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FRESNO – CLOVIS STORM WATER QUALITY MONITORING PROGRAM

2015-2016 Annual Report

Prepared for:

FRESNO METROPOLITAN FLOOD CONTROL DISTRICT
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List of Acronyms

BMP	Best management practice
CDEC	California Data Exchange Center
CFR	Code of Federal Regulations
CIMIS	California Irrigation Management Information System
COD	Chemical oxygen demand
CRM	Certified reference material
CTR	California Toxics Rule
DNB	Donny Bridge (Bureau of Reclamation's monitoring gauge located on the San Joaquin River)
DO	Dissolved oxygen
DOC	Dissolved organic carbon
EC	Electrical conductivity
EDD	Electronic data deliverable
EPA	Environmental Protection Agency
FGS	Frontier Global Sciences
GC	Gas chromatography
GC/MS	Gas chromatography-mass spectroscopy
H41	Highway 41 (Bureau of Reclamation's monitoring gauge located on the San Joaquin River)
LCS/LCSD	Lab control spike/ lab control spike duplicate
LWA	Larry Walker Associates
MAV	Maximum allowable value
MCL	Maximum contaminant level from drinking water standards
MDL	Method detection limit
MRP	Monitoring and reporting program
MS/MSD	Matrix spike/matrix spike duplicate
NOAA	National Oceanic and Atmospheric Administration
MS4	Municipal separate storm sewer system
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric turbidity unit
PAHs	Polycyclic aromatic hydrocarbons
PQL	Practical quantitation limit

QA/QC	Quality assurance/quality control
RL	Reporting limit
RPD	Relative percent difference
RWQE	Report of Water Quality Exceedance
SOP	Standard operating procedure
SWAMP	Surface Water Ambient Monitoring Program
SWMP	Stormwater Quality Management Program
TDS	Total dissolved solids
TKN	Total kjeldahl nitrogen
TOC	Total organic carbon
TSS	Total suspended solids
WQO	Water quality objective

Executive Summary

On September 16, 1994, the Central Valley Regional Water Quality Control Board (Regional Board) issued the municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) permit No. CA0083500 to the Fresno Metropolitan Flood Control District (District) and four other co-permittees. The Regional Board most recently renewed the permit on May 31, 2013 (Order No. R5-2013-0080). This permit was subsequently amended on June 5, 2015, to allow participation in the Delta Regional Monitoring Program (R5-2015-0046)[1] The NPDES permit requires the District to implement receiving water monitoring of the San Joaquin River and complete a special canal study.

During the 2015-2016 monitoring season, the Krazan Associates field team, with technical oversight by Larry Walker Associates (LWA) staff, collected samples and requested laboratory analysis for one dry weather monitoring event in the fall of 2015 and three wet weather monitoring events during storms in the wet season for three monitoring stations located on the San Joaquin River. In addition to the river monitoring program, sampling was conducted at two canal locations as part of the Canal Monitoring Program Special Study during two storm events. Since 1996, 61 ambient river monitoring events (20 dry weather and 41 wet weather) have been conducted at the three San Joaquin River monitoring stations. One wet weather canal sampling event was previously conducted during the 2013-2014 monitoring season as part of the special study.

CONCLUSIONS

To assess program effectiveness, the District developed the following three "Management Questions" that are supported directly by the Monitoring Program Element of the *Fresno-Clovis Storm Water Quality Management Program*:[2]

1. Are receiving waters (i.e., the San Joaquin River) meeting water quality objectives and supporting beneficial uses? [L6]
2. Do the regional stormwater basins effectively remove the constituent(s) causing or contributing to the impairment? [L5]
3. Are urban stormwater discharges a significant source of constituent loads causing impairments to the San Joaquin River and other direct receiving waters? Are there other sources that are major contributors to the receiving water load? [L4]

The District operates a regional basin system that serves 90% of the urban area and allows infiltration of 70-80% of the typical annual rainfall. The basins are highly effective at removing sediment and sediment bound pollutants. This system has successfully reduced the impact of urban runoff by attenuating peak flows and removing pollutants. Because of the infrequent

[1] *Waste Discharge Requirements for Fresno Metropolitan Flood Control District, City of Fresno, City of Clovis, County of Fresno, and California State University Fresno Stormwater Discharges from MS4.*

[2] Fresno-Clovis Storm Water Quality Management Program *Long Term Effectiveness Assessment Strategy.* November 2013.

discharge of urban runoff, any exceedance should be considered in light of the much reduced exceedance period, and may not constitute an impairment of a beneficial use.

Considering these management questions, conclusions drawn to date from the monitoring data include the following:

- The water quality of the San Joaquin River, which has been monitored at locations both upstream and downstream of the Fresno urban area, is of high quality. This conclusion is based on the low or undetectable concentrations of dissolved metals, pathogen indicators, TSS, pesticides, and nutrients that have been observed during monitoring. Furthermore, the frequency of exceedance of the WQOs is very low. [L6]
- Apparent increases in dissolved copper and lead concentrations between the upstream and downstream river monitoring locations are statistically significant for data collected between 1996 and 2016. However, the magnitude of dissolved concentration differences is small relative to data variability. For example, the median dissolved copper concentrations at Station 1 and Station 3 are 0.55 µg/L and 0.71 µg/L (absolute difference of 0.16 µg/L), respectively, and standard deviations are 0.37 µg/L and 0.58 µg/L, respectively. [L6, L4]
- A previous assessment of the entire program monitoring history indicated that station differences for *total recoverable* metals were not statistically significant. Exceedances of the WQOs for these metals are infrequent. [L5, L4]
- Historical station-to-station differences were not statistically significant for naphthalene, the most detected PAH (>20%) that also has a water quality objective. Other PAHs were not examined, since they are either less frequently detected or do not have water quality objectives. [L6]
- Pathogen indicators exhibited slight variability between Stations 1, 2, and 3 during the 2015-2016 events. There were nine downstream pathogen indicator samples collected and 42% of them were equal to or lower than the upstream sites. Even for the samples for which the downstream count was higher, the difference was smaller than typical microbiological variability (one order of magnitude). [L6]
- During the 2015-2016 monitoring year, there was only one WQO exceedance (total aluminum) at Station 3, downstream of the Fresno urban area, which was not observed in the upstream samples. Aluminum has been consistently detected at higher concentrations in the upstream samples in both the river and canal. It is not possible to conclude that urban runoff contributed to this exceedance. [L6, L5]

RECOMMENDATIONS FOR 2016-2017 MONITORING

The 2016-2017 river and canal monitoring efforts are anticipated to remain similar to the programs implemented during 2015-2016. Based on a review of the Monitoring Program, the following changes are recommended for river and canal monitoring in 2016-2017:

- As part of the 2016-2017 Sampling and Analysis Plan, perform laboratory assessment for additional laboratories to ensure that reporting limits are sufficiently low.
- Continue to conduct river sampling for three wet weather events, as long as weather permits, and one dry weather event during the 2016-2017 monitoring year.

- Weather permitting, conduct up to two canal sampling events. Perform an analysis on the Canal Monitoring Program results to determine if additional steps need to be taken to reach a conclusion.
- Investigate the source of the organic carbon contamination in the field blanks. This includes, reviewing equipment and sampling handling practices, which will include using new sampling equipment for each site and event.
- Continue to monitor the source of the higher dissolved fraction and occasional field blank contamination for some of the metals results. The frequency of this contamination has been decreasing, but the program should continue to implement clean sampling techniques and ensure that proper equipment protocols are being followed by the field crew.

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1.0 Introduction

The Central Valley Regional Water Quality Control Board (Regional Board) issued the first municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) permit No. CA0083500 to the Fresno Metropolitan Flood Control District (District) and four other co-permittees on September 16, 1994. Subsequently, the Regional Board has renewed the permit multiple times, most recently on May 31, 2013 (Order No. R5-2013-0080). This permit was subsequently amended on June 5, 2015, to allow participation in the Delta Regional Monitoring Program (R5-2015-0046). The NPDES permit requires the District to perform San Joaquin River (river) monitoring and a canal special study. The *Fresno-Clovis Metropolitan Storm Water Quality Management Program (SWMP) Receiving Water Management Program* was completed to address the most recent NPDES permit requirements on December 1, 2013. The District developed the Receiving Water Monitoring Plan and Standard Operating Procedures (SOP)[3] to address the SWMP needs and comply with the NPDES permit as the basis for the Fresno-Clovis Storm Water Quality Monitoring Program (Monitoring Program). The Monitoring Program and SOP include the river status and trends monitoring and the canal special study.

The District contracted a consultant team led by Larry Walker Associates (LWA) to implement the Monitoring Program. Field services were performed by Krazan & Associates of Clovis (Krazan), and laboratory analytical services were provided by BSK Analytical Laboratories (BSK) in Fresno, Caltest Analytical Laboratory (Caltest) in Napa, and Eurofins Frontier Global Sciences (Frontier) in Bothell, Washington.

The District conducted 2015-2016 river and canal monitoring according to the SOP. The objectives of this river monitoring are to characterize receiving water quality and determine if the discharge of urban storm water runoff from the District's storm water drainage system impairs water quality in the San Joaquin River.

River water column samples were collected and analyzed from three San Joaquin River monitoring stations, during one dry weather monitoring event in September 2015, and three wet weather monitoring events in December 2015 as well as January and March 2016. Since 1996, 61 monitoring events (20 dry weather and 41 wet weather) have been conducted at three monitoring stations in the San Joaquin River. In addition to river monitoring and in accordance to the new permit and the SOP, the District conducts canal special study monitoring at two canal locations. One location is just upstream of the NPDES permit boundary at Mill Ditch (an upstream tributary to Herndon Canal) and the other at Herndon Canal, downstream of the NPDES permit area. Sampling is only performed when flow is present in the canal and there are stormwater discharges to the canal. During the 2015-2016 monitoring season, sampling was conducted at two canal locations during two storm events in January 2016. Previously, one wet weather canal monitoring event was conducted during the 2013-2014 monitoring season. The District will include canal special study updates and data collection summaries in all annual reports until the conclusion of the four year study in 2016-2017, when a more thorough analysis of the collected data will be performed.

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[3] Fresno Metropolitan Flood Control District. *2013-2014 Receiving Water Monitoring Plan and Standard Operating Procedures: River Monitoring and Canal Study*. Prepared by Larry Walker Associates. September 2013.

This report includes a description of the stormwater quality monitoring stations, methods used for sample collection and analysis, field activities conducted during the monitoring events, results of all field and laboratory measurements, and quality assurance/quality control evaluations.

2.0 Methods and Stations Monitored

Descriptions of the monitoring stations and the methods used during the 2015-2016 monitoring activities are provided in this section. Detailed station descriptions, sample collection methods, and analytical methods are included in the standard operating procedure document identified above.

2.1. MONITORING STATIONS

River monitoring involved the collection and analysis of water samples from three stations located on the San Joaquin River. Two of the river sampling sites (Stations 1 and 2) are located upstream of the Fresno-Clovis metropolitan area, and one sampling station (Station 3) is located downstream (**Figure 1**). Station 1 has been monitored at the same location since the first monitoring event, conducted in July of 1996, while Stations 2 and 3 have both been moved slightly downstream. The SOPs contain detailed descriptions of the stations, sample collection methods, and monitoring procedures, as well as logistical information.

Friant Dam (Station 1)

Station 1 is the farthest upstream location and is located just below Friant Dam where Road 20 crosses the San Joaquin River.

Rice Road (Station 2)

Station 2 is located at the Rice Road alignment and is representative of the waters of the San Joaquin River as they first enter the Fresno urban area.

Camp Pashayan (Station 3) (formerly Jura Farms Bridge)

Station 3 is the most downstream station and is located at Camp Pashayan, east of State Route 99. Station 3 was previously located at Jura Farms Bridge, but was moved to its current location due to access issues.

Canal special study monitoring involved the collection and analysis of water samples at two canal sites. One location is just upstream of the NPDES permit boundary at Mill Ditch (an upstream tributary to Herndon Canal) and the other at Herndon Canal, near its discharge to the San Joaquin River.

Mill Ditch at North Temperance Avenue (Canal 1)

Canal 1 is located on Mill Ditch, which is a major drainage point for the rural streams that are located east of the Fresno urban area. Mill Ditch runs into the Herndon Canal approximately six miles downstream from the Canal 1 monitoring site. It was chosen as an upstream canal site due to its large drainage area and its significant contribution to the Herndon Canal.

Herndon Canal at North Garfield Avenue (Canal 2)

Canal 2 is located on Herndon Canal, downstream from the Fresno urban area. The monitoring site is approximately five miles upstream from the confluence of Herndon Canal and the San Joaquin River.

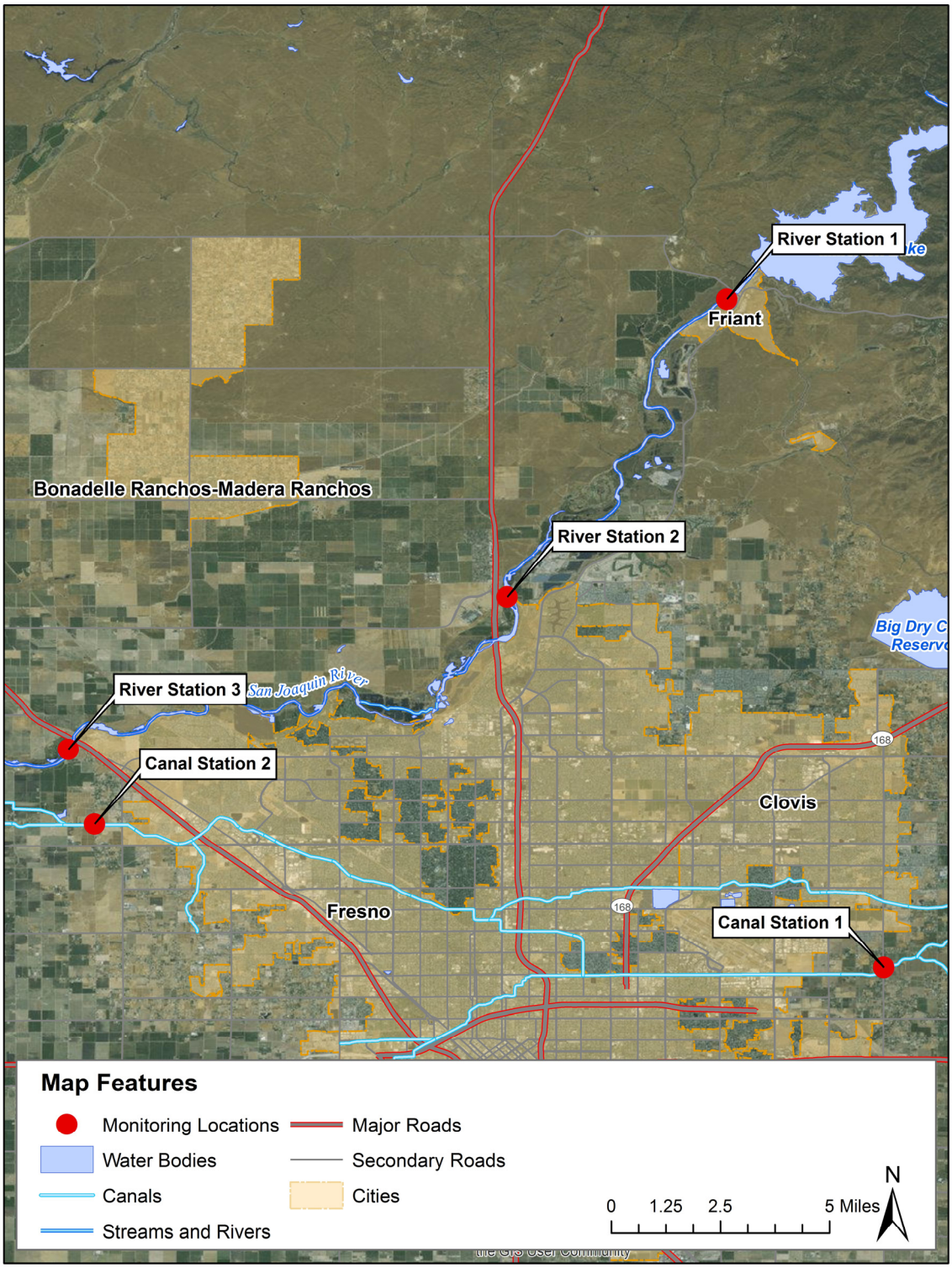

Figure 1. River and Canal Monitoring Sites for Fresno-Clovis Monitoring Program

2.2. WEATHER TRACKING

The tracking of approaching storm systems was primarily accomplished using weather information provided by Western Weather Group, a weather forecasting contractor. Western Weather Group's forecasts were supplemented by weather and forecast data available on the National Oceanic and Atmospheric Administration (NOAA)'s National Weather Service website.[4] Western Weather Group forecasting services consisted of two components: 1) daily written forecasts provided on Monday through Friday or, by request, on other days, including indicated probabilities of precipitation and expected precipitation amounts, as well as expected start and stop times for predicted storms during the succeeding five-day period; and 2) around-the-clock access to Western Weather Group forecasters for telephone consultation regarding impending storm events.

2.3. MONITORING EVENT SELECTION

The LWA Task Manager and the Krazan Field Coordinator continually tracked weather forecasts and identified potential storms for sampling events. The LWA Task Manager, in consultation with the District, made the decision to sample storm events based on approved storm event selection criteria.

The District designed the river monitoring to characterize receiving water and runoff quality under a variety of seasonal and hydrological conditions. Planned river monitoring includes one dry weather monitoring event and three wet weather events: one each during the early, middle, and late parts of the wet season. The SOPs specify that events with forecasted amounts greater than one-half of an inch are targeted. Based on the design capacity of the regional basin system, it is presumed that this threshold must be exceeded for non-negligible discharge to occur. Antecedent conditions (e.g., rainfall in previous days) and regional basin available storage capacity are also factored into monitoring event targeting.

Safety considerations require that river sampling be performed in daylight. Sampling is performed if the last rainfall is less than eight hours before the start of sampling, unless there are other mitigating factors such as expected additional rainfall. Events with forecasted amounts below these thresholds are contingently considered in order to meet permit requirements. *During the 2015-2016 monitoring year, the District collected river samples for one dry weather and three wet weather events.*

A canal monitoring sampling event is triggered by the discharge of the District's basins into the canals. The LWA Task Manager and the District discuss the potential for sampling events, but the final decision to sample is made by the District when confirmation of basin discharges are provided. Ideally, the field crews will collect canal monitoring samples for two wet weather events during the storm monitoring year. *During the 2015-2016 monitoring year, the District collected wet weather canal special study samples for two events.*

2.4. MONITORING METHODS

Depth-integrated composite samples and grab samples were collected during one dry season and three wet weather river monitoring events at three stations in the San Joaquin River during 2015-2016. Two wet weather canal monitoring events were also conducted at the Herndon Canal and

[4] http://nws.noaa.gov/

Mill Ditch. Depth-integrated composite samples were collected from the shore using an expandable pole, Teflon tubing, and a portable peristaltic pump. These samples were collected by pumping water through the Teflon tubing, directly into the composite bottle, through the depth of the water column at each monitoring station. As required for certain constituents, grab samples were collected at mid-depth by submerging and filling sample bottles. Measurements for field-measured parameters were taken at mid-depth using a portable multi-meter. Dissolved metals samples were filtered in the field within 15 minutes of sample collection.

River stage data was obtained from the Bureau of Reclamation's San Joaquin River at Donny Bridge (DNB) gauge[5] and San Joaquin River at Highway 41 (H41) gauge[5]. Rainfall data were obtained from the California Irrigation Management Information System (CIMIS)'s Fresno State gauge (Station #80)[6] and the California Data Exchange Center (CDEC)'s Friant Dam station gauge (Station FRT)[5].

2.5. ANALYTICAL METHODS

For each field measurement performed, the unit, sample type, and reporting limit (RL), if applicable, are presented in **Table 1**. For each constituent sampled, the analytical method, method detection limit (MDL), RL, unit, and sample type are presented in **Table 2**. The MDL, as defined in 40 CFR Part 136, is the "concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix....". The RL is a concentration determined by the laboratory that is greater than the MDL and reflects a limit at which the laboratory can accurately quantify results. More detailed laboratory method information is provided in the SOPs.

Table 1. Field Measurement Parameter Specifications

Parameter	RL	Units	Sample Type
Electrical conductivity (EC)	--	mS/cm	Grab/ In-situ
pH	0 - 14	Std. units	
Dissolved oxygen (DO)	Sensitivity to 5 mg/L	mg/L	
Turbidity	0.1	NTU	
Weather	--	Degrees F	
Water temperature	--	Degrees C	
Velocity	--	ft/sec	Estimated

[5] Based on data reported on the California Data Exchange Center (CDEC) website (http://cdec.water.ca.gov/cgi-progs/selectQuery)

[6] California Irrigation Management Information System (CIMIS) website: (http://www.cimis.water.ca.gov/WSNReportCriteria.aspx)

Table 2. Analytical Methods, Method Detection and Reporting Limits, and Sample Type for Samples Collected in 2015-2016

Constituent	Lab	Method [a]	MDL	RL	Units	Sample Type
Ammonia (NH_3) as N	BSK	EPA 350.1	0.024	0.10	mg/L	Grab
Total & Fecal Coliform		SM 9221-B/E	--	1.8	MPN/100mL	Grab
E.coli and/or enterococcus		SM 9221-B/F	--	1.8	MPN/100mL	Grab
Total Oil & Grease		EPA 1664A	0.24-0.27	5.0	mg/L	Grab
Total Suspended Solids (TSS)		SM 2540-D	5.0	5.0	mg/L	Composite[c]
Total Dissolved Solids (TDS)		SM 2540-C	5.0	5.0	mg/L	Composite[c]
Chemical Oxygen Demand (COD)		SM 5220-D	6.4-13	15-30	mg/L	Composite[c]
Total Kjeldahl Nitrogen (TKN)		EPA 351.2	0.41	1.00	mg/L	Composite[c]
Total Organic Carbon (TOC)		SM 5310-C	0.047-0.085	0.20	mg/L	Composite[c]
Dissolved Organic Carbon (DOC)		SM 5310-C	0.094-0.095	0.20	mg/L	Composite[c]
Total Phosphorus as P		EPA 365.4	0.064	0.10	mg/L	Composite[c]
Hardness as CaCO3		SM 2340-B	0.19	0.41	mg/L	Composite[c]
Polynuclear Aromatic Hydrocarbons (PAHs)	Caltest	EPA 625M	0.004	0.005	µg/L	Composite[c]
Anions						
Chloride	BSK	EPA 300.0	0.51	1.0	mg/L	Composite[c]
Fluoride			0.042	0.10	mg/L	
Sulfate as SO4			0.40	1.0	mg/L	
Nitrate as N			0.44	1.0	mg/L	
Nitrite as N			0.02	0.05	mg/L	
Orthophosphate as P			0.22	0.60	mg/L	
Cations						
Total recoverable Aluminum	BSK	EPA 200.7	0.023	0.050	mg/L	Composite[c]
Total recoverable Barium			0.023	0.050	mg/L	
Total recoverable Boron			0.046	0.10	mg/L	
Total recoverable Calcium			0.046	0.10	mg/L	
Total recoverable Magnesium			0.046	0.10	mg/L	
Total recoverable Potassium			0.91	2.0	mg/L	
Total recoverable Sodium			0.45	1.0	mg/L	
Total Recoverable and Dissolved[b] Metals						
Silver	FGS	EPA 1638	0.002-0.02	0.02-0.202	µg/L	Composite[c]
Arsenic			0.10-1.01	0.30-3.04	µg/L	
Cadmium			0.008-0.081	0.02-0.202	µg/L	
Chromium			0.02-0.2	0.10-1.01	µg/L	
Copper			0.02-0.2	0.1-1.01	µg/L	
Nickel			0.04-0.40	0.10-1.01	µg/L	
Lead			0.005-0.051	0.04-0.405	µg/L	
Selenium			0.44-4.45	0.61-6.07	µg/L	

Constituent	Lab	Method [a]	MDL	RL	Units	Sample Type
Zinc			0.16-1.62	0.50-5.07	µg/L	
Mercury	FGS	EPA 1631E	0.08	0.50	ng/L	Pumped Grab

[a] SM = Standard Methods. From: American Public Health Association, 2005. *Standard Methods for the Examination of Water and Wastewater*, 21st edition. EPA = EPA Methods. From: United States Environmental Protection Agency, March 1983. *Methods for Chemical Analysis of Water and Wastes*. EPA 600479020.
[b] Filtration for dissolved metals was performed in the field.
[c] Depth-integrated composite samples

3.0 2015-2016 Monitoring

Between July 1, 2015 through June 30, 2016, the District conducted one dry weather event and three wet weather events at locations on the San Joaquin River, as well as two wet weather events on the Herndon Canal and Mill Ditch.

3.1. PRE-SEASON TRAINING

Krazan and Associates field staff participated in refresher sample collection training as part of the dry weather river monitoring event on September 24, 2015. During the monitoring event, the field team leader trained personnel in the proper techniques for collection of depth-integrated composite samples and mid-depth grab samples using "clean" sampling techniques.

3.2. DRY WEATHER RIVER MONITORING

Dry weather river monitoring was conducted at all three San Joaquin River monitoring stations on September 24, 2015. All dry weather monitoring event samples were collected using the same procedures as required for wet weather monitoring event sample collection. All river samples were delivered or shipped to the analytical laboratories for analysis by the end of the next business day. Detailed river monitoring procedures are presented in the SOPs. A summary of the dry weather river monitoring event is presented in **Table 3**.

Table 3. Dry Weather River Monitoring Event (DW020), September 24, 2015

Dry Weather River Monitoring	Station 1 Friant Dam	Station 2 Rice Road	Station 3 Camp Pashayan
Composite sample collection time	8:45	10:15	11:40
Grab sample collection time	9:00	10:30	11:55

The complete sets of analyses requested and completed for river samples and field-initiated quality assurance/quality control (QA/QC) samples collected during the dry weather river monitoring event are summarized in **Table 4**.

Table 4. Laboratory Analyses for Dry Weather River Monitoring (DW020), September 24, 2015

ANALYSIS [a], [b]	River Monitoring Stations			QA/QC Samples		
	Station 1 Friant Dam	Station 2 Rice Road	Station 3 Camp Pashayan	Field Blank Station 2	MS/MSD Station 1	Field Duplicate Station 3
Total Recoverable Mercury	R✓	R✓	R✓	R✓	R✓	R✓
Total Recoverable Metals	R✓	R✓	R✓	R✓	R✓	R✓
Dissolved Metals	R✓	R✓	R✓	R✓	--	R✓
Ammonia	R✓	R✓	R✓	--	--	R✓
Hydrocarbon Oil & Grease	R✓	R✓	R✓	--	--	R✓
Total & Fecal Coliform	R✓	R✓	R✓	--	--	R✓
E.coli	R✓	R✓	R✓	--	--	R✓
Anions	R✓	R✓	R✓	--	--	R✓
Cations	R✓	R✓	R✓	--	--	R✓
Chemical Oxygen Demand	R✓	R✓	R✓	--	--	R✓
Hardness	R✓	R✓	R✓	--	--	R✓
Total Kjeldahl Nitrogen	R✓	R✓	R✓	--	--	R✓
Total Phosphorus	R✓	R✓	R✓	--	--	R✓
Dissolved Organic Carbon	R✓	R✓	R✓	R✓	--	R✓
Total Organic Carbon	R✓	R✓	R✓	R✓	--	R✓
Total Dissolved Solids	R✓	R✓	R✓	--	--	R✓
Total Suspended Solids	R✓	R✓	R✓	--	--	R✓
Polynuclear Aromatic Hydrocarbons	R✓	R✓	R✓	R✓	R✓	R✓

[a] "R" indicates that analysis was requested on chain of custody form.
"✓" indicates that the laboratory completed and reported this analysis.
"--" indicates that the analysis was not required in the SOPs.

[b] Results for additional conventional constituents (Alkalinity as CaCO3, Bicarbonate as CaCO3, Carbonate as CaCO3, and Hydroxide as CaCO3) are not required by the SAP but were reported by the laboratory only for this event.

3.2.1. Difficulties Encountered and Their Resolution

There were no significant difficulties or variances from the SOPs encountered during the dry weather river event conducted during the 2015-2016 monitoring season. Any laboratory analytical and reporting problems encountered are described in the Quality Assurance/Quality Control section of this report.

3.3. WET WEATHER MONITORING

Observations of approaching storm systems commenced in October 2015, at which time incoming storm systems were considered to be candidates for river and canal monitoring, subject to the storm selection criteria established in the SOPs.

Historically, a river stage and precipitation gauge was installed for use at Station 3, but the gauge was removed during the summer of 2011 due to Caltrans bridge construction. For this monitoring year, stage data was recorded at both the Bureau of Reclamation's San Joaquin River at Donny Bridge (DNB) gauge and San Joaquin River at Highway 41 (H41) gauge. The DNB gauge is just slightly downstream from Station 3, whereas the H41 gauge is just slightly downstream from Station 2. Precipitation data was recorded at the California Irrigation Management Information System (CIMIS)'s Fresno State precipitation gauge. During the 2015-2016 monitoring year, 16.14 inches of rain were recorded at the Fresno State site, which is higher than the average Fresno area annual precipitation of 11.57 inches (National Weather Service). Daily precipitation measured near Fresno State and the events monitored are illustrated in **Figure 2**. River stage (water height) at DNB and H41, and cumulative precipitation measured near Fresno State are shown in **Figure 3**.

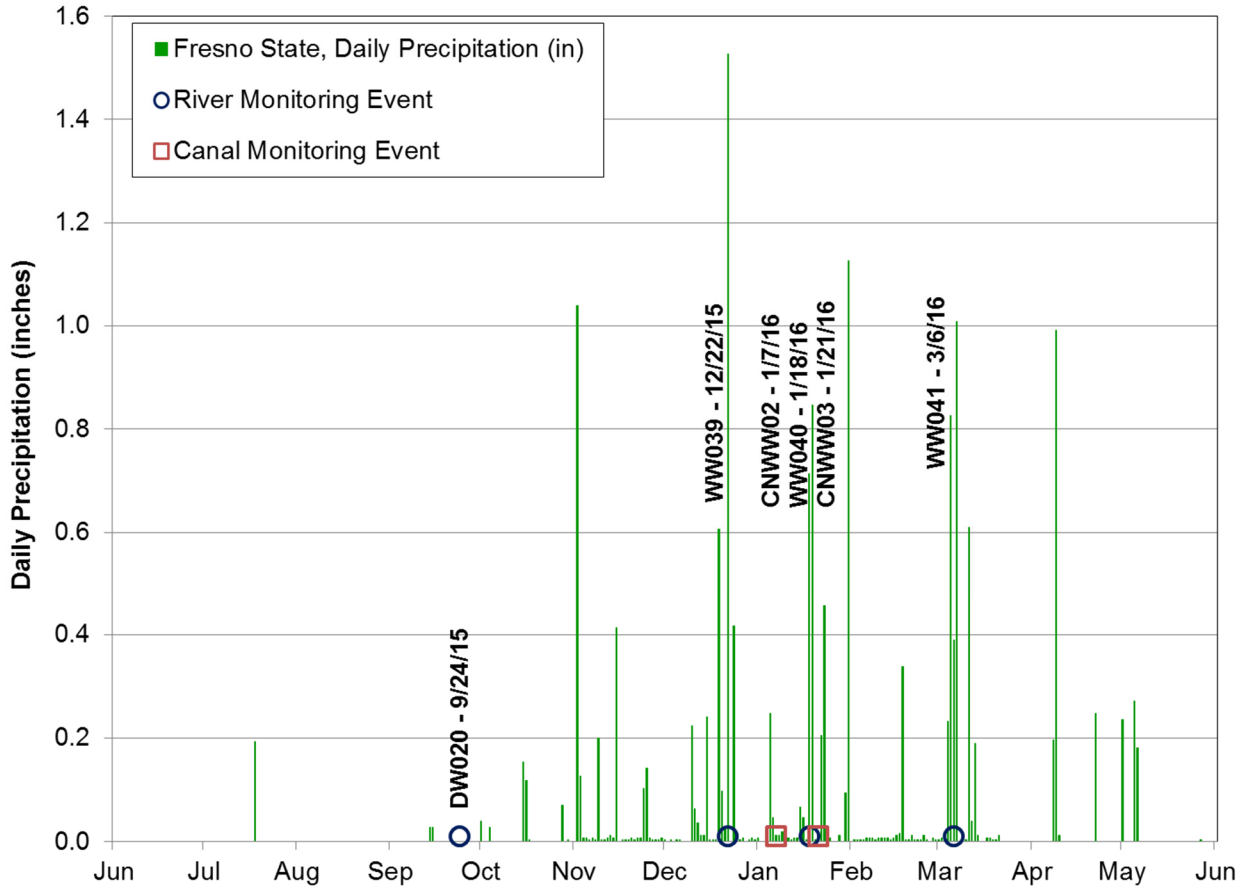

Figure 2. Daily Precipitation at Fresno State (June 1, 2015 - May 31, 2016)

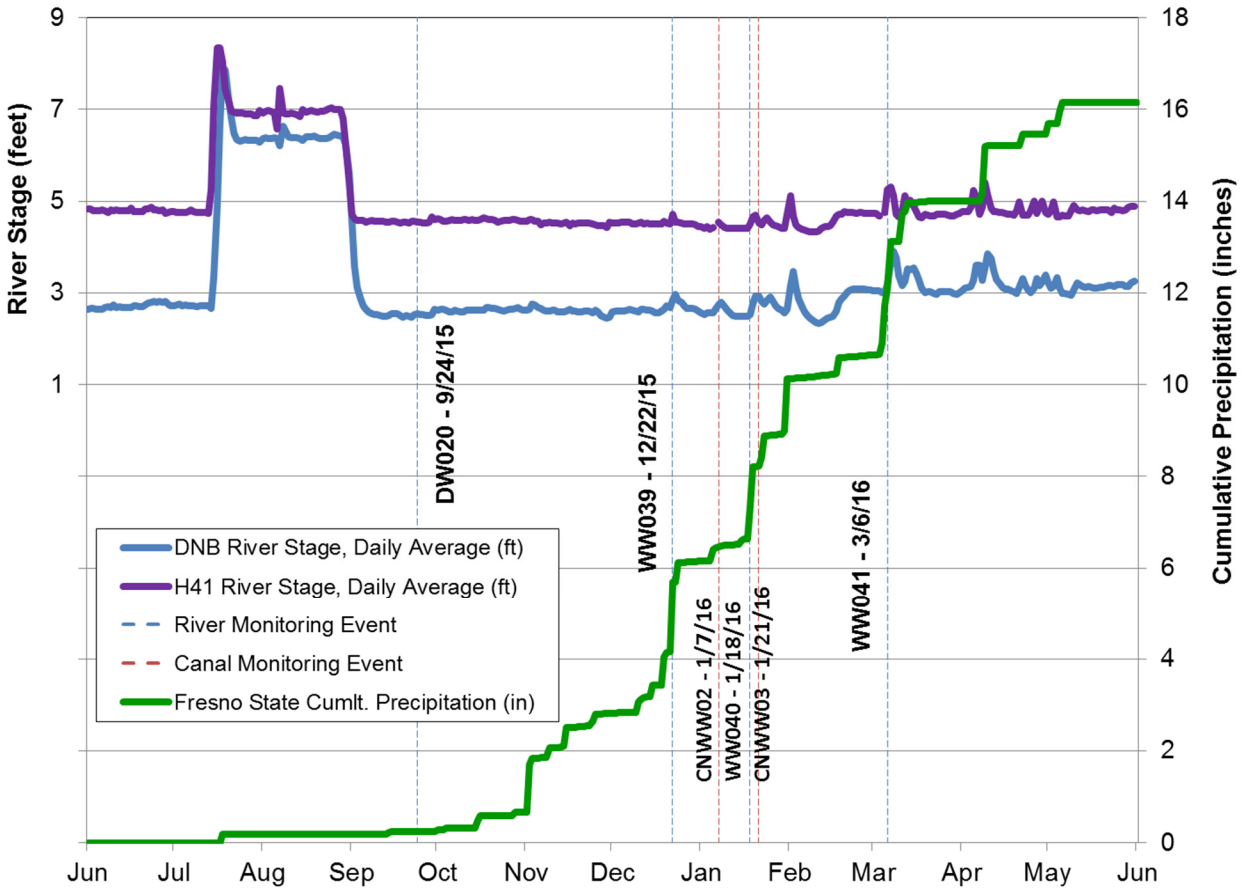

Figure 3. River Stage and Cumulative Precipitation at Fresno State (June 1, 2015 - May 31, 2016)

3.3.1. Description of Targeted Wet Weather Events

The rainfall records for the Fresno State site, as reported by CIMIS, were analyzed to identify storm events. Storm events are identified when at least 0.1" of precipitation occurs within a six hour period and ends when there is a six hour period with less than 0.03" of precipitation. In this way, some days may contain multiple events. **Table 5** summarizes events identified during the data period, antecedent dry periods, and antecedent cumulative annual rainfall.

Table 5. Rainfall Events for June 1, 2015 through May 31, 2016

Storm Event Start Time	Storm Event End Time	Total Event Precipitation (inches)	Event Duration (hours)	Cumulative Precipitation to Date[1] (inch)	Days Since Last Storm Event	Days Since Last Storm Event >0.25"
7/18/2015 19:00	7/18/2015 22:00	0.19	4	0.00	47.8	47.8
10/16/2015 20:00	10/16/2015 23:00	0.11	4	0.47	89.9	137.8
11/2/2015 9:00	11/2/2015 21:00	0.66	13	0.67	16.5	154.4
11/2/2015 22:00	11/3/2015 4:00	0.5	7	1.33	0.0	0.0
11/9/2015 15:00	11/9/2015 23:00	0.16	9	1.91	6.5	6.5
11/15/2015 10:00	11/15/2015 14:00	0.41	5	2.10	5.5	12.3
11/25/2015 6:00	11/25/2015 8:00	0.14	3	2.66	9.7	9.7
12/10/2015 11:00	12/10/2015 17:00	0.22	7	2.85	15.1	24.9
12/15/2015 9:00	12/15/2015 17:00	0.24	9	3.19	4.7	29.8
12/19/2015 8:00	12/20/2015 1:00	0.61	18	3.45	3.6	33.8
12/22/2015 13:00	**12/23/2015 5:00**	**1.5**	**17**	**4.22**	**2.5**	**2.5**
12/24/2015 14:00	12/24/2015 20:00	0.41	7	5.72	1.4	1.4
1/5/2016 3:00	1/5/2016 15:00	0.2	13	6.17	11.3	11.3
1/18/2016 3:00	**1/18/2016 14:00**	**0.71**	**12**	**6.66**	**12.5**	**24.3**
1/19/2016 6:00	1/19/2016 15:00	0.85	10	7.37	0.7	0.7
1/22/2016 13:00	1/22/2016 17:00	0.11	5	8.25	2.9	2.9
1/22/2016 22:00	1/23/2016 3:00	0.16	6	8.35	0.2	3.3
1/23/2016 6:00	1/23/2016 10:00	0.39	5	8.52	0.1	3.6
1/31/2016 1:00	1/31/2016 14:00	1.12	14	9.02	7.6	7.6
2/18/2016 1:00	2/18/2016 4:00	0.23	4	10.27	17.5	17.5
2/18/2016 10:00	2/18/2016 13:00	0.11	4	10.49	0.3	17.8
3/4/2016 18:00	3/4/2016 22:00	0.23	5	10.68	15.2	33.2
3/5/2016 13:00	**3/6/2016 6:00**	**1.13**	**18**	**11.00**	**0.6**	**34.0**
3/7/2016 3:00	3/7/2016 11:00	1.01	9	12.13	0.9	0.9
3/11/2016 11:00	3/11/2016 22:00	0.59	12	13.15	4.0	4.0
3/13/2016 14:00	3/13/2016 17:00	0.17	4	13.82	1.6	1.6
4/8/2016 20:00	4/9/2016 9:00	1.19	14	14.03	26.1	27.9
4/22/2016 14:00	4/22/2016 22:00	0.25	9	15.23	13.2	13.2
5/1/2016 19:00	5/1/2016 21:00	0.24	3	15.48	8.9	22.4
5/5/2016 23:00	5/6/2016 3:00	0.45	5	15.72	4.08	26.58

Notes:
A rainfall event was defined as 0.1" of precipitation within a six hour period, ending with a six hour period with less than 0.03"
Bolded storm events were sampled by the District in the river.
[1] Cumulative precipitation is calculated for the 2015/2016 monitoring season beginning on June 1st up to the storm event start time.

3.3.2. Wet Weather River Monitoring

River monitoring event parameters and antecedent conditions summaries for the three wet weather San Joaquin River monitoring events are shown in **Table 6**, **Table 8**, and Error! Reference source not found.. Depth-integrated composite samples and mid-depth grab samples were successfully collected from each of the three river monitoring stations during each

monitored storm event. The monitoring event hydrographs, showing river stage (water level), rainfall rates, and cumulative rainfall for each monitoring event, are presented in **Figure 4** through **Figure 9**. Analyses requested and completed for San Joaquin River samples and field-initiated QA/QC samples during the three wet weather monitoring events are summarized in **Table 7**, **Table 9**, and **Table 11**.

Field crews collected samples for the following storm events:

- River Monitoring Event 1 (WW039): December 22, 2015
- River Monitoring Event 2 (WW040): January 18, 2016
- River Monitoring Event 3 (WW041): March 6, 2016

Table 6. Rainfall and Antecedent Conditions for Wet Weather River Monitoring Event 1 (WW039), December 22, 2015

Wet Weather Monitoring	Station 1 Friant Dam	Station 2 Rice Road	Station 3 Camp Pashayan
Sampling			
Composite sample collection time	12/22/15 9:15	12/22/15 10:45	12/22/15 12:10
Grab sample collection time	12/22/15 9:30	12/22/15 11:00	12/22/15 12:20
Event Rainfall [a]			
Time of first rain (storm start)		12/22/15 13:00	
Time of last rain (storm end)		12/23/15 5:00	
Event total rainfall (inches)		1.50	
Antecedent Conditions [a]			
Date of previous precipitation		12/20/15 1:00	
Time since previous precipitation		2.5 days	
Date of previous storm ≥ 0.1 in.		12/20/15 1:00	
Time since previous storm ≥ 0.1 in.		2.5 days	
Date of previous storm ≥ 0.25		12/20/15 1:00	
Time since previous storm ≥ 0.25 in.		2.5 days	
Cumulative precipitation in the storm season prior to storm event (in.)[b]		4.22	

[a] Antecedent conditions and event rainfall data are derived from on-site measurements at the Fresno State CIMIS gauge. Small amounts of rain (<0.01 inches/hour) were recorded beginning at 9am on 12/22/15.
[b] Storm season begins on October 1st.

Precipitation data from CDEC's Friant Dam station were included in **Figure 4** and **Figure** 5, as the CIMIS precipitation data at Fresno State erroneously did not record rainfall prior to sampling.

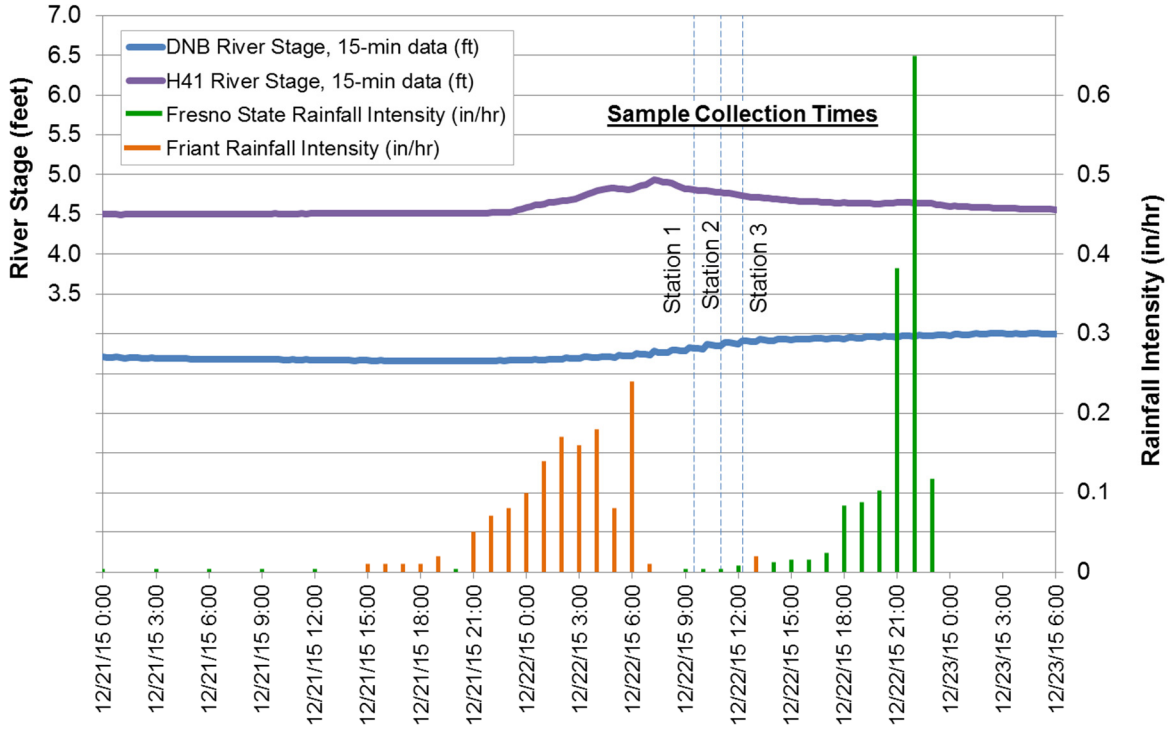

Figure 4. River Stage and Rainfall Intensity: Wet Weather River Monitoring Event 1 (WW039), December 22, 2015

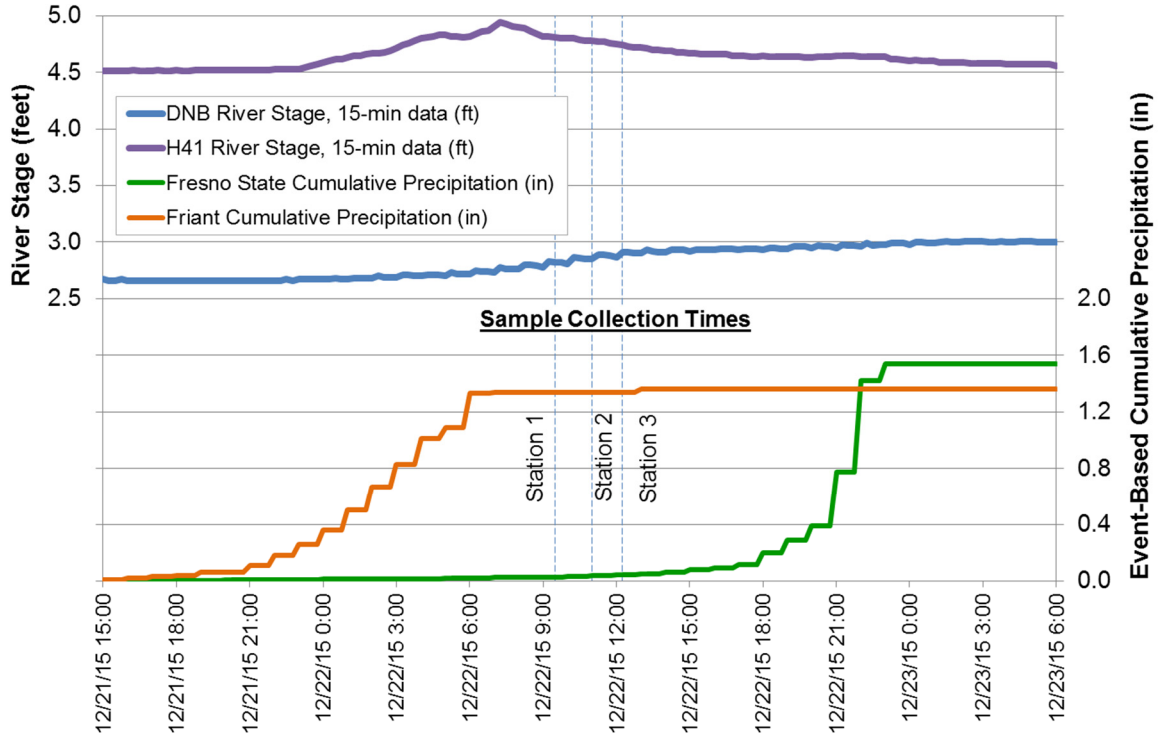

Figure 5. River Stage and Cumulative Precipitation: Wet Weather River Monitoring Event 1 (WW039), December 22, 2015

Table 7. Laboratory Analyses for Wet Weather River Monitoring Event 1 (WW039), December 22, 2015

ANALYSIS [a]	River Monitoring Stations			QA/QC Samples		
	Station 1 Friant Dam	Station 2 Rice Road	Station 3 Camp Pashayan	Field Blank Station 1	MS/MSD	Field/Lab Duplicate Station 2
Total Recoverable Mercury	R✓	R✓	R✓	R✓	--	R✓
Total Recoverable Metals	R✓	R✓	R✓	R✓	--	R✓
Dissolved Metals	R✓	R✓	R✓	R✓	--	R✓
Ammonia	R✓	R✓	R✓	--	--	R✓
Hydrocarbon Oil & Grease	R✓	R✓	R✓	--	--	R✓
Total & Fecal Coliform	R✓	R✓	R✓	--	--	R✓
E.Coli	R✓	R✓	R✓	--	--	R✓
Anions	R✓	R✓	R✓	--	--	R✓
Cations	R✓	R✓	R✓	--	--	R✓
Chemical Oxygen Demand	R✓	R✓	R✓	--	--	R✓
Hardness	R✓	R✓	R✓	--	--	R✓
Total Kjeldahl Nitrogen	R✓	R✓	R✓	--	--	R✓
Total Phosphorus	R✓	R✓	R✓	--	--	R✓
Dissolved Organic Carbon	R✓	R✓	R✓	R✓	--	R✓
Total Organic Carbon	R✓	R✓	R✓	R✓	--	R✓
Total Dissolved Solids	R✓	R✓	R✓	--	--	R✓
Total Suspended Solids	R✓	R✓	R✓	--	--	R✓
Polynuclear Aromatic Hydrocarbons	R✓	R✓	R✓	R✓	--	R✓

[a] "R" indicates that analysis was requested on chain of custody form.
"✓" indicates that the laboratory completed and reported this analysis.
"--" indicates that the analysis was not required in the SOPs.

Table 8. Rainfall and Antecedent Conditions for Wet Weather River Monitoring Event 2 (WW040), January 18, 2016

Wet Weather River Monitoring	Station 1 Friant Dam	Station 2 Rice Road	Station 3 Camp Pashayan
Sampling			
Composite sample collection time	1/18/16 10:30	1/18/16 12:00	1/18/16 13:20
Grab sample collection time	1/18/16 10:45	1/18/16 12:15	1/18/16 13:35
Event Rainfall [a]			
Time of first rain (storm start)		1/18/16 3:00	
Time of last rain (storm end)		1/18/16 14:00	
Event total rainfall (inches)		0.71	
Antecedent Conditions [a]			
Date of previous precipitation		1/5/16 15:00	
Time since previous precipitation		12.5 days	
Date of previous storm ≥ 0.1 in.		1/5/16 15:00	
Time since previous storm ≥ 0.1 in.		12.5 days	
Date of previous storm ≥ 0.25		12/24/15 20:00	
Time since previous storm ≥ 0.25 in.		24.29 days	
Cumulative precipitation in the storm season prior to storm event (in.)[b]		6.66	

[a] Antecedent conditions and event rainfall data are derived from on-site measurements at the Fresno State CIMIS gauge
[b] Storm season begins on October 1st.

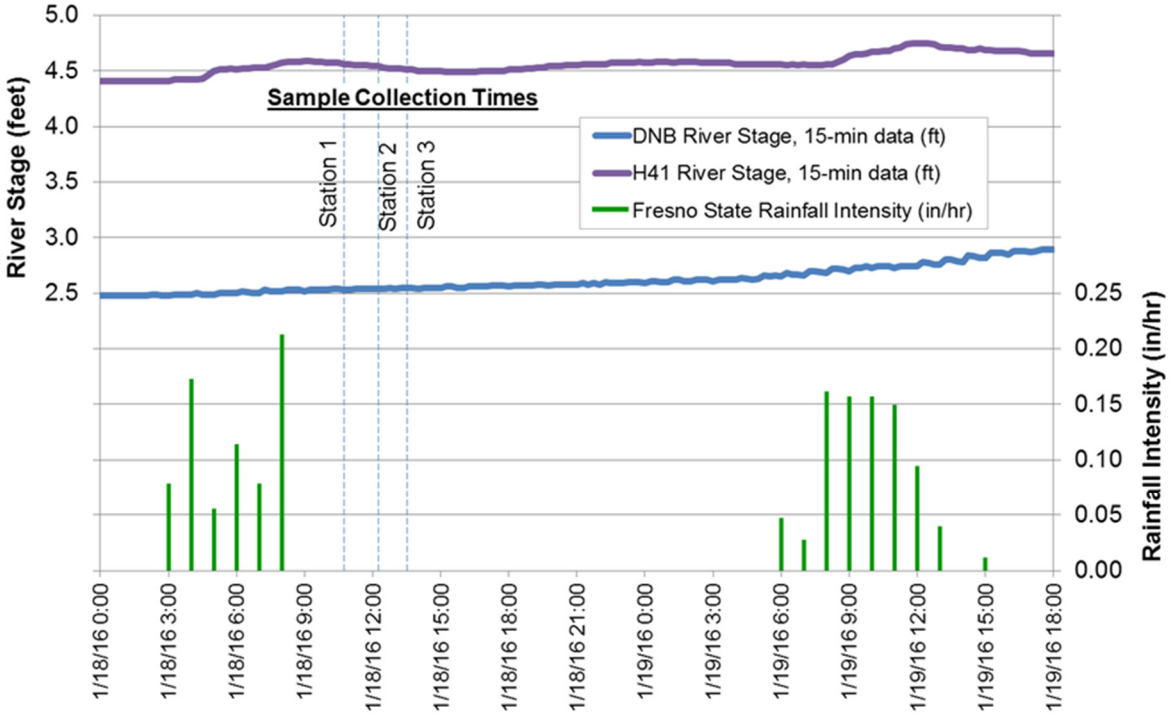

Figure 6. River Stage and Rainfall Intensity: Wet Weather River Monitoring Event 2 (WW040), January 18, 2016

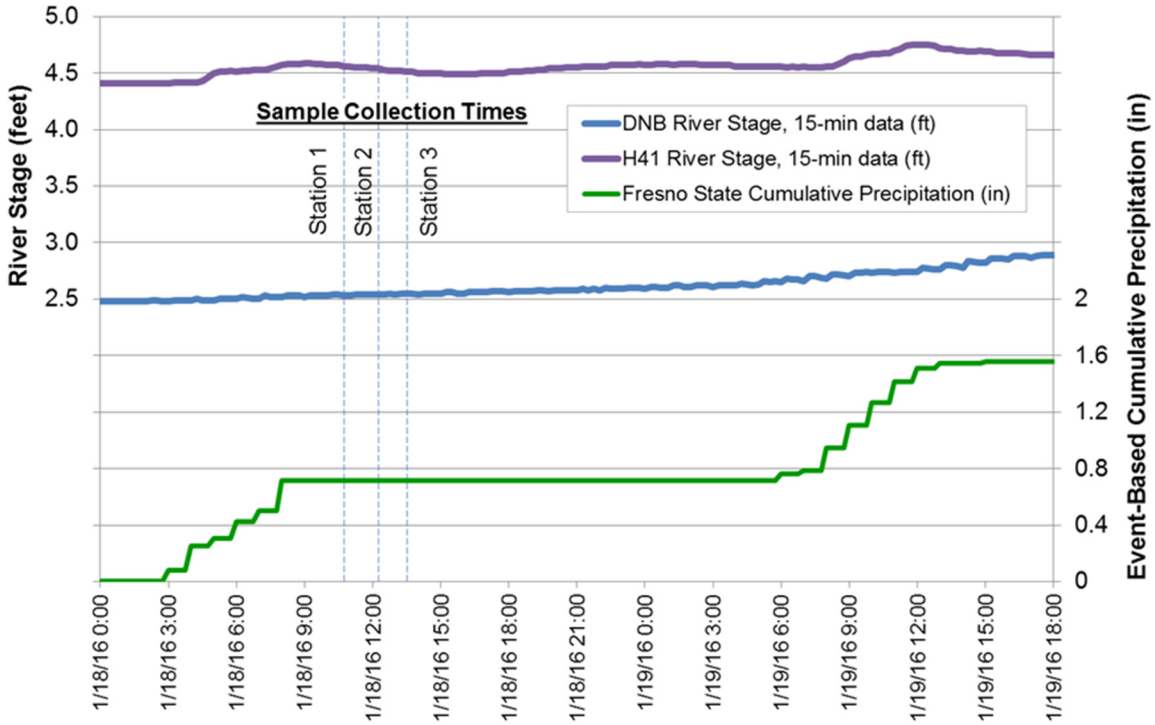

Figure 7. River Stage and Cumulative Precipitation: Wet Weather River Monitoring Event 2 (WW040), January 18, 2016

Table 9. Laboratory Analyses for Wet Weather River Monitoring Event 2 (WW040), January 18, 2016

ANALYSIS [a]	River Monitoring Stations			QA/QC Samples		
	Station 1 Friant Dam	Station 2 Rice Road	Station 3 Camp Pashayan	Field Blank Station 3	MS/MSD Station 2	Field Duplicate Station 1
Total Recoverable Mercury	R✓	R✓	R✓	R✓	R✓	R✓
Total Recoverable Metals	R✓	R✓	R✓	R✓	R✓	R✓
Dissolved Metals	R✓	R✓	R✓	R✓	--	R✓
Ammonia	R✓	R✓	R✓	--	--	R✓
Hydrocarbon Oil & Grease	R✓	R✓	R✓	--	--	R✓
Total & Fecal Coliform	R✓	R✓	R✓	--	--	R✓
E.Coli	R✓	R✓	R✓	--	--	R✓
Anions	R✓	R✓	R✓	--	--	R✓
Cations	R✓	R✓	R✓	--	--	R✓
Chemical Oxygen Demand	R✓	R✓	R✓	--	--	R✓
Hardness	R✓	R✓	R✓	--	--	R✓
Total Kjeldahl Nitrogen	R✓	R✓	R✓	--	--	R✓
Total Phosphorus	R✓	R✓	R✓	--	--	R✓
Dissolved Organic Carbon	R✓	R✓	R✓	R✓	--	R✓
Total Organic Carbon	R✓	R✓	R✓	R✓	--	R✓
Total Dissolved Solids	R✓	R✓	R✓	--	--	R✓
Total Suspended Solids	R✓	R✓	R✓	--	--	R✓
Polynuclear Aromatic Hydrocarbons	R✓	R✓	R✓	R✓	R✓	R✓

[a] "R" indicates that analysis was requested on chain of custody form.
"✓" indicates that the laboratory completed and reported this analysis.
"--" indicates that the analysis was not required in the SOPs.

Table 10. Rainfall and Antecedent Conditions for Wet Weather River Monitoring Event 3 (WW041), March 6, 2016

Wet Weather River Monitoring	Station 1 Friant Dam	Station 2 Rice Road	Station 3 Camp Pashayan
Sampling			
Composite sample collection time	3/6/16 8:15	3/6/16 11:15	3/6/16 12:50
Grab sample collection time	3/6/16 9:45	3/6/16 11:35	3/6/16 13:05
Event Rainfall [a]			
Time of first rain (storm start)		3/5/16 13:00	
Time of last rain (storm end)		3/6/16 6:00	
Event total rainfall (inches)		1.13	
Antecedent Conditions [a]			
Date of previous precipitation		3/4/16 22:00	
Time since previous precipitation		0.63 days	
Date of previous storm ≥ 0.1 in.		3/4/16 22:00	
Time since previous storm ≥ 0.1 in.		0.63 days	
Date of previous storm ≥ 0.25		1/31/16 14:00	
Time since previous storm ≥ 0.25 in.		34 days	
Cumulative precipitation in the storm season prior to storm event (in.)[b]		11.00	

[a] Antecedent conditions and event rainfall data are derived from on-site measurements at the Fresno State CIMIS gauge
[b] Storm season begins on October 1st.

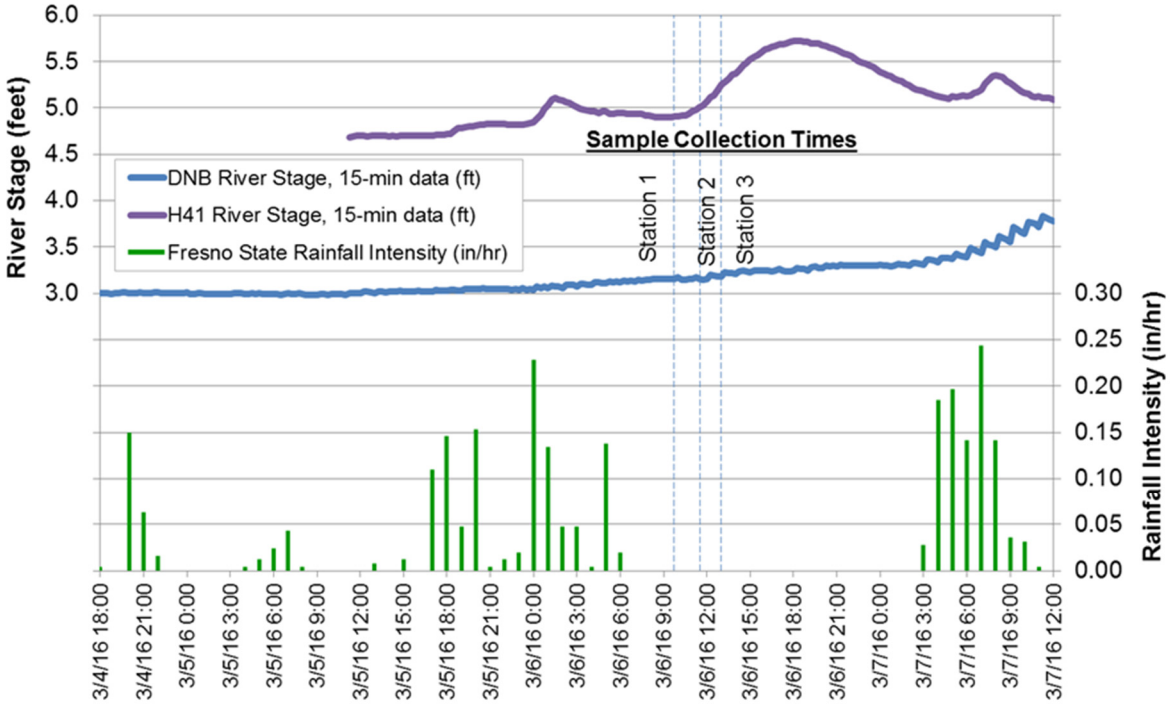

Figure 8. River Stage and Rainfall Intensity: Wet Weather River Monitoring Event 3 (WW041), March 6, 2016

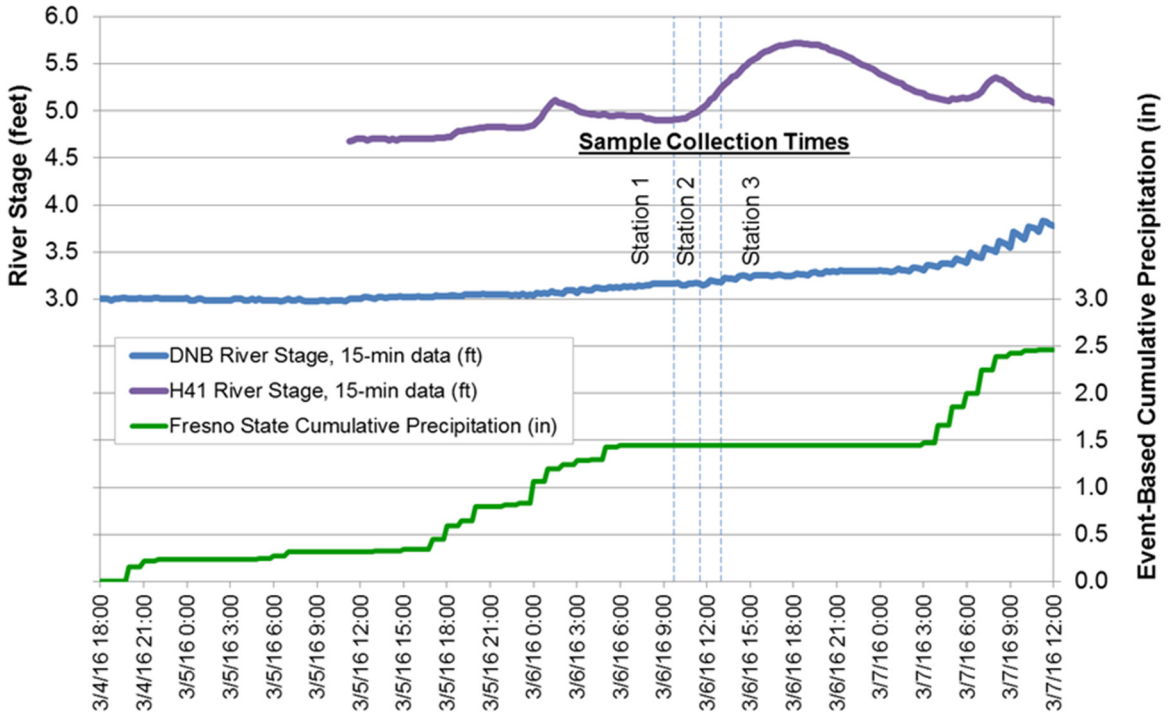

Figure 9. River Stage and Cumulative Precipitation: Wet Weather River Monitoring Event 3 (WW041), March 6, 2016

Table 11. Laboratory Analyses for Wet Weather River Monitoring Event 3 (WW041), March 6, 2016

ANALYSIS [a]	River Monitoring Stations				QA/QC Samples		
	Station 1 Friant Dam	Station 2 Rice Road	Station 3 Camp Pashayan	Field Blank Station 2	MS/ MSD	Field Duplicate Station 1	Field/Lab Duplicate Station 3
Total Recoverable Mercury	R✓	R✓	R✓	R✓	--	R✓	R✓
Total Recoverable Metals	R✓	R✓	R✓	R✓	--	R✓	R✓
Dissolved Metals	R✓	R✓	R✓	R✓	--	R✓	R✓
Ammonia	R✓	R✓	R✓	--	--	R✓	R✓
Hydrocarbon Oil & Grease	R✓	R✓	R✓	--	--	R✓	R✓
Total & Fecal Coliform	R✓	R✓	R✓	--	--	R✓	R✓
E.Coli	R✓	R✓	R✓	--	--	R✓	R✓
Anions	R✓	R✓	R✓	--	--	R✓	R✓
Cations	R✓	R✓	R✓	--	--	R✓	R✓
Chemical Oxygen Demand	R✓	R✓	R✓	--	--	R✓	R✓
Hardness	R✓	R✓	R✓	--	--	R✓	R✓
Total Kjeldahl Nitrogen	R✓	R✓	R✓	--	--	R✓	R✓
Total Phosphorus	R✓	R✓	R✓	--	--	R✓	R✓
Dissolved Organic Carbon	R✓	R✓	R✓	R✓	--	R✓	R✓
Total Organic Carbon	R✓	R✓	R✓	R✓	--	R✓	R✓
Total Dissolved Solids	R✓	R✓	R✓	--	--	R✓	R✓
Total Suspended Solids	R✓	R✓	R✓	--	--	R✓	R✓
Polynuclear Aromatic Hydrocarbons	R✓	R✓	R✓	R✓	--	R[b]	R✓

[a] "R" indicates that analysis was requested on chain of custody form.
"✓" indicates that the laboratory completed and reported this analysis.
"--" indicates that the analysis was not required in the SOPs.
[b] Due to a laboratory error, Caltest was not able to analyze this collected field-initiated QA/QC sample.

3.3.2.1. Difficulties Encountered and Their Resolution

There were no significant variances from the SOPs for the 2015-2016 wet weather river sample collection events. Any laboratory analytical and reporting problems encountered are described in the Quality Assurance/Quality Control section of this report. The field crews encountered the following minor issues that were identified and corrected:

- WW039: While the field crew was en route to Station 1, they suffered a flat tire. This was fixed and sampling resumed as normal.

- WW041: While collecting samples at Station 1, the peristaltic pump battery died. The field crew had to retrieve a spare before resuming sample collection. The slight delay in sampling did not affect the collection of the remaining samples.

3.3.3. Canal Monitoring

Due to the lack of precipitation during the 2014-2015 monitoring season, the District did not conduct any events for the Canal Monitoring Program. Significant precipitation and discharge from the District's basins are the two requirements necessary to conduct canal monitoring. The 2014-2015 storm season consisted only of a few large precipitation events and each event was preceded by an extended dry period. These conditions do not generally result in a discharge from the basins.

During the 2015-2016 monitoring season, sampling was conducted at canal locations during two events in January 2016. Canal monitoring event parameters and antecedent conditions summaries for the two wet weather canal monitoring events are shown in **Table 12** and Error! Reference source not found.. Analyses requested and completed for the canal samples (Mill Ditch at North Temperance Avenue and Herndon Canal at North Garfield Avenue) and field-initiated QA/QC samples during the two wet weather monitoring events are summarized in **Table 13** and

Table 15.

Field crews collected samples for the following storm events:

- Canal Monitoring Event 1 (CNWW02): January 7, 2016
- Canal Monitoring Event 2 (CNWW03): January 21, 2016

Table 12. Rainfall and Antecedent Conditions for Wet Weather Canal Monitoring Event 1 (CNWW02), January 7, 2016

Wet Weather Monitoring	Canal 1 Temperance	Canal 2 Garfield
Sampling		
Composite sample collection time	1/7/16 07:55	1/7/16 08:40
Grab sample collection time	1/7/16 07:35	1/7/16 08:50
Event Rainfall [a]		
Time of first rain (storm start)	1/5/16 3:00	
Time of last rain (storm end)	1/5/16 15:00	
Event total rainfall (inches)	0.20	
Antecedent Conditions [a]		
Date of previous precipitation	2/24/15 20:00	
Time since previous precipitation	11 days	
Date of previous storm ≥ 0.1 in.	2/24/15 20:00	
Time since previous storm ≥ 0.1 in.	11 days	
Date of previous storm ≥ 0.25	2/24/15 20:00	
Time since previous storm ≥ 0.25 in.	11 days	

Cumulative precipitation in the storm season prior to storm event (in.)	6.17

[a] Antecedent conditions and event rainfall data are derived from on-site measurements at the Fresno State CIMIS gauge.
[b] Storm season begins on October 1st.

Table 13. Laboratory Analyses for Wet Weather Canal Monitoring Event 1 (CNWW02), January 7, 2016

ANALYSIS [a]	Canal Monitoring Stations		QA/QC Samples		
	Canal 1 Temperance	Canal 2 Garfield	Field Blank Canal 2	MS/MSD	Field Duplicate Canal 1
Total Recoverable Mercury	R✓	R✓	R✓	--	R✓
Total Recoverable Metals	R✓	R✓	R✓	--	R✓
Dissolved Metals	R✓	R✓	R✓	--	R✓
Ammonia	R✓	R✓	--	--	R✓
Hydrocarbon Oil & Grease	R✓	R✓	--	--	R✓
Total & Fecal Coliform	R✓	R✓	--	--	R✓
E.Coli	R✓	R✓	--	--	R✓
Anions	R✓	R✓	--	--	R✓
Cations	R✓	R✓	--	--	R✓
Chemical Oxygen Demand	R✓	R✓	--	--	R✓
Hardness	R✓	R✓	R✓	--	R✓
Total Kjeldahl Nitrogen	R✓	R✓	--	--	R✓
Total Phosphorus	R✓	R✓	--	--	R✓
Dissolved Organic Carbon	R✓	R✓	R✓	--	R✓
Total Organic Carbon	R✓	R✓	R✓	--	R✓
Total Dissolved Solids	R✓	R✓	--	--	R✓
Total Suspended Solids	R✓	R✓	--	--	R✓
Polynuclear Aromatic Hydrocarbons	R✓	R✓	R✓	--	R✓

[a] "R" indicates that analysis was requested on chain of custody form.
"✓" indicates that the laboratory completed and reported this analysis.
"--" indicates that the analysis was not required in the SOPs.

Table 14. Rainfall and Antecedent Conditions for Wet Weather Canal Monitoring Event 2 (CNWW03), January 21, 2016

Wet Weather Monitoring	Canal 1 Temperance	Canal 2 Garfield
Sampling		
Composite sample collection time	1/21/16 12:15	1/21/16 13:30
Grab sample collection time	1/21/16 12:00	1/21/16 13:15
Event Rainfall [a]		
Time of first rain (storm start)	1/19/16 6:00	
Time of last rain (storm end)	1/19/16 15:00	
Event total rainfall (inches)	0.85	
Antecedent Conditions [a]		
Date of previous precipitation	1/18/16 14:00	
Time since previous precipitation	0.67 days	
Date of previous storm ≥ 0.1 in.	1/18/16 14:00	
Time since previous storm ≥ 0.1 in.	0.67 days	
Date of previous storm ≥ 0.25	1/18/16 14:00	
Time since previous storm ≥ 0.25 in.	0.67 days	
Cumulative precipitation in the storm season prior to storm event (in.)[b]	7.37	

[a] Antecedent conditions and event rainfall data are derived from on-site measurements at the Fresno State CIMIS gauge.
[b] Storm season begins on October 1st.

Table 15. Laboratory Analyses for Wet Weather Canal Monitoring Event 2 (CNWW03), January 21, 2016

ANALYSIS [a]	Canal Monitoring Stations		QA/QC Samples		
	Canal 1 Temperance	Canal 2 Garfield	Field Blank Canal 1	MS/MSD Canal 1	Field Duplicate Canal 2
Total Recoverable Mercury	R✓	R✓	R✓	R✓	R✓
Total Recoverable Metals	R✓	R✓	R✓	R✓	R✓
Dissolved Metals	R✓	R✓	R✓	--	R✓
Ammonia	R✓	R✓	--	--	R✓
Hydrocarbon Oil & Grease	R✓	R✓	--	--	R✓
Total & Fecal Coliform	R✓	R✓	--	--	R✓
E.Coli	R✓	R✓	--	--	R✓
Anions	R✓	R✓	--	--	R✓
Cations	R✓	R✓	--	--	R✓
Chemical Oxygen Demand	R✓	R✓	--	--	R✓
Hardness	R✓	R✓	--	--	R✓
Total Kjeldahl Nitrogen	R✓	R✓	--	--	R✓
Total Phosphorus	R✓	R✓	--	--	R✓
Dissolved Organic Carbon	R✓	R✓	R✓	--	R✓
Total Organic Carbon	R✓	R✓	R✓	--	R✓
Total Dissolved Solids	R✓	R✓	--	--	R✓
Total Suspended Solids	R✓	R✓	--	--	R✓
Polynuclear Aromatic Hydrocarbons	R✓	R✓	R✓	R✓	R✓

[a] "R" indicates that analysis was requested on chain of custody form.
"✓" indicates that the laboratory completed and reported this analysis.
"--" indicates that the analysis was not required in the SOPs.

3.3.3.1. Difficulties Encountered and Their Resolution

There were no significant difficulties or variances from the SOPs encountered during the wet weather canal events conducted during the 2015-2016 monitoring season. Any laboratory analytical and reporting problems encountered are described in the Quality Assurance/Quality Control section of this report.

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4.0 Quality Assurance/Quality Control

This section presents the results of quality assurance/quality control (QA/QC) analyses conducted during the 2015-2016 monitoring year and an evaluation of the monitoring data considering the QA/QC results. The purpose of the QA/QC review is to identify any apparent QA/QC problems that may limit or bias reported data. QA/QC samples were collected and analyzed during the 2015-2016 monitoring events, as shown in **Table 16**.

The analytical laboratories (BSK, Caltest, and Eurofins Frontier Global Sciences) deliver all data reports in a hard copy or electronic report format and provide an electronic data deliverable (EDD). The hard copy format is considered the official record of results and is the report examined in the initial screening of the analytical data. The EDD is used for importing data into the project database.

Table 16. 2015-2016 Quality Control Sample Collection Schedule

Location	Dry Weather	1st Storm	2nd Storm	3rd Storm
Station 1	MS/MSD	Field Blank	Field Duplicate	Field Duplicate
Station 2	Field Blank	Field/Lab Duplicate	MS/MSD	Field Blank
Station 3	Field Duplicate		Field Blank	Field/Lab Duplicate
Canal 1	[1]	Field Duplicate	Field Blank and MS/MSD	[1]
Canal 2	[1]	Field Blank	Field Duplicate	[1]

[1] Event not required in SOP

4.1. QA/QC METHODS

QA/QC methods used to evaluate laboratory performance are described below.

4.1.1. Initial Screening

The initial screening process occurs following each monitoring event when laboratory reports are received. The reported data are checked as soon as possible after the monitoring event to identify gross errors committed in the sampling, analysis, or reporting processes. Reported data are checked against the chain of custody forms, for adherence to specifications in the River Monitoring SOPs, and for questionable (out-of-control) analytical results. The initial screening includes the checks on the following items:

- Laboratory reporting errors – Identify typographical errors, incorrect units, etc.
- Completeness – Were all the analyses performed as requested?
- Holding times – Were all analyses performed within prescribed holding times?
- Detection limits – Did reported analytical detection limits meet requirements?

Reported concentrations that appear to be out of range or are inconsistent with other results are indicators of potential laboratory errors, including reporting problems (e.g., typographical errors). Such results are investigated when detected. Examples of these include a dissolved concentration greater than the corresponding total recoverable concentration or a constituent concentration that is several orders of magnitude different than concentrations of the same constituent for other events. The results are also reviewed to ensure that all chain-of-custody

requests were completed as requested and that analyses were performed within the method-prescribed holding time. Program reporting limit requirements are also checked to ensure that each laboratory performed as its contract requires.

A sample is qualified with "H" when a violation of the method/program prescribed holding time occurs.[7] The analysis holding time is calculated as the time elapsed between the sample collection and analysis. The preparation/filtration holding time is calculated as the time elapsed between the sample collection and preparation/filtration.

The initial screening typically involves additional communication with the laboratory and requests for amended laboratory reports. When an amended laboratory report is issued, it supersedes previously issued reports.

4.1.2. QA/QC Data Evaluation

The QA/QC data evaluation assesses contamination, precision and accuracy. Both a laboratory-initiated assessment (internal QA/QC) and a field-initiated assessment (external QA/QC) are performed. All QA/QC results are included in **Appendix A**. QA/QC results are compared to program control limits based on Environmental Protection Agency (EPA) and Surface Water Ambient Monitoring Program (SWAMP) methods, internal laboratory standards, and historic laboratory performance. The laboratory identifies out-of-control internal QA/QC results and presents them in the report narrative. Externally identified out-of- control results are reported to the laboratory for verification and case-by-case discussion. Environmental results are qualified using SWAMP qualification codes (see Error! Reference source not found.**)** based on the QA/QC results, guidance on SWAMP protocols, and EPA guidance for metals and organics.[8,9,10]

All QA/QC data, in EDD format, are imported into a relational database system. The database is structured to identify potential environmental data qualifications based on the QA/QC results.

Table 17. Summary of Measurement Quality Objectives

Quality Control	QA Objective	SWAMP QA Code	Performance Criteria
Hold Time	≤prescribed holding time	H	>95%
Field Blank	<RL	IP	>95%
Laboratory Blank	<RL	IP	>95%
Field Duplicate	≤25% RPD both results > RL	FDP	>95%

[7] Previously, this qualification has also been indicated by "HT."

[8] http://www.waterboards.ca.gov/water_issues/programs/swamp/#

[9] United States Environmental Protection Agency. April 1995. *Guidance on the Documentation and Evaluation of Trace Metals Data Collected for Clean Water Act Compliance Monitoring*. EPA 821-B-95-002.

[10] United States Environmental Protection Agency. October 1999. *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*. EPA 540-R-99-008.

United States Environmental Protection Agency, June 2001. *USEPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review*. EPA-540-R-00-006

United States Environmental Protection Agency, October 2004. *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*. EPA 540-R-04-004

Quality Control	QA Objective	SWAMP QA Code	Performance Criteria
Laboratory Duplicate	≤25% RPD both results > RL	IL	>95%
MS/MSD	Recovery 50-150% or control limits of 3 standard deviations based on lab data	GB	>95%
MSD	≤25% RPD	IL	>95%
LCS/LCSD	Recovery 50-150% or control limits of 3 standard deviations based on lab data	EUM	>95%
LCSD	≤25% RPD	IL	>95%
Surrogates	Recovery 50-150% or control limits of 3 standard deviations based on lab data	GN	>95%

4.1.2.1. Contamination Checks

Contamination of samples is assessed using equipment (i.e., laboratory), method, and field blanks. Blanks are prepared using reagent grade de-ionized water that is assumed to be void of all constituents for which a given set of analyses are to be performed. These blanks are tested using analytical procedures identical to those used for the environmental samples. The conditions under which the blanks are prepared follow, as closely as possible, the conditions in the field or laboratory, as appropriate for the blank type.

- **Equipment Blank** – For all monitoring, composite bottle blanks are prepared and analyzed by the analytical laboratory prior to or during each monitoring season. Blank water is pumped through clean sample collection tubing, poured into clean sample bottles, and allowed to sit for a specified amount of time; analyses are conducted on these blank samples. A detected concentration in a laboratory blank indicates contamination in the bottle or bottle cleaning procedure.
- **Laboratory Blank** – Method blanks are prepared by the laboratory using blank water and analyzed for every batch of environmental samples analyzed, typically once per event. The method blank is tested using analytical procedures identical to those used for the environmental samples. A detected concentration in a method blank is an indication of contamination in the analytical process.
- **Field Blank** – A field blank is prepared in the field using procedures that simulate the actual field sampling procedures. A detected value reported for a field blank indicates that contamination has occurred at some point during the field sampling or analytical procedures. The detection of an analyte in a field blank sample does not necessarily mean that the contamination significantly affects a particular environmental result.

When a detected concentration or "hit" is reported, qualification of the blank data and the corresponding environmental data is carried out according to SWAMP protocols as follows:

- **Laboratory Blank** – If the result for a single method blank is greater than the method detection limit (MDL), or if the average method blank concentration plus two standard deviations of three or more method blanks is greater than the reporting limit (RL) or practical quantitation limit (PQL) for a particular analyte, then the method blank itself is qualified, and the associated environmental sample results have the potential to be qualified.

- Each method blank result that meets one of the above requirements is qualified with an "IP" (analyte detected in method, trip, or equipment blank).
- Each detected environmental sample with a concentration of less than five times the concentration measured in an associated, detected method blank is considered to be an upper limit of its true concentration due to method blank contamination and is qualified with an "IP" (analyte detected in method, trip, or equipment blank).

- **Field Blank** – If the detected field blank is greater than the RL or PQL for a particular analyte, then the blank is qualified with the following qualifiers and the associated environmental sample results have the potential to be qualified.
  - Each field blank result that meets the above requirement is qualified with an "IP" (analyte detected in method, trip, or equipment blank).
  - Each detected environmental sample with a concentration less than five times the concentration measured in an associated, detected field blank is considered to be an upper limit of its true concentration due to field blank contamination and is qualified with an "IP" (analyte detected in method, trip, or equipment blank).

The resulting data qualifications are presented in **Appendix A**.

4.1.2.2. Accuracy Checks

Accuracy checks consist of measurements of the recovery of a "spike" of a known concentration, followed by the calculation of percent recovery according to the following formula:

$$R = 100\%*[(C_s-C)/s]$$

where: R = Percent recovery

C_s = spiked sample concentration

C = sample concentration (for spiked matrices)

s = concentration equivalent of spike added

- **Laboratory Control Spike (LCS)** – LCS analyses are batch checks for recovery of a known concentration of a standard solution used to assess the accuracy of the entire laboratory analytical process. LCS samples are standards prepared internally by the laboratory using a known amount of analyte. LCS samples are analyzed in the same manner as the environmental samples. A certified reference material test (CRMs) is a type of LCS.
- **Matrix Spike (MS)** – Matrix spike analysis involves the introduction of a known spike in the original "matrix" (sample solution) and is a measure of the accuracy of the recovery performance of the laboratory. To perform this analysis, the laboratory generally requires an additional volume of sample. Matrix interference can lead to recovery problems and raised detection limits. Re-analysis is the first corrective action once matrix interference problems are identified, but re-analysis is only possible when sufficient sample volume is available.
- **Surrogate** – Environmental surrogate matrix spikes are used as a check on the extraction process for organic compounds. Surrogate organic compounds ("surrogates") are spiked or added to all environmental samples, field-initiated QA/QC samples, and laboratory-

initiated QA/QC samples analyzed for trace organics. These surrogate compounds provide a measure of the efficiency of the organic compound extraction process when testing samples using gas chromatography (GC) or gas chromatography-mass spectroscopy (GC/MS) analytical methods. Organic compound extraction efficiency is determined from the recovery of surrogate compounds from solution; hence, surrogate compounds are reported as "percent recovery" results. These surrogate compound recoveries provide an indication of the ability of an analytical process to accurately evaluate the concentration of a known trace organic compound in environmental and laboratory matrices.

When a detected concentration or "hit" is reported, qualification of the QA/QC data and the corresponding environmental data is carried out according to SWAMP protocols as follows:

- **Laboratory Control Spike (LCS)** – An out-of-control LCS does not cause environmental data qualification if the corresponding matrix spike is within the control limits.
    - Each out-of- control LCS is qualified with "EUM" (LCS is outside of control limits).
    - The environmental data associated with the LCS are qualified with "EUM" (LCS is outside of control limits), unless a matrix spike associated with the environmental sample is in control. These environmental data may be considered "high biased" when one or both spike recoveries are greater than the upper recovery limit and the environmental result is above the MDL and "low biased" when one or both spike recoveries are less than the lower recovery limit (the environmental result may be undetected, below the MDL).
- **Matrix Spike (MS)** – A matrix spike can result in environmental data qualification if the matrix spike and corresponding matrix spike duplicate (or average of the matrix spike and matrix spike duplicate) recovery percentages are outside the upper or lower control limits.
    - Each out-of-control matrix spike is qualified with "GB" (matrix spike recovery not within control limits).
    - The environmental samples associated with matrix spikes (i.e., collected at the same location as the matrix spike sample) are qualified with "GB" (matrix spike recovery not within control limits). The environmental samples associated with matrix spikes may be considered "high biased" when one or both spike recoveries are greater than the upper recovery limit and the environmental result is above the MDL and "low biased" when one or both spike recoveries are less than the lower recovery limit (the environmental result may be undetected, below the MDL).
- **Surrogate** – Out-of-control surrogate spike recoveries are qualified with "GN" (surrogate recovery is outside of control limits). No environmental data qualification occurs; however, if the corresponding laboratory control spike recoveries are also out-of-control, the laboratory is consulted to determine if and how the environmental results might have been affected.

The resulting data qualifications are included in **Appendix A**.

4.1.2.3. Precision Checks

Precision is the measurement of the difference between samples that are presupposed to be replicates (i.e., collected and analyzed in the same manner). The relative percent difference (RPD) is calculated as a measure of the difference between replicate samples. The RPD is calculated from field duplicate, laboratory duplicate, matrix spike duplicate and laboratory spike duplicate data as follows:

$$RPD = 100\%*(|R1-R2|)/[(R1+R2)/2]$$

where: RPD = Relative Percent Difference

R1 = replicate sample No. 1

R2 = replicate sample No. 2

- **Laboratory Duplicate** – Laboratory duplicates are samples split in the laboratory to measure the precision of the laboratory analysis, including the sub-sampling process (the process of deriving a sample from a parent sample).
- **Laboratory Control Spike Duplicate** – Laboratory control spike duplicate (LCS, Lab Replicate 2 (or greater)) analyses are performed to check the precision of the laboratory control spike recovery. RPDs are calculated from the laboratory control spike and laboratory control spike duplicate percent recoveries.
- **Field Duplicate** – Field duplicates are collected as grab and composite samples in the field directly after the environmental sample. Similarly to the environmental sample, the composite field duplicate is split into individual sample bottles by the Krazan field crew. The composite splits and grab samples are then labeled as separate samples and submitted to the laboratory. Both composite-based and grab-based field duplicates provide a measure of the concentration variability introduced by field and laboratory procedures. Composite-based field duplicates also provide a measure of the precision of the sub-sampling process.
- **Matrix Spike Duplicate (MSD)** – Matrix spike duplicate analyses are performed to check the precision of the matrix spike recovery. Ideally, triple the normal sample volume is provided to the analytical laboratory for the analysis of a matrix spike and a matrix spike duplicate. RPDs are calculated from the matrix spike and matrix spike duplicate percent recoveries.

When a RPD exceeds the maximum allowable value (MAV) and both environmental samples are detected above the RL, qualification of the QA/QC data and the corresponding environmental data is carried out according to SWAMP protocols as follows:

- **Laboratory Duplicate, Laboratory Control Spike Duplicate, Field Duplicate, and Matrix Spike Duplicate** – These duplicate samples must have RPDs less than the MAV.
    - Each laboratory duplicate sample, including matrix and laboratory control spike duplicates, with out-of-control RPDs is qualified with “IL” (RPD exceeds the MAV).
    - Each field duplicate sample with out-of-control RPDs is qualified with “FDP” (RPD exceeds the MAV).
    - Each environmental sample associated with a duplicate sample is qualified with either “IL” or “FDP” (RPD exceeds the MAV), as appropriate. These environmental samples

are considered to be irreproducible due to laboratory, sampling, or matrix spike variability.

The resulting data qualifications are presented in **Appendix A**.

4.2. QA/QC RESULTS

QA/QC results from the contract laboratories used in the 2015-2016 monitoring year for both river and canal monitoring are presented in this section. Field blanks, reagent (method) blanks, field duplicates, laboratory duplicates, matrix spikes, matrix spike duplicates, laboratory control spikes, laboratory control spike duplicates, and surrogate spikes were all considered in the analysis of laboratory performance. All QA/QC results from the 2015-2016 monitoring year are reported in **Appendix A**.

A summary of the QA/QC success rates for the various constituent groups and the reported QA/QC checks is presented in **Table 18**. The evaluations of QA/QC data used to compute the success rates reported in this table were based on Environmental Protection Agency (EPA) and Surface Water Ambient Monitoring Program (SWAMP) methods, internal laboratory standards, and historic laboratory performance.

The information in **Table 18** is used to determine whether trends exist in the QA/QC data quality based on the number of QA/QC observations that resulted in the qualification of environmental data.

4.2.1. Initial Screening

Laboratory data problems encountered during the 2015-2016 monitoring season in the initial screening process are as follows for the six events (four river and two canal):

- WW039: Two samples, the environmental collected at Station 2 and its respective field duplicate, submitted to BSK for the first wet weather river event WW039 were analyzed past the holding time for nitrate.
- CNWW02: The field crew collected samples and requested analyses for hardness on the chain-of-custody form from the analytical laboratory BSK for samples collected at canal monitoring locations during the first wet weather canal event CNWW02; however, the initial laboratory report dated January 20, 2016 did not include the requested results. The analyses were requested from Caltest instead which subsequently provided a laboratory report and corresponding EDD.
- WW041: Due to a laboratory error, Caltest was not able to analyze the requested field-initiated QA/QC field duplicate sample for the third wet weather river event WW041. In addition, the environmental sample collected at Station 3 and its respective field duplicate were analyzed for PAHs out of hold time.

4.2.2. Contamination Checks

As shown in **Table 18**, success rates for two types of contamination checks were greater than 95% except for those listed below. The appropriate data points have been qualified with “IP” (analyte detected in method, trip, or equipment blank), as reported in **Appendix A**.

4.2.2.1. Field Blanks

Success rates for results of field blanks were greater than 95% for all constituent groups except as follows:

- Bacteriological, Conventionals, Nutrients and Hydrocarbons – 30.8%
- Metals, Anions, and Cations – 93.9%

TOC and DOC field blanks were analyzed for all six events. Six DOC and three TOC analyses were reported above the RL. Two DOC and one TOC environmental results were qualified due to potential contamination. Generally, the organic carbon environmental results were significantly higher than the observed contamination, but this issue will be further investigated in the offseason. Sampling and equipment handling practices will be reviewed to insure that the field crew is not introducing these contaminates to the samples.

A total of seven metals field blanks (six dissolved and one total) were detected above the MDL and were qualified. Six environmental sample results associated with these field blanks were also qualified as having potential contamination. This program has observed metals contamination in the past and has implemented protocols to mitigate it. The trend for the contamination is getting better, but anther review of the sampling and equipment handling procedure will occur in the offseason.

4.2.2.2. Method Blanks

Success rates for results of method blanks were greater than 95% for all constituent groups.

4.2.3. Accuracy Checks

As shown in **Table 18**, success rates for three types of accuracy checks were greater than 95% except for those summarized below. The appropriate data points have been qualified, as reported in **Appendix A**.

4.2.3.1. Laboratory Control Spikes (LCS) and Matrix Spikes (MS)

Success rates for LCS and MS results were greater than 95% for all constituent groups.

4.2.3.2. Surrogate Spikes

Success rates for surrogate spikes were greater than 95% for all constituent groups.

4.2.4. Precision Checks

As shown in **Table 18**, success rates for three types of precision checks are summarized below. The appropriate data points have been qualified, as reported in **Appendix A**.

4.2.4.1. Field Duplicates

Success rates for field duplicate analyses were greater than 95% for all constituent groups.

4.2.4.2. LCS and MS Duplicates

Success rates for results of laboratory control spike duplicates (LCSD) and matrix spike duplicates (MSD) were greater than 95% for all constituent groups except as follows:

- PAHs – LCS 91.3%
- PAHs – MS 66.7%

Laboratory control spike duplicate RPDs were above the project specified RPDs in 13 samples. All but two of these were observed during the March wet weather event.

Matrix interference in the collected samples caused RPDs of 25 matrix spike duplicates to be greater than the recommended limit. 16 of these were observed during the dry weather event in September, while the remaining nine occurred during the wet weather events in January.

Caltest laboratory, who performed the analyses, considers this not to be an issue that would affect the environmental results, since the out of control LCSD and MSD results were observed during different events and sites. Environmental data was still qualified based on the project specified controls.

4.2.4.3. Laboratory Duplicates

Success rates for laboratory duplicates were greater than 95% for all constituent groups.

4.2.5. Holding Times Achieved

As shown in **Table 18**, maximum allowable holding times were met with greater than 95% success rates for all constituent groups, except as follows:

- PAHs –93.8%

Twenty five PAH samples during event WW41 were analyzed past their prescribed hold times (seven days). The laboratory made an error during the preparation of the samples, which caused the solvent in each of the samples to overflow their respective containers. Sample volume for the Station 1 was entirely lost and needed to be reanalyzed outside of the hold time. This issue has been addressed by the laboratory and corrections have been made to ensure that this error does not occur in the future.

4.2.6. Detection Limits Achieved

All constituents were analyzed at detection limits at or below those specified in the River Monitoring SOPs or were reported as detected above the laboratory reporting limit.

4.2.7. Analysis of Dissolved Metals Results

As shown in **Table 21**, **Table 25**, **Table 29**, and **Table 33**, dissolved metals results for 14 river monitoring samples were greater than the corresponding total metals results. Since the dissolved metals result for a sample should always be a fraction of the total metals result, these results were questionable. Therefore, an analysis was performed to determine whether the dissolved metal results should be deemed invalid and rejected from the database. The criterion selected was whether the difference between the dissolved and total metal results for a sample was greater than one reporting limit (RL). This criterion is based on a reasonable expectation for laboratory precision. A total of 4 of the 14 results, 28.6%, for river monitoring exceeded this limit. These results are qualified with a “R” in the tables, and were removed from the database, time series plots, and **Appendix A**. Only two dissolved metals results for canal monitoring samples were greater than the corresponding total metals results. The difference between the dissolved and total metals results for either sample was less than one RL, so qualification is not necessary.

Table 18. QA/QC Success Rates, 2015-2016 River and Canal Monitoring

QA/QC Analysis	Total Number of Observations	Number Successful	Success Rate
Bacteriologicals, Conventionals, Nutrients, and Hydrocarbons			
Holding Time	268	267	99.6%
Method Blanks	80	79	98.8%
Field Blanks	13	4	***30.8%***
Field Duplicates	116	113	97.4%
Laboratory Duplicates	15	15	100%
Laboratory Control Spike *(accuracy)*	135	135	100%
Laboratory Control Spike/Laboratory Control Spike Duplicate *(precision)*	64	64	100%
Matrix Spike *(accuracy)*	86	82	95.3%
Matrix Spike/Matrix Spike Duplicate *(precision)*	36	36	100%
Metals, Anions, and Cations			
Holding Time	447	447	100%
Method Blanks	188	188	96.8%
Field Blanks	114	107	***93.9%***
Field Duplicates	195	191	97.9%
Laboratory Duplicates	2	2	100%
Laboratory Control Spike *(accuracy)*	234	232	99%
Laboratory Control Spike/Laboratory Control Spike Duplicate *(precision)*	117	117	100%
Matrix Spike *(accuracy)*	342	341	99.7%
Matrix Spike/Matrix Spike Duplicate *(precision)*	165	165	100%
PAHs			
Holding Time	400	375	***93.8%***
Method Blanks	175	175	100%
Field Blanks	150	148	98.7%
Field Duplicates	150	150	100%
Laboratory Control Spike *(accuracy)*	325	318	97.8%
Laboratory Control Spike/Laboratory Control Spike Duplicate *(precision)*	150	137	***91.3%***
Matrix Spike *(accuracy)*	150	150	100%
Matrix Spike/Matrix Spike Duplicate *(precision)*	75	50	***66.7%***
Surrogate Spikes *(accuracy)*	48	46	95.8%

Note: Success rates less than the specified performance criteria (>95%) have been bolded and italicized in the table.

5.0 Water Quality Results: 2015-2016

This section includes a presentation of the field and laboratory results of river and canal monitoring conducted during the 2015-2016 season.

The standard field measurements taken and the results of laboratory-performed analyses for the 2015-2016 monitoring events are listed in **Table 19** through **Table 34** for the river sites and **Table 35** through **Table 42** for the canal sites. Field measurements were taken at approximately the same time grab samples were collected. For ammonia, bacteriological, hydrocarbon oil and grease, and mercury, the results represent concentrations from mid-depth grab samples. The remaining results represent concentrations from depth-integrated composite samples. These tables include results for all constituents for which there was at least one detected result at one or more stations during 2015-2016 river and canal monitoring. A more complete summary of monitoring results is provided in **Appendix A**.

In addition, the frequencies of detection of trace elements in river and canal samples are reported in **Table 43** and **Note:** The total represents the primary environmental samples and does not include any field or lab-initiated QAQC samples.

[a] One result was rejected since the dissolved sample result is significantly greater than corresponding total sample result.
[b] Three results were rejected since the dissolved sample result is significantly greater than corresponding total sample result.
, respectively.

Table 19. Field Measurement Results for the Dry Weather River Event (DW020): September 24, 2015

Constituent	Units	Station 1	Station 2	Station 3
Field Measurements				
Dissolved Oxygen	mg/L	7.61	7.74	7.39
Electrical Conductivity	µS/cm	21	18	32
pH	SU	6.93	7.24	7.48
Temperature	°C	21.2	21.1	22.8
Turbidity	NTU	1	1	1
River Velocity[a]	ft/sec	2.4	2	2

Note:
[a] River velocity was estimated using the floating stick method.

Table 20. Laboratory Results for Bacteriologicals, Conventionals, Nutrients and Hydrocarbons for the Dry Weather River Event (DW020): September 24, 2015

Constituent [a]	Units	Station 1	Station 2	Station 3
Bacteriologicals				
Fecal Coliform	MPN/100 mL	8	8	13
Total Coliform	MPN/100 mL	50	130	80
E.Coli	MPN/100 mL	8	8	13
Conventionals				
Alkalinity as CaCO3 [b]	mg/L	14	15	15
Bicarbonate as CaCO3 [b]	mg/L	14	15	15
Chemical Oxygen Demand	mg/L	<6.4	<6.4	<6.4
Dissolved Organic Carbon	mg/L	1.3	1.6[IP]	1.6
Hardness (as CaCO3)	mg/L	11	12	12
Total Dissolved Solids	mg/L	28	32	31
Total Organic Carbon	mg/L	1.3	1.7[IP]	1.7
Total Suspended Solids	mg/L	<5.0	<5.0	<5.0
Hydrocarbons (Oil & Grease)				
None detected				
Nutrients				
Ammonia as N	mg/L	<0.024	<0.024	<0.024
Nitrate as N	mg/L	<0.44	<0.44	<0.44
Phosphorus as P	mg/L	<0.064	<0.064	<0.064

Notes:
IP = Analyte detected in method, trip, or equipment blank
[a] Only constituents detected at one or more stations, during one or more events, are included.
[b] Results for these additional constituents are not required by the SAP but were reported by the laboratory only for this event.

Table 21. Laboratory Results for Metals, Anions, and Cations for the Dry Weather River Event (DW020): September 24, 2015

Constituent [a]	Units	Station 1 [b]	Station 2 [b]	Station 3 [b]
Metals				
Arsenic - Dissolved	µg/L	2.84	2.67[IP]	2.91[d]
Arsenic - Total	µg/L	3.27	2.74	2.83
Cadmium - Dissolved	µg/L	<0.008	<0.008	<0.008
Cadmium - Total	µg/L	<0.008	<0.008	<0.008
Chromium - Dissolved	µg/L	<0.02	<0.02	<0.02
Chromium - Total	µg/L	<0.02	<0.02	<0.02
Copper - Dissolved	µg/L	0.39	0.45	0.47
Copper - Total	µg/L	0.54	0.61	0.48
Lead - Dissolved	µg/L	<0.005	<0.005	0.04
Lead - Total	µg/L	0.044	0.051	0.086
Mercury - Total	ng/L	<0.08	<0.08	<0.08
Nickel - Dissolved	µg/L	<0.04	<0.04	<0.04
Nickel - Total	µg/L	<0.04	<0.04	<0.04
Selenium - Dissolved	µg/L	<0.44	<0.44	<0.44
Selenium - Total	µg/L	<0.44	<0.44	<0.44
Zinc - Dissolved	µg/L	1.44[R, c]	0.95[IP]	1.50[R, c]
Zinc - Total	µg/L	0.60	1.56	<0.16
Anions				
Chloride	mg/L	3.6	3.7	3.7
Sulfate	mg/L	1.6	1.6	1.6
Cations				
Aluminum	mg/L	<0.023	<0.023	<0.023
Barium	mg/L	<0.023	<0.023	<0.023
Calcium	mg/L	3.6	3.6	3.6
Magnesium	mg/L	0.6	0.67	0.68
Potassium	mg/L	<0.91	<0.91	<0.91
Sodium	mg/L	4.6	4.6	5

Notes:
IP = Analyte detected in method, trip, or equipment blank
R = Data rejected - EPA Flag. Data qualified as rejected are not included in the database export and thus are not included in **Appendix A**.
[a] Only constituents detected at one or more stations, during one or more events, are included.
[b] See Error! Reference source not found. for definitions of the indicated qualifications.
[c] Dissolved sample result is significantly greater than corresponding total sample result. The difference between the total and dissolved sample results is greater than the reporting limit; filter contamination is suspected, and the dissolved result has been rejected.
[d] Dissolved sample result is greater than corresponding total sample result, but the difference is less than the reporting limit. The dissolved result is not rejected.

Table 22. Laboratory Results for PAHs for the Dry Weather River Event (DW020): September 24, 2015

Constituent [a]	Units	Station 1 [b]	Station 2 [b]	Station 3 [b]
PAHs				
1-Methylnaphthalene	µg/L	<0.004	<0.004	<0.004
1-Methylphenanthrene	µg/L	<0.004[IL]	<0.004	<0.004
2,3,5-Trimethylnaphthalene	µg/L	<0.004	<0.004	<0.004
2,6-Dimethylnaphthalene	µg/L	<0.004	<0.004	<0.004
2-Methylnaphthalene	µg/L	<0.004	<0.004	<0.004
Acenaphthene	µg/L	<0.004	<0.004	<0.004
Acenaphthylene	µg/L	<0.004	<0.004	<0.004
Anthracene	µg/L	<0.004[IL]	<0.004	<0.004
Benzo(a)anthracene	µg/L	<0.004[IL]	<0.004	<0.004
Benzo(a)pyrene	µg/L	<0.004[IL]	<0.004	<0.004
Benzo(b)fluoranthene	µg/L	<0.004[IL]	<0.004	<0.004
Benzo(e)pyrene	µg/L	<0.004[EUM,IL]	<0.004[EUM]	<0.004[EUM]
Benzo(g,h,i)perylene	µg/L	<0.004[IL]	<0.004	<0.004
Benzo(k)fluoranthene	µg/L	<0.004[IL]	<0.004	<0.004
Biphenyl	µg/L	<0.004	<0.004	<0.004
Chrysene	µg/L	<0.004[IL]	<0.004	<0.004
Dibenz(a,h)anthracene	µg/L	<0.004[IL]	<0.004	<0.004
Dibenzothiophene	µg/L	<0.004[IL]	<0.004	<0.004
Fluoranthene	µg/L	<0.004[IL]	<0.004	0.006
Fluorene	µg/L	<0.004[IL]	<0.004	<0.004
Indeno(1,2,3-cd)pyrene	µg/L	<0.004[IL]	<0.004	<0.004
Naphthalene	µg/L	<0.004	<0.004	<0.004
Perylene	µg/L	<0.004	<0.004	<0.004
Phenanthrene	µg/L	0.004[DNQ,IL]	<0.004	0.0048[DNQ]
Pyrene	µg/L	<0.004[IL]	<0.004	0.008

Notes:
DNQ = Detected but not quantified
EUM = LCS is outside of control limits
IL = RPD exceeds laboratory control limit
[a] Only constituents detected at one or more stations, during one or more events, are included.
[b] See Error! Reference source not found. for definitions of the indicated qualifications.

Table 23. Field Measurement Results for the Wet Weather River Event 1 (WW039): December 22, 2015

Constituent	Units	Station 1	Station 2	Station 3
Field Measurements				
Dissolved Oxygen	mg/L	7.85	7.21	7.35
Electrical Conductivity	µS/cm	11	29	18
pH	SU	7.14	7.28	6.91
Temperature	°C	8.3	7.8	7.8
Turbidity	NTU	1	2	1
River Velocity[a]	ft/sec	1.2	3	1

Note:
[a] River velocity was estimated using the floating stick method.

Table 24. Laboratory Results for Bacteriologicals, Conventionals, Nutrients and Hydrocarbons for the Wet Weather River Event 1 (WW039): December 22, 2015

Constituent [a]	Units	Station 1 [b]	Station 2 [b]	Station 3 [b]
Bacteriologicals				
Fecal Coliform	MPN/100 mL	49	23	130
Total Coliform	MPN/100 mL	1,100	23	2,300
E.Coli	MPN/100 mL	49	23	130
Conventionals				
Chemical Oxygen Demand	mg/L	<6.4	<6.4	<6.4
Dissolved Organic Carbon	mg/L	1.2[IP]	2.4	1.5
Hardness (as CaCO3)	mg/L	15	21	12
Total Dissolved Solids	mg/L	44	60	39
Total Organic Carbon	mg/L	1.3	2.9	1.8
Total Suspended Solids	mg/L	10	<5.0	<5.0
Hydrocarbons (Oil & Grease)				
None detected				
Nutrients				
Ammonia as N	mg/L	<0.024	<0.024	<0.024
Nitrate as NO3	mg/L	<0.44	2[H]	<0.44
Phosphorus as P	mg/L	<0.064	<0.064	0.1

Notes:
H = Holding time exceeded
IP = Analyte detected in method, trip, or equipment blank
[a] Only constituents detected at one or more stations, during one or more events, are included.
[b] See Error! Reference source not found. for definitions of the indicated qualifications.

Table 25. Laboratory Results for Metals, Anions, and Cations for the Wet Weather River Event 1 (WW039): December 22, 2015

Constituent [a]	Units	Station 1 [b]	Station 2 [b]	Station 3 [b]
Metals				
Arsenic - Dissolved	µg/L	1.91	2.12	2.08
Arsenic - Total	µg/L	2.76[EUM]	2.22[EUM]	2.20[EUM]
Cadmium - Dissolved	µg/L	0.03[c]	<0.008	<0.008
Cadmium - Total	µg/L	0.028	<0.008	<0.008
Chromium - Dissolved	µg/L	0.13	0.13	0.14[c]
Chromium - Total	µg/L	0.39	0.17	0.10
Copper - Dissolved	µg/L	0.46	0.68	0.55
Copper - Total	µg/L	0.93	0.76	0.65
Lead - Dissolved	µg/L	0.054	0.052	0.041
Lead - Total	µg/L	1.87	0.114	0.066
Mercury - Total	ng/L	0.56[D]	<0.08	0.73[D]
Nickel - Dissolved	µg/L	0.15	0.22	0.12[c]
Nickel - Total	µg/L	0.26	0.28	0.10
Selenium - Dissolved	µg/L	<0.44	<0.44	<0.44
Selenium - Total	µg/L	<0.44	<0.44	<0.44
Zinc - Dissolved	µg/L	1.00[IP]	<0.16	0.78
Zinc - Total	µg/L	1.74	0.66	1.11
Anions				
Chloride	mg/L	5.0	6.3	4.0
Sulfate	mg/L	1.9	5.0	1.6
Cations				
Aluminum	mg/L	0.20	0.12	<0.023
Barium	mg/L	<0.023	<0.023	<0.023
Calcium	mg/L	4.5	5.6	3.7
Magnesium	mg/L	0.87	1.6	0.71
Potassium	mg/L	<0.91	<0.91	<0.91
Sodium	mg/L	6.0	7.1	4.9

Notes:
D: Analyte analyzed at a secondary dilution
EUM = LCS is outside of control limits
IP = Analyte detected in method, trip, or equipment blank
[a] Only constituents detected at one or more stations, during one or more events, are included.
[b] See Error! Reference source not found. for definitions of the indicated qualifications.
[c] Dissolved sample result is greater than corresponding total sample result, but the difference is less than the reporting limit. The dissolved result is not rejected.

Table 26. Laboratory Results for PAHs for the Wet Weather River Event 1 (WW039): December 22, 2015

Constituent [a]	Units	Station 1 [b]	Station 2 [b]	Station 3 [b]
PAHs				
1-Methylnaphthalene	µg/L	<0.004	<0.004	<0.004
1-Methylphenanthrene	µg/L	<0.004	<0.004	<0.004
2,3,5-Trimethylnaphthalene	µg/L	<0.004	<0.004	<0.004
2,6-Dimethylnaphthalene	µg/L	<0.004	<0.004	<0.004
2-Methylnaphthalene	µg/L	<0.004	<0.004	<0.004
Acenaphthene	µg/L	<0.004	<0.004	<0.004
Acenaphthylene	µg/L	<0.004	<0.004	<0.004
Anthracene	µg/L	<0.004	<0.004	<0.004
Benzo(a)anthracene	µg/L	<0.004	<0.004	<0.004
Benzo(a)pyrene	µg/L	<0.004	<0.004	<0.004
Benzo(b)fluoranthene	µg/L	<0.004	<0.004	<0.004
Benzo(e)pyrene	µg/L	<0.004	<0.004	<0.004
Benzo(g,h,i)perylene	µg/L	<0.004	<0.004	<0.004
Benzo(k)fluoranthene	µg/L	<0.004	<0.004	<0.004
Biphenyl	µg/L	<0.004	<0.004	<0.004
Chrysene	µg/L	<0.004	<0.004	<0.004
Dibenz(a,h)anthracene	µg/L	<0.004	<0.004	<0.004
Dibenzothiophene	µg/L	<0.004	<0.004	<0.004
Fluoranthene	µg/L	0.007	<0.004	0.006
Fluorene	µg/L	<0.004	<0.004	<0.004
Indeno(1,2,3-cd)pyrene	µg/L	<0.004	<0.004	<0.004
Naphthalene	µg/L	<0.004	<0.004	<0.004
Perylene	µg/L	<0.004	<0.004	<0.004
Phenanthrene	µg/L	<0.004	<0.004	0.005
Pyrene	µg/L	0.007	<0.004	0.006

[a] Only constituents detected at one or more stations, during one or more events, are included.

Table 27. Field Measurement Results for the Wet Weather River Event 2 (WW040): January 18, 2016

Constituent	Units	Station 1	Station 2	Station 3
Field Measurements				
Dissolved Oxygen	mg/L	7.11	7.82	7.53
Electrical Conductivity	µS/cm	91	64	22
pH	SU	7.24	7.17	7.43
Temperature	°C	9.2	8.6	8.7
Turbidity	NTU	2	2	1
River Velocity[a]	ft/sec	0.5	1.5	0.2

[a] River velocity was estimated using the floating stick method.

Table 28. Laboratory Results for Bacteriologicals, Conventionals, Nutrients and Hydrocarbons for the Wet Weather River Event 2 (WW040): January 18, 2016

Constituent [a]	Units	Station 1 [b]	Station 2 [b]	Station 3 [b]
Bacteriologicals				
Fecal Coliform	MPN/100 mL	23	130	7.8
Total Coliform	MPN/100 mL	110	1,700	33
E.Coli	MPN/100 mL	23	130	7.8
Conventionals				
Chemical Oxygen Demand	mg/L	<6.4	<6.4	<6.4
Dissolved Organic Carbon	mg/L	2.6	2.0	2.0
Hardness (as CaCO3)	mg/L	20	18	19
Total Dissolved Solids	mg/L	48	44	41
Total Organic Carbon	mg/L	2.4	1.9	2.2
Total Suspended Solids	mg/L	<5.0	<5.0	24
Hydrocarbons (Oil & Grease)				
None detected				
Nutrients				
Ammonia as N	mg/L	<0.024	<0.024	1.2
Nitrate as NO3	mg/L	<0.44	<0.44	<0.44
Phosphorus as P	mg/L	<0.064	<0.064	<0.064

Notes:
[a] Only constituents detected at one or more stations, during one or more events, are included.

Table 29. Laboratory Results for Metals, Anions, and Cations for the Wet Weather River Event 2 (WW040): January 18, 2016

Constituent [a]	Units	Station 1 [b]	Station 2 [b]	Station 3 [b]
Metals				
Arsenic - Dissolved	µg/L	3.11	2.78	2.26
Arsenic - Total	µg/L	3.27[EUM]	3[EUM]	2.68[EUM]
Cadmium - Dissolved	µg/L	<0.008	<0.008	<0.008
Cadmium - Total	µg/L	<0.008	<0.008	<0.008
Chromium - Dissolved	µg/L	0.14[c]	0.12	<0.02
Chromium - Total	µg/L	0.12	0.16	0.18
Copper - Dissolved	µg/L	0.76	0.54	0.64
Copper - Total	µg/L	0.91	0.64	0.82
Lead - Dissolved	µg/L	<0.005	<0.005	<0.005
Lead - Total	µg/L	0.066	0.057	0.309
Mercury - Total	ng/L	0.99[D]	0.68[D]	0.72[D]
Nickel - Dissolved	µg/L	0.24	0.13	0.15
Nickel - Total	µg/L	0.31	0.31	0.23
Selenium - Dissolved	µg/L	0.7[c]	0.76	0.74[c]
Selenium - Total	µg/L	<0.44	1.65	<0.44
Zinc - Dissolved	µg/L	0.82[c]	0.84[c]	1.09
Zinc - Total	µg/L	0.58[FDP]	0.78	1.81
Anions				
Chloride	mg/L	6.1	5.8	5.9
Sulfate	mg/L	2.6	2.1	2.2
Cations				
Aluminum	mg/L	<0.023	<0.023	0.35
Barium	mg/L	<0.023	<0.023	<0.023
Calcium	mg/L	6	5.4	5.4
Magnesium	mg/L	1.2	1.1	1.3
Potassium	mg/L	<0.91	<0.91	<0.91
Sodium	mg/L	7.5	6.9	6.9

Notes:
D: Analyte analyzed at a secondary dilution
EUM = LCS is outside of control limits
FDP = Field duplicate RPD not within control
[a] Only constituents detected at one or more stations, during one or more events, are included.
[b] See Error! Reference source not found. for definitions of the indicated qualifications.
[c] Dissolved sample result is greater than corresponding total sample result, but the difference is less than the reporting limit. The dissolved result is not rejected.

Table 30. Laboratory Results for PAHs for the Wet Weather River Event 2 (WW040): January 18, 2016

Constituent [a]	Units	Station 1 [b]	Station 2 [b]	Station 3 [b]
PAHs				
1-Methylnaphthalene	µg/L	<0.004	<0.004[IL]	<0.004
1-Methylphenanthrene	µg/L	<0.004	<0.004	<0.004
2,3,5-Trimethylnaphthalene	µg/L	<0.004	<0.004	<0.004
2,6-Dimethylnaphthalene	µg/L	<0.004	<0.004[IL]	<0.004
2-Methylnaphthalene	µg/L	<0.004	<0.004[IL]	<0.004
Acenaphthene	µg/L	<0.004	<0.004	<0.004
Acenaphthylene	µg/L	<0.004	<0.004[IL]	<0.004
Anthracene	µg/L	<0.004	<0.004	<0.004
Benzo(a)anthracene	µg/L	<0.004	<0.004	<0.004
Benzo(a)pyrene	µg/L	<0.004	<0.004	<0.004
Benzo(b)fluoranthene	µg/L	<0.004	<0.004	<0.004
Benzo(e)pyrene	µg/L	<0.004	<0.004	<0.004
Benzo(g,h,i)perylene	µg/L	<0.004	<0.004	<0.004
Benzo(k)fluoranthene	µg/L	<0.004	<0.004[IL]	<0.004
Biphenyl	µg/L	<0.004	<0.004[IL]	<0.004
Chrysene	µg/L	<0.004	<0.004	<0.004
Dibenz(a,h)anthracene	µg/L	<0.004	<0.004	<0.004
Dibenzothiophene	µg/L	<0.004	<0.004	<0.004
Fluoranthene	µg/L	<0.004	<0.004	<0.004
Fluorene	µg/L	<0.004	<0.004	<0.004
Indeno(1,2,3-cd)pyrene	µg/L	<0.004	<0.004	<0.004
Naphthalene	µg/L	<0.004	<0.004[IL]	<0.004
Perylene	µg/L	<0.004[EUM]	<0.004[EUM]	<0.004[EUM]
Phenanthrene	µg/L	<0.004	<0.004	<0.004
Pyrene	µg/L	<0.004	<0.004	<0.004

Notes:
EUM = LCS is outside of control limits
IL = RPD exceeds laboratory control limit
[a] Only constituents detected at one or more stations, during one or more events, are included.
[b] See Error! Reference source not found. for definitions of the indicated qualifications.

Table 31. Field Measurement Results for the Wet Weather River Event 3 (WW041): March 6, 2016

Constituent	Units	Station 1	Station 2	Station 3
Field Measurements				
Dissolved Oxygen	mg/L	6.88	7.16	7.22
Electrical Conductivity	µS/cm	87	71	93
pH	SU	7.39	7.27	7.22
Temperature	°C	10.3	10.7	10.7
Turbidity	NTU	4	2	4
River Velocity[a]	ft/sec	2	1.2	0.9

Note:
[a] River velocity was estimated using the floating stick method.

Table 32. Laboratory Results for Bacteriologicals, Conventionals, Nutrients and Hydrocarbons for the Wet Weather River Event 3 (WW041): March 6, 2016

Constituent [a]	Units	Station 1	Station 2	Station 3
Bacteriologicals				
Fecal Coliform	MPN/100 mL	49,000	70	1,300
Total Coliform	MPN/100 mL	350,000	540	4,900
E.Coli	MPN/100 mL	49,000	70	1,300
Conventionals				
Chemical Oxygen Demand	mg/L	41	<6.4	<6.4
Dissolved Organic Carbon	mg/L	11	3.3	3.2
Hardness (as CaCO3)	mg/L	47	21	19
Total Dissolved Solids	mg/L	100	53	44
Total Organic Carbon	mg/L	12	3.2	3.2
Total Suspended Solids	mg/L	14	<5	<5
Hydrocarbons (Oil & Grease)				
None detected				
Nutrients				
Ammonia as N	mg/L	<0.024	<0.024	<0.024
Nitrate as NO3	mg/L	<0.44	<0.44	<0.44
Phosphorus as P	mg/L	0.21	<0.064	<0.064

Notes:
[a] Only constituents detected at one or more stations, during one or more events, are included.

Table 33. Laboratory Results for Metals, Anions, and Cations for the Wet Weather River Event 3 (WW041): March 6, 2016

Constituent [a]	Units	Station 1 [b]	Station 2 [b]	Station 3 [b]
Metals				
Arsenic - Dissolved	µg/L	1.83	2.27	2.17
Arsenic - Total	µg/L	2.04	2.34	3.35
Cadmium - Dissolved	µg/L	<0.008	<0.008	<0.008
Cadmium - Total	µg/L	<0.008	<0.008	0.047
Chromium - Dissolved	µg/L	0.27	0.13[d]	0.14
Chromium - Total	µg/L	0.64FDP	0.11	0.83
Copper - Dissolved	µg/L	1.63	0.78R,IP [c]	1.31
Copper - Total	µg/L	2.46	0.67	3.77
Lead - Dissolved	µg/L	0.12	<0.005	0.041
Lead - Total	µg/L	0.604FDP	0.046	4.31
Mercury - Total	ng/L	8.67D	1.67D	1.48D
Nickel - Dissolved	µg/L	0.94	0.21	0.22
Nickel - Total	µg/L	1.32	0.21	0.89
Selenium - Dissolved	µg/L	<0.44	<0.44	<0.44
Selenium - Total	µg/L	<0.44	<0.44	<0.44
Zinc - Dissolved	µg/L	1.98	2.07R [c]	2.57
Zinc - Total	µg/L	4.58	0.94	15.0
Anions				
Chloride	mg/L	6.4	5.8	5.5
Sulfate	mg/L	3.4	2.3	2.1
Cations				
Aluminum	mg/L	0.43	0.08	0.053
Barium	mg/L	0.058	<0.023	<0.023
Calcium	mg/L	13	6.0	5.5
Magnesium	mg/L	3.6	1.3	1.2
Potassium	mg/L	3.7	<0.91	<0.91
Sodium	mg/L	11	7.1	6.6

Notes:
D: Analyte analyzed at a secondary dilution
FDP = Field duplicate RPD not within control
IP = Analyte detected in method, trip, or equipment blank
R = Data rejected - EPA Flag. Data qualified as rejected are not included in the database export and thus are not included in **Appendix A**.
[a] Only constituents detected at one or more stations, during one or more events, are included.
[b] See Error! Reference source not found. for definitions of the indicated qualifications.
[c] Dissolved sample result is significantly greater than corresponding total sample result. The difference between the total and dissolved sample results is greater than the reporting limit; filter contamination is suspected, and the dissolved result has been rejected.
[d] Dissolved sample result is greater than corresponding total sample result, but the difference is less than the reporting limit. The dissolved result is not rejected.

Table 34. Laboratory Results for PAHs for the Wet Weather River Event 3 (WW041): March 6, 2016

Constituent [a]	Units	Station 1 [b]	Station 2 [b]	Station 3 [b]
PAHs				
1-Methylnaphthalene	µg/L	<0.004	<0.004	<0.004[H,IL]
1-Methylphenanthrene	µg/L	<0.004	<0.004	<0.004[H]
2,3,5-Trimethylnaphthalene	µg/L	<0.004	<0.004	<0.004[H,IL]
2,6-Dimethylnaphthalene	µg/L	<0.004	<0.004	<0.004[H,IL]
2-Methylnaphthalene	µg/L	<0.004	<0.004	<0.004[H,IL]
Acenaphthene	µg/L	<0.004	<0.004	<0.004[H,IL]
Acenaphthylene	µg/L	<0.004	<0.004	<0.004[H,IL]
Anthracene	µg/L	<0.004	<0.004	<0.004[H,IL]
Benzo(a)anthracene	µg/L	<0.004	<0.004	<0.004[H]
Benzo(a)pyrene	µg/L	<0.004[EUM]	<0.004[EUM]	<0.004[H,EUM]
Benzo(b)fluoranthene	µg/L	<0.004	<0.004	<0.004[H]
Benzo(e)pyrene	µg/L	<0.004	<0.004	<0.004[H]
Benzo(g,h,i)perylene	µg/L	<0.004	<0.004	<0.004[H]
Benzo(k)fluoranthene	µg/L	<0.004	<0.004	<0.004[H]
Biphenyl	µg/L	<0.004	<0.004	<0.004[H,IL]
Chrysene	µg/L	<0.004	<0.004	<0.004[H]
Dibenz(a,h)anthracene	µg/L	<0.004	<0.004	<0.004[H]
Dibenzothiophene	µg/L	<0.004	<0.004	<0.004[H,IL]
Fluoranthene	µg/L	0.0049[DNQ,EUM]	<0.004[EUM]	0.007[H]
Fluorene	µg/L	<0.004	<0.004	<0.004[H,IL]
Indeno(1,2,3-cd)pyrene	µg/L	<0.004	<0.004	<0.004[H]
Naphthalene	µg/L	<0.004	<0.004	<0.004[H]
Perylene	µg/L	<0.004[EUM]	<0.004[EUM]	<0.004[H]
Phenanthrene	µg/L	<0.004	<0.004	0.05[H,IL,IP]
Pyrene	µg/L	0.01[EUM,IP]	0.006[EUM,IP]	0.011[H,IP]

Notes:
DNQ = Detected but not quantified
EUM = LCS is outside of control limits
H = Analyte was analyzed outside of hold time
IL = RPD exceeds laboratory control limit
IP = Analyte detected in method, trip, or equipment blank
[a] Only constituents detected at one or more stations, during one or more events, are included.
[b] See Error! Reference source not found. for definitions of the indicated qualifications.

Table 35. Field Measurement Results for the Wet Weather Canal Event 1 (CNWW02): January 7, 2016

Constituent	Units	Canal 1	Canal 2
Field Measurements			
Dissolved Oxygen	mg/L	9.53	8.41
Electrical Conductivity	µS/cm	90	51
pH	SU	7.77	7.00
Temperature	°C	9.6	9.0
Turbidity	NTU	8	2
Velocity[a]	ft/sec	0.3	1.9

Note:
[a] Velocity was estimated using the floating stick method.

Table 36. Laboratory Results for Bacteriologicals, Conventionals, Nutrients and Hydrocarbons for the Wet Weather Canal Event 1 (CNWW02): January 7, 2016

Constituent [a]	Units	Canal 1	Canal 2
Bacteriologicals			
Fecal Coliform	MPN/100 mL	140	1,300
Total Coliform	MPN/100 mL	1,100	4,900
E.Coli	MPN/100 mL	140	1,300
Conventionals			
Chemical Oxygen Demand	mg/L	<6.4	31
Dissolved Organic Carbon	mg/L	2.5	4.8
Hardness (as CaCO3)	mg/L	42	26
Total Dissolved Solids	mg/L	68	41
Total Organic Carbon	mg/L	2.7	4.9
Total Suspended Solids	mg/L	16	10
Hydrocarbons (Oil & Grease)			
	None detected		
Nutrients			
Ammonia as N	mg/L	<0.024	1.0
Nitrate as NO3	mg/L	5.3[FDP]	1.7
Phosphorus as P	mg/L	<0.064	0.13

Notes:
FDP = Field duplicate RPD not within control
[a] Only constituents detected at one or more stations, during one or more events, are included.

Table 37. Laboratory Results for Metals, Anions, and Cations for the Wet Weather Canal Event 1 (CNWW02): January 7, 2016

Constituent [a]	Units	Canal 1 [b]	Canal 2 [b]
Metals			
Arsenic - Dissolved	µg/L	0.66	1.09
Arsenic - Total	µg/L	1.14	1.32
Cadmium - Dissolved	µg/L	<0.008	0.023
Cadmium - Total	µg/L	0.031	0.038
Chromium - Dissolved	µg/L	0.41	0.51
Chromium - Total	µg/L	1.14	0.81
Copper - Dissolved	µg/L	2.60	5.15
Copper - Total	µg/L	3.61	6.48
Lead - Dissolved	µg/L	0.059	0.316
Lead - Total	µg/L	0.568	1.11
Mercury - Total	ng/L	1.86[D]	2.24[D]
Nickel - Dissolved	µg/L	2.00	1.38[IP]
Nickel - Total	µg/L	3.02	1.97
Selenium - Dissolved	µg/L	0.80	<0.44
Selenium - Total	µg/L	1.15	<0.44
Zinc - Dissolved	µg/L	1.50	17.6
Zinc - Total	µg/L	4.87	23.8
Anions			
Chloride	mg/L	2.4	3.0
Sulfate	mg/L	8.8	2.7
Cations			
Aluminum	mg/L	0.47	0.23
Barium	mg/L	<0.023	<0.023
Calcium	mg/L	-- [c]	-- [c]
Magnesium	mg/L	-- [c]	-- [c]
Potassium	mg/L	<0.91	2.4
Sodium	mg/L	5.8	3.8

Notes:
D: Analyte analyzed at a secondary dilution
IP = Analyte detected in method, trip, or equipment blank
[a] Only constituents detected at one or more stations, during one or more events, are included.
[b] See Error! Reference source not found. for definitions of the indicated qualifications.
[c] "--" indicates that the analysis was not required.

Table 38. Laboratory Results for PAHs for the Wet Weather Canal Event 1 (CNWW02): January 7, 2016

Constituent [a]	Units	Canal 1 [b]	Canal 2 [b]
PAHs			
1-Methylnaphthalene	µg/L	<0.004	<0.004
1-Methylphenanthrene	µg/L	<0.004	<0.004
2,3,5-Trimethylnaphthalene	µg/L	<0.004	<0.004
2,6-Dimethylnaphthalene	µg/L	<0.004	<0.004
2-Methylnaphthalene	µg/L	<0.004	<0.004
Acenaphthene	µg/L	<0.004	<0.004
Acenaphthylene	µg/L	<0.004	<0.004
Anthracene	µg/L	<0.004	<0.004
Benzo(a)anthracene	µg/L	<0.004	<0.004
Benzo(a)pyrene	µg/L	<0.004	0.006
Benzo(b)fluoranthene	µg/L	<0.004	0.01
Benzo(e)pyrene	µg/L	<0.004	0.009
Benzo(g,h,i)perylene	µg/L	<0.004	0.01
Benzo(k)fluoranthene	µg/L	<0.004	<0.004
Biphenyl	µg/L	<0.004	<0.004
Chrysene	µg/L	<0.004	0.01
Dibenz(a,h)anthracene	µg/L	<0.004	<0.004
Dibenzothiophene	µg/L	<0.004	<0.004
Fluoranthene	µg/L	0.0046[DNQ]	0.02
Fluorene	µg/L	<0.004	<0.004
Indeno(1,2,3-cd)pyrene	µg/L	<0.004	0.008
Naphthalene	µg/L	<0.004	<0.004
Perylene	µg/L	<0.004	<0.004
Phenanthrene	µg/L	0.006	0.007
Pyrene	µg/L	0.005	0.02

Notes:
DNQ = Detected but not quantified
[a] Only constituents detected at one or more stations, during one or more events, are included.

Table 39. Field Measurement Results for the Wet Weather Canal Event 2 (CNWW03): January 21, 2016

Constituent	Units	Canal 1	Canal 2
Field Measurements			
Dissolved Oxygen	mg/L	7.81	7.25
Electrical Conductivity	µS/cm	110	74
pH	SU	7.41	7.26
Temperature	°C	10.1	10.0
Turbidity	NTU	7	4
Velocity[a]	ft/sec	0.2	2.5

Note:
[a] Velocity was estimated using the floating stick method.

Table 40. Laboratory Results for Bacteriologicals, Conventionals, Nutrients and Hydrocarbons for the Wet Weather Canal Event 2 (CNWW03): January 21, 2016

Constituent [a]	Units	Canal 1 [b]	Canal 2 [b]
Bacteriologicals			
Fecal Coliform	MPN/100 mL	79	490
Total Coliform	MPN/100 mL	130	7,900
E.Coli	MPN/100 mL	79	490
Conventionals			
Chemical Oxygen Demand	mg/L	<6.4	17[FDP]
Dissolved Organic Carbon	mg/L	2.5	3.3
Hardness (as CaCO3)	mg/L	35	16
Total Dissolved Solids	mg/L	60	38
Total Organic Carbon	mg/L	4.2	3.6
Total Suspended Solids	mg/L	22	9.0
Hydrocarbons (Oil & Grease)			
None detected			
Nutrients			
Ammonia as N	mg/L	<0.024	<0.024
Nitrate as NO3	mg/L	1.7	1.5
Phosphorus as P	mg/L	<0.064[GB]	0.33[FDP]

Notes:
FDP = Field duplicate RPD not within control
GB = Matrix spike recovery not within control limits
[a] Only constituents detected at one or more stations, during one or more events, are included.
[b] See Error! Reference source not found. for definitions of the indicated qualifications.

Table 41. Laboratory Results for Metals, Anions, and Cations for the Wet Weather Canal Event 2 (CNWW03): January 21, 2016

Constituent [a]	Units	Canal 1 [b]	Canal 2 [b]
Metals			
Arsenic - Dissolved	µg/L	0.93	1.31[FDP]
Arsenic - Total	µg/L	1.34[GB]	1.41
Cadmium - Dissolved	µg/L	<0.008	<0.008
Cadmium - Total	µg/L	0.026	<0.008
Chromium - Dissolved	µg/L	0.69	0.62
Chromium - Total	µg/L	1.73	1.01
Copper - Dissolved	µg/L	2.67	5.84
Copper - Total	µg/L	4.35	7.03
Lead - Dissolved	µg/L	0.086	0.222
Lead - Total	µg/L	1.54	0.895
Mercury - Total	ng/L	2.34[D]	2.61[D]
Nickel - Dissolved	µg/L	2.49	1.19
Nickel - Total	µg/L	6.57	1.74
Selenium - Dissolved	µg/L	1.42[c]	1.17[c]
Selenium - Total	µg/L	1.15	0.68
Zinc - Dissolved	µg/L	1.20	10.5
Zinc - Total	µg/L	9.39[IP]	18.3[IP]
Anions			
Chloride	mg/L	1.7	2.6
Sulfate	mg/L	7.5	2.1
Cations			
Aluminum	mg/L	0.66	0.30
Barium	mg/L	<0.023	<0.023
Calcium	mg/L	9.3	4.9
Magnesium	mg/L	3.0	0.87
Potassium	mg/L	<0.91	<0.91
Sodium	mg/L	5.3	3.1

Notes:
D: Analyte analyzed at a secondary dilution
IP = Analyte detected in method, trip, or equipment blank
FDP = Field duplicate RPD not within control
GB = Matrix spike recovery not within control limits
[a] Only constituents detected at one or more stations, during one or more events, are included.
[b] See Error! Reference source not found. for definitions of the indicated qualifications.
[c] Dissolved sample result is greater than corresponding total sample result, but the difference is less than the reporting limit. The dissolved result is not rejected.

Table 42. Laboratory Results for PAHs for the Wet Weather Canal Event 2 (CNWW03): January 21, 2016

Constituent [a]	Units	Canal 1 [b]	Canal 2 [b]
PAHs			
1-Methylnaphthalene	µg/L	<0.004	<0.004
1-Methylphenanthrene	µg/L	<0.004	<0.004
2,3,5-Trimethylnaphthalene	µg/L	<0.004	<0.004
2,6-Dimethylnaphthalene	µg/L	<0.004	<0.004
2-Methylnaphthalene	µg/L	<0.004	<0.004
Acenaphthene	µg/L	<0.004	<0.004
Acenaphthylene	µg/L	<0.004	<0.004
Anthracene	µg/L	<0.004	<0.004
Benzo(a)anthracene	µg/L	<0.004	<0.004
Benzo(a)pyrene	µg/L	<0.004[IL]	0.007[IL]
Benzo(b)fluoranthene	µg/L	<0.004	0.02
Benzo(e)pyrene	µg/L	<0.004[IL]	0.01[IL]
Benzo(g,h,i)perylene	µg/L	<0.004	0.01
Benzo(k)fluoranthene	µg/L	<0.004[IL]	0.0049[DNQ]
Biphenyl	µg/L	<0.004	<0.004
Chrysene	µg/L	<0.004	0.01
Dibenz(a,h)anthracene	µg/L	<0.004	<0.004
Dibenzothiophene	µg/L	<0.004	<0.004
Fluoranthene	µg/L	0.0049[DNQ]	0.02
Fluorene	µg/L	<0.004	<0.004
Indeno(1,2,3-cd)pyrene	µg/L	<0.004[IL]	0.01
Naphthalene	µg/L	<0.004	<0.004
Perylene	µg/L	<0.004	<0.004
Phenanthrene	µg/L	0.006	0.008
Pyrene	µg/L	0.005	0.02

Notes:
DNQ = Detected but not quantified
IL = RPD exceeds laboratory control limit
[a] Only constituents detected at one or more stations, during one or more events, are included.
[b] See Error! Reference source not found. for definitions of the indicated qualifications.

Table 43. Frequency of Detection of Trace Elements during the 2015-2016 San Joaquin River Monitoring Season

Method	Constituent	Units	Method Detection Limit	Number of Data Points	Number of Detects	Percent Detected
EPA 200.7	Aluminum (Al)	mg/L	0.023	12	6	50%
EPA 200.7	Barium (Ba)	mg/L	0.023	12	1	8%
EPA 200.7	Boron (B)	mg/L	0.046	12	0	0%
EPA 200.7	Calcium (Ca)	mg/L	0.046	12	12	100%
EPA 200.7	Magnesium (Mg)	mg/L	0.046	12	12	100%
EPA 200.7	Potassium (K)	mg/L	0.91	12	1	8%
EPA 200.7	Sodium (Na)	mg/L	0.45	12	12	100%
EPA 1638	Arsenic (As)	µg/L	0.1	12	12	100%
EPA 1638	Arsenic (As) - Dissolved	µg/L	0.1	12	12	100%
EPA 1638	Cadmium (Cd)	µg/L	0.008	12	2	17%
EPA 1638	Cadmium (Cd) - Dissolved	µg/L	0.008	12	1	8%
EPA 1638	Chromium (Cr)	µg/L	0.02	12	9	75%
EPA 1638	Chromium (Cr) - Dissolved	µg/L	0.02	12	8	67%
EPA 1638	Copper (Cu)	µg/L	0.02	12	12	100%
EPA 1638	Copper (Cu) - Dissolved	µg/L	0.02	11[a]	11	100%
EPA 1638	Lead (Pb)	µg/L	0.005	12	12	100%
EPA 1638	Lead (Pb) - Dissolved	µg/L	0.005	12	6	50%
EPA 1631E	Mercury (Hg)	ng/L	0.08	12	8	67%
EPA 1638	Nickel (Ni)	µg/L	0.04	12	9	75%
EPA 1638	Nickel (Ni) - Dissolved	µg/L	0.04	12	9	75%
EPA 1638	Selenium (Se)	µg/L	0.44	12	1	8%
EPA 1638	Selenium (Se) - Dissolved	µg/L	0.44	12	3	25%
EPA 1638	Silver (Ag)	µg/L	0.002	12	0	0%
EPA 1638	Silver (Ag) - Dissolved	µg/L	0.002	12	0	0%
EPA 1638	Zinc (Zn)	µg/L	0.16	12	11	92%
EPA 1638	Zinc (Zn) - Dissolved	µg/L	0.16	9[b]	8	89%

Note: The total represents the primary environmental samples and does not include any field or lab-initiated QAQC samples.
[a] One result was rejected since the dissolved sample result is significantly greater than corresponding total sample result.
[b] Three results were rejected since the dissolved sample result is significantly greater than corresponding total sample result.

Table 44. Frequency of Detection of Trace Elements during the 2015-2016 Canal Monitoring Season

Method	Constituent	Units	Method Detection Limit	Number of Data Points	Number of Detects	Percent Detected
EPA 200.7	Aluminum (Al)	mg/L	0.023	4	4	100%
EPA 200.7	Barium (Ba)	mg/L	0.023	4	0	0%
EPA 200.7	Boron (B)	mg/L	0.046	4	0	0%
EPA 200.7	Calcium (Ca)	mg/L	0.046	2[a]	2	100%
EPA 200.7	Magnesium (Mg)	mg/L	0.046	2[a]	2	100%
EPA 200.7	Potassium (K)	mg/L	0.91	4	1	25%
EPA 200.7	Sodium (Na)	mg/L	0.45	4	4	100%
EPA 1638	Arsenic (As)	µg/L	0.1	4	4	100%
EPA 1638	Arsenic (As) - Dissolved	µg/L	0.1	4	4	100%
EPA 1638	Cadmium (Cd)	µg/L	0.008	4	3	75%
EPA 1638	Cadmium (Cd) - Dissolved	µg/L	0.008	4	1	25%
EPA 1638	Chromium (Cr)	µg/L	0.02	4	4	100%
EPA 1638	Chromium (Cr) - Dissolved	µg/L	0.02	4	4	100%
EPA 1638	Copper (Cu)	µg/L	0.02	4	4	100%
EPA 1638	Copper (Cu) - Dissolved	µg/L	0.02	4	4	100%
EPA 1638	Lead (Pb)	µg/L	0.005	4	4	100%
EPA 1638	Lead (Pb) - Dissolved	µg/L	0.005	4	4	100%
EPA 1631E	Mercury (Hg)	ng/L	0.08	4	4	100%
EPA 1638	Nickel (Ni)	µg/L	0.04	4	4	100%
EPA 1638	Nickel (Ni) - Dissolved	µg/L	0.04	4	4	100%
EPA 1638	Selenium (Se)	µg/L	0.44	4	3	75%
EPA 1638	Selenium (Se) - Dissolved	µg/L	0.44	4	3	75%
EPA 1638	Silver (Ag)	µg/L	0.002	4	0	0%
EPA 1638	Silver (Ag) - Dissolved	µg/L	0.002	4	0	0%
EPA 1638	Zinc (Zn)	µg/L	0.16	4	4	100%
EPA 1638	Zinc (Zn) - Dissolved	µg/L	0.16	4	4	100%

Note: The total represents the primary environmental samples and does not include any field or lab-initiated QAQC samples.
[a] The lab did not report results for calcium or magnesium for one event; the analysis is not required.

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6.0 Data Observations and Conclusions

Observations and conclusions related to the San Joaquin River monitoring results for the 2015-2016 monitoring season and all historical monitoring (1996-2016) are presented below. Detailed statistical analyses of the Canal Monitoring data will be performed at the end of the special study period. A subset of constituents representative of several constituent classes, known to be present in typical urban runoff and detected in previous river monitoring, were used to help determine whether dry/wet or spatial patterns exist. This "indicator" list does not constitute a "constituent of concern" list for the District, but a means to more easily track potential impacts of urban runoff on the river:

- Copper, dissolved
- Lead, dissolved
- Zinc, dissolved
- Fecal Coliform
- TDS
- TSS
- Hardness
- Naphthalene

Dissolved metals are included on the indicator list rather than total recoverable metals because the California Toxics Rule water quality objectives are promulgated in the dissolved or most bioavailable form.

6.1. LONG TERM RIVER MONITORING: 1996 – 2016

Fifty-seven river monitoring events, composed of 20 dry weather and 41 wet weather events – have been conducted since 1996, as shown in **Table 45**. Two of the monitoring stations (Stations 1 and 2) are located upstream, and one (Station 3) is located downstream of the Fresno-Clovis Metropolitan area. This section provides a summary of currently monitored constituents reported for the historical river monitoring (1996-2016). The summary is intended to provide a basis for future trend analysis and to assist with overall program management.

There are a number of contributing factors that should be considered when evaluating long term data sets for trend analysis. The analytical laboratory, analytical methods, station locations and sample collection techniques can change over time with method and capability improvements. Some results may not be comparable over time without consideration of these other factors. These factors should be considered when proposing policy or management changes based on the data results presented here. For instance, during events conducted between 1996 and early 2003, depth-integrated, cross-sectional, composite samples were collected at each of the three river monitoring stations. Beginning with the 2003-2004 season, samples have been collected at depth-integrated composite samples near the riverbank, as recommended in the *San Joaquin River Variability Technical Memorandum, August 2003*. This improvement to sampling techniques has minimized contamination and improved accuracy in the more recent data, some of which may have lower, less variable results.

Summary statistics for the currently monitored constituents at all stations are included in **Appendix B**, for all events, only dry weather events, and only wet weather events. Additional historical constituents have been monitored over the course of the program, and the summary statistics for those constituents can be found in the *Fresno-Clovis Storm Water Quality Monitoring Program 2008-2009 Annual Monitoring Report* (August, 2009). **Figure 10** through

Figure 33 are time series plots showing concentrations of the indicator constituents over the history of the San Joaquin River Monitoring Program.

Table 45. San Joaquin River Monitoring Events 1996-2016

Number of Events	Event No.	Date	Storm Size (inches)	Approximate Cumulative Precipitation Prior to Event (inches)[4]	Dry Period Preceding Event[2]	Notes
1	DW001	7/30/96	N/A	N/A	N/A	Dry Weather
2	WW001	10/29/96	1.90	0.32	3 days	First Flush
3	DW002	8/20/97	N/A	N/A	N/A	Dry Weather
4	WW002	11/26/97	0.80	1.02	15 days	First Flush
5	WW003	2/2-3/98[1]	1.69	8.15	12 hours	
6	WW004	3/25/98	1.86	14.0	8 days	
7	DW003	9/10/98	N/A	N/A	N/A	Dry Weather
8	WW005	1/25/99	1.05	2.35	18 hours	
9	DW004	9/29/99	N/A	N/A	N/A	Dry Weather
10	WW006	1/18/00	0.85	0.51	15 hours	First Flush
11	WW007	3/5/00	0.73	9.80	4 days	
12	DW005	9/21/00	N/A	N/A	N/A	Dry Weather
13	WW008	10/29/00	0.99	1.44	16 hours	
14	WW009	1/11/01	0.92	3.72	38 hours	
15	WW010	3/5/01	1.70	9.20	8 days	
16	DW006	9/17/01	N/A	N/A	N/A	Dry Weather
17	WW011	12/29/01	0.94	4.80	5 days	
18	DW007	9/4/02	N/A	N/A	N/A	Dry Weather
19	WW012	12/16/02	0.70	1.48	1.3 days	
20	DW008	10/6/03	N/A	N/A	N/A	Dry Weather
21	WW013	2/18/04	0.27	3.95	1.5 days	
22	DW009	9/29/04	N/A	N/A	N/A	Dry Weather
23	WW014	10/19/04	0.78	0.37	21 hours	First Flush
24	WW015	2/15/05	1.44	8.82	5 hours	
25	WW016	2/28/05	0.53	11.2	5.7 days	
26	DW010	9/21/05	N/A	N/A	N/A	Dry Weather
27	WW017	1/2/06	3.12	2.85	22 hours	
28	WW018	3/28/06	0.37	9.51	4.5 days	
29	WW019	4/3/06	0.37	9.90	8 hours	
30	DW011	10/3/06	N/A	N/A	N/A	Dry Weather
31	WW020	1/28/07	0.40	1.5	24 days	
32	WW021	2/10/07	0.30	2.1	14 hours	
33	DW012	9/18/07	N/A	N/A	N/A	Dry Weather

Number of Events	Event No.	Date	Storm Size (inches)	Approximate Cumulative Precipitation Prior to Event (inches)[4]	Dry Period Preceding Event[2]	Notes
34	WW022	12/18/07	1.25	0.72	10 days	
35	WW023	1/28/08	1.36	4.43	2 days	
36	DW013	10/2/08	N/A	N/A	N/A	Dry Weather
37	WW024	11/26/08	0.65	1.44	17 days	
38	WW025	2/13/09	0.61	6.64	32 hours	
39	DW014	9/21/09	N/A	N/A	N/A	Dry Weather
40	WW026	10/14/09	1.24	0.60	130 days	First Flush
41	WW027	1/21/10	0.56	7.40	20.5 hours	
42	WW028	2/24/10	1.20	9.68	2 days	
43	DW015	9/27/10	N/A	N/A	N/A	Dry Weather
44	WW029	12/18/10	1.36	4.65	2 days	
45	WW030	12/29/10	2.08	9.73	2.7 days	
46	WW031	3/20/11	2.44	16.17	27 hours	
47	DW016	8/16/12	N/A	N/A	N/A	Dry Weather
48	WW032	1/21/12	0.86	4.08	61 days	
49	WW033	3/17/12	1.77	6.05	16 days	
50	WW034	4/13/12	2.09	9.34	1 day	
51	DW017	9/4/12	N/A	N/A	N/A	Dry Weather
52	DW018	9/18/13	N/A	N/A	29 days[3]	Dry Weather
53	WW035	2/6/14	0.55	1.18	3.3 days	
54	WW036	2/28/14	0.56	1.84	1 day	
55	DW019	9/23/14	N/A	0.02	123.5 days	Dry Weather
56	WW037	12/12/14	1.64	1.8	9.5 days	
57	WW038	4/25/15	0.86	6.15	17.5 days	
58	DW020	9/24/15	N/A	0.25	N/A	Dry Weather
59	WW039	12/22/15	1.5	4.22	2.5 days	
60	WW040	1/18/16	0.71	6.66	12.5 days	
61	WW041	3/6/16	1.13	11.00	15 hours	

[1] Two samples were collected for this event
[2] Period since last precipitation greater than 0.10”
[3] Dry period preceding dry weather events was not calculated prior to 2013.
[4] Cumulative precipitation is calculated from June 1st to May 31st of the monitoring year.
NA = not applicable

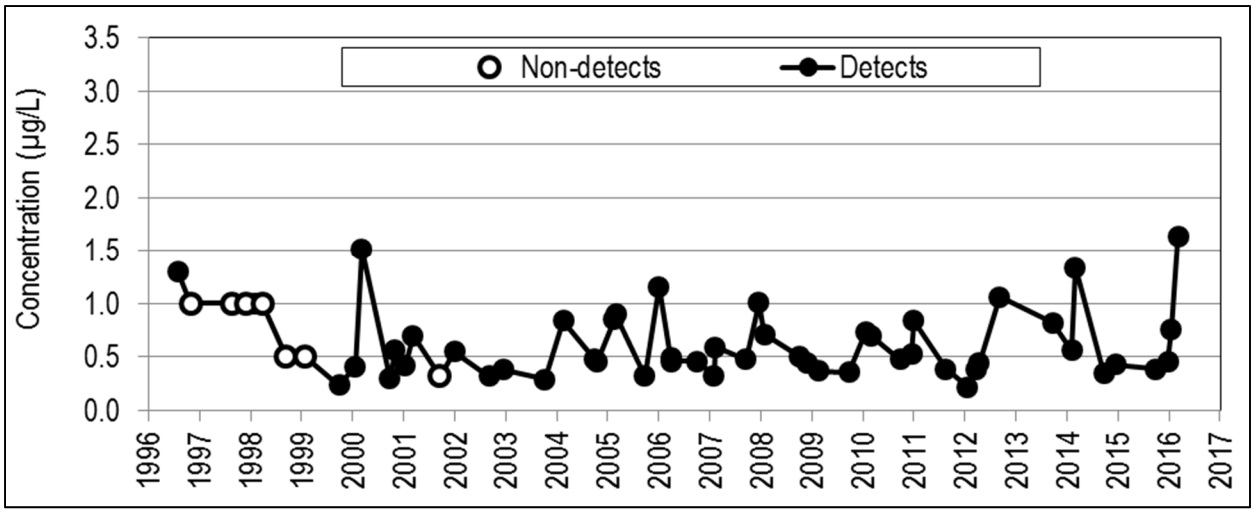

Figure 10. San Joaquin River Dissolved Copper at Station 1 (1996-2016)

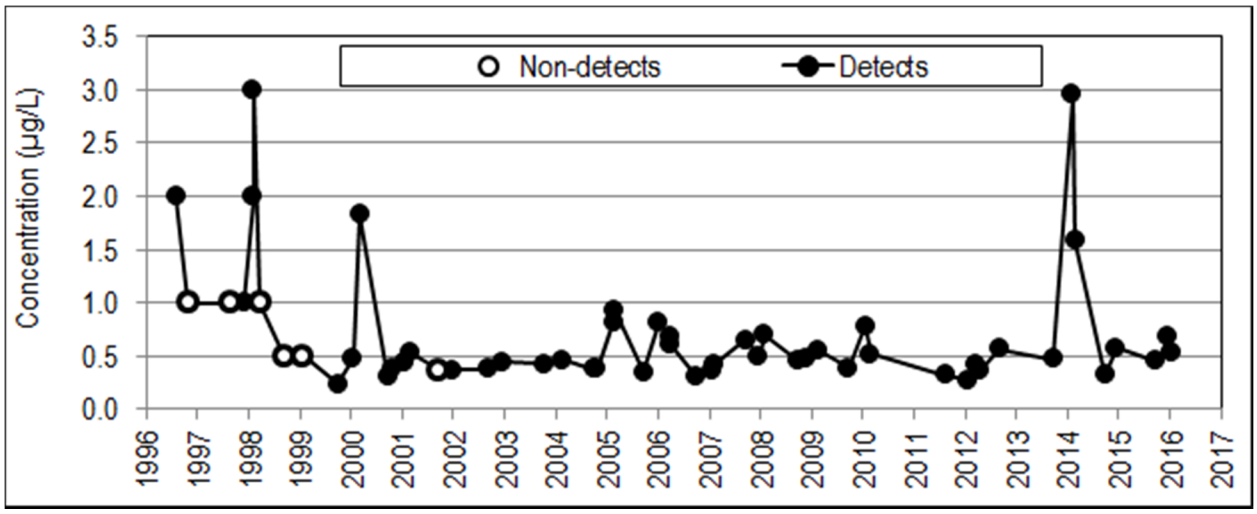

Figure 11. San Joaquin River Dissolved Copper at Station 2 (1996-2016)

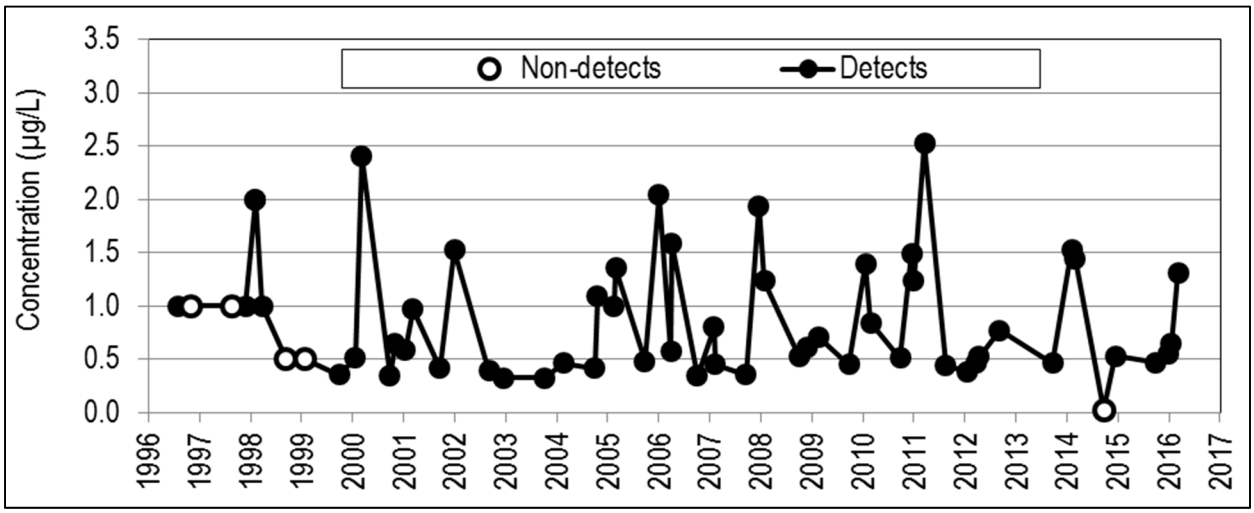

Figure 12. San Joaquin River Dissolved Copper at Station 3 (1996-2016)

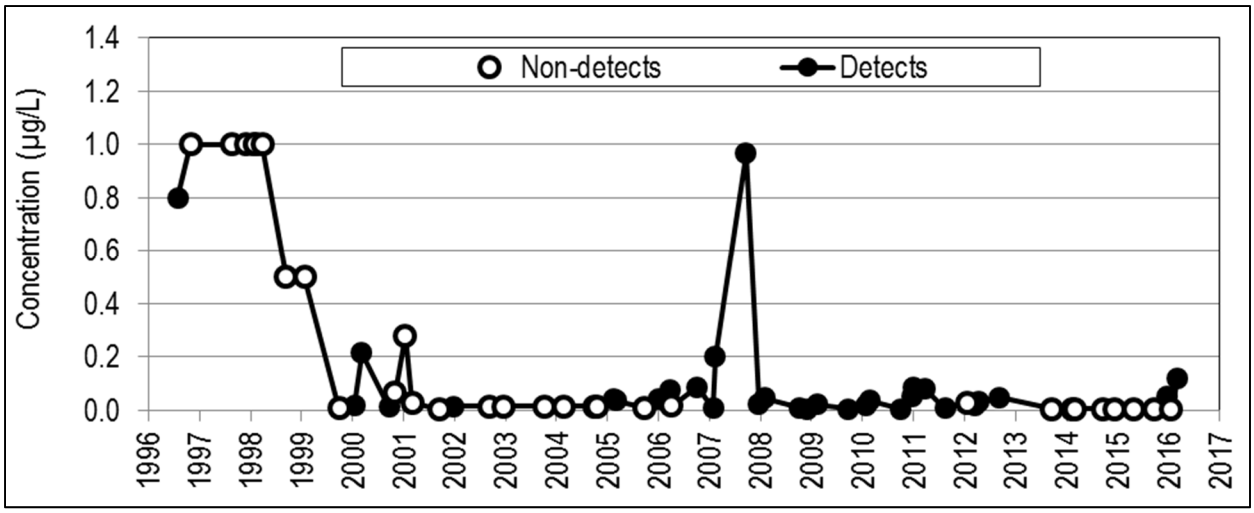

Figure 13. San Joaquin River Dissolved Lead at Station 1 (1996-2016)

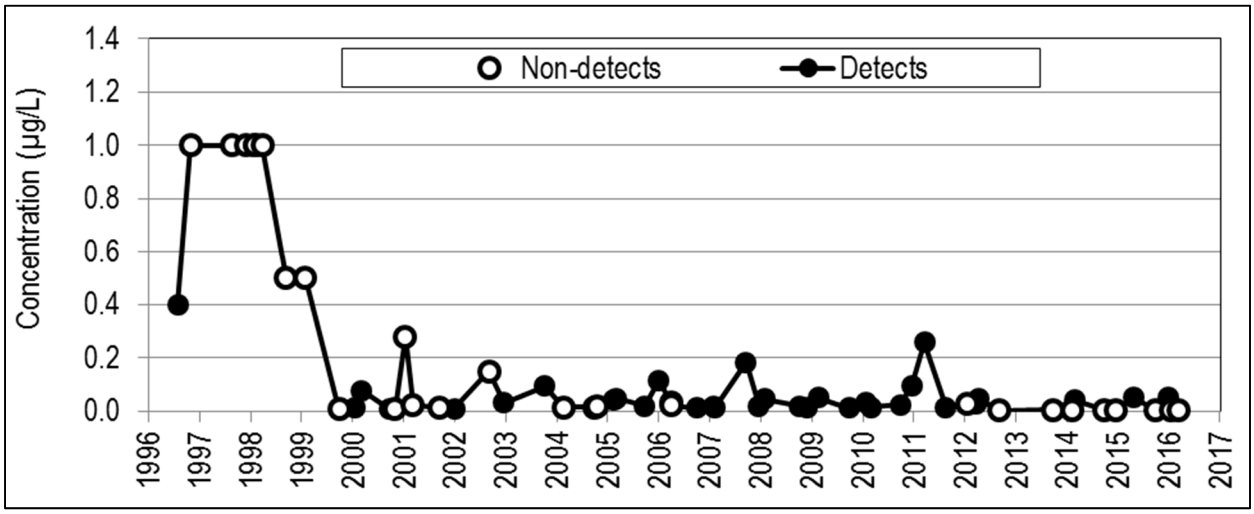

Figure 14. San Joaquin River Dissolved Lead at Station 2 (1996-2016)

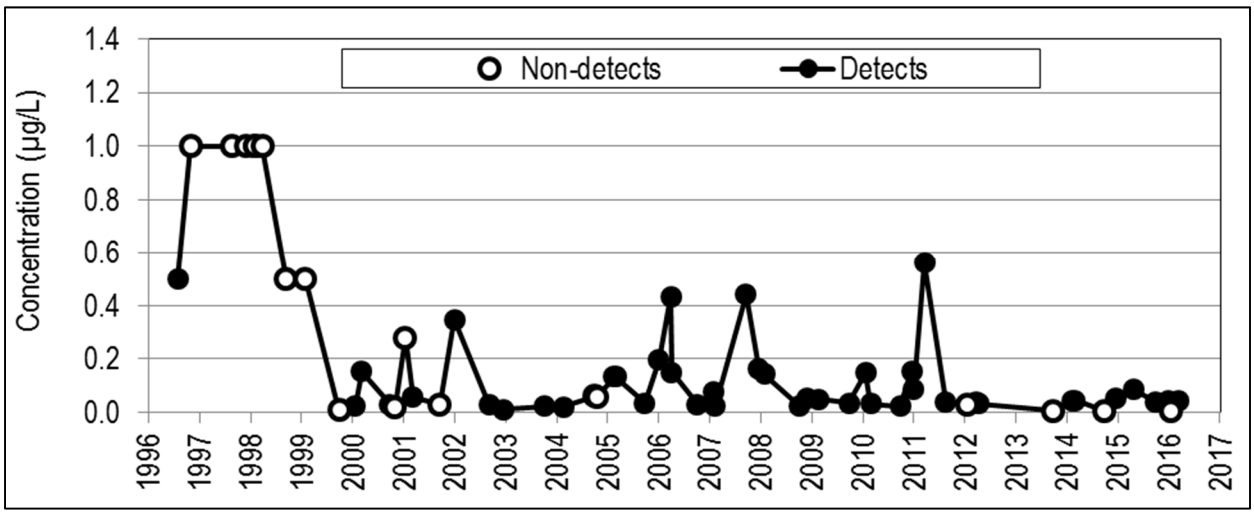

Figure 15. San Joaquin River Dissolved Lead at Station 3 (1996-2016)

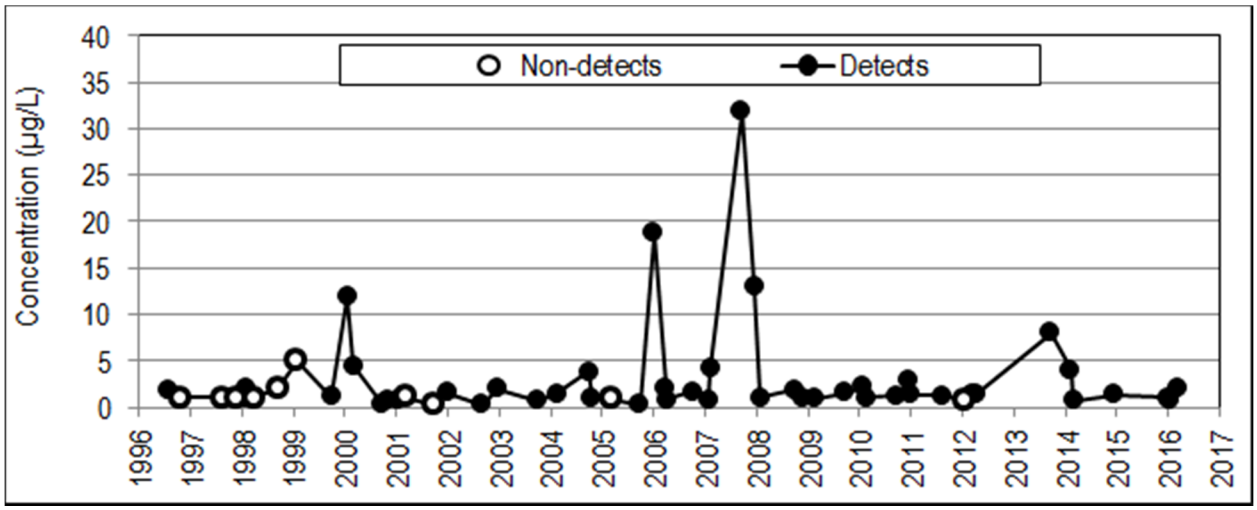

Figure 16. San Joaquin River Dissolved Zinc at Station 1 (1996-2016)

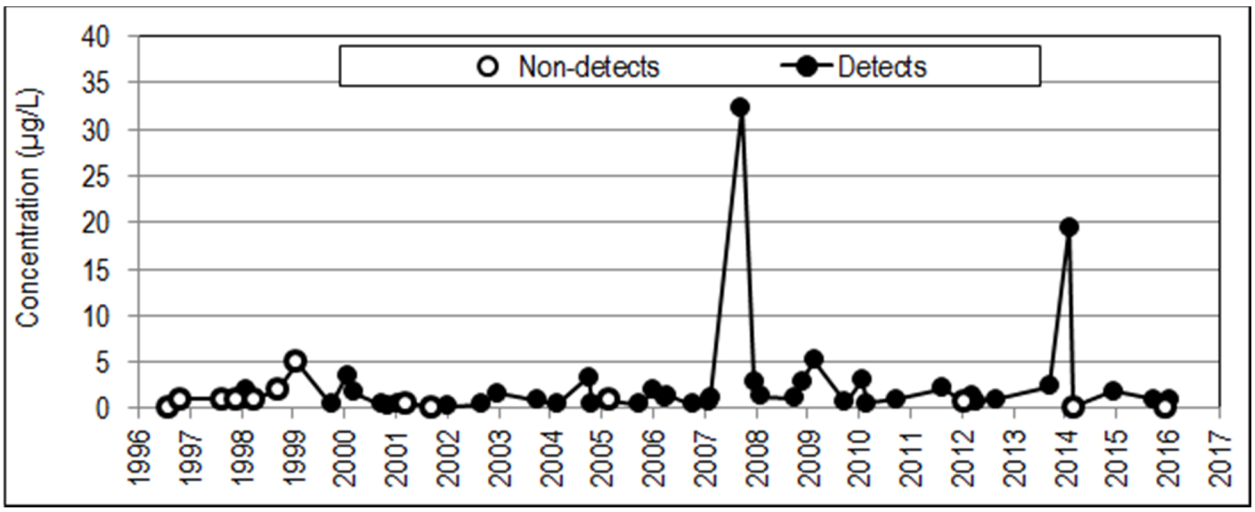

Figure 17. San Joaquin River Dissolved Zinc at Station 2 (1996-2016)

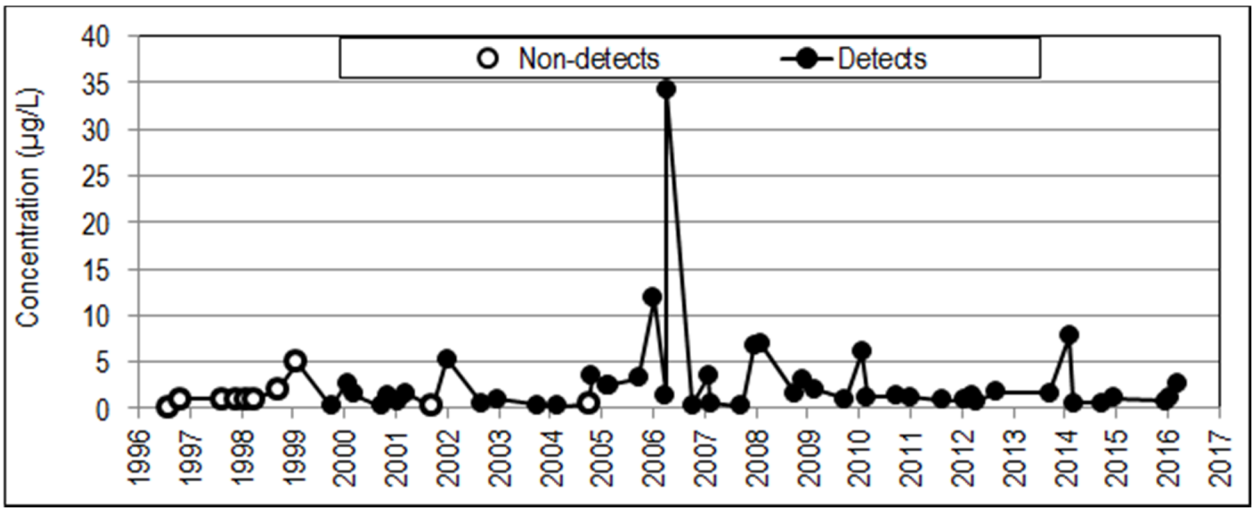

Figure 18. San Joaquin River Dissolved Zinc at Station 3 (1996-2016)

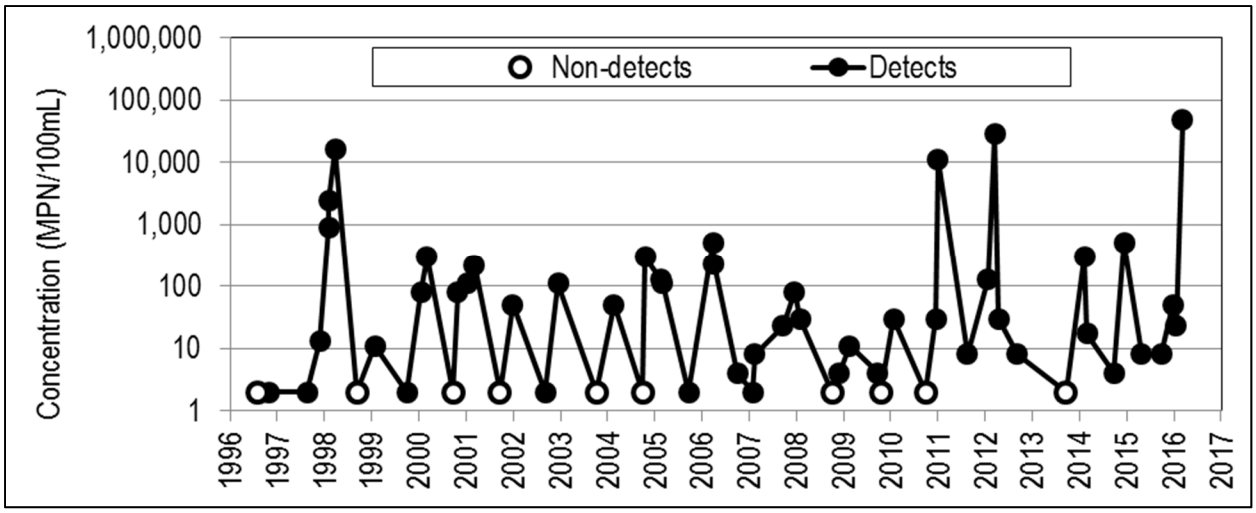

Figure 19. San Joaquin River Fecal Coliform at Station 1 (1996-2016)

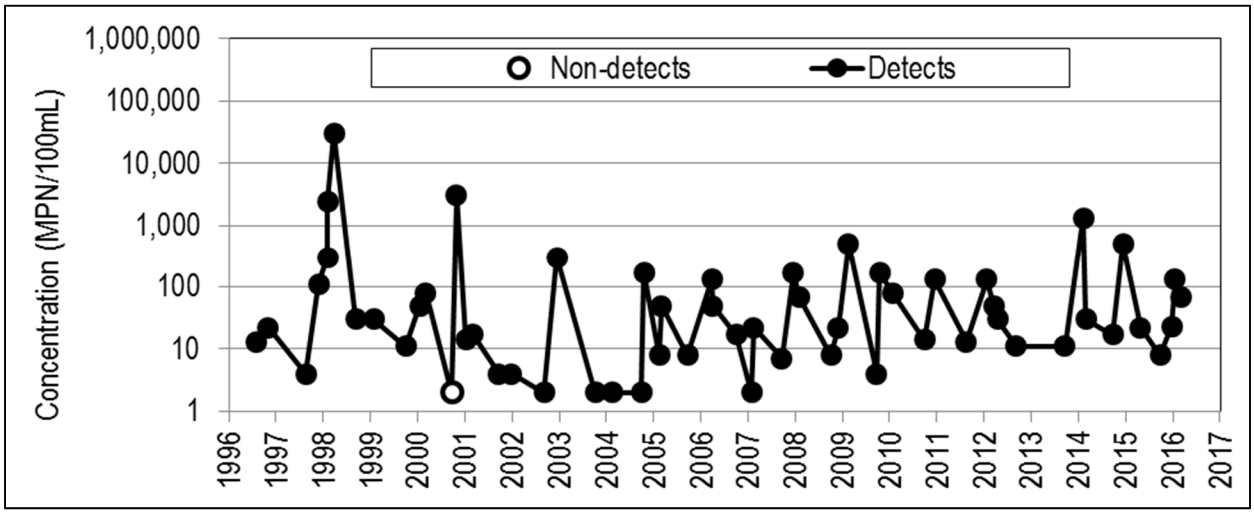

Figure 20. San Joaquin River Fecal Coliform at Station 2 (1996-2016)

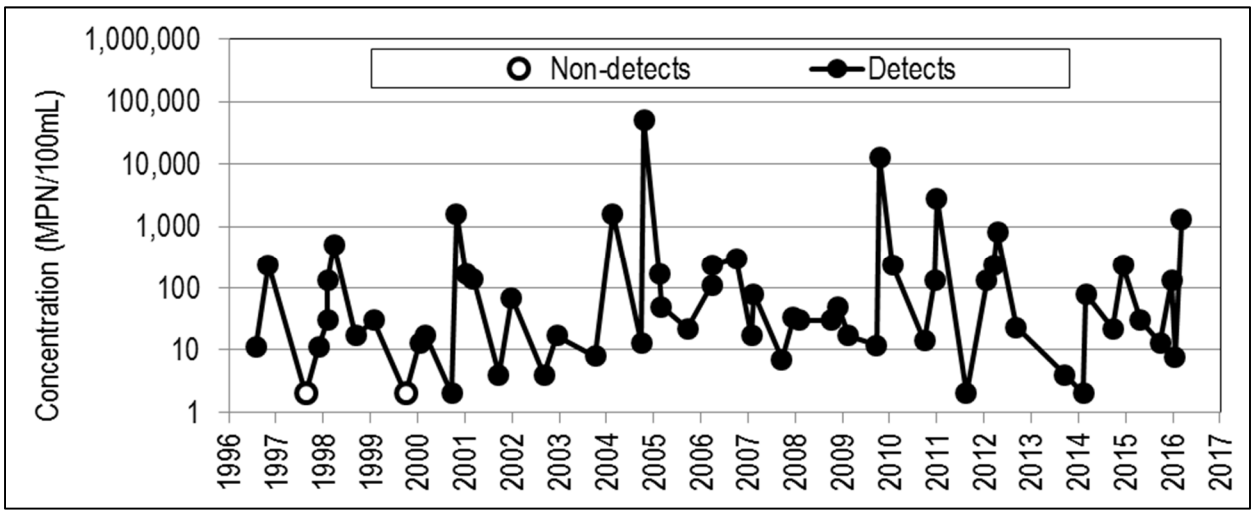

Figure 21. San Joaquin River Fecal Coliform at Station 3 (1996-2016)

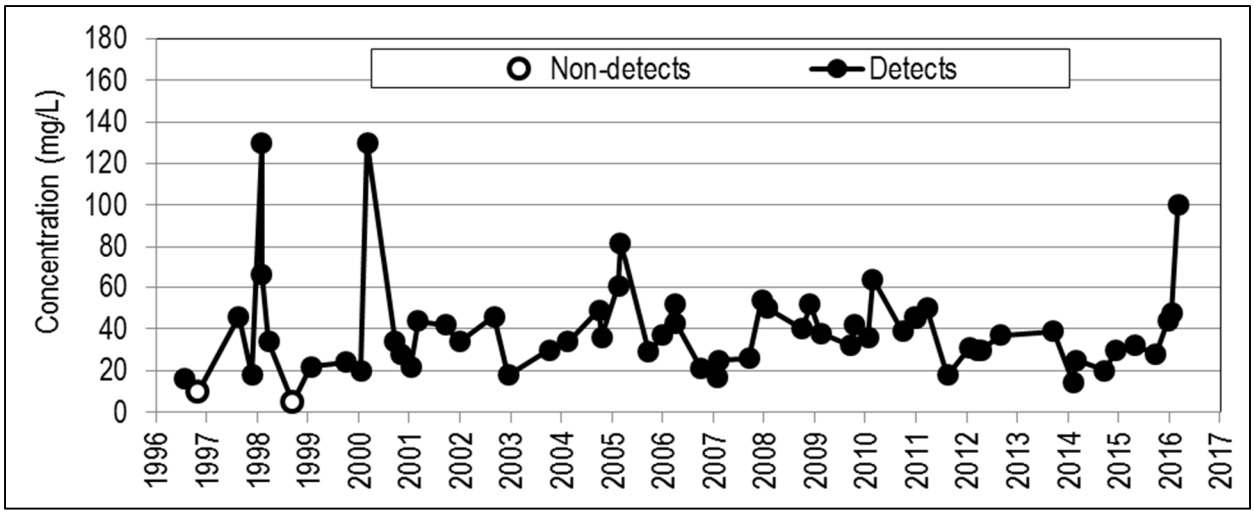

Figure 22. San Joaquin River Total Dissolved Solids (TDS) at Station 1 (1996-2016)

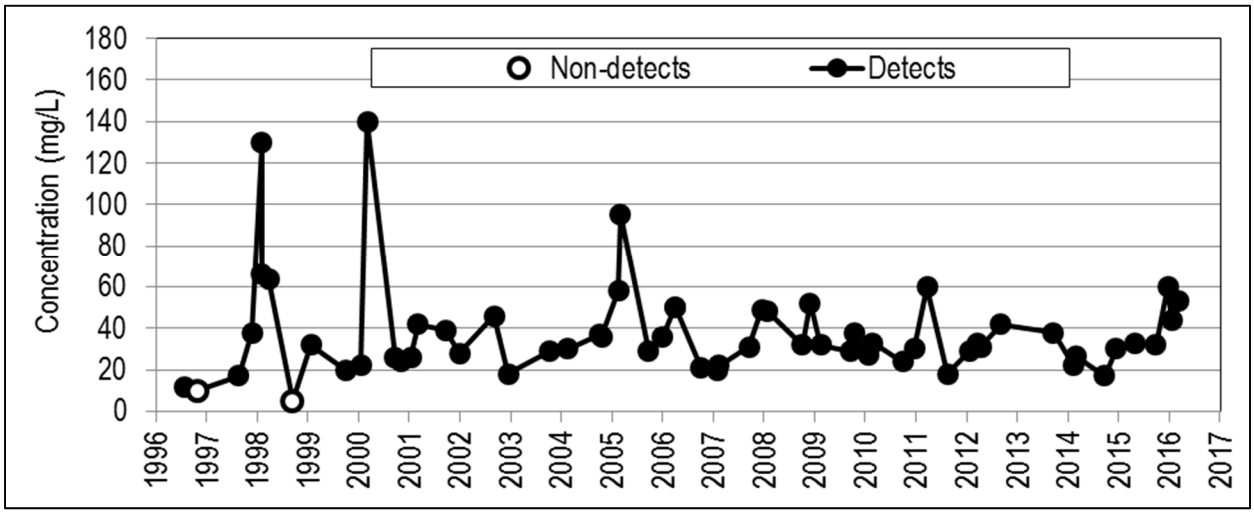

Figure 23. San Joaquin River Total Dissolved Solids (TDS) at Station 2 (1996-2016)

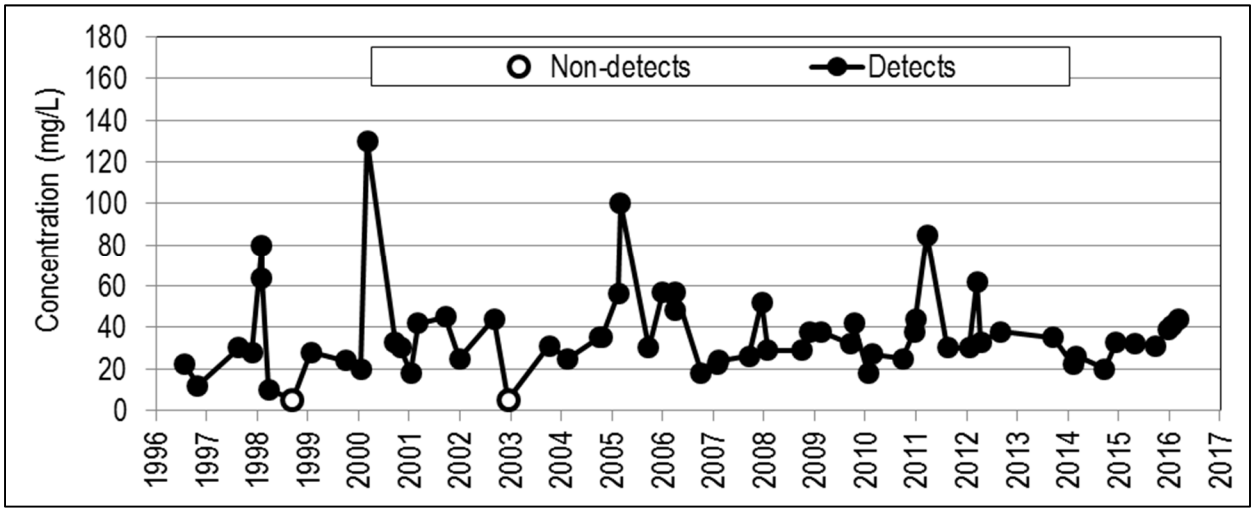

Figure 24. San Joaquin River Total Dissolved Solids (TDS) at Station 3 (1996-2016)

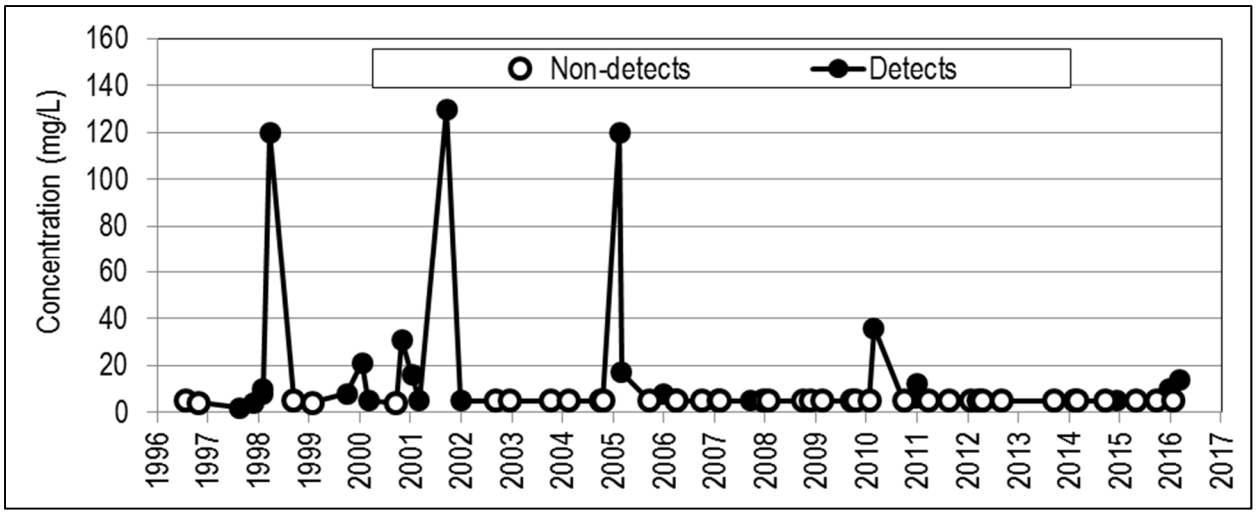

Figure 25. Joaquin River Total Suspended Solids (TSS) at Station 1 (1996-2016)

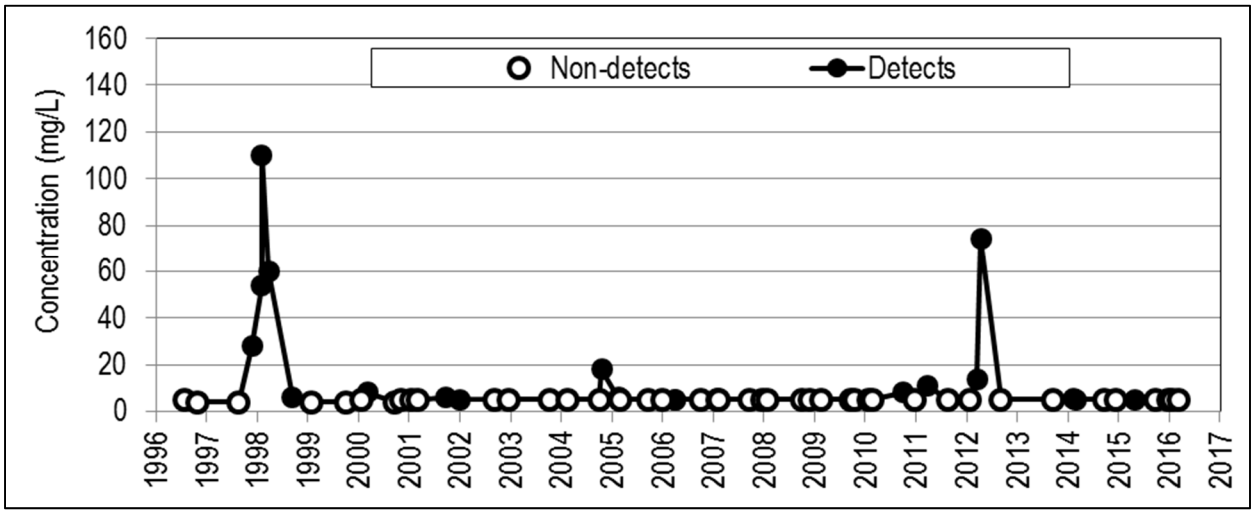

Figure 26. Joaquin River Total Suspended Solids (TSS) at Station 2 (1996-2016)

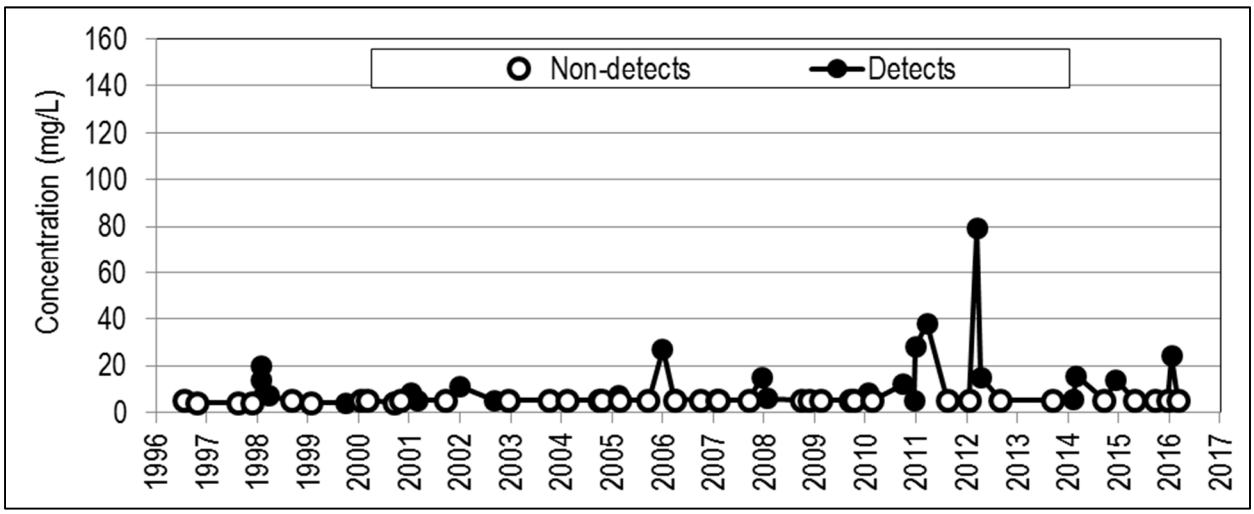

Figure 27. Joaquin River Total Suspended Solids (TSS) at Station 3 (1996-2016)

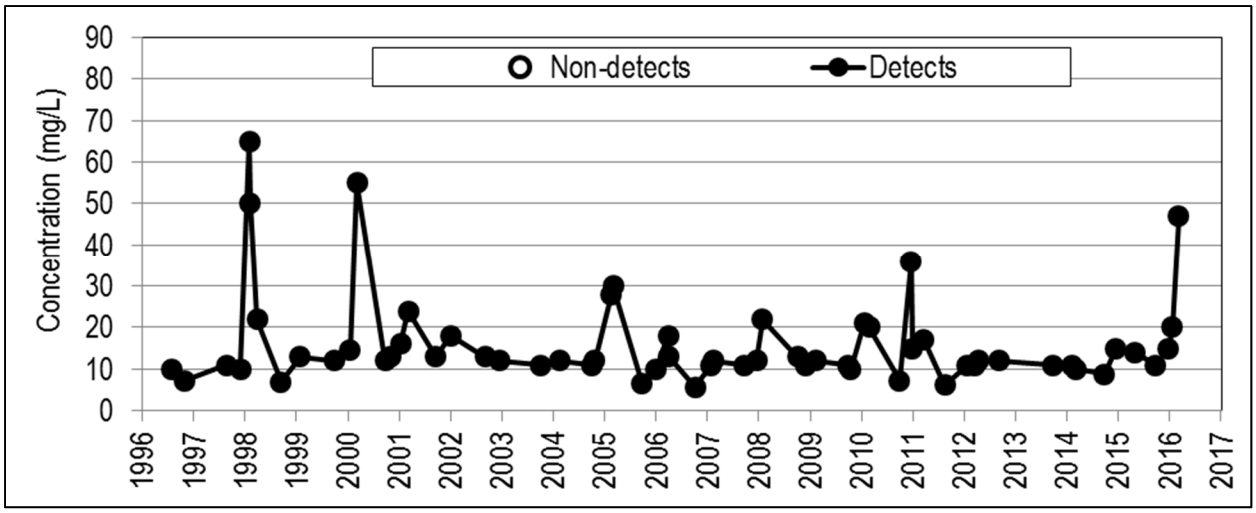

Figure 28. San Joaquin River Hardness as CaCO3 at Station 1 (1996-2016)

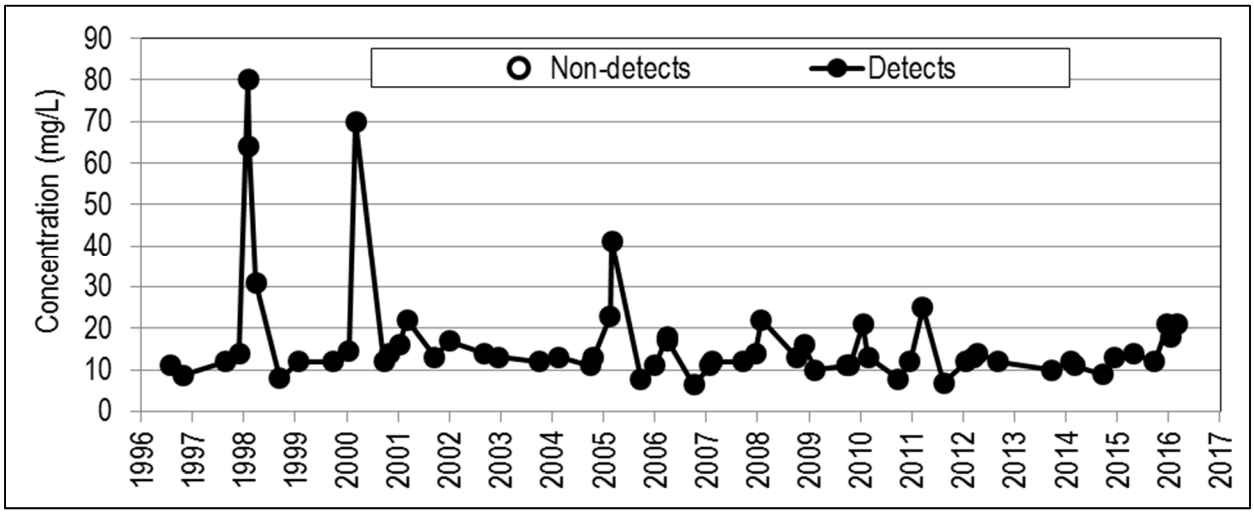

Figure 29. San Joaquin River Hardness as CaCO3 at Station 2 (1996-2016)

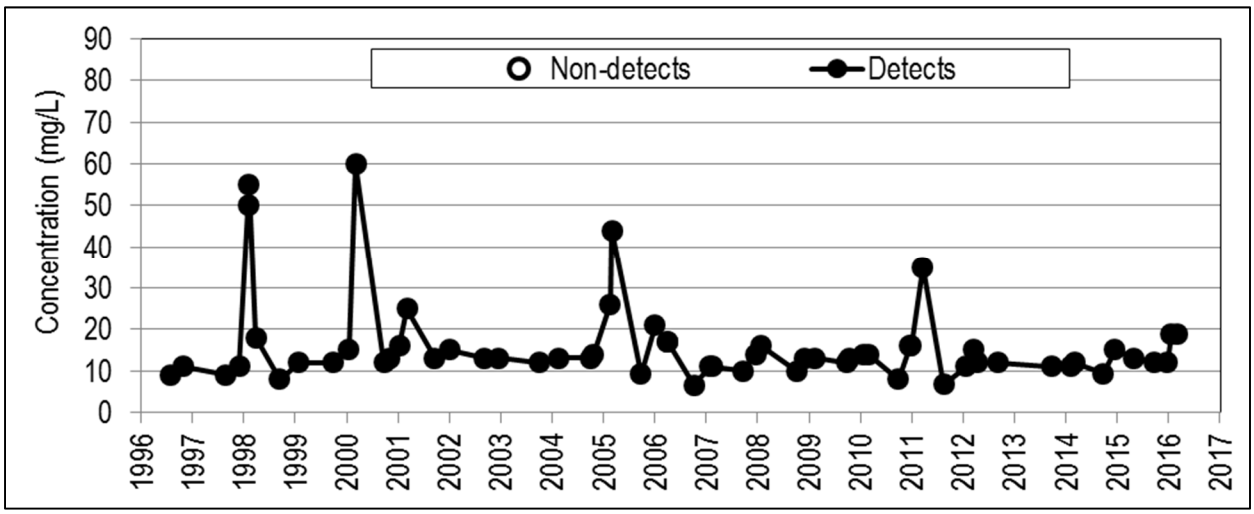

Figure 30. San Joaquin River Hardness as CaCO3 at Station 3 (1996-2016)

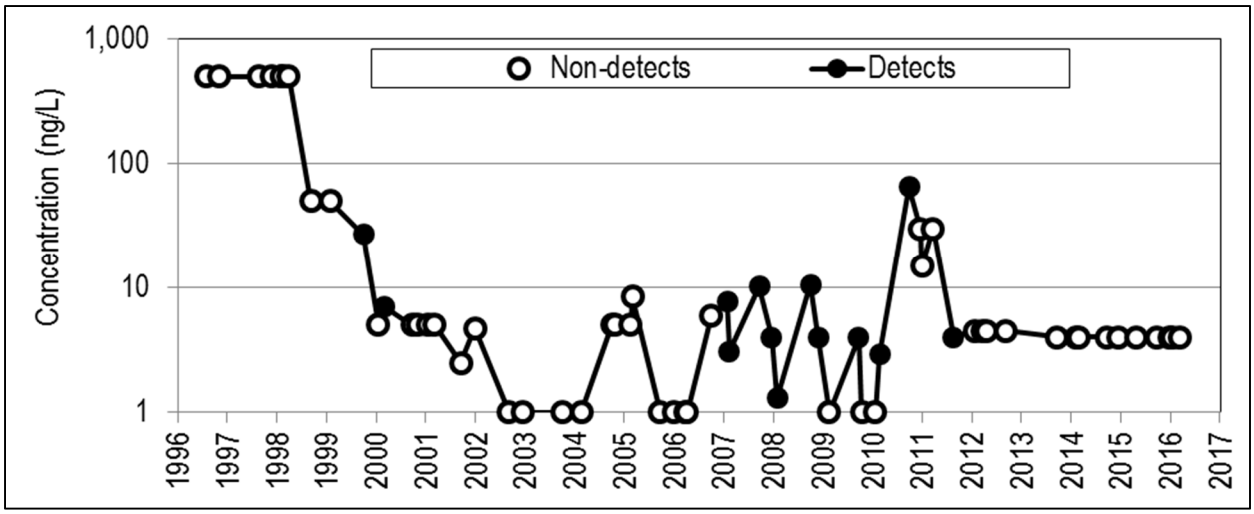

Figure 31. San Joaquin River Naphthalene at Station 1 (1996-2016)

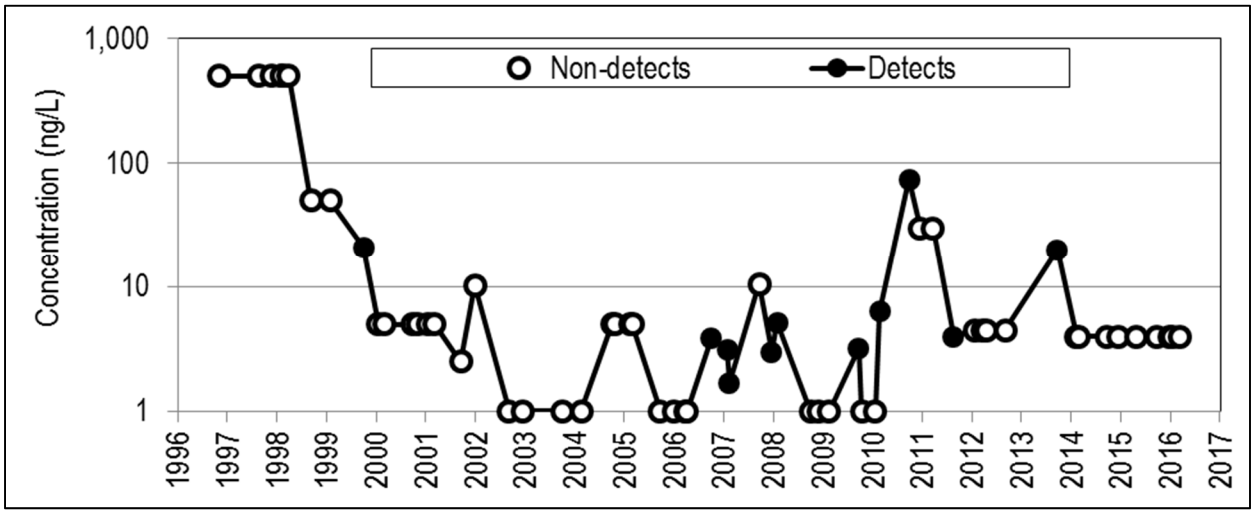

Figure 32. San Joaquin River Naphthalene at Station 2 (1996-2016)

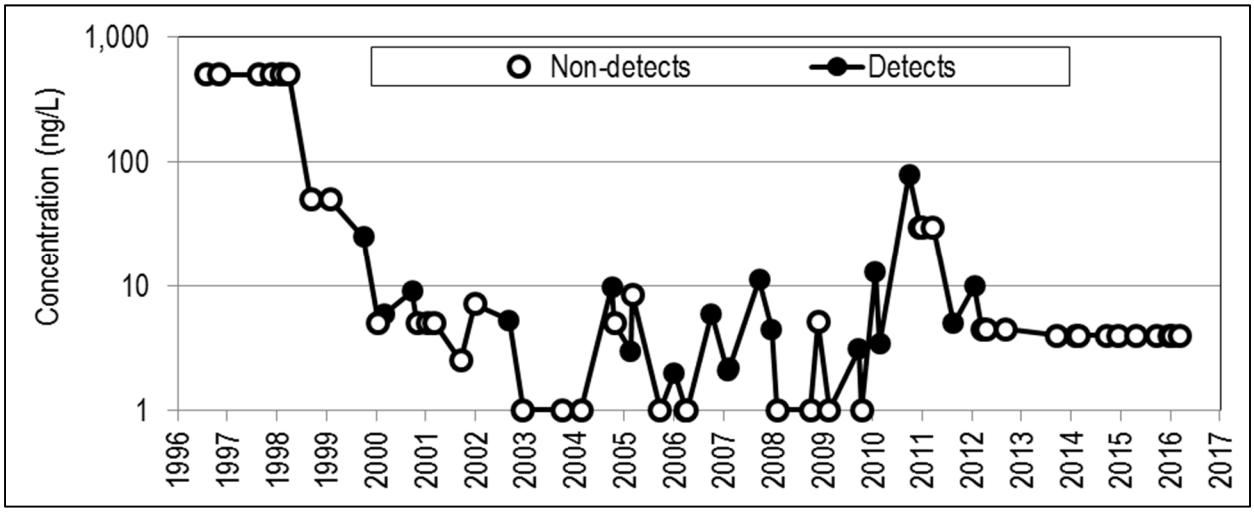

Figure 33. San Joaquin River Naphthalene at Station 3 (1996-2016)

6.2. DRY WEATHER PATTERNS

Larry Walker Associates compared dry weather and wet weather data to determine if there were significant differences. Historically, dry weather monitoring was performed in the late summer or early fall prior to the wet season. Median data are compared and then a more robust Kruskal-Wallis test is performed to test the statistical significance of differences in the median values. **Figure 34** through **Figure 36** box plots compares event type for the indicator constituents.

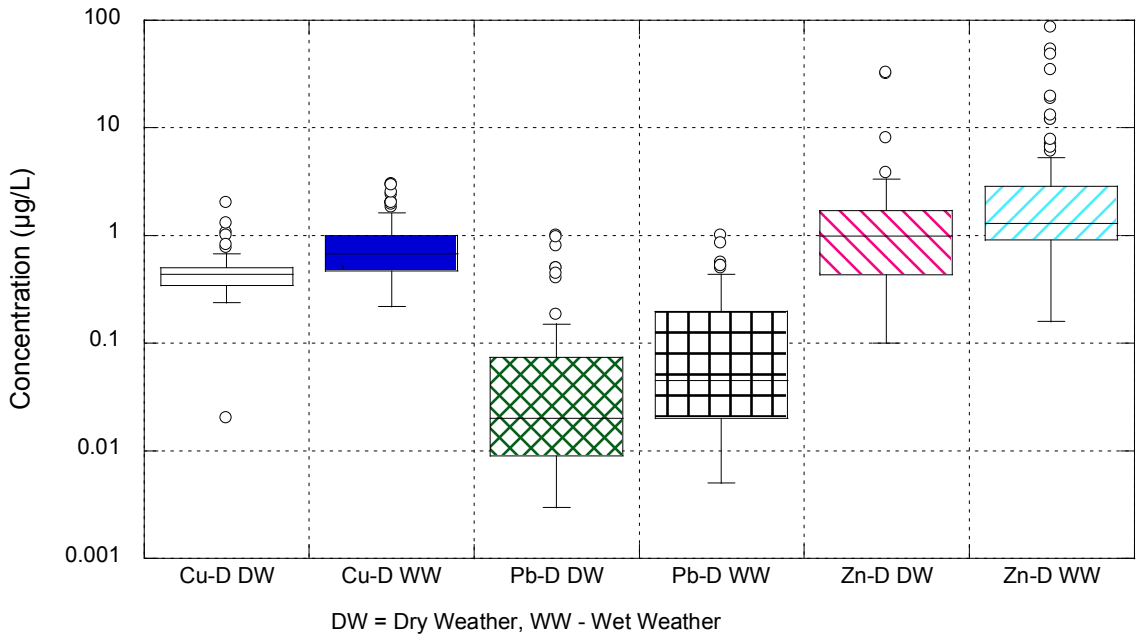

Figure 34. Dissolved Metals Concentrations by Event Type (1996-2016)

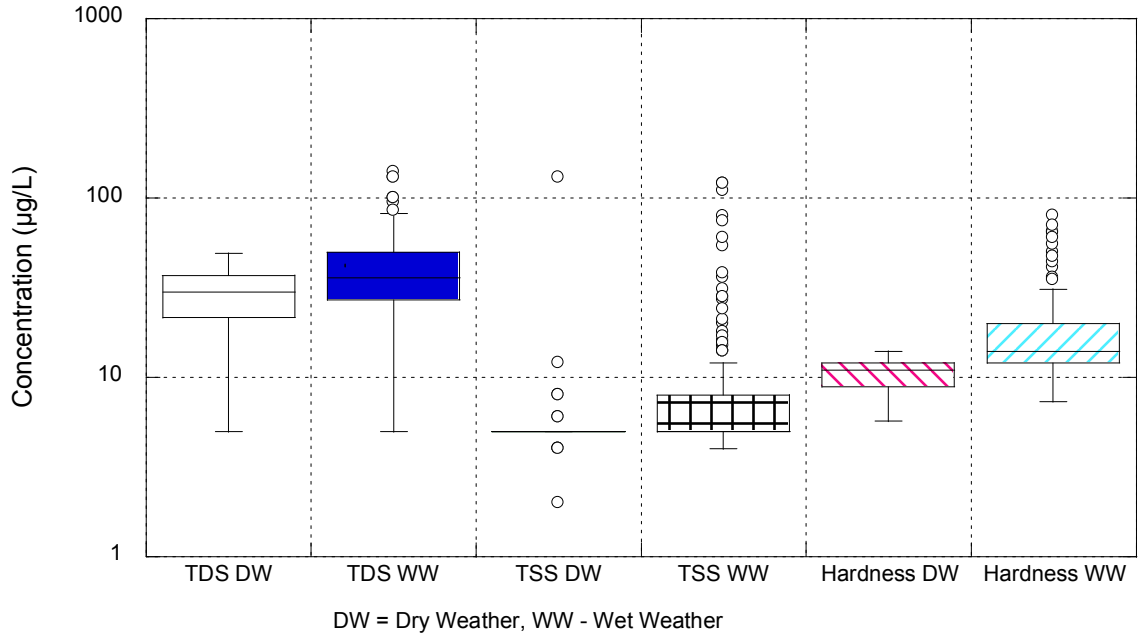

Figure 35. Conventional Concentrations by Event Type (1996-2016)

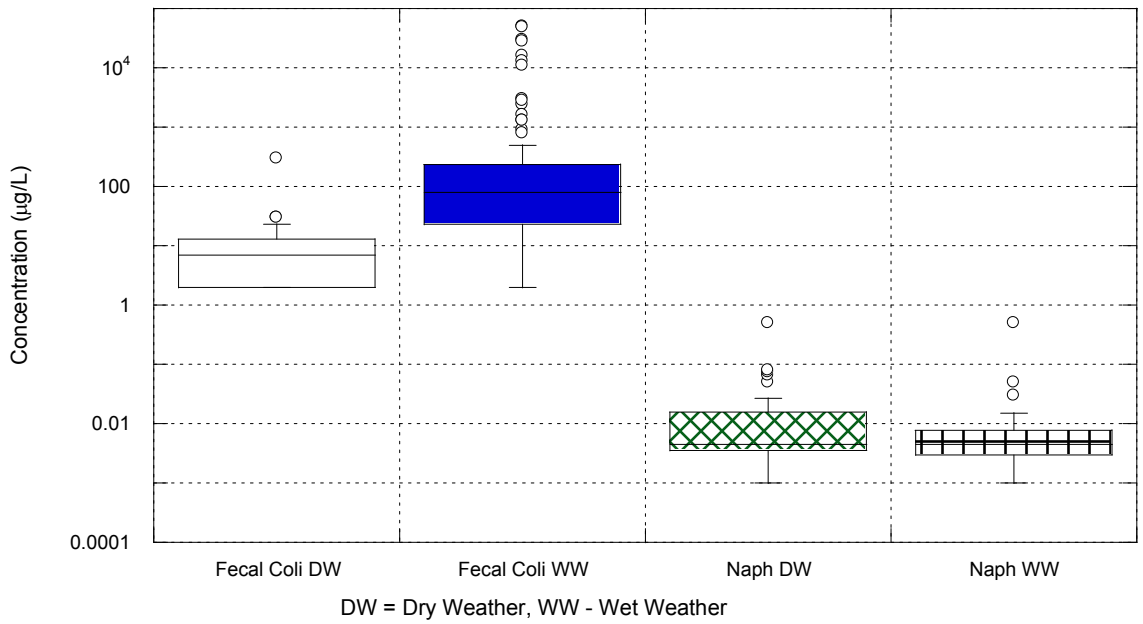

Figure 36. Fecal Coliform and Naphthalene Concentrations by Event Type (1996-2016)

6.2.1. Median Comparison

For the 1996-2016 river data, six out of the eight indicator constituents had higher median wet weather concentrations than dry weather concentrations, as shown in **Table 46** and **Figure 34** through **Figure 36**.

Table 46. Summary Statistics for Dry/Wet Results for Indicator Constituents (1996-2016)

	Dry Season (all stations)			Wet Season (all stations)		
Constituent	n	Standard Deviation	Median	n	Standard Deviation	Median
Copper, dissolved	60	0.28	0.42	118	0.60	0.72
Lead, dissolved	60	0.19	0.011	122	0.082	0.030
Zinc, dissolved	56	5.94	0.76	118	10.78	1.45
Fecal Coliform	60	38.44	4.99	116	7,651	96.71
TDS	60	9.47	28.00	125	25.59	36.62
TSS	60	16.66	1.40	125	21.38	3.00
Hardness	60	2.22	10.13	125	13.65	16.74
Naphthalene	59	0.016	0.002	125	0.0019	0.0013

Notes:
ID indicates an insufficient number of detected data for performing the statistical analysis.

6.2.2. Unpaired Tests for Significance

Larry Walker Associates performed a Kruskal-Wallis test on the indicator constituent datasets (1996-2015) to assess the statistical significance of differences between wet and dry weather data. These tests assess whether the distributions and central values are statistically different. Both tests assume that site-to-site differences are not significant relative to dry weather and wet weather difference. The analyses compares unpaired datasets to develop a test statistic value and a probability (p-value) that differences between the average of dataset 'A' and the average of dataset 'B' are due to chance alone. When the p-value is less than a typical 5% probability threshold (i.e., $p < 0.05$), factors other than chance (e.g., environmental influences) likely explain differences between data sets. The p-values resulting from the unpaired rank sum are shown in **Table 47**, including [<] or [>] to indicate the "direction" of the statistical difference, if any (D stands for dry weather, W stands for wet weather).

The results showed statistically significant differences between the dry and wet monitoring data for most of the indicator constituent groups. Median wet weather concentrations for these constituents were higher than dry weather concentrations. Dry weather, wet weather and combined event data summary statistics for the entire program (1996-2016) are summarized in **Table 48** for the indicator constituents.

Table 47. Unpaired p-Values of Dry/Wet Results for Indicator Constituents (1996-2016)

	Dry vs. Wet (all stations)
Constituent	**Kruskal-Wallis Rank Sum Test**
Copper, dissolved	<0.0001 [D<W]
Lead, dissolved	0.0013 [D<W]
Zinc, dissolved	0.0017 [D<W]
Fecal Coliform	< 0.0001 [D<W]
TDS	0.0004 [D<W]
TSS	0.0002 [D<W]
Hardness	< 0.0001 [D<W]
Naphthalene	0.4852

Notes:
ID indicates that there was insufficient detected data to perform the test
p-value is a measurement of statistical significance, a lower number indicates the differences are less likely to be random.
"D<W" indicates that the dry event concentrations were statistically lower that wet event concentrations at a significance greater than 0.05 (i.e., $p < 0.05$)

Table 48. 1996-2016 Summary Statistics for Indicator Constituents by Event Type

Constituent	Event Type [a]	Units	Station 1			Station 2			Station 3		
			n[c]	Std Dev[b]	Median[b]	n[c]	Std Dev[b]	Median[b]	n[c]	Std Dev[b]	Median[b]
Copper, dissolved	All	µg/L	60	0.37	0.55	58	0.65	0.57	20	0.17	0.43
	DW	µg/L	20	0.27	0.43	20	0.37	0.42	40	0.60	0.91
	WW	µg/L	40	0.39	0.62	38	0.74	0.66	60	0.58	0.71
Lead, dissolved	All	µg/L	61	0.16	0.01	60	0.06	0.02	20	0.17	0.03
	DW	µg/L	20	0.27	0.00	20	0.09	0.01	41	0.11	0.06
	WW	µg/L	41	0.05	0.02	40	0.04	0.02	61	0.13	0.05
Zinc, dissolved	All	µg/L	58	8.40	1.39	57	12.15	0.97	19	0.86	0.53
	DW	µg/L	18	7.34	1.19	19	7.27	0.77	40	9.05	1.85
	WW	µg/L	40	8.92	1.52	38	14.03	1.08	59	7.63	1.21
Fecal Coliform	All	MPN/100mL	59	7,612	19.5	58	3,949	33.12	20	65.16	8.75
	DW	MPN/100mL	20	5.27	1.66	20	6.98	6.95	39	8,180	120.0
	WW	MPN/100mL	39	9,254	92.7	38	4,862	78.13	59	6,682	48.13
Total Dissolved Solids	All	mg/L	42	26.54	37.57	41	26.54	37.84	20	7.68	28.83
	DW	mg/L	62	23.27	34.73	61	23.59	33.26	42	24.19	34.70
	WW	mg/L	20	10.64	29.73	20	9.94	25.74	62	20.96	32.52
Total Suspended Solids	All	mg/L	62	26.58	2.35	61	19.31	1.24	20	2.53	2.09
	DW	mg/L	20	28.63	1.66	20	ID		42	14.05	4.37
	WW	mg/L	42	25.86	2.81	41	23.04	1.62	62	12.12	2.83
Hardness as $CaCO_3$	All	mg/L	62	11.64	13.97	61	13.79	14.50	20	2.08	10.18
	DW	mg/L	20	2.40	9.85	20	2.25	10.37	42	12.04	16.64
	WW	mg/L	42	13.10	16.50	41	15.87	17.08	62	10.71	14.20
Naphthalene	All	ng/L	62	8.91	0.90	60	10.04	0.78	20	17.55	3.00
	DW	ng/L	20	15.04	1.75	19	17.22	1.46	42	2.09	1.44
	WW	ng/L	42	1.59	1.24	41	1.87	0.94	62	10.48	1.42

[a] DW = Dry Weather, WW = Wet Weather
[b] Std Dev = Standard Deviation;
ID = Insufficient number of detected data are available for calculation of statistical parameters;
[c] Two samples were collected for a multiday event on 2/2-3/1998; no wet-weather samples were collected 2012-2013 FY

6.3. STATION-TO-STATION PATTERNS

Larry Walker Associates compared station-to-station (i.e., paired monitoring site comparisons) data to determine if there were statistically significant differences between sites. An assessment conducted in 2005 concluded that there was no consistent trend of differences between (paired) concentrations at different stations for most constituents[11]. A non-parametric paired sign test was performed so that non-detected values could also be considered in the analysis, which does not consider the magnitude of site differences. The analysis examines the statistical occurrence of the "direction" of any site-to-site difference. Station-to-station differences are identified with more statistical "power" as the number of data point pairs increases. While comparisons of median values can also provide insight into site differences, the paired sign test results can determine if the relationship is consistent and not just a result of individual data point variability. In addition to an assessment of all data, the analysis also considers wet and dry weather events separately.

The non-parametric paired sign test analysis was updated for this report. The analysis evaluated all data from 1996-2016 to test whether there were statistically significant differences between any of the sites. The urban runoff influence occurs between Stations 2 and 3, and any differences between these sites should be confirmed with the test between Stations 1 and 3. Differences between Stations 1 and 2 are not attributable to urban runoff.

6.3.1. Median Value Comparison

Of the indicator constituents, dissolved copper, lead, naphthalene, and total suspended solids had higher median concentrations at the downstream station than the two upstream stations during wet weather events (see **Table 48**). During dry weather events, when regional detention basins are not discharging to the river, dissolved copper, lead, , zinc, fecal coliform, and total suspended solids had higher median concentrations at the downstream station than at the upstream stations. Any effects during dry weather are not due to urban runoff from the regional detention basins, and these non-urban effects may contribute to (or mitigate) any wet weather effects.

6.3.2. Paired Sign Test Results

Larry Walker Associates performed the paired sign test on all indicator constituents for all historical data and between each site paired by event. The results are reported in **Table 49** as p-values or the probability that any differences are due to chance alone. Statistically significant differences were found during wet weather for two metals: dissolved copper and dissolved lead datasets between Station 1 and 3 and Stations 2 and 3. Station 3 median concentrations were higher for both dissolved copper and dissolved lead in wet seasons. Statistically significant differences were also found during dry weather for fecal coliform: both Stations 2 and 3 medians were higher than station No.1 median in dry conditions. There was also a statistically significant difference in the hardness datasets between Stations 1 and 2, with Station 2 median concentrations higher in both dry and wet seasons. Statistically significant differences between Stations 1 and 2 were also observed for TDS in the dry-weather discharges. In these conditions, the TDS median concentration was higher at Station 1.

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[11] *Fresno-Clovis San Joaquin River Comparison of Water Quality Monitoring Results*. Memorandum to Daniel Rourke prepared by Airy Krich-Brinton of Larry Walker Associates for the Fresno Metropolitan Flood Control District. August 12, 2005.

Table 49. Paired Sign Test p-Values of Station-to-Station Results for Indicator Constituents (1996-2016)

	Station 1 vs. Station 2		Station 1 vs. Station 3		Station 2 vs. Station 3	
Constituent	**n**	**p-value**	**n**	**p-value**	**n**	**p-value**
Dry Weather						
Copper, dissolved	20	0.8036	20	0.4807	20	0.2379
Lead, dissolved	19	0.5811	19	0.0574	19	0.0574
Zinc, dissolved	17	0.3018	17	0.1185	18	1.000
Fecal Coliform	20	0.0018 [2>1]	20	0.0023 [3>1]	20	0.4545
TDS	20	0.0352 [1>2]	20	1.0000	20	0.6476
TSS	20	1.0000	20	1.0000	20	1.0000
Hardness	20	0.0034 [2>1]	20	0.1796	20	1.0000
Naphthalene	19	1.0000	19	0.7266	19	0.3438
Wet Weather						
Copper, dissolved	38	0.2295	39	<0.0001 [3>1]	38	0.0070 [3>2]
Lead, dissolved	40	0.7011	41	0.0052 [3>1]	40	<0.0001 [3>2]
Zinc, dissolved	38	0.2135	40	0.6076	38	0.1628
Fecal Coliform	38	0.7283	39	0.8679	38	0.6076
TDS	41	0.8642	42	0.1877	41	0.2682
TSS	41	0.8238	42	0.3269	41	0.2632
Hardness	41	0.0243 [2>1]	42	0.3915	41	0.8642
Naphthalene	41	0.7539	42	0.5811	41	1.000
All						
Copper, dissolved	58	0.2026	60	<0.0001 [3>1]	58	0.0026 [3>2]
Lead, dissolved	59	0.3368	59	0.0002 [3>1]	59	<0.0001 [3>2]
Zinc, dissolved	55	0.0789	57	0.5601	55	0.2430
Fecal Coliform	58	0.0400 [2>1]	59	0.0534	58	0.3222
TDS	61	0.1524	62	0.2624	61	0.6029
TSS	61	1.0000	62	0.2649	61	0.4049
Hardness	61	0.0003 [2>1]	62	0.1114	61	1.0000
Naphthalene	60	0.8145	61	0.3833	60	0.4049

Notes:
n stands for the number of data pairs that were used in the test.
Statistically significant differences are shaded

6.4. RECEIVING WATER LIMITATIONS ANALYSIS

The District compared San Joaquin River and canal special study data to applicable receiving water limitations, outlined in Section C of the Permit. Water quality objectives (WQO) were used from the following sources:

- Permit specific WQOs
- California Toxics Rule (CTR)
- Water Quality Control Plan (Basin Plan) for the San Joaquin River Watershed[12]

6.4.1. San Joaquin River

Measurements collected at the San Joaquin River sites that were inconsistent with these WQOs are shown in **Table 50**.

Table 50. 2015-2016 Exceedances of Water Quality Objectives in the San Joaquin River

Event	Site	Constituent	Units	Result	WQO[1]	WQO Source
DW020 9/24/2015	Station 2	pH	SU	7.24	↑↓ of 0.30 SU[2]	narrative
WW039 12/22/2015	Station 3	pH	SU	6.91	↑↓ of 0.30 SU[2]	narrative
WW040 1/18/2016	Station 3	Aluminum	µg/L	350	200	Title 22 2° MCL
WW041 3/6/2016	Station 1	Aluminum	µg/L	430	200	Title 22 2° MCL
	Station 1	Dissolved Oxygen	mg/L	6.88	7	Basin Plan
	Station 1	E.coli	MPN/100mL	49,000	235	Basin Plan
	Station 3	E.coli	MPN/100mL	1,300	235	Basin Plan
	Station 1	Fecal Coliform	MPN/100mL	49,000	400	Basin Plan
	Station 3	Fecal Coliform	MPN/100mL	1,300	400	Basin Plan

[1] WQO is defined as a water quality objective or standard in the MRP.
[2] pH cannot increase or decrease by more than 0.30 SU from its ambient condition. Downstream stations were compared to the directly upstream station for purposes of the WQO calculation

The MRP states that if discharges from the Fresno urban area are causing or contributing to exceedances of an applicable WQO then the District shall create a Report of Water Quality Exceedance (RWQE), which outlines best management practices (BMPs) and monitoring approaches intended to mitigate future exceedances.

The District evaluates exceedances of downstream WQOs for a monitoring event relative to upstream concentrations. In cases where the upstream concentration is greater than or close to the downstream event, urban runoff is not considered to have caused or contributed to the downstream exceedance. Because some WQOs are hardness based, its value will change

[12] California Regional Water Quality Control Board, Central Valley Region. *The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board: Central Valley Region, the Sacramento River Basin and the San Joaquin River Basin* (Fourth Edition, Revised). October 2011.

between stations and difference between the observed concentration and station-specific WQO may be smaller.

To account for data variability and complex factors, determinations of "cause and contribute" should be performed on a long-term basis and the District has historically evaluated long-term data to identify statistical differences between stations. In cases of exceedances where the downstream station is statistically significantly different than both upstream locations, urban runoff may be contributing to the exceedance if the constituent is present in urban runoff and other contributing factors are likely not dominant.

During the 2015-2016 monitoring year, Station 3 had exceedances of E.Coli and Fecal Coliform, but in each case the same exceedances were also observed at one of the upstream sites at higher concentrations. Urban runoff cannot be found to cause or contribute to these WQO exceedances.

Station 2 and 3 had exceedances of field measured pH. The Permit specifies that pH cannot change from its ambient condition by more than 0.30 SUs. Upstream and downstream values were compared for this objective and exceedances were noted for Station 2 during the dry weather event and for Station 3 during the wet weather event in December (WW039). There is notable variance in ph results from station to station and for the Station 3 exceedance, comparing it to Station 1 versus Station 2 would not have yielded an exceedance.

Station 3 also had an exceedance for aluminum during event WW041 in January. Aluminum has been detected in the upstream sites at concentrations greater than or equal to Station 3 for three of the four events. Aluminum also exceeded the WQOs in the canal sites, but for both canal events, the upstream concentration was significantly greater than the downstream concentration. Moreover, the Regional Water Board is considering implementing these Title 22 Secondary MCLs as dissolved constituents. From this, it is not possible to conclude that urban runoff is causing or contributing to the aluminum exceedance.

6.4.2. Herndon Canal Special Study

The exceedances of WQOs at the upstream (Canal 1) and downstream (Canal 2) canal sites are listed in **Table 51**.

Table 51. 2015-2016 Exceedances of Water Quality Objectives for the Canal Special Study Monitoring Program

Event	Site	Constituent	Units	Result	WQO[1]	WQO Source
CNWW02 1/7/2016	Canal 1	Aluminum	µg/L	470	200	Title 22 2° MCL
	Canal 2	Aluminum	µg/L	230	200	Title 22 2° MCL
	Canal 2	Benzo(a)pyrene	µg/L	0.006	0.0044	CTR
	Canal 2	Benzo(b)fluoranthene	µg/L	0.01	0.0044	CTR
	Canal 2	Chrysene	µg/L	0.01	0.0044	CTR
	Canal 2	Copper, dissolved	µg/L	5.15	2.83	CTR Chronic
	Canal 2	Copper, dissolved	µg/L	5.15	3.78	CTR Acute
	Canal 2	E.Coli	MPN/100mL	1,300	235	Basin Plan
	Canal 2	Fecal Coliform	MPN/100mL	1,300	400	Basin Plan
	Canal 2	Indeno(1,2,3-c,d)pyrene	µg/L	0.008	0.0044	CTR
CNWW03 1/21/2016	Canal 1	Aluminum	µg/L	660	200	Title 22 2° MCL
	Canal 2	Aluminum	µg/L	300	200	Title 22 2° MCL
	Canal 2	Benzo(a)pyrene	µg/L	0.007	0.0044	CTR
	Canal 2	Benzo(b)fluoranthene	µg/L	0.02	0.0044	CTR
	Canal 2	Benzo(k)fluoranthene	µg/L	0.0049	0.0044	CTR
	Canal 2	Chrysene	µg/L	0.01	0.0044	CTR
	Canal 2	Copper, dissolved	µg/L	5.84	1.87	CTR Chronic
	Canal 2	Copper, dissolved	µg/L	5.84	2.39	CTR Acute
	Canal 2	E.Coli	MPN/100mL	490	235	Basin Plan
	Canal 2	Fecal Coliform	MPN/100mL	490	400	Basin Plan
	Canal 2	Indeno(1,2,3-c,d)pyrene	µg/L	0.01	0.0044	CTR
	Canal 2	pH	SU	7.77	↑↓ of 0.30 SU[2]	narrative

[1] WQO is defined as a water quality objective or standard in the MRP.

[2] pH cannot increase or decrease by more than 0.30 SU from its ambient condition. Downstream stations were compared to the directly upstream station for purposes of the WQO calculation

The District observed exceedances of aluminum, E.Coli, fecal coliform, dissolved copper, and PAHs during both events and pH at one event. The fecal coliform exceedances were observed in the downstream site and although they exceed the WQO of 400 MPN/100mL, there are not enough data points in a 30 day period to qualify as an exceedance in accordance with the MRP. Aluminum exceedances were observed at the upstream portion of the canal at higher concentrations and it is not possible to conclude that urban runoff caused or contributed to the exceedance. PAHs are regularly detected in urban runoff in other parts of California and no detections in the San Joaquin River were exceedances. The PAH WQO is based on a long term exposure and associated cancer risk increase, and longer term data are necessary to evaluate the site-to-site and temporal variability before finding that urban runoff is causing or contributing to an exceedance. With only a few storm events sampled in the study, additional data are necessary before finding that urban runoff is causing or contributing to a WQO exceedance as part of this special study.

6.5. CONCLUSIONS

To assess program effectiveness, the District developed the following three "Management Questions" that are supported directly by the Monitoring Program Element of the Fresno-Clovis Storm Water Quality Management Program:[13]

4. Are receiving waters (i.e., the San Joaquin River) meeting water quality objectives and supporting beneficial uses? [L6]
5. Do the regional stormwater basins effectively remove the constituent(s) causing or contributing to the impairment? [L5]
6. Are urban stormwater discharges a significant source of constituent loads causing impairments to the San Joaquin River and other direct receiving waters? Are there other sources that are major contributors to the receiving water load? [L4]

The District operates a regional basin system that serves 90% of the urban area and allows infiltration of 70-80% of the typical annual rainfall. The basins are highly effective at removing sediment and sediment bound pollutants. This system has successfully reduced the impact of urban runoff by attenuating peak flows and removing pollutants. Because of the infrequent discharge of urban runoff, any exceedance should be considered in light of the much reduced exceedance period, and may not constitute an impairment of a beneficial use.

In light of these management questions, conclusions drawn to date from the river monitoring data include the following:

- The water quality of the San Joaquin River, which has been monitored at locations both upstream and downstream of the Fresno urban area, is of high quality. This conclusion is based on the low or undetectable concentrations of dissolved metals, pathogen indicators, TSS, pesticides, and nutrients that have been observed during monitoring. Furthermore, the frequency of exceedance of the WQOs is very low. [L6]
- Apparent increases in dissolved copper and lead concentrations between the upstream and downstream river monitoring locations are statistically significant for data collected between 1996 and 2016. However, the magnitude of dissolved concentration differences is small relative to data variability. For example, the median dissolved copper concentrations at Station 1 and Station 3 are 0.55 µg/L and 0.71 µg/L (absolute difference of 0.16 µg/L), respectively, and standard deviations are 0.37 µg/L and 0.58 µg/L, respectively. [L6, L4]
- A previous assessment of the entire program monitoring history indicated that station differences for *total recoverable* metals were not statistically significant. Exceedances of the WQOs for these metals are infrequent. [L5, L4]
- Historical station-to-station differences were not statistically significant for naphthalene, the most detected PAH (>20%) that also has a water quality objective. Other PAHs were not examined, since they are either less frequently detected or do not have water quality objectives. [L6]

[13] Fresno-Clovis Storm Water Quality Management Program *Long Term Effectiveness Assessment Strategy.* November 2013

- Pathogen indicators exhibited slight variability between Stations 1, 2, and 3 during the 2015-2016 events. There were nine downstream pathogen indicator samples collected and 42% of them were equal to or lower than the upstream sites. Even for the samples for which the downstream count was higher, the difference was smaller than typical microbiological variability (one order of magnitude). [L6]
- During the 2015-2016 monitoring year, there was only one WQO exceedance (total aluminum) at Station 3, downstream of the Fresno urban area, which was not observed in the upstream samples. Aluminum has been consistently detected at higher concentrations in the upstream samples in both the river and canal. It is not possible to conclude that urban runoff contributed to this exceedance. [L6, L5]

Based on the limited number of canal monitoring events, it is not possible to evaluate the overall condition of the Herndon Canal and the impact of urban runoff. The 2016-2017 monitoring year is the last of the four required canal monitoring years by the Permit. Depending on weather conditions, up to two wet weather canal events will be conducted. At the conclusion of the two events the combined canal monitoring data will be evaluated to see if additional actions need to be taken.

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7.0 Project Recommendations

The 2016-2017 river and canal monitoring efforts are anticipated to remain similar to the programs implemented during 2015-2016. Based on a review of the Monitoring Program, the following changes are recommended for river and canal monitoring in 2016-2017:

- As part of the 2016-2017 Sampling and Analysis Plan, perform laboratory assessment for additional laboratories to ensure that reporting limits are sufficiently low.
- Continue to conduct river sampling for three wet weather events, as long as weather permits, and one dry weather event during the 2016-2017 monitoring year.
- Weather permitting, conduct up to two canal sampling events. Perform an analysis on the Canal Monitoring Program results to determine if additional steps need to be taken to reach a conclusion.
- Investigate the source of the organic carbon contamination in the field blanks. This includes, reviewing equipment and sampling handling practices, which will include using new sampling equipment for each site and event.
- Continue to monitor the source of the higher dissolved fraction and occasional field blank contamination for some of the metals results. The frequency of this contamination has been decreasing, but the program should continue to implement clean sampling techniques and ensure that proper equipment protocols are being followed by the field crew.

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Appendix A

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APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	3.6	=	0.51	1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	3.7	=	0.51	1	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	3.7	=	0.51	1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 300.0	Anion	Chloride	None	mg/L	1	3.7	=	0.51	1	None	BSK				
DW020	LABQA	9/25/2015	LabBlank	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	-0.51	ND	0.51	1	None	BSK				
DW020	LABQA	9/25/2015	LCS	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	99	=	0.51	1	None	BSK	99		90	110
DW020	LABQA	9/25/2015	LCS	1	2	EPA 300.0	Anion	Chloride	None	mg/L	1	100	=	0.51	1	None	BSK	102	3	90	110
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	5	=	0.51	1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	6.3	=	0.51	1	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	4	=	0.51	1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 300.0	Anion	Chloride	None	mg/L	1	6.3	=	0.51	1	None	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	56	=	0.51	1	None	BSK	103		80	120
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 300.0	Anion	Chloride	None	mg/L	1	57	=	0.51	1	None	BSK	105	2	80	120
WW039	LABQA	12/23/2015	LabBlank	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	-0.51	ND	0.51	1	None	BSK				
WW039	LABQA	12/23/2015	LCS	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	100	=	0.51	1	None	BSK	101		90	110
WW039	LABQA	12/23/2015	LCS	1	2	EPA 300.0	Anion	Chloride	None	mg/L	1	100	=	0.51	1	None	BSK	101	0.1	90	110
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	2.4	=	0.51	1	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	3	=	0.51	1	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 300.0	Anion	Chloride	None	mg/L	1	2.2	=	0.51	1	None	BSK				
CNWW02	LABQA	1/7/2016	LabBlank	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	-0.51	ND	0.51	1	None	BSK				
CNWW02	LABQA	1/7/2016	LCS	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	100	=	0.51	1	None	BSK	100		90	110
CNWW02	LABQA	1/7/2016	LCS	1	2	EPA 300.0	Anion	Chloride	None	mg/L	1	100	=	0.51	1	None	BSK	100	0.2	90	110
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	5.9	=	0.51	1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	6.1	=	0.51	1	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	5.8	=	0.51	1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 300.0	Anion	Chloride	None	mg/L	1	6.1	=	0.51	1	None	BSK				
WW040	LABQA	1/19/2016	LabBlank	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	-0.51	ND	0.51	1	None	BSK				
WW040	LABQA	1/19/2016	LCS	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	100	=	0.51	1	None	BSK	100		90	110
WW040	LABQA	1/19/2016	LCS	1	2	EPA 300.0	Anion	Chloride	None	mg/L	1	100	=	0.51	1	None	BSK	101	0.5	90	110
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	2.6	=	0.51	1	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	1.7	=	0.51	1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 300.0	Anion	Chloride	None	mg/L	1	2.6	=	0.51	1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	MS1	2	1	EPA 300.0	Anion	Chloride	None	mg/L	1	53	=	0.51	1	None	BSK	100		80	120
CNWW03	Garfield Ave	1/21/2016	MS1	2	2	EPA 300.0	Anion	Chloride	None	mg/L	1	53	=	0.51	1	None	BSK	102	2	80	120
CNWW03	LABQA	1/22/2016	LabBlank	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	-0.51	ND	0.51	1	None	BSK				
CNWW03	LABQA	1/22/2016	LCS	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	99	=	0.51	1	None	BSK	99		90	110
CNWW03	LABQA	1/22/2016	LCS	1	2	EPA 300.0	Anion	Chloride	None	mg/L	1	99	=	0.51	1	None	BSK	99	0.4	90	110
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	5.5	=	0.51	1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	6.4	=	0.51	1	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	5.8	=	0.51	1	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 300.0	Anion	Chloride	None	mg/L	1	5.5	=	0.51	1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 300.0	Anion	Chloride	None	mg/L	1	6.2	=	0.51	1	None	BSK				
WW041	Rice Road	3/6/2016	MS1	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	56	=	0.51	1	None	BSK	99		80	120
WW041	Rice Road	3/6/2016	MS1	1	2	EPA 300.0	Anion	Chloride	None	mg/L	1	57	=	0.51	1	None	BSK	101	2	80	120
WW041	LABQA	3/8/2016	LabBlank	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	-0.51	ND	0.51	1	None	BSK				
WW041	LABQA	3/8/2016	LCS	1	1	EPA 300.0	Anion	Chloride	None	mg/L	1	100	=	0.51	1	None	BSK	100		90	110
WW041	LABQA	3/8/2016	LCS	1	2	EPA 300.0	Anion	Chloride	None	mg/L	1	100	=	0.51	1	None	BSK	100	0.3	90	110
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 300.0	Anion	Fluoride	None	mg/L	1	-0.042	ND	0.042	0.1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 300.0	Anion	Fluoride	None	mg/L	1	-0.042	ND	0.042	0.1	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 300.0	Anion	Fluoride	None	mg/L	1	-0.042	ND	0.042	0.1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 300.0	Anion	Fluoride	None	mg/L	1	-0.042	ND	0.042	0.1	None	BSK				
DW020	LABQA	9/25/2015	LabBlank	1	1	EPA 300.0	Anion	Fluoride	None	mg/L	1	-0.042	ND	0.042	0.1	None	BSK				
DW020	LABQA	9/25/2015	LCS	1	1	EPA 300.0	Anion	Fluoride	None	mg/L	1	0.96	=	0.042	0.1	None	BSK	96		90	110
DW020	LABQA	9/25/2015	LCS	1	2	EPA 300.0	Anion	Fluoride	None	mg/L	1	1	=	0.042	0.1	None	BSK	100	3	90	110
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	1.6	=	0.4	1	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	1.6	=	0.4	1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	1.6	=	0.4	1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	1.6	=	0.4	1	None	BSK				
DW020	LABQA	9/25/2015	LabBlank	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	-0.4	ND	0.4	1	None	BSK				
DW020	LABQA	9/25/2015	LCS	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	99	=	0.4	1	None	BSK	99		90	110

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
DW020	LABQA	9/25/2015	LCS	1	2	EPA 300.0	Anion	Sulfate	None	mg/L	1	100	=	0.4	1	None	BSK	102	3	90	110
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	1.9	=	0.4	1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	5	=	0.4	1	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	1.6	=	0.4	1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	4.9	=	0.4	1	None	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	52	=	0.4	1	None	BSK	99		80	120
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 300.0	Anion	Sulfate	None	mg/L	1	53	=	0.4	1	None	BSK	102	2	80	120
WW039	LABQA	12/23/2015	LabBlank	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	-0.4	ND	0.4	1	None	BSK				
WW039	LABQA	12/23/2015	LCS	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	100	=	0.4	1	None	BSK	100		90	110
WW039	LABQA	12/23/2015	LCS	1	2	EPA 300.0	Anion	Sulfate	None	mg/L	1	100	=	0.4	1	None	BSK	100	0.2	90	110
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	8.8	=	0.4	1	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	2.7	=	0.4	1	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	8.5	=	0.4	1	None	BSK				
CNWW02	LABQA	1/7/2016	LabBlank	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	-0.4	ND	0.4	1	None	BSK				
CNWW02	LABQA	1/7/2016	LCS	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	99	=	0.4	1	None	BSK	99		90	110
CNWW02	LABQA	1/7/2016	LCS	1	2	EPA 300.0	Anion	Sulfate	None	mg/L	1	99	=	0.4	1	None	BSK	99	0.2	90	110
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	2.2	=	0.4	1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	2.6	=	0.4	1	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	2.1	=	0.4	1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	2.7	=	0.4	1	None	BSK				
WW040	LABQA	1/19/2016	LabBlank	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	-0.4	ND	0.4	1	None	BSK				
WW040	LABQA	1/19/2016	LCS	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	100	=	0.4	1	None	BSK	100		90	110
WW040	LABQA	1/19/2016	LCS	1	2	EPA 300.0	Anion	Sulfate	None	mg/L	1	100	=	0.4	1	None	BSK	100	0.5	90	110
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	2.1	=	0.4	1	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	7.5	=	0.4	1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	1.9	=	0.4	1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	MS1	2	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	51	=	0.4	1	None	BSK	98		80	120
CNWW03	Garfield Ave	1/21/2016	MS1	2	2	EPA 300.0	Anion	Sulfate	None	mg/L	1	52	=	0.4	1	None	BSK	100	2	80	120
CNWW03	LABQA	1/22/2016	LabBlank	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	-0.4	ND	0.4	1	None	BSK				
CNWW03	LABQA	1/22/2016	LCS	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	99	=	0.4	1	None	BSK	99		90	110
CNWW03	LABQA	1/22/2016	LCS	1	2	EPA 300.0	Anion	Sulfate	None	mg/L	1	99	=	0.4	1	None	BSK	99	0.5	90	110
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	2.1	=	0.4	1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	3.4	=	0.4	1	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	2.3	=	0.4	1	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	2	=	0.4	1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	3.3	=	0.4	1	None	BSK				
WW041	Rice Road	3/6/2016	MS1	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	51	=	0.4	1	None	BSK	98		80	120
WW041	Rice Road	3/6/2016	MS1	1	2	EPA 300.0	Anion	Sulfate	None	mg/L	1	53	=	0.4	1	None	BSK	101	2	80	120
WW041	LABQA	3/8/2016	LabBlank	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	-0.4	ND	0.4	1	None	BSK				
WW041	LABQA	3/8/2016	LCS	1	1	EPA 300.0	Anion	Sulfate	None	mg/L	1	100	=	0.4	1	None	BSK	101		90	110
WW041	LABQA	3/8/2016	LCS	1	2	EPA 300.0	Anion	Sulfate	None	mg/L	1	100	=	0.4	1	None	BSK	101	0.5	90	110
DW020	Friant Dam	9/24/2015	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	8	=	-88	1.8	None	BSK				
DW020	Rice Road	9/24/2015	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	8	=	-88	1.8	None	BSK				
DW020	Camp Pashayan	9/24/2015	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	13	=	-88	1.8	None	BSK				
DW020	Camp Pashayan	9/24/2015	Grab	2	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	7	=	-88	1.8	None	BSK				
WW039	Friant Dam	12/22/2015	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	49	=	-88	1.8	None	BSK				
WW039	Rice Road	12/22/2015	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	23	=	-88	1.8	None	BSK				
WW039	Camp Pashayan	12/22/2015	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	130	=	-88	1.8	None	BSK				
WW039	Rice Road	12/22/2015	Grab	2	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	33	=	-88	1.8	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	140	=	-88	1.8	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	1300	=	-88	1.8	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Grab	2	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	33	=	-88	1.8	None	BSK				
WW040	Friant Dam	1/18/2016	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	23	=	-88	1.8	None	BSK				
WW040	Rice Road	1/18/2016	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	130	=	-88	1.8	None	BSK				
WW040	Camp Pashayan	1/18/2016	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	7.8	=	-88	1.8	None	BSK				
WW040	Friant Dam	1/18/2016	Grab	2	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	79	=	-88	1.8	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	79	=	-88	1.8	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	490	=	-88	1.8	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Grab	2	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	330	=	-88	1.8	None	BSK				
WW041	Friant Dam	3/6/2016	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	49000	=	-88	1.8	None	BSK				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW041	Rice Road	3/6/2016	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	70	=	-88	1.8	None	BSK				
WW041	Camp Pashayan	3/6/2016	Grab	1	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	1300	=	-88	1.8	None	BSK				
WW041	Camp Pashayan	3/6/2016	Grab	2	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	490	=	-88	1.8	None	BSK				
WW041	Friant Dam	3/6/2016	Grab	2	1	SM 9221 B/F	Bacteriological	E. coli	None	MPN/100 mL	1	49000	=	-88	1.8	None	BSK				
DW020	Friant Dam	9/24/2015	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	8	=	-88	1.8	None	BSK				
DW020	Rice Road	9/24/2015	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	8	=	-88	1.8	None	BSK				
DW020	Camp Pashayan	9/24/2015	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	13	=	-88	1.8	None	BSK				
DW020	Camp Pashayan	9/24/2015	Grab	2	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	7	=	-88	1.8	None	BSK				
WW039	Friant Dam	12/22/2015	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	49	=	-88	1.8	None	BSK				
WW039	Rice Road	12/22/2015	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	23	=	-88	1.8	None	BSK				
WW039	Camp Pashayan	12/22/2015	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	130	=	-88	1.8	None	BSK				
WW039	Rice Road	12/22/2015	Grab	2	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	33	=	-88	1.8	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	140	=	-88	1.8	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	1300	=	-88	1.8	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Grab	2	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	33	=	-88	1.8	None	BSK				
WW040	Friant Dam	1/18/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	23	=	-88	1.8	None	BSK				
WW040	Rice Road	1/18/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	130	=	-88	1.8	None	BSK				
WW040	Camp Pashayan	1/18/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	7.8	=	-88	1.8	None	BSK				
WW040	Friant Dam	1/18/2016	Grab	2	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	79	=	-88	1.8	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	79	=	-88	1.8	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	490	=	-88	1.8	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Grab	2	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	330	=	-88	1.8	None	BSK				
WW041	Friant Dam	3/6/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	49000	=	-88	1.8	None	BSK				
WW041	Rice Road	3/6/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	70	=	-88	1.8	None	BSK				
WW041	Camp Pashayan	3/6/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	1300	=	-88	1.8	None	BSK				
WW041	Camp Pashayan	3/6/2016	Grab	2	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	490	=	-88	1.8	None	BSK				
WW041	Friant Dam	3/6/2016	Grab	2	1	SM 9221 B/E/F	Bacteriological	Fecal Coliform	None	MPN/100 mL	1	49000	=	-88	1.8	None	BSK				
DW020	Friant Dam	9/24/2015	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	50	=	-88	1.8	None	BSK				
DW020	Rice Road	9/24/2015	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	130	=	-88	1.8	None	BSK				
DW020	Camp Pashayan	9/24/2015	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	80	=	-88	1.8	None	BSK				
DW020	Camp Pashayan	9/24/2015	Grab	2	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	50	=	-88	1.8	None	BSK				
WW039	Friant Dam	12/22/2015	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	1100	=	-88	1.8	None	BSK				
WW039	Rice Road	12/22/2015	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	23	=	-88	1.8	None	BSK				
WW039	Camp Pashayan	12/22/2015	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	2300	=	-88	1.8	None	BSK				
WW039	Rice Road	12/22/2015	Grab	2	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	33	=	-88	1.8	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	1100	=	-88	1.8	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	4900	=	-88	1.8	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Grab	2	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	490	=	-88	1.8	None	BSK				
WW040	Friant Dam	1/18/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	110	=	-88	1.8	None	BSK				
WW040	Rice Road	1/18/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	1700	=	-88	1.8	None	BSK				
WW040	Camp Pashayan	1/18/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	33	=	-88	1.8	None	BSK				
WW040	Friant Dam	1/18/2016	Grab	2	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	490	=	-88	1.8	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	130	=	-88	1.8	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	7900	=	-88	1.8	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Grab	2	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	22000	=	-88	1.8	None	BSK				
WW041	Friant Dam	3/6/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	350000	=	-88	1.8	None	BSK				
WW041	Rice Road	3/6/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	540	=	-88	1.8	None	BSK				
WW041	Camp Pashayan	3/6/2016	Grab	1	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	4900	=	-88	1.8	None	BSK				
WW041	Camp Pashayan	3/6/2016	Grab	2	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	4600	=	-88	1.8	None	BSK				
WW041	Friant Dam	3/6/2016	Grab	2	1	SM 9221 B/E/F	Bacteriological	Total Coliform	None	MPN/100 mL	1	220000	=	-88	1.8	None	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.054	=	0.023	0.05	None	BSK				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.24	=	0.023	0.05	None	BSK	122		70	130
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.22	=	0.023	0.05	None	BSK	109	11	70	130
DW020	LABQA	9/29/2015	LabBlank	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
DW020	LABQA	9/29/2015	LCS	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.2	=	0.023	0.05	None	BSK	99		85	115
DW020	LABQA	9/29/2015	LCS	1	2	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.2	=	0.023	0.05	None	BSK	102	3	85	115
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.2	=	0.023	0.05	None	BSK				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.12	=	0.023	0.05	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.12	=	0.023	0.05	None	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.41	=	0.023	0.05	None	BSK	105		70	130
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.46	=	0.023	0.05	None	BSK	129	11	70	130
WW039	LABQA	12/29/2015	LabBlank	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW039	LABQA	12/29/2015	LCS	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.18	=	0.023	0.05	None	BSK	91		85	115
WW039	LABQA	12/29/2015	LCS	1	2	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.18	=	0.023	0.05	None	BSK	89	2	85	115
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.47	=	0.023	0.05	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.23	=	0.023	0.05	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.49	=	0.023	0.05	None	BSK				
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.21	=	0.023	0.05	None	BSK	103		85	115
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.21	=	0.023	0.05	None	BSK	106	3	85	115
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.35	=	0.023	0.05	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.055	=	0.023	0.05	None	BSK				
WW040	Friant Dam	1/18/2016	MS1	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.29	=	0.023	0.05	None	BSK	130		70	130
WW040	Friant Dam	1/18/2016	MS1	1	2	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.28	=	0.023	0.05	None	BSK	121	6	70	130
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.66	=	0.023	0.05	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.3	=	0.023	0.05	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.33	=	0.023	0.05	None	BSK				
WW040	LABQA	1/21/2016	LabBlank	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW040	LABQA	1/21/2016	LCS	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.18	=	0.023	0.05	None	BSK	89		85	115
WW040	LABQA	1/21/2016	LCS	1	2	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.19	=	0.023	0.05	None	BSK	93	4	85	115
CNWW03	LABQA	1/25/2016	LabBlank	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
CNWW03	LABQA	1/25/2016	LCS	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.19	=	0.023	0.05	None	BSK	96		85	115
CNWW03	LABQA	1/25/2016	LCS	1	2	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.18	=	0.023	0.05	None	BSK	89	8	85	115
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.43	=	0.023	0.05	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.08	=	0.023	0.05	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.053	=	0.023	0.05	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.55	=	0.023	0.05	None	BSK				
WW041	LABQA	3/8/2016	LabBlank	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW041	LABQA	3/8/2016	LCS	1	1	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.17	=	0.023	0.05	None	BSK	85		85	115
WW041	LABQA	3/8/2016	LCS	1	2	EPA 200.7	Cation	Aluminum	Total Recoverable	mg/L	1	0.19	=	0.023	0.05	None	BSK	95	12	85	115
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.21	=	0.023	0.05	None	BSK	106		70	130
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.21	=	0.023	0.05	None	BSK	104	2	70	130
DW020	LABQA	9/29/2015	LabBlank	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
DW020	LABQA	9/29/2015	LCS	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.2	=	0.023	0.05	None	BSK	100		85	115
DW020	LABQA	9/29/2015	LCS	1	2	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.2	=	0.023	0.05	None	BSK	102	2	85	115
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.21	=	0.023	0.05	None	BSK	107		70	130
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.22	=	0.023	0.05	None	BSK	108	0.5	70	130
WW039	LABQA	12/29/2015	LabBlank	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW039	LABQA	12/29/2015	LCS	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.2	=	0.023	0.05	None	BSK	98		85	115
WW039	LABQA	12/29/2015	LCS	1	2	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.2	=	0.023	0.05	None	BSK	98	0.7	85	115
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.2	=	0.023	0.05	None	BSK	100		85	115

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EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.2	=	0.023	0.05	None	BSK	101	0.7	85	115
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW040	Friant Dam	1/18/2016	MS1	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.22	=	0.023	0.05	None	BSK	108		70	130
WW040	Friant Dam	1/18/2016	MS1	1	2	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.21	=	0.023	0.05	None	BSK	107	1	70	130
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW040	LABQA	1/21/2016	LabBlank	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW040	LABQA	1/21/2016	LCS	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.2	=	0.023	0.05	None	BSK	101		85	115
WW040	LABQA	1/21/2016	LCS	1	2	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.2	=	0.023	0.05	None	BSK	101	0.5	85	115
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.23	=	0.023	0.05	None	BSK	100		70	130
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.23	=	0.023	0.05	None	BSK	97	2	70	130
CNWW03	LABQA	1/25/2016	LabBlank	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
CNWW03	LABQA	1/25/2016	LCS	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.2	=	0.023	0.05	None	BSK	98		85	115
CNWW03	LABQA	1/25/2016	LCS	1	2	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.19	=	0.023	0.05	None	BSK	94	4	85	115
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.058	=	0.023	0.05	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.056	=	0.023	0.05	None	BSK				
WW041	LABQA	3/8/2016	LabBlank	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	-0.023	ND	0.023	0.05	None	BSK				
WW041	LABQA	3/8/2016	LCS	1	1	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.21	=	0.023	0.05	None	BSK	103		85	115
WW041	LABQA	3/8/2016	LCS	1	2	EPA 200.7	Cation	Barium	Total Recoverable	mg/L	1	0.21	=	0.023	0.05	None	BSK	103	0.4	85	115
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.65	=	0.046	0.1	None	BSK	108		70	130
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.63	=	0.046	0.1	None	BSK	105	3	70	130
DW020	LABQA	9/29/2015	LabBlank	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
DW020	LABQA	9/29/2015	LCS	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.59	=	0.046	0.1	None	BSK	98		85	115
DW020	LABQA	9/29/2015	LCS	1	2	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.61	=	0.046	0.1	None	BSK	101	3	85	115
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.65	=	0.046	0.1	None	BSK	101		70	130
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.64	=	0.046	0.1	None	BSK	99	1	70	130
WW039	LABQA	12/29/2015	LabBlank	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW039	LABQA	12/29/2015	LCS	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.59	=	0.046	0.1	None	BSK	98		85	115
WW039	LABQA	12/29/2015	LCS	1	2	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.6	=	0.046	0.1	None	BSK	99	1	85	115
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.61	=	0.046	0.1	None	BSK	101		85	115
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.61	=	0.046	0.1	None	BSK	101	0.06	85	115
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW040	Friant Dam	1/18/2016	MS1	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.68	=	0.046	0.1	None	BSK	103		70	130
WW040	Friant Dam	1/18/2016	MS1	1	2	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.66	=	0.046	0.1	None	BSK	100	3	70	130
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW040	LABQA	1/21/2016	LabBlank	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				

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EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW040	LABQA	1/21/2016	LCS	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.6	=	0.046	0.1	None	BSK	99		85	115
WW040	LABQA	1/21/2016	LCS	1	2	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.61	=	0.046	0.1	None	BSK	101	2	85	115
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.62	=	0.046	0.1	None	BSK	103		70	130
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.62	=	0.046	0.1	None	BSK	104	0.5	70	130
CNWW03	LABQA	1/25/2016	LabBlank	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
CNWW03	LABQA	1/25/2016	LCS	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.6	=	0.046	0.1	None	BSK	99		85	115
CNWW03	LABQA	1/25/2016	LCS	1	2	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.58	=	0.046	0.1	None	BSK	96	3	85	115
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW041	LABQA	3/8/2016	LabBlank	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW041	LABQA	3/8/2016	LCS	1	1	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.62	=	0.046	0.1	None	BSK	104		85	115
WW041	LABQA	3/8/2016	LCS	1	2	EPA 200.7	Cation	Boron	Total Recoverable	mg/L	1	0.62	=	0.046	0.1	None	BSK	104	0.06	85	115
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	3.6	=	0.046	0.1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	3.6	=	0.046	0.1	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	3.6	=	0.046	0.1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	3.5	=	0.046	0.1	None	BSK				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	14	=	0.046	0.1	None	BSK	103		70	130
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	14	=	0.046	0.1	None	BSK	100	2	70	130
DW020	LABQA	9/29/2015	LabBlank	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
DW020	LABQA	9/29/2015	LCS	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	9.9	=	0.046	0.1	None	BSK	99		85	115
DW020	LABQA	9/29/2015	LCS	1	2	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	10	=	0.046	0.1	None	BSK	101	2	85	115
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	4.5	=	0.046	0.1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	5.6	=	0.046	0.1	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	3.7	=	0.046	0.1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	5.8	=	0.046	0.1	None	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	14	=	0.046	0.1	None	BSK	98		70	130
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	14	=	0.046	0.1	None	BSK	99	0.9	70	130
WW039	LABQA	12/29/2015	LabBlank	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW039	LABQA	12/29/2015	LCS	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	9.5	=	0.046	0.1	None	BSK	95		85	115
WW039	LABQA	12/29/2015	LCS	1	2	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	9.6	=	0.046	0.1	None	BSK	96	0.8	85	115
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	5.4	=	0.046	0.1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	6	=	0.046	0.1	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	5.4	=	0.046	0.1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	6	=	0.046	0.1	None	BSK				
WW040	Friant Dam	1/18/2016	MS1	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	16	=	0.046	0.1	None	BSK	103		70	130
WW040	Friant Dam	1/18/2016	MS1	1	2	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	16	=	0.046	0.1	None	BSK	100	2	70	130
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	9.3	=	0.046	0.1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	4.9	=	0.046	0.1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	4.9	=	0.046	0.1	None	BSK				
WW040	LABQA	1/21/2016	LabBlank	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW040	LABQA	1/21/2016	LCS	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	10	=	0.046	0.1	None	BSK	102		85	115
WW040	LABQA	1/21/2016	LCS	1	2	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	10	=	0.046	0.1	None	BSK	102	0.3	85	115
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	19	=	0.046	0.1	None	BSK	101		70	130
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	19	=	0.046	0.1	None	BSK	97	2	70	130
CNWW03	LABQA	1/25/2016	LabBlank	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
CNWW03	LABQA	1/25/2016	LCS	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	10	=	0.046	0.1	None	BSK	100		85	115
CNWW03	LABQA	1/25/2016	LCS	1	2	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	9.7	=	0.046	0.1	None	BSK	97	3	85	115
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	5.5	=	0.046	0.1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	13	=	0.046	0.1	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	6	=	0.046	0.1	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	5.6	=	0.046	0.1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	12	=	0.046	0.1	None	BSK				
WW041	LABQA	3/8/2016	LabBlank	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW041	LABQA	3/8/2016	LCS	1	1	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	10	=	0.046	0.1	None	BSK	100		85	115
WW041	LABQA	3/8/2016	LCS	1	2	EPA 200.7	Cation	Calcium	Total Recoverable	mg/L	1	10	=	0.046	0.1	None	BSK	100	0.4	85	115
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	0.6	=	0.046	0.1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	0.68	=	0.046	0.1	None	BSK				

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EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	0.67	=	0.046	0.1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	0.68	=	0.046	0.1	None	BSK				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	11	=	0.046	0.1	None	BSK	100		70	130
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	10	=	0.046	0.1	None	BSK	98	2	70	130
DW020	LABQA	9/29/2015	LabBlank	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
DW020	LABQA	9/29/2015	LCS	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	9.7	=	0.046	0.1	None	BSK	97		85	115
DW020	LABQA	9/29/2015	LCS	1	2	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	10	=	0.046	0.1	None	BSK	100	3	85	115
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	0.87	=	0.046	0.1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	1.6	=	0.046	0.1	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	0.71	=	0.046	0.1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	1.6	=	0.046	0.1	None	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	10	=	0.046	0.1	None	BSK	95		70	130
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	10	=	0.046	0.1	None	BSK	95	0.4	70	130
WW039	LABQA	12/29/2015	LabBlank	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW039	LABQA	12/29/2015	LCS	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	9.4	=	0.046	0.1	None	BSK	94		85	115
WW039	LABQA	12/29/2015	LCS	1	2	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	9.4	=	0.046	0.1	None	BSK	94	0.06	85	115
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	1.3	=	0.046	0.1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	1.2	=	0.046	0.1	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	1.1	=	0.046	0.1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	1.2	=	0.046	0.1	None	BSK				
WW040	Friant Dam	1/18/2016	MS1	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	11	=	0.046	0.1	None	BSK	100		70	130
WW040	Friant Dam	1/18/2016	MS1	1	2	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	11	=	0.046	0.1	None	BSK	98	2	70	130
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	3	=	0.046	0.1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	0.87	=	0.046	0.1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	0.88	=	0.046	0.1	None	BSK				
WW040	LABQA	1/21/2016	LabBlank	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW040	LABQA	1/21/2016	LCS	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	10	=	0.046	0.1	None	BSK	100		85	115
WW040	LABQA	1/21/2016	LCS	1	2	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	10	=	0.046	0.1	None	BSK	101	1	85	115
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	13	=	0.046	0.1	None	BSK	96		70	130
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	12	=	0.046	0.1	None	BSK	93	3	70	130
CNWW03	LABQA	1/25/2016	LabBlank	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
CNWW03	LABQA	1/25/2016	LCS	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	10	=	0.046	0.1	None	BSK	100		85	115
CNWW03	LABQA	1/25/2016	LCS	1	2	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	9.8	=	0.046	0.1	None	BSK	98	2	85	115
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	1.2	=	0.046	0.1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	3.6	=	0.046	0.1	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	1.3	=	0.046	0.1	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	1.2	=	0.046	0.1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	3.5	=	0.046	0.1	None	BSK				
WW041	LABQA	3/8/2016	LabBlank	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	-0.046	ND	0.046	0.1	None	BSK				
WW041	LABQA	3/8/2016	LCS	1	1	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	11	=	0.046	0.1	None	BSK	107		85	115
WW041	LABQA	3/8/2016	LCS	1	2	EPA 200.7	Cation	Magnesium	Total Recoverable	mg/L	1	11	=	0.046	0.1	None	BSK	107	0.5	85	115
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	11	=	0.91	2	None	BSK	108		70	130
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	11	=	0.91	2	None	BSK	106	2	70	130
DW020	LABQA	9/29/2015	LabBlank	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
DW020	LABQA	9/29/2015	LCS	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	9.9	=	0.91	2	None	BSK	99		85	115
DW020	LABQA	9/29/2015	LCS	1	2	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	10	=	0.91	2	None	BSK	102	3	85	115
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	11	=	0.91	2	None	BSK	100		70	130
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	11	=	0.91	2	None	BSK	101	0.4	70	130
WW039	LABQA	12/29/2015	LabBlank	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
WW039	LABQA	12/29/2015	LCS	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	9.9	=	0.91	2	None	BSK	99		85	115
WW039	LABQA	12/29/2015	LCS	1	2	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	10	=	0.91	2	None	BSK	101	2	85	115
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	2.4	=	0.91	2	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	10	=	0.91	2	None	BSK	102		85	115
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	10	=	0.91	2	None	BSK	103	2	85	115
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
WW040	Friant Dam	1/18/2016	MS1	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	11	=	0.91	2	None	BSK	102		70	130
WW040	Friant Dam	1/18/2016	MS1	1	2	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	11	=	0.91	2	None	BSK	100	1	70	130
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
WW040	LABQA	1/21/2016	LabBlank	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
WW040	LABQA	1/21/2016	LCS	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	10	=	0.91	2	None	BSK	102		85	115
WW040	LABQA	1/21/2016	LCS	1	2	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	10	=	0.91	2	None	BSK	103	0.3	85	115
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	11	=	0.91	2	None	BSK	100		70	130
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	11	=	0.91	2	None	BSK	97	3	70	130
CNWW03	LABQA	1/25/2016	LabBlank	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
CNWW03	LABQA	1/25/2016	LCS	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	9.5	=	0.91	2	None	BSK	95		85	115
CNWW03	LABQA	1/25/2016	LCS	1	2	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	9.3	=	0.91	2	None	BSK	93	2	85	115
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	3.7	=	0.91	2	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	3.6	=	0.91	2	None	BSK				
WW041	LABQA	3/8/2016	LabBlank	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	-0.91	ND	0.91	2	None	BSK				
WW041	LABQA	3/8/2016	LCS	1	1	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	10	=	0.91	2	None	BSK	101		85	115
WW041	LABQA	3/8/2016	LCS	1	2	EPA 200.7	Cation	Potassium	Total Recoverable	mg/L	1	10	=	0.91	2	None	BSK	101	0.3	85	115
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	4.6	=	0.45	1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	5	=	0.45	1	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	4.6	=	0.45	1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	4.7	=	0.45	1	None	BSK				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	15	=	0.45	1	None	BSK	104		70	130
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	15	=	0.45	1	None	BSK	102	1	70	130
DW020	LABQA	9/29/2015	LabBlank	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	-0.45	ND	0.45	1	None	BSK				
DW020	LABQA	9/29/2015	LCS	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	10	=	0.45	1	None	BSK	102		85	115
DW020	LABQA	9/29/2015	LCS	1	2	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	10	=	0.45	1	None	BSK	104	2	85	115
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	6	=	0.45	1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	7.1	=	0.45	1	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	4.9	=	0.45	1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	7.3	=	0.45	1	None	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	16	=	0.45	1	None	BSK	101		70	130
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	16	=	0.45	1	None	BSK	102	0.9	70	130
WW039	LABQA	12/29/2015	LabBlank	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	-0.45	ND	0.45	1	None	BSK				
WW039	LABQA	12/29/2015	LCS	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	9.9	=	0.45	1	None	BSK	99		85	115
WW039	LABQA	12/29/2015	LCS	1	2	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	10	=	0.45	1	None	BSK	100	1	85	115
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	5.8	=	0.45	1	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	3.8	=	0.45	1	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	5.6	=	0.45	1	None	BSK				
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	-0.45	ND	0.45	1	None	BSK				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	9.9	=	0.45	1	None	BSK	99		85	115
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	10	=	0.45	1	None	BSK	100	0.6	85	115
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	6.9	=	0.45	1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	7.5	=	0.45	1	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	6.9	=	0.45	1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	7.5	=	0.45	1	None	BSK				
WW040	Friant Dam	1/18/2016	MS1	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	18	=	0.45	1	None	BSK	104		70	130
WW040	Friant Dam	1/18/2016	MS1	1	2	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	17	=	0.45	1	None	BSK	100	2	70	130

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	5.3	=	0.45	1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	3.1	=	0.45	1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	3.1	=	0.45	1	None	BSK				
WW040	LABQA	1/21/2016	LabBlank	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	-0.45	ND	0.45	1	None	BSK				
WW040	LABQA	1/21/2016	LCS	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	10	=	0.45	1	None	BSK	101		85	115
WW040	LABQA	1/21/2016	LCS	1	2	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	10	=	0.45	1	None	BSK	102	0.8	85	115
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	15	=	0.45	1	None	BSK	101		70	130
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	15	=	0.45	1	None	BSK	98	2	70	130
CNWW03	LABQA	1/25/2016	LabBlank	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	-0.45	ND	0.45	1	None	BSK				
CNWW03	LABQA	1/25/2016	LCS	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	10	=	0.45	1	None	BSK	100		85	115
CNWW03	LABQA	1/25/2016	LCS	1	2	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	9.6	=	0.45	1	None	BSK	96	4	85	115
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	6.6	=	0.45	1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	11	=	0.45	1	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	7.1	=	0.45	1	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	6.7	=	0.45	1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	11	=	0.45	1	None	BSK				
WW041	LABQA	3/8/2016	LabBlank	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	-0.45	ND	0.45	1	None	BSK				
WW041	LABQA	3/8/2016	LCS	1	1	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	10	=	0.45	1	None	BSK	101		85	115
WW041	LABQA	3/8/2016	LCS	1	2	EPA 200.7	Cation	Sodium	Total Recoverable	mg/L	1	10	=	0.45	1	None	BSK	101	0.2	85	115
DW020	Rice Road	9/24/2015	Integrated	1	1	SM 2320 B	Conventional	Alkalinity as CaCO3	None	mg/L	1	15	=	-88	3	None	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	1	SM 2320 B	Conventional	Alkalinity as CaCO3	None	mg/L	1	14	=	-88	3	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	SM 2320 B	Conventional	Alkalinity as CaCO3	None	mg/L	1	15	=	-88	3	None	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	2	SM 2320 B	Conventional	Alkalinity as CaCO3	None	mg/L	1	14	=	-88	3	None	BSK		2		
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	SM 2320 B	Conventional	Alkalinity as CaCO3	None	mg/L	1	15	=	-88	3	None	BSK				
DW020	LABQA	9/25/2015	LabBlank	1	1	SM 2320 B	Conventional	Alkalinity as CaCO3	None	mg/L	1	-3	ND	-88	3	None	BSK				
DW020	LABQA	9/25/2015	LCS	1	1	SM 2320 B	Conventional	Alkalinity as CaCO3	None	mg/L	1	98	=	-88	3	None	BSK	98		80	120
DW020	LABQA	9/25/2015	LCS	1	2	SM 2320 B	Conventional	Alkalinity as CaCO3	None	mg/L	1	100	=	-88	3	None	BSK	103	5	80	120
DW020	Rice Road	9/24/2015	Integrated	1	1	SM 2320 B	Conventional	Bicarbonate as CaCO3	None	mg/L	1	15	=	-88	3	None	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	1	SM 2320 B	Conventional	Bicarbonate as CaCO3	None	mg/L	1	14	=	-88	3	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	SM 2320 B	Conventional	Bicarbonate as CaCO3	None	mg/L	1	15	=	-88	3	None	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	2	SM 2320 B	Conventional	Bicarbonate as CaCO3	None	mg/L	1	14	=	-88	3	None	BSK		2		
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	SM 2320 B	Conventional	Bicarbonate as CaCO3	None	mg/L	1	15	=	-88	3	None	BSK				
DW020	LABQA	9/25/2015	LabBlank	1	1	SM 2320 B	Conventional	Bicarbonate as CaCO3	None	mg/L	1	-3	ND	-88	3	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	SM 2320 B	Conventional	Carbonate as CaCO3	None	mg/L	1	-3	ND	-88	3	None	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	1	SM 2320 B	Conventional	Carbonate as CaCO3	None	mg/L	1	-3	ND	-88	3	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	SM 2320 B	Conventional	Carbonate as CaCO3	None	mg/L	1	-3	ND	-88	3	None	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	2	SM 2320 B	Conventional	Carbonate as CaCO3	None	mg/L	1	-3	ND	-88	3	None	BSK		0		
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	SM 2320 B	Conventional	Carbonate as CaCO3	None	mg/L	1	-3	ND	-88	3	None	BSK				
DW020	LABQA	9/25/2015	LabBlank	1	1	SM 2320 B	Conventional	Carbonate as CaCO3	None	mg/L	1	-3	ND	-88	3	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	1	SM 5220 D	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
DW020	Friant Dam	9/24/2015	MS1	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	47	=	6.4	15	None	BSK	94		80	120
DW020	Friant Dam	9/24/2015	MS1	1	2	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	46	=	6.4	15	None	BSK	92	1	80	120
DW020	LABQA	9/25/2015	LabBlank	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
DW020	LABQA	9/25/2015	LCS	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	44	=	6.4	15	None	BSK	87		80	120
DW020	LABQA	9/25/2015	LCS	1	2	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	45	=	6.4	15	None	BSK	90	3	80	120
WW039	Friant Dam	12/22/2015	Integrated	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	110	=	13	30	None	BSK	106		80	120
WW039	Friant Dam	12/22/2015	MS1	1	2	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	100	=	13	30	None	BSK	104	1	80	120
WW039	LABQA	12/24/2015	LabBlank	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
WW039	LABQA	12/24/2015	LCS	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	51	=	6.4	15	None	BSK	103		80	120
WW039	LABQA	12/24/2015	LCS	1	2	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	52	=	6.4	15	None	BSK	103	0.7	80	120
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	31	=	6.4	15	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	18	=	6.4	15	None	BSK				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	120	=	13	30	None	BSK	102		80	120
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	120	=	13	30	None	BSK	108	5	80	120
CNWW02	LABQA	1/8/2016	LabBlank	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
CNWW02	LABQA	1/8/2016	LCS	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	52	=	6.4	15	None	BSK	104		80	120
CNWW02	LABQA	1/8/2016	LCS	1	2	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	51	=	6.4	15	None	BSK	101	3	80	120
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
WW040	Friant Dam	1/18/2016	MS1	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	110	=	13	30	None	BSK	110		80	120
WW040	Friant Dam	1/18/2016	MS1	1	2	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	110	=	13	30	None	BSK	112	2	80	120
WW040	LABQA	1/20/2016	LabBlank	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
WW040	LABQA	1/20/2016	LCS	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	53	=	6.4	15	None	BSK	105		80	120
WW040	LABQA	1/20/2016	LCS	1	2	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	52	=	6.4	15	None	BSK	103	2	80	120
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	17	=	6.4	15	FDP	BSK				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	32	=	6.4	15	FDP	BSK				
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	120	=	13	30	None	BSK	103		80	120
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	110	=	13	30	None	BSK	100	2	80	120
CNWW03	LABQA	1/27/2016	LabBlank	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
CNWW03	LABQA	1/27/2016	LCS	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	50	=	6.4	15	None	BSK	100		80	120
CNWW03	LABQA	1/27/2016	LCS	1	2	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	52	=	6.4	15	None	BSK	103	3	80	120
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	41	=	6.4	15	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	39	=	6.4	15	None	BSK				
WW041	Friant Dam	3/6/2016	MS1	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	140	=	13	30	None	BSK	99		80	120
WW041	Friant Dam	3/6/2016	MS1	1	2	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	140	=	13	30	None	BSK	98	0.5	80	120
WW041	LABQA	3/10/2016	LabBlank	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	-6.4	ND	6.4	15	None	BSK				
WW041	LABQA	3/10/2016	LCS	1	1	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	51	=	6.4	15	None	BSK	102		80	120
WW041	LABQA	3/10/2016	LCS	1	2	SM 5210 B	Conventional	Chemical Oxygen Demand	None	mg/L	1	49	=	6.4	15	None	BSK	99	3	80	120
DW020	Rice Road	9/24/2015	FieldBlank	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	0.36	=	0.094	0.2	IP	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	1.6	=	0.094	0.2	IP	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	1.3	=	0.094	0.2	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	1.6	=	0.094	0.2	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	1.6	=	0.094	0.2	None	BSK				
DW020	Friant Dam	9/24/2015	MS1	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	12	=	0.094	0.2	None	BSK	103		80	120
DW020	Friant Dam	9/24/2015	MS1	1	2	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	12	=	0.094	0.2	None	BSK	106	2	80	120
DW020	LABQA	9/29/2015	LabBlank	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	-0.094	ND	0.094	0.2	None	BSK				
DW020	LABQA	9/29/2015	LCS	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	10	=	0.094	0.2	None	BSK	101		80	120
DW020	LABQA	9/29/2015	LCS	1	2	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	10	=	0.094	0.2	None	BSK	103	1	80	120
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	0.33	=	0.095	0.2	IP	BSK				
WW039	Friant Dam	12/22/2015	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	1.2	=	0.095	0.2	IP	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	2.4	=	0.095	0.2	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	1.5	=	0.095	0.2	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	2.4	=	0.095	0.2	None	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	11	=	0.095	0.2	None	BSK	96		80	120
WW039	Friant Dam	12/22/2015	MS1	1	2	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	11	=	0.095	0.2	None	BSK	97	1	80	120
WW039	LABQA	12/29/2015	LabBlank	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	-0.095	ND	0.095	0.2	None	BSK				
WW039	LABQA	12/29/2015	LCS	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	10	=	0.095	0.2	None	BSK	103		80	120
WW039	LABQA	12/29/2015	LCS	1	2	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	9.1	=	0.095	0.2	None	BSK	91	13	80	120
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	0.28	=	0.095	0.2	IP	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	2.5	=	0.095	0.2	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	4.8	=	0.095	0.2	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	2.4	=	0.095	0.2	None	BSK				
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	13	=	0.095	0.2	None	BSK	101		80	120
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	13	=	0.095	0.2	None	BSK	103	1	80	120
CNWW02	LABQA	1/8/2016	LabBlank	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	-0.095	ND	0.095	0.2	None	BSK				
CNWW02	LABQA	1/8/2016	LCS	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	9.8	=	0.095	0.2	None	BSK	98		80	120

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EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
CNWW02	LABQA	1/8/2016	LCS	1	2	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	10	=	0.095	0.2	None	BSK	102	4	80	120
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	0.25	=	0.095	0.2	IP	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	2.6	=	0.095	0.2	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	2	=	0.095	0.2	None	BSK				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	2	=	0.095	0.2	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	2.6	=	0.095	0.2	None	BSK				
WW040	Friant Dam	1/18/2016	MS1	2	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	13	=	0.095	0.2	None	BSK	100		80	120
WW040	Friant Dam	1/18/2016	MS1	2	2	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	13	=	0.095	0.2	None	BSK	101	1	80	120
WW040	LABQA	1/20/2016	LabBlank	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	-0.095	ND	0.095	0.2	None	BSK				
WW040	LABQA	1/20/2016	LCS	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	10	=	0.095	0.2	None	BSK	100		80	120
WW040	LABQA	1/20/2016	LCS	1	2	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	10	=	0.095	0.2	None	BSK	101	1	80	120
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	0.3	=	0.095	0.2	IP	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	3.3	=	0.095	0.2	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	2.5	=	0.095	0.2	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	3.3	=	0.095	0.2	None	BSK				
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	13	=	0.095	0.2	None	BSK	101		80	120
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	12	=	0.095	0.2	None	BSK	100	1	80	120
CNWW03	LABQA	2/2/2016	LabBlank	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	-0.095	ND	0.095	0.2	None	BSK				
CNWW03	LABQA	2/2/2016	LCS	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	10	=	0.095	0.2	None	BSK	101		80	120
CNWW03	LABQA	2/2/2016	LCS	1	2	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	10	=	0.095	0.2	None	BSK	101	0.3	80	120
WW041	Rice Road	3/6/2016	FieldBlank	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	0.43	=	0.095	0.2	IP	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	3.2	=	0.095	0.2	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	11	=	0.095	0.2	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	3.3	=	0.095	0.2	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	3.2	=	0.095	0.2	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	12	=	0.095	0.2	None	BSK				
WW041	Friant Dam	3/6/2016	MS1	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	21	=	0.095	0.2	None	BSK	97		80	120
WW041	Friant Dam	3/6/2016	MS1	1	2	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	21	=	0.095	0.2	None	BSK	100	2	80	120
WW041	LABQA	3/9/2016	LabBlank	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	-0.095	ND	0.095	0.2	None	BSK				
WW041	LABQA	3/9/2016	LCS	1	1	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	10	=	0.095	0.2	None	BSK	102		80	120
WW041	LABQA	3/9/2016	LCS	1	2	SM 5310 C	Conventional	Dissolved Organic Carbon	Dissolved	mg/L	1	10	=	0.095	0.2	None	BSK	101	0.4	80	120
CNWW02	LABQA	1/1/1950	LabBlank	1	1	SM 2340 C	Conventional	Hardness (as CaCO3)	None	mg/L	1	-1.7	ND	1.7	5	None	CAL				
CNWW02	LABQA	1/1/1950	LCS	1	1	SM 2340 C	Conventional	Hardness (as CaCO3)	None	mg/L	1	100	=	1.7	5	None	CAL	100		80	120
DW020	Rice Road	9/24/2015	Integrated	1	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	12	=	0.19	0.41	None	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	11	=	0.19	0.41	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	12	=	0.19	0.41	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	11	=	0.19	0.41	None	BSK				
WW039	Friant Dam	12/22/2015	Integrated	1	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	15	=	0.19	0.41	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	21	=	0.19	0.41	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	12	=	0.19	0.41	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	21	=	0.19	0.41	None	BSK				
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	SM 2340 C	Conventional	Hardness (as CaCO3)	None	mg/L	1	-1.7	ND	1.7	5	None	CAL				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	SM 2340 C	Conventional	Hardness (as CaCO3)	None	mg/L	1	42	=	1.7	5	None	CAL				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	SM 2340 C	Conventional	Hardness (as CaCO3)	None	mg/L	1	26	=	1.7	5	None	CAL				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	SM 2340 C	Conventional	Hardness (as CaCO3)	None	mg/L	1	42	=	1.7	5	None	CAL				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	19	=	0.19	0.41	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	20	=	0.19	0.41	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	18	=	0.19	0.41	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	20	=	0.19	0.41	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	16	=	0.19	0.41	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	35	=	0.19	0.41	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	16	=	0.19	0.41	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	19	=	0.19	0.41	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	47	=	0.19	0.41	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	21	=	0.19	0.41	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	19	=	0.19	0.41	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	SM 2340 B	Conventional	Hardness (as CaCO3)	None	mg/L	1	45	=	0.19	0.41	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	SM 2320 B	Conventional	Hydroxide as CaCO3	None	mg/L	1	-3	ND	-88	3	None	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	1	SM 2320 B	Conventional	Hydroxide as CaCO3	None	mg/L	1	-3	ND	-88	3	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	SM 2320 B	Conventional	Hydroxide as CaCO3	None	mg/L	1	-3	ND	-88	3	None	BSK				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
DW020	Friant Dam	9/24/2015	Integrated	1	2	SM 2320 B	Conventional	Hydroxide as CaCO3	None	mg/L	1	-3	ND	-88	3	None	BSK		0		
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	SM 2320 B	Conventional	Hydroxide as CaCO3	None	mg/L	1	-3	ND	-88	3	None	BSK				
DW020	LABQA	9/25/2015	LabBlank	1	1	SM 2320 B	Conventional	Hydroxide as CaCO3	None	mg/L	1	-3	ND	-88	3	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	32	=	-88	5	None	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	28	=	-88	5	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	31	=	-88	5	None	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	2	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	27	=	-88	5	None	BSK		4		
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	30	=	-88	5	None	BSK				
DW020	LABQA	10/5/2015	LabBlank	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	-5	ND	-88	5	None	BSK				
DW020	LABQA	10/5/2015	LCS	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	990	=	-88	5	None	BSK	99		70	130
WW039	Friant Dam	12/22/2015	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	44	=	-88	5	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	60	=	-88	5	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	39	=	-88	5	None	BSK				
WW039	Friant Dam	12/22/2015	Integrated	1	2	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	43	=	-88	5	None	BSK		3		
WW039	Rice Road	12/22/2015	Integrated	2	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	62	=	-88	5	None	BSK				
WW039	LABQA	1/4/2016	LabBlank	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	-5	ND	-88	5	None	BSK				
WW039	LABQA	1/4/2016	LCS	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	990	=	-88	5	None	BSK	99		70	130
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	68	=	-88	5	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	41	=	-88	5	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	2	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	66	=	-88	5	None	BSK		1		
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	68	=	-88	5	None	BSK				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	41	=	-88	5	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	48	=	-88	5	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	44	=	-88	5	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	2	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	48	=	-88	5	None	BSK		1		
WW040	Friant Dam	1/18/2016	Integrated	2	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	46	=	-88	5	None	BSK				
CNWW02	LABQA	1/19/2016	LabBlank	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	-5	ND	-88	5	None	BSK				
CNWW02	LABQA	1/19/2016	LCS	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	980	=	-88	5	None	BSK	98		70	130
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	38	=	-88	5	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	60	=	-88	5	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	2	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	60	=	-88	5	None	BSK		0		
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	36	=	-88	5	None	BSK				
WW040	LABQA	1/29/2016	LabBlank	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	-5	ND	-88	5	None	BSK				
WW040	LABQA	1/29/2016	LCS	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	980	=	-88	5	None	BSK	98		70	130
CNWW03	LABQA	2/1/2016	LabBlank	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	-5	ND	-88	5	None	BSK				
CNWW03	LABQA	2/1/2016	LCS	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	990	=	-88	5	None	BSK	99		70	130
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	44	=	-88	5	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	100	=	-88	5	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	53	=	-88	5	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	1	2	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	46	=	-88	5	None	BSK		4		
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	43	=	-88	5	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	110	=	-88	5	None	BSK				
WW041	LABQA	3/10/2016	LabBlank	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	-5	ND	-88	5	None	BSK				
WW041	LABQA	3/10/2016	LCS	1	1	SM 2540 C	Conventional	Total Dissolved Solids	Dissolved	mg/L	1	1000	=	-88	5	None	BSK	100		70	130
DW020	Rice Road	9/24/2015	FieldBlank	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	0.36	=	0.047	0.2	IP	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	1.7	=	0.047	0.2	IP	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	1.3	=	0.047	0.2	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	1.7	=	0.047	0.2	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	1.9	=	0.047	0.2	None	BSK				
DW020	Friant Dam	9/24/2015	MS1	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	12	=	0.047	0.2	None	BSK	106		80	120
DW020	Friant Dam	9/24/2015	MS1	1	2	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	12	=	0.047	0.2	None	BSK	107	1	80	120
DW020	LABQA	9/29/2015	LabBlank	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	-0.047	ND	0.047	0.2	None	BSK				
DW020	LABQA	9/29/2015	LCS	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	10	=	0.047	0.2	None	BSK	103		80	120
DW020	LABQA	9/29/2015	LCS	1	2	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	10	=	0.047	0.2	None	BSK	104	1	80	120
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	0.2	=	0.085	0.2	IP	BSK				
WW039	Friant Dam	12/22/2015	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	1.3	=	0.085	0.2	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	2.9	=	0.085	0.2	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	1.8	=	0.085	0.2	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	2.9	=	0.085	0.2	None	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	11	=	0.085	0.2	None	BSK	97		80	120

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW039	Friant Dam	12/22/2015	MS1	1	2	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	10	=	0.085	0.2	None	BSK	92	5	80	120
WW039	LABQA	12/28/2015	LabBlank	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	-0.085	ND	0.085	0.2	None	BSK				
WW039	LABQA	12/28/2015	LCS	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	9.3	=	0.085	0.2	None	BSK	93		80	120
WW039	LABQA	12/28/2015	LCS	1	2	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	9.8	=	0.085	0.2	None	BSK	98	5	80	120
WW039	LABQA	12/30/2015	LabBlank	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	-0.085	ND	0.085	0.2	None	BSK				
WW039	LABQA	12/30/2015	LCS	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	11	=	0.085	0.2	None	BSK	106		80	120
WW039	LABQA	12/30/2015	LCS	1	2	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	11	=	0.085	0.2	None	BSK	106	0.2	80	120
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	-0.085	ND	0.085	0.2	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	2.7	=	0.085	0.2	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	4.9	=	0.085	0.2	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	2.5	=	0.085	0.2	None	BSK				
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	13	=	0.085	0.2	None	BSK	100		80	120
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	13	=	0.085	0.2	None	BSK	103	2	80	120
CNWW02	LABQA	1/12/2016	LabBlank	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	-0.085	ND	0.085	0.2	None	BSK				
CNWW02	LABQA	1/12/2016	LCS	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	10	=	0.085	0.2	None	BSK	101		80	120
CNWW02	LABQA	1/12/2016	LCS	1	2	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	10	=	0.085	0.2	None	BSK	102	0.6	80	120
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	-0.085	ND	0.085	0.2	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	2.4	=	0.085	0.2	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	1.9	=	0.085	0.2	None	BSK				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	2.2	=	0.085	0.2	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	2.4	=	0.085	0.2	None	BSK				
WW040	LABQA	1/20/2016	LabBlank	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	-0.085	ND	0.085	0.2	None	BSK				
WW040	LABQA	1/20/2016	LCS	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	9.9	=	0.085	0.2	None	BSK	99		80	120
WW040	LABQA	1/20/2016	LCS	1	2	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	10	=	0.085	0.2	None	BSK	101	2	80	120
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	0.29	=	0.085	0.2	IP	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	3.6	=	0.085	0.2	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	4.2	=	0.085	0.2	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	3.6	=	0.085	0.2	None	BSK				
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	13	=	0.085	0.2	None	BSK	86		80	120
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	13	=	0.085	0.2	None	BSK	86	0.6	80	120
CNWW03	LABQA	2/2/2016	LabBlank	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	-0.085	ND	0.085	0.2	None	BSK				
CNWW03	LABQA	2/2/2016	LCS	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	10	=	0.085	0.2	None	BSK	100		80	120
CNWW03	LABQA	2/2/2016	LCS	1	2	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	10	=	0.085	0.2	None	BSK	100	0.2	80	120
WW041	Rice Road	3/6/2016	FieldBlank	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	-0.085	ND	0.085	0.2	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	3.2	=	0.085	0.2	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	12	=	0.085	0.2	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	3.2	=	0.085	0.2	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	3.1	=	0.085	0.2	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	12	=	0.085	0.2	None	BSK				
WW041	Friant Dam	3/6/2016	MS1	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	22	=	0.085	0.2	None	BSK	95		80	120
WW041	Friant Dam	3/6/2016	MS1	1	2	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	22	=	0.085	0.2	None	BSK	100	2	80	120
WW041	LABQA	3/8/2016	LabBlank	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	-0.085	ND	0.085	0.2	None	BSK				
WW041	LABQA	3/8/2016	LabBlank	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	-0.085	ND	0.085	0.2	None	BSK				
WW041	LABQA	3/8/2016	LCS	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	10	=	0.085	0.2	None	BSK	100		80	120
WW041	LABQA	3/8/2016	LCS	1	1	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	10	=	0.085	0.2	None	BSK	100		80	120
WW041	LABQA	3/8/2016	LCS	1	2	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	10	=	0.085	0.2	None	BSK	100	0.4	80	120
WW041	LABQA	3/8/2016	LCS	1	2	SM 5310 C	Conventional	Total Organic Carbon	Total	mg/L	1	10	=	0.085	0.2	None	BSK	100	0.6	80	120
DW020	Rice Road	9/24/2015	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
DW020	Friant Dam	9/24/2015	Integrated	1	2	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK		0		
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
DW020	LABQA	10/6/2015	LabBlank	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
WW039	Friant Dam	12/22/2015	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	10	=	-88	5	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
WW039	Friant Dam	12/22/2015	Integrated	1	2	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	11	=	-88	5	None	BSK		10		
WW039	Rice Road	12/22/2015	Integrated	2	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
WW039	LABQA	1/4/2016	LabBlank	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	16	=	-88	5	None	BSK				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	10	=	-88	5	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	2	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	18	=	-88	5	None	BSK		6		
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	17	=	-88	5	None	BSK				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	24	=	-88	5	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
CNWW02	LABQA	1/18/2016	LabBlank	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	9	=	-88	5	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	22	=	-88	5	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	2	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	23	=	-88	5	None	BSK		4		
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	12	=	-88	5	None	BSK				
WW040	LABQA	1/26/2016	LabBlank	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
CNWW03	LABQA	2/1/2016	LabBlank	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	14	=	-88	5	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	1	2	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK		0		
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	14	=	-88	5	None	BSK				
WW041	LABQA	3/11/2016	LabBlank	1	1	SM 2540 D	Conventional	Total Suspended Solids	None	mg/L	1	-5	ND	-88	5	None	BSK				
DW020	Friant Dam	9/24/2015	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	21	=	-88	1	None	Field Crew				
DW020	Rice Road	9/24/2015	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	18	=	-88	1	None	Field Crew				
DW020	Camp Pashayan	9/24/2015	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	32	=	-88	1	None	Field Crew				
WW039	Friant Dam	12/22/2015	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	11	=	-88	1	None	Field Crew				
WW039	Rice Road	12/22/2015	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	29	=	-88	1	None	Field Crew				
WW039	Camp Pashayan	12/22/2015	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	18	=	-88	1	None	Field Crew				
CNWW02	Temperance Ave	1/7/2016	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	90	=	-88	1	None	Field Crew				
CNWW02	Garfield Ave	1/7/2016	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	51	=	-88	1	None	Field Crew				
WW040	Friant Dam	1/18/2016	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	91	=	-88	1	None	Field Crew				
WW040	Rice Road	1/18/2016	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	64	=	-88	1	None	Field Crew				
WW040	Camp Pashayan	1/18/2016	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	22	=	-88	1	None	Field Crew				
CNWW03	Temperance Ave	1/21/2016	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	110	=	-88	1	None	Field Crew				
CNWW03	Garfield Ave	1/21/2016	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	74	=	-88	1	None	Field Crew				
WW041	Friant Dam	3/6/2016	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	87	=	-88	1	None	Field Crew				
WW041	Rice Road	3/6/2016	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	71	=	-88	1	None	Field Crew				
WW041	Camp Pashayan	3/6/2016	Grab	1	1	FieldMeasure	Field	Conductivity	None	µS/cm	1	93	=	-88	1	None	Field Crew				
DW020	Friant Dam	9/24/2015	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	7.61	=	-88	0.01	None	Field Crew				
DW020	Rice Road	9/24/2015	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	7.74	=	-88	0.01	None	Field Crew				
DW020	Camp Pashayan	9/24/2015	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	7.39	=	-88	0.01	None	Field Crew				
WW039	Friant Dam	12/22/2015	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	7.85	=	-88	0.01	None	Field Crew				
WW039	Rice Road	12/22/2015	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	7.21	=	-88	0.01	None	Field Crew				
WW039	Camp Pashayan	12/22/2015	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	7.35	=	-88	0.01	None	Field Crew				
CNWW02	Temperance Ave	1/7/2016	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	9.53	=	-88	0.01	None	Field Crew				
CNWW02	Garfield Ave	1/7/2016	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	8.41	=	-88	0.01	None	Field Crew				
WW040	Friant Dam	1/18/2016	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	7.11	=	-88	0.01	None	Field Crew				
WW040	Rice Road	1/18/2016	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	7.82	=	-88	0.01	None	Field Crew				
WW040	Camp Pashayan	1/18/2016	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	7.53	=	-88	0.01	None	Field Crew				
CNWW03	Temperance Ave	1/21/2016	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	7.81	=	-88	0.01	None	Field Crew				
CNWW03	Garfield Ave	1/21/2016	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	7.25	=	-88	0.01	None	Field Crew				
WW041	Friant Dam	3/6/2016	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	6.88	=	-88	0.01	None	Field Crew				
WW041	Rice Road	3/6/2016	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	7.16	=	-88	0.01	None	Field Crew				
WW041	Camp Pashayan	3/6/2016	Grab	1	1	FieldMeasure	Field	Dissolved Oxygen	None	mg/L	1	7.22	=	-88	0.01	None	Field Crew				
DW020	Friant Dam	9/24/2015	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	6.93	=	-88	0.01	None	Field Crew				
DW020	Rice Road	9/24/2015	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	7.24	=	-88	0.01	None	Field Crew				
DW020	Camp Pashayan	9/24/2015	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	7.48	=	-88	0.01	None	Field Crew				
WW039	Friant Dam	12/22/2015	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	7.14	=	-88	0.01	None	Field Crew				
WW039	Rice Road	12/22/2015	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	7.28	=	-88	0.01	None	Field Crew				
WW039	Camp Pashayan	12/22/2015	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	6.91	=	-88	0.01	None	Field Crew				
CNWW02	Temperance Ave	1/7/2016	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	7.77	=	-88	0.01	None	Field Crew				

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EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
CNWW02	Garfield Ave	1/7/2016	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	7	=	-88	0.01	None	Field Crew				
WW040	Friant Dam	1/18/2016	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	7.24	=	-88	0.01	None	Field Crew				
WW040	Rice Road	1/18/2016	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	7.17	=	-88	0.01	None	Field Crew				
WW040	Camp Pashayan	1/18/2016	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	7.43	=	-88	0.01	None	Field Crew				
CNWW03	Temperance Ave	1/21/2016	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	7.41	=	-88	0.01	None	Field Crew				
CNWW03	Garfield Ave	1/21/2016	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	7.26	=	-88	0.01	None	Field Crew				
WW041	Friant Dam	3/6/2016	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	7.39	=	-88	0.01	None	Field Crew				
WW041	Rice Road	3/6/2016	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	7.27	=	-88	0.01	None	Field Crew				
WW041	Camp Pashayan	3/6/2016	Grab	1	1	FieldMeasure	Field	pH	None	-log[H+]	1	7.22	=	-88	0.01	None	Field Crew				
DW020	Friant Dam	9/24/2015	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	21.2	=	-88	0.1	None	Field Crew				
DW020	Rice Road	9/24/2015	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	21.1	=	-88	0.1	None	Field Crew				
DW020	Camp Pashayan	9/24/2015	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	22.8	=	-88	0.1	None	Field Crew				
WW039	Friant Dam	12/22/2015	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	8.3	=	-88	0.1	None	Field Crew				
WW039	Rice Road	12/22/2015	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	7.8	=	-88	0.1	None	Field Crew				
WW039	Camp Pashayan	12/22/2015	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	7.8	=	-88	0.1	None	Field Crew				
CNWW02	Temperance Ave	1/7/2016	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	9.6	=	-88	0.1	None	Field Crew				
CNWW02	Garfield Ave	1/7/2016	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	9	=	-88	0.1	None	Field Crew				
WW040	Friant Dam	1/18/2016	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	9.2	=	-88	0.1	None	Field Crew				
WW040	Rice Road	1/18/2016	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	8.6	=	-88	0.1	None	Field Crew				
WW040	Camp Pashayan	1/18/2016	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	8.7	=	-88	0.1	None	Field Crew				
CNWW03	Temperance Ave	1/21/2016	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	10.1	=	-88	0.1	None	Field Crew				
CNWW03	Garfield Ave	1/21/2016	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	10	=	-88	0.1	None	Field Crew				
WW041	Friant Dam	3/6/2016	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	10.3	=	-88	0.1	None	Field Crew				
WW041	Rice Road	3/6/2016	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	10.7	=	-88	0.1	None	Field Crew				
WW041	Camp Pashayan	3/6/2016	Grab	1	1	FieldMeasure	Field	Temperature	None	Deg C	1	10.7	=	-88	0.1	None	Field Crew				
DW020	Friant Dam	9/24/2015	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	1	=	-88	0.1	None	Field Crew				
DW020	Rice Road	9/24/2015	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	1	=	-88	0.1	None	Field Crew				
DW020	Camp Pashayan	9/24/2015	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	1	=	-88	0.1	None	Field Crew				
WW039	Friant Dam	12/22/2015	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	1	=	-88	0.1	None	Field Crew				
WW039	Rice Road	12/22/2015	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	2	=	-88	0.1	None	Field Crew				
WW039	Camp Pashayan	12/22/2015	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	1	=	-88	0.1	None	Field Crew				
CNWW02	Temperance Ave	1/7/2016	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	8	=	-88	0.1	None	Field Crew				
CNWW02	Garfield Ave	1/7/2016	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	2	=	-88	0.1	None	Field Crew				
WW040	Friant Dam	1/18/2016	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	2	=	-88	0.1	None	Field Crew				
WW040	Rice Road	1/18/2016	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	2	=	-88	0.1	None	Field Crew				
WW040	Camp Pashayan	1/18/2016	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	1	=	-88	0.1	None	Field Crew				
CNWW03	Temperance Ave	1/21/2016	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	7	=	-88	0.1	None	Field Crew				
CNWW03	Garfield Ave	1/21/2016	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	4	=	-88	0.1	None	Field Crew				
WW041	Friant Dam	3/6/2016	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	4	=	-88	0.1	None	Field Crew				
WW041	Rice Road	3/6/2016	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	2	=	-88	0.1	None	Field Crew				
WW041	Camp Pashayan	3/6/2016	Grab	1	1	FieldMeasure	Field	Turbidity	None	NTU	1	4	=	-88	0.1	None	Field Crew				
DW020	Friant Dam	9/24/2015	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
DW020	Rice Road	9/24/2015	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
DW020	Camp Pashayan	9/24/2015	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
DW020	Camp Pashayan	9/24/2015	Grab	2	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
DW020	LABQA	9/26/2015	LabBlank	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
DW020	LABQA	9/26/2015	LCS	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	19	=	0.24	5	None	BSK	94		64	132
DW020	LABQA	9/26/2015	LCS	1	2	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	19	=	0.24	5	None	BSK	97	3	64	132
WW039	Friant Dam	12/22/2015	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW039	Rice Road	12/22/2015	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW039	Camp Pashayan	12/22/2015	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW039	Rice Road	12/22/2015	Grab	2	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW039	LABQA	12/24/2015	LabBlank	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW039	LABQA	12/24/2015	LCS	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	18	=	0.24	5	None	BSK	91		64	132
WW039	LABQA	12/24/2015	LCS	1	2	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	18	=	0.24	5	None	BSK	92	0.5	64	132
CNWW02	Temperance Ave	1/7/2016	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Grab	2	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
CNWW02	LABQA	1/13/2016	LabBlank	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
CNWW02	LABQA	1/13/2016	LCS	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	18	=	0.24	5	None	BSK	91		64	132

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EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
CNWW02	LABQA	1/13/2016	LCS	1	2	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	19	=	0.24	5	None	BSK	94	3	64	132
WW040	Friant Dam	1/18/2016	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW040	Rice Road	1/18/2016	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW040	Camp Pashayan	1/18/2016	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW040	Friant Dam	1/18/2016	Grab	2	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW040	LABQA	1/19/2016	LabBlank	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW040	LABQA	1/19/2016	LCS	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	19	=	0.24	5	None	BSK	96		64	132
WW040	LABQA	1/19/2016	LCS	1	2	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	19	=	0.24	5	None	BSK	94	2	64	132
CNWW03	Temperance Ave	1/21/2016	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Grab	2	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.27	ND	0.27	5	None	BSK				
CNWW03	LABQA	1/22/2016	LabBlank	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
CNWW03	LABQA	1/22/2016	LCS	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	19	=	0.24	5	None	BSK	96		64	132
CNWW03	LABQA	1/22/2016	LCS	1	2	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	18	=	0.24	5	None	BSK	92	5	64	132
WW041	Friant Dam	3/6/2016	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW041	Rice Road	3/6/2016	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW041	Camp Pashayan	3/6/2016	Grab	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW041	Camp Pashayan	3/6/2016	Grab	2	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW041	Friant Dam	3/6/2016	Grab	2	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW041	LABQA	3/11/2016	LabBlank	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	-0.24	ND	0.24	5	None	BSK				
WW041	LABQA	3/11/2016	LCS	1	1	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	19	=	0.24	5	None	BSK	97		64	132
WW041	LABQA	3/11/2016	LCS	1	2	EPA 1664A	Hydrocarbon	Oil & Grease, Total	None	mg/L	1	19	=	0.24	5	None	BSK	93	4	64	132
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	0.33	=	0.1	0.3	IP	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	2.84	=	0.1	0.3	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	2.67	=	0.1	0.3	IP	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	2.91	=	0.1	0.3	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	2.84	=	0.1	0.3	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	49.73	=	0.51	1.52	D	FGS	93.8		85	115
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	204.6	=	0.5	1.51	D	FGS	98.4		85	115
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	49.39	=	0.51	1.52	D	FGS	93.1	0.693	85	115
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	206.4	=	0.5	1.51	D	FGS	99.3	0.852	85	115
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	1.91	=	0.1	0.3	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	2.12	=	0.1	0.3	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	2.08	=	0.1	0.3	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	2.12	=	0.1	0.3	None	FGS				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	44.86	=	0.51	1.52	D	FGS	85.9		85	115
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	191.8	=	0.5	1.51	D	FGS	92.6		85	115
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	45.32	=	0.51	1.52	D	FGS	86.8	1.01	85	115
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	193.5	=	0.5	1.51	D	FGS	93.5	0.889	85	115
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	0.66	=	0.1	0.3	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	1.09	=	0.1	0.3	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	0.78	=	0.1	0.3	None	FGS				
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	3.11	=	0.1	0.3	None	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	2.78	=	0.1	0.3	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	2.26	=	0.1	0.3	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	3.11	=	0.1	0.3	None	FGS				
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	0.93	=	0.1	0.3	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	1.31	=	0.1	0.3	FDP	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	0.93	=	0.1	0.3	FDP	FGS				
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	1.83	=	0.1	0.3	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	2.27	=	0.1	0.3	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	2.17	=	0.1	0.3	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	2.06	=	0.1	0.3	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Arsenic	Dissolved	µg/L	1	1.86	=	0.1	0.3	None	FGS				
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	3.27	=	0.1	0.3	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	2.74	=	0.1	0.3	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	2.83	=	0.1	0.3	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	3.01	=	0.1	0.3	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	51.56	=	0.51	1.52	D	FGS	96.6		85	115
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	198.3	=	0.5	1.51	D	FGS	95.1		85	115
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	51.82	=	0.51	1.52	D	FGS	97.1	0.5	85	115
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	199.6	=	0.5	1.51	D	FGS	95.8	0.636	85	115
DW020	LABQA	9/30/2015	LabBlank	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
DW020	LABQA	9/30/2015	LCS	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	45.56	=	0.5	1.5	D	FGS	91.1		85	115
DW020	LABQA	9/30/2015	LCS	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	46.05	=	0.5	1.5	D	FGS	92.1	1.07	85	115
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	2.76	=	0.1	0.3	EUM	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	2.22	=	0.1	0.3	EUM	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	2.2	=	0.1	0.3	EUM	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	2.35	=	0.1	0.3	None	FGS				
WW039	LABQA	12/31/2015	LabBlank	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
WW039	LABQA	12/31/2015	LCS	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	42.53	=	0.5	1.5	D	FGS	85.1		85	115
WW039	LABQA	12/31/2015	LCS	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	42.42	=	0.5	1.5	EUM, D	FGS	84.8	0.258	85	115
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	1.14	=	0.1	0.3	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	1.32	=	0.1	0.3	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	0.99	=	0.1	0.3	None	FGS				
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	50.81	=	0.51	1.52	D	FGS	99.3		85	115
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	218.7	=	0.5	1.51	D	FGS	106		85	115
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	50.81	=	0.51	1.52	D	FGS	99.3	0.0067	85	115
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	219.2	=	0.5	1.51	D	FGS	106	0.237	85	115
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	46.99	=	0.5	1.5	D	FGS	94		85	115
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	49.05	=	0.5	1.5	D	FGS	98.1	4.29	85	115
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	3.27	=	0.1	0.3	EUM	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	3	=	0.1	0.3	EUM	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	2.68	=	0.1	0.3	EUM	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	3.3	=	0.1	0.3	None	FGS				
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	49.39	=	0.51	1.52	D	FGS	94.9		85	115
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	201.2	=	0.5	1.51	D	FGS	97.2		85	115
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	47.89	=	0.51	1.52	D	FGS	91.9	3.09	85	115
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	199.9	=	0.5	1.51	D	FGS	96.6	0.635	85	115
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	1.34	=	0.1	0.3	GB	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	1.41	=	0.1	0.3	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	1.38	=	0.1	0.3	None	FGS				
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	56.22	=	1.01	3.04	D	FGS	109		85	115
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	483.8	=	1.01	3.03	GB	FGS	118		85	115
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	52.08	=	1.01	3.04	D	FGS	101	7.65	85	115
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	474.1	=	1.01	3.03	D	FGS	115	2.03	85	115
WW040	LABQA	1/25/2016	LabBlank	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
WW040	LABQA	1/25/2016	LabBlank	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
WW040	LABQA	1/25/2016	LCS	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	44.32	=	0.5	1.5	D	FGS	88.6		85	115
WW040	LABQA	1/25/2016	LCS	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	42.31	=	0.5	1.5	EUM, D	FGS	84.6	4.64	85	115
CNWW03	LABQA	2/1/2016	LabBlank	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
CNWW03	LABQA	2/1/2016	LCS	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	55.79	=	0.5	1.5	D	FGS	112		85	115
CNWW03	LABQA	2/1/2016	LCS	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	54.61	=	0.5	1.5	D	FGS	109	2.14	85	115
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	2.04	=	0.1	0.3	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	2.34	=	0.1	0.3	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	3.35	=	0.1	0.3	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	2.32	=	0.1	0.3	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	2.19	=	0.1	0.3	None	FGS				
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	46.09	=	0.51	1.52	D	FGS	88.1		85	115
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	186.7	=	0.5	1.51	D	FGS	90.1		85	115
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	46.36	=	0.51	1.52	D	FGS	88.6	0.586	85	115
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	186.6	=	0.5	1.51	D	FGS	90	0.0677	85	115
WW041	LABQA	3/17/2016	LabBlank	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
WW041	LABQA	3/17/2016	LabBlank	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	-0.1	ND	0.1	0.3	None	FGS				
WW041	LABQA	3/17/2016	LCS	1	1	EPA 1638	Metal	Arsenic	Total	µg/L	1	43.57	=	0.5	1.5	D	FGS	87.1		85	115
WW041	LABQA	3/17/2016	LCS	1	2	EPA 1638	Metal	Arsenic	Total	µg/L	1	42.49	=	0.5	1.5	D	FGS	85	2.51	85	115
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	40.18	=	0.04	0.101	D	FGS	100		84	113
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	20.3	=	0.04	0.101	D	FGS	98.8		84	113
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	40.02	=	0.04	0.101	D	FGS	99.9	0.408	84	113
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	21.91	=	0.04	0.101	D	FGS	107	7.63	84	113
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	0.03	=	0.008	0.02	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	39.85	=	0.04	0.101	D	FGS	99.5		84	113
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	21.49	=	0.04	0.101	D	FGS	105		84	113
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	39.82	=	0.04	0.101	D	FGS	99.5	0.0701	84	113
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	21.49	=	0.04	0.101	D	FGS	105	0.0112	84	113
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	0.023	=	0.008	0.02	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	0.02	=	0.008	0.02	None	FGS				
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Cadmium	Dissolved	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	40.63	=	0.04	0.101	D	FGS	101		84	113
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	19.53	=	0.04	0.101	D	FGS	95		84	113
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	39.78	=	0.04	0.101	D	FGS	99.3	2.1	84	113
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	19.68	=	0.04	0.101	D	FGS	95.8	0.804	84	113
DW020	LABQA	9/30/2015	LabBlank	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	0.082	=	0.008	0.02	IP	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	0.045	=	0.008	0.02	IP	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	3	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	4	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	5	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
DW020	LABQA	9/30/2015	LCS	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	37.35	=	0.04	0.1	D	FGS	93.4		84	113
DW020	LABQA	9/30/2015	LCS	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	36.7	=	0.04	0.1	D	FGS	91.7	1.76	84	113
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	0.028	=	0.008	0.02	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW039	LABQA	12/31/2015	LabBlank	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW039	LABQA	12/31/2015	LCS	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	39.6	=	0.04	0.1	D	FGS	99		84	113
WW039	LABQA	12/31/2015	LCS	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	39.39	=	0.04	0.1	D	FGS	98.5	0.553	84	113
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	0.031	=	0.008	0.02	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	0.038	=	0.008	0.02	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	0.028	=	0.008	0.02	None	FGS				
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	36.23	=	0.04	0.101	D	FGS	90.5		84	113
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	20.47	=	0.04	0.101	D	FGS	99.7		84	113
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	37.25	=	0.04	0.101	D	FGS	93	2.77	84	113
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	20.69	=	0.04	0.101	D	FGS	101	1.07	84	113
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	35.78	=	0.04	0.1	D	FGS	89.4		84	113
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	36.09	=	0.04	0.1	D	FGS	90.2	0.872	84	113
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	37.94	=	0.04	0.101	D	FGS	94.8		84	113
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	20.89	=	0.04	0.101	D	FGS	102		84	113
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	37.69	=	0.04	0.101	D	FGS	94.2	0.649	84	113
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	20.82	=	0.04	0.101	D	FGS	101	0.344	84	113
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	0.026	=	0.008	0.02	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	35.49	=	0.081	0.202	D	FGS	88.7		84	113
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	40.48	=	0.081	0.202	D	FGS	98.7		84	113
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	35.73	=	0.081	0.202	D	FGS	89.3	0.697	84	113
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	40.89	=	0.081	0.202	D	FGS	99.7	1.01	84	113
WW040	LABQA	1/25/2016	LabBlank	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW040	LABQA	1/25/2016	LabBlank	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW040	LABQA	1/25/2016	LCS	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	35.36	=	0.08	0.2	D	FGS	88.4		84	113
WW040	LABQA	1/25/2016	LCS	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	34.02	=	0.08	0.2	D	FGS	85.1	3.86	84	113
CNWW03	LABQA	2/1/2016	LabBlank	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
CNWW03	LABQA	2/1/2016	LCS	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	36.67	=	0.04	0.1	D	FGS	91.7		84	113
CNWW03	LABQA	2/1/2016	LCS	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	37.94	=	0.04	0.1	D	FGS	94.9	3.41	84	113
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	0.047	=	0.008	0.02	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	36.12	=	0.04	0.101	D	FGS	90.3		84	113
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	18	=	0.04	0.101	D	FGS	87.7		84	113
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	35.74	=	0.04	0.101	D	FGS	89.3	1.06	84	113
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	17.96	=	0.04	0.101	D	FGS	87.6	0.205	84	113
WW041	LABQA	3/17/2016	LabBlank	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW041	LABQA	3/17/2016	LabBlank	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	-0.008	ND	0.008	0.02	None	FGS				
WW041	LABQA	3/17/2016	LCS	1	1	EPA 1638	Metal	Cadmium	Total	µg/L	1	35.54	=	0.04	0.1	D	FGS	88.8		84	113
WW041	LABQA	3/17/2016	LCS	1	2	EPA 1638	Metal	Cadmium	Total	µg/L	1	34.76	=	0.04	0.1	D	FGS	86.9	2.22	84	113
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	-0.02	ND	0.02	0.3	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	-0.02	ND	0.02	0.3	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	-0.02	ND	0.02	0.3	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	-0.02	ND	0.02	0.3	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	-0.02	ND	0.02	0.3	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	52.25	=	0.1	0.51	D	FGS	104		85	115
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	216.7	=	0.1	0.5	D	FGS	106		85	115
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	51.51	=	0.1	0.51	D	FGS	103	1.44	85	115
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	215.9	=	0.1	0.5	D	FGS	105	0.385	85	115
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.13	=	0.02	0.1	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.13	=	0.02	0.1	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.14	=	0.02	0.1	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.2	=	0.02	0.1	None	FGS				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	51.81	=	0.2	1.01	D	FGS	103		85	115
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	423.7	=	0.2	1.01	D	FGS	103		85	115
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	50.94	=	0.2	1.01	D	FGS	102	1.69	85	115
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	432.8	=	0.2	1.01	D	FGS	106	2.11	85	115
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.41	=	0.02	0.1	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.51	=	0.02	0.1	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.4	=	0.02	0.1	None	FGS				
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.14	=	0.02	0.1	None	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.12	=	0.02	0.1	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.69	=	0.02	0.1	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.62	=	0.02	0.1	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.54	=	0.02	0.1	None	FGS				
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.27	=	0.02	0.1	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.13	=	0.02	0.1	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.14	=	0.02	0.1	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Chromium	Dissolved	µg/L	1	0.24	=	0.02	0.1	None	FGS				
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.3	None	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.3	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.3	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.3	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.3	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	52.08	=	0.1	0.51	D	FGS	104		85	115
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	212.8	=	0.1	0.5	D	FGS	104		85	115
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	52.8	=	0.1	0.51	D	FGS	105	1.37	85	115
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	211.5	=	0.1	0.5	D	FGS	103	0.582	85	115
DW020	LABQA	9/30/2015	LabBlank	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.3	None	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.3	None	FGS				
DW020	LABQA	9/30/2015	LCS	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	49.48	=	0.1	0.5	D	FGS	98.9		85	115
DW020	LABQA	9/30/2015	LCS	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	50.23	=	0.1	0.5	D	FGS	100	1.49	85	115
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	0.39	=	0.02	0.1	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	0.17	=	0.02	0.1	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	0.1	=	0.02	0.1	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Chromium	Total	µg/L	1	0.19	=	0.02	0.1	None	FGS				
WW039	LABQA	12/31/2015	LabBlank	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW039	LABQA	12/31/2015	LCS	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	51.67	=	0.1	0.5	D	FGS	103		85	115
WW039	LABQA	12/31/2015	LCS	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	52.38	=	0.1	0.5	D	FGS	105	1.36	85	115
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	1.14	=	0.02	0.1	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	0.81	=	0.02	0.1	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Chromium	Total	µg/L	1	1.09	=	0.02	0.1	None	FGS				
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	53.46	=	0.1	0.51	D	FGS	105		85	115
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	222	=	0.1	0.5	D	FGS	108		85	115
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	53.1	=	0.1	0.51	D	FGS	104	0.663	85	115
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	224.4	=	0.1	0.5	D	FGS	109	1.06	85	115
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	50.56	=	0.1	0.5	D	FGS	101		85	115
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	51.07	=	0.1	0.5	D	FGS	102	0.995	85	115
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	0.12	=	0.02	0.1	None	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	0.16	=	0.02	0.1	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	0.18	=	0.02	0.1	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Chromium	Total	µg/L	1	0.14	=	0.02	0.1	None	FGS				
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	48.62	=	0.2	1.01	D	FGS	96.2		85	115
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	411.7	=	0.2	1.01	D	FGS	100		85	115
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	48.09	=	0.2	1.01	D	FGS	95.2	1.1	85	115
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	423.6	=	0.2	1.01	D	FGS	103	2.84	85	115
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	1.73	=	0.02	0.1	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	1.01	=	0.02	0.1	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Chromium	Total	µg/L	1	0.93	=	0.02	0.1	None	FGS				
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	50.02	=	0.2	1.01	D	FGS	96.2		85	115
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	438.7	=	0.2	1.01	D	FGS	107		85	115
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	50.21	=	0.2	1.01	D	FGS	96.6	0.384	85	115
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	429.7	=	0.2	1.01	D	FGS	104	2.09	85	115
WW040	LABQA	1/25/2016	LabBlank	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW040	LABQA	1/25/2016	LabBlank	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW040	LABQA	1/25/2016	LCS	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	46.23	=	0.2	1	D	FGS	92.5		85	115
WW040	LABQA	1/25/2016	LCS	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	46.46	=	0.2	1	D	FGS	92.9	0.5	85	115
CNWW03	LABQA	2/1/2016	LabBlank	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
CNWW03	LABQA	2/1/2016	LCS	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	49.44	=	0.1	0.5	D	FGS	98.9		85	115
CNWW03	LABQA	2/1/2016	LCS	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	49.27	=	0.1	0.5	D	FGS	98.5	0.342	85	115
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	0.64	=	0.02	0.1	FDP	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	0.11	=	0.02	0.1	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	0.83	=	0.02	0.1	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Chromium	Total	µg/L	1	0.18	=	0.02	0.1	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Chromium	Total	µg/L	1	0.41	=	0.02	0.1	FDP	FGS				
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	46.19	=	0.1	0.51	D	FGS	91.1		85	115
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	185.2	=	0.1	0.5	D	FGS	90.1		85	115
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	45.32	=	0.1	0.51	D	FGS	89.4	1.9	85	115
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	185.5	=	0.1	0.5	D	FGS	90.2	0.144	85	115
WW041	LABQA	3/17/2016	LabBlank	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW041	LABQA	3/17/2016	LabBlank	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW041	LABQA	3/17/2016	LCS	1	1	EPA 1638	Metal	Chromium	Total	µg/L	1	43.8	=	0.1	0.5	D	FGS	87.6		85	115
WW041	LABQA	3/17/2016	LCS	1	2	EPA 1638	Metal	Chromium	Total	µg/L	1	43.39	=	0.1	0.5	D	FGS	86.8	0.948	85	115
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	0.39	=	0.02	0.1	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	0.45	=	0.02	0.1	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	0.47	=	0.02	0.1	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	0.56	=	0.02	0.1	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	52.3	=	0.1	0.51	D	FGS	104		51	145
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	269.2	=	0.1	0.5	D	FGS	105		51	145
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Copper	Dissolved	µg/L	1	51.81	=	0.1	0.51	D	FGS	103	0.929	51	145
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Copper	Dissolved	µg/L	1	271.1	=	0.1	0.5	D	FGS	106	0.724	51	145
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	0.46	=	0.02	0.1	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	0.68	=	0.02	0.1	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	0.55	=	0.02	0.1	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	0.68	=	0.02	0.1	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	45.73	=	0.1	0.51	D	FGS	90.5		51	145
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	240.3	=	0.1	0.5	D	FGS	93.6		51	145
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Copper	Dissolved	µg/L	1	45.97	=	0.1	0.51	D	FGS	91	0.513	51	145
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Copper	Dissolved	µg/L	1	239.6	=	0.1	0.5	D	FGS	93.3	0.289	51	145
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	2.6	=	0.02	0.1	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	5.15	=	0.02	0.1	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	2.78	=	0.02	0.1	None	FGS				
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	0.76	=	0.02	0.1	None	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	0.54	=	0.02	0.1	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	0.64	=	0.02	0.1	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	0.77	=	0.02	0.1	None	FGS				
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	2.67	=	0.02	0.1	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	5.84	=	0.02	0.1	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	5.58	=	0.02	0.1	None	FGS				
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	2.77	=	0.02	0.1	IP	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	1.63	=	0.02	0.1	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	0.78	=	0.02	0.1	R	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	1.31	=	0.02	0.1	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	1.3	=	0.02	0.1	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Copper	Dissolved	µg/L	1	1.84	=	0.02	0.1	None	FGS				
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	0.54	=	0.02	0.1	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	0.61	=	0.02	0.1	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	0.48	=	0.02	0.1	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Copper	Total	µg/L	1	0.57	=	0.02	0.1	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	52.64	=	0.1	0.51	D	FGS	104		51	145
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	265.4	=	0.1	0.5	D	FGS	103		51	145
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	52.88	=	0.1	0.51	D	FGS	105	0.447	51	145
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	262.4	=	0.1	0.5	D	FGS	102	1.14	51	145
DW020	LABQA	9/30/2015	LabBlank	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
DW020	LABQA	9/30/2015	LCS	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	49.22	=	0.1	0.5	D	FGS	98.4		51	145
DW020	LABQA	9/30/2015	LCS	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	51.22	=	0.1	0.5	D	FGS	102	3.99	51	145
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	0.93	=	0.02	0.1	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	0.76	=	0.02	0.1	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	0.65	=	0.02	0.1	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Copper	Total	µg/L	1	0.77	=	0.02	0.1	None	FGS				
WW039	LABQA	12/31/2015	LabBlank	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW039	LABQA	12/31/2015	LCS	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	44.91	=	0.1	0.5	D	FGS	89.8		51	145
WW039	LABQA	12/31/2015	LCS	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	45.22	=	0.1	0.5	D	FGS	90.4	0.696	51	145
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	0.34	=	0.02	0.1	IP	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	3.61	=	0.02	0.1	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	6.48	=	0.02	0.1	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Copper	Total	µg/L	1	3.79	=	0.02	0.1	None	FGS				
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	57.38	=	0.1	0.51	D	FGS	108		51	145
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	286.6	=	0.1	0.5	D	FGS	110		51	145
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	55.42	=	0.1	0.51	D	FGS	104	3.48	51	145
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	285.2	=	0.1	0.5	D	FGS	110	0.505	51	145
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	50.84	=	0.1	0.5	D	FGS	102		51	145
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	51.62	=	0.1	0.5	D	FGS	103	1.53	51	145
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	0.91	=	0.02	0.1	None	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	0.64	=	0.02	0.1	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	0.82	=	0.02	0.1	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Copper	Total	µg/L	1	0.92	=	0.02	0.1	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	51.39	=	0.2	1.01	D	FGS	101		51	145
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	525.1	=	0.2	1.01	D	FGS	102		51	145
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	49.57	=	0.2	1.01	D	FGS	97.4	3.61	51	145
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	538.7	=	0.2	1.01	D	FGS	105	2.57	51	145
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	4.35	=	0.02	0.1	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	7.03	=	0.02	0.1	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Copper	Total	µg/L	1	6.93	=	0.02	0.1	None	FGS				
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	56.68	=	0.2	1.01	D	FGS	105		51	145
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	584.6	=	0.2	1.01	D	FGS	113		51	145
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	57.48	=	0.2	1.01	D	FGS	106	1.42	51	145
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	579.5	=	0.2	1.01	D	FGS	112	0.889	51	145
WW040	LABQA	1/25/2016	LabBlank	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW040	LABQA	1/25/2016	LabBlank	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW040	LABQA	1/25/2016	LCS	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	46.93	=	0.2	1	D	FGS	93.8		51	145
WW040	LABQA	1/25/2016	LCS	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	48.09	=	0.2	1	D	FGS	96.2	2.44	51	145
CNWW03	LABQA	2/1/2016	LabBlank	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
CNWW03	LABQA	2/1/2016	LCS	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	53.54	=	0.1	0.5	D	FGS	107		51	145
CNWW03	LABQA	2/1/2016	LCS	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	52.82	=	0.1	0.5	D	FGS	106	1.36	51	145
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	2.46	=	0.02	0.1	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	0.67	=	0.02	0.1	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	3.77	=	0.02	0.1	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Copper	Total	µg/L	1	1.41	=	0.02	0.1	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Copper	Total	µg/L	1	2.48	=	0.02	0.1	None	FGS				
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	50.21	=	0.1	0.51	D	FGS	95.5		51	145
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	242.9	=	0.1	0.5	D	FGS	93.8		51	145
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	49.47	=	0.1	0.51	D	FGS	94	1.49	51	145
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	244.8	=	0.1	0.5	D	FGS	94.6	0.801	51	145
WW041	LABQA	3/17/2016	LabBlank	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW041	LABQA	3/17/2016	LabBlank	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	-0.02	ND	0.02	0.1	None	FGS				
WW041	LABQA	3/17/2016	LCS	1	1	EPA 1638	Metal	Copper	Total	µg/L	1	46.31	=	0.1	0.5	D	FGS	92.6		51	145
WW041	LABQA	3/17/2016	LCS	1	2	EPA 1638	Metal	Copper	Total	µg/L	1	45.44	=	0.1	0.5	D	FGS	90.9	1.88	51	145
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.04	=	0.005	0.04	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.052	=	0.005	0.04	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	50.11	=	0.025	0.202	D	FGS	100		72	143
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	51.98	=	0.025	0.202	D	FGS	101		72	143
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Lead	Dissolved	µg/L	1	50.38	=	0.025	0.202	D	FGS	101	0.523	72	143
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Lead	Dissolved	µg/L	1	51.97	=	0.025	0.202	D	FGS	101	0.0279	72	143
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.054	=	0.005	0.04	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.052	=	0.005	0.04	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.041	=	0.005	0.04	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.052	=	0.005	0.04	None	FGS				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	48.72	=	0.025	0.202	D	FGS	97.3		72	143
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	52.88	=	0.025	0.202	D	FGS	103		72	143
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Lead	Dissolved	µg/L	1	48.86	=	0.025	0.202	D	FGS	97.6	0.293	72	143
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Lead	Dissolved	µg/L	1	52.75	=	0.025	0.202	D	FGS	103	0.251	72	143
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.059	=	0.005	0.04	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.316	=	0.005	0.04	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.065	=	0.005	0.04	None	FGS				
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.086	=	0.005	0.04	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.222	=	0.005	0.04	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.216	=	0.005	0.04	None	FGS				
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.12	=	0.005	0.04	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.041	=	0.005	0.04	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.043	=	0.005	0.04	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Lead	Dissolved	µg/L	1	0.128	=	0.005	0.04	None	FGS				
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.044	=	0.005	0.04	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.051	=	0.005	0.04	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.086	=	0.005	0.04	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.09	=	0.005	0.04	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	50.23	=	0.025	0.202	D	FGS	100		72	143
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	51.86	=	0.025	0.202	D	FGS	101		72	143
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	50.17	=	0.025	0.202	D	FGS	100	0.136	72	143
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	50.35	=	0.025	0.202	D	FGS	98.2	2.95	72	143
DW020	LABQA	9/30/2015	LabBlank	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
DW020	LABQA	9/30/2015	LCS	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	47.66	=	0.025	0.2	D	FGS	95.3		72	143
DW020	LABQA	9/30/2015	LCS	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	48.9	=	0.025	0.2	D	FGS	97.8	2.57	72	143
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	1.87	=	0.005	0.04	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.114	=	0.005	0.04	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.066	=	0.005	0.04	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.143	=	0.005	0.04	None	FGS				
WW039	LABQA	12/31/2015	LabBlank	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
WW039	LABQA	12/31/2015	LCS	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	48.48	=	0.025	0.2	D	FGS	97		72	143
WW039	LABQA	12/31/2015	LCS	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	48.62	=	0.025	0.2	D	FGS	97.2	0.286	72	143
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.568	=	0.005	0.04	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	1.11	=	0.005	0.04	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.58	=	0.005	0.04	None	FGS				
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	49.16	=	0.025	0.202	D	FGS	97.2		72	143
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	53.2	=	0.025	0.202	D	FGS	103		72	143
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	48.91	=	0.025	0.202	D	FGS	96.7	0.494	72	143
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	53.55	=	0.025	0.202	D	FGS	103	0.661	72	143
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	47.04	=	0.025	0.2	D	FGS	94.1		72	143
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	46.83	=	0.025	0.2	D	FGS	93.7	0.459	72	143
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.066	=	0.005	0.04	None	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.057	=	0.005	0.04	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.309	=	0.005	0.04	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.078	=	0.005	0.04	None	FGS				
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	47.13	=	0.051	0.405	D	FGS	94.2		72	143
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	101.2	=	0.05	0.404	D	FGS	98.7		72	143
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	46.36	=	0.051	0.405	D	FGS	92.6	1.65	72	143
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	101.3	=	0.05	0.404	D	FGS	98.8	0.0923	72	143
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	1.54	=	0.005	0.04	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.895	=	0.005	0.04	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.931	=	0.005	0.04	None	FGS				
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	46.61	=	0.051	0.405	D	FGS	90.2		72	143
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	103.2	=	0.05	0.404	D	FGS	99.1		72	143
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	48.23	=	0.051	0.405	D	FGS	93.4	3.4	72	143
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	105.2	=	0.05	0.404	D	FGS	101	1.91	72	143
WW040	LABQA	1/25/2016	LabBlank	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW040	LABQA	1/25/2016	LabBlank	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
WW040	LABQA	1/25/2016	LCS	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	45.78	=	0.05	0.401	D	FGS	91.6		72	143
WW040	LABQA	1/25/2016	LCS	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	45.77	=	0.05	0.401	D	FGS	91.5	0.0287	72	143
CNWW03	LABQA	2/1/2016	LabBlank	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
CNWW03	LABQA	2/1/2016	LCS	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	45.28	=	0.025	0.2	D	FGS	90.6		72	143
CNWW03	LABQA	2/1/2016	LCS	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	45.62	=	0.025	0.2	D	FGS	91.2	0.758	72	143
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.604	=	0.005	0.04	FDP	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.046	=	0.005	0.04	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	4.31	=	0.005	0.04	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Lead	Total	µg/L	1	0.735	=	0.005	0.04	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Lead	Total	µg/L	1	1.34	=	0.005	0.04	FDP	FGS				
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	48.13	=	0.025	0.202	D	FGS	95.1		72	143
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	46.25	=	0.025	0.202	D	FGS	89.1		72	143
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	45.98	=	0.025	0.202	D	FGS	90.7	4.57	72	143
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	46.35	=	0.025	0.202	D	FGS	89.3	0.229	72	143
WW041	LABQA	3/17/2016	LabBlank	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
WW041	LABQA	3/17/2016	LabBlank	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	-0.005	ND	0.005	0.04	None	FGS				
WW041	LABQA	3/17/2016	LCS	1	1	EPA 1638	Metal	Lead	Total	µg/L	1	47.4	=	0.025	0.2	D	FGS	94.8		72	143
WW041	LABQA	3/17/2016	LCS	1	2	EPA 1638	Metal	Lead	Total	µg/L	1	44.98	=	0.025	0.2	D	FGS	90	5.24	72	143
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	Friant Dam	9/24/2015	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	Rice Road	9/24/2015	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	Camp Pashayan	9/24/2015	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	Camp Pashayan	9/24/2015	Grab	2	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	2.79	=	0.08	0.5	None	FGS	98.3		71	125
DW020	Rice Road	9/24/2015	MS1	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	2.91	=	0.08	0.5	None	FGS	104		71	125
DW020	Camp Pashayan	9/24/2015	MS1	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	2.78	=	0.08	0.5	None	FGS	91.7		71	125
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	2.83	=	0.08	0.5	None	FGS	99.9	1.47	71	125
DW020	Rice Road	9/24/2015	MS1	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	2.9	=	0.08	0.5	None	FGS	103	0.19	71	125
DW020	Camp Pashayan	9/24/2015	MS1	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	2.81	=	0.08	0.5	None	FGS	92.8	0.953	71	125
DW020	Camp Pashayan	9/24/2015	MS1	2	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	2.98	=	0.08	0.5	None	FGS	98.7		71	125
DW020	Camp Pashayan	9/24/2015	MS1	2	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	2.94	=	0.08	0.5	None	FGS	97.3	1.26	71	125
DW020	LABQA	10/5/2015	LabBlank	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	LABQA	10/5/2015	LabBlank	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	LABQA	10/5/2015	LabBlank	1	3	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	LABQA	10/5/2015	LabBlank	1	4	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.09	ND	0.09	0.52	None	FGS				
DW020	LABQA	10/5/2015	LabBlank	1	5	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	LABQA	10/5/2015	LabBlank	1	6	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	LABQA	10/5/2015	LabBlank	1	7	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	LABQA	10/5/2015	LabBlank	1	8	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	LABQA	10/5/2015	LabBlank	1	9	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	LABQA	10/5/2015	LabBlank	1	10	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	LABQA	10/5/2015	LabBlank	1	11	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.09	ND	0.09	0.52	None	FGS				
DW020	LABQA	10/5/2015	LCS	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	15.01	=	0.08	0.5	D	FGS	95.8		80	120
DW020	LABQA	10/5/2015	LCS	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	15.15	=	0.08	0.5	D	FGS	96.6	0.926	80	120
DW020	LABQA	10/9/2015	LabBlank	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	LABQA	10/9/2015	LabBlank	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	LABQA	10/9/2015	LabBlank	1	3	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	LABQA	10/9/2015	LabBlank	1	4	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.09	ND	0.09	0.52	None	FGS				
DW020	LABQA	10/9/2015	LCS	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	14.76	=	0.08	0.5	D	FGS	94.1		80	120
DW020	LABQA	10/9/2015	LCS	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	14.8	=	0.08	0.5	D	FGS	94.4	0.262	80	120
DW020	LABQA	10/12/2015	LabBlank	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	LABQA	10/12/2015	LabBlank	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	LABQA	10/12/2015	LabBlank	1	3	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
DW020	LABQA	10/12/2015	LabBlank	1	4	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.09	ND	0.09	0.52	None	FGS				
DW020	LABQA	10/12/2015	LCS	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	14.74	=	0.08	0.5	D	FGS	94		80	120
DW020	LABQA	10/12/2015	LCS	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	14.94	=	0.08	0.5	D	FGS	95.3	1.36	80	120
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW039	Friant Dam	12/22/2015	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	0.56	=	0.08	0.5	D	FGS				

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2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW039	Rice Road	12/22/2015	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW039	Camp Pashayan	12/22/2015	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	0.73	=	0.08	0.5	D	FGS				
WW039	Rice Road	12/22/2015	Grab	2	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW039	LABQA	12/30/2015	LabBlank	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW039	LABQA	12/30/2015	LabBlank	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW039	LABQA	12/30/2015	LabBlank	1	3	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW039	LABQA	12/30/2015	LabBlank	1	4	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.09	ND	0.09	0.52	None	FGS				
WW039	LABQA	12/30/2015	LCS	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	14.99	=	0.08	0.5	D	FGS	95.6		80	120
WW039	LABQA	12/30/2015	LCS	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	14.91	=	0.08	0.5	D	FGS	95.1	0.556	80	120
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	1.86	=	0.08	0.5	D	FGS				
CNWW02	Garfield Ave	1/7/2016	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	2.24	=	0.08	0.5	D	FGS				
CNWW02	Temperance Ave	1/7/2016	Grab	2	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	1.63	=	0.08	0.5	D	FGS				
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
CNWW02	LABQA	1/11/2016	LabBlank	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
CNWW02	LABQA	1/11/2016	LabBlank	1	3	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
CNWW02	LABQA	1/11/2016	LabBlank	1	4	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.09	ND	0.09	0.52	None	FGS				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	16.64	=	0.08	0.5	D	FGS	106		80	120
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	15.83	=	0.08	0.5	D	FGS	101	4.96	80	120
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW040	Friant Dam	1/18/2016	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	0.99	=	0.08	0.5	D	FGS				
WW040	Rice Road	1/18/2016	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	0.68	=	0.08	0.5	D	FGS				
WW040	Camp Pashayan	1/18/2016	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	0.72	=	0.08	0.5	D	FGS				
WW040	Friant Dam	1/18/2016	Grab	2	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	1.09	=	0.08	0.5	D	FGS				
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	3.85	=	0.08	0.5	None	FGS	125		71	125
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	3.61	=	0.08	0.5	None	FGS	116	6.4	71	125
WW040	Friant Dam	1/18/2016	MS1	2	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	6.95	=	0.08	0.5	None	FGS	116		71	125
WW040	Friant Dam	1/18/2016	MS1	2	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	6.96	=	0.08	0.5	None	FGS	116	0.194	71	125
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	2.34	=	0.08	0.5	D	FGS				
CNWW03	Garfield Ave	1/21/2016	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	2.61	=	0.08	0.5	D	FGS				
CNWW03	Temperance Ave	1/21/2016	Grab	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	2.43	=	0.08	0.5	D	FGS		3.91		
CNWW03	Garfield Ave	1/21/2016	Grab	2	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	2.6	=	0.08	0.5	D	FGS				
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	11.38	=	0.08	0.5	None	FGS	89.4		71	125
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	11.68	=	0.08	0.5	None	FGS	92.3	2.58	71	125
WW040	LABQA	1/25/2016	LabBlank	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW040	LABQA	1/25/2016	LabBlank	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW040	LABQA	1/25/2016	LabBlank	1	3	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW040	LABQA	1/25/2016	LabBlank	1	4	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW040	LABQA	1/25/2016	LabBlank	1	5	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW040	LABQA	1/25/2016	LabBlank	1	6	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW040	LABQA	1/25/2016	LCS	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	16.23	=	0.08	0.5	D	FGS	104		80	120
WW040	LABQA	1/25/2016	LCS	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	16.66	=	0.08	0.5	D	FGS	106	2.64	80	120
CNWW03	LABQA	1/28/2016	LabBlank	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
CNWW03	LABQA	1/28/2016	LabBlank	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
CNWW03	LABQA	1/28/2016	LabBlank	1	3	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
CNWW03	LABQA	1/28/2016	LCS	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	14.14	=	0.08	0.5	D	FGS	90.2		80	120
CNWW03	LABQA	1/28/2016	LCS	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	14.65	=	0.08	0.5	D	FGS	93.4	3.52	80	120
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW041	Friant Dam	3/6/2016	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	8.67	=	0.08	0.5	D	FGS				
WW041	Rice Road	3/6/2016	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	1.67	=	0.08	0.5	D	FGS				
WW041	Camp Pashayan	3/6/2016	Grab	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	1.48	=	0.08	0.5	D	FGS				
WW041	Rice Road	3/6/2016	Grab	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	1.69	=	0.08	0.5	D	FGS		1.1		
WW041	Camp Pashayan	3/6/2016	Grab	2	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	1.6	=	0.08	0.5	D	FGS				
WW041	Friant Dam	3/6/2016	Grab	2	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	7.39	=	0.08	0.5	D	FGS				
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	31.34	=	0.08	0.5	None	FGS	112		71	125
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	31.46	=	0.08	0.5	None	FGS	113	0.381	71	125
WW041	Friant Dam	3/6/2016	MS1	2	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	26.71	=	0.08	0.5	None	FGS	95.5		71	125
WW041	Friant Dam	3/6/2016	MS1	2	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	26.72	=	0.08	0.5	None	FGS	95.5	0.0264	71	125
WW041	LABQA	3/14/2016	LabBlank	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW041	LABQA	3/14/2016	LabBlank	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW041	LABQA	3/14/2016	LabBlank	1	3	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.09	ND	0.09	0.52	None	FGS				
WW041	LABQA	3/14/2016	LabBlank	1	4	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW041	LABQA	3/14/2016	LCS	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	15.69	=	0.08	0.5	None	FGS	100		80	120
WW041	LABQA	3/14/2016	LCS	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	17	=	0.08	0.5	None	FGS	108	8.03	80	120
WW041	LABQA	3/15/2016	LabBlank	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW041	LABQA	3/15/2016	LabBlank	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW041	LABQA	3/15/2016	LabBlank	1	3	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW041	LABQA	3/15/2016	LabBlank	1	4	EPA 1631E	Metal	Mercury	Total	ng/L	1	-0.08	ND	0.08	0.5	None	FGS				
WW041	LABQA	3/15/2016	LCS	1	1	EPA 1631E	Metal	Mercury	Total	ng/L	1	14.96	=	0.08	0.5	D	FGS	95.4		80	120
WW041	LABQA	3/15/2016	LCS	1	2	EPA 1631E	Metal	Mercury	Total	ng/L	1	14.95	=	0.08	0.5	D	FGS	95.3	0.0906	80	120
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	-0.04	ND	0.04	0.3	None	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	-0.04	ND	0.04	0.3	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	-0.04	ND	0.04	0.3	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	-0.04	ND	0.04	0.3	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	-0.04	ND	0.04	0.3	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	50.26	=	0.2	0.51	D	FGS	100		68	134
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	267.3	=	0.2	0.5	D	FGS	104		68	134
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	51.61	=	0.2	0.51	D	FGS	103	2.64	68	134
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	272.9	=	0.2	0.5	D	FGS	106	2.05	68	134
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	0.15	=	0.04	0.1	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	0.22	=	0.04	0.1	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	0.12	=	0.04	0.1	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	0.25	=	0.04	0.1	None	FGS				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	45.85	=	0.2	0.51	D	FGS	91.4		68	134
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	250.6	=	0.2	0.5	D	FGS	97.7		68	134
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	46.3	=	0.2	0.51	D	FGS	92.3	0.968	68	134
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	249.4	=	0.2	0.5	D	FGS	97.3	0.467	68	134
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	0.33	=	0.04	0.1	IP	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	2	=	0.04	0.1	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	1.38	=	0.04	0.1	IP	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	2.03	=	0.04	0.1	None	FGS				
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	0.24	=	0.04	0.1	None	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	0.13	=	0.04	0.1	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	0.15	=	0.04	0.1	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	0.27	=	0.04	0.1	None	FGS				
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	2.49	=	0.04	0.1	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	1.19	=	0.04	0.1	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	1.09	=	0.04	0.1	None	FGS				
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	0.94	=	0.04	0.1	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	0.21	=	0.04	0.1	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	0.22	=	0.04	0.1	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	0.22	=	0.04	0.1	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Nickel	Dissolved	µg/L	1	1.02	=	0.04	0.1	None	FGS				
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.3	None	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.3	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.3	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.3	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.3	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	51.71	=	0.2	0.51	D	FGS	103		68	134
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	272.3	=	0.2	0.5	D	FGS	106		68	134
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	52.26	=	0.2	0.51	D	FGS	104	1.06	68	134
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	259.9	=	0.2	0.5	D	FGS	101	4.66	68	134
DW020	LABQA	9/30/2015	LabBlank	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.3	None	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.3	None	FGS				
DW020	LABQA	9/30/2015	LCS	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	48.12	=	0.2	0.5	D	FGS	96.2		68	134

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
DW020	LABQA	9/30/2015	LCS	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	51.29	=	0.2	0.5	D	FGS	103	6.37	68	134
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	0.26	=	0.04	0.1	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	0.28	=	0.04	0.1	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	0.1	=	0.04	0.1	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Nickel	Total	µg/L	1	0.27	=	0.04	0.1	None	FGS				
WW039	LABQA	12/31/2015	LabBlank	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
WW039	LABQA	12/31/2015	LCS	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	45.93	=	0.2	0.5	D	FGS	91.9		68	134
WW039	LABQA	12/31/2015	LCS	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	46.4	=	0.2	0.5	D	FGS	92.8	1.02	68	134
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	3.02	=	0.04	0.1	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	1.97	=	0.04	0.1	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Nickel	Total	µg/L	1	3.33	=	0.04	0.1	None	FGS				
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	55.54	=	0.2	0.51	D	FGS	105		68	134
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	279.2	=	0.2	0.5	D	FGS	108		68	134
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	53.85	=	0.2	0.51	D	FGS	102	3.1	68	134
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	280.3	=	0.2	0.5	D	FGS	108	0.386	68	134
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	50.71	=	0.2	0.5	D	FGS	101		68	134
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	50.8	=	0.2	0.5	D	FGS	102	0.169	68	134
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	0.31	=	0.04	0.1	None	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	0.31	=	0.04	0.1	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	0.23	=	0.04	0.1	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Nickel	Total	µg/L	1	0.32	=	0.04	0.1	None	FGS				
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	48.48	=	0.4	1.01	D	FGS	95.2		68	134
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	521.4	=	0.4	1.01	D	FGS	102		68	134
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	48.13	=	0.4	1.01	D	FGS	94.5	0.715	68	134
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	531.5	=	0.4	1.01	D	FGS	104	1.92	68	134
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	6.57	=	0.04	0.1	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	1.74	=	0.04	0.1	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Nickel	Total	µg/L	1	1.61	=	0.04	0.1	None	FGS				
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	56.51	=	0.4	1.01	D	FGS	102		68	134
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	563.3	=	0.4	1.01	D	FGS	109		68	134
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	55.95	=	0.4	1.01	D	FGS	101	0.983	68	134
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	559.4	=	0.4	1.01	D	FGS	108	0.697	68	134
WW040	LABQA	1/25/2016	LabBlank	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
WW040	LABQA	1/25/2016	LabBlank	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
WW040	LABQA	1/25/2016	LCS	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	47.22	=	0.4	1	D	FGS	94.4		68	134
WW040	LABQA	1/25/2016	LCS	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	46.92	=	0.4	1	D	FGS	93.8	0.643	68	134
CNWW03	LABQA	2/1/2016	LabBlank	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
CNWW03	LABQA	2/1/2016	LCS	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	50.04	=	0.2	0.5	D	FGS	100		68	134
CNWW03	LABQA	2/1/2016	LCS	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	50.17	=	0.2	0.5	D	FGS	100	0.252	68	134
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	1.32	=	0.04	0.1	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	0.21	=	0.04	0.1	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	0.89	=	0.04	0.1	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Nickel	Total	µg/L	1	0.39	=	0.04	0.1	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Nickel	Total	µg/L	1	1.29	=	0.04	0.1	None	FGS				
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	47.86	=	0.2	0.51	D	FGS	93.1		68	134
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	235.5	=	0.2	0.5	D	FGS	91.4		68	134
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	46.96	=	0.2	0.51	D	FGS	91.3	1.89	68	134
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	241.1	=	0.2	0.5	D	FGS	93.6	2.35	68	134
WW041	LABQA	3/17/2016	LabBlank	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
WW041	LABQA	3/17/2016	LabBlank	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	-0.04	ND	0.04	0.1	None	FGS				
WW041	LABQA	3/17/2016	LCS	1	1	EPA 1638	Metal	Nickel	Total	µg/L	1	44.88	=	0.2	0.5	D	FGS	89.8		68	134
WW041	LABQA	3/17/2016	LCS	1	2	EPA 1638	Metal	Nickel	Total	µg/L	1	43.83	=	0.2	0.5	D	FGS	87.7	2.37	68	134
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	51.81	=	2.23	3.04	D	FGS	104		59	149
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	188.9	=	2.22	3.03	D	FGS	92.2		59	149
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	45.87	=	2.23	3.04	D	FGS	91.7	12.2	59	149
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	202.5	=	2.22	3.03	D	FGS	98.8	6.91	59	149
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	45.32	=	2.23	3.04	D	FGS	90.6		59	149
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	195.5	=	2.22	3.03	D	FGS	95.4		59	149
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	46.72	=	2.23	3.04	D	FGS	93.4	3.03	59	149
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	196.7	=	2.22	3.03	D	FGS	95.9	0.572	59	149
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	0.8	=	0.44	0.61	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	0.7	=	0.44	0.61	None	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	0.76	=	0.44	0.61	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	0.74	=	0.44	0.61	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	0.63	=	0.44	0.61	None	FGS				
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	1.42	=	0.44	0.61	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	1.17	=	0.44	0.61	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	1.04	=	0.44	0.61	None	FGS				
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Selenium	Dissolved	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	51.95	=	2.23	3.04	D	FGS	104		59	149
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	194.5	=	2.22	3.03	D	FGS	94.9		59	149
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	48.96	=	2.23	3.04	D	FGS	97.9	5.93	59	149
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	204.6	=	2.22	3.03	D	FGS	99.8	5.06	59	149
DW020	LABQA	9/30/2015	LabBlank	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	1.17	=	0.44	0.6	IP	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	25.27	=	0.44	0.6	IP	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	3	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.6	None	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	4	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.6	None	FGS				
DW020	LABQA	9/30/2015	LCS	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	43.09	=	2.2	3.01	D	FGS	86.2		59	149
DW020	LABQA	9/30/2015	LCS	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	47.55	=	2.2	3.01	D	FGS	95.1	9.84	59	149
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW039	LABQA	12/31/2015	LabBlank	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.6	None	FGS				
WW039	LABQA	12/31/2015	LCS	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	45.41	=	2.2	3.01	D	FGS	90.8		59	149
WW039	LABQA	12/31/2015	LCS	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	45.14	=	2.2	3.01	D	FGS	90.3	0.603	59	149
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	1.15	=	0.44	0.61	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Selenium	Total	µg/L	1	0.72	=	0.44	0.61	None	FGS				
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	39.02	=	2.23	3.04	D	FGS	75.7		59	149
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	188.9	=	2.22	3.03	D	FGS	91.6		59	149
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	43.36	=	2.23	3.04	D	FGS	84.4	10.5	59	149
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	186.3	=	2.22	3.03	D	FGS	90.3	1.35	59	149
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.6	None	FGS				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	46.6	=	2.2	3.01	D	FGS	93.2		59	149
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	44.19	=	2.2	3.01	D	FGS	88.4	5.3	59	149
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	1.65	=	0.44	0.61	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	199.6	=	2.22	3.03	D	FGS	96.6		59	149
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	50.32	=	2.23	3.04	D	FGS	97.3		59	149
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	180	=	2.22	3.03	D	FGS	87.1	10.3	59	149
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	48.96	=	2.23	3.04	D	FGS	94.6	2.75	59	149
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	1.15	=	0.44	0.61	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	0.68	=	0.44	0.61	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Selenium	Total	µg/L	1	0.61	=	0.44	0.61	None	FGS				
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	32.03	=	4.45	6.07	D	FGS	64.1		59	149
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	304.1	=	4.44	6.06	D	FGS	74.2		59	149
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	31.71	=	4.45	6.07	D	FGS	63.4	1.01	59	149
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	299.6	=	4.44	6.06	D	FGS	73.1	1.5	59	149
WW040	LABQA	1/25/2016	LabBlank	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.6	None	FGS				
WW040	LABQA	1/25/2016	LabBlank	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.6	None	FGS				
WW040	LABQA	1/25/2016	LCS	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	33.59	=	4.41	6.01	D	FGS	67.2		59	149
WW040	LABQA	1/25/2016	LCS	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	33.31	=	4.41	6.01	D	FGS	66.6	0.829	59	149
CNWW03	LABQA	2/1/2016	LabBlank	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.6	None	FGS				
CNWW03	LABQA	2/1/2016	LCS	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	33.62	=	2.2	3.01	D	FGS	67.2		59	149
CNWW03	LABQA	2/1/2016	LCS	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	33.56	=	2.2	3.01	D	FGS	67.1	0.187	59	149
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.61	None	FGS				
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	47.97	=	2.23	3.04	D	FGS	95.9		59	149
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	192.9	=	2.22	3.03	D	FGS	94.1		59	149
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	47.33	=	2.23	3.04	D	FGS	94.7	1.34	59	149
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	190.5	=	2.22	3.03	D	FGS	92.9	1.27	59	149
WW041	LABQA	3/17/2016	LabBlank	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.6	None	FGS				
WW041	LABQA	3/17/2016	LabBlank	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	-0.44	ND	0.44	0.6	None	FGS				
WW041	LABQA	3/17/2016	LCS	1	1	EPA 1638	Metal	Selenium	Total	µg/L	1	45.61	=	2.2	3.01	D	FGS	91.2		59	149
WW041	LABQA	3/17/2016	LCS	1	2	EPA 1638	Metal	Selenium	Total	µg/L	1	47.33	=	2.2	3.01	D	FGS	94.7	3.7	59	149
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	25.13	=	0.01	0.101	D	FGS	100		74	119
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	10.23	=	0.01	0.101	D	FGS	99.7		74	119
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Silver	Dissolved	µg/L	1	24.85	=	0.01	0.101	D	FGS	99.3	1.11	74	119
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Silver	Dissolved	µg/L	1	10.1	=	0.01	0.101	D	FGS	98.4	1.31	74	119
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	24.99	=	0.02	0.202	D	FGS	99.9		74	119
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	20.71	=	0.02	0.202	D	FGS	101		74	119
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Silver	Dissolved	µg/L	1	25.1	=	0.02	0.202	D	FGS	100	0.439	74	119
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Silver	Dissolved	µg/L	1	20.71	=	0.02	0.202	D	FGS	101	0.0059	74	119
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Silver	Dissolved	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	24.79	=	0.01	0.101	D	FGS	99		74	119
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	9.838	=	0.01	0.101	D	FGS	95.7		74	119
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	25.1	=	0.01	0.101	D	FGS	100	1.23	74	119
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	9.776	=	0.01	0.101	D	FGS	95	0.632	74	119
DW020	LABQA	9/30/2015	LabBlank	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	0.034	=	0.002	0.02	IP	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	3	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	4	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
DW020	LABQA	9/30/2015	LCS	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	23.83	=	0.01	0.1	D	FGS	95.3		74	119
DW020	LABQA	9/30/2015	LCS	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	23.82	=	0.01	0.1	D	FGS	95.3	0.0243	74	119
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW039	LABQA	12/31/2015	LabBlank	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW039	LABQA	12/31/2015	LCS	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	25.14	=	0.01	0.1	D	FGS	101		74	119
WW039	LABQA	12/31/2015	LCS	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	25.05	=	0.01	0.1	D	FGS	100	0.347	74	119
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	25.01	=	0.01	0.101	D	FGS	100		74	119
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	9.906	=	0.01	0.101	D	FGS	96.6		74	119
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	25.2	=	0.01	0.101	D	FGS	101	0.742	74	119
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	10.24	=	0.01	0.101	D	FGS	99.9	3.36	74	119
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	23.69	=	0.01	0.1	D	FGS	94.8		74	119
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	24.27	=	0.01	0.1	D	FGS	97.1	2.41	74	119
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	24.38	=	0.01	0.101	D	FGS	97.5		74	119
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	9.948	=	0.01	0.101	D	FGS	97		74	119
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	24.29	=	0.01	0.101	D	FGS	97.1	0.395	74	119
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	9.855	=	0.01	0.101	D	FGS	96.1	0.935	74	119
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	23.73	=	0.02	0.202	D	FGS	94.9		74	119
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	22.87	=	0.02	0.202	D	FGS	111		74	119
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	24.68	=	0.02	0.202	D	FGS	98.7	3.92	74	119
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	23.84	=	0.02	0.202	D	FGS	116	4.16	74	119
WW040	LABQA	1/25/2016	LabBlank	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW040	LABQA	1/25/2016	LabBlank	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW040	LABQA	1/25/2016	LCS	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	23.95	=	0.01	0.1	D	FGS	95.8		74	119
WW040	LABQA	1/25/2016	LCS	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	23.35	=	0.01	0.1	D	FGS	93.4	2.55	74	119
CNWW03	LABQA	2/1/2016	LabBlank	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
CNWW03	LABQA	2/1/2016	LCS	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	24.4	=	0.01	0.1	D	FGS	97.6		74	119
CNWW03	LABQA	2/1/2016	LCS	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	23.93	=	0.01	0.1	D	FGS	95.7	1.95	74	119
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	23.93	=	0.01	0.101	D	FGS	95.7		74	119
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	9.57	=	0.01	0.101	D	FGS	93.3		74	119
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	23.97	=	0.01	0.101	D	FGS	95.9	0.183	74	119
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	9.566	=	0.01	0.101	D	FGS	93.2	0.0364	74	119
WW041	LABQA	3/17/2016	LabBlank	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW041	LABQA	3/17/2016	LabBlank	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	-0.002	ND	0.002	0.02	None	FGS				
WW041	LABQA	3/17/2016	LCS	1	1	EPA 1638	Metal	Silver	Total	µg/L	1	23.52	=	0.01	0.1	D	FGS	94.1		74	119
WW041	LABQA	3/17/2016	LCS	1	2	EPA 1638	Metal	Silver	Total	µg/L	1	23.13	=	0.01	0.1	D	FGS	92.5	1.66	74	119
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	2.55	=	0.16	0.5	IP	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	1.44	=	0.16	0.5	R	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	0.95	=	0.16	0.5	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	1.5	=	0.16	0.5	R	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	1.42	=	0.16	0.5	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	51.37	=	0.81	2.53	D	FGS	99.8		46	146
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	502.2	=	0.81	2.52	D	FGS	97.7		46	146
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	50.16	=	0.81	2.53	D	FGS	97.4	2.38	46	146
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	510.1	=	0.81	2.52	D	FGS	99.2	1.57	46	146
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	0.76	=	0.16	0.5	IP	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	1	=	0.16	0.5	IP	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	0.78	=	0.16	0.5	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	0.77	=	0.16	0.5	None	FGS				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	46.43	=	0.81	2.53	D	FGS	90.9		46	146
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	492.3	=	0.81	2.52	D	FGS	95.9		46	146
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	46.79	=	0.81	2.53	D	FGS	91.6	0.767	46	146
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	489.8	=	0.81	2.52	D	FGS	95.4	0.513	46	146
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	0.92	=	0.16	0.5	IP	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	1.5	=	0.16	0.5	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	17.6	=	0.16	0.5	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	1.65	=	0.16	0.5	None	FGS				
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	0.82	=	0.16	0.5	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	0.84	=	0.16	0.5	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	1.09	=	0.16	0.5	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	1.04	=	0.16	0.5	None	FGS				
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	1.2	=	0.16	0.5	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	10.5	=	0.16	0.5	None	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	11	=	0.16	0.5	None	FGS				
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	1.98	=	0.16	0.5	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	2.07	=	0.16	0.5	R	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	2.57	=	0.16	0.5	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	2.34	=	0.16	0.5	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Zinc	Dissolved	µg/L	1	2.07	=	0.16	0.5	None	FGS				
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	0.6	=	0.16	0.5	None	FGS				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	1.56	=	0.16	0.5	IP	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	50.25	=	0.81	2.53	D	FGS	99		46	146
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	498.3	=	0.81	2.52	D	FGS	97.1		46	146
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	51.07	=	0.81	2.53	D	FGS	101	1.64	46	146
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	489.9	=	0.81	2.52	D	FGS	95.5	1.69	46	146
DW020	LABQA	9/30/2015	LabBlank	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	3	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
DW020	LABQA	9/30/2015	LabBlank	1	4	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
DW020	LABQA	9/30/2015	LCS	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	49.07	=	0.8	2.5	D	FGS	98.1		46	146
DW020	LABQA	9/30/2015	LCS	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	50.07	=	0.8	2.5	D	FGS	100	2.01	46	146
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	1.74	=	0.16	0.5	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	0.66	=	0.16	0.5	None	FGS				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	1.11	=	0.16	0.5	None	FGS				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 1638	Metal	Zinc	Total	µg/L	1	0.77	=	0.16	0.5	None	FGS				
WW039	LABQA	12/31/2015	LabBlank	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
WW039	LABQA	12/31/2015	LCS	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	45.08	=	0.8	2.5	D	FGS	90.2		46	146
WW039	LABQA	12/31/2015	LCS	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	45.19	=	0.8	2.5	D	FGS	90.4	0.244	46	146
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	4.87	=	0.16	0.5	None	FGS				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	23.8	=	0.16	0.5	None	FGS				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 1638	Metal	Zinc	Total	µg/L	1	4.8	=	0.16	0.5	None	FGS				
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	54.42	=	0.81	2.53	D	FGS	99.1		46	146
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	547.6	=	0.81	2.52	D	FGS	106		46	146
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	54.37	=	0.81	2.53	D	FGS	99	0.0796	46	146
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	550.5	=	0.81	2.52	D	FGS	106	0.527	46	146
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	49.54	=	0.8	2.5	D	FGS	99.1		46	146
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	50.08	=	0.8	2.5	D	FGS	100	1.08	46	146
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	0.58	=	0.16	0.5	FDP	FGS				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	0.78	=	0.16	0.5	None	FGS				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	1.81	=	0.16	0.5	None	FGS				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 1638	Metal	Zinc	Total	µg/L	1	1.15	=	0.16	0.5	FDP	FGS				
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	45.91	=	1.62	5.06	D	FGS	83.7		46	146
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	944.9	=	1.62	5.05	D	FGS	91.8		46	146
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	43.43	=	1.62	5.06	D	FGS	78.7	5.55	46	146
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	949	=	1.62	5.05	D	FGS	92.2	0.432	46	146
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	9.39	=	0.16	0.5	IP	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	18.3	=	0.16	0.5	IP	FGS				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 1638	Metal	Zinc	Total	µg/L	1	18.9	=	0.16	0.5	None	FGS				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	96.99	=	1.62	5.07	D	FGS	87.6		46	146
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	1022	=	1.62	5.05	D	FGS	98.8		46	146
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	54.01	=	1.62	5.06	D	FGS	88.2		46	146
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	1084	=	1.62	5.05	D	FGS	105		46	146
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	100.4	=	1.62	5.07	D	FGS	91	3.45	46	146
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	1016	=	1.62	5.05	D	FGS	98.2	0.612	46	146
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	56.23	=	1.62	5.06	D	FGS	92.6	4.04	46	146
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	1070	=	1.62	5.05	D	FGS	103	1.33	46	146
WW040	LABQA	1/25/2016	LabBlank	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
WW040	LABQA	1/25/2016	LabBlank	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
WW040	LABQA	1/25/2016	LCS	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	42.24	=	1.6	5.01	D	FGS	84.5		46	146
WW040	LABQA	1/25/2016	LCS	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	41.73	=	1.6	5.01	D	FGS	83.5	1.23	46	146
CNWW03	LABQA	2/1/2016	LabBlank	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	2.33	=	0.16	0.5	IP	FGS				
CNWW03	LABQA	2/1/2016	LCS	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	51.63	=	0.8	2.5	D	FGS	103		46	146
CNWW03	LABQA	2/1/2016	LCS	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	50.86	=	0.8	2.5	D	FGS	102	1.5	46	146
CNWW03	LABQA	2/3/2016	LabBlank	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
CNWW03	LABQA	2/3/2016	LCS	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	47.61	=	0.8	2.5	D	FGS	95.2		46	146
CNWW03	LABQA	2/3/2016	LCS	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	49.06	=	0.8	2.5	D	FGS	98.1	3.01	46	146
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	4.58	=	0.16	0.5	None	FGS				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	0.94	=	0.16	0.5	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	15	=	0.16	0.5	None	FGS				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 1638	Metal	Zinc	Total	µg/L	1	3.32	=	0.16	0.5	None	FGS				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 1638	Metal	Zinc	Total	µg/L	1	4.31	=	0.16	0.5	None	FGS				
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	50.75	=	0.81	2.53	D	FGS	92.3		46	146
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	480.3	=	0.81	2.52	D	FGS	92.8		46	146
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	49.74	=	0.81	2.53	D	FGS	90.3	2	46	146
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	480.7	=	0.81	2.52	D	FGS	92.9	0.082	46	146
WW041	LABQA	3/17/2016	LabBlank	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
WW041	LABQA	3/17/2016	LabBlank	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	-0.16	ND	0.16	0.5	None	FGS				
WW041	LABQA	3/17/2016	LCS	1	1	EPA 1638	Metal	Zinc	Total	µg/L	1	45.45	=	0.8	2.5	D	FGS	90.9		46	146
WW041	LABQA	3/17/2016	LCS	1	2	EPA 1638	Metal	Zinc	Total	µg/L	1	44.56	=	0.8	2.5	D	FGS	89.1	1.97	46	146
DW020	Friant Dam	9/24/2015	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
DW020	Rice Road	9/24/2015	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Grab	2	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4.6	=	0.024	0.1	GB	BSK	116		90	110
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4.9	=	0.024	0.1	GB	BSK	122	5	90	110
DW020	LABQA	9/28/2015	LabBlank	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
DW020	LABQA	9/28/2015	LCS	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4.2	=	0.024	0.1	None	BSK	105		90	110
DW020	LABQA	9/28/2015	LCS	1	2	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4.3	=	0.024	0.1	None	BSK	108	2	90	110
WW039	Friant Dam	12/22/2015	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
WW039	Rice Road	12/22/2015	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
WW039	Camp Pashayan	12/22/2015	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
WW039	Rice Road	12/22/2015	Grab	2	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
WW039	Rice Road	12/22/2015	MS1	2	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	3.9	=	0.024	0.1	None	BSK	98		90	110
WW039	Rice Road	12/22/2015	MS1	2	2	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	3.9	=	0.024	0.1	None	BSK	97	0.5	90	110
WW039	LABQA	12/23/2015	LabBlank	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
WW039	LABQA	12/23/2015	LCS	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	3.8	=	0.024	0.1	None	BSK	94		90	110
WW039	LABQA	12/23/2015	LCS	1	2	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4	=	0.024	0.1	None	BSK	101	7	90	110
CNWW02	Temperance Ave	1/7/2016	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	1	=	0.024	0.1	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Grab	2	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
CNWW02	Temperance Ave	1/7/2016	MS1	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4	=	0.024	0.1	None	BSK	100		90	110
CNWW02	Temperance Ave	1/7/2016	MS1	1	2	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4.2	=	0.024	0.1	None	BSK	105	5	90	110
CNWW02	LABQA	1/12/2016	LabBlank	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
CNWW02	LABQA	1/12/2016	LCS	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4.1	=	0.024	0.1	None	BSK	102		90	110
CNWW02	LABQA	1/12/2016	LCS	1	2	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4.2	=	0.024	0.1	None	BSK	104	2	90	110
WW040	Friant Dam	1/18/2016	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
WW040	Rice Road	1/18/2016	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				

APPENDIX A
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EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW040	Camp Pashayan	1/18/2016	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	1.2	=	0.024	0.1	None	BSK				
WW040	Friant Dam	1/18/2016	Grab	2	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
WW040	Friant Dam	1/18/2016	MS1	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4	=	0.024	0.1	None	BSK	99		90	110
WW040	Friant Dam	1/18/2016	MS1	1	2	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4.2	=	0.024	0.1	None	BSK	106	7	90	110
CNWW03	Temperance Ave	1/21/2016	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Grab	2	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
WW040	LABQA	1/26/2016	LabBlank	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
WW040	LABQA	1/26/2016	LCS	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4.2	=	0.024	0.1	None	BSK	106		90	110
WW040	LABQA	1/26/2016	LCS	1	2	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4.3	=	0.024	0.1	None	BSK	107	1	90	110
CNWW03	LABQA	1/28/2016	LabBlank	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
CNWW03	LABQA	1/28/2016	LCS	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	3.9	=	0.024	0.1	None	BSK	98		90	110
CNWW03	LABQA	1/28/2016	LCS	1	2	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4	=	0.024	0.1	None	BSK	100	2	90	110
WW041	Friant Dam	3/6/2016	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
WW041	Rice Road	3/6/2016	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
WW041	Camp Pashayan	3/6/2016	Grab	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
WW041	Camp Pashayan	3/6/2016	Grab	2	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
WW041	Friant Dam	3/6/2016	Grab	2	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4.1	=	0.024	0.1	None	BSK	101		90	110
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4.4	=	0.024	0.1	None	BSK	108	7	90	110
WW041	LABQA	3/15/2016	LabBlank	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	-0.024	ND	0.024	0.1	None	BSK				
WW041	LABQA	3/15/2016	LCS	1	1	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4.2	=	0.024	0.1	None	BSK	106		90	110
WW041	LABQA	3/15/2016	LCS	1	2	EPA 350.1	Nutrient	Ammonia as N	None	mg/L	1	4.4	=	0.024	0.1	None	BSK	110	4	90	110
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
DW020	LABQA	9/25/2015	LabBlank	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
DW020	LABQA	9/25/2015	LCS	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	98	=	0.44	1	None	BSK	98		90	110
DW020	LABQA	9/25/2015	LCS	1	2	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	100	=	0.44	1	None	BSK	100	3	90	110
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	2	=	0.44	1	H	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	1.8	=	0.44	1	H	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	49	=	0.44	1	IP	BSK	95		80	120
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	50	=	0.44	1	IP	BSK	97	2	80	120
WW039	LABQA	12/23/2015	LabBlank	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	1	=	0.44	1	IP	BSK				
WW039	LABQA	12/23/2015	LCS	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	98	=	0.44	1	IP	BSK	98		90	110
WW039	LABQA	12/23/2015	LCS	1	2	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	98	=	0.44	1	IP	BSK	98	0.1	90	110
WW039	LABQA	12/29/2015	LabBlank	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
WW039	LABQA	12/29/2015	LCS	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	100	=	0.44	1	None	BSK	100		90	110
WW039	LABQA	12/29/2015	LCS	1	2	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	100	=	0.44	1	None	BSK	100	0.2	90	110
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	5.3	=	0.44	1	FDP	BSK				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	1.7	=	0.44	1	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	3.9	=	0.44	1	FDP	BSK				
CNWW02	LABQA	1/7/2016	LabBlank	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
CNWW02	LABQA	1/7/2016	LCS	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	98	=	0.44	1	None	BSK	98		90	110
CNWW02	LABQA	1/7/2016	LCS	1	2	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	98	=	0.44	1	None	BSK	98	0.2	90	110
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	1	=	0.44	1	None	BSK				
WW040	LABQA	1/19/2016	LabBlank	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
WW040	LABQA	1/19/2016	LCS	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	98	=	0.44	1	None	BSK	98		90	110
WW040	LABQA	1/19/2016	LCS	1	2	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	99	=	0.44	1	None	BSK	99	0.5	90	110
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	1.5	=	0.44	1	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	1.7	=	0.44	1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	1.5	=	0.44	1	None	BSK				
CNWW03	Garfield Ave	1/21/2016	MS1	2	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	49	=	0.44	1	None	BSK	95		80	120
CNWW03	Garfield Ave	1/21/2016	MS1	2	2	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	50	=	0.44	1	None	BSK	97	2	80	120

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EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
CNWW03	LABQA	1/22/2016	LabBlank	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
CNWW03	LABQA	1/22/2016	LCS	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	97	=	0.44	1	None	BSK	97		90	110
CNWW03	LABQA	1/22/2016	LCS	1	2	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	97	=	0.44	1	None	BSK	97	0.5	90	110
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
WW041	Rice Road	3/6/2016	MS1	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	50	=	0.44	1	None	BSK	98		80	120
WW041	Rice Road	3/6/2016	MS1	1	2	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	51	=	0.44	1	None	BSK	100	2	80	120
WW041	LABQA	3/8/2016	LabBlank	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	-0.44	ND	0.44	1	None	BSK				
WW041	LABQA	3/8/2016	LCS	1	1	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	100	=	0.44	1	None	BSK	102		90	110
WW041	LABQA	3/8/2016	LCS	1	2	EPA 300.0	Nutrient	Nitrate as N	None	mg/L	1	100	=	0.44	1	None	BSK	103	0.3	90	110
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
DW020	LABQA	9/25/2015	LabBlank	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
DW020	LABQA	9/25/2015	LCS	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.93	=	0.02	0.05	None	BSK	93		90	110
DW020	LABQA	9/25/2015	LCS	1	2	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.95	=	0.02	0.05	None	BSK	95	3	90	110
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.43	=	0.02	0.05	None	BSK	86		80	120
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.44	=	0.02	0.05	None	BSK	89	3	80	120
WW039	LABQA	12/23/2015	LabBlank	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW039	LABQA	12/23/2015	LCS	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.96	=	0.02	0.05	None	BSK	96		90	110
WW039	LABQA	12/23/2015	LCS	1	2	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.96	=	0.02	0.05	None	BSK	96	0.6	90	110
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
CNWW02	LABQA	1/7/2016	LabBlank	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
CNWW02	LABQA	1/7/2016	LCS	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.97	=	0.02	0.05	None	BSK	97		90	110
CNWW02	LABQA	1/7/2016	LCS	1	2	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.98	=	0.02	0.05	None	BSK	98	0.8	90	110
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW040	LABQA	1/19/2016	LabBlank	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW040	LABQA	1/19/2016	LCS	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.99	=	0.02	0.05	None	BSK	99		90	110
WW040	LABQA	1/19/2016	LCS	1	2	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.99	=	0.02	0.05	None	BSK	99	0.2	90	110
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
CNWW03	Garfield Ave	1/21/2016	MS1	2	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.46	=	0.02	0.05	None	BSK	85		80	120
CNWW03	Garfield Ave	1/21/2016	MS1	2	2	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.46	=	0.02	0.05	None	BSK	87	2	80	120
CNWW03	LABQA	1/22/2016	LabBlank	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
CNWW03	LABQA	1/22/2016	LCS	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.96	=	0.02	0.05	None	BSK	96		90	110
CNWW03	LABQA	1/22/2016	LCS	1	2	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.96	=	0.02	0.05	None	BSK	96	0.7	90	110
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW041	Rice Road	3/6/2016	MS1	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.45	=	0.02	0.05	None	BSK	89		50	110
WW041	Rice Road	3/6/2016	MS1	1	2	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.46	=	0.02	0.05	None	BSK	92	3	50	110
WW041	LABQA	3/8/2016	LabBlank	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	-0.02	ND	0.02	0.05	None	BSK				
WW041	LABQA	3/8/2016	LCS	1	1	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.95	=	0.02	0.05	None	BSK	95		90	110
WW041	LABQA	3/8/2016	LCS	1	2	EPA 300.0	Nutrient	Nitrite as N	None	mg/L	1	0.96	=	0.02	0.05	None	BSK	96	0.8	90	110

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
DW020	LABQA	9/25/2015	LabBlank	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
DW020	LABQA	9/25/2015	LCS	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	15	=	0.22	0.6	None	BSK	96		90	110
DW020	LABQA	9/25/2015	LCS	1	2	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	15	=	0.22	0.6	None	BSK	100	4	90	110
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	6.4	=	0.22	0.6	None	BSK	84		80	120
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	6.6	=	0.22	0.6	None	BSK	86	3	80	120
WW039	LABQA	12/23/2015	LabBlank	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW039	LABQA	12/23/2015	LCS	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	14	=	0.22	0.6	None	BSK	94		90	110
WW039	LABQA	12/23/2015	LCS	1	2	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	14	=	0.22	0.6	None	BSK	93	0.4	90	110
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
CNWW02	LABQA	1/7/2016	LabBlank	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
CNWW02	LABQA	1/7/2016	LCS	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	14	=	0.22	0.6	None	BSK	94		90	110
CNWW02	LABQA	1/7/2016	LCS	1	2	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	14	=	0.22	0.6	None	BSK	94	0.06	90	110
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW040	LABQA	1/19/2016	LabBlank	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW040	LABQA	1/19/2016	LCS	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	15	=	0.22	0.6	None	BSK	99		90	110
WW040	LABQA	1/19/2016	LCS	1	2	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	15	=	0.22	0.6	None	BSK	101	1	90	110
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
CNWW03	Garfield Ave	1/21/2016	MS1	2	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	7	=	0.22	0.6	None	BSK	87		80	120
CNWW03	Garfield Ave	1/21/2016	MS1	2	2	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	7.2	=	0.22	0.6	None	BSK	88	2	80	120
CNWW03	LABQA	1/22/2016	LabBlank	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
CNWW03	LABQA	1/22/2016	LCS	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	15	=	0.22	0.6	None	BSK	97		90	110
CNWW03	LABQA	1/22/2016	LCS	1	2	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	15	=	0.22	0.6	None	BSK	99	2	90	110
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW041	Rice Road	3/6/2016	MS1	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	7.1	=	0.22	0.6	None	BSK	92		80	120
WW041	Rice Road	3/6/2016	MS1	1	2	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	7.3	=	0.22	0.6	None	BSK	95	3	80	120
WW041	LABQA	3/8/2016	LabBlank	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	-0.22	ND	0.22	0.6	None	BSK				
WW041	LABQA	3/8/2016	LCS	1	1	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	15	=	0.22	0.6	None	BSK	97		90	110
WW041	LABQA	3/8/2016	LCS	1	2	EPA 300.0	Nutrient	Orthophosphate as PO4	Dissolved	mg/L	1	15	=	0.22	0.6	None	BSK	97	0.1	90	110
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	10	=	0.064	0.1	None	BSK	100		90	110
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	9.7	=	0.064	0.1	None	BSK	97	3	90	110
DW020	LABQA	9/29/2015	LabBlank	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
DW020	LABQA	9/29/2015	LCS	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	9.6	=	0.064	0.1	None	BSK	96		90	110
DW020	LABQA	9/29/2015	LCS	1	2	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	9.8	=	0.064	0.1	None	BSK	98	2	90	110
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	0.1	=	0.064	0.1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	9.7	=	0.064	0.1	None	BSK	97		90	110
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	10	=	0.064	0.1	None	BSK	101	3	90	110
WW039	LABQA	1/4/2016	LabBlank	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
WW039	LABQA	1/4/2016	LCS	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	10	=	0.064	0.1	None	BSK	100		90	110
WW039	LABQA	1/4/2016	LCS	1	2	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	10	=	0.064	0.1	None	BSK	101	0.9	90	110
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	0.13	=	0.064	0.1	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	0.17	=	0.064	0.1	None	BSK				
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	10	=	0.064	0.1	None	BSK	100		90	110
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	9.9	=	0.064	0.1	None	BSK	99	0.5	90	110
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
WW040	Friant Dam	1/18/2016	MS1	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	10	=	0.064	0.1	None	BSK	100		90	110
WW040	Friant Dam	1/18/2016	MS1	1	2	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	9.9	=	0.064	0.1	None	BSK	99	1	90	110
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	0.33	=	0.064	0.1	FDP	BSK				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	GB	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	0.6	=	0.064	0.1	FDP	BSK				
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	9.5	=	0.064	0.1	None	BSK	95		90	110
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	11	=	0.064	0.1	GB	BSK	113	18	90	110
WW040	LABQA	1/25/2016	LabBlank	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
WW040	LABQA	1/25/2016	LCS	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	10	=	0.064	0.1	None	BSK	101		90	110
WW040	LABQA	1/25/2016	LCS	1	2	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	10	=	0.064	0.1	None	BSK	100	1	90	110
CNWW03	LABQA	1/27/2016	LabBlank	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
CNWW03	LABQA	1/27/2016	LCS	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	9.9	=	0.064	0.1	None	BSK	99		90	110
CNWW03	LABQA	1/27/2016	LCS	1	2	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	10	=	0.064	0.1	None	BSK	100	1	90	110
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	0.21	=	0.064	0.1	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	0.18	=	0.064	0.1	None	BSK				
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	11	=	0.064	0.1	None	BSK	106		90	110
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	10	=	0.064	0.1	None	BSK	99	7	90	110
WW041	LABQA	3/9/2016	LabBlank	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	-0.064	ND	0.064	0.1	None	BSK				
WW041	LABQA	3/9/2016	LCS	1	1	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	10	=	0.064	0.1	None	BSK	104		90	110
WW041	LABQA	3/9/2016	LCS	1	2	EPA 365.4	Nutrient	Phosphorus as P	None	mg/L	1	10	=	0.064	0.1	None	BSK	101	3	90	110
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	10	=	0.41	1	None	BSK	101		90	110
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	9.9	=	0.41	1	None	BSK	99	2	90	110
DW020	LABQA	9/29/2015	LabBlank	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
DW020	LABQA	9/29/2015	LCS	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	9.7	=	0.41	1	None	BSK	97		90	110
DW020	LABQA	9/29/2015	LCS	1	2	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	9.9	=	0.41	1	None	BSK	99	2	90	110
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW039	Friant Dam	12/22/2015	MS1	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	11	=	0.41	1	None	BSK	109		90	110
WW039	Friant Dam	12/22/2015	MS1	1	2	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	11	=	0.41	1	None	BSK	110	0.2	90	110
WW039	LABQA	12/30/2015	LabBlank	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW039	LABQA	12/30/2015	LCS	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	10	=	0.41	1	None	BSK	105		90	110
WW039	LABQA	12/30/2015	LCS	1	2	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	10	=	0.41	1	None	BSK	105	0.1	90	110
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
CNWW02	LABQA	1/11/2016	LabBlank	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
CNWW02	LABQA	1/11/2016	LCS	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	10	=	0.41	1	None	BSK	104		90	110
CNWW02	LABQA	1/11/2016	LCS	1	2	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	10	=	0.41	1	None	BSK	103	2	90	110
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW040	Friant Dam	1/18/2016	MS1	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	10	=	0.41	1	None	BSK	105		90	110
WW040	Friant Dam	1/18/2016	MS1	1	2	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	11	=	0.41	1	None	BSK	107	2	90	110
WW040	Friant Dam	1/18/2016	MS1	2	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	10	=	0.41	1	None	BSK	100		90	110
WW040	Friant Dam	1/18/2016	MS1	2	2	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	11	=	0.41	1	None	BSK	108	7	90	110
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	GB	BSK				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	11	=	0.41	1	None	BSK	110		90	110
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	11	=	0.41	1	GB	BSK	113	3	90	110
CNWW03	LABQA	1/26/2016	LabBlank	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW040	LABQA	1/26/2016	LabBlank	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
CNWW03	LABQA	1/26/2016	LCS	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	10	=	0.41	1	None	BSK	104		90	110
WW040	LABQA	1/26/2016	LCS	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	10	=	0.41	1	None	BSK	101		90	110
CNWW03	LABQA	1/26/2016	LCS	1	2	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	11	=	0.41	1	None	BSK	107	3	90	110
WW040	LABQA	1/26/2016	LCS	1	2	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	11	=	0.41	1	None	BSK	105	5	90	110
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW041	Friant Dam	3/6/2016	Integrated	2	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW041	Friant Dam	3/6/2016	MS1	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	12	=	0.41	1	None	BSK	109		90	110
WW041	Friant Dam	3/6/2016	MS1	1	2	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	12	=	0.41	1	None	BSK	107	2	90	110
WW041	LABQA	3/9/2016	LabBlank	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	-0.41	ND	0.41	1	None	BSK				
WW041	LABQA	3/9/2016	LCS	1	1	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	11	=	0.41	1	None	BSK	107		90	110
WW041	LABQA	3/9/2016	LCS	1	2	EPA 351.2	Nutrient	Total Kjeldahl Nitrogen	None	mg/L	1	10	=	0.41	1	None	BSK	104	3	90	110
DW020	LABQA	1/1/1950	LabBlank	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW039	LABQA	1/1/1950	LabBlank	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW040	LABQA	1/1/1950	LabBlank	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW041	LABQA	1/1/1950	LabBlank	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW041	LABQA	1/1/1950	LabBlank	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
CNWW02	LABQA	1/1/1950	LabBlank	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
CNWW03	LABQA	1/1/1950	LabBlank	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
DW020	LABQA	1/1/1950	LCS	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	75		20	130
WW039	LABQA	1/1/1950	LCS	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	95		20	130
WW040	LABQA	1/1/1950	LCS	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	83		20	130
WW041	LABQA	1/1/1950	LCS	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.0229	=	-88	0.005	None	CAL	115		20	130
WW041	LABQA	1/1/1950	LCS	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.0135	=	0.004	0.005	None	CAL	68		20	130
CNWW02	LABQA	1/1/1950	LCS	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	75		20	130
CNWW03	LABQA	1/1/1950	LCS	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	92		20	130
DW020	LABQA	1/1/1950	LCS	1	2	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	83	9.5	20	130
WW039	LABQA	1/1/1950	LCS	1	2	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	91	4.3	20	130
WW040	LABQA	1/1/1950	LCS	1	2	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	78	6.2	20	130
WW041	LABQA	1/1/1950	LCS	1	2	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.0182	=	0.004	0.005	IL	CAL	91	30	20	130
CNWW02	LABQA	1/1/1950	LCS	1	2	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.01	=	0.004	0.005	None	CAL	68	11	20	130
CNWW03	LABQA	1/1/1950	LCS	1	2	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	79	15	20	130
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.01	=	0.004	0.005	None	CAL	67		10	130
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	84	22	10	130
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	IL	CAL				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.009	=	0.004	0.005	None	CAL	44		10	130
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.01	=	0.004	0.005	IL	CAL	61	33	10	130
CNWW03	Temperance Ave	1/21/2016	FieldBlank	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
CNWW03	Temperance Ave	1/21/2016	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
CNWW03	Garfield Ave	1/21/2016	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
CNWW03	Garfield Ave	1/21/2016	Integrated	2	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
CNWW03	Temperance Ave	1/21/2016	MS1	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.01	=	0.004	0.005	None	CAL	72		10	130
CNWW03	Temperance Ave	1/21/2016	MS1	1	2	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	86	18	10	130
WW041	Rice Road	3/6/2016	FieldBlank	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW041	Friant Dam	3/6/2016	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW041	Rice Road	3/6/2016	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW041	Camp Pashayan	3/6/2016	Integrated	1	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	H, IL	CAL				
WW041	Camp Pashayan	3/6/2016	Integrated	2	1	EPA 625M	PAH	1-Methylnaphthalene	None	µg/L	1	-0.004	ND	0.004	0.005	H	CAL				
DW020	LABQA	1/1/1950	LabBlank	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW039	LABQA	1/1/1950	LabBlank	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW040	LABQA	1/1/1950	LabBlank	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW041	LABQA	1/1/1950	LabBlank	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW041	LABQA	1/1/1950	LabBlank	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
CNWW02	LABQA	1/1/1950	LabBlank	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
CNWW03	LABQA	1/1/1950	LabBlank	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
DW020	LABQA	1/1/1950	LCS	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	101		60	130
WW039	LABQA	1/1/1950	LCS	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	110		60	130
WW040	LABQA	1/1/1950	LCS	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	99		60	130
WW041	LABQA	1/1/1950	LCS	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.0259	=	-88	0.005	None	CAL	130		60	130
WW041	LABQA	1/1/1950	LCS	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.0181	=	0.004	0.005	None	CAL	91		60	130
CNWW02	LABQA	1/1/1950	LCS	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	102		60	130
CNWW03	LABQA	1/1/1950	LCS	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	120		60	130
DW020	LABQA	1/1/1950	LCS	1	2	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	112	11	60	130
WW039	LABQA	1/1/1950	LCS	1	2	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	110	0	60	130
WW040	LABQA	1/1/1950	LCS	1	2	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	90	9.6	60	130
WW041	LABQA	1/1/1950	LCS	1	2	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.0229	=	0.004	0.005	None	CAL	115	23	60	130
CNWW02	LABQA	1/1/1950	LCS	1	2	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	83	21	60	130
CNWW03	LABQA	1/1/1950	LCS	1	2	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	100	19	60	130
DW020	Rice Road	9/24/2015	FieldBlank	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
DW020	Friant Dam	9/24/2015	Integrated	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	IL	CAL				
DW020	Rice Road	9/24/2015	Integrated	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
DW020	Camp Pashayan	9/24/2015	Integrated	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
DW020	Camp Pashayan	9/24/2015	Integrated	2	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
DW020	Friant Dam	9/24/2015	MS1	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	89		40	150
DW020	Friant Dam	9/24/2015	MS1	1	2	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.03	=	0.004	0.005	IL	CAL	127	36	40	150
WW039	Friant Dam	12/22/2015	FieldBlank	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW039	Friant Dam	12/22/2015	Integrated	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW039	Rice Road	12/22/2015	Integrated	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW039	Camp Pashayan	12/22/2015	Integrated	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW039	Rice Road	12/22/2015	Integrated	2	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
CNWW02	Garfield Ave	1/7/2016	FieldBlank	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
CNWW02	Temperance Ave	1/7/2016	Integrated	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
CNWW02	Garfield Ave	1/7/2016	Integrated	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				

APPENDIX A
2015-2016 Environmental and QA/QC Results

EventID	SiteName	Sample Date	Sample TypeCode	Replicate	Lab Replicate	Method Name	Classification	Analyte Name	Fraction Name	Unit	Dil Factor	Result	Result Qual Code	MDL	RL	QACode	Lab Name	Percent Recovery	RPD	LCL	UCL
CNWW02	Temperance Ave	1/7/2016	Integrated	2	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW040	Camp Pashayan	1/18/2016	FieldBlank	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW040	Friant Dam	1/18/2016	Integrated	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW040	Rice Road	1/18/2016	Integrated	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW040	Camp Pashayan	1/18/2016	Integrated	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW040	Friant Dam	1/18/2016	Integrated	2	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	-0.004	ND	0.004	0.005	None	CAL				
WW040	Rice Road	1/18/2016	MS1	1	1	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.01	=	0.004	0.005	None	CAL	62		40	150
WW040	Rice Road	1/18/2016	MS1	1	2	EPA 625M	PAH	1-Methylphenanthrene	None	µg/L	1	0.02	=	0.004	0.005	None	CAL	77	22	40	150

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Appendix B

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APPENDIX B - 1996-2016 River Monitoring Summary Statistics

			Station 1 - Friant Dam								Station 2 - Rice Road								Station 3 - Jura Farms Bric				5.00			
							Percentiles								Percentiles								Percentiles			
Classification	Constituent	Season	n	%Det	Mean	StDev	10th	50th	90th	Max Det	n	%Det	Mean	StDev	10th	50th	90th	Max Det	n	%Det	Mean	StDev	10th	50th	90th	Max Det
Anion	Chloride	ALL	62	98%	3.07	1.49	1.35	2.71	5.44	7.4	61	98%	3.22	1.59	1.46	2.86	5.60	8.1	62	100%	3.19	1.37	1.56	2.89	5.35	6.9
Anion	Chloride	DW	20	95%	2.15	0.92	0.98	1.94	3.84	3.6	20	95%	2.19	0.90	1.05	2.00	3.79	3.7	20	100%	2.44	1.02	1.12	2.20	4.32	4
Anion	Chloride	WW	42	100%	3.50	1.52	1.68	3.17	5.96	7.4	41	100%	3.72	1.62	1.88	3.39	6.14	8.1	42	100%	3.55	1.38	1.92	3.29	5.65	6.9
Anion	Sulfate	ALL	62	45%	1.77	1.55	0.46	1.31	3.70	8.2	61	39%	1.73	1.66	0.40	1.22	3.72	8.4	62	44%	1.63	1.27	0.53	1.29	3.17	5.9
Anion	Sulfate	DW	20	35%	1.32	0.80	0.53	1.13	2.40	4	20	25%	1.33	0.34	0.89	1.28	1.85	2.2	20	40%	1.45	0.62	0.73	1.32	2.40	3
Anion	Sulfate	WW	42	50%	2.02	1.74	0.50	1.48	4.33	8.2	41	46%	2.04	1.91	0.43	1.41	4.62	8.4	42	45%	1.75	1.46	0.49	1.32	3.59	5.9
Bacteriological	E. coli	ALL	7	100%	7083.7	18484.2	0.3	56.2	10933.0	49000	7	100%	78.43	107.6	3.2	32.5	329.8	300	7	100%	245.1	472.6	2.8	52.7	974.1	1300
Bacteriological	E. coli	DW	2	100%	6.0	2.8				8	2	100%	7.50	0.7				8	2	100%	17.5	6.4				22
Bacteriological	E. coli	WW	5	100%	9914.8	21850.3	0.2	140.7	80257.5	49000	5	100%	106.80	117.7	6.2	58.6	558.2	300	5	100%	336.2	546.6	2.4	83.0	2849.0	1300
Bacteriological	Fecal Coliform	ALL	59	83%	1880.0	7612.4	0.3	19.5	1478.7	49000	58	98%	696.11	3949.8	2.2	33.1	497.2	30000	59	97%	1270.7	6682.2	2.4	48.1	949.9	50000
Bacteriological	Fecal Coliform	DW	20	55%	3.6	5.3	0.3	1.7	10.4	23	20	95%	9.36	7.0	2.1	6.9	22.8	30	20	90%	25.5	65.2	1.4	8.7	54.5	300
Bacteriological	Fecal Coliform	WW	39	97%	2842.3	9254.4	2.9	92.7	2965.1	49000	38	100%	1057.58	4862.5	5.8	78.1	1046.8	30000	39	100%	1909.4	8180.2	8.0	119.9	1804.6	50000
Bacteriological	Fecal Streptococcus	ALL	31	90%	229.7	706.7	0.6	19.4	598.4	3900	30	97%	455.21	1548.5	1.2	23.2	466.6	7300	31	87%	1012.0	3636.9	1.6	47.5	1425.9	19000
Bacteriological	Fecal Streptococcus	DW	12	83%	11.4	22.5	0.5	3.8	31.9	80	12	100%	11.17	18.9	1.6	6.1	23.2	70	12	75%	34.1	67.6	0.7	9.3	115.5	240
Bacteriological	Fecal Streptococcus	WW	19	95%	367.6	883.3	2.7	61.1	1395.6	3900	18	94%	751.25	1964.2	2.5	60.3	1464.6	7300	19	95%	1629.7	4582.8	6.6	142.8	3104.0	19000
Bacteriological	Fecal Streptococcus (CFU/100	ALL	14	93%	1468.9	5050.2	0.9	43.7	2130.4	19000	14	93%	113.91	262.3	2.2	27.2	335.7	1000	13	92%	560.0	940.4	3.6	103.3	2933.7	2900
Bacteriological	Fecal Streptococcus (CFU/100	DW	4	75%	4751.3	9499.2	0.0	2.1	210941.8	19000	4	100%	7.00	3.4	2.4	6.3	16.6	11	3	67%	ID	ID	ID	ID	ID	16
Bacteriological	Fecal Streptococcus (CFU/100	WW	10	100%	155.9	239.5	8.9	68.8	533.8	810	10	90%	157.08	303.5	8.4	57.7	398.4	1000	10	100%	ID	ID	ID	ID	ID	2900
Bacteriological	Total Coliform	ALL	59	100%	8754.4	45896.2	6.8	216.7	6942.1	350000	58	100%	1227.78	4074.0	26.3	249.9	2371.1	30000	59	97%	ID	ID	ID	ID	ID	160000
Bacteriological	Total Coliform	DW	20	100%	162.6	265.9	4.3	47.2	514.6	900	20	100%	131.35	93.1	22.8	91.7	368.4	300	20	90%	ID	ID	ID	ID	ID	2300
Bacteriological	Total Coliform	WW	39	100%	13160.4	56181.1	12.4	473.4	18081.4	350000	38	100%	1804.84	4957.1	40.0	423.5	4480.6	30000	39	100%	ID	ID	ID	ID	ID	160000
Cation	Aluminum	ALL	61	67%	0.17	0.34	0.01	0.07	0.43	2.2	60	70%	0.12	0.18	0.01	0.06	0.31	1	61	80%	ID	ID	ID	ID	ID	2
Cation	Aluminum	DW	19	37%	0.04	0.03	0.01	0.03	0.09	0.11	19	42%	0.04	0.03	0.01	0.03	0.09	0.10898	19	58%	ID	ID	ID	ID	ID	0.1
Cation	Aluminum	WW	42	81%	0.23	0.39	0.02	0.11	0.58	2.2	41	83%	0.16	0.20	0.02	0.09	0.42	1	42	90%	ID	ID	ID	ID	ID	2
Cation	Barium	ALL	61	48%	0.18	1.28	0.00	0.01	0.06	10	60	45%	0.17	1.22	0.00	0.01	0.05	9.5	61	46%	ID	ID	ID	ID	ID	10
Cation	Barium	DW	19	53%	0.54	2.29	0.00	0.01	0.11	10	19	53%	0.51	2.18	0.00	0.01	0.11	9.5	19	53%	ID	ID	ID	ID	ID	10
Cation	Barium	WW	42	45%	0.02	0.02	0.01	0.02	0.04	0.08	41	41%	0.02	0.02	0.01	0.01	0.03	0.067	42	43%	ID	ID	ID	ID	ID	0.055
Cation	Boron	ALL	61	39%	0.03	0.03	0.01	0.03	0.06	0.17	60	42%	0.03	0.01	0.02	0.03	0.05	0.099	61	43%	ID	ID	ID	ID	ID	0.092
Cation	Boron	DW	19	32%	0.03	0.02	0.01	0.03	0.06	0.084	19	26%	0.04	0.01	0.03	0.04	0.05	0.0495	19	37%	ID	ID	ID	ID	ID	0.092
Cation	Boron	WW	42	43%	0.03	0.03	0.01	0.03	0.06	0.17	41	49%	0.03	0.01	0.02	0.03	0.05	0.099	42	45%	ID	ID	ID	ID	ID	0.074
Cation	Calcium	ALL	62	100%	4.74	3.13	2.25	4.14	7.60	18	61	100%	4.81	3.32	2.40	4.22	7.44	19	62	100%	ID	ID	ID	ID	ID	15
Cation	Calcium	DW	20	100%	3.11	0.76	2.08	3.00	4.34	4	20	100%	3.22	0.72	2.25	3.13	4.35	4.1	20	100%	ID	ID	ID	ID	ID	3.9
Cation	Calcium	WW	42	100%	5.51	3.52	2.60	4.82	8.95	18	41	100%	5.59	3.79	2.74	4.89	8.72	19	42	100%	ID	ID	ID	ID	ID	15
Cation	Magnesium	ALL	62	100%	1.10	0.92	0.42	0.89	1.87	4.8	61	100%	1.23	1.37	0.46	0.96	1.97	8	62	100%	ID	ID	ID	ID	ID	5.6
Cation	Magnesium	DW	20	100%	0.60	0.15	0.41	0.58	0.84	0.8	20	100%	0.65	0.14	0.46	0.64	0.88	0.867	20	100%	ID	ID	ID	ID	ID	0.95
Cation	Magnesium	WW	42	100%	1.33	1.04	0.51	1.09	2.33	4.8	41	100%	1.52	1.59	0.55	1.16	2.48	8	42	100%	ID	ID	ID	ID	ID	5.6
Cation	Potassium	ALL	61	20%	0.85	0.75	0.23	0.63	1.75	3.7	60	15%	0.81	0.75	0.22	0.61	1.66	4.1	61	26%	ID	ID	ID	ID	ID	4
Cation	Potassium	DW	19	16%	0.61	0.17	0.37	0.59	0.92	1	19	16%	0.63	0.17	0.39	0.60	0.93	1	19	16%	ID	ID	ID	ID	ID	1
Cation	Potassium	WW	42	21%	0.87	0.89	0.15	0.55	2.04	3.7	41	15%	0.68	0.93	0.07	0.34	1.75	4.1	42	31%	ID	ID	ID	ID	ID	4
Cation	Sodium	ALL	61	100%	4.78	2.69	2.30	4.25	7.84	16	60	100%	4.66	2.29	2.40	4.23	7.46	13	61	100%	ID	ID	ID	ID	ID	11
Cation	Sodium	DW	19	100%	3.32	1.10	1.83	3.11	5.29	4.9	19	100%	3.54	1.20	1.93	3.31	5.67	5	19	100%	ID	ID	ID	ID	ID	5.1
Cation	Sodium	WW	42	100%	5.43	2.94	2.77	4.89	8.65	16	41	100%	5.17	2.49	2.80	4.74	8.04	13	42	100%	ID	ID	ID	ID	ID	11
Conventional	Chemical Oxygen Demand	ALL	62	71%	12.13	16.33	2.00	7.33	26.90	110	61	75%	10.35	12.12	2.30	7.10	21.93	85	62	73%	ID	ID	ID	ID	ID	140
Conventional	Chemical Oxygen Demand	DW	20	65%	9.33	8.15	2.39	7.00	20.52	37	20	80%	7.27	4.34	3.12	6.35	12.90	22	20	70%	ID	ID	ID	ID	ID	110
Conventional	Chemical Oxygen Demand	WW	42	74%	13.53	18.95	1.86	7.65	31.44	110	41	73%	11.89	14.27	2.12	7.62	27.37	85	42	74%	ID	ID	ID	ID	ID	140
Conventional	Dissolved Organic Carbon	ALL	10	100%	2.48	3.02	0.80	1.81	4.08	11	10	100%	1.91	0.58	1.25	1.84	2.72	3.3	10	100%	ID	ID	ID	ID	ID	3.2
Conventional	Dissolved Organic Carbon	DW	3	100%	1.38	0.23	1.02	1.37	1.84	1.6419	3	100%	1.54	0.22	1.17	1.53	2.02	1.73455	3	100%	ID	ID	ID	ID	ID	1.7431
Conventional	Dissolved Organic Carbon	WW	7	100%	2.95	3.58	0.71	2.05	5.90	11	7	100%	2.06	0.62	1.31	2.00	3.04	3.3	7	100%	ID	ID	ID	ID	ID	3.2
Conventional	Hardness (as CaCO3)	ALL	62	100%	16.31	11.64	7.34	13.97	26.60	65	61	100%	17.06	13.79	7.86	14.50	26.75	80	62	100%	ID	ID	ID	ID	ID	60
Conventional	Hardness (as CaCO3)	DW	20	100%	10.17	2.40	6.92	9.85	14.03	13	20	100%	10.63	2.25	7.58	10.37	14.19	14	20	100%	ID	ID	ID	ID	ID	13
Conventional	Hardness (as CaCO3)	WW	42	100%	19.23	13.10	8.53	16.50	31.95	65	41	100%	20.20	15.87	9.05	17.08	32.22	80	42	100%	ID	ID	ID	ID	ID	60
Conventional	Total Dissolved Solids	ALL	62	97%	39.57	23.27	17.79	34.73	67.78	130	61	97%	38.02	23.59	17.15	33.26	64.50	140	62	97%	ID	ID	ID	ID	ID	130
Conventional	Total Dissolved Solids	DW	20	95%	31.48	10.64	17.84	29.73	49.54	49	20	95%	27.51	9.94	14.87	25.74	44.57	46	20	95%	ID	ID	ID	ID	ID	45
Conventional	Total Dissolved Solids	WW	42	98%	43.45	26.54	18.17	37.57	77.68	130	41	98%	43.17	26.54	19.52	37.84	73.37	140	42	98%	ID	ID	ID	ID	ID	130
Conventional	Total Organic Carbon	ALL	61	100%	3.42	3.80	1.14	2.57	5.81	25	60	98%	3.01	2.67	1.24	2.49	5.01	18	61	100%	ID	ID	ID	ID	ID	27
Conventional	Total Organic Carbon	DW	19	100%	2.48	2.33	1.27	2.11	3.51	12	19	100%	2.14	0.38	1.60	2.10	2.75	2.8	19	100%	ID	ID	ID	ID	ID	5.6
Conventional	Total Organic Carbon	WW	42	100%	3.84	4.27	1.11	2.81	7.13	25	41	98%	3.41	3.16	1.15	2.68	6.29	18	42	100%	ID	ID	ID	ID	ID	27
Conventional	Total Suspended Solids	ALL	62	37%	10.54	26.58	0.25	2.35	22.40	130	61	31%	7.68	19.31	0.09	1.24	17.53	110	62	39%	ID	ID	ID	ID	ID	79
Conventional	Total Suspended Solids	DW	20	20%	8.70	28.63	0.19	1.66	14.22	130	20	15%	ID	ID	ID	ID	ID	8	20	15%	ID	ID	ID	ID	ID	12
Conventional	Total Suspended Solids	WW	42	45%	11.45	25.86	0.27	2.81	29.35	120	41	39%	ID	ID	ID	ID	ID	110	42	50%	ID	ID	ID	ID	ID	79
Field	Conductivity	ALL	47	100%	41.02	24.28	9.86	31.15	98.43	105	46	100%	ID	ID	ID	ID	ID	108	47	100%	ID	ID	ID	ID	ID	132
Field	Conductivity	DW	15	100%	34.54	23.84	3.06	20.39	135.63	99	15	100%	ID	ID	ID	ID	ID	91	15	100%	ID	ID	ID	ID	ID	85

APPENDIX B - 1996-2016 River Monitoring Summary Statistics

			Station 1 - Friant Dam								Station 2 - Rice Road								Station 3 - Jura Farms Bric				5.00			
							Percentiles								Percentiles								Percentiles			
Classification	Constituent	Season	n	%Det	Mean	StDev	10th	50th	90th	Max Det	n	%Det	Mean	StDev	10th	50th	90th	Max Det	n	%Det	Mean	StDev	10th	50th	90th	Max Det
Field	Conductivity	WW	32	100%	44.06	24.25	17.34	38.00	83.27	105	31	100%	ID	ID	ID	ID	ID	108	32	100%	ID	ID	ID	ID	ID	132
Field	Dissolved Oxygen	ALL	47	100%	7.55	1.69	5.22	7.32	10.26	10.36	46	100%	ID	ID	ID	ID	ID	14.14	47	100%	ID	ID	ID	ID	ID	11.35
Field	Dissolved Oxygen	DW	15	100%	7.77	1.51	5.63	7.61	10.29	9.64	15	100%	ID	ID	ID	ID	ID	10.92	15	100%	ID	ID	ID	ID	ID	11.35
Field	Dissolved Oxygen	WW	32	100%	7.45	1.78	4.95	7.18	10.41	10.36	31	100%	ID	ID	ID	ID	ID	14.14	32	100%	ID	ID	ID	ID	ID	11
Field	pH	ALL	47	100%	7.01	0.61	6.19	6.98	7.87	8.41	46	100%	ID	ID	ID	ID	ID	8.12	47	100%	ID	ID	ID	ID	ID	8.2
Field	pH	DW	15	100%	6.82	0.73	5.80	6.78	7.93	8.2	15	100%	ID	ID	ID	ID	ID	7.69	15	100%	ID	ID	ID	ID	ID	7.87
Field	pH	WW	32	100%	7.10	0.54	6.37	7.08	7.86	8.41	31	100%	ID	ID	ID	ID	ID	8.12	32	100%	ID	ID	ID	ID	ID	8.2
Field	Temperature	ALL	47	100%	10.97	2.12	8.75	10.81	13.37	21.2	46	100%	ID	ID	ID	ID	ID	21.1	47	100%	ID	ID	ID	ID	ID	24.3
Field	Temperature	DW	15	100%	12.79	2.74	9.75	12.56	16.18	21.2	15	100%	ID	ID	ID	ID	ID	21.1	15	100%	ID	ID	ID	ID	ID	24.3
Field	Temperature	WW	32	100%	10.13	0.98	8.82	10.08	11.51	12.2	31	100%	ID	ID	ID	ID	ID	13.8	32	100%	ID	ID	ID	ID	ID	16.6
Field	Turbidity	ALL	48	100%	12.82	15.17	1.79	7.60	32.36	87	46	100%	ID	ID	ID	ID	ID	105	47	100%	ID	ID	ID	ID	ID	75
Field	Turbidity	DW	14	100%	6.57	5.08	0.93	4.22	19.23	14	12	100%	ID	ID	ID	ID	ID	23	12	100%	ID	ID	ID	ID	ID	21
Field	Turbidity	WW	34	100%	15.39	17.16	2.47	9.69	38.09	87	34	100%	ID	ID	ID	ID	ID	105	35	100%	ID	ID	ID	ID	ID	75
Hydrocarbon	Oil & Grease, Total	ALL	61	5%	ID	ID	ID	ID	ID	11	60	2%	ID	ID	ID	ID	ID	2.2	61	7%	ID	ID	ID	ID	ID	1.7
Hydrocarbon	Oil & Grease, Total	DW	19	0%	---	---	---	---	---	---	19	0%	ID	ID	ID	ID	ID	---	19	0%	ID	ID	ID	ID	ID	---
Hydrocarbon	Oil & Grease, Total	WW	42	7%	ID	ID	ID	ID	ID	11	41	2%	ID	ID	ID	ID	ID	2.2	42	10%	ID	ID	ID	ID	ID	1.7
Metal	Arsenic-D	ALL	44	100%	1.69	0.65	1.00	1.59	2.52	4.15	43	100%	ID	ID	ID	ID	ID	3.91	44	98%	ID	ID	ID	ID	ID	2.91
Metal	Arsenic-D	DW	14	100%	1.79	0.50	1.13	1.73	2.63	2.84	14	100%	ID	ID	ID	ID	ID	2.67	14	93%	ID	ID	ID	ID	ID	2.91
Metal	Arsenic-D	WW	30	100%	1.64	0.72	0.94	1.53	2.49	4.15	29	100%	ID	ID	ID	ID	ID	3.91	30	100%	ID	ID	ID	ID	ID	2.87
Metal	Arsenic-TR	ALL	62	95%	1.96	0.90	1.08	1.81	3.05	5.9	61	98%	ID	ID	ID	ID	ID	4.43	62	98%	ID	ID	ID	ID	ID	3.35
Metal	Arsenic-TR	DW	20	100%	1.88	0.54	1.20	1.81	2.72	3.27	20	100%	ID	ID	ID	ID	ID	2.74	20	95%	ID	ID	ID	ID	ID	3
Metal	Arsenic-TR	WW	42	93%	2.00	1.03	1.00	1.81	3.27	5.9	41	98%	ID	ID	ID	ID	ID	4.43	42	100%	ID	ID	ID	ID	ID	3.35
Metal	Cadmium-D	ALL	60	52%	0.03	0.06	0.00	0.01	0.06	0.379	59	49%	ID	ID	ID	ID	ID	0.245	60	50%	ID	ID	ID	ID	ID	0.351
Metal	Cadmium-D	DW	20	45%	0.01	0.01	0.00	0.01	0.02	0.063	20	45%	ID	ID	ID	ID	ID	0.047	20	45%	ID	ID	ID	ID	ID	0.029
Metal	Cadmium-D	WW	40	55%	0.03	0.07	0.00	0.01	0.08	0.379	39	51%	ID	ID	ID	ID	ID	0.245	40	53%	ID	ID	ID	ID	ID	0.351
Metal	Cadmium-TR	ALL	62	60%	0.04	0.09	0.00	0.01	0.09	0.589	61	59%	ID	ID	ID	ID	ID	0.325	62	60%	ID	ID	ID	ID	ID	0.689
Metal	Cadmium-TR	DW	20	60%	0.01	0.02	0.00	0.01	0.03	0.078	20	55%	ID	ID	ID	ID	ID	0.07	20	50%	ID	ID	ID	ID	ID	0.043
Metal	Cadmium-TR	WW	42	60%	0.05	0.11	0.00	0.01	0.13	0.589	41	61%	ID	ID	ID	ID	ID	0.325	42	64%	ID	ID	ID	ID	ID	0.689
Metal	Chromium-D	ALL	43	63%	0.09	0.07	0.02	0.06	0.19	0.29	43	60%	ID	ID	ID	ID	ID	0.8	44	64%	ID	ID	ID	ID	ID	1.01
Metal	Chromium-D	DW	13	62%	0.08	0.05	0.03	0.06	0.15	0.19	13	62%	ID	ID	ID	ID	ID	0.4	14	50%	ID	ID	ID	ID	ID	0.32
Metal	Chromium-D	WW	30	63%	0.09	0.08	0.02	0.06	0.22	0.29	30	60%	ID	ID	ID	ID	ID	0.8	30	70%	ID	ID	ID	ID	ID	1.01
Metal	Chromium-TR	ALL	62	53%	0.29	0.73	0.01	0.09	0.65	5.46	61	51%	ID	ID	ID	ID	ID	1.66	62	60%	ID	ID	ID	ID	ID	1.97
Metal	Chromium-TR	DW	20	35%	0.10	0.22	0.01	0.04	0.26	1	20	35%	ID	ID	ID	ID	ID	0.18	20	40%	ID	ID	ID	ID	ID	0.36
Metal	Chromium-TR	WW	42	62%	0.37	0.86	0.02	0.14	0.86	5.46	41	59%	ID	ID	ID	ID	ID	1.66	42	69%	ID	ID	ID	ID	ID	1.97
Metal	Copper-D	ALL	60	88%	0.63	0.37	0.28	0.55	1.07	2.01	58	90%	ID	ID	ID	ID	ID	3	60	92%	ID	ID	ID	ID	ID	2.52
Metal	Copper-D	DW	20	85%	0.48	0.27	0.23	0.43	0.77	1.3	20	85%	ID	ID	ID	ID	ID	2	20	85%	ID	ID	ID	ID	ID	1
Metal	Copper-D	WW	40	90%	0.71	0.39	0.32	0.62	1.20	2.01	39	92%	ID	ID	ID	ID	ID	3	40	95%	ID	ID	ID	ID	ID	2.52
Metal	Copper-TR	ALL	62	87%	0.94	1.02	0.31	0.72	1.67	7.35	61	90%	ID	ID	ID	ID	ID	5	62	92%	ID	ID	ID	ID	ID	3.77
Metal	Copper-TR	DW	20	75%	0.50	0.18	0.30	0.47	0.74	1.06	20	75%	ID	ID	ID	ID	ID	0.77	20	80%	ID	ID	ID	ID	ID	1
Metal	Copper-TR	WW	42	93%	1.15	1.18	0.37	0.88	2.08	7.35	41	98%	ID	ID	ID	ID	ID	5	42	98%	ID	ID	ID	ID	ID	3.77
Metal	Iron-D	ALL	61	51%	0.06	0.16	0.00	0.01	0.13	0.967	60	53%	ID	ID	ID	ID	ID	0.4	61	70%	ID	ID	ID	ID	ID	0.561
Metal	Iron-D	DW	20	45%	0.10	0.27	0.00	0.00	0.20	0.967	20	50%	ID	ID	ID	ID	ID	0.4	20	65%	ID	ID	ID	ID	ID	0.535
Metal	Iron-TR	ALL	41	54%	0.04	0.05	0.00	0.02	0.11	0.216	40	55%	ID	ID	ID	ID	ID	0.259	41	73%	ID	ID	ID	ID	ID	0.561
Metal	Iron-TR	DW	62	76%	0.48	1.74	0.02	0.13	0.74	13.4	61	77%	ID	ID	ID	ID	ID	3.46	62	85%	ID	ID	ID	ID	ID	4.9
Metal	Lead-D	ALL	61	51%	0.06	0.16	0.00	0.01	0.13	0.967	60	53%	ID	ID	ID	ID	ID	0.4	61	70%	ID	ID	ID	ID	ID	0.561
Metal	Lead-D	DW	20	45%	0.10	0.27	0.00	0.00	0.20	0.967	20	50%	ID	ID	ID	ID	ID	0.4	20	65%	ID	ID	ID	ID	ID	0.535
Metal	Lead-D	WW	41	54%	0.04	0.05	0.00	0.02	0.11	0.216	40	55%	ID	ID	ID	ID	ID	0.259	41	73%	ID	ID	ID	ID	ID	0.561
Metal	Lead-TR	ALL	62	76%	0.48	1.74	0.02	0.13	0.74	13.4	61	77%	ID	ID	ID	ID	ID	3.46	62	85%	ID	ID	ID	ID	ID	4.9
Metal	Lead-TR	DW	20	65%	0.09	0.09	0.02	0.06	0.20	0.414	20	60%	ID	ID	ID	ID	ID	1.15	20	75%	ID	ID	ID	ID	ID	0.695
Metal	Lead-TR	WW	42	81%	0.68	2.10	0.04	0.20	1.03	13.4	41	85%	ID	ID	ID	ID	ID	3.46	42	90%	ID	ID	ID	ID	ID	4.9
Metal	Mercury-TR	ALL	61	66%	1.52	1.97	0.34	1.02	3.04	12.3	61	64%	ID	ID	ID	ID	ID	5.81	62	66%	ID	ID	ID	ID	ID	17.7
Metal	Mercury-TR	DW	20	65%	0.87	0.25	0.54	0.83	1.29	1.5	20	65%	ID	ID	ID	ID	ID	4.58	20	65%	ID	ID	ID	ID	ID	1.92
Metal	Mercury-TR	WW	41	66%	1.85	2.33	0.33	1.17	4.13	12.3	41	63%	ID	ID	ID	ID	ID	5.81	42	67%	ID	ID	ID	ID	ID	17.7
Metal	Nickel-D	ALL	60	78%	0.19	0.22	0.03	0.12	0.44	1.1	60	72%	ID	ID	ID	ID	ID	1.2	60	73%	ID	ID	ID	ID	ID	1.34
Metal	Nickel-D	DW	20	70%	0.19	0.30	0.01	0.09	0.51	1.1	20	70%	ID	ID	ID	ID	ID	1.2	20	65%	ID	ID	ID	ID	ID	1.1
Metal	Nickel-D	WW	40	83%	0.19	0.17	0.05	0.14	0.43	0.94	40	73%	ID	ID	ID	ID	ID	0.87	40	78%	ID	ID	ID	ID	ID	1.34
Metal	Nickel-TR	ALL	62	82%	0.33	0.51	0.06	0.20	0.69	3.67	61	79%	ID	ID	ID	ID	ID	2	62	79%	ID	ID	ID	ID	ID	3.47
Metal	Nickel-TR	DW	20	80%	0.18	0.23	0.04	0.13	0.40	1.1	20	60%	ID	ID	ID	ID	ID	1.1	20	70%	ID	ID	ID	ID	ID	1.5
Metal	Nickel-TR	WW	42	83%	0.40	0.59	0.07	0.24	0.85	3.67	41	88%	ID	ID	ID	ID	ID	2	42	83%	ID	ID	ID	ID	ID	3.47
Metal	Selenium-D	ALL	44	20%	0.15	0.12	0.04	0.12	0.32	0.7	43	12%	ID	ID	ID	ID	ID	1	44	9%	ID	ID	ID	ID	ID	0.74
Metal	Selenium-D	DW	14	14%	ID	ID	ID	ID	ID	0.42	14	7%	ID	ID	ID	ID	ID	0.2	14	7%	ID	ID	ID	ID	ID	0.31
Metal	Selenium-D	WW	30	23%	0.16	0.13	0.05	0.13	0.34	0.7	29	14%	ID	ID	ID	ID	ID	1	30	10%	ID	ID	ID	ID	ID	0.74

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			Station 1 - Friant Dam								Station 2 - Rice Road								Station 3 - Jura Farms Bric				5.00			
							Percentiles								Percentiles								Percentiles			
Classification	Constituent	Season	n	%Det	Mean	StDev	10th	50th	90th	Max Det	n	%Det	Mean	StDev	10th	50th	90th	Max Det	n	%Det	Mean	StDev	10th	50th	90th	Max Det
Metal	Selenium-TR	ALL	62	16%	0.12	0.11	0.03	0.08	0.26	0.53	61	16%	ID	ID	ID	ID	ID	1.65	62	10%	ID	ID	ID	ID	ID	0.4
Metal	Selenium-TR	DW	20	15%	0.08	0.05	0.02	0.07	0.20	0.26	20	5%	ID	ID	ID	ID	ID	0.31	20	5%	ID	ID	ID	ID	ID	0.2
Metal	Selenium-TR	WW	42	17%	0.16	0.11	0.05	0.13	0.32	0.53	41	22%	ID	ID	ID	ID	ID	1.65	42	12%	ID	ID	ID	ID	ID	0.4
Metal	Silver-D	ALL	44	14%	0.00	0.00	0.00	0.00	0.01	0.017	43	12%	ID	ID	ID	ID	ID	0.024	44	14%	ID	ID	ID	ID	ID	0.016
Metal	Silver-D	DW	14	7%	ID	ID	ID	ID	ID	0.017	14	14%	ID	ID	ID	ID	ID	0.024	14	14%	ID	ID	ID	ID	ID	0.015
Metal	Silver-D	WW	30	17%	0.00	0.00	0.00	0.00	0.01	0.014	29	10%	ID	ID	ID	ID	ID	0.024	30	13%	ID	ID	ID	ID	ID	0.016
Metal	Silver-TR	ALL	62	19%	0.00	0.01	0.00	0.00	0.01	0.051	61	8%	ID	ID	ID	ID	ID	0.013	62	16%	ID	ID	ID	ID	ID	0.019
Metal	Silver-TR	DW	20	10%	ID	ID	ID	ID	ID	0.023	20	5%	ID	ID	ID	ID	ID	0.013	20	10%	ID	ID	ID	ID	ID	0.015
Metal	Silver-TR	WW	42	24%	0.01	0.01	0.00	0.00	0.02	0.051	41	10%	ID	ID	ID	ID	ID	0.012	42	19%	ID	ID	ID	ID	ID	0.019
Metal	Zinc-D	ALL	58	83%	3.59	8.40	0.31	1.39	6.30	53.7	57	79%	ID	ID	ID	ID	ID	86.1	59	81%	ID	ID	ID	ID	ID	48.1
Metal	Zinc-D	DW	18	83%	3.32	7.34	0.20	1.19	7.04	31.8	19	79%	ID	ID	ID	ID	ID	32.4	19	74%	ID	ID	ID	ID	ID	3.22
Metal	Zinc-D	WW	40	83%	3.72	8.92	0.39	1.52	5.92	53.7	39	79%	ID	ID	ID	ID	ID	86.1	40	85%	ID	ID	ID	ID	ID	48.1
Metal	Zinc-TR	ALL	62	81%	4.12	6.90	0.37	1.87	9.48	37	61	80%	ID	ID	ID	ID	ID	38.1	62	81%	ID	ID	ID	ID	ID	42.8
Metal	Zinc-TR	DW	20	65%	3.18	8.12	0.11	0.87	7.04	37	20	70%	ID	ID	ID	ID	ID	38.1	20	65%	ID	ID	ID	ID	ID	3.91
Metal	Zinc-TR	WW	42	88%	4.56	6.30	0.64	2.54	10.04	29.8	41	85%	ID	ID	ID	ID	ID	11	42	88%	ID	ID	ID	ID	ID	42.8
Nutrient	Ammonia (NH3-N)	ALL	62	16%	0.07	0.15	0.00	0.02	0.18	0.81	61	15%	ID	ID	ID	ID	ID	4	62	24%	ID	ID	ID	ID	ID	1.2
Nutrient	Ammonia (NH3-N)	DW	20	5%	ID	ID	ID	ID	ID	0.0916	20	5%	ID	ID	ID	ID	ID	0.03	20	5%	ID	ID	ID	ID	ID	0.12
Nutrient	Ammonia (NH3-N)	WW	39	23%	ID	ID	ID	ID	ID	0.81	38	21%	ID	ID	ID	ID	ID	4	39	33%	ID	ID	ID	ID	ID	0.65
Nutrient	Nitrate as N	ALL	10	30%	ID	ID	ID	ID	ID	0.7261	10	30%	ID	ID	ID	ID	ID	2	10	30%	ID	ID	ID	ID	ID	0.876
Nutrient	Nitrate as N	DW	3	33%	ID	ID	ID	ID	ID	0.616	3	0%	ID	ID	ID	ID	ID	---	3	33%	ID	ID	ID	ID	ID	0.4546
Nutrient	Nitrate as N	WW	7	29%	ID	ID	ID	ID	ID	0.7261	7	29%	ID	ID	ID	ID	ID	0.9568	7	29%	ID	ID	ID	ID	ID	0.876
Nutrient	Nitrate as NO3	ALL	52	25%	ID	ID	ID	ID	ID	4.8	51	31%	ID	ID	ID	ID	ID	4	52	31%	ID	ID	ID	ID	ID	3.3
Nutrient	Nitrate as NO3	DW	17	6%	ID	ID	ID	ID	ID	1	17	6%	ID	ID	ID	ID	ID	0.8	17	6%	ID	ID	ID	ID	ID	0.7
Nutrient	Nitrate as NO3	WW	38	32%	ID	ID	ID	ID	ID	4.8	37	41%	ID	ID	ID	ID	ID	4	38	42%	ID	ID	ID	ID	ID	3.3
Nutrient	Nitrite as N	ALL	62	0%	ID	ID	ID	ID	ID	---	61	0%	ID	ID	ID	ID	ID	---	62	0%	ID	ID	ID	ID	ID	---
Nutrient	Nitrite as N	DW	20	0%	ID	ID	ID	ID	ID	---	20	0%	ID	ID	ID	ID	ID	---	20	0%	ID	ID	ID	ID	ID	---
Nutrient	Nitrite as N	WW	39	0%	ID	ID	ID	ID	ID	---	38	0%	ID	ID	ID	ID	ID	---	39	0%	ID	ID	ID	ID	ID	---
Nutrient	Orthophosphate as PO4	ALL	62	10%	ID	ID	ID	ID	ID	0.17	61	8%	ID	ID	ID	ID	ID	3.7	62	6%	ID	ID	ID	ID	ID	0.13
Nutrient	Orthophosphate as PO4	DW	20	5%	ID	ID	ID	ID	ID	0.05	20	0%	ID	ID	ID	ID	ID	---	20	5%	ID	ID	ID	ID	ID	0.06
Nutrient	Orthophosphate as PO4	WW	42	12%	ID	ID	ID	ID	ID	0.17	41	12%	ID	ID	ID	ID	ID	3.7	42	7%	ID	ID	ID	ID	ID	0.13
Nutrient	Phosphorus as PO4	ALL	10	10%	ID	ID	ID	ID	ID	0.21	10	10%	ID	ID	ID	ID	ID	0.047	10	20%	ID	ID	ID	ID	ID	0.1
Nutrient	Phosphorus as PO4	DW	3	0%	ID	ID	ID	ID	ID	---	3	0%	ID	ID	ID	ID	ID	---	3	0%	ID	ID	ID	ID	ID	---
Nutrient	Phosphorus as PO4	WW	7	0%	ID	ID	ID	ID	ID	---	7	29%	ID	ID	ID	ID	ID	2	7	14%	ID	ID	ID	ID	ID	0.047
Nutrient	Total Kjeldahl Nitrogen	ALL	61	16%	ID	ID	ID	ID	ID	1.7	60	15%	ID	ID	ID	ID	ID	1.7	62	21%	ID	ID	ID	ID	ID	2
Nutrient	Total Kjeldahl Nitrogen	DW	20	15%	ID	ID	ID	ID	ID	0.6	20	15%	ID	ID	ID	ID	ID	1.1	20	20%	ID	ID	ID	ID	ID	1.3
Nutrient	Total Kjeldahl Nitrogen	WW	41	17%	ID	ID	ID	ID	ID	1.7	40	15%	ID	ID	ID	ID	ID	1.7	42	21%	ID	ID	ID	ID	ID	2
PAH	1-Methylnaphthalene	ALL	53	15%	ID	ID	ID	ID	ID	0.0027	52	10%	ID	ID	ID	ID	ID	0.0161	53	25%	ID	ID	ID	ID	ID	0.0044
PAH	1-Methylnaphthalene	DW	17	12%	ID	ID	ID	ID	ID	0.0013	17	12%	ID	ID	ID	ID	ID	0.0161	17	29%	ID	ID	ID	ID	ID	0.0044
PAH	1-Methylnaphthalene	WW	36	17%	ID	ID	ID	ID	ID	0.0027	35	9%	ID	ID	ID	ID	ID	0.002	36	22%	ID	ID	ID	ID	ID	0.0027
PAH	1-Methylphenanthrene	ALL	53	0%	ID	ID	ID	ID	ID	---	52	0%	ID	ID	ID	ID	ID	---	53	8%	ID	ID	ID	ID	ID	0.0022
PAH	1-Methylphenanthrene	DW	17	0%	ID	ID	ID	ID	ID	---	17	0%	ID	ID	ID	ID	ID	---	17	0%	ID	ID	ID	ID	ID	---
PAH	1-Methylphenanthrene	WW	36	0%	ID	ID	ID	ID	ID	---	35	0%	ID	ID	ID	ID	ID	---	36	11%	ID	ID	ID	ID	ID	0.0022
PAH	2,3,5-Trimethylnaphthalene	ALL	53	0%	ID	ID	ID	ID	ID	---	52	2%	ID	ID	ID	ID	ID	0.008	53	2%	ID	ID	ID	ID	ID	0.0049
PAH	2,3,5-Trimethylnaphthalene	DW	17	0%	ID	ID	ID	ID	ID	---	17	0%	ID	ID	ID	ID	ID	---	17	0%	ID	ID	ID	ID	ID	---
PAH	2,3,5-Trimethylnaphthalene	WW	36	0%	ID	ID	ID	ID	ID	---	35	3%	ID	ID	ID	ID	ID	0.008	36	3%	ID	ID	ID	ID	ID	0.0049
PAH	2,6-Dimethylnaphthalene	ALL	53	0%	ID	ID	ID	ID	ID	---	52	6%	ID	ID	ID	ID	ID	0.0013	53	9%	ID	ID	ID	ID	ID	0.0023
PAH	2,6-Dimethylnaphthalene	DW	17	0%	ID	ID	ID	ID	ID	---	17	6%	ID	ID	ID	ID	ID	0.0013	17	12%	ID	ID	ID	ID	ID	0.0023
PAH	2,6-Dimethylnaphthalene	WW	36	0%	ID	ID	ID	ID	ID	---	35	6%	ID	ID	ID	ID	ID	0.0012	36	8%	ID	ID	ID	ID	ID	0.0018
PAH	2-Chloronaphthalene	ALL	3	0%	ID	ID	ID	ID	ID	---	1	0%	ID	ID	ID	ID	ID	---	3	0%	ID	ID	ID	ID	ID	---
PAH	2-Chloronaphthalene	DW	1	0%	ID	ID	ID	ID	ID	---	0		ID	ID	ID	ID	ID		1	0%	ID	ID	ID	ID	ID	---
PAH	2-Chloronaphthalene	WW	5	20%	ID	ID	ID	ID	ID	0.21	4	0%	ID	ID	ID	ID	ID	---	5	20%	ID	ID	ID	ID	ID	0.1
PAH	2-Methylnaphthalene	ALL	53	21%	ID	ID	ID	ID	ID	0.008	52	25%	ID	ID	ID	ID	ID	0.0158	53	32%	ID	ID	ID	ID	ID	0.0078
PAH	2-Methylnaphthalene	DW	17	24%	ID	ID	ID	ID	ID	0.003	17	35%	ID	ID	ID	ID	ID	0.0158	17	41%	ID	ID	ID	ID	ID	0.0078
PAH	2-Methylnaphthalene	WW	36	19%	ID	ID	ID	ID	ID	0.008	35	20%	ID	ID	ID	ID	ID	0.0037	36	28%	ID	ID	ID	ID	ID	0.0042
PAH	Acenaphthene	ALL	62	0%	ID	ID	ID	ID	ID	---	60	3%	ID	ID	ID	ID	ID	0.00915	62	13%	ID	ID	ID	ID	ID	0.0076
PAH	Acenaphthene	DW	20	0%	ID	ID	ID	ID	ID	---	19	5%	ID	ID	ID	ID	ID	0.00915	20	10%	ID	ID	ID	ID	ID	0.002
PAH	Acenaphthene	WW	39	0%	ID	ID	ID	ID	ID	---	38	3%	ID	ID	ID	ID	ID	0.001	39	15%	ID	ID	ID	ID	ID	0.0076
PAH	Acenaphthylene	ALL	62	0%	ID	ID	ID	ID	ID	---	60	2%	ID	ID	ID	ID	ID	0.0118	62	6%	ID	ID	ID	ID	ID	0.006
PAH	Acenaphthylene	DW	20	0%	ID	ID	ID	ID	ID	---	19	5%	ID	ID	ID	ID	ID	0.0118	20	5%	ID	ID	ID	ID	ID	0.006
PAH	Acenaphthylene	WW	42	0%	ID	ID	ID	ID	ID	---	41	0%	ID	ID	ID	ID	ID	---	42	7%	ID	ID	ID	ID	ID	0.0022
PAH	Anthracene	ALL	62	0%	ID	ID	ID	ID	ID	---	60	2%	ID	ID	ID	ID	ID	0.0013	62	6%	ID	ID	ID	ID	ID	0.0093
PAH	Anthracene	DW	20	0%	ID	ID	ID	ID	ID	---	19	0%	ID	ID	ID	ID	ID	---	20	0%	ID	ID	ID	ID	ID	---

APPENDIX B - 1996-2016 River Monitoring Summary Statistics

			Station 1 - Friant Dam								Station 2 - Rice Road								Station 3 - Jura Farms Bric				5.00			
							Percentiles								Percentiles								Percentiles			
Classification	Constituent	Season	n	%Det	Mean	StDev	10th	50th	90th	Max Det	n	%Det	Mean	StDev	10th	50th	90th	Max Det	n	%Det	Mean	StDev	10th	50th	90th	Max Det
PAH	Anthracene	WW	42	0%	ID	ID	ID	ID	ID	---	41	2%	ID	ID	ID	ID	ID	0.0013	42	10%	ID	ID	ID	ID	ID	0.0093
PAH	Benzo(a)anthracene	ALL	62	2%	ID	ID	ID	ID	ID	0.0016	60	2%	ID	ID	ID	ID	ID	0.0013	62	15%	ID	ID	ID	ID	ID	0.0126
PAH	Benzo(a)anthracene	DW	20	0%	ID	ID	ID	ID	ID	---	19	0%	ID	ID	ID	ID	ID	---	20	0%	ID	ID	ID	ID	ID	---
PAH	Benzo(a)anthracene	WW	42	2%	ID	ID	ID	ID	ID	0.0016	41	2%	ID	ID	ID	ID	ID	0.0013	42	21%	ID	ID	ID	ID	ID	0.0126
PAH	Benzo(a)pyrene	ALL	62	0%	ID	ID	ID	ID	ID	---	60	0%	ID	ID	ID	ID	ID	---	62	8%	ID	ID	ID	ID	ID	0.012
PAH	Benzo(a)pyrene	DW	20	0%	ID	ID	ID	ID	ID	---	19	0%	ID	ID	ID	ID	ID	---	20	0%	ID	ID	ID	ID	ID	---
PAH	Benzo(a)pyrene	WW	42	0%	ID	ID	ID	ID	ID	---	41	0%	ID	ID	ID	ID	ID	---	42	12%	ID	ID	ID	ID	ID	0.012
PAH	Benzo(b)fluoranthene	ALL	62	3%	ID	ID	ID	ID	ID	0.004	60	0%	ID	ID	ID	ID	ID	---	62	6%	ID	ID	ID	ID	ID	0.0178
PAH	Benzo(b)fluoranthene	DW	20	0%	ID	ID	ID	ID	ID	---	19	0%	ID	ID	ID	ID	ID	---	20	0%	ID	ID	ID	ID	ID	---
PAH	Benzo(b)fluoranthene	WW	42	5%	ID	ID	ID	ID	ID	0.004	41	0%	ID	ID	ID	ID	ID	---	42	10%	ID	ID	ID	ID	ID	0.0178
PAH	Benzo(e)pyrene	ALL	53	6%	ID	ID	ID	ID	ID	0.0035	52	2%	ID	ID	ID	ID	ID	0.0014	53	11%	ID	ID	ID	ID	ID	0.012
PAH	Benzo(e)pyrene	DW	17	0%	ID	ID	ID	ID	ID	---	17	0%	ID	ID	ID	ID	ID	---	17	0%	ID	ID	ID	ID	ID	---
PAH	Benzo(e)pyrene	WW	36	8%	ID	ID	ID	ID	ID	0.0035	35	3%	ID	ID	ID	ID	ID	0.0014	36	17%	ID	ID	ID	ID	ID	0.012
PAH	Benzo(g,h,i)perylene	ALL	62	2%	ID	ID	ID	ID	ID	0.0038	60	0%	ID	ID	ID	ID	ID	---	62	8%	ID	ID	ID	ID	ID	0.0168
PAH	Benzo(g,h,i)perylene	DW	20	0%	ID	ID	ID	ID	ID	---	19	0%	ID	ID	ID	ID	ID	---	20	0%	ID	ID	ID	ID	ID	---
PAH	Benzo(g,h,i)perylene	WW	42	2%	ID	ID	ID	ID	ID	0.0038	41	0%	ID	ID	ID	ID	ID	---	42	12%	ID	ID	ID	ID	ID	0.0168
PAH	Benzo(k)fluoranthene	ALL	62	0%	ID	ID	ID	ID	ID	---	60	0%	ID	ID	ID	ID	ID	---	62	8%	ID	ID	ID	ID	ID	0.0063
PAH	Benzo(k)fluoranthene	DW	20	0%	ID	ID	ID	ID	ID	---	19	0%	ID	ID	ID	ID	ID	---	20	0%	ID	ID	ID	ID	ID	---
PAH	Benzo(k)fluoranthene	WW	42	0%	ID	ID	ID	ID	ID	---	41	0%	ID	ID	ID	ID	ID	---	42	12%	ID	ID	ID	ID	ID	0.0063
PAH	Biphenyl	ALL	44	5%	ID	ID	ID	ID	ID	0.003	44	7%	ID	ID	ID	ID	ID	0.0044	44	14%	ID	ID	ID	ID	ID	0.0022
PAH	Biphenyl	DW	14	7%	ID	ID	ID	ID	ID	0.0011	14	7%	ID	ID	ID	ID	ID	0.0011	14	14%	ID	ID	ID	ID	ID	0.0011
PAH	Biphenyl	WW	30	3%	ID	ID	ID	ID	ID	0.003	30	7%	ID	ID	ID	ID	ID	0.0044	30	13%	ID	ID	ID	ID	ID	0.0022
PAH	Chrysene	ALL	62	0%	ID	ID	ID	ID	ID	---	60	3%	ID	ID	ID	ID	ID	0.0027	62	16%	ID	ID	ID	ID	ID	0.0124
PAH	Chrysene	DW	20	0%	ID	ID	ID	ID	ID	---	19	0%	ID	ID	ID	ID	ID	---	20	0%	ID	ID	ID	ID	ID	---
PAH	Chrysene	WW	42	0%	ID	ID	ID	ID	ID	---	41	5%	ID	ID	ID	ID	ID	0.0027	42	24%	ID	ID	ID	ID	ID	0.0124
PAH	Dibenz(a,h)anthracene	ALL	62	2%	ID	ID	ID	ID	ID	0.0042	60	0%	ID	ID	ID	ID	ID	---	62	2%	ID	ID	ID	ID	ID	0.005
PAH	Dibenz(a,h)anthracene	DW	20	0%	ID	ID	ID	ID	ID	---	19	0%	ID	ID	ID	ID	ID	---	20	0%	ID	ID	ID	ID	ID	---
PAH	Dibenz(a,h)anthracene	WW	42	2%	ID	ID	ID	ID	ID	0.0042	41	0%	ID	ID	ID	ID	ID	---	42	2%	ID	ID	ID	ID	ID	0.005
PAH	Dibenzothiophene	ALL	26	0%	ID	ID	ID	ID	ID	---	26	0%	ID	ID	ID	ID	ID	---	26	8%	ID	ID	ID	ID	ID	0.0024
PAH	Dibenzothiophene	DW	6	0%	ID	ID	ID	ID	ID	---	6	0%	ID	ID	ID	ID	ID	---	6	0%	ID	ID	ID	ID	ID	---
PAH	Dibenzothiophene	WW	19	0%	ID	ID	ID	ID	ID	---	19	0%	ID	ID	ID	ID	ID	---	19	11%	ID	ID	ID	ID	ID	0.0024
PAH	Fluoranthene	ALL	62	8%	ID	ID	ID	ID	ID	0.007	60	3%	ID	ID	ID	ID	ID	0.0056	62	31%	ID	ID	ID	ID	ID	0.0402
PAH	Fluoranthene	DW	20	5%	ID	ID	ID	ID	ID	0.006	19	0%	ID	ID	ID	ID	ID	---	20	10%	ID	ID	ID	ID	ID	0.006
PAH	Fluoranthene	WW	42	5%	ID	ID	ID	ID	ID	0.0023	41	5%	ID	ID	ID	ID	ID	0.0056	42	36%	ID	ID	ID	ID	ID	0.0402
PAH	Fluorene	ALL	62	0%	ID	ID	ID	ID	ID	---	60	8%	ID	ID	ID	ID	ID	0.0104	62	13%	ID	ID	ID	ID	ID	0.022
PAH	Fluorene	DW	20	0%	ID	ID	ID	ID	ID	---	19	16%	ID	ID	ID	ID	ID	0.0104	20	0%	ID	ID	ID	ID	ID	---
PAH	Fluorene	WW	42	5%	ID	ID	ID	ID	ID	0.007	41	5%	ID	ID	ID	ID	ID	0.0022	42	24%	ID	ID	ID	ID	ID	0.022
PAH	Indeno(1,2,3-cd)pyrene	ALL	61	0%	ID	ID	ID	ID	ID	---	60	0%	ID	ID	ID	ID	ID	---	61	3%	ID	ID	ID	ID	ID	0.0019
PAH	Indeno(1,2,3-cd)pyrene	DW	19	0%	ID	ID	ID	ID	ID	---	19	0%	ID	ID	ID	ID	ID	---	19	0%	ID	ID	ID	ID	ID	---
PAH	Indeno(1,2,3-cd)pyrene	WW	42	5%	ID	ID	ID	ID	ID	0.01	41	2%	ID	ID	ID	ID	ID	0.006	42	10%	ID	ID	ID	ID	ID	0.011
PAH	Naphthalene	ALL	62	21%	ID	ID	ID	ID	ID	0.065	60	20%	ID	ID	ID	ID	ID	0.0737	62	27%	ID	ID	ID	ID	ID	0.079
PAH	Naphthalene	DW	20	30%	ID	ID	ID	ID	ID	0.065	19	32%	ID	ID	ID	ID	ID	0.0737	20	45%	ID	ID	ID	ID	ID	0.079
PAH	Naphthalene	WW	42	17%	ID	ID	ID	ID	ID	0.0078	41	15%	ID	ID	ID	ID	ID	0.01	42	19%	ID	ID	ID	ID	ID	0.013
PAH	Perylene	ALL	53	2%	ID	ID	ID	ID	ID	0.007	52	0%	ID	ID	ID	ID	ID	---	53	2%	ID	ID	ID	ID	ID	0.0076
PAH	Perylene	DW	17	0%	ID	ID	ID	ID	ID	---	17	0%	ID	ID	ID	ID	ID	---	17	0%	ID	ID	ID	ID	ID	---
PAH	Perylene	WW	36	3%	ID	ID	ID	ID	ID	0.007	35	0%	ID	ID	ID	ID	ID	---	36	3%	ID	ID	ID	ID	ID	0.0076
PAH	Phenanthrene	ALL	62	11%	ID	ID	ID	ID	ID	0.0058	60	10%	ID	ID	ID	ID	ID	0.00789	62	32%	0.00	0.01	0.00	0.00	0.01	0.05
PAH	Phenanthrene	DW	20	15%	ID	ID	ID	ID	ID	0.0058	19	16%	ID	ID	ID	ID	ID	0.00789	20	30%	0.00	0.00	0.00	0.00	0.00	0.00626
PAH	Phenanthrene	WW	42	10%	ID	ID	ID	ID	ID	0.0024	41	7%	ID	ID	ID	ID	ID	0.0028	42	29%	0.00	0.00	0.00	0.00	0.01	0.0268
PAH	Pyrene	ALL	62	13%	ID	ID	ID	ID	ID	0.074	60	12%	ID	ID	ID	ID	ID	0.006	62	32%	0.00	0.01	0.00	0.00	0.01	0.0286
PAH	Pyrene	DW	20	10%	ID	ID	ID	ID	ID	0.009	19	16%	ID	ID	ID	ID	ID	0.006	20	15%	0.00	0.00	0.00	0.00	0.00	0.008
PAH	Pyrene	WW	42	10%	ID	ID	ID	ID	ID	0.074	41	7%	ID	ID	ID	ID	ID	0.0042	42	40%	0.01	0.01	0.00	0.00	0.02	0.05

Appendix C

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APPENDIX C - Measurement Quality Objectives

Constituent	Primary Lab	Method [a]	Units	MDL	RL	Measurement Quality Objectives: Lower Control Limit	Upper Control Limit	RPD
Ammonia (NH_3)	BSK	SM 4500-NH3-G	mg/L	0.029	0.1	80	120	25
Total & Fecal Coliform	BSK	SM 9221-E/F	MPN/100mL	--	20	NA	NA	25
Total Oil & Grease	BSK	EPA 1664A	mg/L	0.72	5	NA	NA	25
Total Suspended Solids (TSS)	BSK	SM 2540-D	mg/L	5	5	NA	NA	25
Total Dissolved Solids (TDS)	BSK	SM 2540-C	mg/L	5	5	NA	NA	25
Chemical Oxygen Demand (COD)	BSK	SM 5210-B	mg/L	1.1	3	80	120	25
Total Kjeldahl Nitrogen (TKN)	BSK	EPA 351.2	mg/L	0.41	1	90	110	25
Total Organic Carbon (TOC)	BSK	SM 5310-C	mg/L	0.047	0.2	80	120	25
Dissolved Organic Carbon (DOC)	BSK	SM 5310-C	mg/L	0.081	0.2	80	120	25
Orthophosphate as PO4	BSK	EPA 300.0	mg/L	0.61	1.2	80	120	25
Total Phosphorus	BSK	EPA 365.4	mg/L	0.04	0.1	90	110	25
Hardness	FGS	SM 2340-B	mg/L	0.19	0.41	80	120	25
Anions								
Chloride	BSK	EPA 300.0	mg/L	0.45	1	80	120	25
Sulfate	BSK	EPA 300.0	mg/L	0.38	2	80	120	25
Nitrate	BSK	EPA 300.0	mg/L	0.4	1	80	120	25
Nitrite	BSK	EPA 300.0	mg/L	0.043	0.05	80	120	25
Orthophosphate as P	BSK	EPA 300.0	mg/L	0.31	0.6	80	120	25
Cations								25
Total recoverable Aluminum	BSK	EPA 200.7	mg/L	0.023	0.05	70	130	25
Total recoverable Barium	BSK	EPA 200.7	mg/L	0.023	0.05	70	130	25
Total recoverable Boron	BSK	EPA 200.7	mg/L	0.046	0.1	70	130	25
Total recoverable Calcium	BSK	EPA 200.7	mg/L	0.046	0.1	70	130	25
Total recoverable Potassium	BSK	EPA 200.7	mg/L	0.91	2	70	130	25
Total recoverable Sodium	BSK	EPA 200.7	mg/L	0.45	1	70	130	25
Total Recoverable and Dissolved Metals								25
Arsenic	FGS	EPA 1638	µg/L	0.1	0.3	85	115	25
Cadmium	FGS	EPA 1638	µg/L	0.008	0.002	84	113	25
Chromium	FGS	EPA 1638	µg/L	0.02	0.1	85	115	25
Copper	FGS	EPA 1638	µg/L	0.02	0.01	51	145	25
Lead	FGS	EPA 1638	µg/L	0.005	0.04	72	143	25
Mercury	FGS	EPA 1631E	ng/L	0.08	0.5	71	125	25
Nickel	FGS	EPA 1638	µg/L	0.04	0.1	68	0.1	25
Selenium	FGS	EPA 1638	µg/L	0.44	0.61	59	149	25
Silver	FGS	EPA 1638	µg/L	0.002	0.02	74	119	25
Zinc	FGS	EPA 1638	µg/L	0.16	0.5	46	146	25
PAH								
1-Methylnaphthalene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
1-Methylphenanthrene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
2,3,5-Trimethylnaphthalene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
2,6-Dimethylnaphthalene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
2-Methylnaphthalene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Acenaphthene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Acenaphthylene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Anthracene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Benzo(a)anthracene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Benzo(a)pyrene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Benzo(b)fluoranthene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Benzo(e)pyrene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Benzo(g,h,i)perylene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Benzo(k)fluoranthene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Biphenyl	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Chrysene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Dibenz(a,h)anthracene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Dibenzothiophene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Fluoranthene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Fluorene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Indeno(1,2,3-cd)pyrene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Naphthalene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Perylene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Phenanthrene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25
Pyrene	Caltest	EPA 625	µg/L	0.004	0.005	50	150	25