including processed wood products, fence posts and utility poles, and to control public health pests such as mosquitoes and fire ants (NPIC, 2011).

Diazinon is the common name for a synthetic organophosphate pesticide first registered in the U.S. in 1956. Diazinon is used in agriculture to control soil and foliage insects and pests on a variety of fruit, vegetable, nut and field crops. Diazinon is also used on non-lactating cattle in an insecticidal ear tag. Diazinon was one of the most widely used insecticides for household and agricultural pest control. Prior to the cancellation of all residential uses by 2004, diazinon was used outdoors on lawns and gardens, indoors for fly control and in pet collars designed to control fleas and ticks. Current agricultural uses of diazinon are limited to selected crops, and diazinon products (other than cattle ear tags) are regulated as restricted use pesticides (NPIC, 2011a).

Beta-BHC is a synonym of beta-hexachlorocyclohexane (beta-HCH), which is one of the isomers of hexachlorocyclohexane. It is a byproduct of the production of the insecticide lindane. This pesticide was widely used during the 1960s and 1970s, particularly on cotton plants. Although banned as a pesticide more than 30 years ago, traces of beta-HCH can still be found in water and soil (USEPA, 2013a).

In a previous study by Young et al. (1973), the annual wet weather loads for DDTs from the adjacent Ballona Creek watershed were around 18 kg during 1971-1972 water year, which was a particularly wet year. In the 1987-88 period, wet weather loadings for DDT during a comparable size storm year were around 8 kg (Stein et al., 2003). There were no detectable concentrations of DDT in stormwater samples from 1994 to 2005 (LADPW, 2005). However, the detection limits for DDT used by the Los Angeles County lab are two orders of magnitude greater than the Communities of Practice (COP)'s human health objective.

More recently, Curren et al. (2011) evaluated the contribution of subwatersheds to chlorinated pesticide loading during wet weather flow in Los Angeles area. Fifteen storm drains were sampled during three storms during the 2005 - 2006 winter rainy season. The suspended solids were analyzed for chlorinated pesticides. Curren et al. (2011) found DDT concentrations in stormwater during the 2005-2006 season that ranged from non-detect to 0.4 ng/l. This indicates that DDT concentrations in stormwater may exceed the human health criteria. The total DDT loadings based on the average concentrations from these three storms sampled by Curren et al. (2011) were estimated to be 6.2 g.

Based on approved Santa Monica Bay TMDLs for DDTs and PCBs, the concentrations of DDT in the wastewater effluent are currently at or near the detection limits. From 1947 to 1971 large quantities of DDT were discharged from the Montrose Chemical plant in Los Angeles, which manufactured DDT, to the Los Angeles County Joint Water Pollution Control Plant (JWPCP). The concentrations of DDT in surface sediments have decreased substantially since the early 1970s as much of the contamination has been buried below the active sediment layer or degraded as a result of natural processes (USEPA, 2012).

Both chlorpyrifos and diazinon are man-made pesticides. Agricultural sources of chlorpyrifos and diazinon in the watershed are likely causing exceedance of water quality objectives, based on similarity of agricultural practice in the Lower Salinas River watershed. Based on the agricultural application location and amount applied using the Pesticide Use Report (PUR) provided by the California Department of Pesticide Regulation (CDPR), applications of currently registered pesticides such as Chlorpyrifos and Diazinon are reported at the section level or square mile level. The pesticide use

report allows for fairly accurate identification of sources in time and space. It is estimated that agricultural application could be accounted for over 90% of chlorpyrifos use and diazinon uses. In addition, the various uses of diazinon and chlorpyrifos in an urban setting include landscape applications and pest control. Both pesticides can be transported to surface water via urban storm water conveyance systems (CA SWRCB, 2011).

### 3.D.2.2 PCBs

Polychlorinated biphenyls (PCBs) are mixtures of up to 209 individual chlorinated compounds (known as congeners). PCBs were used in a wide variety of applications, including dielectric fluids in transformers and capacitors, heat transfer fluids, and lubricants. In 1976, the manufacture of PCBs was prohibited because of evidence that they build up in the environment and can cause harmful health effects.

PCBs are typically associated with more urban areas. In addition, PCBs were commonly used in a number of household products (e.g., fluorescent light fixtures, paints, waxes, caulking). Although there is little information available to estimate the potential loads from rural areas, rural areas are unlikely to be a major source of PCBs (USEPA, 2012).

Potential pollutants from construction sites include sediment, which may contain historic PCBs from construction materials and the heavy equipment used on construction sites. In addition, in the highly urbanized areas within Los Angeles River watershed re-development of former industrial sites has a higher potential to discharge sediments laden with pollutants such as PCBs. During wet weather, runoff from construction sites has the potential to contribute metals loadings to the creek (USEPA and CA RWRCB, 2005).

In the 1971-1972 water year, the annual wet weather loads for PCBs were around 15 kg (Young et al., 1973). In the 1987-88 water year, the wet weather loadings for PCBs were around 7 kg. LADPW has not indicated detectable levels of PCBs in stormwater since the mid-1990s. However, detection levels for PCBs measured as arochlors were 65 ng/l, which are more than three orders of magnitude greater than the COP human health objective. In 1995-1996 water year, Suffet and Stenstrom (1997) measured PCB congeners and found elevated concentrations of total PCBs (calculated as the sum of the 18 congeners) ranging between 15,100 ng/l to 390,000 ng/l in stormwater runoff.

More recently, Curren et al. (2011) found concentrations of total PCBs that were much lower, ranging from 0.74 ng/l to 16.07 ng/l in the 2005-06 rainy season. These most recent values are all higher than the COP objective. The estimate of PCB loads based on the average concentrations from the three storms sampled by Curren et al. (2011) was 32.9 g. However, a disproportionate mass of PCB loading came from a site which had no obvious sources.

Based on approved TMDL for Calleguas Creek Watershed Organochlorine Pesticides and PCBs, most PCB residues in the watershed are due to past use of PCBs as coolants and lubricants in transformers, capacitors, and other electrical equipment. Atmospheric deposition is also a potential source of PCBs. Urban runoff and publicly owned treatment works (POTWs) are minor sources of PCBs (California RWQCB, 2005).

Furthermore, based on approved Santa Monica Bay TMDLs for DDTs and PCBs, the concentrations of PCBs in the wastewater effluent are currently at or near the detection limits. PCBs entered the JWPCP from several industrial sources in the Los Angeles area. The concentrations of PCBs in surface sediments have decreased substantially since the early 1970s as much of the contamination has been

buried below the active sediment layer or degraded as a result of natural processes (USEPA, 2012). The continued presence of high PCBs in sediments also suggest land-based inputs to the storm drain system, although there is limited information to assess the impact of hundreds of individual industrial or construction stormwater projects (USEPA, 2012).

Atmospheric deposition may be a potential nonpoint source of PCBs. There may also be potential losses of PCBs that may occur as a result of volatilization. Sabin et al. (2011) provide limited information on net-gas exchange during dry weather from sites near Ballona Creek Estuary and Los Angeles Harbor. Volatilization may be an important loss term process for PCBs. However, the rates of volatilization are a function of concentrations in both the air and water which can vary greatly over time and space.

### 3.D.2.3 PAHs

Polynuclear aromatic hydrocarbons (PAHs) are a group of over 200 different chemicals. They are found in nature in coal and crude oil and in emissions from combustion of fossil fuels, forest fires and volcanoes. Most PAHs entering the environment are formed unintentionally during burning (coal, oil, wood, gasoline, garbage, tobacco and other organic material) or in certain industrial processes. Important sources of PAHs in surface waters include deposition of airborne PAHs, municipal waste water discharge, urban storm water runoff particularly from roads, runoff from coal storage areas, effluents from wood treatment plants and other industries, oil spills, and petroleum pressing (ATSDR, 1995).

The loadings of PAHs are attributable to historical and ongoing activities in the watershed. Atmospheric deposition may be a potential nonpoint source of metals and PAHs to the watershed, through either direct or indirect deposition. PAHs are released to the atmosphere through natural and synthetic sources of emissions. The largest sources of PAHs to the atmosphere are from synthetic sources, including wood burning in homes; automobile and truck emissions; and hazardous waste sites and former manufactured-gas sites (USEPA and CA RWRCB, 2005).

It is believed that the primary source of PAHs to Los Angeles River watershed is urban storm water runoff. Indirect atmospheric deposition reflects the process by which metals and PAHs deposited on the land surface may be washed off during storm events and delivered through storm water runoff to Los Angeles River watershed. Most airborne PAHs are deposited on the land (e.g., through precipitation or indirect atmospheric deposition) and are transported to Los Angeles River through storm water runoff (USEPA and CA RWQCB, 2005).

Stein et. al. (2006) characterized the sources and temporal patterns of PAHs in urban storm water by analyzing PAH concentrations and loads from a range of homogeneous land use sites and in-river mass emission sites throughout the greater Los Angeles region. Samples were collected at 30- to 60-min intervals over the course of a storm during multiple storm events over a four-year period in order to investigate PAH sources and inter- and intra-storm patterns in loading. Polycyclic aromatic hydrocarbon storm fluxes ranged from 1.3 g/km<sup>2</sup> for the largely undeveloped watershed to 223.7 g/km<sup>2</sup> for the highly urbanized watershed, with average storm fluxes being 46 times higher in developed versus undeveloped watersheds (Stein et. al. 2006). Early-season storms repeatedly produced substantially higher loads than comparably sized late season storms. Within individual storms, PAHs exhibited a moderate first flush with between 30 and 60% of the total PAH load being discharged in the first 20% of the storm volume. The predominant source of PAHs in urban storm water in the greater Los Angeles area is from aerial deposition and subsequent wash-off of PAHs associated with combustion byproducts (Stein et. al., 2006; Sabin and Schiff, 2004; Gunther et. al., 1987).

### 3.D.2.4 Dioxin

Dioxin is the name given to a group of persistent, very toxic chemicals. Dioxins can be released into the environment through forest fires, backyard burning of trash, certain industrial activities, and residue from past commercial burning of waste. Dioxins break down very slowly and past releases of dioxins from both man-made and natural sources still exist in the environment.

The most toxic form of dioxin is 2,3,7,8-tetrachlorodibenzo-p-dioxin or TCDD. 2,3,7,8-TCDD is released to the environment in stack emissions from the incineration of municipal refuse and certain chemical wastes, in exhaust from automobiles powered by leaded gasoline, in emissions from wood burning in the presence of chlorine, in accidental fires involving transformers containing PCBs and chlorinated benzenes, and from the improper disposal of certain chlorinated chemical wastes. TCDD has been released to the environment as a low level impurity in various pesticides.

Based on a survey of storm water runoff for Dioxins in the San Francisco Bay area, the California Regional Water Quality Control Board estimated the mass contribution from industrial and municipal wastewater discharges, storm water, and direct atmospheric deposition (California Regional Water Quality Control Board, 1998). It is expected that these are similar Dioxin source categories for Los Angeles River watershed.

For the largest categories of direct deposition and storm water runoff, the California Regional Water Quality Control Board expects air emissions from disperse sources or from “reservoir sources” to be the ultimate source due to uniformity of concentrations throughout the region independent of industrial activity. The current known air sources are on- and off-road mobile sources (e.g., motor vehicles, including diesel), and residential wood burning. Dioxin legacy sources may include medical waste incinerators and other combustion sources that operated historically in the area (USEPA, 2013).

In the municipal water discharge category, the suspected sources are also diffuse, including laundry gray-water, storm water inflow, shower water, human waste, bleached toilet paper, food waste, and industrial sources. Of these, the predominant one appears to be laundry gray-water. Dioxins in gray-water may come from pentachlorophenol-treated cotton from overseas, chloranil-based dyes in the fabric, fabric bleaching, soil and human skin (USEPA, 2013). For example, based on the previous study in San Francisco Bay, current best estimate is that municipal wastewater treatment plants contribute less than 10% of the dioxins delivered to the San Francisco Bay (BACWA, 2008).

For the industrial category, the only documented source of dioxins in the California is expected from petroleum refineries. Within the industrial process, the specific source is the wash waters from catalyst regeneration reformers. Further studies suggest that the dioxins that remain in the discharge are primarily due to storm water runoff from areas surrounding the refineries (USEPA, 2013).

### 3.D.2.5 Bis(2-ethylhexyl)Phthalate

Bis-2-ethylhexylphthalate is a plasticizer used in the manufacture of polyvinyl chloride (PVC). It is also a common contaminant of sample containers, sampling apparatus, and analytical equipment. For example, it has been identified as a common laboratory contaminant during groundwater monitoring data analysis (WI DNR, 2002). Attribution to MS4 discharges is uncertain and can possibly be attributable to lab contamination, which is largely a function of lab design, practices and housekeeping.

### 3.D.2.6 Chlorination Byproduct Trihalomethanes (THM)

Trihalomethane compounds chlorodibromomethane and dichlorobromomethane are disinfection byproducts formed from the reactions of chlorine with organic matter in water. These constituents are regulated in the discharges from the WRPs that discharge to the LA River and are likely the primary sources of the Category 3 exceedance level in LA River Reach 3 below the LA-Glendale WRP discharge and the Category 2 exceedance level in the Burbank Western Channel into which the Burbank WRP discharges. As such, these THM exceedances should not be attributed to the MS4 system.

## 3.D.3 Metals

Under the Los Angeles River Metals TMDL, cadmium, copper, lead, selenium, and zinc have separate dry/wet weather numeric targets and/or load allocations within the watershed. The sources and delivery of metals can vary depending on weather and flow conditions. Wet weather metal loads are typically greater than dry weather loads, with wet weather stormwater runoff shown to be the dominant source of annual metals loading (LACDPW, 2010). During dry weather, most of the metals loadings are in the dissolved form. The three major publicly owned treatment works that discharge to the river constitute the majority of flow and metals loadings during dry weather. Storm drains also contribute a large percentage of dry weather loadings because although their flows are typically low, concentrations of metals in urban runoff may be quite high (LARWQCB, 2010b).

During wet weather, most of the metals loadings are in the particulate form and are associated with wet-weather stormwater flow. On an annual basis, stormwater contributes about 40% of the cadmium loading, 80% of the copper loading, 95% of the lead loading and 90% of the zinc loading, the majority of which is permitted through the Los Angeles County MS4 (in addition to the Caltrans stormwater permit, general construction stormwater permit, and general industrial stormwater permit) (LARWQCB, 2010b).

### 3.D.3.1 Toxic Organic Chemicals

The fertilizers used for land and landscape maintenance of municipal areas are also a source of metals. Fertilizers, herbicides, and pesticides contain metals such as cadmium, copper, lead, and zinc. Heavy metals in municipal stormwater can also come from car debris, roof shingles, building materials, and plastics (LACDPW, 2012a).

### 3.D.3.2 Road Infrastructure

“A California study found that cars are the leading source of metal loads in stormwater, producing over 50 percent of the copper, cadmium, and zinc loads. Wear from brake pads, tires, and engine parts is a significant source of metal pollutants. For example, almost 50 percent of the copper loads in roadway stormwater originates from brake pads, and tire wear accounts for over 50 percent of the total cadmium and zinc loads delivered to the San Francisco Bay each year. Such conditions are expected to be similar for the Los Angeles region. Leaking oil, grease, and coolant also contribute metals and PAHs to the roadway loads.” (LACDPW, 2012a). Table 2-14 shows common sources of contaminants in runoff from roads and highways.

**Table 2-14 Common Sources of Roadway Pollutants**

Source	Cadmium	Copper	Nickel	Lead	Zinc	PAHs	Nutrients	Synthetic Organic Chemicals
Gasoline	•	•		•	•			
Exhaust			•	•		•		•
Motor oil and grease			•	•	•	•		
Antifreeze	•	•		•	•	•		
Undercoating				•	•			
Brake linings		•	•	•	•			
Tires	•	•		•	•	•		
Asphalt	•	•	•		•	•		
Concrete		•	•		•			
Diesel oil	•			•	•			•
Engine wear			•	•	•			
Fertilizers, pesticides, and herbicides	•	•	•		•		•	•

Adapted from LACDPW (2012a)

### 3.D.3.3 Silver

According to the TMDL development for the Lower St. Johns River in Florida, silver compounds in soil are released into the environment by rain and may be carried long distances in air and water. Silver is stable and remains in the environment in one form or another until it is taken out again by people. Because silver is an element, it does not break down, but it can change its form by combining with other substances (USEPA, 2004). Silver has also been identified as a component in vehicle fuels (Lee, 1993).

There are limited studies and literature on the sources of silver in the Los Angeles River watershed, but MS4 discharges cannot be eliminated as possible sources of silver. However, it should be noted that over the past five years, there have only been two exceedances of total silver in the watershed out of 70 samples (at Centinela Creek), and no exceedances for dissolved silver. Over the past ten years, there have been seven exceedances of total silver in the watershed out of 168 samples (4%), and four exceedances of dissolved silver out of 128 samples (3%). This low number of exceedances may indicate that silver is not a significant constituent of concern in the watershed.

### 3.D.3.4 Mercury

The adopted San Francisco Bay Basin Plan TMDL identified sources of mercury in San Francisco Bay to include bed erosion (about 38%), the Central Valley watershed (about 36%), urban stormwater runoff (about 13%), the Guadalupe River watershed (about 8%), direct atmospheric deposition (about 2%), non-urban stormwater runoff (about 2%), and wastewater discharges (about 1.5%). There was also a potential that mercury may enter the Bay from Bay margin contaminated sites and abandoned mercury mines outside the Guadalupe watershed (SFBRWQCB, 2006).

The organic form of mercury (methylmercury) is toxic and bioavailable. Sources of methylmercury in Delta waters include tributary inputs from upstream watersheds and within-Delta sources such as methylmercury flux from wetland and in-channel sediments, municipal

and industrial wastewater, agricultural drainage, and urban runoff (CVRWQCB, 2010). Various sources of mercury have been identified, including urban stormwater runoff, correlating to a linkage to MS4 discharges.

It should be noted that over the past five years, there have been only two exceedances for mercury in the Los Angeles River watershed out of 276 samples, one each for Burbank Western Channel and Rio Hondo. This indicates that mercury may not be a significant constituent of concern in the watershed.

Mercury is also recognized to be a potential laboratory contaminant. Mercury is found in thermometers, manometers, vacuum pumps, switches, discharge tubes, dental amalgams, and as a component in chemical reactions. Because of its frequent use, it is not unusual for mercury to be spilled, or otherwise contaminate laboratory, storage, or office areas. Contamination of laboratory spaces from historic mercury spills is also common (University of Florida, 2012).

### 3.D.3.5 Selenium

Selenium was placed on the 303(d) list of impairments for Burbank Western Channel due to a sufficient number of exceedances of the CTR CCC limit for selenium for freshwater aquatic life protection. Exceedances were shown in receiving water quality monitoring data from the Burbank Water Reclamation Plant Annual Monitoring Reports (2003-2007). (SWRCB, 2010).

The Los Angeles River and Tributaries Metals TMDL (May 2010) states in the source analysis amendment: “The sources of selenium appear to be related to natural levels of selenium in soils in the upper watershed. Separate studies are underway to evaluate whether selenium levels represent a ‘natural condition’ for this watershed.”

Although the upper part of the watershed included in the Metals TMDL source analysis of areas draining to LA River Reach 1 and its tributaries, a similar natural condition may exist in the upper watershed draining to Burbank Western Channel. Further analysis of studies indicating presence of marine shale in the ULAR geology and comparison to the Burbank Western Channel upper watershed geology may be completed in the final version of the WQP memo.

Receiving water monitoring reports indicate that largest source of selenium levels in Burbank Western Channel may be the discharges from the Burbank Water Reclamation Plant, potentially eliminated MS4 discharges as a significant source.

### 3.D.3.6 Thallium

Thallium is a highly toxic element that is found mainly in soil, but also present in fossil fuels, alloys, and in electronic utilities. The element has been increasingly used in energy production. Thallium is also found in airborne dust particles from cement production. High concentrations of thallium have been found in the vicinity of cement plants in Poland. About 15 tons of thallium is produced annually in the world, and it is estimated that 2,000 to 5,000 tons are mobilized through industrial processes. In the U.S., about 1,000 tons of thallium is estimated to be released to the environment annually. These amounts are released as dust and vapors (35 tons), bound to non-ferrous metals (60 tons) and in fluids and solid wastes (>500 tons) (Karlsson, 2006).

The presence of thallium in the watershed seems to be a result of industrial and manufacturing facilities, which are regulated by California’s statewide General Industrial Stormwater Permit or individual NPDES permits processes. It should be noted that over the past five years, there have been zero exceedances for thallium in the Los Angeles River watershed out of 71 samples. Over the past ten years, thallium



exceeded WQOs in only 19 of 640 samples (3%). This indicates that thallium may not be a significant constituent of concern in the watershed.

## 3.D.4 Nutrients

### 3.D.4.1 Ammonia-N, Nitrate- N, Nitrite-N, Nitrate-N + Nitrite-N

The staff report for TMDL for Nitrogen Compounds and Related Effects for Los Angeles River and Tributaries states “The three largest POTWs (Donald C. Tillman Water Reclamation Plant, Los Angeles-Glendale Water Reclamation Plant, and Burbank Water Treatment Plant) constitute the major sources of nitrogen in the watershed”. Urban and residential stormwater runoff presents loadings of nutrients that is smaller than that of POTWs, but still represents a linkage to MS4 discharges (LARWQCB 2003). The nutrient loading for stormwater runoff from the land uses draining to MS4s would typically occur during storm events where runoff will carry pollutants from land uses (for example, fertilizers in residential areas) into the storm drain system.

## 3.D.5 Pollutant Class To Be Determined

The section includes water quality conditions that are not specific pollutants (i.e., pH and dissolved oxygen), per se, or constituents where the linkage to another type of constituent will be further investigated during EWMP development.

### 3.D.5.1 Benthic-Macroinvertebrates

Benthic macroinvertebrates impairment was placed on the 303(d) list of impairments for Compton Creek and Arroyo Seco Reach 1 due to Southern California Index of Biological Integrity (IBI) scores that were very poor in October of 2003 and very poor in October of 2004 indicating impairment of benthic community structure. (SWRCB 2010)

The sources of impairment to benthic-macroinvertebrate communities cannot be quantified at this time because specific pollutants have not been identified with a site-specific study. While specific toxic pollutants may be contributing the impairment indicated by a shift in the benthic-macroinvertebrate communities, it is currently not possible to identify specific pollutants or other stressors. Some of the potential pollutants and water quality data that were considered when evaluating these Benthic macroinvertebrates impairments include coliform bacteria, cyanide, nitrite, metals, trash, dissolved oxygen and pH. (SWRCB 2010)

Due to these unknowns MS4 discharges cannot be eliminated as possible sources of benthic-macroinvertebrate related impairment. Further analysis or site-specific studies will likely be completed during development of a benthic-macroinvertebrates TMDL.

### 3.D.5.2 Chlorine

Chlorine is a category 2 pollutant for Burbank Western Channel for wet weather and a Category 3 pollutant for LA River Reached 3 through 6 for dry weather. The Chlorine TMDL for the Santa Fe River in New Mexico identified POTW effluent, agriculture and mining as sources of chlorine (NMEDSWQB 2000). There is no significant runoff from mining or agriculture to MS4s in the LA River watershed, leaving residual chlorine in POTW effluent as the primary source of chlorine in the LA River watershed.

### 3.D.5.3 Cyanide

The sources of cyanide are generally anthropogenic in nature, but can also include some natural non-point sources. Point sources of cyanide can include stormwater runoff from industrial facilities, e.g.,

metal plating and finishing operations may contain cyanide (LACDPW, 2005). Sand and gravel operations, oil and natural gas facilities, transportation, recycling and manufacturing facilities have been identified as possible industrial sources (LACDPW, 2006). These sources are regulated by California's statewide General Industrial Stormwater Permit or individual NPDES permits.

Non-point sources of cyanide may include pesticide use, which can be transported to storm drains during dry weather flow (e.g., over-irrigation) or wet weather flow. The largest likely source of cyanide in the watershed is air-borne deposition from motor vehicle emissions (LACDPW, 2005). The amount of cyanide that could be released to the environment from natural sources is comparatively low. Natural sources may include incomplete combustion from forest fires, decomposition of plant material and fungi. (LACDPW, 2005).

While some potential sources of cyanide may be attributed to industrial facilities, e.g., metal plating, finishing, and manufacturing operations, the MS4 cannot be eliminated as a significant linkage for cyanide impairment as the MS4 is the conduit for cyanide that comes from some of the most significant sources. The largest likely sources of cyanide in the watershed are linked to MS4 discharges, as both air-borne deposition from motor vehicle emissions and pesticide use are linked to surface runoff in the MS4 and from the MS4 to the LA River.

The low level of cyanide exceedances might also be attributed to laboratory contamination issues. For example, laboratories are noted as a possible source of cyanide in the Commercial and Institutional category in the San Francisco area (BACWA, 2008).

#### 3.D.5.4 Dissolved Oxygen

Low dissolved oxygen concentration results when there is insufficient aeration of oxygen into water. Slow-moving, stagnant, and pooled water has little opportunity for aeration, resulting in low concentrations of dissolved oxygen. Biologically, oxygen is also removed from the water column during respiration by plants for cell production. The chemical removal of oxygen can occur as ammonia is oxidized to nitrite, and eventually nitrate, thereby removing available oxygen from the water column. The saturation of oxygen in water is lastly a function of temperature and salinity; water with lower temperature and salinity retains more dissolved oxygen, relative to higher temperature and salinity (CCRWQCB, 2006).

A characterization study conducted in Washington found that increased stream temperatures likely heavily influence lower dissolved oxygen levels (SWDE, 2013). An indicator of low dissolved oxygen is benthic algae cover. Benthic algae is a natural plant in most stream systems and is a vital component of the stream food web. Under natural conditions, algal density is kept at levels that do not adversely affect dissolved oxygen. Factors limiting algal growth include (but not limited to): 1) nutrients, 2) light, 3) substrate, 4) flowing water, and 5) temperature. The direct impact of urban storm water runoff on dissolved oxygen conditions in receiving waters is not thought to be substantial. However, the secondary impacts on the dissolved oxygen balance in receiving waters due to nutrient enrichment, eutrophication, and resulting sediment oxygen demand may be important. Therefore, there is still an indirect linkage between the MS4 and low dissolved oxygen.

#### 3.D.5.5 pH

The receiving water analysis for pH identified exceedances for both the Basin Plan minimum and maximum objectives. Wet weather samples exhibited exceedances for the both minimum/maximum WQOs, while dry weather samples only exhibited exceedances for maximum WQOs. A characterization

study conducted in Washington found that increased low pH is likely a result of the combination of large wet-season precipitation events, the acidity of rainfall and shallow groundwater, and the poor buffering capacity of the stream and surrounding landscape (SWDE, 2013). Most pH impacts in urban waters are caused by runoff of rainwater with low pH levels (acid precipitation). In fact, urban areas tend to have more acidic rainfall than less developed areas (USEPA, 1999).

Higher levels of pH may be caused by the respiration of aquatic plants, e.g. benthic algae. Photosynthesis is accelerated during afternoon hours when peak solar radiation is present. Photosynthesis by algae uses water column carbon dioxide. The reduced carbon dioxide has a net effect of increasing pH. Central Coast Regional Board staff concluded that benthic algae is a source of biologic removal of dissolved oxygen in lower Chorro Creek during afternoon hours, and is a factor causing impairment of low dissolved oxygen and high pH (CCRWQCB, 2006). Higher levels of pH may be attributed to the MS4 by way of nutrient enrichment, which promotes algal growth.

### 3.D.6 Salts

Salts identified as Category 2 and 3 pollutants for ULAR include chloride, sulfate and total dissolved solids (TDS). The staff report for the Santa Clara River Chloride TMDL and Interim Waste Load Allocations for sulfate and TDS identifies chloride sources as primarily from imported water and chloride added by domestic uses such as self-regenerating water softeners. Both of these sources are linked to POTWs and not MS4 discharges, however could be linked to MS4s for discharges of imported water directly to storm drains (LARWQCB 2008). The Los Angeles River watershed is also heavily dependent on imported water, and may have similar sources of salts to that of the Santa Clara River.

### 3.D.7 Trash

A numeric target of 0 (zero) trash in the water has been established by the Los Angeles River and Legg Lake TMDLs. According to the TMDL Staff Reports, the major source of trash in Los Angeles River and Legg Lake results from litter, which is intentionally or accidentally discarded in watershed drainage areas. Transport mechanisms include: (1) storm drains: trash is deposited throughout the watershed and is carried to the various reaches of the river and its tributaries during and after significant rainstorms through storm drains, (2) wind action: trash can also blow into the waterways directly, and (3) direct disposal: direct dumping also occurs. Several studies conclude that urban runoff is the dominant source of trash. The correlation between trash and urban runoff through storm drains can be evidenced by the large amount of trash that accumulates at the base of storm drains (LARWQCB, 2007a, LARWQCB, 2007b). For Legg Lake, based on the land uses in the vicinity of the lake, the observed trash characteristics at the lake, and the fact that only two storm drains discharge to the lake, it is determined that nonpoint sources are the dominant source of trash to Legg Lake. Although the MS4 is not the dominant source of trash at Legg Lake, trash still accumulates at the base of storm drains discharging to the lake and catch basins which collect runoff from surrounding lands (LARWQCB, 2007b).