

KLAMATH RIVER WATER QUALITY SAMPLING FINAL 2016 ANNUAL REPORT

Prepared for the
KHSA Water Quality Monitoring Group

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1. Introduction

On November 13, 2008, the United States, the states of California and Oregon, and PacifiCorp executed an Agreement in Principle (AIP) describing a framework for possible removal of PacifiCorp’s dams on the Klamath River. Interim Measure 12 of the AIP stipulated a water quality monitoring program, including on-going monitoring of cyanobacteria (blue-green algae) and associated toxins. The Klamath Hydroelectric Settlement Agreement (KHSA), signed on February 18, 2010 (subsequently amended on April 6, 2016), superseded the AIP. Interim Measure 15 (IM 15) - Water Quality Monitoring states that PacifiCorp shall fund (\$500,000 per year) long-term baseline water quality monitoring to support water quality improvement activities, dam removal studies, permitting studies, and form a long-term record to assess trends and other potential changes in the basin. This includes funding for cyanobacteria and cyanobacteria-generated toxin monitoring to protect public health. The monitoring is performed by an entity or entities agreed upon by the parties to the KHSA and in consultation with the appropriate water quality agencies. The 2016 water quality monitoring program conducted under IM 15 represents the eighth year of water quality monitoring under the AIP and the KHSA.

The monitoring program is a cooperative effort of the KHSA Monitoring Group¹. This group developed the KHSA IM15 monitoring study plan that is located on PacifiCorp’s Klamath website², as well as the Klamath Basin Monitoring Program (KBMP) website³. Actual monitoring is completed by a sub-set of the group that includes the Yurok Tribe, Karuk Tribe, PacifiCorp, and the U.S. Bureau of Reclamation (USBR). The program continues to collect data from 254 miles of river and reservoirs from Link Dam near Klamath Falls in Oregon to the Klamath River Estuary in California. Annual planning and coordination meetings include the IM 15 Monitoring Group and interested stakeholders. The IM 15 Monitoring Group ensures that the intent of IM 15 is met, appropriate quality assurance protocols and standard operating procedures are in place, water quality conditions and sampling matters are tracked in a timely fashion, and the process is transparent.

This report summarizes the results from the 2016 grab sampling data collection and available water quality probe data, as well as the 2016 public health data collection. Four appendices accompany this report: the sampling locations (Appendix A); the 2016 baseline grab sample results (Appendix B); the phytoplankton species charts and biovolume graphs (Appendix C); and the 2016 public health data (Appendix D).

¹ The KHSA Monitoring Group consists of representatives from the North Coast Regional Water Quality Control Board; Oregon Department of Environmental Quality; U.S. Environmental Protection Agency, Region IX; Karuk Tribe; Yurok Tribe; PacifiCorp; and U.S. Bureau of Reclamation.

² <http://www.pacificorp.com/es/hydro/hl/kr.html#>

³ <http://kbmp.net/collaboration/klamath-hydroelectric-settlement-agreement-monitoring>

2. Program Elements

The primary elements of the IM 15 monitoring program include baseline and public health monitoring. The baseline water quality monitoring element includes water quality grab samples, physical observations associated with these grab samples, and water quality probe and algae species data. The water quality probes recorded observations at hourly or sub-hourly intervals. Parameters sampled by probes included water temperature, dissolved oxygen, specific conductivity, and pH at specific locations in the Klamath River (Table 1). The grab samples are collected for analytical determination of a suite of water quality constituents (Section 5.1). The algae data in the baseline monitoring element includes algae species identification and quantification from samples collected at each sampling location. The grab sample and water quality probe data and algae species quantification are presented in this report, and are available in electronic form. Monitoring was carried out from February through December.

The public health monitoring program data consists of sampling of algae species at specific sites within reservoirs and river reaches and focuses on toxin-producing algae species and algal toxin sampling. These results were presented in public health memoranda produced throughout the season⁴. These memoranda are used to track phytoplankton and toxin conditions and supported management decisions to post and de-post reservoir and river reaches with public health advisory information. A summary of the 2016 public health monitoring program data is presented herein.

The KBMP hosts reports from previous years, other, associated program documents, and other materials and features that provide transparency to the KBMP process that are directly transferable to the IM 15 monitoring program. There are other Klamath River monitoring efforts outside of the IM 15 program that are sponsored by individual entities, including those that participate in the IM 15 program. However, only data collected under the IM 15 are included in this report.

All site names sampled in the baseline and public health programs have been standardized in 2016. All site names are followed by the river mile and program in parenthesis. For example, Klamath River below Iron Gate Dam (RM 189.73; Baseline) versus Klamath River below Iron Gate Dam (RM 189.73; Public Health). This report and associated data set present the site names in this new format.

⁴ Public health memoranda are available online at <http://www.pacificcorp.com/es/hydro/hl/kr.html#>.

3. Baseline Program Water Quality Sampling

In 2016, sampling was conducted at 24 sites along the Klamath River and its tributaries, from Link Dam to the Klamath River Estuary (Figure 1), by the four sampling entities: U.S. Bureau of Reclamation (USBR), PacifiCorp, Karuk Tribe, and Yurok Tribe. Sixteen of those sites were located on the mainstem of the Klamath River, four sites were located in the reservoirs on the Klamath River, and four sites were located on the major tributaries of the Klamath River (Shasta, Scott, Salmon and Trinity rivers). Sampling locations, sampling frequency and sampling entity vary across the study area ((Table 1).

Discrete physical parameters (water temperature, dissolved oxygen, specific conductivity, and pH) were collected at all sites when grab samples were collected during the sampling year. Continuous physical parameters were collected at six sites, four of which are baseline program sites and two of which are near baseline program sites. Sondes were deployed to collect continuous water physical parameters at the following baseline program sites: Link Dam (RM 254.44; Baseline) (maintained by USBR), Klamath River below Iron Gate Dam (RM 189.73; Baseline) (maintained by PacifiCorp), Klamath River below Seiad (RM 128.5; Baseline) (maintained by the Karuk Tribe), and Klamath River at Weitchpec (RM 43.5; Baseline) (maintained by the Yurok Tribe).

One of the two non-baseline program locations for sonde deployment was Klamath River above Keno Dam, at River Mile 234.9, which is just upstream of Klamath River below Keno Dam near a U.S. Geological Survey (USGS) gage (RM 233.4; Baseline). This sonde was maintained by USBR. While data collected above Keno Dam is not a proxy for water quality conditions below the dam, as conditions can differ in Keno Reservoir and in the Klamath River below Keno Dam, the sonde provided data to illustrate conditions at the downstream end of the reservoir prior to being released to Klamath River. The other non-baseline program location for sonde deployment was Klamath River above Turwar, at River Mile 8.0, which is upstream of the baseline sampling site Klamath River near Klamath (RM 6.0; Baseline). This sonde was maintained by the Yurok Tribe and provided the physical conditions of the mouth of the Klamath River before it enters the estuary.

Except for four sites, grab samples of all other baseline water quality constituents were collected monthly (Table 1). At Link Dam (RM 254.44; Baseline) and Klamath River below Iron Gate Dam (RM 189.73; Baseline) samples were collected bi-monthly from May through October and monthly for the remainder of the sampling season. At the Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline) and Klamath River above Shovel Creek (RM 206.42; Baseline) sites where samples were collected bi-monthly from June through September and monthly for the remainder of the sampling season.

The following constituents were analyzed in 2016: inorganic nitrogen (total nitrogen, nitrate+nitrite, and ammonia), particulate nitrogen, particulate phosphorus, particulate inorganic phosphorus, inorganic phosphorus (total phosphorus and orthophosphate), particulate carbon, dissolved organic carbon, total and volatile suspended solids,

turbidity, chlorophyll-a, pheophytin, and microcystin. Phytoplankton species samples were also collected. Not all parameters were analyzed for samples from every site (Table 1). Data results from the 2016 baseline grab samples are presented in Appendix B.

The baseline program has gone through several revisions throughout its implementation. Changes in the 2016 baseline sampling program included the following:

- Carbonaceous biological oxygen demand (CBOD) was removed from constituent list.
- Alkalinity was removed from the QA program because it has been stable through the years and the expense of the alkalinity spike.
- The inter-laboratory comparison was removed from the program.
- The frequency of sampling baseline phytoplankton was changed as follows:
 - If the site had been sampled monthly from March – November, it was sampled monthly sampling May through October.
 - If the site had been sampled monthly from February – December, it was sampled monthly March – November.
- Shipping protocols for phytoplankton samples were adjusted to save shipping costs.
- Two algae genera names were updated to be consistent with new nomenclature
 - *Anabaena* has been renamed *Dolichospermum*.
 - *Oscillatoria* has been renamed *Planktothrix*.

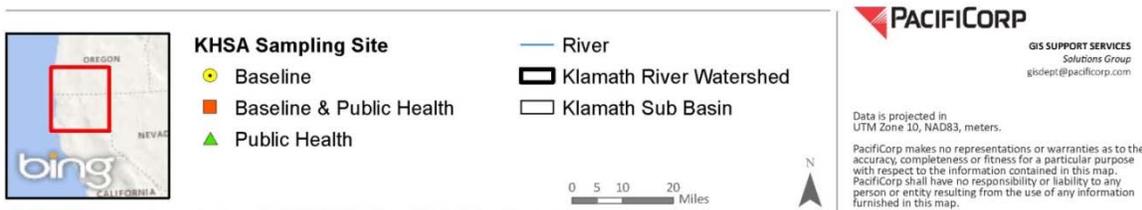
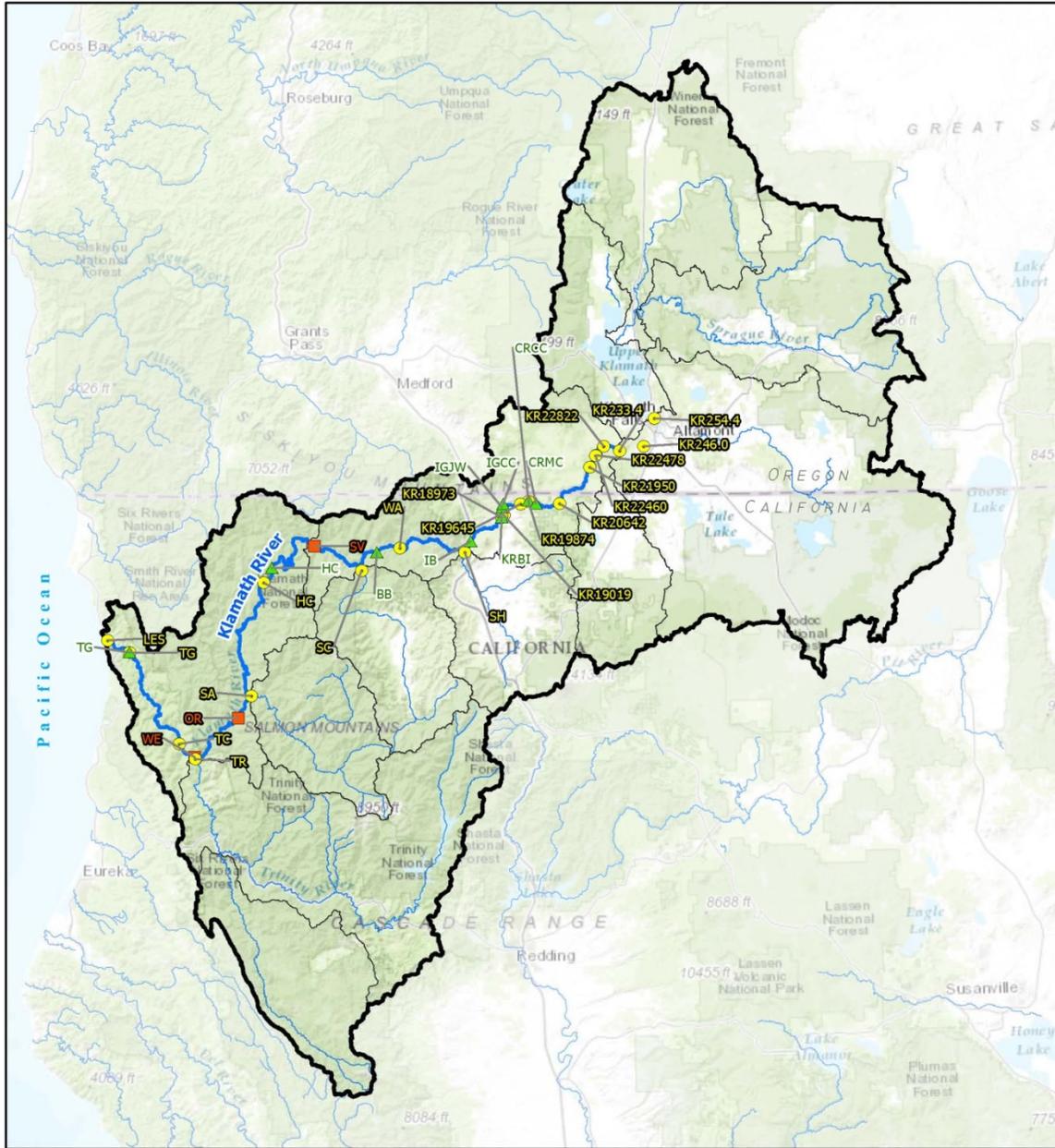


Figure 1. 2016 KHSA Klamath River baseline monitoring and public health sampling sites.

Table 1. 2016 Baseline monitoring locations, sampling frequency, and sampling entities.

Monitoring Location		Water Temperature (°C)	Dissolved Oxygen (mg/l)	pH (log(H+))	Conductance (µS/cm)	Total N (mg/l)	Ammonia N (mg/l)	Nitrite + Nitrate (mg/l)	Total P (mg/L)	Ortho P (mg/L)	Particulate P & Particulate Inorganic P (mg/l)	Dissolved Organic N & P (mg/l)	Particulate and Dissolved C (mg/l)	Particulate N (mg/l)	TSS and VSS(mg/l)	Alkalinity (mg/l)	Water Column chl_a/Phco (µg/l)	Phytoplankton species	Microcystin (µg/l)	LCMS confirmation	Turbidity (NTU)	Sampling Entity	
Site ID	Sampling Method:	T,P	P	P	P	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	
KR25444	Link Dam (RM 254.44; Baseline)	H	H	H	H	M/BM	M/BM	M/BM	M/BM	M/BM	M/BM	M/BM	M/BM	M/BM	M/BM	M/BM	M/BM	M/BM	M/BM	BM/S	M2/BM2**	USBR	
KR24600	Keno Reservoir at Miller Island (RM 246.0; Baseline)	H	H	H	H	M	M	M	M	M			M		M	M	M	M-	M/S		M	USBR	
KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	H	D	D	D	M2/BM2	M2/BM2	M2/BM2	M2/BM2	M2/BM2	M		M	M	M	M2/BM2**	M	M-	M/S		M2/BM2**	USBR	
KR22822	Klamath River above J.C. Boyle Reservoir (RM 228.22; Baseline)	H	D	D	D	M	M	M	M	M			M		M	M	M	M/S				PacifiCorp	
KR22478	J.C. Boyle Reservoir (RM 224.78; Baseline) ^a	VP	VP	VP	VP												M/S	M/S	M/S				PacifiCorp
KR22460	Klamath River below J.C. Boyle Dam (RM 224.60; Baseline)	H	D	D	D	M	M	M	M	M			M		M	M	M	M/S					PacifiCorp
KR21950	Klamath River below USGS Gage (RM 219.50; Baseline)	H	D	D	D	M	M	M	M	M			M		M	M	M	M-	M/S		M		PacifiCorp
KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	H	D	D	D	M2/BM2	M2/BM2	M2/BM2	M2/BM2	M2/BM2	M		M	M	M	M	M	M-	M/S		M		PacifiCorp
KR19874	Copco Reservoir (RM 198.74; Baseline) ^b	VP	VP	VP	VP	M	M	M	M	M			M		M	M	M	M/S	M/S				PacifiCorp
KR19645	Klamath River below Copco Dam (RM 196.45; Baseline)	H	D	D	D	M	M	M	M	M			M		M	M	M	M-/S	M/S				PacifiCorp
KR19019	Iron Gate Reservoir (RM 190.19; Baseline) ^c	VP	VP	VP	VP	M	M	M	M	M			M		M	M	M	M/S	M/S				PacifiCorp
KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	H	H	H	H	M/BM	M/BM	M/BM	M/BM	M/BM	M/BM		M/BM	M/BM	M/BM	M/BM	M/BM	M/BM	M/BM	BM/S		M/BM	PacifiCorp
KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	H	D	D	D	M	M	M	M	M			M		M	*	M	M/S	M/S	S2			Karuk
KR12850	Klamath River below Seiad (RM 128.5; Baseline)	H	H	H	H	M	M	M	M	M	M		M	M	M	*	M	M-	M/S		M		Karuk
KR10130	Klamath River below Happy Camp (RM 101.3; Baseline)	H	D	D	D	M	M	M	M	M			M		M	*	M	M/S	M/S				Karuk
KR05910	Klamath River at Orleans (USGS) (RM 59.1; Baseline)	H	H	H	H	M	M	M	M	M			M		M	M	M	M-	M/S		M		Karuk
KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	H	H	H	H	M	M	M	M	M			M		M	*	M	M/S	M/S	S2			Yurok
KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	H	H	H	H	M	M	M	M	M			M		M	*	M	M/S	M/S				Yurok
KR00600	Klamath River near Klamath (RM 6.0; Baseline) ^a	H	H	H	H	M	M	M	M	M	M		M	M	M	*	M	M-	M/S		M		Yurok
KR00050	Klamath River Estuary (RM 0.5; Baseline) ^a	HP	D	D	D	M	M	M	M	M			M		M	*	M	M/S	M/S				Yurok
SH00000	Shasta River near mouth (Baseline)	H	H	H	H	M	M	M	M	M			M		M	*	M	*			M		Karuk
SC00000	Scott River near mouth (Baseline)	H	H	H	H	M	M	M	M	M			M		M	*	M	*			M		Karuk
SA00000	Salmon River near mouth (Baseline)	H	H	H	H	M	M	M	M	M			M		M	*	M	*			M		Karuk
TR00000	Trinity River near mouth (Baseline)	H	H	H	H	M	M	M	M	M			M		M	*	M	*			M		Yurok

Notes:

^a Sampling at one depth in J.C. Boyle reservoir (0.5 m depth = surface)

^b Sampling at three depths in Copco Reservoir (0.5 m below surface, thermocline, and 0.5 m above bottom)

^c Sampling at three depths in Iron Gate Reservoir (0.5 m below surface, thermocline, and 0.5 m above bottom)

^d Continuously deployed sonde is located 2 miles upstream of this site at Klamath above Turwar (RM8.0)

^e Hourly measurements at four locations (two in lower estuary, one in mid-estuary, and one in upper estuary) at two depths (0.5 m below surface and 0.5 m above bottom)

Key:

Sampling Method

T – Thermistor

P – Probe or data sonde

G – Grab sample

Sampling Frequency Codes

VP – vertical profile at stated sampling frequency

H – hourly measurements by sondes (in some instances sub-hourly data may be collected)

D – Discrete sample

HP - Hourly measurements in a profile

M – monthly sampling, excluding January

M/S – monthly sampling, seasonally from May through October

M/BM – Bi-monthly sampling May - October and monthly sampling the remainder of the year

M2/BM2 – Bi-monthly sampling June-September and monthly the remainder of the year

M- = Monthly Sampling with exception of December, January and February

M2/BM2** – Bi-monthly sampling June-September and monthly the remainder of the year and consider adding May and October to go to M/BM

BM/S –Bimonthly sampling July-Oct

S2 – monthly sampling July – Oct

***** - Not sampled This parameter is covered at a M/S frequency by Tribal Water Quality Workgroup

4. Public Health Sampling

To determine the potential risks to public health resulting from exposure to cyanobacteria and the toxins they produce in the Klamath River, public health monitoring included water column and shoreline water sampling within the Klamath River and reservoirs. Several species of cyanobacteria have been documented in the Klamath River, including but not limited to *Aphanizomenon flos aquae*, *Microcystis aeruginosa* (MSAE), *Dolichospermum flos aquae* (formerly *Anabaena flos aquae*), and *Planktothrix* sp. (formerly *Oscillatoria* sp.). Since 2004, Klamath River public health sampling has documented elevated levels of toxin-producing cyanobacteria, primarily MSAE and the associated toxin microcystin. Microcystins are a class of toxic chemical which is produced by some strains of cyanobacteria, including MSAE, and are released into the water when cyanobacterial cells die or cell membranes degrade. MSAE blooms and microcystins at elevated levels can present risks to human health and to terrestrial and aquatic species, and result in impairments to a number of beneficial uses for the Klamath River system. Microcystin toxins can induce skin rashes, sore throat, oral blistering, nausea, gastroenteritis, fever and liver toxicity (WHO 2003; OEHHA 2012).

In 2016, public health sampling was revised to include new sites in Oregon with samples collected by Oregon Department of Environmental Quality (ODEQ):

- Upper Klamath Lake at Eagle Ridge County Park
- Upper Klamath Lake at Howard's Bay Park
- Upper Klamath Lake at Moore Park
- Keno Reservoir at Keno Park
- J.C. Boyle Reservoir at Topsy Campground

Other revisions to the 2016 public health sampling included the following:

- Two algae genera names were updated to be consistent with new nomenclature
 - *Anabaena* has been renamed *Dolichospermum*.
 - *Oscillatoria* has been renamed *Planktothrix*.
- The frequency of sampling at Klamath River below Iron Gate Dam was changed to once in May and twice a month from June – November.
- All lab results for microcystin were reported in public health memos regardless of which sampling program they originated from (baseline versus public health).

Table 2. 2016 Klamath River public health monitoring locations, constituents, method, and sampling frequency.

Location	Site ID	River Mile	Phytoplankton Species	Microcystin - EPA	LC/MS/MS water for cyanotoxins	Sampling Entity
Upper Klamath Lake at Eagle Ridge County Park (Public Health)	UKEP	-	BM5	BM5	-	ODEQ
Upper Klamath Lake at Howard's Bay Park (Public Health)	UKHP	-	BM5	BM5	-	ODEQ
Upper Klamath Lake at Moore Park (Public Health)	UKMP	-	BM5	BM5	-	ODEQ
Keno Reservoir at Keno Park (Public Health)	KEKP	234.0	BM5	BM5	-	ODEQ
J.C. Boyle Reservoir at Topsy Campground (Public Health)	BRTC	225.0	BM5	BM5	-	ODEQ
Copco Reservoir at Mallard Cove (Public Health)	CRMC	200.8	BM7-mod	BM7-mod	S	PacifiCorp
Copco Reservoir at Copco Cove (Public Health)	CRCC	198.5	BM7-mod	BM7-mod	S	PacifiCorp
Iron Gate Reservoir at Camp Creek (Public Health)	IRCC	192.8	BM7-mod	BM7-mod	S	PacifiCorp
Iron Gate Reservoir at Jay Williams Boat Ramp (Public Health)	IRJW	192.4	BM7-mod	BM7-mod	S	PacifiCorp
Klamath River below Iron Gate Dam (RM 189.73; Public Health)	KRBI	189.7	BM7-mod	BM7-mod	-	PacifiCorp
Klamath River at I-5 Rest Area (RM 179.20; Public Health)	KRIB	179.2	BM/W	BM/W	BM5	Karuk
Klamath River at Brown Bear River Access (RM 150.00; Public Health)	KRBB	150.0	BM/W	BM/W	-	Karuk
Klamath River below Seiad (RM 128.5; Public Health)	KRSV	128.5	BM/W	BM/W	-	Karuk
Klamath River below Happy Camp (RM 101.3; Public Health)	KRHC	101.3	BM/W	BM/W	-	Karuk
Klamath River at Orleans (USGS) (RM 59.1; Public Health)	KROR	59.1	BM/W	BM/W	-	Karuk
Klamath River at Weitchpec (RM 43.5; Public Health)	KRWE	43.5	BM/W	BM/W	-	Yurok
Klamath River near Klamath (RM 6.0; Public Health)	KRTG	6.0	BM/W	BM/W	-	Yurok
Klamath River at South Slough (RM 0.1; Public Health)	KRSS	0.1	BM/W	BM/W	-	Yurok

Key:

Frequency	# of sample events	Sampling frequency description
BM7-mod	9	1x month in May and at least 2x month June through November
BM/W	16	Timing of public health monitoring will be at the discretion of the sampling entity; however, weekly sampling usually occurs from July through September during peak algae bloom season.
BM5	10	2x month June-October
S	4	Analysis for anatoxin-a will be tied to the temporal and density distribution of <i>Dolichospermum</i> (formerly <i>Anabaena</i>) in the reservoirs however; four test analysis are budgeted.

5. Water Sample Collection

Water samples included both water quality data collected with probes (temperature, dissolved oxygen, specific conductivity, and pH) and grab samples. Grab samples (i.e., samples analyzed for physical and chemical constituents listed in Table 1 and Table 2) were sent to respective laboratories for analysis. For turbidity, USBR used a HACH 2100P Turbidimeter, and PacifiCorp used a HACH 2100Q Turbidimeter for measurements, rather than collecting grab samples.

5.1. Analytical Samples

Grab water samples were collected for analytical determination of:

- Nitrogen: ammonia (NH₄), nitrate+nitrite (NO₃+NO₂), total nitrogen (TN), particulate nitrogen (PN)
- Phosphorus: orthophosphate (OPO₄) and total phosphorus (TP) particulate phosphorus (PP), and particulate inorganic phosphorus (PIP)
- Carbon: dissolved organic carbon (DOC) and particulate carbon (PC)
- Solids: total suspended solids (TSS) and volatile suspended solids (VSS)
- Alkalinity (ALKT)
- Turbidity (TURB)
- Phytoplankton (algae): chlorophyll-*a* and pheophytin
- Microcystin (MCYN) and anatoxin-a (if warranted)
- Algae species

Six laboratories completed the analytical work during the field season:

- CH2M Applied Sciences Laboratory (CH2M) in Corvallis, Oregon
 - <http://www.testamericainc.com>
- IEH Aquatic Research (IEH) in Seattle, Washington.
 - <http://www.iehinc.com/ieh-locations/>
- Chesapeake Biological Laboratories (CBL) in Solomons, Maryland
 - <http://www.umces.edu/cbl>
- EPA Region 9 (EPA) laboratory in Richmond, California
 - <http://www.epa.gov/region9/lab/>
- Green Water Laboratories in Palatka, Florida
 - [https:// http://greenwaterlab.com/](https://http://greenwaterlab.com/)
- Aquatic Analysts in Friday Harbor, Washington

5.2. Field Measurements

Water temperature, pH, specific conductivity, and dissolved oxygen were measured at all sampling sites. In some cases, sampling entities collected additional information (e.g., turbidity) during field visits. Field measurements were recorded at each site using either thermistors or water quality probes that were maintained and calibrated by each sampling entity. In addition to the vertical profiles in reservoirs and continuous time series monitoring (Table 1), physical water quality parameters were measured when grab samples were collected. Field measurements that were collected during grab sampling are included in the field data (Appendix B) while time series monitoring data are maintained by (and available from) each sampling entity.

5.3. Quality Assurance of Samples

Baseline monitoring samples were collected under individual entity Quality Assurance Project Plans, Standard Operating Procedures, and/or Sampling Analysis Plans (Karuk 2009; PacifiCorp 2008; USBR 2009; Yurok 2008). These methods have been compared and reviewed by the KHSA Working Group to ensure consistent sampling techniques are applied (KHSA-WG 2010).

Public health samples were collected according to the Standard Operating Procedure developed by the Klamath Blue Green Algae Working Group (www.kbmp.net/collaboration/klamath-hydroelectric-settlement-agreement-monitoring). Because of the risk to public health from toxins produced by cyanobacteria, initial public health samples are analyzed under a ‘rush’ order with Aquatic Analysts in Friday Harbor, Washington. During analysis, only potentially toxic cyanobacteria are identified and enumerated. If a risk to public health is identified and a water body (lake, reservoir, or river) are posted with health advisory warnings, subsequent algae samples at a posted location will continue to be collected but not analyzed under a ‘rush’ order. Once the bloom has diminished, public health samples may again be analyzed under a ‘rush’ order to provide timely results to identify public health risks and potentially de-post a waterbody.

5.4. Water Quality Analytical Methods

CH2M, IEH, and CBL used either Standard Methods or EPA analytical methods for analysis of nutrients, dissolved and particulate carbon, alkalinity, carbonaceous biological oxygen demand, total suspended solids and volatile suspended solids chlorophyll-a, and pheophytin (Table 3). Each laboratory used its own internal water quality control and assurance samples during analysis of the KHSA 2016 samples. Method detection limits (MDL) and reporting limits (RL) varied among the laboratories. Some constituent MDLs at CH2M varied over the course of the year, and all unique pairs of MDLs and RLs are presented below. IEH MDL values did not vary during the year, so only one value is presented below per constituent.

Algae species analysis method information for Aquatic Analysts is not presented because this analysis does not include MDLs or RLs.

5.5. *Algae Sample Analytical Methods*

Analysis of chlorophyll-a and pheophytin was performed by CBL for samples collected by USBR and PacifiCorp, and by IEH for samples collected by the Karuk and Yurok tribes. Algae species samples collected by USBR, PacifiCorp, Karuk Tribe, and Yurok Tribe were analyzed by Aquatic Analysts. Microcystin analysis was performed using the Enzyme-Linked ImmunoSorbent Assay (ELISA) method at the EPA laboratory. Additional microcystin analysis, as well as anatoxin-a analysis was completed by the Green Water Laboratories using liquid chromatography-tandem mass spectrometry (LCMS/MS) for selected locations.

Table 3. 2016 Analyzing laboratory method references, method detection limits (MDLs), and method reporting limits (RLs) for water quality constituents. Units presented in milligrams per liter (mg/L) or parts per million (ppm) unless otherwise noted. All unique MDLs and RLs are shown.

Constituent Name	Constituent ID	CH2M			IEH			CBL			EPA			GreenWater		
		Method	MDL ¹	RL ²	Method	MDL	RL	Method	MDL	RL	Method	MDL	RL	Method	MDL	RL
Alkalinity	ALKT	SM2320B	n/a	5.0	SM18 2320B	0.70	1.0	-	-	-	-	-	-	-	-	-
Ammonia	NH4	EPA 350.1	0.02 0.024	0.05	SM18 4500NH3H	0.005	0.010	-	-	-	-	-	-	-	-	-
Carbonaceous Biological Oxygen Demand – 5 day	CBOD5	SM5210B	n/a	2.0												
Dissolved Organic Carbon	DOC	SM5310B	0.2	0.5	SM20 5310B	0.10	0.25	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite	NO3+NO2	EPA 353.2	0.0028	0.010	SM18 4500N03F	0.006	0.010	-	-	-	-	-	-	-	-	-
Total Nitrogen	TN	SM4500-N C	0.024 0.048	0.20	SM204500NC	0.024	0.05	-	-	-	-	-	-	-	-	-
Ortho-phosphate	OPO4	EPA 365.1	0.0014	0.010	SM18 4500PF	0.001	0.001	-	-	-	-	-	-	-	-	-
Total Phosphorus	TP	EPA 365.4	0.017	0.050	SM18 4500PF	0.001	0.002	-	-	-	-	-	-	-	-	-
Total Suspended Solids	TSS	SM2540D	0.6	5.0	SM20 2540D	0.3	0.5	-	-	-	-	-	-	-	-	-
Volatile Suspended Solids	VSS	EPA 160.4	n/a	5.0	SM20 2540E	0.3	0.5	-	-	-	-	-	-	-	-	-
Turbidity	TURB	-	-	-	SM20 2130B	0.10	0.10	-	-	-	-	-	-	-	-	-
Chlorophyll-a ³	CHLOR-A	-	-	-	SM1810200H	0.1	0.1	EPA 446.0	0.62	-	-	-	-	-	-	-
Pheophytin	PHEO	-	-	-	SM1810200H	0.1	0.1	EPA 446.0	0.74	-	-	-	-	-	-	-
Particulate Carbon	PC	-	-	-	-	-	-	EPA 440.0	0.0633	-	-	-	-	-	-	-
Particulate Inorganic Phosphorus	PIP	-	-	-	-	-	-	EPA 365.1	0.0024	-	-	-	-	-	-	-
Particulate Phosphorus	PP	-	-	-	-	-	-	EPA 365.1	0.0021	-	-	-	-	-	-	-
Particulate Nitrogen	PN	-	-	-	-	-	-	EPA 440.0	0.0105	-	-	-	-	-	-	-
Microcystin ³	MYCN	-	-	-	-	-	-	-	-	-	ELISA	0.10 0.15	0.15 0.18	-	-	-
Anatoxin-a ³	ANTX-A	-	-	-	-	-	-	-	-	-	-	-	-	LCMS/MS	0.05	0.10

MDL – method detection limit RL – method reporting limit
¹ CH2M uses the term limit of detection (LOD) instead of MDL

² CH2M uses the term limit of quantification (LOQ) instead of RL
³ Units for chlorophyll-a, microcystin, and anatoxin-a are in µg/L (or ppb).

6. Baseline Program Water Quality Data

Water quality samples for the 2016 IM15 baseline water quality monitoring program were collected from February through December. Sampling crews from the various entities typically collected samples within a few days of each other. Sampling on the same day throughout the basin was infeasible because of other obligations, shipping constraints, travel considerations, and other factors. In most cases all 24 sites (Figure 1) were sampled each month. There were periods when one or more sites were omitted or one or more constituents were not sampled. Data was reviewed by sampling entities before being compiled for presentation in this report. Compiled data from all baseline-program sampling is presented in the appendices (Appendix B) and summarized below, except for time series data, which can be obtained from the individual sampling entities (Table 1). Selected results of algae species identification are presented below and in Appendix C.

6.1. Data Summary

Field measurements collected included water temperature, pH, specific conductivity, and dissolved oxygen. Chemical and biological water quality measurements include two types of algae related estimates (chlorophyll-a and pheophytin), alkalinity, two forms of carbon (dissolved organic and particulate), four forms of nitrogen (ammonia, nitrate+nitrite, total nitrogen, and particulate nitrogen), four forms of phosphorus (orthophosphate, total phosphorus, particulate phosphorus, and particulate inorganic phosphorus), total suspended solids, volatile suspended solids, turbidity and microcystin. Density and biovolume for algal species and groups were also measured.

Data are summarized in this report to illustrate general spatial and temporal patterns during the 2016 sampling period. In addition to the dataset (Appendix B), data also are summarized in three formats:

- (1) Longitudinal boxplots⁵ based on seasonal grab sample data
- (2) Physical water quality sonde data (hourly) at specific locations
- (3) Charts and graphs representing the groups of algae and respective biovolumes at the sampling locations for March, June, September and November.

The box plots and hourly sonde data are presented in the main report; the charts and graphs of algae are presented in Appendix C. The data summary constituents presented include: dissolved oxygen, dissolved organic carbon, total nitrogen, total phosphorus, and microcystin.

⁵ A box-and-whisker plot is a graphical way of presenting statistical parameters including median, mean, lower and upper quartiles, and outliers. The median value is represented by a horizontal line; a box (gray) is formed by the 25th quartile and 75th quartile and represents the inter-quartile range (IQR); the whiskers extend beyond the 1.5*IQR above and below the quartiles; and points beyond the whiskers are termed outliers. Outliers are values between 1.5 to 3 times the IQR. Extreme outliers are values greater than 3 times the IQR.

The mainstem sites and major tributaries (Shasta, Scott, Salmon, and Trinity rivers) are presented separately.

Time series data are presented for summary constituents at locations on the Klamath River for which there are USGS flow gages (Table 4). While algae data are available for the May to October period, September percent biovolume are presented for illustration at eight locations (Figure 2). These locations are: (1) Link Dam (RM 254.44; Baseline), (2) Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline), (3) Copco Reservoir (RM 198.74; Baseline), (4) Klamath River below Iron Gate Dam (RM 189.73; Baseline), (5) Klamath River below Seiad (RM 128.5; Baseline), (6) Klamath River at Orleans (USGS) (RM 59.1; Baseline), (7) Klamath River at Weitchpec (RM 43.5; Baseline), and (8) Klamath River Estuary (RM 0.5; Baseline). Plots representing algae species for other months are presented in Appendix C.

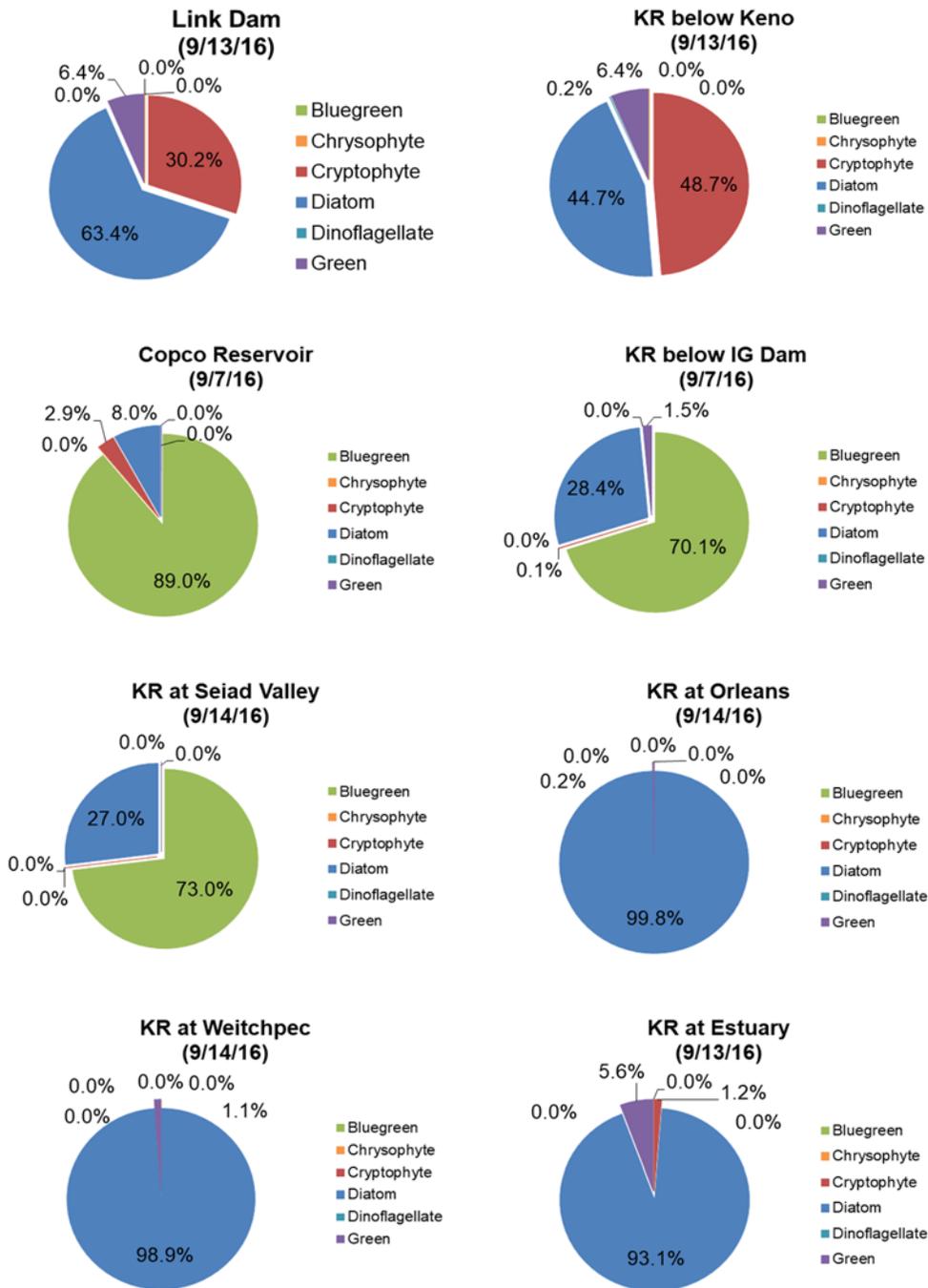


Figure 2. Phytoplankton species percent biovolume for eight locations in the Klamath River: September 2016.

Table 4. United States Geological Survey (USGS) flow gage locations for time series data.

USGS Location Name	River Mile (RM) <i>(approximate)</i>	USGS Gage Number
Link River at Klamath Falls, OR	254	11507500
Klamath River at Keno, OR	232	11509500
Klamath River below Iron Gate Dam, CA	190	11516530
Klamath River near Seiad Valley, CA	129	11520500
Klamath River at Orleans, CA	59	11523000
Klamath River near Klamath, CA	8	11530500

Grab sample data and the associated physical water quality measurements (e.g., water temperature and dissolved oxygen) are presented in the following figures. These illustrations are not intended to be comprehensive, but rather to present general conditions throughout the Klamath River during the sampling season. Box plots of constituents from samples collected in the Shasta, Scott, Salmon and Trinity rivers are presented first (Figure 3) followed by individual plots of the same constituents for the Klamath River from Link Dam to the Klamath River estuary (Figures 4 to 8). Time series data of water temperature, dissolved oxygen, pH, total nitrogen, total phosphorus, and microcystin are presented in Figures 9 through 17.

6.1.1. Major Tributaries (Boxplot)

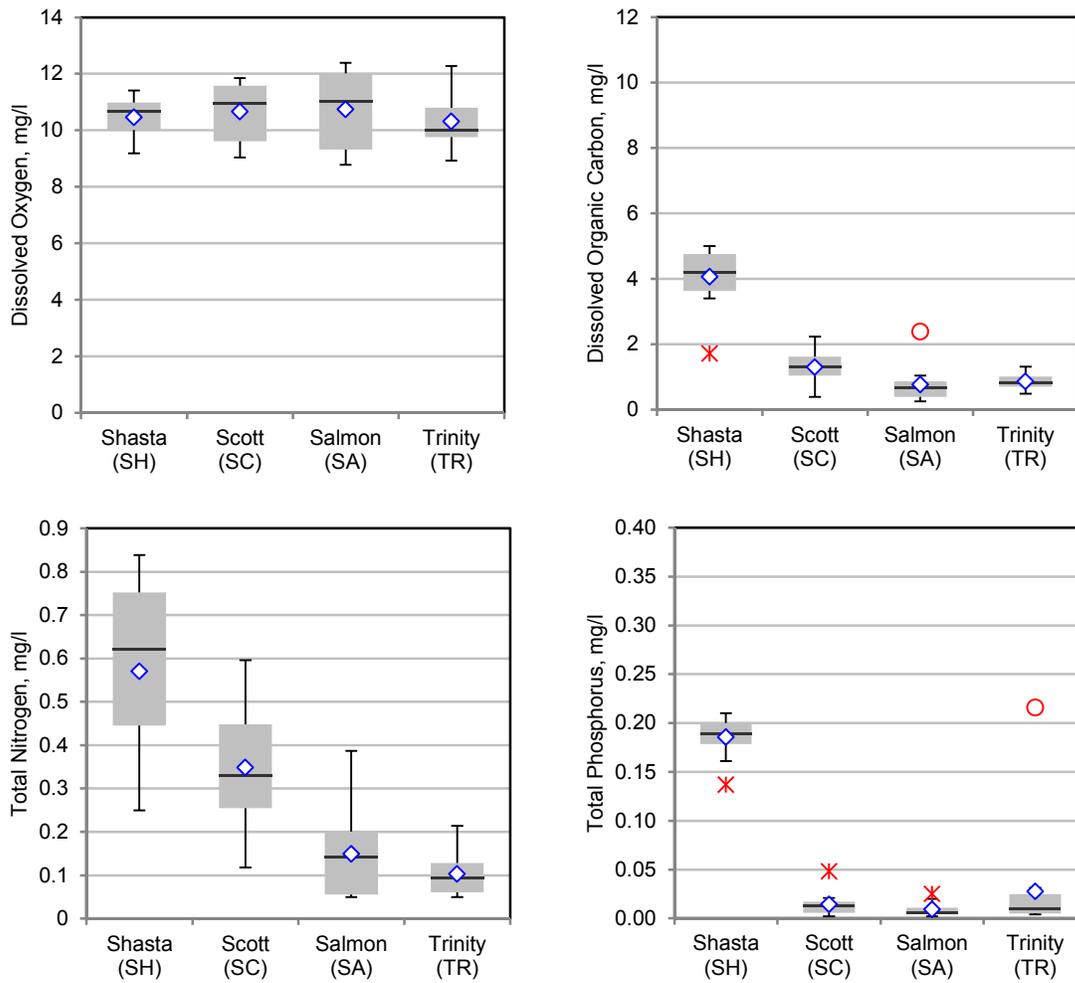


Figure 3. Baseline data for discrete dissolved oxygen, dissolved organic carbon, total nitrogen, and total phosphorus for the Shasta, Scott, Salmon, and Trinity rivers with median (—), mean (◊), outliers (*), and extreme outliers (○) identified (February 2016 – December 2016).

6.1.2. Mainstem Klamath River (Boxplot)

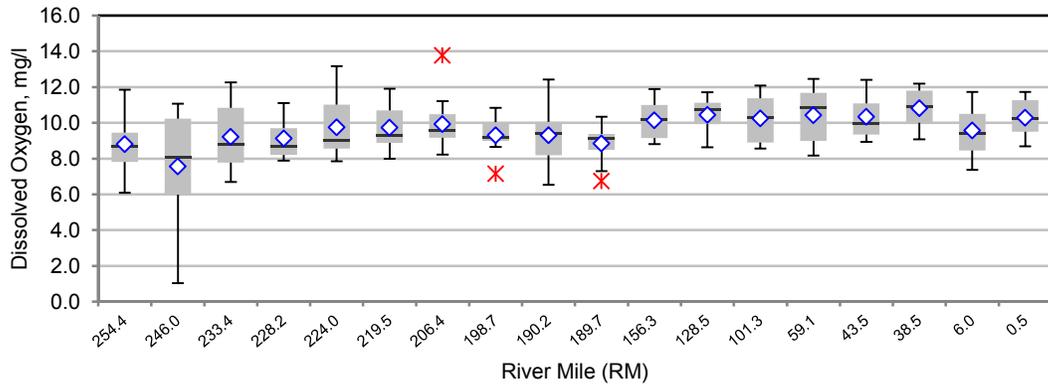


Figure 4. Discrete dissolved oxygen concentration in the Klamath River from Link Dam to the Klamath River Estuary with median (—), mean (◊), outliers (*), and extreme outliers (○) identified (February 2016 – December 2016). Note: Includes reservoir sites at Keno Reservoir at Miller Island (RM 246.0; Baseline), Copco Reservoir (RM 198.74; Baseline), and Iron Gate Reservoir (RM 190.19; Baseline). River mile on x-axis not to scale.

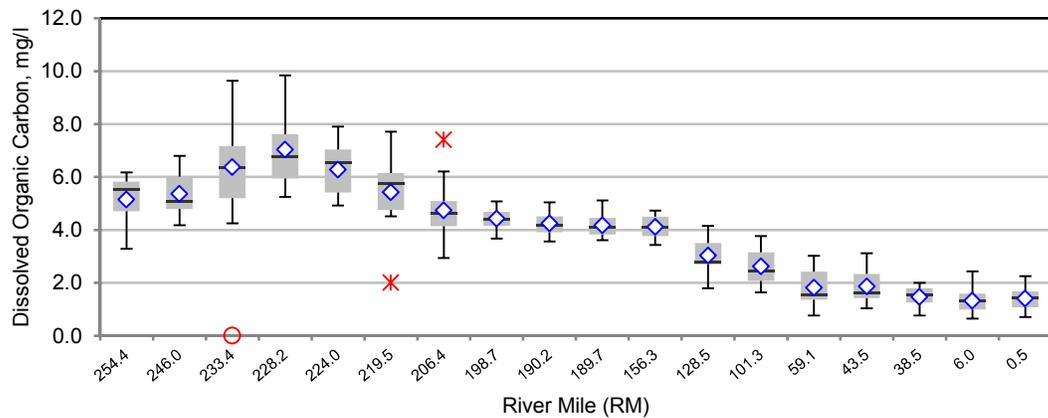


Figure 5. Dissolved organic carbon in the Klamath River from Link Dam to the Klamath River Estuary with median (—), mean (◊), outliers (*), and extreme outliers (○) identified (February 2016 – December 2016). Note: Includes reservoir sites at Keno Reservoir at Miller Island (RM 246.0; Baseline), Copco Reservoir (RM 198.74; Baseline), and Iron Gate Reservoir (RM 190.19; Baseline). River mile on x-axis not to scale.

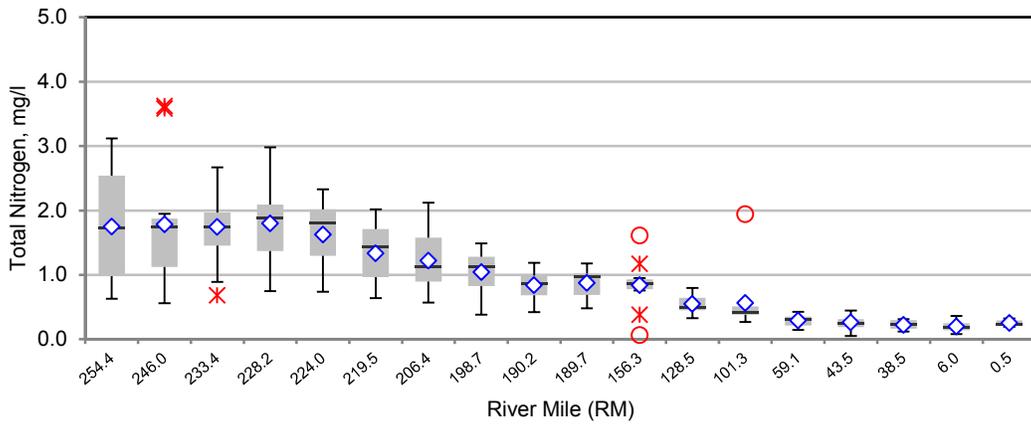


Figure 6. Total nitrogen in the Klamath River from Link Dam to the Klamath River Estuary with median (—), mean (◇), outliers (*), and extreme outliers (○) identified (February 2016 – December 2016). Note: Includes reservoir sites at Keno Reservoir at Miller Island (RM 246.0; Baseline), Copco Reservoir (RM 198.74; Baseline), and Iron Gate Reservoir (RM 190.19; Baseline). River mile on x-axis not to scale.

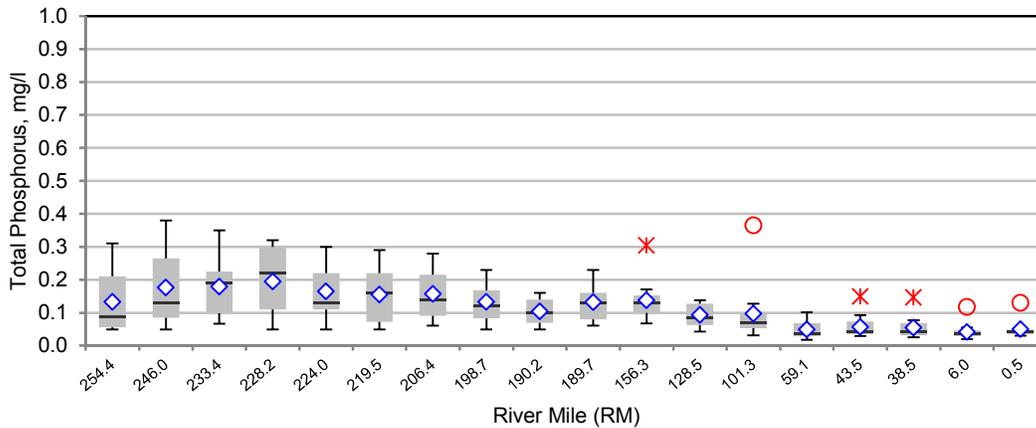


Figure 7. Total phosphorus in the Klamath River from Link Dam to the Klamath River Estuary with median (—), mean (◇), outliers (*), and extreme outliers (○) identified (February 2016 – December 2016). Note: Includes reservoir sites at Keno Reservoir at Miller Island (RM 246.0; Baseline), Copco Reservoir (RM 198.74; Baseline), and Iron Gate Reservoir (RM 190.19; Baseline). River mile on x-axis not to scale.

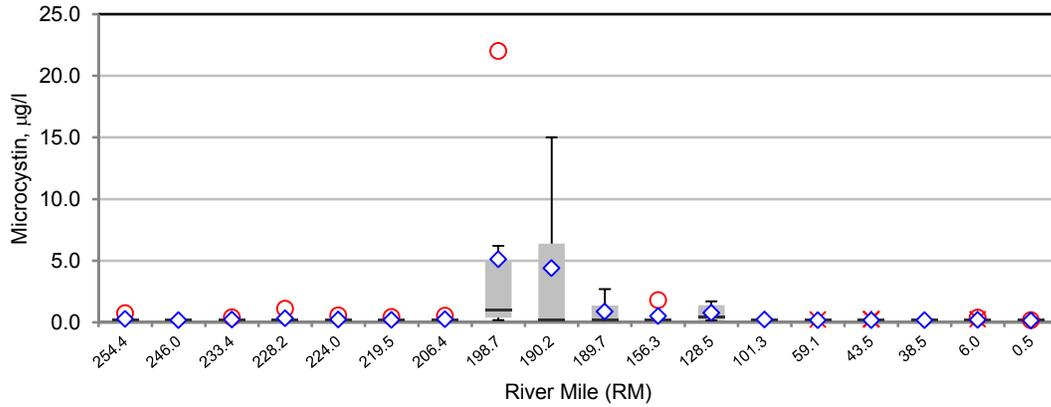


Figure 8. Microcystin in the Klamath River from Link Dam to the Klamath River Estuary with median (—), mean (◇), outliers (*), and extreme outliers (○) identified (February 2016 – December 2016). Note: Includes reservoir sites at Keno Reservoir at Miller Island (RM 246.0; Baseline), Copco Reservoir (RM 198.74; Baseline), and Iron Gate Reservoir (RM 190.19; Baseline). River mile on x-axis not to scale.

6.1.3. Major Tributaries (Time Series)

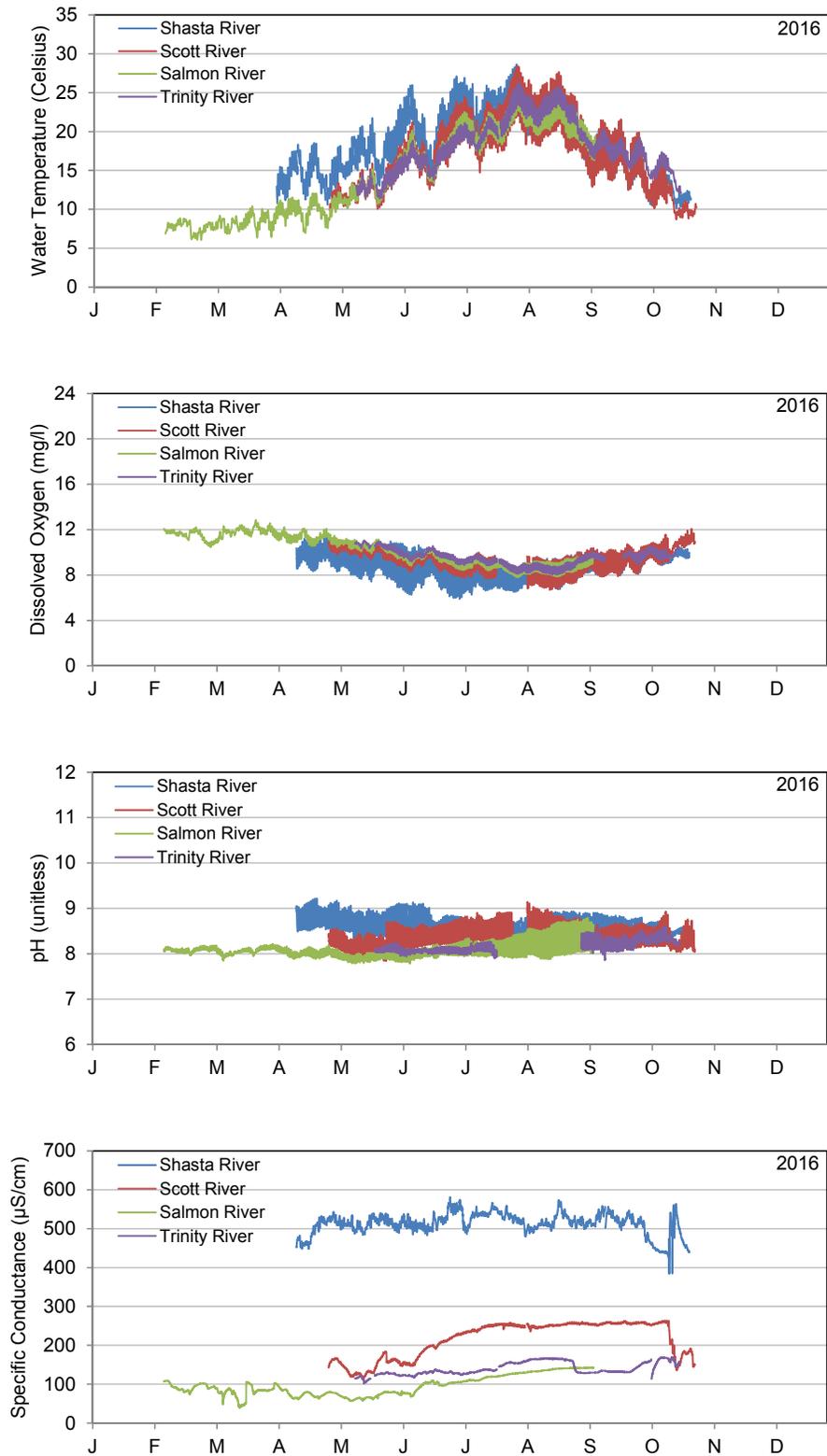


Figure 9. Continuous water temperature, dissolved oxygen, pH, and specific conductance data (2016) for the Shasta River, Scott River, Salmon River, and Trinity River.

6.1.4. Mainstem Klamath River (Time Series)

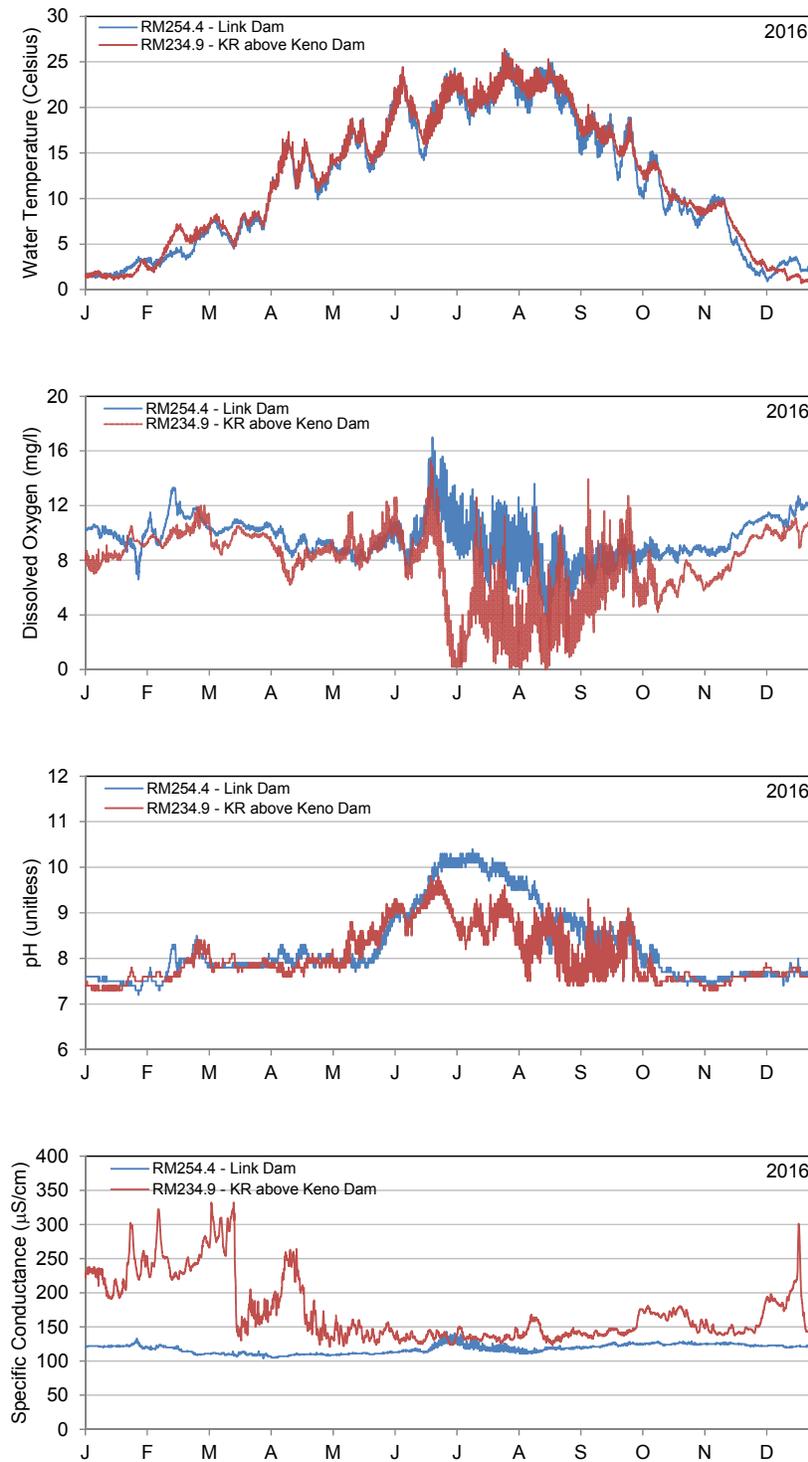


Figure 10. Continuous water temperature, dissolved oxygen, pH, and specific conductance data (2016) for the Klamath River (KR) at Link Dam (RM 254.44; Baseline) and Klamath River above Keno Dam (surface) (RM 234.9).

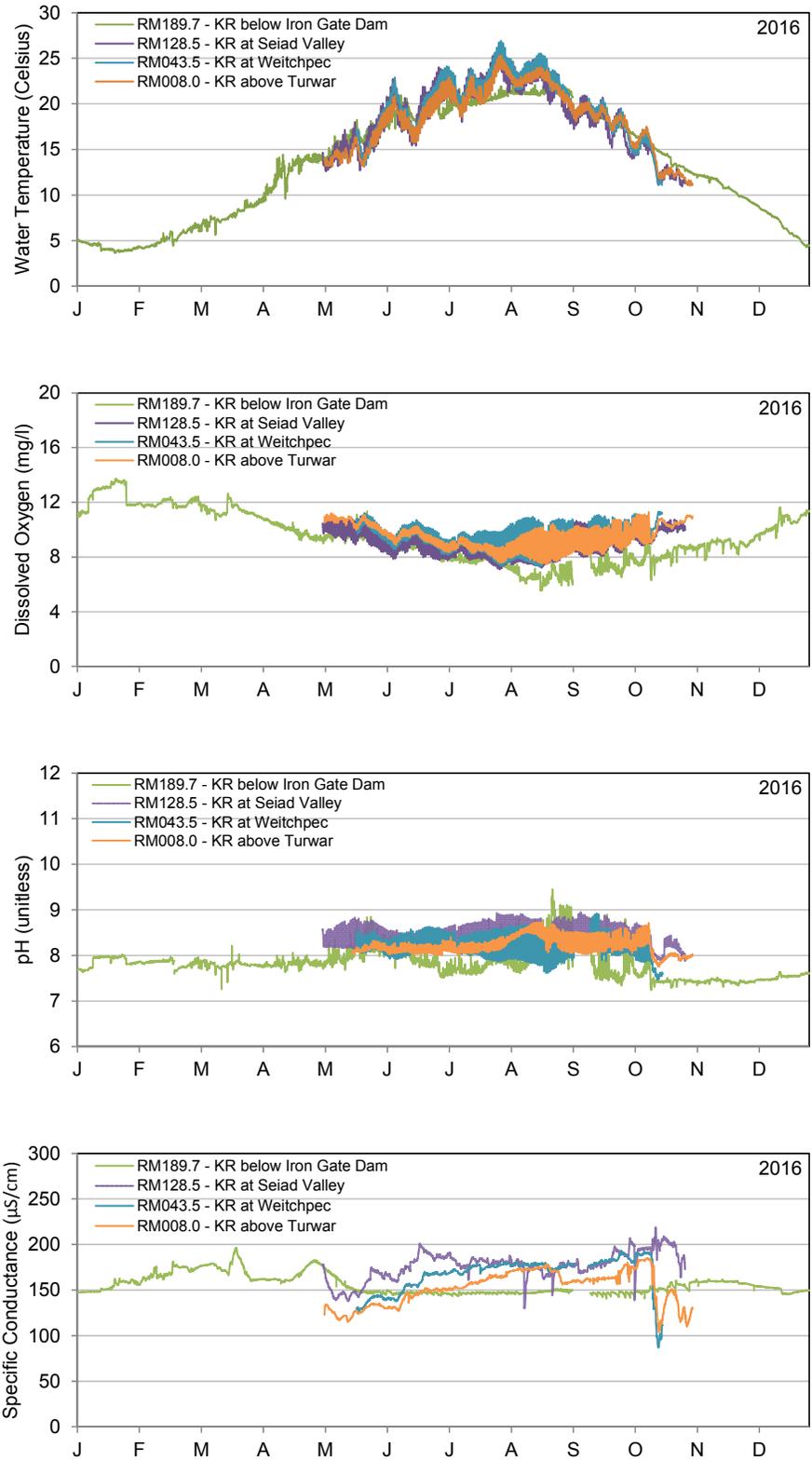


Figure 11. Continuous water temperature, dissolved oxygen, pH, and specific conductance data (2016) for the Klamath River below Iron Gate Dam (RM 189.73; Baseline), Klamath River below Seiad (RM 128.5; Baseline), Klamath River at Weitchpec (RM 43.5; Baseline), and Klamath River above Turwar (RM 8.0).

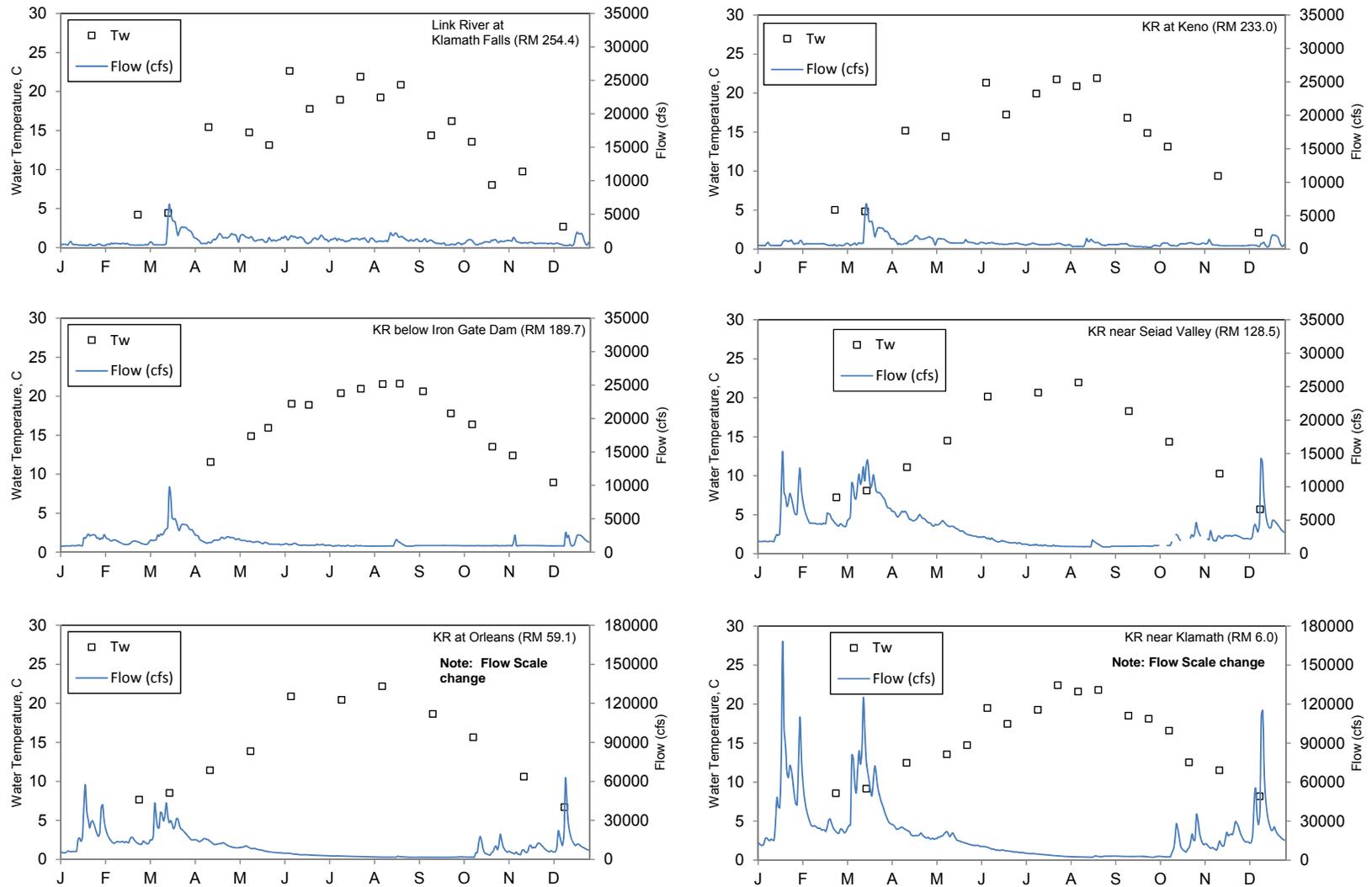


Figure 12. Discrete 2016 water temperature (T_w) measured during grab sampling and mean daily flow at USGS flow gage locations for: Link River at Klamath Falls (USGS Gage 11507500), Klamath River at Keno (USGS Gage 11509500), Klamath River below Iron Gate Dam (USGS Gage 11516530), Klamath River near Seiad Valley (USGS Gage 11520500), Klamath River at Orleans (USGS Gage 11523000), and Klamath River near Klamath (USGS Gage 11530500). Note the scale change for the secondary y-axis for Klamath River at Orleans (USGS) (RM 59.1; Baseline) and Klamath River near Klamath (RM 6.0; Baseline).

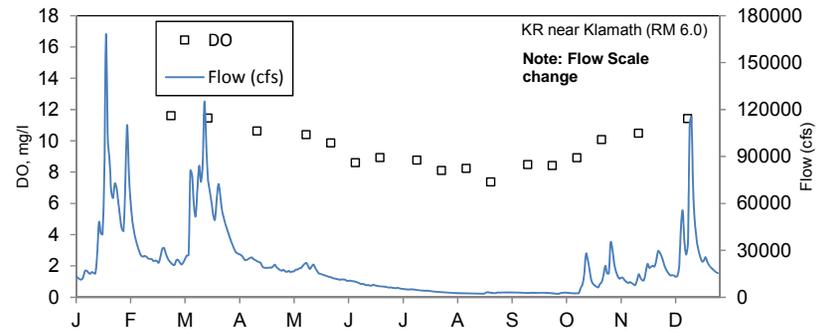
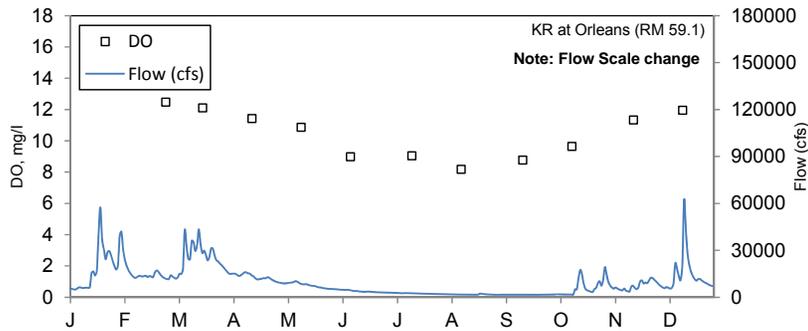
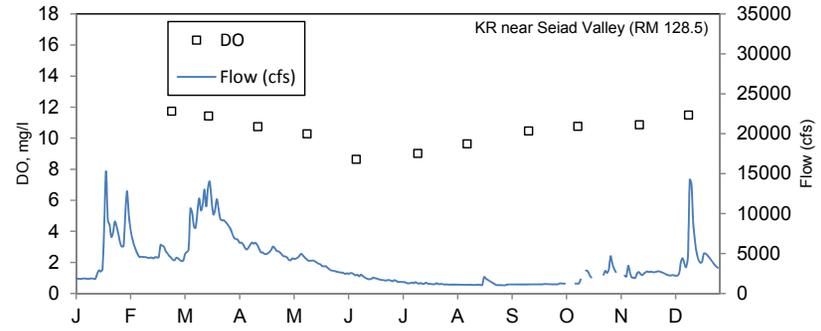
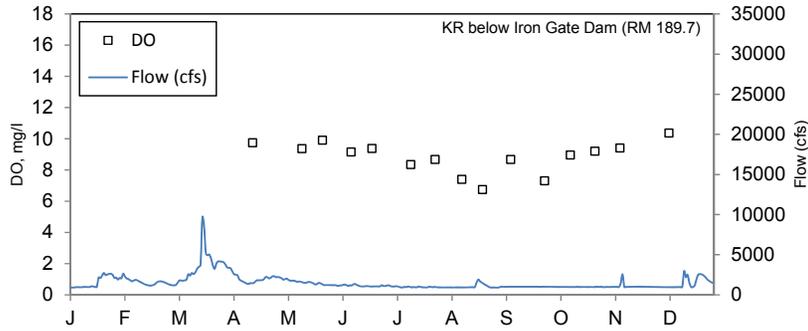
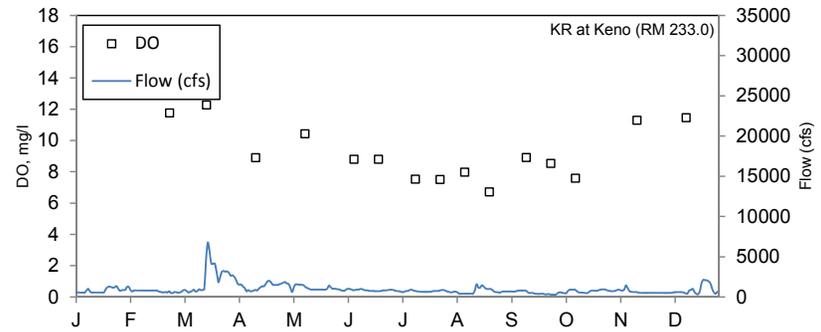
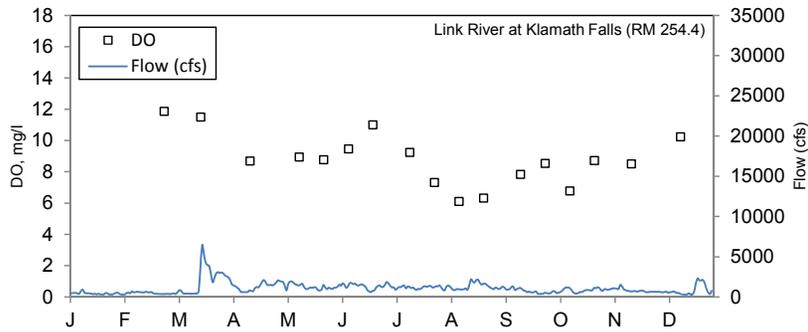


Figure 13. Discrete 2016 dissolved oxygen (DO) measured during grab sampling and mean daily flow at USGS flow gage locations for: Link River at Klamath Falls (USGS Gage 11507500), Klamath River at Keno (USGS Gage 11509500), Klamath River below Iron Gate Dam (USGS Gage 11516530), Klamath River near Seiad Valley (USGS Gage 11520500), Klamath River at Orleans (USGS Gage 11523000), and Klamath River near Klamath (USGS Gage 11530500). Note the scale change for the secondary y-axis for Klamath River at Orleans (USGS) (RM 59.1; Baseline) and Klamath River near Klamath (RM 6.0; Baseline).

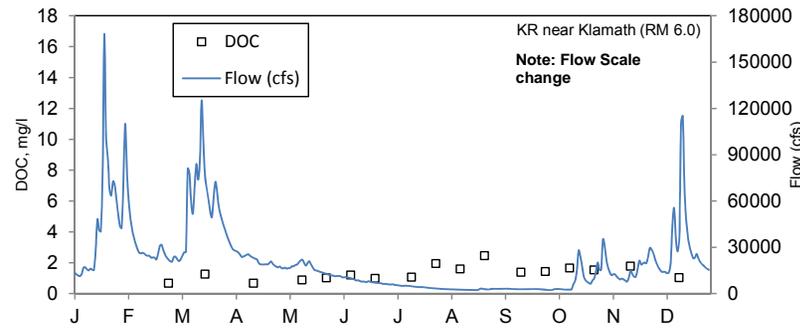
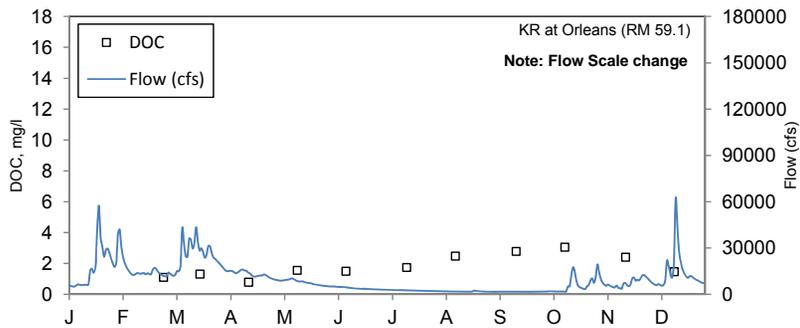
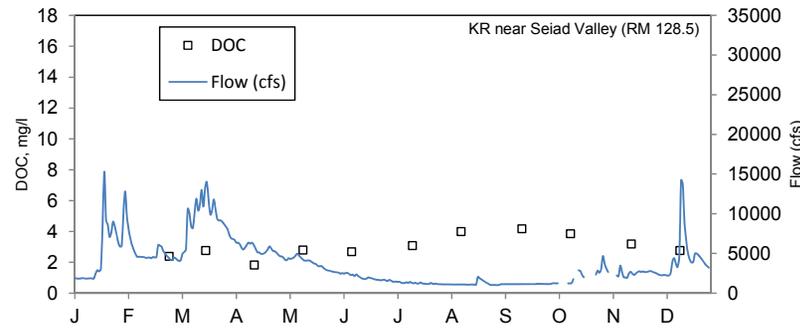
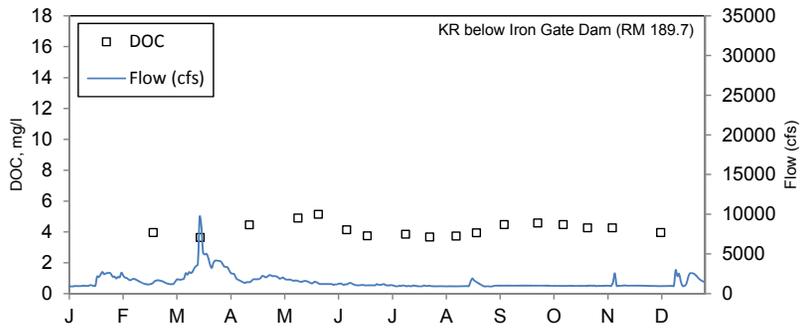
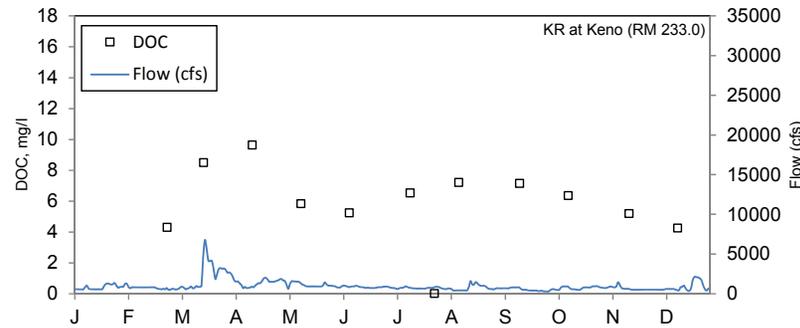
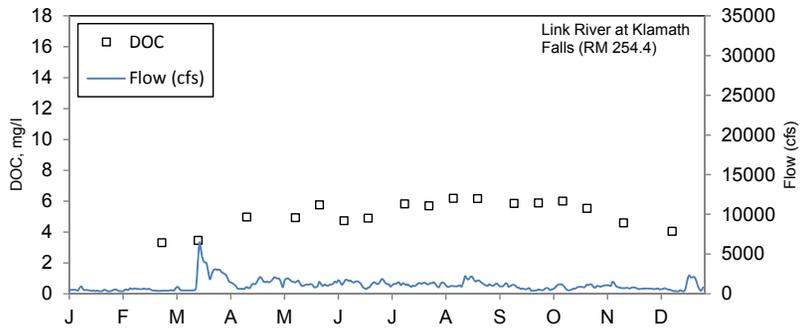


Figure 14. Discrete 2016 dissolved organic carbon (DOC) measured during grab sampling and mean daily flow at USGS flow gage locations for: Link River at Klamath Falls (USGS Gage 11507500), Klamath River at Keno (USGS Gage 11509500), Klamath River below Iron Gate Dam (USGS Gage 11516530), Klamath River near Seiad Valley (USGS Gage 11520500), Klamath River at Orleans (USGS Gage 11523000), and Klamath River near Klamath (USGS Gage 11530500). Note the scale change for the secondary y-axis for Klamath River at Orleans (USGS) (RM 59.1; Baseline) and Klamath River near Klamath (RM 6.0; Baseline).

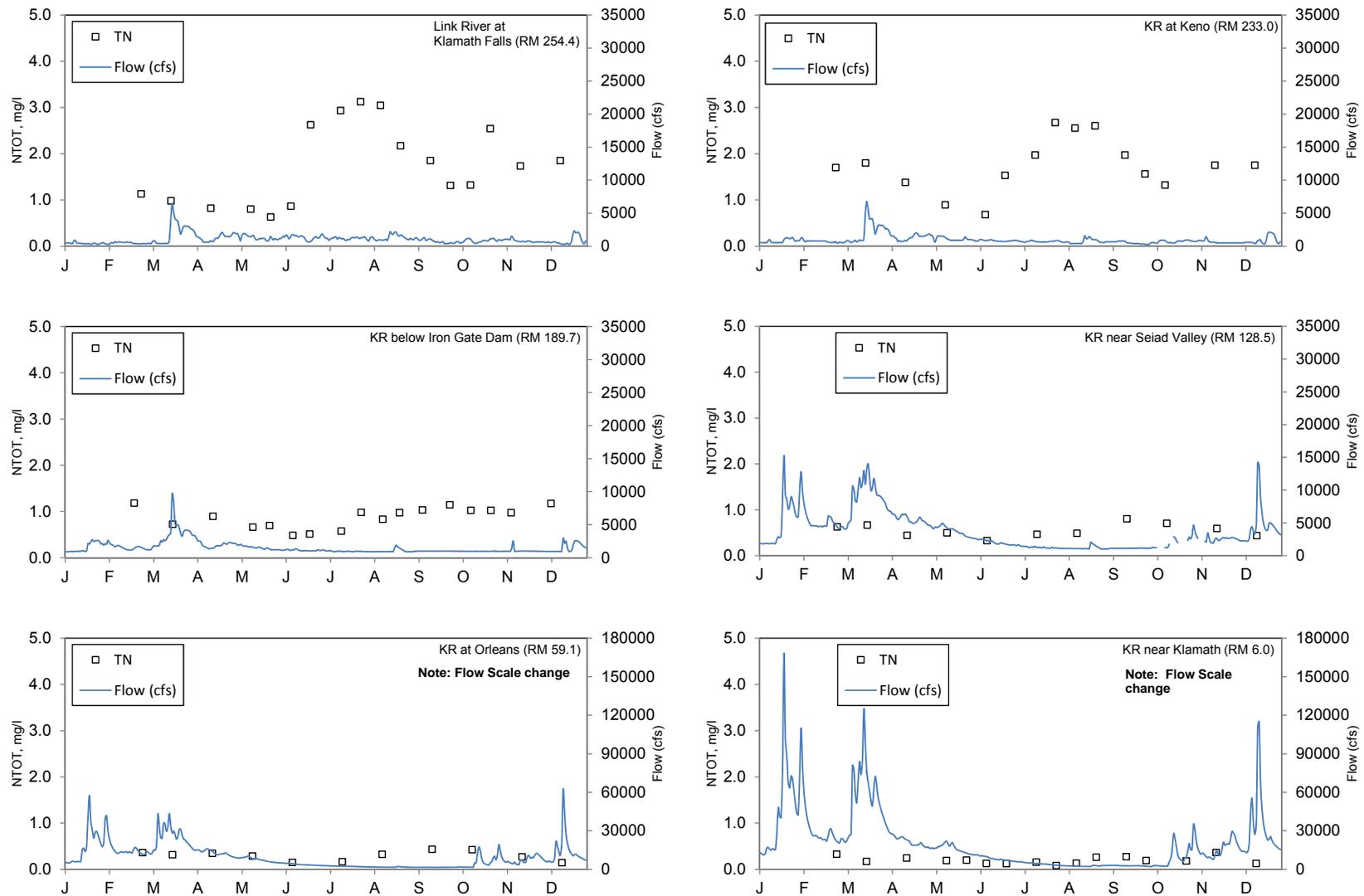


Figure 15. Discrete 2016 total nitrogen (TN) measured during grab sampling and mean daily flow at USGS flow gage locations for: Link River at Klamath Falls (USGS Gage 11507500), Klamath River at Keno (USGS Gage 11509500), Klamath River below Iron Gate Dam (USGS Gage 11516530), Klamath River near Seiad Valley (USGS Gage 11520500), Klamath River at Orleans (USGS Gage 11523000), and Klamath River near Klamath (USGS Gage 11530500). Note the scale change for the secondary y-axis for Klamath River at Orleans (USGS) (RM 59.1; Baseline) and Klamath River near Klamath (RM 6.0; Baseline).

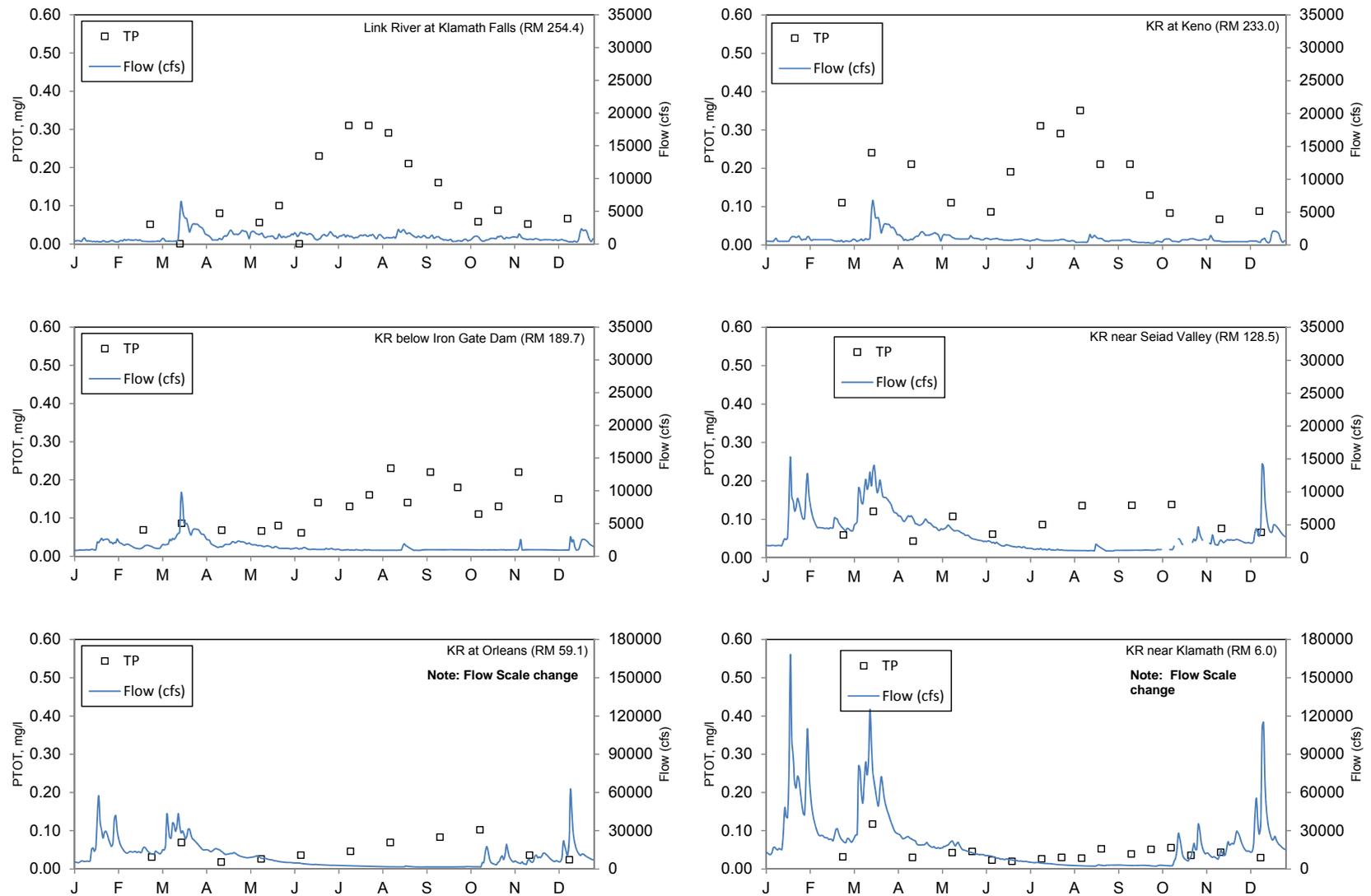


Figure 16. Discrete 2016 total phosphorus (TP) measured during grab sampling and mean daily flow at USGS flow gage locations for: Link River at Klamath Falls (USGS Gage 11507500), Klamath River at Keno (USGS Gage 11509500), Klamath River below Iron Gate Dam (USGS Gage 11516530), Klamath River near Seiad Valley (USGS Gage 11520500), Klamath River at Orleans (USGS Gage 11523000), and Klamath River near Klamath (USGS Gage 11530500). Note the scale change for the secondary y-axis for Klamath River at Orleans (USGS) (RM 59.1; Baseline) and Klamath River near Klamath (RM 6.0; Baseline).

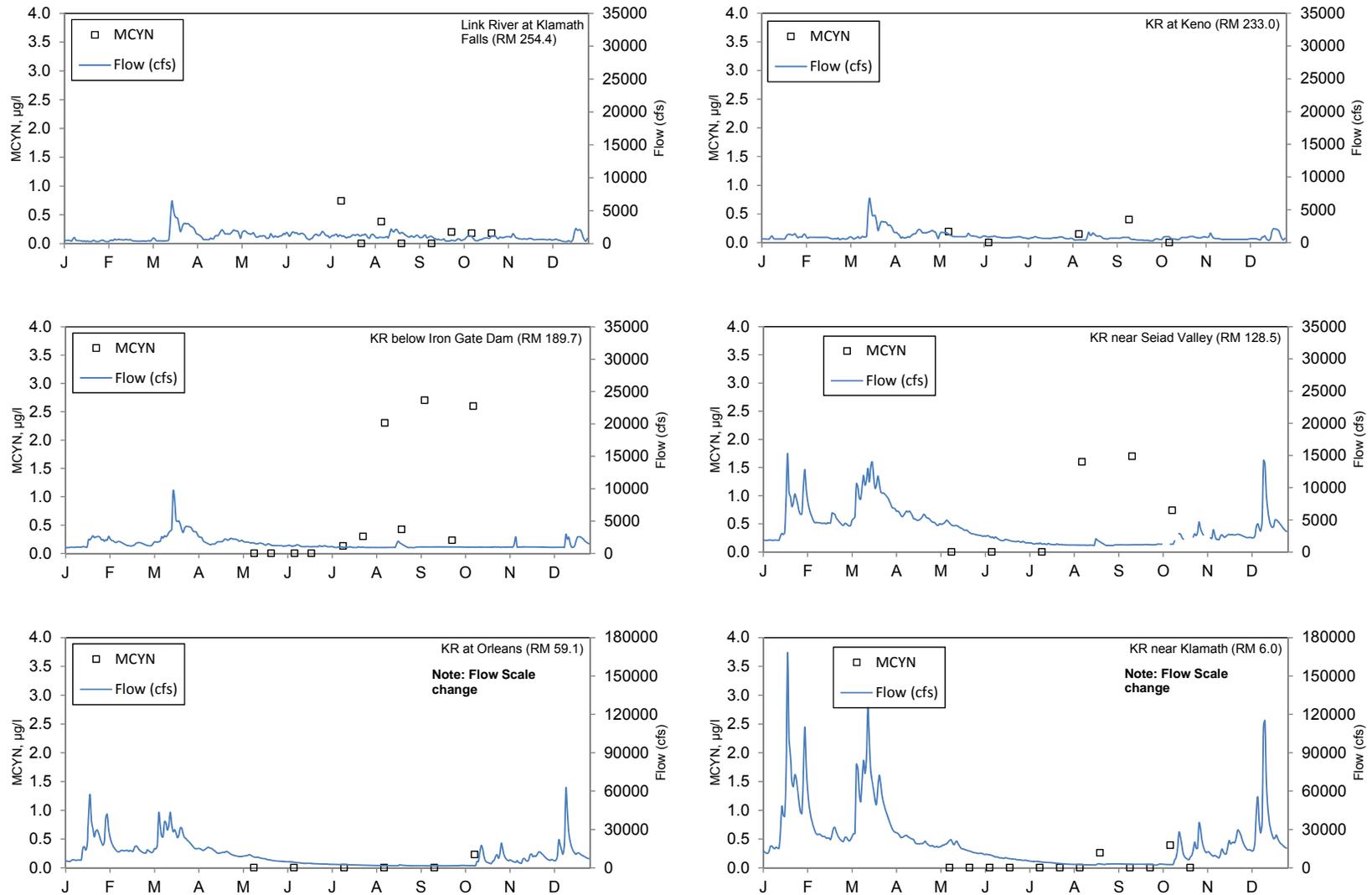


Figure 17. Discrete 2016 microcystin (MCYN) measured during grab sampling and mean daily flow at USGS flow gage locations for: Link River at Klamath Falls (USGS Gage 11507500), Klamath River at Keno (USGS Gage 11509500), Klamath River below Iron Gate Dam (USGS Gage 11516530), Klamath River near Seiad Valley (USGS Gage 11520500), Klamath River at Orleans (USGS Gage 11523000), and Klamath River near Klamath (USGS Gage 11530500). Note the scale change for the secondary y-axis for Klamath River at Orleans (USGS) (RM 59.1; Baseline) and Klamath River near Klamath (RM 6.0; Baseline). Only surface samples are taken in consideration. Non-detect values are presented as zeros.

7. Public Health Water Quality Data

Water quality samples for the 2016 IM 15 public health monitoring program were collected from May through November. Sampling crews from the various entities generally collected samples within a few days of each other. Sampling on the same day throughout the basin was infeasible because of other obligations, shipping constraints, travel considerations, and other factors. In most cases all 18 sites were sampled each month. There were periods when one or more sites were omitted or one or more constituents were not sampled. The full public health dataset is presented in Appendix D.

7.1. Public Health Advisories

The Oregon Health Authority issued a health advisory for Upper Klamath Lake because of cyanotoxins in that waterbody at concentrations greater than the Oregon guideline values (OHA 2016) on July 8, 2016⁶ for the entire lake (including Agency Lake). This advisory was lifted for Upper Klamath Lake and Agency Lake on July 28, 2016 except for the Howard's Bay area which remained under an advisory posting. The Howard's Bay advisory was lifted on September 16, 2016. However, samples from early October resulted in issuance of a new advisory on October 3, 2016. This advisory was lifted on November 7, 2016. One advisory was issued on July 28 for the Klamath River from Link dam downstream through J.C. Boyle reservoir on July 28, 2016; this advisory was lifted on October 27, 2016.

In 2016, the California State Water Resources Control Board (SWRCB), working with a wide array of stakeholders and experts, updated their posting guidelines for cyanobacteria (SWRCB 2016). The new posting levels for microcystin are graded across a Caution, Warning, and Danger level based on toxin concentrations that exceed 0.8 µg/L, 6 µg/L, and 20 µg/L respectively. Detailed information about these thresholds and information supporting the posting levels is available on the SWRCB harmful algal blooms website⁷.

In California, public health samples collected in Copco Reservoir contained toxin levels above the California posting guidelines (SWRCB 2016) and therefore Copco Reservoir was posted at the Danger level on June 28, 2016. Those advisories continued through the fall until they were removed on December 1, 2016, once November public health sampling confirmed the level of toxins was below the guidelines. Iron Gate Reservoir was posted at the Caution level on June 24, the Warning level on July 11, and the

⁶ Note that the dates in the posting discussion reference the date that a regulatory agency (either the Oregon Health Authority or the North Coast Regional Water Quality Control Board) issued an advisory or direction to post a waterbody. They do not refer to the dates that water samples were actually collected.

⁷ <http://www.mywaterquality.ca.gov/habs/>

Danger level on August 8, 2016 in accordance with California posting guidelines (SWRCB 2016). The Danger advisory remained in place until it was removed on December 1, 2016, after the review of November public health sampling data.

Samples collected in the Klamath River below Iron Gate Dam also contained toxin levels above the Caution level, and public health advisories were posted at the Warning level on August 15, 2016 based on preliminary lab results from the site at the I-5 bridge that indicated potential microcystin levels over 6 µg/L. Final lab results for these same samples were below the 6 µg/L threshold, resulting in a down-posting to the Caution level for the river from downstream of Iron Gate dam to Happy Camp. The area from Happy Camp to Orleans was posted at the Caution level on October 5, 2016. All postings on the river downstream of Iron Gate dam were removed on December 1, 2016 after the review of November public health data confirmed the level of toxins had fallen below the posting guidelines.

7.2. Data Summary

The public health data is summarized below to illustrate general spatial and temporal patterns during the 2016 sampling period (the full public health dataset is in Appendix D). Data also are summarized in (1) bar graphs representing the microcystin concentration for the different sampling events at a specific location, (2) bar graphs representing the toxic algae cell counts for the different sampling events at a specific location, and (3) longitudinal graphs of river mile versus and corresponding lab results for microcystin. Data for each location is presented on two separate graphs.

All microcystin data included below was collected in accordance with the public health sampling SOP for the public health monitoring program, except for the South Slough site, where microcystin samples were collected using the baseline SOP instead of the public health SOP. The main difference in these SOPs that could affect the comparison of South Slough results to public health sites is the depth of the sample (surface for public health samples versus 0.5 m for baseline sites) and the sample location. Baseline sites are typically in a fixed location with flowing water. Public health sites vary slightly as sampling crews find the areas of highest apparent algae concentrations.

The MDL for microcystin was 0.15 µg/l and the RL was 0.18 µg/l until after June 23, 2016, when the MDL became 0.10 µg/l and the RL became 0.15 µg/l because of a change in ELISA kit used at the EPA laboratory. There were many samples where microcystin was not detected above the MDL. To clearly indicate when a sample was collected but microcystin was not detected, all non-detect values were graphed as a clearly identified, separate series on the figures below. If a sample was not collected at a location, a note was added to the specific graph for that site.

There were also instances when an algae sample was collected, but no toxic algae were detected. In such cases, a value of zero for the toxic algae cell count indicated that a

sample was collected and no toxic algae were detected. The toxic algae cell count graphs present values for *Dolichospermum flos-aquae* (DKFA) (formerly called *Anabaena flos-aquae* (ABFA) and MSAE. Also presented on the graphs is a summation of other potentially toxic cyanobacteria, including *Dolichospermum circinalis*, *Dolichospermum planctonica*, *Dolichospermum sp.*, *Aphanizomenon sp.*, *Gloeotrichia echinulate*, *Lyngbya sp.*, *Planktothrix limosa* (formerly called *Oscillatoria limosa*), *Planktothrix sp.* (formerly called *Oscillatoria sp.*), *Pseudo-Dolichospermum sp.*, *Dolichospermum variabilis*, and *Limnothrix sp.*, which were present in the Klamath River samples. When they were abundant in 2016, most of the 'Other' cyanobacteria was *Gloeotrichia echinulata* (Figures 21 and 22). At the South Slough site, most of the 'Other' cyanobacteria were *Dolichospermum planctonica*, *Dolichospermum sp.*, or *Planktothrix limosa* (Figure 27) While *Aphanizomenon flos-aquae* cell counts were reported for the public health samples, in the Klamath River system this species of cyanobacteria has not been found to produce toxins (Carmichael et al. 2000; Li et al. 2000; Pereira 2004). Therefore, *Aphanizomenon flos-aquae* values were omitted from the public health summary graphs.

Because of the higher cell counts and microcystin concentrations at the reservoir sites, the graphs for the reservoir locations have a different scale than the graphs for the river locations.

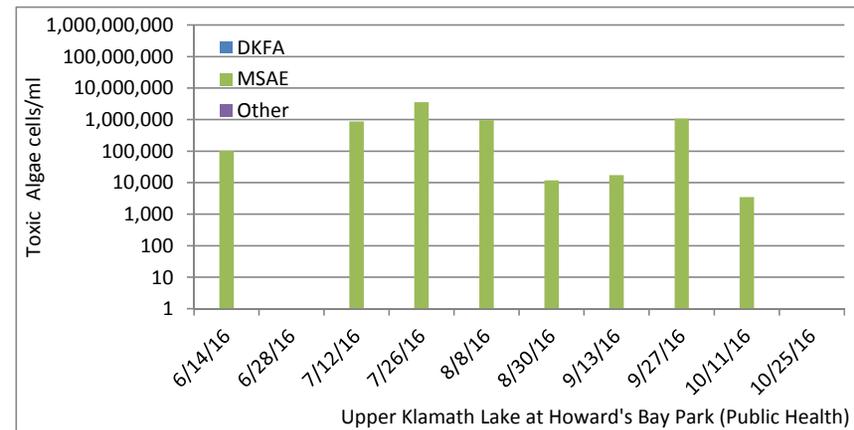
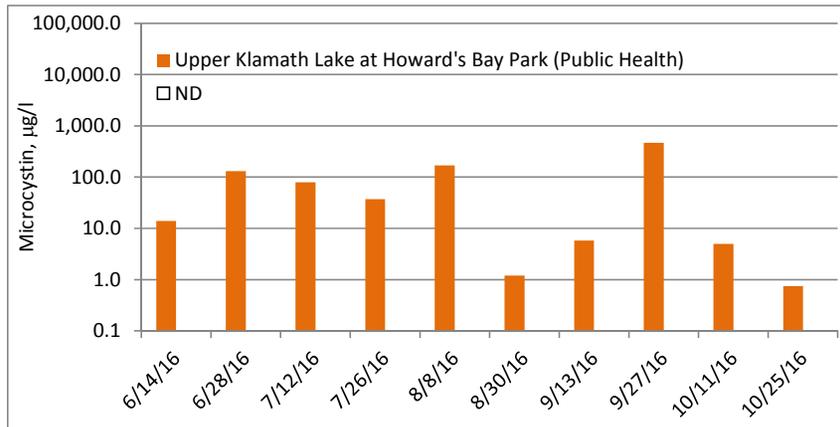
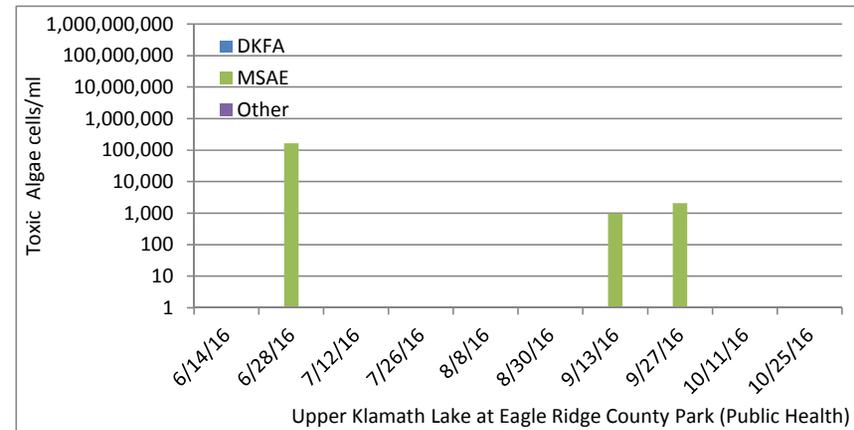
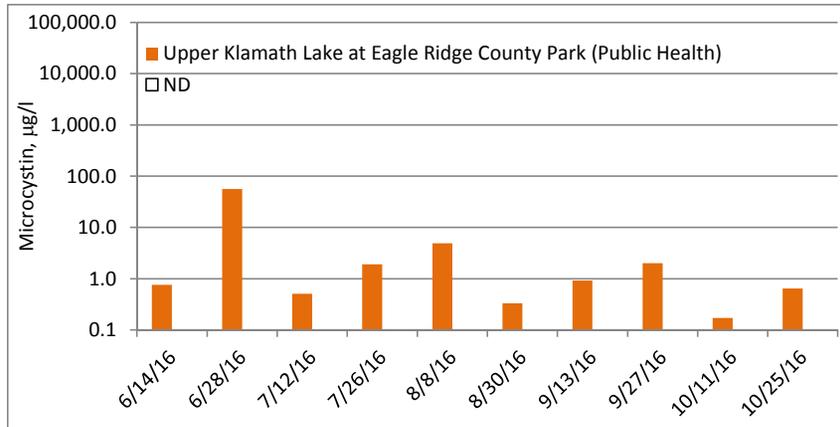


Figure 18. Microcystin concentrations and toxic algae cell counts from 2016 public health samples collected in Upper Klamath Lake at Eagle Ridge County Park (Public Health) and Upper Klamath Lake at Howard's Bay Park (Public Health) (ND indicates non-detect results).

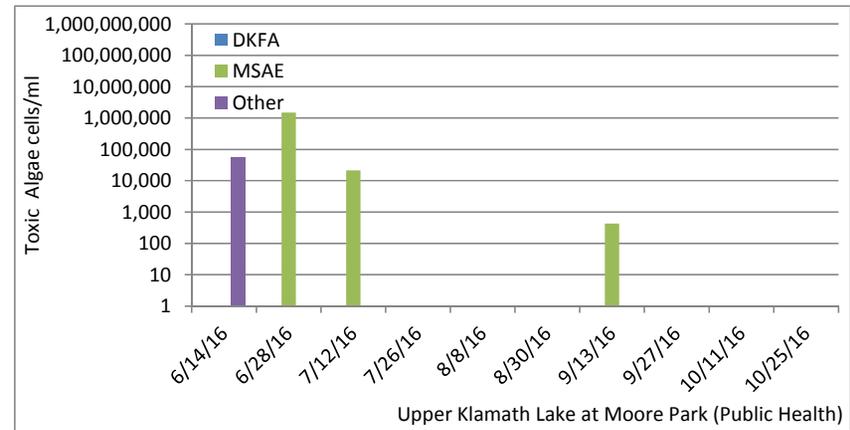
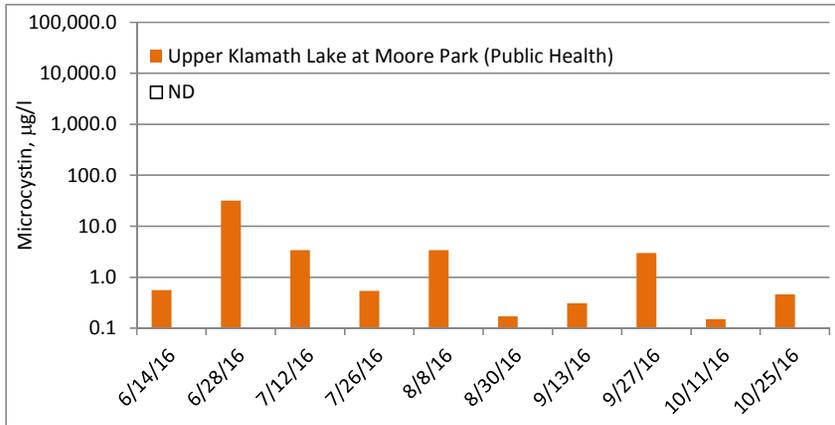


Figure 19. Microcystin concentrations and toxic algae cell counts from 2016 public health samples collected in Upper Klamath Lake at Moore Park (Public Health) (ND indicates non-detect results).

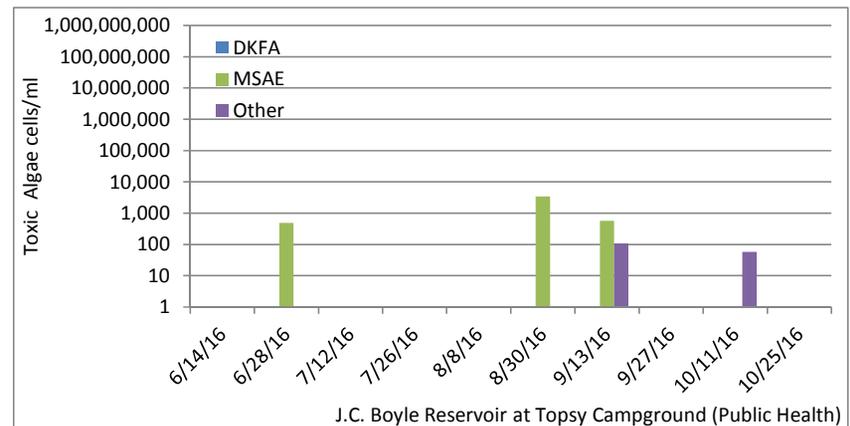
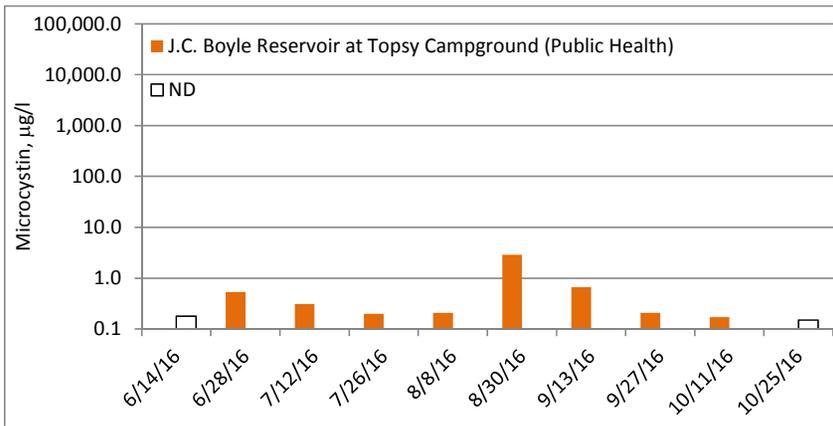
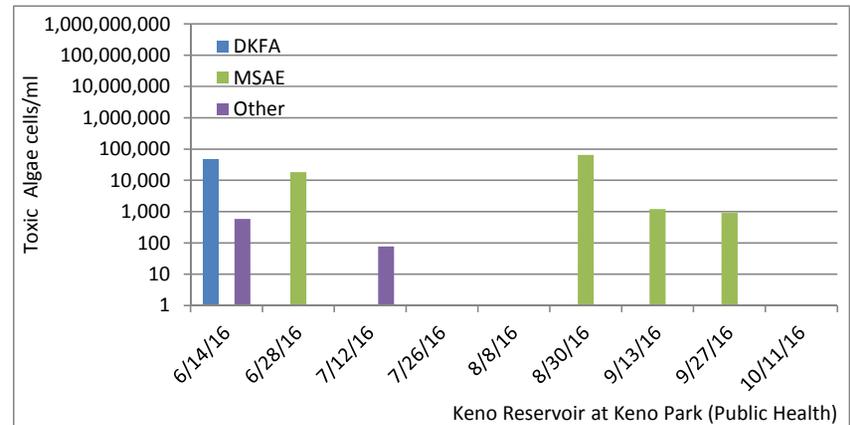
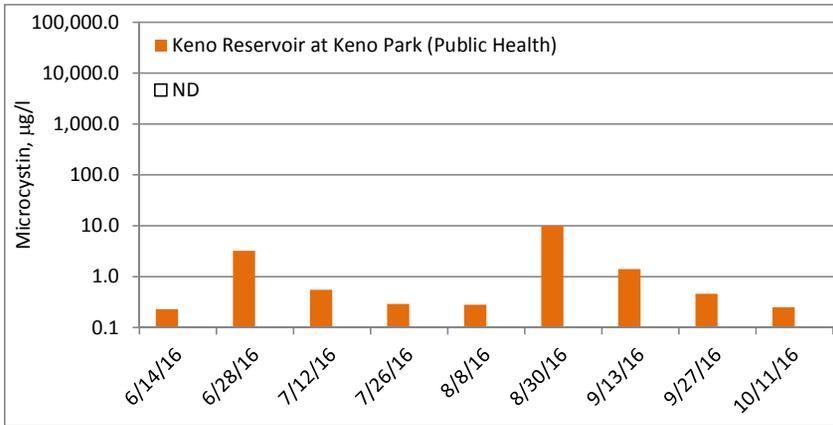


Figure 20. Microcystin concentrations and toxic algae cell counts from 2016 public health samples collected in Keno Reservoir at Keno Park (Public Health) and J.C. Boyle Reservoir at Topsy Campground (Public Health) (ND indicates non-detect results).

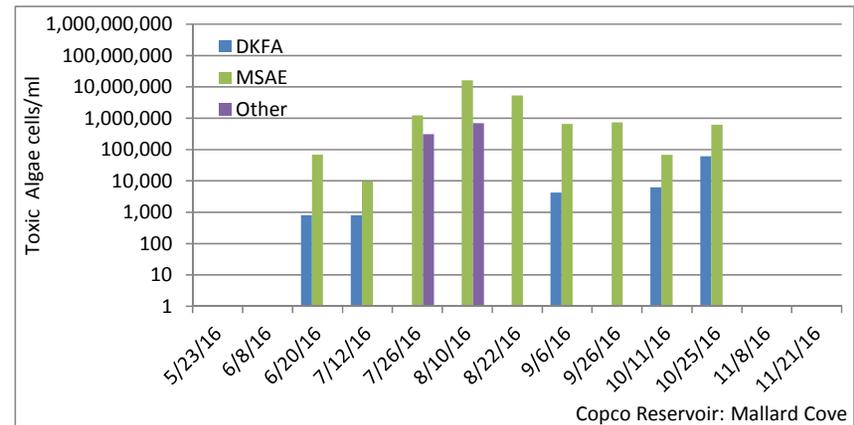
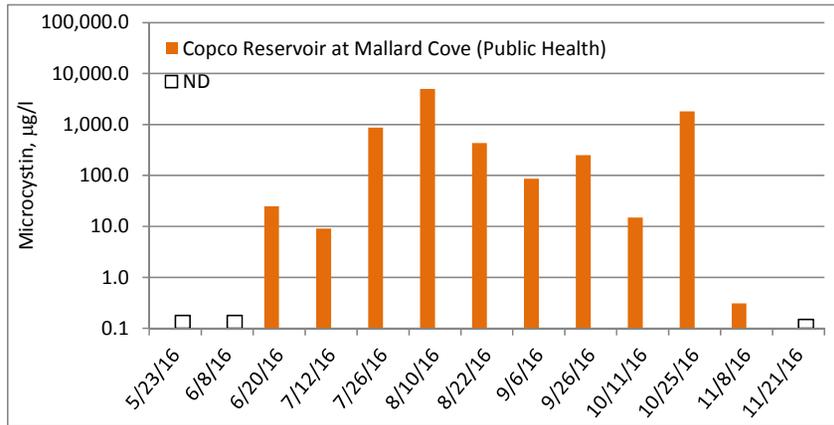
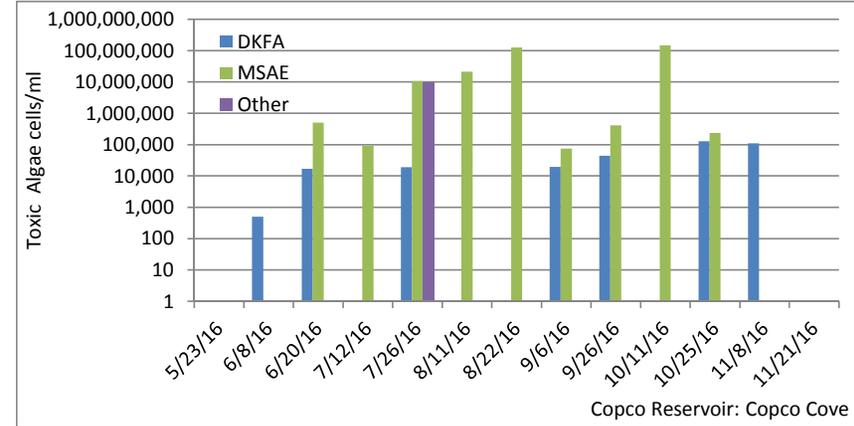
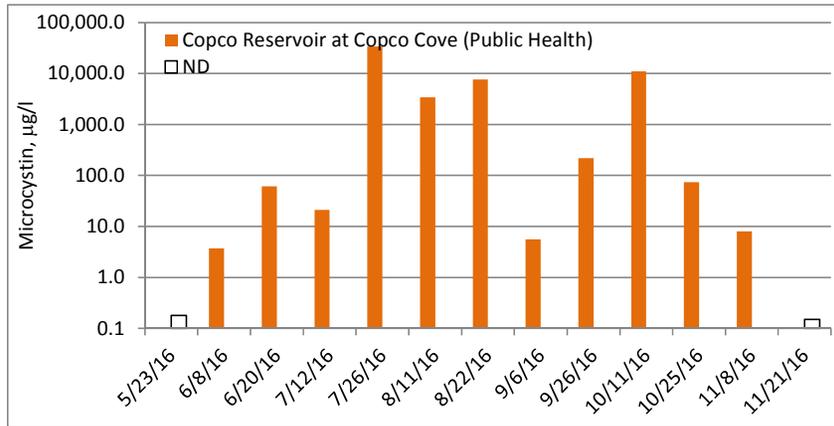


Figure 21. Microcystin concentrations and toxic algae cell counts from 2016 public health samples collected in Copco Reservoir at Copco Cove and Mallard Cove (ND indicates non-detect results).

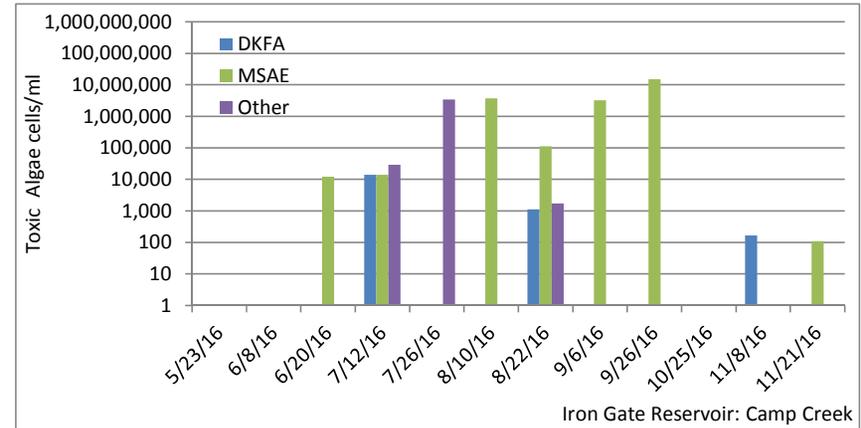
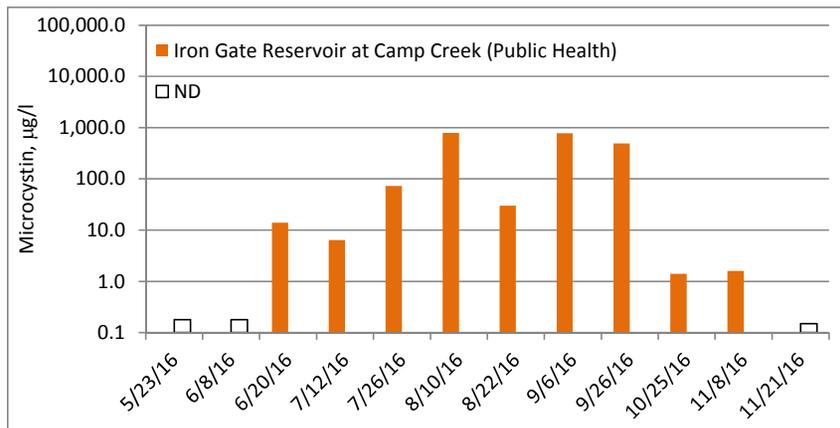
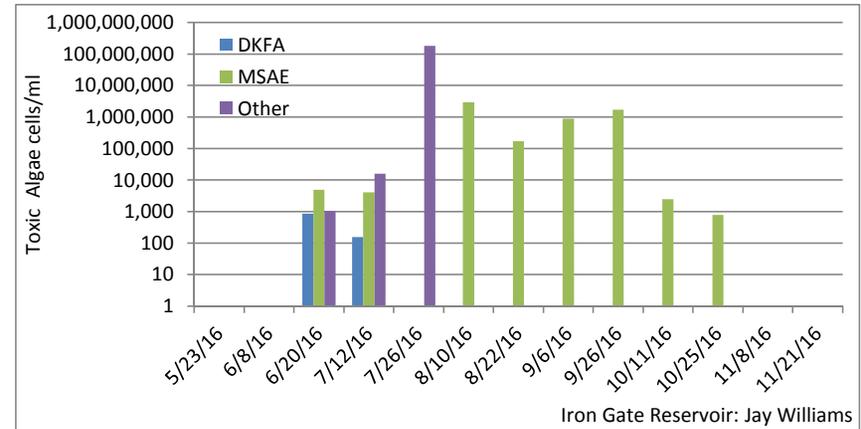
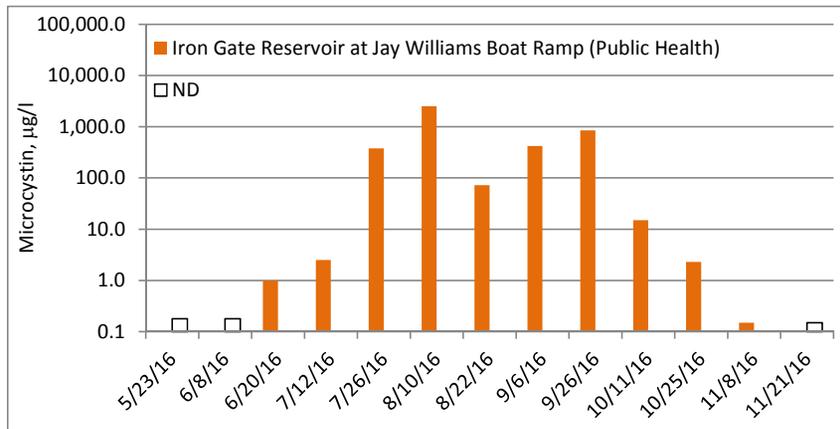


Figure 22. Microcystin concentrations and toxic algae cell counts from 2016 public health samples collected in Iron Gate Reservoir at Jay Williams Boat Ramp and Camp Creek (ND indicates non-detect results).

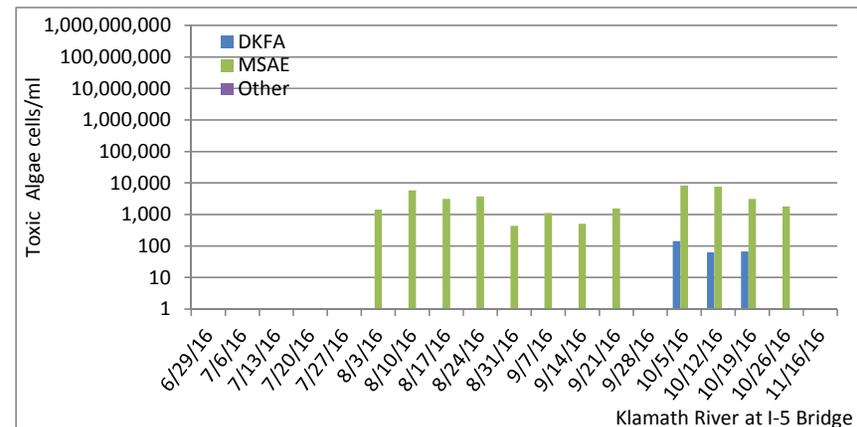
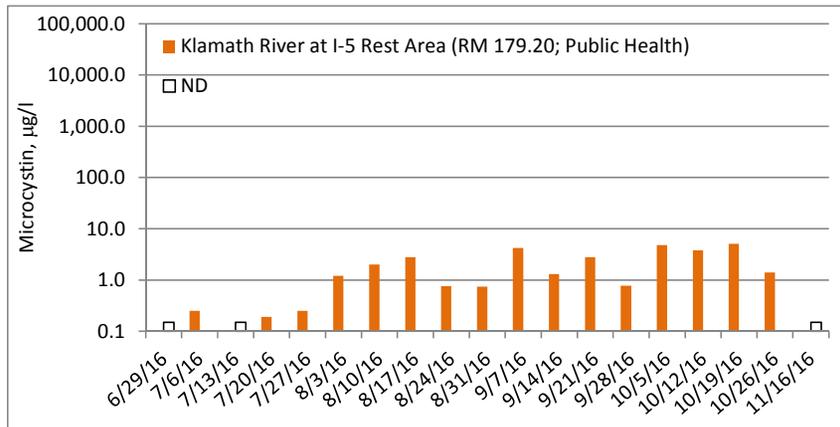
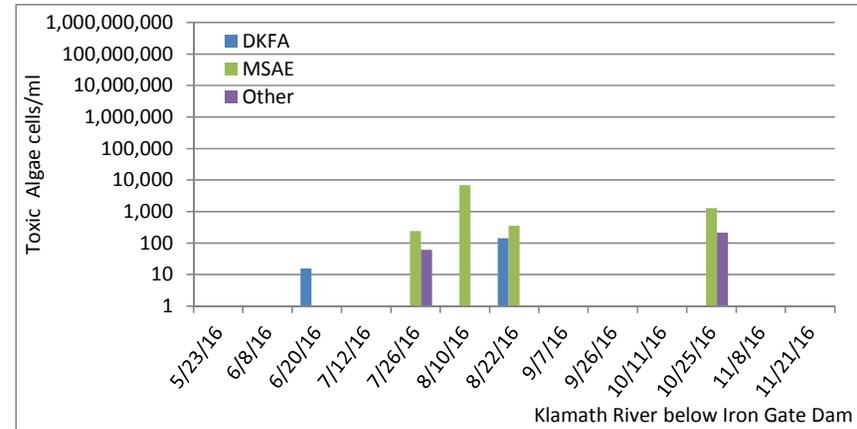
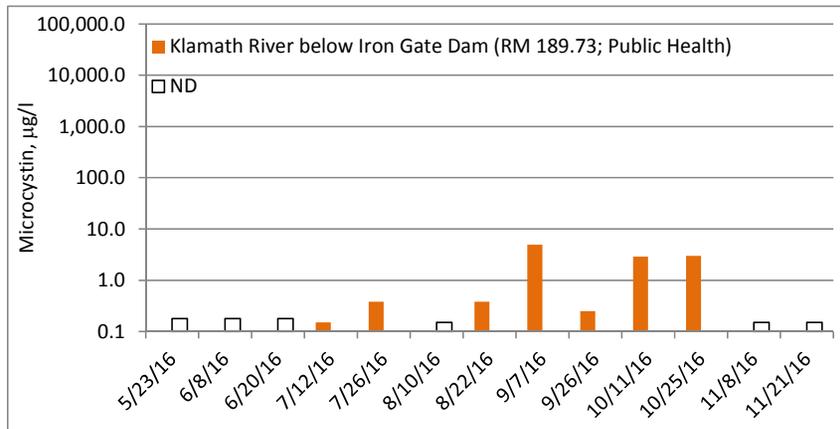


Figure 23. Microcystin concentrations and toxic algae cell counts from 2016 public health samples collected in Klamath River Klamath River below Iron Gate Dam (RM 189.73; Public Health) and Klamath River at I-5 Rest Area (RM 179.20; Public Health) (ND indicates non-detect results).

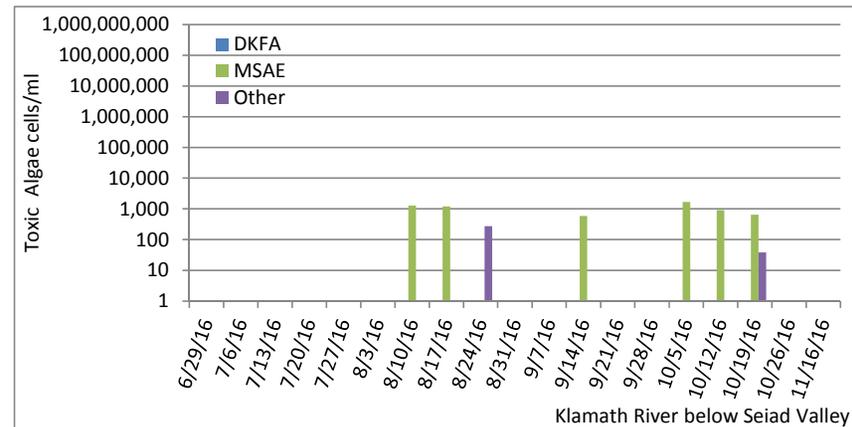
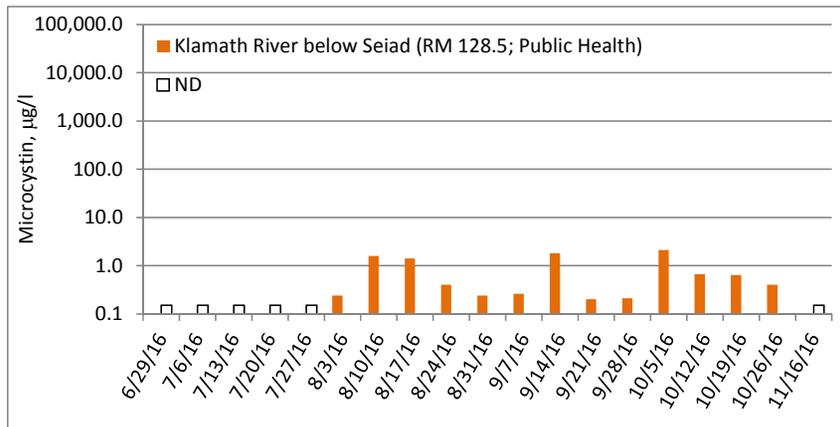
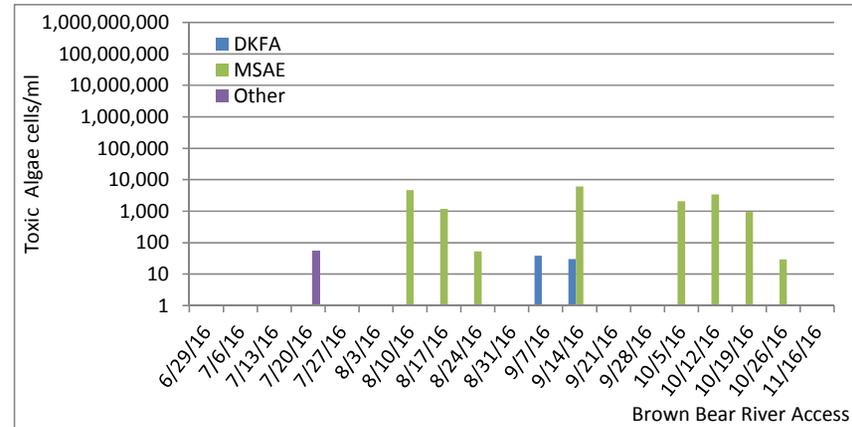
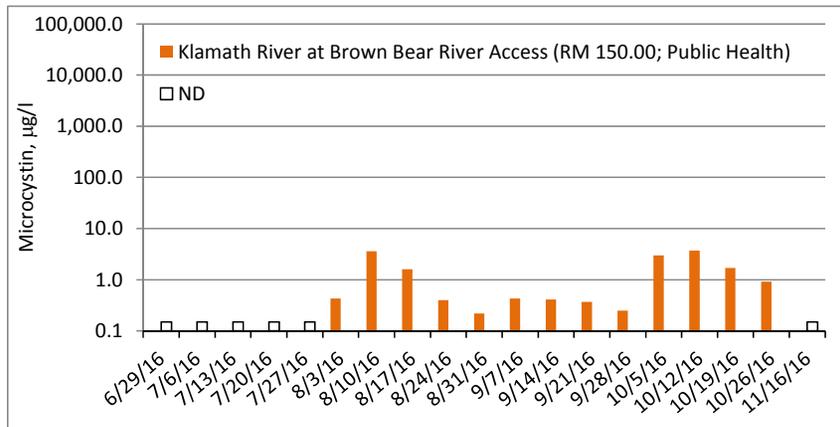


Figure 24. Microcystin concentrations and toxic algae cell counts from 2016 public health samples collected at Klamath River at Brown Bear River Access (RM 150.00; Public Health) and Klamath River below Seiad (RM 128.5; Public Health) (ND indicates non-detect results).

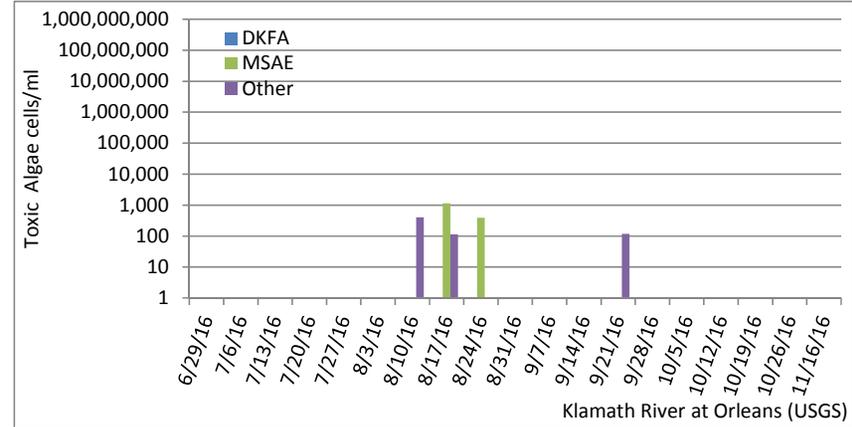
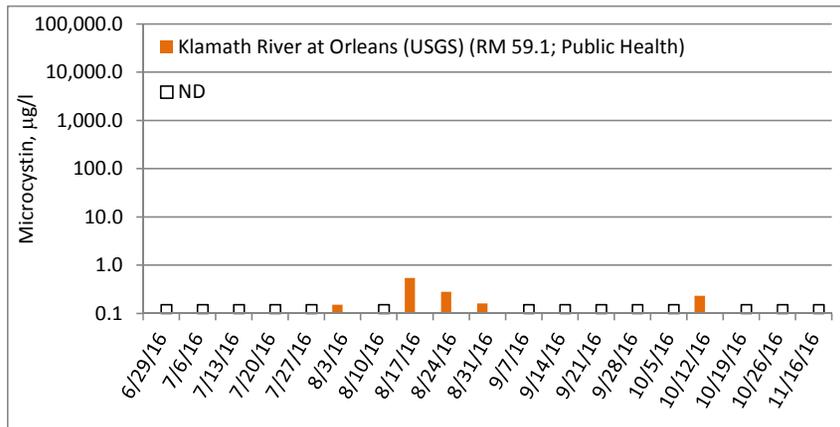
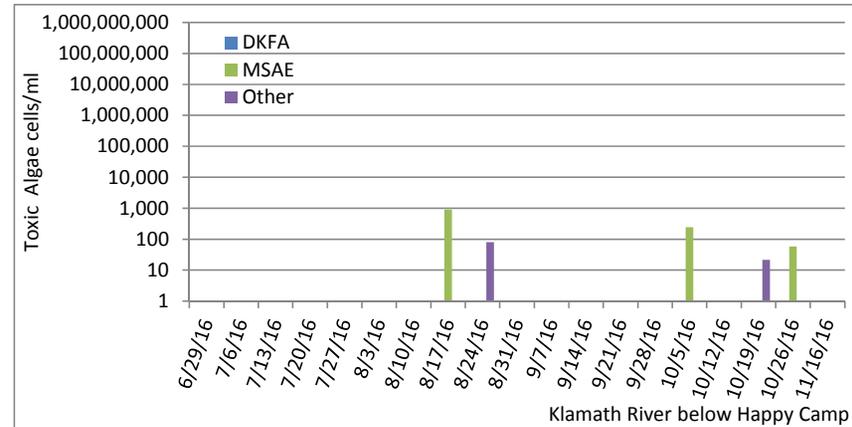
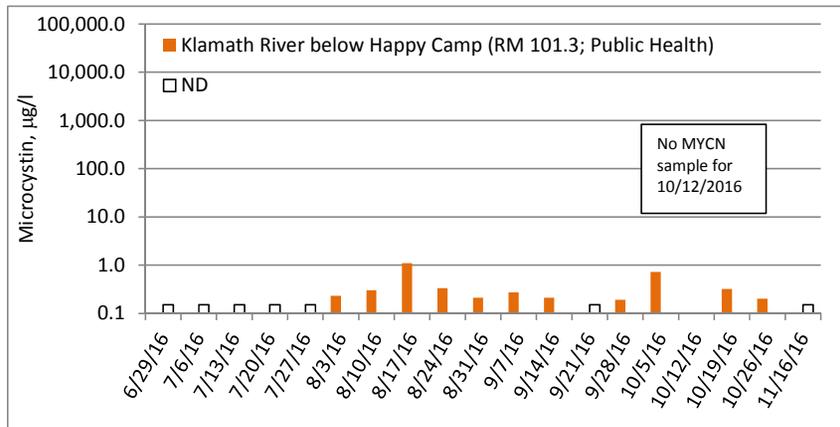


Figure 25. Microcystin concentrations and toxic algae cell counts from 2016 public health samples collected in Klamath River below Happy Camp (RM 101.3; Public Health) and Klamath River at Orleans (USGS) (RM 59.1; Public Health) (ND indicates non-detect results).

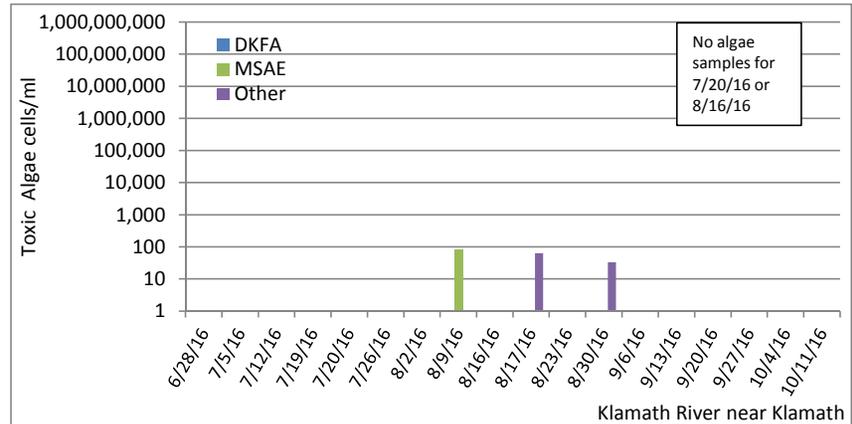
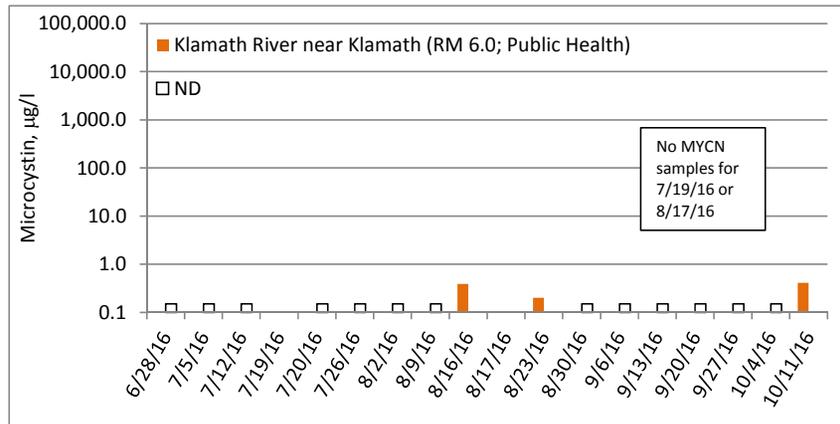
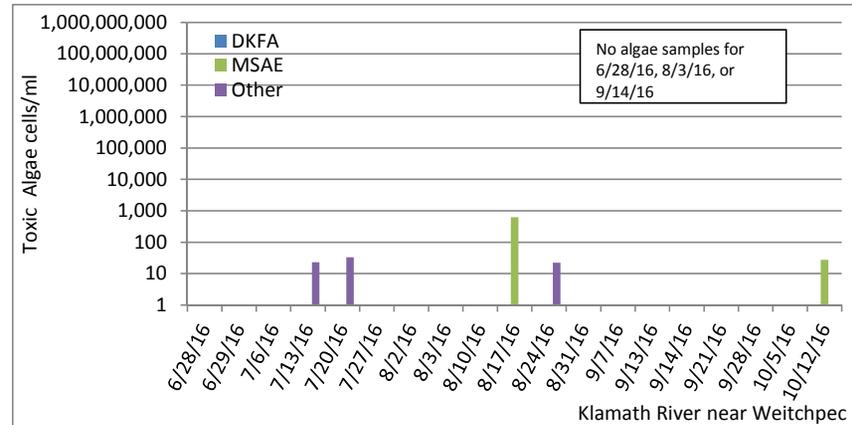
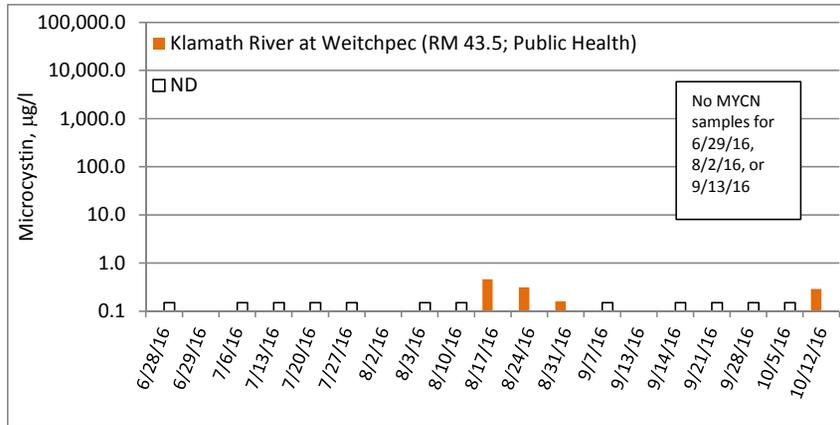


Figure 26. Microcystin concentrations and toxic algae cell counts from 2016 public health samples collected at Klamath River at Weitchpec (RM 43.5; Public Health) and Klamath River near Klamath (RM 6.0; Public Health) (ND indicates non-detect results).

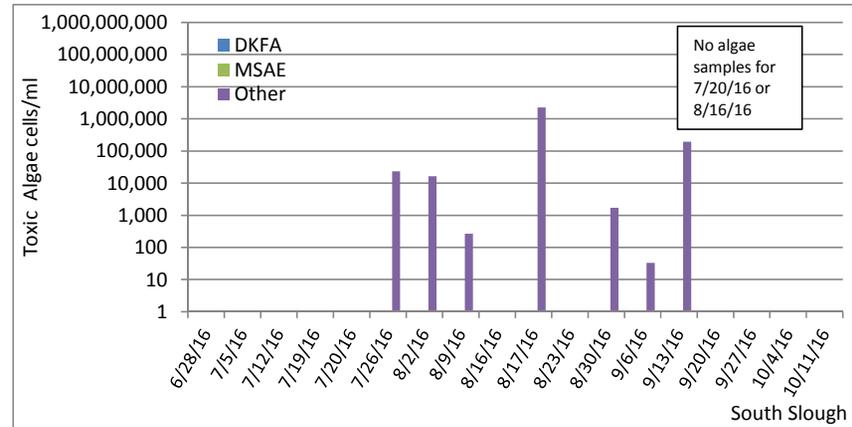
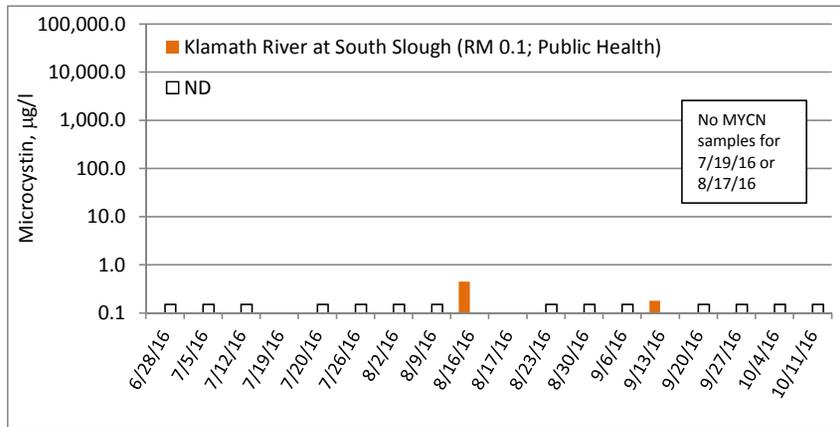


Figure 27. Microcystin concentrations and toxic algae cell counts from 2016 public health samples collected at Klamath River at South Slough (RM 0.1; Public Health) (ND indicates non-detect results).

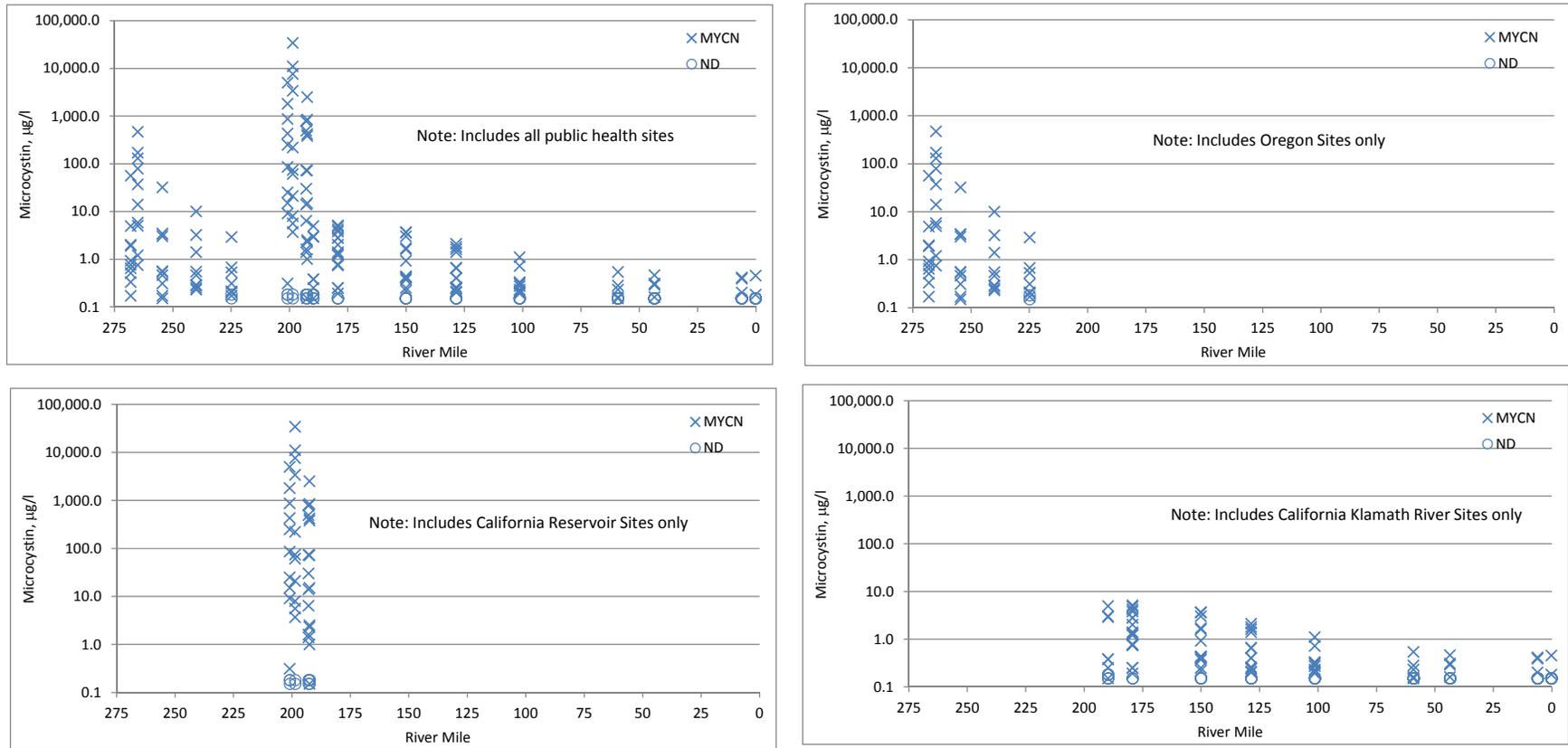


Figure 28. 2016 microcystin (MYCN) concentrations from public health program: at all public health sampling sites (top left), Oregon sites (top right), California reservoir sites (bottom left) and California Klamath River sites from Iron Gate dam downstream (bottom right). ND (o) indicates non-detect results. Reservoir sites were given approximate river miles to locate them appropriately on the graph.

8. Summary

The KHSA IM15 baseline water quality sampling program and public health monitoring program are an interagency cooperative effort to characterize water quality conditions in the Klamath Basin in support of ongoing and future measures pertaining to restoration, dam removal studies, public health, and other factors. The programs were originally implemented in 2009 under the AIP and have been on-going in a consistent manner ever since. Quality assurance measures have been incorporated into the process and final data sets are available to all interested parties. This planning and monitoring effort has laid the groundwork for continued cooperation and quality data collection in the Klamath River basin.

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Appendix A. Baseline Water Quality Sampling Site Locations

Table A-1. 2016 baseline water quality sampling locations in the Klamath River mainstem and major tributaries.

Site ID	Location	Site Type	River Mile	Sampling Entity
KR25444	Link Dam (RM 254.44; Baseline)	Mainstem	254.44	USBR
KR24600	Keno Reservoir at Miller Island (RM 246.0; Baseline)	Mainstem	246.00	USBR
KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	Mainstem	233.40	USBR
KR22822	Klamath River above J.C. Boyle Reservoir (RM 228.22; Baseline)	Mainstem	228.22	PacifiCorp
KR22478	J.C. Boyle Reservoir (RM 224.78; Baseline)	Reservoir	224.78	PacifiCorp
KR22460	Klamath River below J.C. Boyle Dam (RM 224.60; Baseline)	Mainstem	224.60	PacifiCorp
KR21950	Klamath River below USGS Gage (RM 219.50; Baseline)	Mainstem	219.50	PacifiCorp
KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	Mainstem	206.42	PacifiCorp
KR19874	Copco Reservoir (RM 198.74; Baseline)(0.5 m, thermocline, 0.5 m from bottom, and 0-8m integrated)	Reservoir	198.74	PacifiCorp
KR19645	Klamath River below Copco Dam (RM 196.45; Baseline)	Mainstem	196.45	PacifiCorp
KR19019	Iron Gate Reservoir (RM 190.19; Baseline)(0.5 m, thermocline, 0.5 m from bottom, and 0-8m integrated)	Reservoir	190.19	PacifiCorp
KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	Mainstem	189.73	PacifiCorp
KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	Mainstem	156.26	Karuk
KR12850	Klamath River below Seiad (RM 128.5; Baseline)	Mainstem	128.50	Karuk
KR10130	Klamath River below Happy Camp (RM 101.3; Baseline)	Mainstem	101.30	Karuk
KR05910	Klamath River at Orleans (USGS) (RM 59.1; Baseline)	Mainstem	59.10	Karuk
KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Mainstem	43.50	Yurok
KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Mainstem	38.50	Yurok
KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Mainstem	6.00	Yurok
KR00050	Klamath River Estuary (RM 0.5; Baseline)	Mainstem	0.50	Yurok
SH00000	Shasta River near mouth (Baseline)	Tributary	-	Karuk
SC00000	Scott River near mouth (Baseline)	Tributary	-	Karuk
SA00000	Salmon River near mouth (Baseline)	Tributary	-	Karuk
TR00000	Trinity River near mouth (Baseline)	Tributary	-	Yurok

Appendix B. 2016 Baseline Data Summary

Appendix Table B-1 presents the complete general water quality and nutrient data set for the 2016 KHSA baseline sampling. The four sampling entities are United States Bureau of Reclamation (USBR), PacifiCorp, the Karuk Tribe, and the Yurok Tribe. TKN was not sampled in 2016. Before the decision to remove CBOD from the sampling program was finalized, USBR collected six CBOD samples in February, 2016, and those data are presented below.

Table B-1. 2016 Klamath River Baseline Data Summary

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	°C Water Temperature	pH	Specific Conductivity µS/cm	Dissolved Oxygen mg/l	Algae, Chlorophyll-a µg/l	Algae, Pheophytin µg/l	Alkalinity mg/l	Carbon, Dissolved Organic C-Carbon mg/l	Carbon, Particulate C-Carbon mg/l	Demand, Carbonaceous Biological Oxygen Demand mg/l	Nitrogen, Ammonia mg/l	Nitrogen, Nitrate-Nitrite mg/l	Nitrogen, Particulate mg/l	Nitrogen, Total Kjeldahl Nitrogen mg/l	Nitrogen, Total Nitrogen mg/l	Phosphorus, Phosphate mg/l	Phosphorus, Total mg/l	Phosphorus, Particulate mg/l	Phosphorus, Particulate Inorganic Phosphorus mg/l	Turbidity NTU	Solids, Total Suspended Solids mg/l	Solids, Volatile Suspended Solids mg/l	Toxins, Microcystin µg/l
2016KHSA-001	2/23/2016	10:00	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	4.19	8.04	113	11.85	20.73	6.08	44.20	3.29	2.13	2.2	<0.05	0.40	0.30		1.13	<0.01	0.05	0.03	0.01	22.90	32.0	<5.0	
2016KHSA-007	3/15/2016	9:00	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	4.41	7.63	104	11.49	13.69	4.44	42.30	3.44	1.64	<2.0	0.14	0.22	0.24		0.98	<0.01	<0.05	0.03	0.02	21.80	28.0	<5.0	
2016KHSA-013	4/12/2016	8:30	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	15.40	7.83	108	8.68	15.25	3.94	46.60	4.96	1.60	0.09	0.08	0.24		0.82	<0.01	0.08	0.04	0.01	16.10	15.3	<5.0		
2016KHSA-019	5/10/2016	8:45	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	14.74	7.90	110	8.94	12.17	3.28	44.60	4.91	1.41	<0.05	0.11	0.24		0.80	0.05	0.06	0.04	0.03	9.46	8.2	<5.0		
2016KHSA-025	5/24/2016	7:00	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	13.12	7.65	110	8.75	14.57	3.18	45.10	5.75	0.16	<0.05	0.06	1.00		0.63	0.04	0.10	0.02	0.01	8.77	8.0	<5.0		
2016KHSA-029	6/7/2016	8:50	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	22.61	9.16	112	9.45	25.17	2.09	48.70	4.71	2.07	0.05	<0.01	0.39		0.86	0.04	<0.05	0.04	0.02	8.48	9.7	<5.0		
2016KHSA-035	6/21/2016	7:45	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	17.75	9.57	112	10.99	166.92	0.09	54.60	4.88	8.34	<0.05	<0.01	1.70		2.62	0.01	0.23	0.19	0.12	12.37	25.1	19.4		
2016KHSA-040	7/12/2016	8:30	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	18.92	10.12	118	9.23	230.30	0.09	48.90	5.81	11.50	<0.05	0.01	2.25		2.93	0.06	0.31	0.15	0.07	11.56	30.4	26.4	0.74	
2016KHSA-046	7/26/2016	9:00	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	21.88	9.94	112	7.30	230.40	0.88	50.70	5.68	12.30	<0.05	0.01	2.43		3.12	0.08	0.31	0.14	0.06	32.73	25.6	14.8	<0.15	
2016KHSA-051	8/9/2016	8:00	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	19.23	9.95	109	6.09	215.33	0.09	50.10	6.17	9.24	0.05	<0.01	1.85		3.04	0.09	0.29	0.12	0.04	22.30	34.7	49.0	0.38	
2016KHSA-057	8/23/2016	8:30	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	20.85	9.25	114	6.31	75.98	4.21	53.60	6.15	6.56	0.10	0.03	1.30		2.17	0.02	0.21	0.13	0.07	15.00	25.2	8.0	<0.15	
2016KHSA-062	9/13/2016	8:30	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	14.37	8.13	119	7.81	33.87	3.54	58.40	5.83	5.41	<0.05	<0.01	0.99		1.85	0.02	0.16	0.11	0.03	19.03	38.8	11.6	<0.15	
2016KHSA-068	9/27/2016	9:00	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	16.18	8.37	135	8.53	16.87	4.94	57.20	5.86	4.13	0.05	0.01	0.76		1.31	<0.01	0.10	0.07	0.03	9.25	14.8	7.8	0.20	
2016KHSA-073	10/11/2016	8:30	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	13.55	7.75	125	6.76	3.49	1.21	59.90	5.99	1.60	0.25	0.06	0.27		1.32	0.02	0.06	0.05	0.02	4.90	<5.0	<5.0	0.18	
2016KHSA-079	10/25/2016	8:30	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	8.00	7.10	122	8.71	7.73	5.65	57.60	5.52	2.85	0.57	0.21	0.39		2.54	0.01	0.09	0.06	0.01	14.70	43.6	5.6	0.18	
2016KHSA-083	11/15/2016	11:00	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	9.73	7.00	120	8.50	6.95	2.31	53.50	4.58	2.53	0.62	0.32	0.48		1.73	0.01	0.05	0.02	0.00	11.20	9.8	<5.0		
2016KHSA-089	12/13/2016	10:30	KR25444	Link Dam (RM 254.44; Baseline)	USBR	0.5	R	2.68	7.26	118	10.22	10.79	2.18	52.20	4.04	1.91	0.39	0.48	0.31		1.85	<0.01	0.07	0.02	0.01	16.00	18.4	<5.0		
2016KHSA-004	2/23/2016	11:20	KR24600	Keno Reservoir at Miller Island (RM 246.0; Baseline)	USBR	0.5	P	5.22	7.77	206	10.59	27.76	6.62	72.70	4.67	2.46	3.8	0.10	0.64	0.38		1.65	0.03	0.08		17.80	20.7	<5.0		
2016KHSA-010	3/15/2016	8:25	KR24600	Keno Reservoir at Miller Island (RM 246.0; Baseline)	USBR	0.5	P	4.28	7.51	204	11.07	23.65	11.71	74.40	4.71	2.36	2.1	0.18	0.43	0.34		1.80	0.07	0.20		36.60	51.3	6.7		
2016KHSA-016	4/12/2016	9:55	KR24600	Keno Reservoir at Miller Island (RM 246.0; Baseline)	USBR	0.5	P	15.50	7.90	150	8.10	16.85	6.66	56.20	4.97	1.80	0.10	0.12	0.27		0.95	0.06	0.13		16.30	21.0	<5.0			

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	A Water Temperature	pH	Specific Conductivity	Dissolved Oxygen	Algae, Chlorophyll-a	Algae, Pheophytin	Alkalinity	Carbon, Dissolved Organic Carbon	Carbon, Particulate Carbon	Demand, Carbonaceous Biological Oxygen Demand	Nitrogen, Ammonia	Nitrogen, Nitrate+Nitrite	Nitrogen, Particulate Nitrogen	Nitrogen, Total Kjeldahl Nitrogen	Nitrogen, Total Nitrogen	Phosphorus, Phosphate	Phosphorus, Total Phosphorus	Phosphorus, Particulate Phosphorus	Phosphorus, Particulate Inorganic Phosphorus	Turbidity NTU	Solids, Total Suspended Solids	Solids, Volatile Suspended Solids	Toxins, Microcystin
2016KHS-A-022	5/10/2016	10:00	KR24600	Keno Reservoir at Miller Island (RM 246.0; Baseline)	USBR	0.5	P	15.57	8.38	117	10.42	19.15	4.15	46.10	5.13	1.18	<0.05	0.10	0.18		0.71	0.07	0.09			10.10	10.4	<5.0	<0.18	
2016KHS-A-032	6/7/2016	10:15	KR24600	Keno Reservoir at Miller Island (RM 246.0; Baseline)	USBR	0.5	P	22.49	8.92	119	9.90	12.03	1.58	49.70	4.87	1.13	<0.05	<0.01	0.16		0.56	0.07	0.09			6.13	7.5	<5.0	<0.18	
2016KHS-A-043	7/12/2016	10:30	KR24600	Keno Reservoir at Miller Island (RM 246.0; Baseline)	USBR	0.5	P	20.26	8.70	121	2.28	71.25	3.66	52.80	6.56	1.63	1.10	0.02	0.33		3.62	0.12	0.34			10.04	15.6	12.8	<0.15	
2016KHS-A-054	8/9/2016	9:40	KR24600	Keno Reservoir at Miller Island (RM 246.0; Baseline)	USBR	0.5	P	21.33	8.83	122	1.03	48.50	12.99	55.90	6.80	5.70	1.43	0.01	1.28		3.58	0.11	0.38			9.00	15.5	9.0	0.19	
2016KHS-A-065	9/13/2016	9:45	KR24600	Keno Reservoir at Miller Island (RM 246.0; Baseline)	USBR	0.5	P	16.01	7.55	127	6.68	45.57	8.99	60.20	5.93	4.16	0.23	0.05	0.81		1.95	0.03	0.20			11.60	16.3	8.0	0.22	
2016KHS-A-076	10/11/2016	7:50	KR24600	Keno Reservoir at Miller Island (RM 246.0; Baseline)	USBR	0.5	P	12.83	7.01	150	5.28	4.96	2.67	66.20	6.11	1.11	0.34	0.11	0.15		1.30	0.04	<0.05			6.26	5.6	<5.0	<0.15	
2016KHS-A-086	11/15/2016	12:10	KR24600	Keno Reservoir at Miller Island (RM 246.0; Baseline)	USBR	0.5	P	9.95	6.88	127	7.76	8.26	3.24	56.30	5.08	1.49	0.58	0.38	0.21		1.74	0.04	0.05			11.80	11.2	<5.0		
2016KHS-A-092	12/13/2016	11:25	KR24600	Keno Reservoir at Miller Island (RM 246.0; Baseline)	USBR	0.5	P	1.90	7.31	167	10.05	8.44	3.18	74.60	4.18	1.45	0.32	0.58	0.22		1.75	0.08	0.33			13.50	13.3	<5.0		
2016KHS-A-005	2/23/2016	8:30	KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	USBR	0.5	P	5.01	7.65	231	11.74	34.87	9.35	78.50	4.29	2.27	3.1	0.06	0.77	0.37		1.70	0.03	0.11	0.05	0.03	18.60	28.0	<5.0	
2016KHS-A-011	3/15/2016	7:15	KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	USBR	0.5	P	4.82	7.86	318	12.26	45.06	16.06	119.00	8.48	6.10	2.8	0.43	0.49	0.71		1.80	0.07	0.24	0.10	0.05	70.30	70.0	12.0	
2016KHS-A-017	4/12/2016	7:35	KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	USBR	0.5	P	15.17	7.49	240	8.89	11.25	4.60	80.10	9.63	1.46	0.22	0.16	0.22		1.38	0.12	0.21	0.04	0.02	14.40	18.3	<5.0		
2016KHS-A-023	5/10/2016	7:45	KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	USBR	0.5	P	14.41	7.99	140	10.41	18.63	4.73	52.00	5.82	1.93	<0.05	0.11	0.31		0.89	0.08	0.11	0.03	0.03	11.40	12.4	<5.0	0.19	
2016KHS-A-033	6/7/2016	8:00	KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	USBR	0.5	P	21.32	8.63	126	8.78	10.69	2.00	50.70	5.23	0.97	0.06	<0.01	0.16		0.68	0.08	0.09	0.02	0.01	5.36	5.0	<5.0	<0.18	
2016KHS-A-038	6/21/2016	6:55	KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	USBR	0.5	P	17.23	9.21	140	8.78			92.40			<0.05	<0.01			1.53	0.08	0.19			12.90				
2016KHS-A-044	7/12/2016	7:40	KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	USBR	0.5	P	19.92	8.71	135	7.51	30.81	5.53	48.50	6.52	8.93	0.82	0.03	1.95		1.97	0.17	0.31	0.03	0.02	4.44	5.0	<5.0		
2016KHS-A-049	7/26/2016	7:40	KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	USBR	0.5	P	21.75	8.88	132	7.50			57.20			1.06	0.03			2.67	0.12	0.29			5.83				
2016KHS-A-055	8/9/2016	7:15	KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	USBR	0.5	P	20.88	8.04	137	7.97	36.62	13.15	59.30	7.20	2.64	1.27	0.03	0.49		2.55	0.17	0.35	0.05	0.01	3.82	6.3	<5.0	0.15	
2016KHS-A-060	8/23/2016	7:45	KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	USBR	0.5	P	21.90	8.23	127	6.70			56.70			0.63	0.04			2.60	0.06	0.21			7.47				
2016KHS-A-066	9/13/2016	7:45	KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	USBR	0.5	P	16.80	7.72	140	8.90	42.69	12.69	64.00	7.14	3.47	0.33	0.03	0.64		1.97	0.05	0.21	0.08	0.02	8.36	11.3	7.7	0.40	
2016KHS-A-071	9/27/2016	7:30	KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	USBR	0.5	P	14.85	7.20	147	8.52			62.10			0.21	0.03			1.56	0.04	0.13			7.47				
2016KHS-A-077	10/11/2016	10:00	KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	USBR	0.5	P	13.11	7.34	167	7.58	31.70	14.19	73.90	6.35	2.36	0.10	0.02	0.40		1.32	<0.01	0.08	0.03	0.00	8.36	11.4	<5.0	<0.15	
2016KHS-A-087	11/15/2016	10:00	KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	USBR	0.5	P	9.35	6.98	134	11.28	5.56	3.56	56.20	5.18	1.11	0.65	0.36	0.15		1.75	0.04	0.07	0.01	0.00	11.20	7.0	<5.0		
2016KHS-A-093	12/13/2016	9:30	KR23340	Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline)	USBR	0.5	P	2.09	7.42	181	11.44	22.22	4.61	73.90	4.25	1.32	0.26	0.57	0.24		1.75	0.04	0.09	0.03	0.01	13.50	13.3	<5.0		
KR16022	3/15/2016	10:30	KR22822	Klamath River above J.C. Boyle Reservoir (RM 228.22; Baseline)	PacifiCorp	0.5	P	5.31	8.08	319	11.11	41.69	29.36	118	8.57	5.5	0.13	0.52	0.659		2.98	0.18	0.3			111	20			
KR16042	4/12/2016	9:00	KR22822	Klamath River above J.C. Boyle Reservoir (RM 228.22; Baseline)	PacifiCorp	0.5	P	14.87	7.77	251	8.71	5.38	3.96	79.6	9.84	0.624	0.15	0.37	0.0861		1.48	0.16	0.22			18.7	<5.0			
KR16062	5/10/2016	8:50	KR22822	Klamath River above J.C. Boyle Reservoir (RM 228.22; Baseline)	PacifiCorp	0.5	P	14.95	8.18	142	9.04	8.17	4.71	52.4	5.94	0.582	<0.05	0.16	0.0878		0.83	0.098	0.09			12.6	<5.0	<0.18		

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	Water Temperature °C	pH	Specific Conductivity µS/cm	Dissolved Oxygen mg/l	Algae, Chlorophyll-a µg/l	Algae, Pheophytin µg/l	Alkalinity mg/l	Carbon, Dissolved Organic Carbon mg/l	Carbon, Particulate Carbon mg/l	Demand, Carbonaceous Biological Oxygen Demand mg/l	Nitrogen, Ammonia mg/l	Nitrogen, Nitrate+Nitrite mg/l	Nitrogen, Particulate Nitrogen mg/l	Nitrogen, Total Kjeldahl Nitrogen mg/l	Nitrogen, Total Nitrogen mg/l	Phosphorus, Phosphate mg/l	Phosphorus, Total Phosphorus mg/l	Phosphorus, Particulate Phosphorus mg/l	Phosphorus, Particulate Inorganic Phosphorus mg/l	Turbidity NTU	Solids, Total Suspended Solids mg/l	Solids, Volatile Suspended Solids mg/l	Toxins, Microcystin µg/l
KR16084	6/7/2016	10:00	KR22822	Klamath River above J.C. Boyle Reservoir (RM 228.22; Baseline)	PacifiCorp	0.5	P	22.72	7.93	130	7.88	4.78	3.62	50	5.25	1	<0.05	0.12	0.142		0.75	0.12	0.13				7.8	<5.0	<0.18	
KR16107	7/11/2016	8:40	KR22822	Klamath River above J.C. Boyle Reservoir (RM 228.22; Baseline)	PacifiCorp	0.5	P	19.68	7.45	135	8.21	8.45	7.07	51.1	7.02	0.956	0.26	0.77	0.168		2.09	0.2	0.32				6.4	<5.0	0.2	
KR16130	8/9/2016	9:40	KR22822	Klamath River above J.C. Boyle Reservoir (RM 228.22; Baseline)	PacifiCorp	0.5	P	20.3	7.64	137	8.21	8.36	8.50	52.6	6.78	1.39	0.13	1.48	0.255		2.83	0.22	0.3				5.4	<5.0	<0.15	
KR16153	9/5/2016	10:00	KR22822	Klamath River above J.C. Boyle Reservoir (RM 228.22; Baseline)	PacifiCorp	0.5	P	17.57	7.84	143	8.61	6.20	7.27	96.2	7.62	1.18	0.17	0.58	0.195		1.95	0.14	0.23				6	<5.0	1.1	
KR16176	10/10/2016	9:50	KR22822	Klamath River above J.C. Boyle Reservoir (RM 228.22; Baseline)	PacifiCorp	0.5	P	13.62	7.9	176	9.7	11.21	8.53	72.8	6.65	1.56	0.095	0.16	0.282		1.37	0.036	<0.05				10.2	<5.0	<0.15	
KR16198	11/7/2016	9:30	KR22822	Klamath River above J.C. Boyle Reservoir (RM 228.22; Baseline)	PacifiCorp	0.5	P	8.73	7.74	158	10.7	2.89	2.90	60.8	5.63	0.741	0.28	0.75	0.112		1.89	0.067	0.11				6.2	<5.0		
KR16064	5/10/2016	11:35	KR22478	J.C. Boyle Reservoir (RM 224.78; Baseline)	PacifiCorp	0.5	P	17.23	8.41	134	9.45	11.70	4.23		1.36				0.215											<0.18
KR16086	6/7/2016	13:10	KR22478	J.C. Boyle Reservoir (RM 224.78; Baseline)	PacifiCorp	0.5	P	22.87	8.24	136	7.78	10.50	2.98		0.826				0.128											<0.18
KR16109	7/11/2016	11:35	KR22478	J.C. Boyle Reservoir (RM 224.78; Baseline)	PacifiCorp	0.5	P	20.51	7.73	135	7.73	15.80	13.70		1.11				0.192											<0.15
KR16132	8/9/2016	12:20	KR22478	J.C. Boyle Reservoir (RM 224.78; Baseline)	PacifiCorp	0.5	P	23.12	7.9	141	7.92	7.85	8.05		0.826				0.152											<0.15
KR16155	9/26/2016	13:45	KR22478	J.C. Boyle Reservoir (RM 224.78; Baseline)	PacifiCorp	0.5	P	17.17	7.58	148	10.37	13.19	6.13		1.35				0.222											0.16
KR16178	10/10/2016	12:45	KR22478	J.C. Boyle Reservoir (RM 224.78; Baseline)	PacifiCorp	0.5	P	14.32	8.05	181	10.04	9.27	6.85		1.14				0.184											<0.15
KR16001	2/16/2016	13:35	KR22460	Klamath River below J.C. Boyle Dam (RM 224.60; Baseline)	PacifiCorp	0.5	R	6.62	7.9	209	10.95	12.54	5.34	67.3	5.45	1.24	0.13	0.72	0.189		1.63	0.08	0.1					15.2	<5.0	
KR16021	3/15/2016	9:30	KR22460	Klamath River below J.C. Boyle Dam (RM 224.60; Baseline)	PacifiCorp	0.5	R	5.24	8.07	268	11.64	16.85	9.13	95.4	7.21	3.41	0.14	0.44	0.373		1.83	0.13	0.17					38	<5.0	
KR16041	4/12/2016	10:05	KR22460	Klamath River below J.C. Boyle Dam (RM 224.60; Baseline)	PacifiCorp	0.5	R	15.46	7.97	222	8.99	10.59	5.83	68.4	7.9	0.76	0.1	0.31	0.107		1.26	0.11	0.19					23	5.7	
KR16061	5/10/2016	12:15	KR22460	Klamath River below J.C. Boyle Dam (RM 224.60; Baseline)	PacifiCorp	0.5	R	15.8	8.1	130	9.01	11.16	5.49	49.7	5.38	1.19	<0.05	0.14	0.174		0.81	0.11	0.12					14.4	<5.0	<0.18
KR16083	6/7/2016	13:30	KR22460	Klamath River below J.C. Boyle Dam (RM 224.60; Baseline)	PacifiCorp	0.5	R	22.18	7.99	136	7.85	7.87	3.63	53	5.22	0.0633	0.09	0.093	0.0105		0.74	0.12	0.13					7	<5.0	<0.18
KR16106	7/11/2016	10:50	KR22460	Klamath River below J.C. Boyle Dam (RM 224.60; Baseline)	PacifiCorp	0.5	R	19.92	7.55	136	8.42	3.95	3.59	52.3	6.55	1.05	0.31	0.74	0.17		2.08	0.19	0.3					6.4	<5.0	<0.15
KR16129	8/9/2016	11:55	KR22460	Klamath River below J.C. Boyle Dam (RM 224.60; Baseline)	PacifiCorp	0.5	R	21.95	7.53	141	8.04	5.14	5.23	55.4	6.7	1.39	0.19	1.05	0.221		2.33	0.21	0.28					5	<5.0	<0.15
KR16152	9/5/2016	12:00	KR22460	Klamath River below J.C. Boyle Dam (RM 224.60; Baseline)	PacifiCorp	0.5	R	18.15	7.82	144	8.69	5.12	5.69	75.7	7.31	1.05	0.2	0.66	0.182		1.98	0.16	0.25					5.1	<5.0	0.56
KR16175	10/10/2016	12:00	KR22460	Klamath River below J.C. Boyle Dam (RM 224.60; Baseline)	PacifiCorp	0.5	R	13.75	7.91	180	9.41	6.99	6.20	73.1	6.86	1.02	0.11	0.23	0.154		1.33	0.058	<0.05					7.6	<5.0	<0.15
KR16197	11/7/2016	10:45	KR22460	Klamath River below J.C. Boyle Dam (RM 224.60; Baseline)	PacifiCorp	0.5	R	9.03	7.77	155	11.09	2.43	2.60	61.4	5.55	0.82	0.28	0.7	0.117		1.81	0.062	0.086					6.6	<5.0	
KR16217	12/5/2016	11:00	KR22460	Klamath River below J.C. Boyle Dam (RM 224.60; Baseline)	PacifiCorp	0.5	R	3.38	7.73	149	13.17	4.78	4.95	58.2	4.93	1.35	0.18	0.86	0.223		2.06	0.048	0.13					8.4	<5.0	
KR16003	2/16/2016	13:00	KR21950	Klamath River below USGS Gage (RM 219.50; Baseline)	PacifiCorp	0.5	P	7.3	7.82	201	10.66	14.28	5.45	67.7	4.71	0.957	0.1	0.68	0.151		1.43	0.076	0.075				14	12.8	<5.0	
KR16023	3/15/2016	9:00	KR21950	Klamath River below USGS Gage (RM 219.50; Baseline)	PacifiCorp	0.5	P	5.92	8.09	258	11.14	18.39	10.01	91.8	7.03	3.17	0.073	0.44	0.389		1.7	0.12	0.16				37.4	34.7	6	
KR16043	4/14/2016	7:25	KR21950	Klamath River below USGS Gage (RM 219.50; Baseline)	PacifiCorp	0.5	P	13.37	8.07	215	9.26	5.48	3.28	71.8	7.71	0.603	0.086	0.3	0.0856		1.12	0.14	0.19				9.26	13.1	<5.0	

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	Water Temperature °C	pH	Specific Conductivity µS/cm	Dissolved Oxygen mg/l	Algae, Chlorophyll-a µg/l	Algae, Pheophytin µg/l	Alkalinity mg/l	Carbon, Dissolved Organic Carbon mg/l	Carbon, Particulate Carbon mg/l	Demand, Carbonaceous Biological Oxygen Demand mg/l	Nitrogen, Ammonia mg/l	Nitrogen, Nitrate+Nitrite mg/l	Nitrogen, Particulate Nitrogen mg/l	Nitrogen, Total Kjeldahl Nitrogen mg/l	Nitrogen, Total Nitrogen mg/l	Phosphorus, Phosphate mg/l	Phosphorus, Total Phosphorus mg/l	Phosphorus, Particulate Phosphorus mg/l	Phosphorus, Particulate Inorganic Phosphorus mg/l	Turbidity NTU	Solids, Total Suspended Solids mg/l	Solids, Volatile Suspended Solids mg/l	Toxins, Microcystin µg/l
KR16063	5/10/2016	10:20	KR21950	Klamath River below USGS Gage (RM 219.50; Baseline)	PacifiCorp	0.5	P	15.22	8.22	134	9.29	11.25	5.18	53.9	4.8	1.04	<0.05	0.14	0.16			0.7	0.092	0.064			8.16	11.1	<5.0	<0.18
KR16085	6/7/2016	12:10	KR21950	Klamath River below USGS Gage (RM 219.50; Baseline)	PacifiCorp	0.5	P	20.93	7.95	139	8	4.62	2.32	53.9	4.51	0.862	0.067	0.11	0.127			0.64	0.1	0.11			4.7	7	<5.0	<0.18
KR16108	7/11/2016	10:10	KR21950	Klamath River below USGS Gage (RM 219.50; Baseline)	PacifiCorp	0.5	P	18.86	7.57	137	8.87	6.31	4.96	54.2	5.84	0.937	0.21	0.69	0.168			1.76	0.17	0.29			3.51	6.8	<5.0	<0.15
KR16131	8/9/2016	11:00	KR21950	Klamath River below USGS Gage (RM 219.50; Baseline)	PacifiCorp	0.5	P	20.26	7.52	141	8.23	4.96	4.65	55.1	5.86	0.673	0.14	0.98	0.108			2.02	0.19	0.26			3.67	<5.0	<5.0	<0.15
KR16154	9/5/2016	11:30	KR21950	Klamath River below USGS Gage (RM 219.50; Baseline)	PacifiCorp	0.5	P	17.17	7.83	144	8.91	4.70	4.90	60.7	6.44	0.714	0.15	0.62	0.119			1.72	0.15	0.25			3.55	6.8	<5.0	0.43
KR16177	10/10/2016	11:30	KR21950	Klamath River below USGS Gage (RM 219.50; Baseline)	PacifiCorp	0.5	P	13.41	7.94	175	10.06	6.79	5.74	75.3	5.75	0.771	0.07	0.23	0.124			1.22	0.054	<0.05			4.96	5.8	<5.0	<0.15
KR16199	11/7/2016	10:30	KR21950	Klamath River below USGS Gage (RM 219.50; Baseline)	PacifiCorp	0.5	P	9.33	7.85	153	10.75	2.56	2.63	61.4	4.94	0.695	0.23	0.68	0.106			1.55	0.061	0.07			9.36	5.2	<5.0	
KR16219	12/5/2016	9:15	KR21950	Klamath River below USGS Gage (RM 219.50; Baseline)	PacifiCorp	0.5	P	7.36	7.22	146	11.9	2.11	1.98	62.8	2.01	0.539	0.18	0.48	0.104			0.81	0.043	0.19			5.07	<5.0	<5.0	
KR16017	2/17/2016	15:25	KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	PacifiCorp	0.5	P					13.07	6.25	68	3.98	0.555	<0.05	0.69	0.0701			1.31	0.068	0.07	0.0325	0.0179	13	10.2	<5.0	
KR16037	3/16/2016	16:00	KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	PacifiCorp	0.5	P	9.17	8.02	1.96	10.89	35.47	24.93	73	4.84	2.75	0.15	0.5	0.351			1.62	0.089	0.27	0.14	0.0784	86.2	144	18	
KR16057	4/13/2016	14:30	KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	PacifiCorp	0.5	P	15.97	8.51	217	9.66	5.54	3.23	71.3	7.4	0.982	<0.05	0.36	0.141			1.1	0.12	0.14	0.0209	0.0103	11.1	12.6	<5.0	
KR16078	5/11/2016	14:10	KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	PacifiCorp	0.5	P	17.15	8.7	135	9.6	5.70	3.16	52.6	4.62	0.79	<0.05	0.12	0.123			0.83	0.092	0.07	0.0222	0.008	8.46	10.8	<5.0	<0.18
KR16100	6/8/2016	14:25	KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	PacifiCorp	0.5	P	21.96	8.49	130	8.72	8.63	3.05	55	4.31	0.399	0.053	0.089	0.0601			0.57	0.11	0.1			5.69	9.8	<5.0	<0.18
KR16104	6/20/2016	15:15	KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	PacifiCorp	0.5	P	18.46	8.35	132	9.15						<0.05	0.084			0.72	0.1	0.17							
KR16123	7/12/2016	15:40	KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	PacifiCorp	0.5	P	20.52	8.43	135	9.19	7.85	5.36	52.5	5.24	1	<0.05	0.91	0.154			1.61	0.16	0.22	0.02	0.0089	4.03	6.6	<5.0	<0.15
KR16127	7/26/2016	10:50	KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	PacifiCorp	0.5	P	20.42	8.15	143	9.24						0.057	0.93			1.59	0.15	0.21							
KR16146	8/10/2016	14:50	KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	PacifiCorp	0.5	P	18.2	8.47	143	9.59	3.98	3.38	62.2	3.1	3.36	<0.05	0.6	0.664			0.98	0.12	0.21	0.011	0.0031	2.91	6.6	<5.0	<0.15
KR16150	8/22/2016	7:30	KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	PacifiCorp	0.5	P	19.24	7.64	138	8.23						0.076	1.26			2.12	0.19	0.28							
KR16169	9/6/2016	19:05	KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	PacifiCorp	0.5	P	17.73	8.17	145	8.9	4.70	3.85	59.9	6.21	0.323	0.061	0.62	0.0595			1.57	0.13	0.24	0.0198	0.0038	2.83	5	<5.0	0.53
KR16173	9/26/2016	15:00	KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	PacifiCorp	0.5	P	14.7	8.39	147	10.3						<0.05	0.27			0.67	0.077	0.087							
KR16192	10/11/2016	14:00	KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	PacifiCorp	0.5	P	13.34	8.37	170	10.54	10.07	7.18	72.6	4.95	1.06	<0.05	0.21	0.169			0.96	0.048	0.061	0.0215	0.0089	4.92	6.4	<5.0	
KR16213	11/8/2016	14:15	KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	PacifiCorp	0.5	P	10.32	8.22	148	11.22	2.68	2.46	59.5	4.54	0.582	<0.05	0.82	0.082			1.51	0.062	0.095	0.0093	<0.0024	9.6	6	<5.0	
KR16233	12/6/2016	13:10	KR20642	Klamath River above Shovel Creek (RM 206.42; Baseline)	PacifiCorp	0.5	P	4.8	8.35	149	13.76	2.73	2.40	61.5	2.94	0.651	<0.05	0.69	0.114			1.13	0.052	0.13	0.0055	<0.0024	9.02	<5.0	<5.0	
KR16014	2/17/2016	13:45	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0-8	I					2.86	2.17			0.644					0.0822									
KR16054	4/13/2016	12:40	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0-8	I					2.29	1.49			0.331					0.0459									
KR16075	5/11/2016	12:00	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0-8	I					3.96	1.62			0.515					0.0768									<0.18

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	A Water Temperature °C	pH	Specific Conductivity µS/cm	Dissolved Oxygen mg/l	Algae, Chlorophyll-a µg/l	Algae, Pheophytin µg/l	Alkalinity mg/l	Carbon, Dissolved Organic Carbon mg/l	Carbon, Particulate Carbon mg/l	Demand, Carbonaceous Biological Oxygen Demand mg/l	Nitrogen, Ammonia mg/l	Nitrogen, Nitrate+Nitrite mg/l	Nitrogen, Particulate Nitrogen mg/l	Nitrogen, Total Kjeldahl Nitrogen mg/l	Nitrogen, Total Nitrogen mg/l	Phosphorus, Phosphate mg/l	Phosphorus, Total Phosphorus mg/l	Phosphorus, Particulate Phosphorus mg/l	Phosphorus, Particulate Inorganic Phosphorus mg/l	Turbidity NTU	Solids, Total Suspended Solids mg/l	Solids, Volatile Suspended Solids mg/l	Toxins, Microcystin µg/l
KR16097	6/8/2016	12:40	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0-8	I					5.21	1.86		0.352					0.049										<0.18
KR16120	7/12/2016	13:30	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0-8	I					5.15	1.23		0.546					0.089										3.2
KR16143	8/11/2016	8:50	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0-8	I					11.88	1.64		0.3					0.0722										3.6
KR16166	9/7/2016	9:10	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0-8	I					2.13	0.80		0.546					0.111										0.44
KR16189	10/11/2016	12:20	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0-8	I					12.02	3.73		0.598					0.0988										3.3
KR16210	11/8/2016	13:00	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0-8	I					1.52	0.62		0.335					0.047										
KR16230	12/6/2016	12:00	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0-8	I					1.06	0.86		0.484					0.0879										
KR16013	2/17/2016	13:35	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0.5	P	6.79	7.92	209	10.84	3.48	2.22	73.8	4.14	0.781		<0.05	0.77	0.0855			1.29	0.099	0.12			6.2	<5.0	
KR16015	2/17/2016	14:05	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	6	P					0.21	0.15	70.5	4.07	0.6		0.095	0.73	0.0789			1.23	0.096	0.095			6.4	<5.0	
KR16016	2/17/2016	13:55	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	28	P							72.6	4.22			0.1	0.72				1.31	0.099	0.11			7.8	<5.0	
KR16053	4/13/2016	12:30	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0.5	P	16.17	8.07	172	9.14	2.93	1.09	58.7	4.74	0.222		<0.05	0.3	0.0282			0.8	0.074	<0.05			<5.0	<5.0	
KR16055	4/13/2016	13:00	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	9	P	12.27	7.76	171	8.61	2.44	2.11	58.6	4.74	0.508		0.055	0.32	0.0638			0.88	0.076	0.064			7.6	<5.0	
KR16056	4/13/2016	12:50	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	29	P	8.83	7.54	168	7.16			57.8	4.65			0.17	0.3				0.99	0.12	0.16			12.4	<5.0	
KR16074	5/11/2016	11:50	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0.5	P	17.39	8.17	146	8.97	1.74	0.65	55	5.08	0.449		<0.05	0.15	0.0659			0.62	0.089	0.074			<5.0	<5.0	<0.18
KR16076	5/11/2016	12:10	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	20	P	10.84	7.46	171	4.22	2.59	1.50	54.7	4.61	0.446		<0.05	0.16	0.0593			0.62	0.089	0.062			<5.0	<5.0	
KR16077	5/11/2016	12:20	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	29	P	9.54	7.17	177	0.78			57	4.92			0.078	0.25				0.79	0.14	0.12			5.2	<5.0	
KR16096	6/8/2016	12:30	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0.5	P	22.3	8.55	148	9.39	7.70	1.15	56	4.07	0.792		<0.05	<0.01	0.118			0.38	0.066	0.073			<5.0	<5.0	<0.18
KR16098	6/8/2016	12:50	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	12	P	14.91	7.38	146	4.88	3.75	1.30	57.3	3.91	0.144		<0.05	0.13	0.02			0.47	0.1	0.095			<5.0	<5.0	
KR16099	6/8/2016	13:00	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	29	P	10.5	6.95	172	0.00			59.8	4.23			0.19	0.45				1.11	0.19	0.17			7.8	<5.0	
KR16119	7/12/2016	13:20	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0.5	P	23.05	8.48	146	9.25	11.33	1.19	58.5	4.2	1.12		<0.05	0.38	0.198			0.9	0.1	0.17			<5.0	<5.0	6.2
KR16121	7/12/2016	13:50	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	15	P	14.94	7.04	154	0.16	1.09	1.13	57.9	3.74	0.419		<0.05	0.35	0.057			0.71	0.15	0.2			<5.0	<5.0	
KR16122	7/12/2016	13:40	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	27	P	11.43	6.96	175	0.00			65	4.24			0.33	0.28				0.92	0.26	0.3			5	<5.0	
KR16142	8/11/2016	8:30	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0.5	P	22.17	8.9	143	10.25	48.06	3.25	58.4	4.37	0.886		<0.05	0.33	0.138			1.49	0.12	0.23			9.2	8	22
KR16144	8/11/2016	9:00	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	15	P	19.02	7.12	147	0.21	3.17	1.17	59.3	3.74	0.822		<0.05	0.61	0.151			1.1	0.2	0.26			<5.0	<5.0	
KR16145	8/11/2016	9:10	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	29	P	12.18	6.91	175	0.00			69.7	3.96			0.7	<0.01				0.99	0.44	0.53			5	<5.0	
KR16165	9/7/2016	9:00	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0.5	P	19.25	7.91	144	7.15	4.22	0.81	57.7	5.01	0.584		0.088	0.65	0.133			1.41	0.16	0.22			<5.0	<5.0	0.99

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	A Water Temperature	pH	Specific Conductivity	Dissolved Oxygen	Algae, Chlorophyll-a	Algae, Pheophytin	Alkalinity	Carbon, Dissolved Organic Carbon	Carbon, Particulate Carbon	Demand, Carbonaceous Biological Oxygen Demand	Nitrogen, Ammonia	Nitrogen, Nitrate+Nitrite	Nitrogen, Particulate Nitrogen	Nitrogen, Total Kjeldahl Nitrogen	Nitrogen, Total Nitrogen	Phosphorus, Phosphate	Phosphorus, Total Phosphorus	Phosphorus, Particulate Phosphorus	Phosphorus, Particulate Inorganic Phosphorus	Turbidity NTU	Solids, Total Suspended Solids	Solids, Volatile Suspended Solids	Toxins, Microcystin
KR16167	9/7/2016	9:20	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	12	P	18.69	7.5	147	4.79	3.26	0.94	57.5	4.97	0.818		0.083	0.65	0.127		1.43	0.15	0.26			<5.0	<5.0		
KR16168	9/7/2016	9:30	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	29	P	12.62	6.99	184	0.00			73	4.46		1.23	0.011				1.54	0.7	0.78			5.5	<5.0		
KR16188	10/11/2016	12:10	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0.5	P	16.33	7.86	153	8.66	15.13	5.32	65.3	4.41	0.83	0.14	0.28	0.155			1.17	0.1	0.16			<5.0	<5.0	1.1	
KR16190	10/11/2016	12:30	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	16	P	13.53	7.1	158	0.45	15.60	4.72	65.3	4.42	1.54	0.13	0.27	0.297			1.26	0.1	0.21			5.4	<5.0		
KR16191	10/11/2016	12:40	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	26	P	13.3	7.1	163	0.01			64.5	4.37		0.11	0.28				1.15	0.11	0.16			<5.0	<5.0		
KR16209	11/8/2016	12:45	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0.5	P	12.76	7.84	162	9.05	6.05	0.69	68.4	4.53	0.468	0.15	0.36	0.09			1.09	0.08	0.11			<5.0	<5.0		
KR16211	11/8/2016	13:15	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	18	P	10.15	7.69	154	8.85	1.03	1.17	65.1	4.45	0.661	0.15	0.53	0.117			1.15	0.075	0.095			<5.0	<5.0		
KR16212	11/8/2016	13:30	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	27	P	9.92	7.7	152	9.26			66	4.29		0.15	0.54				1.21	0.073	0.1			<5.0	<5.0		
KR16229	12/6/2016	11:45	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	0.5	P	7.3	7.68	151	10.32	1.77	1.21	61.9	3.67	0.535	0.088	0.66	0.0949			1.26	0.062	0.12			<5.0	<5.0		
KR16231	12/6/2016	12:15	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	15	P	6.78	7.67	150	10.35	1.58	1.18	61.5	3.67	0.434	0.089	0.62	0.0773			1.25	0.064	0.097			<5.0	<5.0		
KR16232	12/6/2016	12:30	KR19874	Copco Reservoir (RM 198.74; Baseline)	PacifiCorp	30	P	6.37	7.64	150	10.38			61.1	3.58		0.12	0.66				1.3	0.064	0.11			5.6	<5.0		
KR16012	2/17/2016	12:30	KR19645	Klamath River below Copco Dam (RM 196.45; Baseline)	PacifiCorp	0.5	P	5.81	7.74	200	10.61	2.28	1.84	72.5	4.19	0.491	0.11	0.76	0.0723			1.4	0.096	0.099			6.6	<5.0		
KR16032	3/16/2016	13:30	KR19645	Klamath River below Copco Dam (RM 196.45; Baseline)	PacifiCorp	0.5	P					3.87	3.04	70.3	4.48	0.963	<0.05	0.41	0.116			0.93	0.07	0.095			14.2	<5.0		
KR16052	4/13/2016	11:30	KR19645	Klamath River below Copco Dam (RM 196.45; Baseline)	PacifiCorp	0.5	P	13.99	8.2	170	10.1	3.63	2.23	58.6	4.82	0.508	<0.05	0.37	0.075			0.95	0.084	0.14			11.4	<5.0		
KR16073	5/11/2016	11:05	KR19645	Klamath River below Copco Dam (RM 196.45; Baseline)	PacifiCorp	0.5	P	15.66	7.97	149	8.56	2.68	1.37	55.4	4.77	0.531	<0.05	0.16	0.0746			0.67	0.098	0.074			6.8	<5.0	<0.18	
KR16095	6/8/2016	11:20	KR19645	Klamath River below Copco Dam (RM 196.45; Baseline)	PacifiCorp	0.5	P	19.11	7.91	148	7.91	5.84	1.45	55.5	4.06	0.384	<0.05	0.069	0.0557			0.47	0.085	0.086	0.0086	0.0134	5	<5.0	<0.18	
KR16118	7/12/2016	12:40	KR19645	Klamath River below Copco Dam (RM 196.45; Baseline)	PacifiCorp	0.5	P	20.35	7.74	147	7.06	3.44	1.22	59.7	4	0.539	<0.05	0.38	0.095			0.78	0.12	0.18			<5.0	<5.0	0.89	
KR16141	8/10/2016	13:30	KR19645	Klamath River below Copco Dam (RM 196.45; Baseline)	PacifiCorp	0.5	P	21.35	8.29	145	7.46	13.67	1.85	58.9	3.95	1.18	<0.05	0.42	0.218			1.06	0.15	0.24			<5.0	<5.0	3.6	
KR16164	9/6/2016	18:00	KR19645	Klamath River below Copco Dam (RM 196.45; Baseline)	PacifiCorp	0.5	P	19.07	7.64	147	5.76	1.26	0.87	60.5	4.76	0.184	0.14	0.59	0.0328			1.34	0.17	0.23			<5.0	<5.0	0.44	
KR16187	10/11/2016	11:00	KR19645	Klamath River below Copco Dam (RM 196.45; Baseline)	PacifiCorp	0.5	P	15.15	7.81	155	9.08	1.40	0.77	65.6	4.32	0.358	0.13	0.42	0.0582			1.08	0.15	0.18			<5.0	<5.0	0.6	
KR16208	11/8/2016	11:50	KR19645	Klamath River below Copco Dam (RM 196.45; Baseline)	PacifiCorp	0.5	P	11.06	7.74	160	9.2	1.62	0.82	68.6	4.5	0.327	0.13	0.44	0.0541			1.09	0.079	0.11			<5.0	<5.0		
KR16228	12/6/2016	10:45	KR19645	Klamath River below Copco Dam (RM 196.45; Baseline)	PacifiCorp	0.5	P	7.09	7.67	150	10.58	1.63	1.58	60.6	3.57	0.584	0.076	0.64	0.0914			1.28	0.061	0.12			<5.0	<5.0		
KR16009	2/17/2016	10:10	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0-8	I					5.20	1.82		0.712					0.115										
KR16029	3/16/2016	9:00	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0-8	I					3.11	2.33		0.446					0.0649										
KR16049	4/13/2016	9:10	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0-8	I					4.08	1.97		0.592					0.0794										
KR16070	5/11/2016	8:55	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0-8	I					3.32	1.60		0.577					0.0976									<0.18	

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	A Water Temperature	pH	Specific Conductivity	Dissolved Oxygen	Algae, Chlorophyll-a	Algae, Pheophytin	Alkalinity	Carbon, Dissolved Organic Carbon	Carbon, Particulate Carbon	Demand, Carbonaceous Biological Oxygen Demand	Nitrogen, Ammonia	Nitrogen, Nitrate+Nitrite	Nitrogen, Particulate Nitrogen	Nitrogen, Total Kjeldahl Nitrogen	Nitrogen, Total Nitrogen	Phosphorus, Phosphate	Phosphorus, Total Phosphorus	Phosphorus, Particulate Phosphorus	Phosphorus, Particulate Inorganic Phosphorus	Turbidity	Solids, Total Suspended Solids	Solids, Volatile Suspended Solids	Toxins, Microcystin	
KR16092	6/8/2016	8:20	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0-8	I					1.26	0.90			0.76															<0.18
KR16115	7/12/2016	9:50	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0-8	I					7.21	1.11			0.502															0.36
KR16138	8/10/2016	9:40	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0-8	I					21.27	2.86			1.45															3.7
KR16161	9/6/2016	11:30	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0-8	I					2.17	0.55			0.614															3
KR16184	10/25/2016	8:45	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0-8	I					1.92	0.64			0.328															
KR16205	11/8/2016	9:15	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0-8	I					0.89	0.44			0.258															
KR16225	12/6/2016	9:20	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0-8	I					0.86	0.74			0.479															
KR16008	2/17/2016	10:00	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0.5	P	6.88	7.89	162	11.65	9.77	2.77	63.1	3.57	0.518		<0.05	0.49		0.0658							5.6	<5.0		
KR16010	2/17/2016	10:30	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	5	P	6.65	7.83	162	11.54	3.60	0.96	62.3	3.58	0.533		<0.05	0.49		0.0712							<5.0	<5.0		
KR16011	2/17/2016	10:20	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	45	P							67.1	3.57			0.11	0.68									6.6	<5.0		
KR16028	3/16/2016	8:50	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0.5	P	8.16	7.92	167	10.46	5.01	3.06	63.1	3.61	0.502		<0.05	0.4	0.0694								5.4	<5.0		
KR16030	3/16/2016	9:10	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	12	P	7.13	7.83	164	10.14	2.93	2.58	62.7	3.55	0.594		<0.05	0.7	0.0716								5.4	<5.0		
KR16031	3/16/2016	9:20	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	46	P	5.52	7.54	179	8.14			65.5	3.66			<0.05	0.7									7.8	<5.0		
KR16048	4/13/2016	9:00	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0.5	P	15.37	8.02	160	9.64	4.38	1.21	57.1	5.01	0.486		<0.05	0.27	0.0727								<5.0	<5.0		
KR16050	4/13/2016	9:30	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	18	P	8.66	7.6	168	8.73	2.76	2.61	57.8	4.49	0.484		0.054	0.39	0.0615								8	<5.0		
KR16051	4/13/2016	9:20	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	44	P	6.42	7.46	192	6.6			67.2	4.72			<0.05	0.68									6.8	<5.0		
KR16069	5/11/2016	8:45	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0.5	P	16.04	8.2	161	9.38	7.59	2.49	59	5.04	0.614		<0.05	0.17	0.101								<5.0	<5.0	<0.18	
KR16071	5/11/2016	9:05	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	15	P	12.49	7.67	174	6.81	2.33	2.47	60.9	4.81	0.423		<0.05	0.34	0.0461								5	<5.0		
KR16072	5/11/2016	9:15	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	46	P	6.88	7.4	198	4.06			70	4.68			<0.05	0.68									<5.0	<5.0		
KR16091	6/8/2016	8:10	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0.5	P	22.71	8.69	149	9.27	4.32	1.02	59	4.18	0.403		<0.05	<0.01	0.0735								<5.0	<5.0	<0.18	
KR16093	6/8/2016	8:30	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	9	P	16.95	7.66	147	6.95	5.29	1.50	58.5	3.88	0.312		<0.05	0.054	0.0423								<5.0	<5.0		
KR16094	6/8/2016	8:40	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	46	P	7.2	7.06	199	1.94			68.7	4.04			0.057	0.68									<5.0	<5.0		
KR16114	7/12/2016	9:30	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0.5	P	23.18	8.58	150	9.67	13.02	0.83	61.7	3.9	0.835		<0.05	<0.01	0.156								<5.0	<5.0		0.2
KR16116	7/12/2016	10:00	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	15	P	15.55	7.35	156	4.03	1.18	0.66	60.1	3.6	0.331		<0.05	0.23	0.051								<5.0	<5.0		
KR16117	7/12/2016	9:40	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	38	P	7.58	6.89	193	0.69			67.7	3.93			<0.05	0.83									<5.0	<5.0		
KR16137	8/10/2016	9:30	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0.5	P	24.71	9.5	154	12.42	31.87	2.46	63.5	4.08	2.26		<0.05	<0.01	0.363							1.53	5.4	5.8		15

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	Air Water Temperature	pH	Specific Conductivity	Dissolved Oxygen	Algae, Chlorophyll-a	Algae, Pheophytin	Alkalinity	Carbon, Dissolved Organic Carbon	Carbon, Particulate Carbon	Demand, Carbonaceous Biological Oxygen Demand	Nitrogen, Ammonia	Nitrogen, Nitrate+Nitrite	Nitrogen, Particulate Nitrogen	Nitrogen, Total Kjeldahl Nitrogen	Nitrogen, Total Nitrogen	Phosphorus, Phosphate	Phosphorus, Total Phosphorus	Phosphorus, Particulate Phosphorus	Phosphorus, Particulate Inorganic Phosphorus	Turbidity NTU	Solids, Total Suspended Solids	Solids, Volatile Suspended Solids	Toxins, Microcystin
KR16139	8/10/2016	10:00	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	16	P	17.2	7.2	151	1.83	3.53	1.05	59.8	3.53	0.528		<0.05	0.41	0.0823		0.76	0.15	0.2			<5.0	<5.0		
KR16140	8/10/2016	9:50	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	44	P	7.72	6.77	193	0.00			70.1	3.71		0.24	0.56				1.09	0.19	0.26			5.6	<5.0		
KR16160	9/6/2016	11:20	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0.5	P	21.63	9.16	149	8.47	8.64	1.21	62.3	4.64	0.297	0.075	0.25	0.0595			1	0.095	0.16			<5.0	<5.0	6.4	
KR16162	9/6/2016	11:50	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	15	P	19.39	7.34	151	0.12	0.57	0.49	62.9	3.49	0.443	0.071	0.31	0.0759			0.67	0.18	0.28			<5.0	<5.0		
KR16163	9/6/2016	11:40	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	43	P	7.96	7.04	193	0.00			73.4	3.94		0.39	0.41				1.12	0.21	0.31			<5.0	<5.0		
KR16183	10/25/2016	8:30	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0.5	P	13.64	7.22	159	6.53	14.38	0.53	68.8	4.3	1.06	0.18	0.24	0.214			1.06	0.11	0.15			<5.0	<5.0		
KR16185	10/25/2016	9:15	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	18	P	13.59	7.39	160	6.13	1.60	0.67	66.7	5.21	0.209	0.19	0.25	0.0303			0.99	0.11	0.14			<5.0	<5.0		
KR16186	10/25/2016	9:05	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	39	P	8.43	6.83	196	0.00			67.2	4.19		0.21	0.23				1.03	0.11	0.14			<5.0	<5.0		
KR16204	11/8/2016	9:00	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0.5	P	12.45	7.55	161	6.96	1.82	0.36	66.2	4.38	0.28	0.2	0.27	0.0489			0.94	0.11	0.13			<5.0	<5.0		
KR16206	11/8/2016	9:30	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	32	P	10.96	7.3	176	3.54	0.58	0.38	69.9	2.58	0.328	0.25	0.29	0.0576			1.02	0.12	0.17			<5.0	<5.0		
KR16207	11/8/2016	9:45	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	42	P	8.45	7.03	202	0.00			72.5	3.76		0.58	0.19				1.06	0.22	0.26			<5.0	<5.0		
KR16224	12/6/2016	9:10	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	0.5	P	8.89	7.55	157	7.92	0.50	0.51	64.8	3.94	0.387	0.064	0.59	0.0773			1.19	0.085	0.15			<5.0	<5.0		
KR16226	12/6/2016	9:30	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	19	P	8.69	7.39	156	7.97	0.89	0.75	64.8	3.79	0.413	0.072	0.57	0.0686			1.16	0.084	0.13			<5.0	<5.0		
KR16227	12/6/2016	9:40	KR19019	Iron Gate Reservoir (RM 190.19; Baseline)	PacifiCorp	43	P	8.33	7.44	156	8.27			65.5	3.81		0.086	0.59				1.19	0.08	0.13			<5.0	<5.0		
KR16007	2/18/2016	11:15	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	R					2.70	1.78	66.9	3.94	1.58	0.2	0.61	0.202			1.18	0.081	0.069	0.0165	0.0194	12.5	5	<5.0	
KR16027	3/16/2016	11:30	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	R					5.26	4.50	64.9	3.62	0.533	<0.05	0.42	0.0716			0.72	0.061	0.086	0.0167	0.0043	10.2	6.8	<5.0	
KR16047	4/13/2016	15:30	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	R	11.55	7.84	166	9.73	2.46	2.04	57.2	4.44	0.51	0.1	0.33	0.0644			0.89	0.062	0.068	0.0099	0.0026	10.5	7.6	<5.0	
KR16068	5/11/2016	15:35	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	R	14.86	7.98	159	9.35	4.47	2.22	58.8	4.88	0.49	0.053	0.2	0.0659			0.66	0.095	0.066	0.0131	<0.0024	5.74	<5.0	<5.0	<0.18
KR16090	6/8/2016	15:50	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	R	19.01	8.07	145	9.14	5.36	1.67	56.9	4.12	0.407	<0.05	0.057	0.0601			0.48	0.07	0.061	0.0121	0.0043	3.13	<5.0	<5.0	<0.18
KR16113	7/12/2016	16:20	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	R	20.36	7.73	149	8.34	2.42	1.39	62.9	3.83	0.471	<0.05	0.19	0.068			0.57	0.099	0.13	0.0061	0.003	1.91	<5.0	<5.0	<0.15
KR16136	8/10/2016	15:55	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	R	21.54	7.73	149	7.38	2.72	1.33	61.8	3.72	0.593	0.071	0.32	0.0963			0.83	0.14	0.23	0.0115	0.0072	<5.0	<5.0	2.3	
KR16159	9/7/2016	11:00	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	R	20.61	8.55	151	8.66	2.80	0.95	64.3	4.45	0.421	0.1	0.38	0.0943			1.03	0.14	0.22	0.0087	<0.0024	1.25	<5.0	<5.0	2.7
KR16182	10/11/2016	9:00	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	R	16.37	7.69	152	8.94	3.00	1.38	64.3	4.45	0.5	0.086	0.31	0.0777			1.02	0.13	0.11	0.0134	0.0061	2.67	<5.0	<5.0	2.6
KR16203	11/8/2016	15:40	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	R	12.39	7.58	161	9.4	1.16	0.56	70	4.25	0.363	0.16	0.33	0.0628			0.97	0.11	0.22	0.005	<0.0024	3.09	<5.0	<5.0	
KR16223	12/6/2016	14:15	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	R	8.93	7.48	159	10.35	0.99	0.88	65.1	3.94	0.477	0.054	0.59	0.0861			1.17	0.079	0.15	0.0063	0.0035	3.46	<5.0	<5.0	
KR16082	5/23/2016	10:50	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	P	15.92	7.98	152	9.9	9.50	2.75	56.3	5.12	0.676	<0.05	0.14	0.109			0.69	0.06	0.08	0.0203	0.01	6.47	<5.0	<5.0	<0.18

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	A Water Temperature	pH	Specific Conductivity	Dissolved Oxygen	Algae, Chlorophyll-a	Algae, Pheophytin	Alkalinity	Carbon, Dissolved Organic Carbon	Carbon, Particulate Carbon	Demand, Carbonaceous Biological Oxygen Demand	Nitrogen, Ammonia	Nitrogen, Nitrate-Nitrite	Nitrogen, Particulate Nitrogen	Nitrogen, Total Kjeldahl Nitrogen	Nitrogen, Total Nitrogen	Phosphorus, Phosphate	Phosphorus, Total Phosphorus	Phosphorus, Particulate Phosphorus	Phosphorus, Particulate Inorganic Phosphorus	Turbidity	Solids, Total Suspended Solids	Solids, Volatile Suspended Solids	Toxins, Microcystin
KR16105	6/20/2016	12:40	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	P	18.87	7.45	151	9.37	3.04	1.05	61.1	3.73	0.367	<0.05	0.06	0.0617		0.51	0.079	0.14	0.0085	0.0046	2.31	<5.0	<5.0	<0.18	
KR16128	7/26/2016	12:30	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	P	20.95	7.95	149	8.66	3.22	1.19	61	3.66	0.424	0.067	0.37	0.064		0.98	0.12	0.16	0.0112	0.0043	1.4	<5.0	<5.0	0.3	
KR16151	8/22/2016	9:10	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	P	21.58	8.23	150	6.74	8.56	2.25	63.1	3.93	0.664	0.11	0.37	0.113		0.97	0.13	0.14	0.0199	0.0035		<5.0	<5.0	0.42	
KR16174	9/26/2016	17:20	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	P	17.76	7.88	151	7.3	3.09	1.90	61.2	4.56	0.447	0.063	0.45	0.0745		1.14	0.16	0.18	0.0086	0.0032	1.83	<5.0	<5.0	0.23	
KR16196	10/25/2016	10:15	KR18973	Klamath River below Iron Gate Dam (RM 189.73; Baseline)	PacifiCorp	0.5	P	13.52	7.54	161	9.19	1.46	0.53	68	4.25	0.258	0.18	0.26	0.0445		1.02	0.12	0.13	0.0107	0.004	2.46	<5.0	<5.0		
WA022416-OC	2/24/2016	12:20	KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	Karuk	0.5	P	6.52	8.39	0.25	11.89	3.2	1.3	3.73	0.624		0.014	0.513			0.866	0.065	0.101			5.3	5.8	1		
WA031616-OC	3/16/2016	12:12	KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	Karuk	0.5	P	7.78	8.14		11.28	9.8	19	3.43	8.6		0.035	0.498			1.61	0.06	0.304			140	28			
WA041316-OC	4/13/2016	11:57	KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	Karuk	0.5	P	12.01	8.35	0.2	10.47	2.1	1	3.81	1.05		<0.01	0.246			0.869	0.043	0.068			11	3.3			
WA051116-OC	5/11/2016	12:56	KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	Karuk	0.5	P	14.84	8.31	0.18	10.19	4.5	4.3	4.09	0.967		0.013	0.172			0.837	0.106	0.107			6.8	1.5	<0.18		
WA060816-OC	6/8/2016	11:37	KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	Karuk	0.5	P	20.14	8.33	0.17	8.81	1.3	1.3	3.7	0.366		<0.01	0.064			0.382	0.066	0.099			3.3	1.3	<0.18		
WA071316-OC	7/13/2016	11:51	KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	Karuk	0.5	P	21.36	8.24	0.17	8.89	0.7	1.5	4.2	0.439		<0.01	0.034			0.064	0.098	0.131			0.86	2.8	1.7	<0.15	
WA081016-OC	8/10/2016	11:55	KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	Karuk	0.5	P	21.85	8.47	0.16	8.81	3.8	2.6	4.44	1.1		0.012	0.282			0.795	0.146	0.171			7.3	3.2	1.8		
WA091416-OC	9/14/2016	12:03	KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	Karuk	0.5	P	18.77	8.77	0.17	9.42	13	2.6	4.59	0.954		0.011	0.254			1.17	0.145	0.153			1.3	2.5	1.6	0.22	
WA101216-OC	10/12/2016	11:33	KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	Karuk	0.5	P	15.26	8.4	0.18	9.7	2	2.3	4.73	0.715		0.013	0.334			0.757	0.128	0.152			3.4	1.1			
WA111616-OC	11/16/2016	11:42	KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	Karuk	0.5	P	10.57	8.48	0.23	10.73	1.6	1.4	4.56	0.429		0.01	0.418			0.916	0.107	0.129			2.3	0.67			
WA121416-OC	12/14/2016	12:10	KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	Karuk	0.5	P	6.44	8.35	0.22	11.26	2.1	2	4.02			<0.01	0.508			0.949	0.073	0.097			5.3	1.8			
SV022416-OC	2/24/2016	11:05	KR12850	Klamath River below Seiad (RM 128.5; Baseline)	Karuk	0.5	P	7.21	8.35	0.21	11.71	2.4	0.4	2.37	0.491		<0.01	0.438	0.0516		0.623	0.038	0.059	0.0115	0.0093	3.9	8	1.2		
SV031616-OC	3/16/2016	10:54	KR12850	Klamath River below Seiad (RM 128.5; Baseline)	Karuk	0.5	P	8.06	8.28	0.2	11.41	3.2	4.3	2.74	1.72		0.018	0.409	0.165		0.667	0.043	0.12	0.0409	0.0262	18	50	7		
SV041316-OC	4/13/2016	10:47	KR12850	Klamath River below Seiad (RM 128.5; Baseline)	Karuk	0.5	P	11.07	8.25	0.15	10.72	2.1	0.7	1.8	1.04		<0.01	0.178	0.0906		0.438	0.023	0.043	0.0067	0.0045	6.2	17	1.8		
SV051116-OC	5/11/2016	11:14	KR12850	Klamath River below Seiad (RM 128.5; Baseline)	Karuk	0.5	P	14.48	8.28	0.16	10.27	3.7	1.7	2.77	0.558		<0.01	0.142	0.0725		0.495	0.038	0.107	0.0169	0.0081	21	7.8	1.8	<0.18	
SV060816-OC	6/8/2016	10:22	KR12850	Klamath River below Seiad (RM 128.5; Baseline)	Karuk	0.5	P	20.13	8.23	0.14	8.63	0.9	1.4	2.67	0.423		<0.01	0.1	0.0488		0.327	0.04	0.061	0.0115	0.0039	22	4.2	0.67	<0.18	
SV071316-OC	7/13/2016	10:32	KR12850	Klamath River below Seiad (RM 128.5; Baseline)	Karuk	0.5	P	20.64	8.26	0.19	9.01	0.2	1.3	3.07	0.417		<0.01	0.095	0.044		0.462	0.069	0.086	0.0065	<0.0024	0.64	3	1.5	<0.15	
SV081016-OC	8/10/2016	10:21	KR12850	Klamath River below Seiad (RM 128.5; Baseline)	Karuk	0.5	P	21.93	8.61	0.17	9.61	2.2	1.8	3.98	0.484		<0.01	0.159	0.0754		0.485	0.111	0.135	0.0095	0.0049	0.7	3.7	1.4	1.6	
SV091416-OC	9/14/2016	10:30	KR12850	Klamath River below Seiad (RM 128.5; Baseline)	Karuk	0.5	P	18.27	8.67	0.17	10.46	6.4	2.6	4.16	0.725		0.011	0.2	0.12		0.799	0.12	0.136	0.0153	0.0051	0.95	2.3	1	1.7	
SV101216-OC	10/12/2016	10:12	KR12850	Klamath River below Seiad (RM 128.5; Baseline)	Karuk	0.5	P	14.34	8.44	0.18	10.74	1.8	2.8	3.84	0.517		0.011	0.285	0.158		0.701	0.118	0.138	0.0139	0.0039	0.66	2.8	1	0.74	
SV111616-OC	11/16/2016	10:30	KR12850	Klamath River below Seiad (RM 128.5; Baseline)	Karuk	0.5	P	10.24	8.47	0.18	10.85	2.4	0.7	3.17	0.428		<0.01	0.302	0.0505		0.591	0.053	0.076	0.0079	0.0039	3.8	1			

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	Water Temperature °C	pH	Specific Conductivity µS/cm	Dissolved Oxygen mg/l	Algae, Chlorophyll-a µg/l	Algae, Pheophytin µg/l	Alkalinity mg/l	Carbon, Dissolved Organic Carbon mg/l	Carbon, Particulate Carbon mg/l	Demand, Carbonaceous Biological Oxygen Demand mg/l	Nitrogen, Ammonia mg/l	Nitrogen, Nitrate+Nitrite mg/l	Nitrogen, Particulate Nitrogen mg/l	Nitrogen, Total Kjeldahl Nitrogen mg/l	Nitrogen, Total Nitrogen mg/l	Phosphorus, Phosphate mg/l	Phosphorus, Total Phosphorus mg/l	Phosphorus, Particulate Phosphorus mg/l	Phosphorus, Particulate Inorganic Phosphorus mg/l	Turbidity NTU	Solids, Total Suspended Solids mg/l	Solids, Volatile Suspended Solids mg/l	Toxins, Microcystin µg/l
SV121416-OC	12/14/2016	11:25	KR12850	Klamath River below Seiad (RM 128.5; Baseline)	Karuk	0.5	P	5.69	8.27	0.18	11.48	3.5	1.8		2.75			<0.01	0.305			0.435	0.037	0.066			2.8	19	3.6	
HC022416-OC	2/24/2016	10:08	KR10130	Klamath River below Happy Camp (RM 101.3; Baseline)	Karuk	0.5	P	6.87	8.29	0.19	12.08	2.8	<0.1		1.64	0.452		<0.01	0.316			0.424	0.029	0.048				10	1.3	
HC031616-OC	3/16/2016	10:10	KR10130	Klamath River below Happy Camp (RM 101.3; Baseline)	Karuk	0.5	P	8.13	8.24	0.17	11.74	1.6	1.9		1.97	0.848		0.014	0.286			0.39	0.031	0.089				36	3.5	
HC041316-OC	4/13/2016	9:55	KR10130	Klamath River below Happy Camp (RM 101.3; Baseline)	Karuk	0.5	P	10.62	8.16	0.14	11	2.7	0.2		1.77	0.629		<0.01	0.148			0.4	0.018	0.031				20	2.6	
HC051116-OC	5/11/2016	10:22	KR10130	Klamath River below Happy Camp (RM 101.3; Baseline)	Karuk	0.5	P	13.47	8.16	0.15	10.31	4	2.2		2.46	0.627		<0.01	0.104			0.475	0.03	0.07				9	0.83	<0.18
HC060816-OC	6/8/2016	9:20	KR10130	Klamath River below Happy Camp (RM 101.3; Baseline)	Karuk	0.5	P	20.73	8.13	0.07	8.66	2	1		2.18	0.61		0.012	0.079			0.269	0.038	0.058				5.2	1.8	<0.18
HC071316-OC	7/13/2016	9:34	KR10130	Klamath River below Happy Camp (RM 101.3; Baseline)	Karuk	0.5	P	20.17	8.04	0.18	8.86	1.2	1.2		2.76	0.539		<0.01	0.024			0.295	0.056	0.071		0.57		3	0.67	<0.15
HC081016-OC	8/10/2016	9:12	KR10130	Klamath River below Happy Camp (RM 101.3; Baseline)	Karuk	0.5	P	21.22	8.22	0.17	8.57	2	1.9		3.55	0.472		0.017	0.11			0.549	0.096	0.108				3.1	1	0.32
HC091416-OC	9/14/2016	9:27	KR10130	Klamath River below Happy Camp (RM 101.3; Baseline)	Karuk	0.5	P	17.4	8.16	0.18	8.94	3.4	4.5		3.63	0.494		0.09	0.206			1.94	0.12	0.365				4	1.4	0.18
HC101216-OC	10/12/2016	9:22	KR10130	Klamath River below Happy Camp (RM 101.3; Baseline)	Karuk	0.5	P	14.7	8.18	0.19	9.69	1.8	3.1		3.77	0.551		0.012	0.252			0.594	0.105	0.128				3.5	1.8	0.37
HC111616-OC	11/16/2016	9:40	KR10130	Klamath River below Happy Camp (RM 101.3; Baseline)	Karuk	0.5	P	10.23	8.36	0.17	10.99	2	0.5		2.76	0.496		<0.01	0.217			0.468	0.04	0.058				4.2	1	
HC121416-OC	12/14/2016	10:25	KR10130	Klamath River below Happy Camp (RM 101.3; Baseline)	Karuk	0.5	P	5.85	8.23	0.15	11.91	2.4	0.6		2.33			0.01	0.194			0.374	0.032	0.045				7	1.4	
OR022416-OC	2/24/2016	8:55	KR05910	Klamath River at Orleans (USGS) (RM 59.1; Baseline)	Karuk	0.5	P	7.63	8.55	0.15	12.46	1.9	<0.1	69.4	1.08	0.359		<0.01	0.173			0.36	0.018	0.031			2.9	8.3	0.83	
OR031616-OC	3/16/2016	8:51	KR05910	Klamath River at Orleans (USGS) (RM 59.1; Baseline)	Karuk	0.5	P	8.47	8.11	0.14	12.1	1.1	2.3	67.5	1.29	0.703		<0.01	0.153			0.313	0.018	0.069			18	46	3	
OR041316-OC	4/13/2016	8:37	KR05910	Klamath River at Orleans (USGS) (RM 59.1; Baseline)	Karuk	0.5	P	11.4	8.19	0.11	11.41	2.3	<0.1	51.6	0.77	0.186		<0.01	0.09			0.345	0.01	0.018			4	11	1	
OR051116-OC	5/11/2016	8:50	KR05910	Klamath River at Orleans (USGS) (RM 59.1; Baseline)	Karuk	0.5	P	13.84	8.32	0.12	10.85	4.6	<0.1	59.4	1.54	0.462		<0.01	0.047			0.283	0.017	0.026			13	5	<0.5	<0.18
OR060816-OC	6/8/2016	7:48	KR05910	Klamath River at Orleans (USGS) (RM 59.1; Baseline)	Karuk	0.5	P	20.86	8.06	0.13	8.96	2.1	0.9	64.7	1.47	0.324		<0.01	0.037			0.145	0.026	0.036			13	5.1	1.3	<0.18
OR071316-OC	7/13/2016	7:55	KR05910	Klamath River at Orleans (USGS) (RM 59.1; Baseline)	Karuk	0.5	P	20.42	7.54	0.16	9.03	0.7	0.3	78.2	1.71	0.298		0.011	<0.01			0.163	0.04	0.046			0.35	1.3	1.5	<0.15
OR081016-OC	8/10/2016	7:43	KR05910	Klamath River at Orleans (USGS) (RM 59.1; Baseline)	Karuk	0.5	P	22.16	8.47	0.17	8.17	1.2	1.7	81.8	2.46	0.351		0.012	0.012			0.323	0.059	0.069			0.35	1.1	0.63	<0.15
OR091416-OC	9/14/2016	7:53	KR05910	Klamath River at Orleans (USGS) (RM 59.1; Baseline)	Karuk	0.5	P	18.62	8.49	0.17	8.76	3.6	3.2	83.4	2.76	0.525		<0.01	0.022			0.428	0.072	0.083			0.5	3.8	1.5	<0.15
OR101216-OC	10/12/2016	7:57	KR05910	Klamath River at Orleans (USGS) (RM 59.1; Baseline)	Karuk	0.5	P	15.63	8.2	0.18	9.63	1.1	2	80.3	3.03	0.49		<0.01	0.176			0.422	0.077	0.102			0.2	2.1	0.75	0.23
OR111616-OC	11/16/2016	8:07	KR05910	Klamath River at Orleans (USGS) (RM 59.1; Baseline)	Karuk	0.5	P	10.58	7.59	0.11	11.32	2	<0.1	58.8	2.38	0.509		<0.01	0.102			0.268	0.021	0.036			1.3	4.2	1.2	
OR121416-OC	12/14/2016	8:54	KR05910	Klamath River at Orleans (USGS) (RM 59.1; Baseline)	Karuk	0.5	P	6.67	8.1	0.12	11.95	1.6	1.4	60.7	1.45			<0.01	0.101			0.143	0.014	0.024			2.5	13	4.8	
WE022416-OC	2/24/2016	11:13	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	7.79	7.48	143	12.4	1.9	<0.1	68.4	1.22	0.407		<0.010	0.158			0.308	0.018	0.030				4.750	0.750	
WE031616-OC	3/16/2016	9:53	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	8.5	7.83	125	12.31	2.67	1.07		1.08	0.777		0.014	0.135			0.299	0.018	0.075				39.000	3.000	
WE041316-OC	4/13/2016	11:32	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	11.54	7.87	109	11.34	2.3	<0.1		1.04	0.577		<0.010	0.083			0.305	0.012	0.034				14.167	1.500	

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	Water Temperature °C	pH	Specific Conductivity µS/cm	Dissolved Oxygen mg/l	Algae, Chlorophyll-a µg/l	Algae, Pheophytin µg/l	Alkalinity mg/l	Carbon, Dissolved Organic Carbon mg/l	Carbon, Particulate Carbon mg/l	Demand, Carbonaceous Biological Oxygen Demand mg/l	Nitrogen, Ammonia mg/l	Nitrogen, Nitrate+Nitrite mg/l	Nitrogen, Particulate Nitrogen mg/l	Nitrogen, Total Kjeldahl Nitrogen mg/l	Nitrogen, Total Nitrogen mg/l	Phosphorus, Phosphate mg/l	Phosphorus, Total Phosphorus mg/l	Phosphorus, Particulate Phosphorus mg/l	Phosphorus, Particulate Inorganic Phosphorus mg/l	Turbidity NTU	Solids, Total Suspended Solids mg/l	Solids, Volatile Suspended Solids mg/l	Toxins, Microcystin µg/l
WE051116-OC	5/11/2016	10:41	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	14.21	8.04	123	10.96	8.01	2.83		1.43	0.571		<0.010	0.040			0.234	0.017	0.035			6.625	2.000	<0.18	
WE052516-OC	5/25/2016	10:13	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	14.94	8.28	141	10.49	4.5	<0.1	67.9	1.22	0.53		<0.010	0.021			0.209	0.013	0.062			4.000	1.000	<0.18	
WE060816-OC	6/8/2016	10:39	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	20.95	8.23	139	9.17	2.136	1.48		1.63	0.587		<0.010	0.028			0.275	0.023	0.040			4.167	0.833	<0.18	
WE062216-OC	6/22/2016	10:18	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	19.42	8.26	170	9.58	1.9	<0.1	80.6	1.55			<0.010	0.017			<0.050	0.027	0.037		0.730	2.833	0.833		
WE062216-OC	6/22/2016	10:18	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P									0.318														<0.18
WE071316-OC	7/13/2016	10:30	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	20.56	8.29	168	9.34	0.712	0.16		1.5	0.23		<0.010	<0.010			0.156	0.035	0.043		0.430	0.875	0.500	<0.15	
WE072716-OC	7/27/2016	10:06	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	23.53	8.36	176	8.94	1.246	0.5	81.7	2.05	0.213		<0.010	0.012			0.139	0.040	0.049			0.750	0.750	<0.15	
WE081016-OC	8/10/2016	10:26	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	21.82	8.31	177	9.27	1.78	1.34		2.35	0.402		<0.010	<0.010			0.167	0.045	0.058			1.167	0.667	<0.15	
WE082116-OC	8/21/2016	15:05	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P																							0.250
WE082416-OC	8/24/2016	10:00	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	21.65	8.01	170	9	5.34	4.75	77.4	3.13	0.693		<0.010	0.074			0.367	0.072	0.087		0.700	3.167	1.000	0.260	
WE091416-OC	9/14/2016	10:15	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	18.18	8.19	179	9.61	2.136	2.72		2.62	0.395		<0.010	0.023			0.435	0.071	0.074			1.667	1.000	<0.15	
WE092816-OC	9/28/2016	10:07	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	17.75	8.07	188	9.39	1.78	2.83	88.8	2.35	0.422		<0.010	0.193			0.445	0.084	0.149		0.340	1.833	1.333	<0.15	
WE101216-OC	10/12/2016	9:37	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	15.38	8.13	195	9.95	1.78	2.58		2.6	0.482		<0.010	0.153				0.071	0.093			1.875	<0.50	0.240	
WE102616-OC	10/26/2016	10:28	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	11.47	7.97	134	10.87	1.4	<0.1	64.6	2.21	0.318		<0.010	0.096			0.199	0.033	0.040		2.300	2.833	1.333	<0.15	
WE111616-OC	11/16/2016	11:27	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	10.78	7.99	132	11.08	1.6	<0.1		2.33	0.542		<0.010	0.091			0.334	0.019	0.032			5.000	1.143		
WE121416-OC	12/14/2016	11:41	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	P	7.52	7.96	147	11.91	1.78	1.54		1.43	0.63		<0.010	0.079			0.226	0.014	0.034		21.000	19.800	3.200		
TC022416-OC	2/24/2016	10:21	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	7.93	7.93	146	12.19	2.2	<0.1	71.1	0.77	0.343		<0.010	0.117			0.176	0.014	0.026			10.500	1.250		
TC031616-OC	3/16/2016	9:15	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	8.85	7.88	127	12	1.1	<0.1		1.23	0.994		0.029	0.098			0.120	0.014	0.146			114.000	5.000		
TC041316-OC	4/13/2016	10:43	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	11.87	7.88	118	11.12	1.1	<0.1		0.81	0.486		<0.010	0.072			0.164	0.011	0.031			15.500	2.500		
TC051116-OC	5/11/2016	9:53	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	12.91	7.95	119	10.76	11.75	0.21		1.32	1.31		<0.010	0.052			0.235	0.013	0.038			54.000	5.000	<0.18	
TC052516-OC	5/25/2016	9:23	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	13.77	8.16	133	10.3	4.1	<0.1	64.6	1.08	0.545		<0.010	0.026			0.163	0.008	0.045			11.400	2.200	<0.18	
TC060816-OC	6/8/2016	9:29	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	19.05	8.13	130	9.17	1.78	0.59		1.35	0.423		<0.010	0.019			0.185	0.013	0.028			6.333	0.667	<0.18	
TC062216-OC	6/22/2016	9:30	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P									0.317				0.032										<0.18
TC062216-OC	6/22/2016	9:30	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	18.03	8.11	153	9.52	1.2	<0.1	73	1.23			<0.010	0.014			0.104	0.016	0.023		1.400	2.500	0.500		
TC071316-OC	7/13/2016	9:46	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	19.68	8.22	157	9.24	0.356	0.52		1.21	0.248		<0.010	<0.010			0.133	0.021	0.042			1.500	0.500	<0.15	
TC072716-OC	7/27/2016	9:02	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	22.95	8.22	170	8.33	1.424	<0.1	79.7	1.55	0.225		<0.010	<0.010			0.085	0.027	0.033			1.125	<0.50	<0.15	

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	Water Temperature	pH	Specific Conductivity	Dissolved Oxygen	Algae, Chlorophyll-a	Algae, Pheophytin	Alkalinity	Carbon, Dissolved Organic Carbon	Carbon, Particulate Carbon	Demand, Carbonaceous Biological Oxygen Demand	Nitrogen, Ammonia	Nitrogen, Nitrate-Nitrite	Nitrogen, Particulate Nitrogen	Nitrogen, Total Kjeldahl Nitrogen	Nitrogen, Total Nitrogen	Phosphorus, Phosphate	Phosphorus, Total Phosphorus	Phosphorus, Particulate Phosphorus	Phosphorus, Particulate Inorganic Phosphorus	Turbidity NTU	Solids, Total Suspended Solids	Solids, Volatile Suspended Solids	Toxins, Microcystin	
TC081016-OC	8/10/2016	9:26	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	21.77	8.28	173	8.62	1.246	1.5		1.84	0.309		<0.010	<0.010			0.202	0.030	0.043			1.500	0.667	<0.15		
TC082416-OC	8/24/2016	9:11	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	21.67	8.21	168	8.54	3.026	2.33	77.5	2.68	0.55		<0.010	0.061			0.312	0.054	0.063		0.580	3.125	0.875	0.260		
TC091416-OC	9/14/2016	9:29	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	17.71	8.21	160	9.29	1.424	1.94	1.65	0.347			<0.010	0.014			0.307	0.042	0.044			1.714	0.857	<0.15		
TC092816-OC	9/28/2016	9:17	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	17.9	8.09	173	9.32	1.78	2.21	82.7	1.8	0.343		<0.010	0.123			0.313	0.054	0.077		0.410	2.167	1.167	<0.15		
TC101216-OC	10/12/2016	8:57	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	15.69	8.15	187	9.08	1.424	1.94	1.78	0.534			<0.010	0.114	0.062			0.052	0.072			1.875	0.625	0.180		
TC102616-OC	10/26/2016	9:17	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	11.77	7.93	142	10.68	2	<0.1	67.3	1.88	0.376		<0.010	0.067			0.138	0.022	0.033		1.400	4.667	1.000	<0.15		
TC111616-OC	11/16/2016	10:09	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	11.07	8.02	131	10.91	2.448	0.2	2.01	0.580			<0.010	0.070			0.297	0.014	0.027			7.857	1.429			
TC121416-OC	12/14/2016	9:37	KR03850	Klamath River below Trinity River (RM 38.5; Baseline)	Yurok	0.5	P	7.32	7.97	129	12.01	2.136	2.35	1.42	1.780			0.013	0.082			0.228	0.012	0.060			52.000	9.667			
TG022416-OC	2/24/2016	7:19	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	8.55	7.04	142	11.6	2.6	<0.1	68.5	0.65	0.382		<0.010	0.133	0.027			0.325	0.014	0.031	0.009	0.009	5.700	11.750	1.000	
TG031616-OC	3/16/2016	7:27	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	9.14	7.5	123	11.45	1.335	1.47	1.25	0.744			0.032	0.109	0.059			0.166	0.014	0.117	0.061	0.058	45.000	78.000	3.000	
TG041316-OC	4/13/2016	8:17	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	12.44	7.75	121	10.61	1.424	0.44	0.66	0.334			<0.010	0.078	0.025			0.241	0.010	0.030	0.012	0.009	5.500	11.333	1.000	
TG051016-OC	5/10/2016	11:03	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P																							<0.18	
TG051116-OC	5/11/2016	7:14	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	13.55	7.92	115	10.38	5.34	3.63	0.86	0.855		0.016	0.064	0.078			0.188	0.013	0.042	0.038	0.028	9.500	48.500	5.000		
TG052416-OC	5/24/2016	12:14	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P																							<0.18	
TG052516-OC	5/25/2016	7:10	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	14.7	8.07	135	9.85	4.6	<0.1	65.5	1	0.608		<0.010	0.034	0.063			0.196	0.007	0.045	0.019	0.013	21.750	2.000		
TG060716-OC	6/7/2016	11:32	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P																							<0.18	
TG060816-OC	6/8/2016	7:28	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	19.47	7.98	135	8.59	1.716	0.42	1.18	0.433			<0.010	0.032				0.125	0.010	0.023	0.009	0.004	0.350	4.667	1.000	
TG062116-OC	6/21/2016	13:25	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P																							<0.18	
TG062216-OC	6/22/2016	7:20	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P									0.275				0.031					0.007	<0.0024					<0.15
TG062216-OC	6/22/2016	7:20	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	17.46	7.89	152	8.92	1.5	<0.1	74.2	0.98			<0.010	0.045				0.122	0.012	0.020		1.300	2.875	0.625		
TG071216-OC	7/12/2016	12:34	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P																							<0.15	
TG071316-OC	7/13/2016	7:20	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	19.24	8.05	156	8.76	0.712	0.41	1.06	0.231			0.012	0.027	0.028			0.154	0.019	0.026	0.005	<0.0024	0.490	1.875	0.625	
TG072616-OC	7/26/2016	12:50	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P																							<0.15	
TG072716-OC	7/27/2016	7:05	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	22.39	8.25	169	8.09	1.3	<0.1	78.5	1.93	0.181		<0.010	0.025	0.024			0.081	0.022	0.030	0.005	<0.0024	0.600	2.750	1.000	
TG080916-OC	8/9/2016	11:26	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P																							<0.15	
TG081016-OC	8/10/2016	7:04	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	21.6	8.43	172	8.22	0.89	0.98	1.59	0.237			<0.010	0.016	0.029			0.130	0.016	0.028	0.005	<0.0024	0.340	1.250	0.875	

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	A Water Temperature	pH	Specific Conductivity	Dissolved Oxygen	Algae, Chlorophyll-a	Algae, Pheophytin	Alkalinity	Carbon, Dissolved Organic Carbon	Carbon, Particulate Carbon	Demand, Carbonaceous Biological Oxygen Demand	Nitrogen, Ammonia	Nitrogen, Nitrate-Nitrite	Nitrogen, Particulate Nitrogen	Nitrogen, Total Kjeldahl Nitrogen	Nitrogen, Total Nitrogen	Phosphorus, Phosphate	Phosphorus, Total Phosphorus	Phosphorus, Particulate Phosphorus	Phosphorus, Particulate Inorganic Phosphorus	Turbidity NTU	Solids, Total Suspended Solids	Solids, Volatile Suspended Solids	Toxins, Microcystin	
TG082316-OC	8/23/2016	12:52	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P																								0.260
TG082416-OC	8/24/2016	7:01	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	21.79	8.16	172	7.37	3.738	2.99	79.1	2.44	0.504		<0.010	0.012	0.073		0.258	0.040	0.052	0.010	0.003	0.730	2.625	0.750		
TG091316-OC	9/13/2016	12:26	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P																								<0.15
TG091416-OC	9/14/2016	7:15	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	18.51	8.03	161	8.47	1.78	1.46		1.36	0.33		<0.010	0.015	0.038		0.269	0.034	0.039	0.005	<0.0024	0.570	1.333	0.500		
TG092716-OC	9/27/2016	12:59	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P																								<0.15
TG092816-OC	9/28/2016	7:09	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	18.1	8.05	168	8.41	2.136	1.98	80.1	1.42	0.317		<0.010	0.051	0.041		0.187	0.034	0.051	0.007	<0.0024	0.340	2.000	1.333		
TG101116-OC	10/11/2016	12:47	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P																								0.390
TG101216-OC	10/12/2016	6:43	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	16.59	8.16	187	8.91	1.602	1.51		1.65	0.58		<0.010	0.034				0.038	0.055	0.006	<0.0024	0.680	0.875	<0.50		
TG102516-OC	10/25/2016	12:45	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P																								<0.15
TG102616-OC	10/26/2016	7:17	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	12.52	7.87	146	10.07	1.602	0.14	68.6	1.52	0.393		<0.010	0.105			0.182	0.024	0.035	0.008	0.004	1.600	7.000	1.500		
TG111616-OC	11/16/2016	13:23	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	11.49	7.44	137	10.47	2.314	0.68		1.76	0.63		<0.010	0.121	0.048		0.361	0.018	0.043	0.015	0.005	2.300	10.800	2.000		
TG121416-OC	12/14/2016	8:16	KR00600	Klamath River near Klamath (RM 6.0; Baseline)	Yurok	0.5	P	8.17	7.84	125	11.41	1.602	1.58		1.01	0.444		<0.010	0.114	0.028		0.127	0.012	0.029	0.013	0.011	6.400	17.250	1.500		
LES022416-OC	2/24/2016	7:44	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	8.37	7.18	147	11.72	2.67	<0.1	66.2	0.98	0.351		0.010	0.125			0.231	0.014	0.035				18.833	1.000		
LES031616-OC	3/16/2016	6:23	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	9.07	7.63	119	11.59	1.068	1.17		1.39	0.0823		0.030	0.129			0.207	0.014	0.130			110.000	2.000			
LES041316-OC	4/13/2016	7:28	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	12.5	7.87	118	10.72	3.204	<0.1		0.71	0.507		<0.010	0.074			0.321	0.022	0.030			16.000	1.833			
LES051016-OC	5/10/2016	10:33	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P																								<0.18
LES051116-OC	5/11/2016	6:22	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	13.74	7.94	118	10.42	5.874	3.1		1.14	0.94		<0.010	0.058			0.218	0.012	0.034			38.000	3.333			
LES052416-OC	5/24/2016	12:01	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P																								<0.18
LES052516-OC	5/25/2016	6:31	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	14.59	8.07	134	9.93	4.9	<0.1	65.3	1.16	0.435		<0.010	0.023			0.232	0.007	0.062			10.400	1.200			
LES060716-OC	6/7/2016	10:55	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P																								<0.18
LES060816-OC	6/8/2016	6:44	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	19.62	8.1	134	9.09	1.78	0.71		1.32	0.444		<0.010	0.016			0.254	0.010	0.011			6.167	0.667			
LES062116-OC	6/21/2016	12:13	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P																								<0.18
LES062216-OC	6/22/2016	6:31	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P									0.309															
LES062216-OC	6/22/2016	6:31	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	18.08	7.93	156	9.13	1.7	<0.1	72.3	1.05			<0.010	0.019			0.103	0.012	0.021			1.400	4.125	0.500		
LES071216-OC	7/12/2016	13:18	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P																								<0.15
LES071316-OC	7/13/2016	6:23	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	19.8	8.06	209	8.41	0.89	0.11		1.18	0.227		<0.010	0.018			0.108	0.019	0.027			0.833	<0.50			

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	A Water Temperature	pH	Specific Conductivity	Dissolved Oxygen	Algae, Chlorophyll-a	Algae, Pheophytin	Alkalinity	Carbon, Dissolved Organic Carbon	Carbon, Particulate Carbon	Demand, Carbonaceous Biological Oxygen Demand	Nitrogen, Ammonia	Nitrogen, Nitrate+Nitrite	Nitrogen, Particulate Nitrogen	Nitrogen, Total Kjeldahl Nitrogen	Nitrogen, Total Nitrogen	Phosphorus, Phosphate	Phosphorus, Total Phosphorus	Phosphorus, Particulate Phosphorus	Phosphorus, Particulate Inorganic Phosphorus	Turbidity NTU	Solids, Total Suspended Solids	Solids, Volatile Suspended Solids	Toxins, Microcystin	
LES072616-OC	7/26/2016	11:58	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P																							<0.15	
LES072716-OC	7/27/2016	6:13	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	21.97	8.2	1078	8.07	1.246	0.5	79.1	1.39	0.197		<0.010	0.013												
LES080216-SG	8/2/2016	10:56	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.1	P																								<0.15
LES080916-OC	8/9/2016	10:53	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P																								<0.15
LES081016-OC	8/10/2016	6:16	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	22.57	8.72	202	9.77	0.712	0.66		1.6	0.282		<0.010	0.013									0.875	<0.50		
LES082316-OC	8/23/2016	11:03	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P																								<0.15
LES082416-OC	8/24/2016	6:01	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	22.31	8.43	213	9.05	1.602	1.01	80.3	2.26	0.318		<0.010	<0.010								0.560	1.125	<0.50		
LES091316-OC	9/13/2016	11:41	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P																								<0.15
LES091416-OC	9/14/2016	6:24	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	19.14	8.15	173	8.68	0.712	0.78		1.45	0.233		<0.010	0.012									1.167	0.667		
LES092716-OC	9/27/2016	11:23	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P																								<0.15
LES092816-OC	9/28/2016	6:32	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	18.5	8.4	185	10.22	0.89	0.36	78.6	1.44	0.264		<0.010	0.037								0.350	1.167	<0.50		
LES101116-OC	10/11/2016	13:59	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P																								<0.15
LES101216-OC	10/12/2016	6:14	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	16.97	8.34	193	9.74	0.712	1.03		1.69	0.337		0.011	0.036									0.750	0.500		
LES102516-OC	10/25/2016	12:03	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P																								<0.15
LES102616-OC	10/26/2016	6:29	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	12.73	7.75	274	9.42	0.89	3.72	65.3	1.62			0.021	0.265								1.800	9.167	1.667		
LES111616-OC	11/16/2016	7:21	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	11.51	7.79	165	10.24	1.78	<0.1		1.7	0.368		<0.010	0.162									6.143	1.000		
LES121416-OC	12/14/2016	7:43	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	P	8.19	7.74	115	11.44	1.602	2.7		0.91	0.746		<0.010	0.109									28.000	2.500		
SH022416-OC	2/24/2016	12:59	SH00000	Shasta River near mouth (Baseline)	Karuk	0.5	P	8.66	8.8	0.55	11.41	5.3	0.6		4.2	0.506		<0.01	0.392								1.9	4.5	1		
SH031616-OC	3/16/2016	13:10	SH00000	Shasta River near mouth (Baseline)	Karuk	0.5	P	9.85	8.72	0.5	11.01	3.2	0.5		4.9	0.583		<0.01	0.501								2.7	6.3	1.5		
SH041316-OC	4/13/2016	12:43	SH00000	Shasta River near mouth (Baseline)	Karuk	0.5	P	14.45	8.87	0.45	10.4	4.3	1.1		4.62	0.473		<0.01	0.168								2.5	6.7	1.7		
SH051116-OC	5/11/2016	13:40	SH00000	Shasta River near mouth (Baseline)	Karuk	0.5	P	17.83	8.9	0.49	10.66	3	<0.1		4.55	0.335		0.012	0.077								0.82	2.5	1.3		
SH060816-OC	6/8/2016	12:42	SH00000	Shasta River near mouth (Baseline)	Karuk	0.5	P	21.97	8.89	0.5	10.71	1.4	<0.1		3.85	0.203		<0.01	<0.01								11	0.75	<0.5		
SH071316-OC	7/13/2016	13:00	SH00000	Shasta River near mouth (Baseline)	Karuk	0.5	P	21.2	8.55	0.54	9.18	0.9	0.5		5	0.311		0.012	<0.01								0.4	1	0.67		
SH081016-OC	8/10/2016	12:41	SH00000	Shasta River near mouth (Baseline)	Karuk	0.5	P	20.73	8.7	0.49	9.43	0.7	1		4.1	0.291		0.011	0.02								0.42	2	1		
SH091416-OC	9/14/2016	12:48	SH00000	Shasta River near mouth (Baseline)	Karuk	0.5	P	15.88	8.68	0.54	9.79	1.2	1		4.92	0.321		<0.01	0.017								1.7	<0.5			
SH101216-OC	10/12/2016	12:42	SH00000	Shasta River near mouth (Baseline)	Karuk	0.5	P	13.07	8.65	0.44	10.25	1.1	1.7		1.71	0.485		<0.01	0.122								0.7	5	1.8		

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	Water Temperature °C	pH	Specific Conductivity µS/cm	Dissolved Oxygen mg/l	Algae, Chlorophyll-a µg/l	Algae, Pheophytin µg/l	Alkalinity mg/l	Carbon, Dissolved Organic Carbon mg/l	Carbon, Particulate Carbon mg/l	Demand, Carbonaceous Biological Oxygen Demand mg/l	Nitrogen, Ammonia mg/l	Nitrogen, Nitrate-Nitrite mg/l	Nitrogen, Particulate Nitrogen mg/l	Nitrogen, Total Kjeldahl Nitrogen mg/l	Nitrogen, Total Nitrogen mg/l	Phosphorus, Phosphate mg/l	Phosphorus, Total Phosphorus mg/l	Phosphorus, Particulate Phosphorus mg/l	Phosphorus, Particulate Inorganic Phosphorus mg/l	Turbidity NTU	Solids, Total Suspended Solids mg/l	Solids, Volatile Suspended Solids mg/l	Toxins, Microcystin µg/l
SH111616-OC	11/16/2016	12:22	SH00000	Shasta River near mouth (Baseline)	Karuk	0.5	P	9.5	8.81	0.49	10.95	3.6	0.5		3.41	0.581		<0.01	0.269			0.622	0.173	0.209				4	0.67	
SH121416-OC	12/14/2016	13:39	SH00000	Shasta River near mouth (Baseline)	Karuk	0.5	P	5.94	8.73	0.48	11.31	5.1	2.8		3.4			<0.01	0.411			0.716	0.145	0.18			2.6	12	2.5	
SC022416-OC	2/24/2016	11:42	SC00000	Scott River near mouth (Baseline)	Karuk	0.5	P	7.1	8.47	0.19	11.85	1.3	<0.1		1.43	0.312		<0.01	0.475			0.596	0.005	0.014			1.5	8.3	1.2	
SC031616-OC	3/16/2016	11:38	SC00000	Scott River near mouth (Baseline)	Karuk	0.5	P	7.48	8.39	0.18	11.77	2.1	1.8		1.73	0.481		<0.01	0.386			0.426	0.011	0.048			9.5	29	2	
SC041316-OC	4/13/2016	11:25	SC00000	Scott River near mouth (Baseline)	Karuk	0.5	P	9.17	8.25	0.12	11.27	2.3	<0.1		1.51	0.309		<0.01	0.174			0.347	0.005	0.019			5.4	22	2.5	
SC051116-OC	5/11/2016	11:56	SC00000	Scott River near mouth (Baseline)	Karuk	0.5	P	12.41	8.36	0.13	10.64	3.8	0.1		1.29	0.391		<0.01	0.213			0.471	0.005	0.015			1.6	9.5	1.8	
SC060816-OC	6/8/2016	11:03	SC00000	Scott River near mouth (Baseline)	Karuk	0.5	P	18.11	8.44	0.14	9.27	1.6	0.8		1.26	0.197		<0.01	0.19			0.272	0.002	0.01			13	2.8	<0.5	
SC071316-OC	7/13/2016	11:10	SC00000	Scott River near mouth (Baseline)	Karuk	0.5	P	19.08	8.49	0.25	9.59	0.5	0.6		0.82	0.255		0.016	0.445			0.523	0.002	0.005			0.22	1.7	1.2	
SC081016-OC	8/10/2016	11:11	SC00000	Scott River near mouth (Baseline)	Karuk	0.5	P	20.29	8.5	0.24	9.04	0.9	0.2		1.25	0.243		0.013	0.012			0.226	<0.001	0.005			0.34	0.87	<0.5	
SC091416-OC	9/14/2016	11:15	SC00000	Scott River near mouth (Baseline)	Karuk	0.5	P	16.06	8.41	0.26	9.63	0.4	0.3		0.39	0.176		<0.01	0.012			0.282	0.002	0.006			0.21	0.63	<0.5	
SC101216-OC	10/12/2016	10:51	SC00000	Scott River near mouth (Baseline)	Karuk	0.5	P	11.71	8.53	0.26	10.96	0.7	0.8		0.46	0.18		<0.01	0.114			0.118	<0.001	<0.002			0.49	0.63	0.5	
SC111616-OC	11/16/2016	11:06	SC00000	Scott River near mouth (Baseline)	Karuk	0.5	P	8.66	8.47	0.12	11.38	3.8	<0.1		2.23	0.407		<0.01	0.069			0.238	0.003	0.013			4.5	1.2		
SC121416-OC	12/14/2016	12:40	SC00000	Scott River near mouth (Baseline)	Karuk	0.5	P	4.52	8.37	0.14	11.85	4.5	0.5		1.93			<0.01	0.156			0.33	0.006	0.021			1.9	12	2.5	
SA022416-OC	2/24/2016	9:20	SA00000	Salmon River near mouth (Baseline)	Karuk	0.5	P	6.98	8.25	0.1	12.39	0.3	<0.1		0.44	0.194		<0.01	0.052			0.054	0.001	0.003			0.41	1.3	0.67	
SA031616-OC	3/16/2016	9:15	SA00000	Salmon River near mouth (Baseline)	Karuk	0.5	P	7.63	8.3	0.1	12.33	1.1	0.8		0.85	0.369		<0.01	0.056			0.071	0.006	0.025			3.6	13	2	
SA041316-OC	4/13/2016	9:03	SA00000	Salmon River near mouth (Baseline)	Karuk	0.5	P	8.78	8.03	0.07	11.94	1.2	<0.1		0.89	0.214		<0.01	0.054			0.261	<0.001	0.012			2.6	7.1	0.63	
SA051116-OC	5/11/2016	9:16	SA00000	Salmon River near mouth (Baseline)	Karuk	0.5	P	11.2	8.26	0.07	11.02	2.3	<0.1		0.77	0.405		<0.01	0.021			0.235	0.005	0.006			0.35	7.3	1.3	
SA060816-OC	6/8/2016	8:21	SA00000	Salmon River near mouth (Baseline)	Karuk	0.5	P	18.07	8.1	0.16	9.26	0.5	<0.1		0.68	0.288		<0.01	0.011			<0.05	0.004	0.005			0.57	2.8	1	
SA071316-OC	7/13/2016	8:22	SA00000	Salmon River near mouth (Baseline)	Karuk	0.5	P	18.02	7.31	0.11	9.23	1.1	<0.1		0.38	0.931		<0.01	0.013			0.143	0.002	0.02			0.26	6.8	2.2	
SA081016-OC	8/10/2016	8:14	SA00000	Salmon River near mouth (Baseline)	Karuk	0.5	P	19.68	8.12	0.13	8.78	0.2	<0.1		0.4	0.0805		<0.01	0.011			0.162	<0.001	0.006			0.14	0.75	0.63	
SA091416-OC	9/14/2016	8:24	SA00000	Salmon River near mouth (Baseline)	Karuk	0.5	P	15.75	8.21	0.14	9.37	0.9	<0.1		<0.25	0.194		<0.01	<0.01			0.387	0.002	0.004			0.24	0.83	0.5	
SA101216-OC	10/12/2016	8:24	SA00000	Salmon River near mouth (Baseline)	Karuk	0.5	P	12.82	8.2	0.14	10.16	1	<0.1		0.36	0.19		<0.01	0.022			0.058	<0.001	<0.002			0.75	0.88	0.75	
SA111616-OC	11/16/2016	8:36	SA00000	Salmon River near mouth (Baseline)	Karuk	0.5	P	9.14	7.87	0.07	11.5	1.4	<0.1		2.38	0.438		<0.01	0.023			0.167	0.003	0.006			4.2	2		
SA121416-OC	12/14/2016	9:20	SA00000	Salmon River near mouth (Baseline)	Karuk	0.5	P	6.52	8.25	0.09	12.1	1.3	0.2		1.04			<0.01	0.048			<0.05	0.005	0.01			1.3	5.8	1.7	
TR022416-OC	2/24/2016	11:28	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	8.61	7.54	154	11.87	2.136	2.35	76.5	0.48	0.326		<0.010	0.032			0.072	0.006	0.031			6.90	16.5	3.0	
TR031616-OC	3/16/2016	10:06	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	9.19	8	134	11.78	1.068	2.67	1.28	1.53		0.044	0.062				0.177	0.009	0.216			61.00	161.0	14.0	

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Type	A Water Temperature	pH	Specific Conductivity	Dissolved Oxygen	Algae, Chlorophyll-a	Algae, Pheophytin	Alkalinity	Carbon, Dissolved Organic Carbon	Carbon, Particulate Carbon	Demand, Carbonaceous Biological Oxygen Demand	Nitrogen, Ammonia	Nitrogen, Nitrate-Nitrite	Nitrogen, Particulate Nitrogen	Nitrogen, Total Kjeldahl Nitrogen	Nitrogen, Total Nitrogen	Phosphorus, Phosphate	Phosphorus, Total Phosphorus	Phosphorus, Particulate Phosphorus	Phosphorus, Particulate Inorganic Phosphorus	Turbidity	Solids, Total Suspended Solids	Solids, Volatile Suspended Solids	Toxins, Microcystin	
TR041316-OC	4/13/2016	11:45	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	12.87	8	141	10.77	1.6	<0.1	0.58	0.211		<0.010	0.017				0.123	0.006	0.012			3.90	7.1	0.8		
TR051116-OC	5/11/2016	10:56	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	12.27	7.92	83	11.18	5.34	5.13	1.18	1.45		<0.010	0.057				0.214	0.011	0.025			22.00	65.0	8.5		
TR052516-OC	5/25/2016	10:31	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	12	8.2	83	10.8	4.4	<0.1	62.8	0.87	0.309		<0.010	0.032			0.145	0.004	0.025			7.5	<0.50	<0.18		
TR060816-OC	6/8/2016	10:55	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	16.87	8.12	120	9.76	1.246	0.5	0.94	0.303		<0.010	<0.010				0.089	0.003	0.009			0.27	5.2	0.8		
TR062216-OC	6/22/2016	10:36	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P								0.229															<0.18	
TR062216-OC	6/22/2016	10:36	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	16.7	8.02	134	9.89	1.5	<0.1	66.4	0.86		<0.010	0.011				0.065	0.003	0.023			2.10	2.4	0.7		
TR071316-OC	7/13/2016	11:00	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	19.33	8.17	141	9.44	0.712	0.16	0.8	0.181		<0.010	0.011				0.061	0.003	0.008			2.6	<0.50			
TR072716-OC	7/27/2016	10:31	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	22.91	8.24	156	8.93	0.712	<0.1	73.9	0.75	0.106		<0.010	<0.010			<0.050	0.003	0.005			0.38	1.0	0.7	<0.15	
TR081016-OC	8/10/2016	10:54	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	21.5	8.31	105	9.12	0.6	<0.1	0.82	0.134		<0.010	0.010				<0.050	<0.001	0.005			0.24	1.5	0.5		
TR082416-OC	8/24/2016	10:21	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	21.31	8.03	161	8.97	1.068	<0.1	76.3	0.71	0.186		<0.010	<0.010			0.098	0.002	0.005			0.30	<0.50	<0.50	<0.15	
TR091416-OC	9/14/2016	10:36	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	16.96	8.12	132	9.81	0.89	0.11	0.7	0.195		<0.010	<0.010				0.112	0.001	0.004			0.46	1.0	<0.50		
TR092816-OC	9/28/2016	10:29	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	16.82	8.16	144	9.93	1.246	<0.1	72	0.57	0.298		<0.010	0.021			<0.050	<0.001	0.004			0.27	1.8	1.0	<0.15	
TR101216-OC	10/12/2016	10:01	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	15.18	8.21	171	10.22	0.534	0.46	0.55	0.439		<0.010	0.021				0.004	0.004			0.50	0.6	<0.50			
TR102616-OC	10/26/2016	10:07	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	12.55	8.01	158	10.49	1.958	0.78	74.6	1.11	0.439		<0.010	0.016			0.061	0.002	0.010			2.10	5.7	1.0	<0.15	
TR111616-OC	11/16/2016	11:05	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	12.41	8.05	179	10	2.67	0.51	1.01	0.351		<0.010	<0.010				0.157	0.001	0.013			2.10	10.5	1.3		
TR121416-OC	12/14/2016	11:26	TR00000	Trinity River near mouth (Baseline)	Yurok	0.5	P	7.04	7.89	126	12.28	2.136	4.22	1.31	1.24		<0.010	0.067				0.118	0.009	0.069			63.0	7.0			

All Non-detect values were replaced with "<" and the RL value.
Sample Types include: P- Production sample; R – Regular sample associated with QA sample set; I = Depth Integrated sample.

Appendix C. Selected Results of 2016 Baseline Phytoplankton Analysis

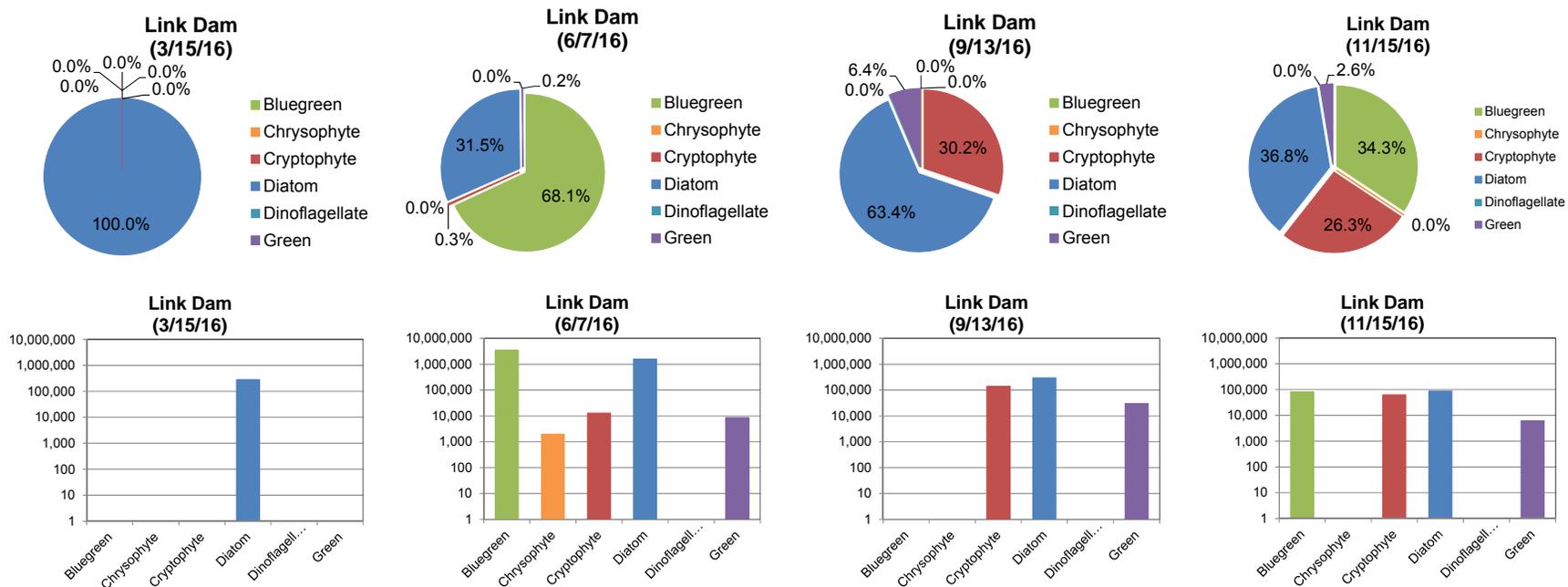


Figure C-1. Phytoplankton species percent biovolume (top) and biovolume by taxa (bottom) at Link River Dam for samples collected as part of Baseline sampling on 3/15/16, 6/7/16, 9/13/16, and 11/15/16. Note: y-axis in logarithmic scale.

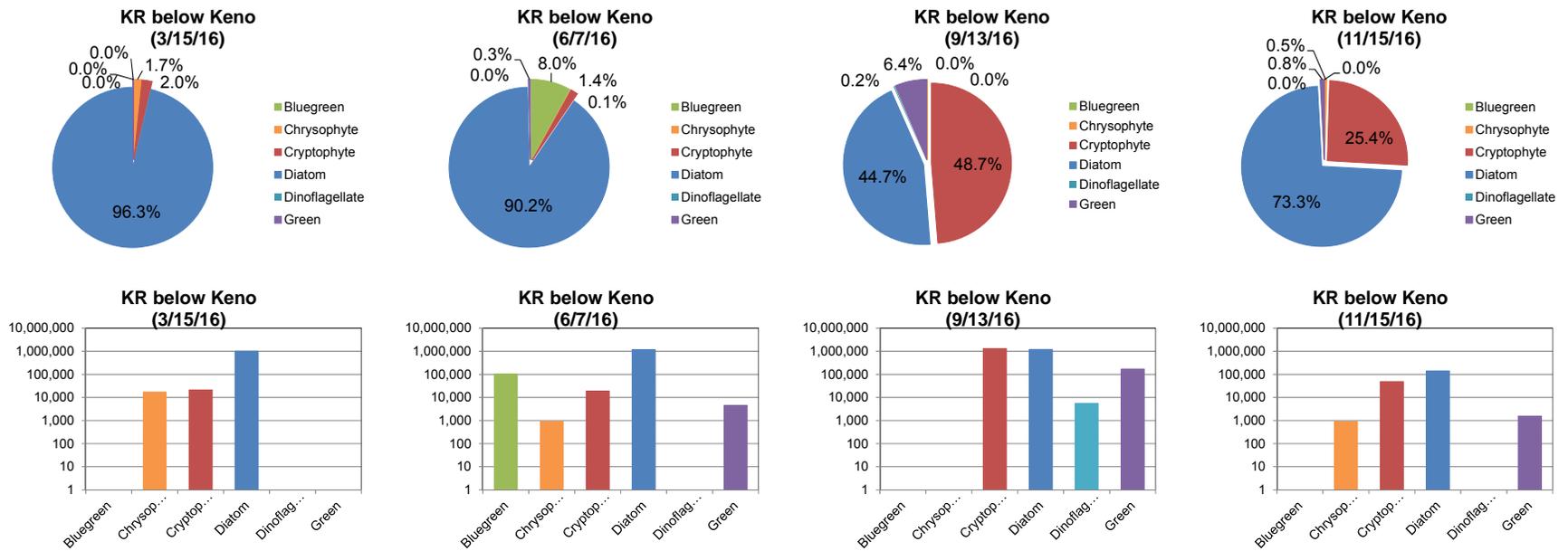


Figure C-2. Phytoplankton species percent biovolume (top) and biovolume by taxa (bottom) at Klamath River below Keno Dam near a USGS gage (RM 233.4; Baseline) for samples collected as part of Baseline sampling on 3/15/16, 6/7/16, 9/13/16, and 11/15/16. Note: y-axis in logarithmic scale.

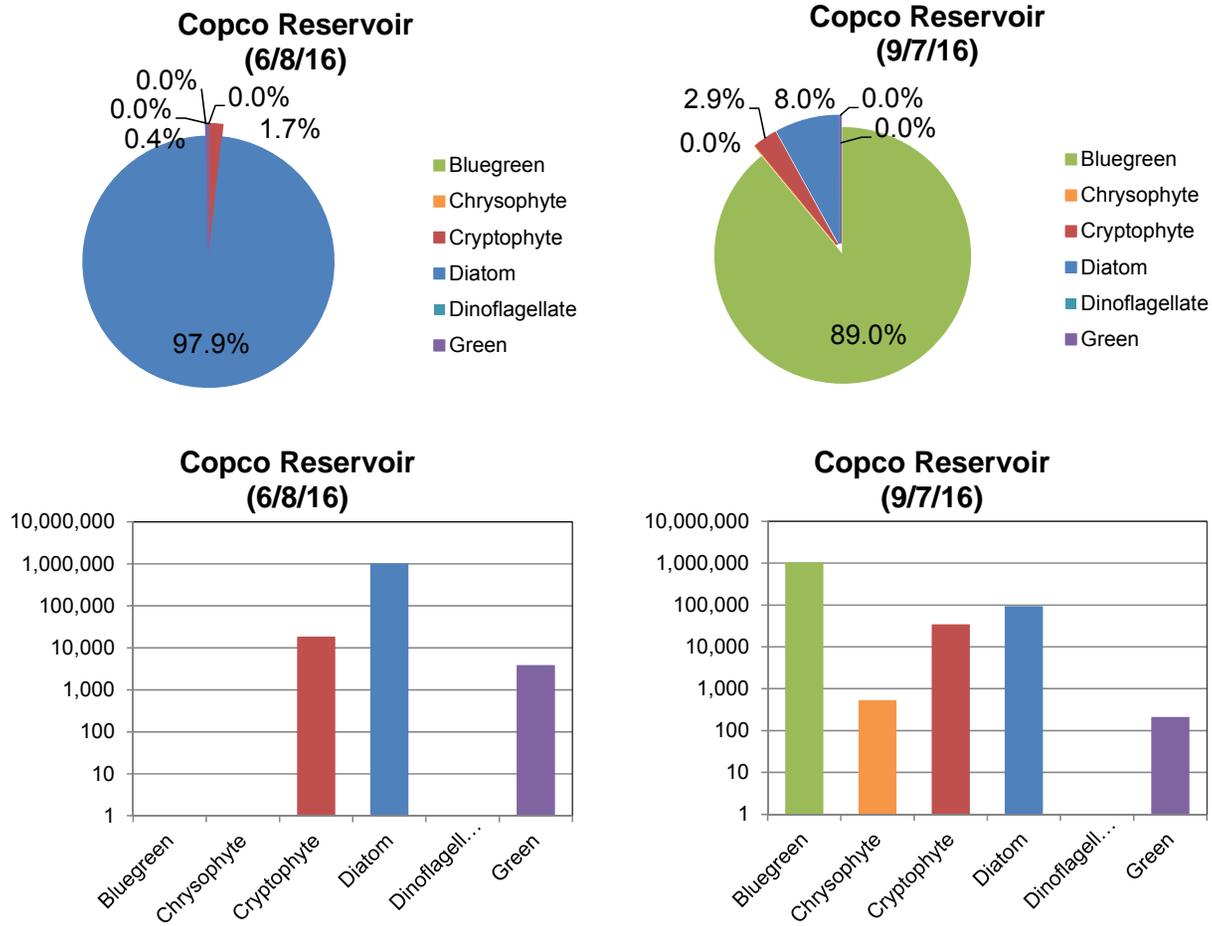


Figure C-3. Phytoplankton species percent biovolume (top) and biovolume by taxa (bottom) at Copco Reservoir near dam for samples collected as part of Baseline sampling on 6/8/16 and 9/7/16. No samples were collected for March or November 2016. Note: y-axis in logarithmic scale.

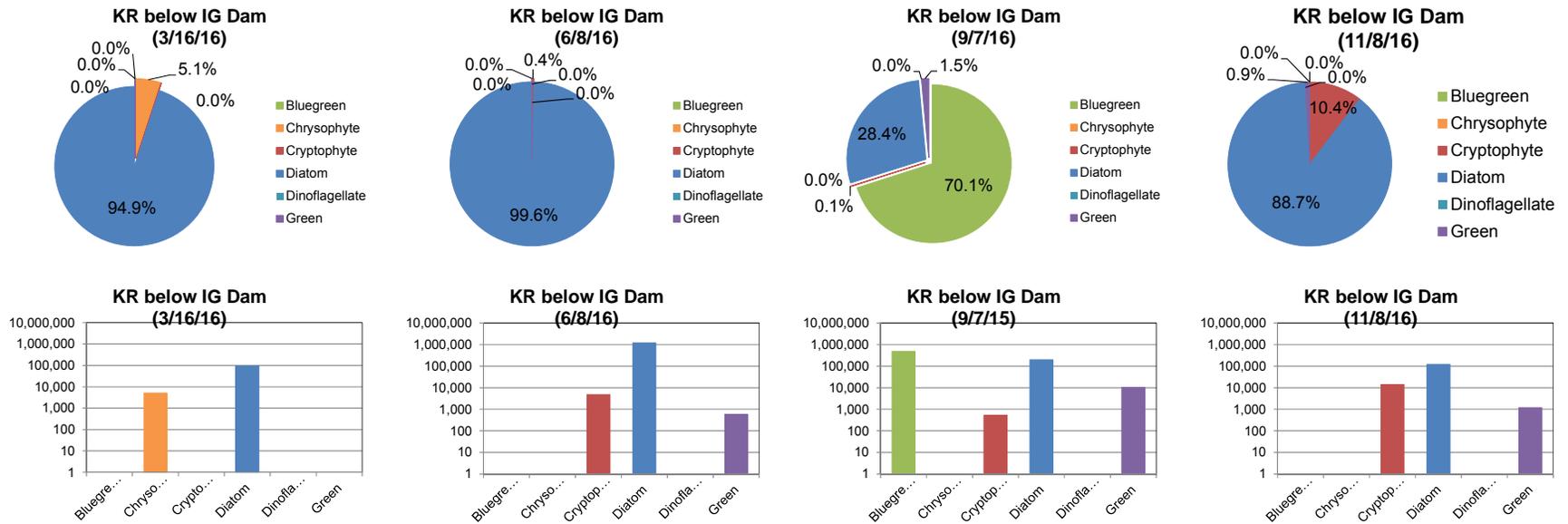


Figure C-4. Phytoplankton species percent biovolume (top) and biovolume by taxa (bottom) at Klamath River below Iron Gate Dam (RM 189.73; Baseline) for samples collected as part of Baseline sampling on 3/16/16, 6/8/16, 9/7/16, and 11/18/16. Note: y-axis in logarithmic scale.

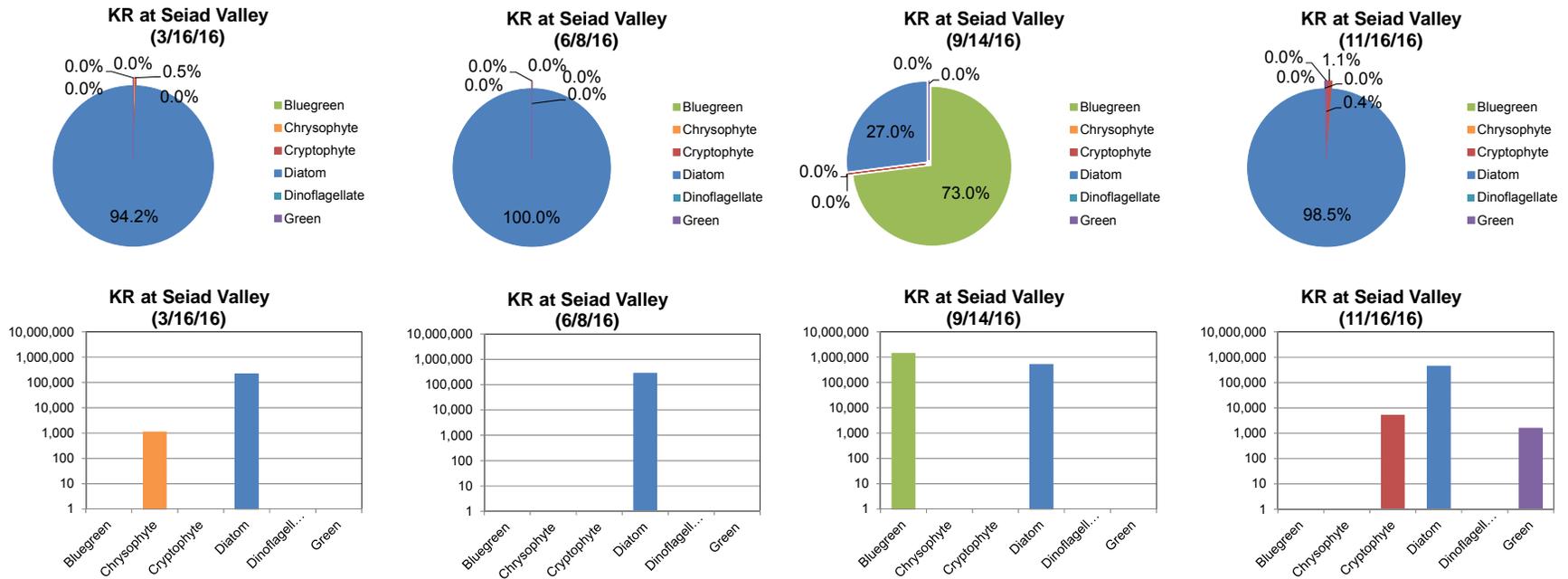


Figure C-5. Phytoplankton species percent biovolume (top) and biovolume by taxa (bottom) at Klamath River below Seiad (RM 128.5; Baseline) for samples collected as part of Baseline sampling on 3/16/16, 6/8/15, 9/14/16, and 11/6/16. Note: y-axis in logarithmic scale. Also, there was a euglenoid present that is not included in the graph or statistics for March.

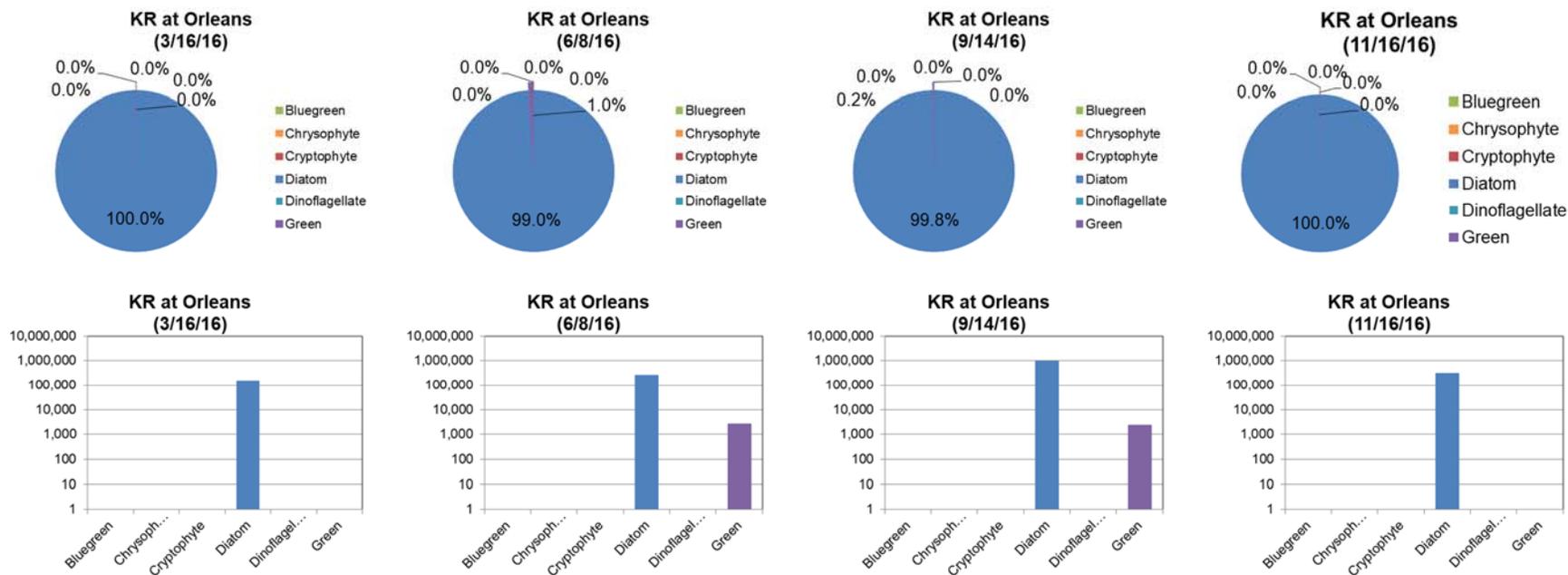


Figure C-6. Phytoplankton species percent biovolume (top) and biovolume by taxa (bottom) at Klamath River at Orleans (USGS) (RM 59.1; Baseline) for samples collected as part of Baseline sampling on 3/16/16, 6/8/16, 9/14/16, and 11/16/16. Note: y-axis in logarithmic scale.

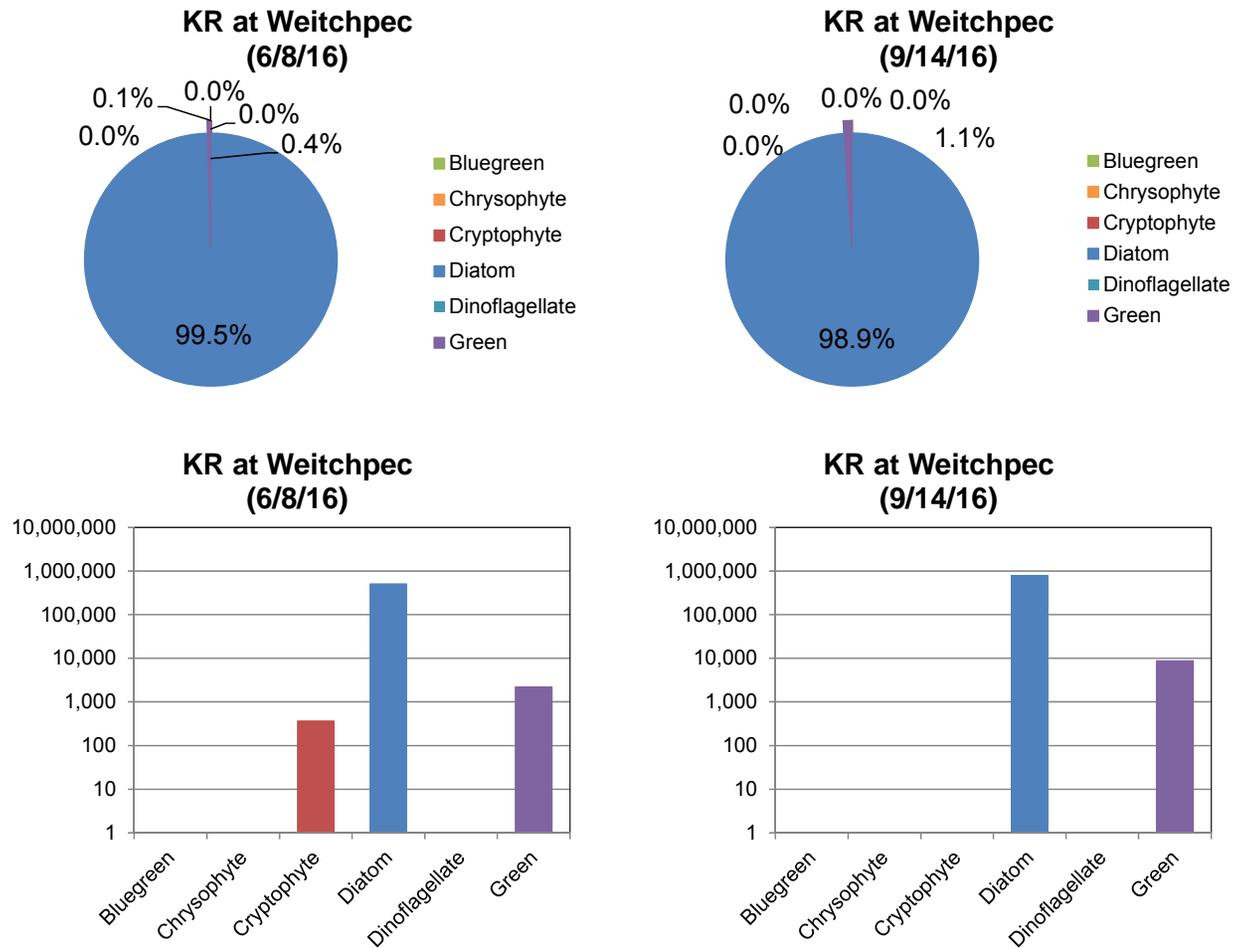


Figure C-7. Phytoplankton species percent biovolume (top) and biovolume by taxa (bottom) at Klamath River at Weitchpec (RM 43.5; Baseline) for samples collected as part of Baseline sampling on 6/8/16 and 9/14/16. No samples were collected for March or November 2016. Note: y-axis in logarithmic scale.

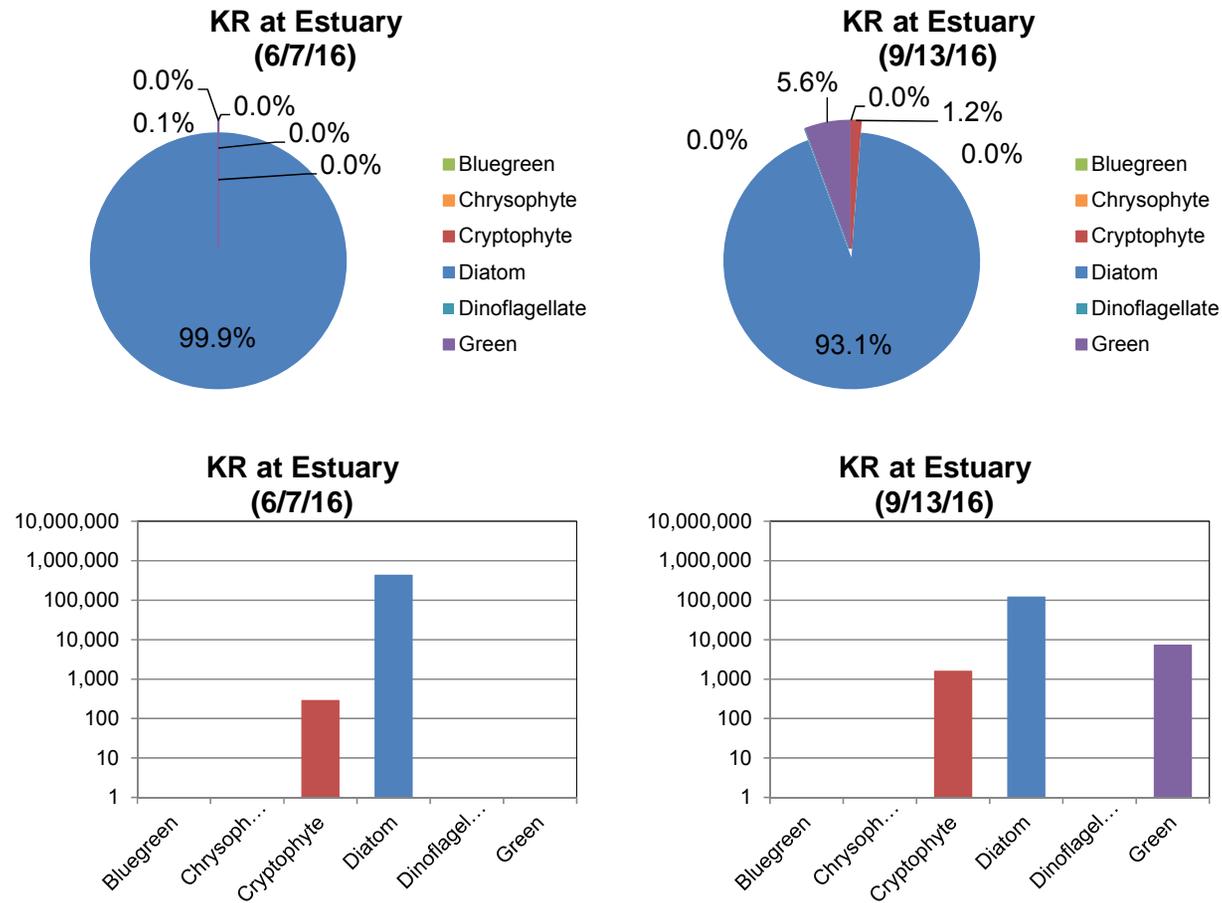


Figure C-8. Phytoplankton species percent biovolume (top) and biovolume by taxa (bottom) at Klamath River Estuary (RM 0.5; Baseline) for samples collected as part of Baseline sampling on 6/7/16 and 9/13/16. No samples were collected for March or November 2016. Note: y-axis in logarithmic scale.

Appendix D. 2016 Public Health Data

Table D-1. 2016 Public Health Dataset. NS indicates an analysis for a sample that was not conducted or a sample that was not collected. Sample IDs for Karuk and Yurok algae species data were assigned based on date and location and matched with microcystin sample IDs as no unique sample IDs were provided to the algae speciation laboratory for analysis. Microcystin test results of non-detect or values less than the reporting limit of 0.18 µg/l (or 0.15 µg/l after 6/23/2016) have been replaced with <0.18 µg/l (or <0.15 µg/l after 6/23/2016). Algae genera names were updated to reflect the newest nomenclature of the field: *Anabaena* was renamed *Dolichospermum* and *Oscillatoria* was renamed *Planktothrix* for all species.

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth m	Microcystin µg/l	Dolichospermum (fisc- aqueae) cells/ml	Aphanizomenon (fisc- aqueae) cells/ml	Microcystis aenigrosa cells/ml	Dolichospermum circinalis cells/ml	Dolichospermum planctonica cells/ml	Dolichospermum sp. cells/ml	Aphanizomenon sp. cells/ml	Gloeotrichia echinulata cells/ml	Lyngbya sp. cells/ml	Planktothrix limosa cells/ml	Planktothrix sp. cells/ml	Pseudo-Dolichospermum sp. cells/ml	Dolichospermum variabilis cells/ml	Limothrix sp. cells/ml
UKEP16001	6/14/2016	11:47	UKEP	Upper Klamath Lake at Eagle Ridge County Park (Public Health)	ODEQ	0.1	0.76	0	349320	0	0	0	0	0	0	0	0	0	0	0	0
UKEP16002	6/28/2016	11:17	UKEP	Upper Klamath Lake at Eagle Ridge County Park (Public Health)	ODEQ	0.1	56	0	10103761	163293	0	0	0	0	0	0	0	0	0	0	0
UKEP16003	7/12/2016	11:58	UKEP	Upper Klamath Lake at Eagle Ridge County Park (Public Health)	ODEQ	0.1	0.51	0	478159	0	0	0	0	0	0	0	0	0	0	0	0
UKEP16004	7/26/2016	12:34	UKEP	Upper Klamath Lake at Eagle Ridge County Park (Public Health)	ODEQ	0.1	1.9	0	150457	0	0	0	0	0	0	0	0	0	0	0	0
UKEP16005	8/8/2016	11:15	UKEP	Upper Klamath Lake at Eagle Ridge County Park (Public Health)	ODEQ	0.1	4.9	0	168251	0	0	0	0	0	0	0	0	0	0	0	0
UKEP16006	8/30/2016	12:13	UKEP	Upper Klamath Lake at Eagle Ridge County Park (Public Health)	ODEQ	0.1	0.33	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UKEP16007	9/13/2016	11:45	UKEP	Upper Klamath Lake at Eagle Ridge County Park (Public Health)	ODEQ	0.1	0.92	0	976	976	0	0	0	0	0	0	0	0	0	0	0
UKEP16008	9/27/2016	12:37	UKEP	Upper Klamath Lake at Eagle Ridge County Park (Public Health)	ODEQ	0.1	2	0	490	2092	0	0	0	0	0	0	0	0	0	0	0
UKEP16009	10/11/2016	12:22	UKEP	Upper Klamath Lake at Eagle Ridge County Park (Public Health)	ODEQ	0.1	0.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UKEP16010	10/25/2016	10:52	UKEP	Upper Klamath Lake at Eagle Ridge County Park (Public Health)	ODEQ	0.1	0.64	0	2255	0	0	0	0	0	0	0	0	0	0	0	0
UKHP16001	6/14/2016	11:24	UKHP	Upper Klamath Lake at Howard's Bay Park (Public Health)	ODEQ	0.1	14	0	296927	100686	0	0	0	0	0	0	0	0	0	0	0
UKHP16002	6/28/2016	11:34	UKHP	Upper Klamath Lake at Howard's Bay Park (Public Health)	ODEQ	0.1	130	0	43439500	0	0	0	0	0	0	0	0	0	0	0	0
UKHP16003	7/12/2016	12:32	UKHP	Upper Klamath Lake at Howard's Bay Park (Public Health)	ODEQ	0.1	79	0	2786509	882245	0	0	0	0	0	0	0	0	0	0	0
UKHP16004	7/26/2016	12:08	UKHP	Upper Klamath Lake at Howard's Bay Park (Public Health)	ODEQ	0.1	37	0	20177880	3545070	0	0	0	0	0	0	0	0	0	0	0
UKHP16005	8/8/2016	11:38	UKHP	Upper Klamath Lake at Howard's Bay Park (Public Health)	ODEQ	0.1	170	0	369782	958566	0	0	0	0	0	0	0	0	0	0	0
UKHP16006	8/30/2016	12:33	UKHP	Upper Klamath Lake at Howard's Bay Park (Public Health)	ODEQ	0.1	1.2	0	0	11776	0	0	0	0	0	0	0	0	0	0	0
UKHP16007	9/13/2016	11:58	UKHP	Upper Klamath Lake at Howard's Bay Park (Public Health)	ODEQ	0.1	5.8	0	0	17083	0	0	0	0	0	0	0	0	0	0	0
UKHP16008	9/27/2016	12:57	UKHP	Upper Klamath Lake at Howard's Bay Park (Public Health)	ODEQ	0.1	470	0	25044	1077630	0	0	0	0	0	0	0	0	0	0	0
UKHP16009	10/11/2016	12:42	UKHP	Upper Klamath Lake at Howard's Bay Park (Public Health)	ODEQ	0.1	5	0	235	3512	0	0	0	0	0	0	0	0	0	0	0
UKHP16010	10/25/2016	10:34	UKHP	Upper Klamath Lake at Howard's Bay Park (Public Health)	ODEQ	0.1	0.75	0	1599	0	0	0	0	0	0	0	0	0	0	0	0
UKMP16001	6/14/2016	11:10	UKMP	Upper Klamath Lake at Moore Park (Public Health)	ODEQ	0.1	0.56	0	302081	0	0	0	0	0	55817	0	0	0	0	0	0
UKMP16002	6/28/2016	11:50	UKMP	Upper Klamath Lake at Moore Park (Public Health)	ODEQ	0.1	32	0	3157000	1485481	0	0	0	0	0	0	0	0	0	0	0

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth m	Microcystin µg/l	Dolichospermum flos- aquae cells/ml	Aphanizomenon flos- aquae cells/ml	Microcystis aeruginosa cells/ml	Dolichospermum circinale cells/ml	Dolichospermum planctonica cells/ml	Dolichospermum sp. cells/ml	Aphanizomenon sp. cells/ml	Geotrichia echinulata cells/ml	Lyngbya sp. cells/ml	Planktothrix imosa cells/ml	Planktothrix sp. cells/ml	Pseudo-Dolichospermum sp. cells/ml	Dolichospermum variatilis cells/ml	Limnodithrix sp. cells/ml
UKMP16003	7/12/2016	12:46	UKMP	Upper Klamath Lake at Moore Park (Public Health)	ODEQ	0.1	3.4	0	206838	21384	0	0	0	0	0	0	0	0	0	0	0
UKMP16004	7/26/2016	13:14	UKMP	Upper Klamath Lake at Moore Park (Public Health)	ODEQ	0.1	0.54	0	1082400	0	0	0	0	0	0	0	0	0	0	0	0
UKMP16005	8/8/2016	11:56	UKMP	Upper Klamath Lake at Moore Park (Public Health)	ODEQ	0.1	3.4	0	277381	0	0	0	0	0	0	0	0	0	0	0	0
UKMP16006	8/30/2016	12:52	UKMP	Upper Klamath Lake at Moore Park (Public Health)	ODEQ	0.1	0.17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UKMP16007	9/13/2016	12:20	UKMP	Upper Klamath Lake at Moore Park (Public Health)	ODEQ	0.1	0.31	0	0	430	0	0	0	0	0	0	0	0	0	0	0
UKMP16008	9/27/2016	13:17	UKMP	Upper Klamath Lake at Moore Park (Public Health)	ODEQ	0.1	3	0	3398	0	0	0	0	0	0	0	0	0	0	0	0
UKMP16009	10/11/2016	13:02	UKMP	Upper Klamath Lake at Moore Park (Public Health)	ODEQ	0.1	0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UKMP16010	10/25/2016	11:22	UKMP	Upper Klamath Lake at Moore Park (Public Health)	ODEQ	0.1	0.46	0	85	0	0	0	0	0	0	0	0	0	0	0	0
KEKP16001	6/14/2016	10:38	KEKP	Keno Reservoir at Keno Park (Public Health)	ODEQ	0.1	0.23	46979	0	0	0	0	587	0	0	0	0	0	0	0	0
KEKP16002	6/28/2016	10:35	KEKP	Keno Reservoir at Keno Park (Public Health)	ODEQ	0.1	3.2	0	279025	18090	0	0	0	0	0	0	0	0	0	0	0
KEKP16003	7/12/2016	10:59	KEKP	Keno Reservoir at Keno Park (Public Health)	ODEQ	0.1	0.55	0	20528	0	0	0	78	0	0	0	0	0	0	0	0
KEKP16004	7/26/2016	11:37	KEKP	Keno Reservoir at Keno Park (Public Health)	ODEQ	0.1	0.29	0	30067	0	0	0	0	0	0	0	0	0	0	0	0
KEKP16005	8/8/2016	10:22	KEKP	Keno Reservoir at Keno Park (Public Health)	ODEQ	0.1	0.28	0	16955	0	0	0	0	0	0	0	0	0	0	0	0
KEKP16006	8/30/2016	11:28	KEKP	Keno Reservoir at Keno Park (Public Health)	ODEQ	0.1	10	0	2708	64845	0	0	0	0	0	0	0	0	0	0	0
KEKP16007	9/13/2016	10:56	KEKP	Keno Reservoir at Keno Park (Public Health)	ODEQ	0.1	1.4	0	0	1203	0	0	0	0	0	0	0	0	0	0	0
KEKP16008	9/27/2016	11:47	KEKP	Keno Reservoir at Keno Park (Public Health)	ODEQ	0.1	0.46	0	0	904	0	0	0	0	0	0	0	0	0	0	0
KEKP16009	10/11/2016	11:35	KEKP	Keno Reservoir at Keno Park (Public Health)	ODEQ	0.1	0.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRTC16001	6/14/2016	10:09	BRTC	J.C. Boyle Reservoir at Topsy Campground (Public Health)	ODEQ	0.1	<0.18	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRTC16002	6/28/2016	10:07	BRTC	J.C. Boyle Reservoir at Topsy Campground (Public Health)	ODEQ	0.1	0.53	0	456392	490	0	0	0	0	0	0	0	0	0	0	0
BRTC16003	7/12/2016	10:42	BRTC	J.C. Boyle Reservoir at Topsy Campground (Public Health)	ODEQ	0.1	0.31	0	775	0	0	0	0	0	0	0	0	0	0	0	0
BRTC16004	7/26/2016	11:17	BRTC	J.C. Boyle Reservoir at Topsy Campground (Public Health)	ODEQ	0.1	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRTC16005	8/8/2016	10:03	BRTC	J.C. Boyle Reservoir at Topsy Campground (Public Health)	ODEQ	0.1	0.21	0	1115	0	0	0	0	0	0	0	0	0	0	0	0
BRTC16006	8/30/2016	11:07	BRTC	J.C. Boyle Reservoir at Topsy Campground (Public Health)	ODEQ	0.1	2.9	0	0	3391	0	0	0	0	0	0	0	0	0	0	0
BRTC16007	9/13/2016	10:38	BRTC	J.C. Boyle Reservoir at Topsy Campground (Public Health)	ODEQ	0.1	0.67	0	0	573	0	0	0	0	0	0	0	107	0	0	0
BRTC16008	9/27/2016	11:28	BRTC	J.C. Boyle Reservoir at Topsy Campground (Public Health)	ODEQ	0.1	0.21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRTC16009	10/11/2016	11:17	BRTC	J.C. Boyle Reservoir at Topsy Campground (Public Health)	ODEQ	0.1	0.17	0	116	0	0	0	0	0	0	0	58	0	0	0	0

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth .m	Microcystin µg/l	Dolichospermum flos-aquae cells/ml	Aphanizomenon flos-aquae cells/ml	Microcystis aeruginosa cells/ml	Dolichospermum circinale cells/ml	Dolichospermum planktonica cells/ml	Dolichospermum sp. cells/ml	Aphanizomenon sp. cells/ml	Geotrichia echinulata cells/ml	Lyngbya sp. cells/ml	Planktothrix imosa cells/ml	Planktothrix sp. cells/ml	Pseudo-Dolichospermum sp. cells/ml	Dolichospermum variabilis cells/ml	Limnodithrix sp. cells/ml
BRTC16010	10/25/2016	10:00	BRTC	J.C. Boyle Reservoir at Topsy Campground (Public Health)	ODEQ	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KR16801	5/23/2016	12:15	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KR16806	6/8/2016	12:10	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	3.7	503	0	0	0	0	0	0	0	0	0	0	0	0	0
KR16811	6/20/2016	14:20	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	61	17034	0	496424	0	0	0	0	0	0	0	0	0	0	0
KR16816	7/12/2016	14:00	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	21	0	183	91883	0	0	0	0	0	0	0	0	0	0	0
KR16821	7/26/2016	11:15	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	34000	19110	0	10686407	0	0	0	0	9440424	0	0	0	0	0	0
KR16826	8/11/2016	8:00	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	3400	0	548963	21169275	0	0	0	0	0	0	0	0	0	0	0
KR16831	8/22/2016	8:00	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	7600	0	0	125277778	0	0	0	0	0	0	0	0	0	0	0
KR16836	9/6/2016	18:20	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	5.6	19191	4810667	73887	0	0	0	0	0	0	0	0	0	0	0
KR16841	9/26/2016	16:25	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	220	44417	102500	415467	0	0	0	0	0	0	0	0	0	0	0
KR16846	10/11/2016	11:30	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	11000	0	27060000	144972763	0	0	0	0	0	0	0	0	0	0	0
KR16851	10/25/2016	11:20	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	74	127469	466552	236331	0	0	0	0	0	0	0	0	0	0	0
KR16856	11/8/2016	13:45	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	8	108380	6091647	0	0	0	0	0	0	0	0	0	0	0	0
KR16861	11/21/2016	14:30	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	<0.15	0	2926	0	0	0	0	0	0	0	0	0	0	0	0
KR16800	5/23/2016	13:05	CRMC	Copco Reservoir at Mallard Cove (Public Health)	PacifiCorp	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KR16805	6/8/2016	15:15	CRMC	Copco Reservoir at Mallard Cove (Public Health)	PacifiCorp	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KR16810	6/20/2016	15:40	CRMC	Copco Reservoir at Mallard Cove (Public Health)	PacifiCorp	0.1	25	807	0	68407	0	0	0	0	0	0	0	0	0	0	0
KR16815	7/12/2016	15:55	CRMC	Copco Reservoir at Mallard Cove (Public Health)	PacifiCorp	0.1	9.1	793	0	9601	0	0	0	0	0	0	0	0	0	0	0
KR16820	7/26/2016	10:15	CRMC	Copco Reservoir at Mallard Cove (Public Health)	PacifiCorp	0.1	870	0	14760	1231230	0	0	0	0	306680	0	0	0	0	0	0
KR16825	8/10/2016	15:20	CRMC	Copco Reservoir at Mallard Cove (Public Health)	PacifiCorp	0.1	5000	0	99485	16236000	0	0	0	0	689765	0	0	0	0	0	0
KR16830	8/22/2016	7:00	CRMC	Copco Reservoir at Mallard Cove (Public Health)	PacifiCorp	0.1	430	0	0	5304299	0	0	0	0	0	0	0	0	0	0	0
KR16835	9/6/2016	18:50	CRMC	Copco Reservoir at Mallard Cove (Public Health)	PacifiCorp	0.1	86	4228	127157	654054	0	0	0	0	0	0	0	0	0	0	0
KR16840	9/26/2016	15:45	CRMC	Copco Reservoir at Mallard Cove (Public Health)	PacifiCorp	0.1	250	0	145595	737532	0	0	0	0	0	0	0	0	0	0	0
KR16845	10/11/2016	13:30	CRMC	Copco Reservoir at Mallard Cove (Public Health)	PacifiCorp	0.1	15	6168	0	67650	0	0	0	0	0	0	0	0	0	0	0
KR16850	10/25/2016	11:50	CRMC	Copco Reservoir at Mallard Cove (Public Health)	PacifiCorp	0.1	1800	61500	47596900	615000	0	0	0	0	0	0	0	0	0	0	0
KR16855	11/8/2016	15:00	CRMC	Copco Reservoir at Mallard Cove (Public Health)	PacifiCorp	0.1	0.31	0	7749	0	0	0	0	0	0	0	0	0	0	0	0

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth .m	Microcystin µg/l	Dolichospermum flos- aquae cells/ml	Aphanizomenon flos- aquae cells/ml	Microcystis aeruginosa cells/ml	Dolichospermum circinale cells/ml	Dolichospermum planctonica cells/ml	Dolichospermum sp. cells/ml	Aphanizomenon sp. cells/ml	Geotrichia echinulata cells/ml	Lyngbya sp. cells/ml	Planktothrix amosa cells/ml	Planktothrix sp. cells/ml	Pseudo-Dolichospermum sp. cells/ml	Dolichospermum varians cells/ml	Limnodithrix sp. cells/ml
KR16860	11/21/2016	15:00	CRMC	Copco Reservoir at Mallard Cove (Public Health)	PacifiCorp	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KR16803	5/23/2016	11:25	IGJW	Iron Gate Reservoir at Jay Williams Boat Ramp (Public Health)	PacifiCorp	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KR16808	6/8/2016	10:20	IGJW	Iron Gate Reservoir at Jay Williams Boat Ramp (Public Health)	PacifiCorp	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KR16813	6/20/2016	13:25	IGJW	Iron Gate Reservoir at Jay Williams Boat Ramp (Public Health)	PacifiCorp	0.1	1	859	0	4940	0	403	658	0	0	0	0	0	0	0	0
KR16818	7/12/2016	11:30	IGJW	Iron Gate Reservoir at Jay Williams Boat Ramp (Public Health)	PacifiCorp	0.1	2.5	153	6259	4050	0	0	0	0	16015	0	0	0	0	0	0
KR16823	7/26/2016	12:10	IGJW	Iron Gate Reservoir at Jay Williams Boat Ramp (Public Health)	PacifiCorp	0.1	380	0	0	0	0	0	0	0	161247880	0	0	0	0	0	0
KR16828	8/10/2016	11:45	IGJW	Iron Gate Reservoir at Jay Williams Boat Ramp (Public Health)	PacifiCorp	0.1	2500	0	0	2956887	0	0	0	0	0	0	0	0	0	0	0
KR16833	8/22/2016	9:00	IGJW	Iron Gate Reservoir at Jay Williams Boat Ramp (Public Health)	PacifiCorp	0.1	72	0	11389	170833	0	0	0	0	0	0	0	0	0	0	0
KR16838	9/6/2016	17:00	IGJW	Iron Gate Reservoir at Jay Williams Boat Ramp (Public Health)	PacifiCorp	0.1	420	0	36080	895235	0	0	0	0	0	0	0	0	0	0	0
KR16843	9/26/2016	17:10	IGJW	Iron Gate Reservoir at Jay Williams Boat Ramp (Public Health)	PacifiCorp	0.1	850	0	1488300	1713800	0	0	0	0	0	0	0	0	0	0	0
KR16848	10/11/2016	10:15	IGJW	Iron Gate Reservoir at Jay Williams Boat Ramp (Public Health)	PacifiCorp	0.1	15	0	12684	2461	0	0	0	0	0	0	0	0	0	0	0
KR16853	10/25/2016	10:45	IGJW	Iron Gate Reservoir at Jay Williams Boat Ramp (Public Health)	PacifiCorp	0.1	2.3	0	490020	774	0	0	0	0	0	0	0	0	0	0	0
KR16858	11/8/2016	10:45	IGJW	Iron Gate Reservoir at Jay Williams Boat Ramp (Public Health)	PacifiCorp	0.1	0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KR16863	11/21/2016	13:45	IGJW	Iron Gate Reservoir at Jay Williams Boat Ramp (Public Health)	PacifiCorp	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KR16802	5/23/2016	11:45	IGCC	Iron Gate Reservoir at Camp Creek (Public Health)	PacifiCorp	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KR16807	6/8/2016	10:40	IGCC	Iron Gate Reservoir at Camp Creek (Public Health)	PacifiCorp	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KR16812	6/20/2016	13:40	IGCC	Iron Gate Reservoir at Camp Creek (Public Health)	PacifiCorp	0.1	14	0	0	12272	0	0	0	0	0	0	0	0	0	0	0
KR16817	7/12/2016	11:40	IGCC	Iron Gate Reservoir at Camp Creek (Public Health)	PacifiCorp	0.1	6.4	13981	1450	13917	0	0	0	0	28993	0	0	0	0	0	0
KR16822	7/26/2016	11:45	IGCC	Iron Gate Reservoir at Camp Creek (Public Health)	PacifiCorp	0.1	73	0	0	0	0	0	0	0	3430947	0	0	0	0	0	0
KR16827	8/10/2016	12:10	IGCC	Iron Gate Reservoir at Camp Creek (Public Health)	PacifiCorp	0.1	790	0	10738	3720750	0	0	0	0	0	0	0	0	0	0	0
KR16832	8/22/2016	8:40	IGCC	Iron Gate Reservoir at Camp Creek (Public Health)	PacifiCorp	0.1	30	1130	28823	110546	0	0	0	0	1695	0	0	0	0	0	0
KR16837	9/6/2016	17:35	IGCC	Iron Gate Reservoir at Camp Creek (Public Health)	PacifiCorp	0.1	780	0	10067	3240556	0	0	0	0	0	0	0	0	0	0	0
KR16842	9/26/2016	16:50	IGCC	Iron Gate Reservoir at Camp Creek (Public Health)	PacifiCorp	0.1	490	0	644286	15201921	0	0	0	0	0	0	0	0	0	0	0
KR16852	10/25/2016	11:00	IGCC	Iron Gate Reservoir at Camp Creek (Public Health)	PacifiCorp	0.1	1.4	0	22260	0	0	0	0	0	0	0	0	0	0	0	0
KR16857	11/8/2016	11:00	IGCC	Iron Gate Reservoir at Camp Creek (Public Health)	PacifiCorp	0.1	1.6	168	0	0	0	0	0	0	0	0	0	0	0	0	0
KR16862	11/21/2016	14:00	IGCC	Iron Gate Reservoir at Camp Creek (Public Health)	PacifiCorp	0.1	<0.15	0	237	110	0	0	0	0	0	0	0	0	0	0	0

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth .m	Microcystin µg/l	Dolichospermum flos- aquae cells/ml	Aphanizomenon flos- aquae cells/ml	Microcystis aeruginosa cells/ml	Dolichospermum circinale cells/ml	Dolichospermum planctonica cells/ml	Dolichospermum sp. cells/ml	Aphanizomenon sp. cells/ml	Geotrichia echinulata cells/ml	Lyngbya sp. cells/ml	Planktothrix imosa cells/ml	Planktothrix sp. cells/ml	Pseudo-Dolichospermum sp. cells/ml	Dolichospermum variatilis cells/ml	Limnodithrix sp. cells/ml
KR16804	5/23/2016	10:55	KRBI	Klamath River below Iron Gate Dam (RM 189.73; Public Health)	PacifiCorp	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
KR16809	6/8/2016	16:00	KRBI	Klamath River below Iron Gate Dam (RM 189.73; Public Health)	PacifiCorp	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
KR16814	6/20/2016	12:50	KRBI	Klamath River below Iron Gate Dam (RM 189.73; Public Health)	PacifiCorp	0.1	<0.15	16	0	0	0	0	0	0	0	0	0	0	0	0	
KR16819	7/12/2016	17:00	KRBI	Klamath River below Iron Gate Dam (RM 189.73; Public Health)	PacifiCorp	0.1	0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
KR16824	7/26/2016	12:40	KRBI	Klamath River below Iron Gate Dam (RM 189.73; Public Health)	PacifiCorp	0.1	0.38	0	0	241	0	0	0	0	62	0	0	0	0	0	
KR16829	8/10/2016	16:00	KRBI	Klamath River below Iron Gate Dam (RM 189.73; Public Health)	PacifiCorp	0.1	<0.15	0	0	6792	0	0	0	0	0	0	0	0	0	0	
KR16834	8/22/2016	9:15	KRBI	Klamath River below Iron Gate Dam (RM 189.73; Public Health)	PacifiCorp	0.1	0.38	142	178	355	0	0	0	0	0	0	0	0	0	0	
KR16839	9/7/2016	11:10	KRBI	Klamath River below Iron Gate Dam (RM 189.73; Public Health)	PacifiCorp	0.1	4.9	0	2582	0	0	0	0	0	0	0	0	0	0	0	
KR16844	9/26/2016	17:30	KRBI	Klamath River below Iron Gate Dam (RM 189.73; Public Health)	PacifiCorp	0.1	0.25	0	186	0	0	0	0	0	0	0	0	0	0	0	
KR16849	10/11/2016	9:40	KRBI	Klamath River below Iron Gate Dam (RM 189.73; Public Health)	PacifiCorp	0.1	2.9	0	2563	0	0	0	0	0	0	0	0	0	0	0	
KR16854	10/25/2016	10:05	KRBI	Klamath River below Iron Gate Dam (RM 189.73; Public Health)	PacifiCorp	0.1	3	0	5274	1281	0	0	0	0	0	0	0	214	0	0	
KR16859	11/8/2016	15:30	KRBI	Klamath River below Iron Gate Dam (RM 189.73; Public Health)	PacifiCorp	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
KR16864	11/21/2016	10:50	KRBI	Klamath River below Iron Gate Dam (RM 189.73; Public Health)	PacifiCorp	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
IB062916-SG	6/29/2016	11:35	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
IB070616-SG	7/6/2016	11:32	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	0.25	0	0	0	0	0	0	0	0	0	0	0	0	0	
IB071316-SG	7/13/2016	12:43	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
IB072016-SG	7/20/2016	12:26	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	0.19	0	0	0	0	0	0	0	0	0	0	0	0	0	
IB072716-SG	7/27/2016	12:34	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	0.25	0	0	0	0	0	0	0	0	0	0	0	0	0	
IB080316-SG	8/3/2016	11:39	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	1.2	0	0	1446	0	0	0	0	0	0	0	0	0	0	
IB081016-SG	8/10/2016	13:03	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	2	0	0	5859	0	0	0	0	0	0	0	0	0	0	
IB081716-SG	8/17/2016	11:59	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	2.8	0	0	3127	0	0	0	0	0	0	0	0	0	0	
IB082416-SG	8/24/2016	12:53	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	0.76	0	0	3671	0	0	0	0	0	0	0	0	0	0	
IB083116-SG	8/31/2016	11:33	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	0.74	0	0	435	0	0	0	0	0	0	0	0	0	0	
IB090716-SG	9/7/2016	11:21	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	4.2	0	1268	1128	0	0	0	0	0	0	0	0	0	0	
IB091416-SG	9/14/2016	13:24	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	1.3	0	5727	507	0	0	0	0	0	0	0	0	0	0	
IB092116-SG	9/21/2016	11:46	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	2.8	0	1515	1543	0	0	0	0	0	0	0	0	0	0	

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IB092816-SG	9/28/2016	13:09	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	0.78	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IB100516-SG	10/5/2016	11:11	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	4.8	142	30939	8326	0	0	0	0	0	0	0	0	0	0	0
IB101216-SG	10/12/2016	12:21	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	3.8	64	4657	7609	0	0	0	0	0	0	0	0	0	0	0
IB101916-SG	10/19/2016	11:08	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	5.1	67	628	3136	0	0	0	0	0	0	0	0	0	0	0
IB102616-SG	10/26/2016	12:28	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	1.4	0	526	1804	0	0	0	0	0	0	0	0	0	0	0
IB111616-SG	11/16/2016	12:41	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BB062916-SG	6/29/2016	10:53	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BB070616-SG	7/6/2016	10:41	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	<0.15	0	89	0	0	0	0	0	0	0	0	0	0	0	0
BB071316-SG	7/13/2016	11:33	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BB072016-SG	7/20/2016	11:45	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	57	0	0	0
BB072716-SG	7/27/2016	11:10	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BB080316-SG	8/3/2016	10:57	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BB081016-SG	8/10/2016	11:36	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	3.6	0	0	4675	0	0	0	0	0	0	0	0	0	0	0
BB081716-SG	8/17/2016	11:04	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	1.6	0	0	1178	0	0	0	0	0	0	0	0	0	0	0
BB082416-SG	8/24/2016	10:59	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	0.4	0	0	53	0	0	0	0	0	0	0	0	0	0	0
BB083116-SG	8/31/2016	10:43	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	0.22	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BB090716-SG	9/7/2016	10:37	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	0.43	38	32	0	0	0	0	0	0	0	0	0	0	0	0
BB091416-SG	9/14/2016	11:43	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	0.41	30	30067	6144	0	0	0	0	0	0	0	0	0	0	0
BB092116-SG	9/21/2016	11:06	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	0.37	0	22	0	0	0	0	0	0	0	0	0	0	0	0
BB092816-SG	9/28/2016	11:10	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	0.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BB100516-SG	10/5/2016	10:17	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	3	0	4771	2090	0	0	0	0	0	0	0	0	0	0	0
BB101216-SG	10/12/2016	11:15	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	3.7	0	297	3410	0	0	0	0	0	0	0	0	0	0	0
BB101916-SG	10/19/2016	10:08	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	1.7	0	58	944	0	0	0	0	0	0	0	0	0	0	0
BB102616-SG	10/26/2016	11:16	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	0.92	0	117	29	0	0	0	0	0	0	0	0	0	0	0
BB111616-SG	11/16/2016	11:30	KRBB	Klamath River at Brown Bear River Access (RM 150.00; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SV062916-SG	6/29/2016	10:17	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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SV070616-SG	7/6/2016	10:02	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SV071316-SG	7/13/2016	10:35	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SV072016-SG	7/20/2016	10:18	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SV072716-SG	7/27/2016	10:15	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SV080316-SG	8/3/2016	9:39	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	0.24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SV081016-SG	8/10/2016	10:21	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	1.6	0	0	1278	0	0	0	0	0	0	0	0	0	0	0
SV081716-SG	8/17/2016	9:28	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	1.4	0	0	1199	0	0	0	0	0	0	0	0	0	0	0
SV082416-SG	8/24/2016	9:56	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	0.4	0	0	0	0	0	242	0	0	0	0	0	0	0	32
SV083116-SG	8/31/2016	9:48	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	0.24	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SV090716-SG	9/7/2016	10:06	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	0.26	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SV091416-SG	9/14/2016	10:35	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	1.8	0	13861	586	0	0	0	0	0	0	0	0	0	0	0
SV092116-SG	9/21/2016	10:37	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SV092816-SG	9/28/2016	10:10	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	0.21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SV100516-SG	10/5/2016	9:45	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	2.1	0	4302	1687	0	0	0	0	0	0	0	0	0	0	0
SV101216-SG	10/12/2016	10:15	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	0.66	0	117	910	0	0	0	0	0	0	0	0	0	0	0
SV101916-SG	10/19/2016	9:32	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	0.64	0	48	645	0	0	14	0	0	0	0	24	0	0	0
SV102616-SG	10/26/2016	10:25	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SV111616-SG	11/16/2016	10:35	KRSV	Klamath River below Seiad (RM 128.5; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HC062916-SG	6/29/2016	8:51	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HC070616-SG	7/6/2016	9:09	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HC071316-SG	7/13/2016	9:35	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	<0.15	0	48	0	0	0	0	0	0	0	0	0	0	0	0
HC072016-SG	7/20/2016	8:38	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HC072716-SG	7/27/2016	9:13	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HC080316-SG	8/3/2016	8:56	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	0.23	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HC081016-SG	8/10/2016	9:12	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HC081716-SG	8/17/2016	8:44	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	1.1	0	0	901	0	0	0	0	0	0	0	0	0	0	0

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth m	Microcystin µg/l	Dolichospermum flos- aquae cells/ml	Aphanizomenon flos- aquae cells/ml	Microcystis aeruginosa cells/ml	Dolichospermum circinale cells/ml	Dolichospermum planctonica cells/ml	Dolichospermum sp. cells/ml	Aphanizomenon sp. cells/ml	Geotrichia echinulata cells/ml	Lyngbya sp. cells/ml	Planktothrix imosa cells/ml	Planktothrix sp. cells/ml	Pseudo-Dolichospermum sp. cells/ml	Dolichospermum varians cells/ml	Limnodithrix sp. cells/ml
HC082416-SG	8/24/2016	9:09	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	0.33	0	0	0	0	0	0	0	0	0	81	0	0	0	
HC083116-SG	8/31/2016	9:09	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	0.21	0	0	0	0	0	0	0	0	0	0	0	0	0	
HC090716-SG	9/7/2016	9:18	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	0.27	0	0	0	0	0	0	0	0	0	0	0	0	0	
HC091416-SG	9/14/2016	9:30	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	0.21	0	0	0	0	0	0	0	0	0	0	0	0	0	
HC092116-SG	9/21/2016	9:19	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
HC092816-SG	9/28/2016	9:15	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	0.19	0	0	0	0	0	0	0	0	0	0	0	0	0	
HC100516-SG	10/5/2016	8:50	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	0.72	0	381	245	0	0	0	0	0	0	0	0	0	0	
HC101216-SG	10/12/2016	9:25	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	NS	0	0	0	0	0	0	0	0	0	0	0	0	0	
HC101916-SG	10/19/2016	8:40	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	0.32	0	0	0	0	0	22	0	0	0	0	0	0	0	
HC102616-SG	10/26/2016	9:27	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	0.2	0	0	58	0	0	0	0	0	0	0	0	0	0	
HC11616-SG	11/16/2016	9:42	KRHC	Klamath River below Happy Camp (RM 101.3; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
OR062916-SG	6/29/2016	7:56	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
OR070616-SG	7/6/2016	8:01	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
OR071316-SG	7/13/2016	7:56	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
OR072016-SG	7/20/2016	7:46	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
OR072716-SG	7/27/2016	7:50	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
OR080316-SG	8/3/2016	7:56	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
OR081016-SG	8/10/2016	7:43	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	381	0	0	0	22	0	0	0	
OR081716-SG	8/17/2016	7:40	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	0.54	0	23	1148	0	0	115	0	0	0	0	0	0	0	
OR082416-SG	8/24/2016	7:36	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	0.28	0	56	390	0	0	0	0	0	0	0	0	0	0	
OR083116-SG	8/31/2016	8:06	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	0.16	0	0	0	0	0	0	0	0	0	0	0	0	0	
OR090716-SG	9/7/2016	8:16	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
OR091416-SG	9/14/2016	7:57	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
OR092116-SG	9/21/2016	8:00	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	<0.15	0	66	0	0	0	0	0	0	119	0	0	0	0	
OR092816-SG	9/28/2016	7:45	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	
OR100516-SG	10/5/2016	7:53	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	<0.15	0	156	0	0	0	0	0	0	0	0	0	0	0	

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth .m	Microcystin µg/l	Dolichospermum flos- aquae cells/ml	Aphanizomenon flos- aquae cells/ml	Microcystis aeruginosa cells/ml	Dolichospermum circinale cells/ml	Dolichospermum planctonica cells/ml	Dolichospermum sp. cells/ml	Aphanizomenon sp. cells/ml	Geotrichia echinulata cells/ml	Lyngbya sp. cells/ml	Planktothrix imosa cells/ml	Planktothrix sp. cells/ml	Pseudo-Dolichospermum sp. cells/ml	Dolichospermum variatilis cells/ml	Limnodithrix sp. cells/ml
OR101216-SG	10/12/2016	7:57	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	0.23	0	127	0	0	0	0	0	0	0	0	0	0	0	0
OR101916-SG	10/19/2016	7:37	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	<0.15	0	209	0	0	0	0	0	0	0	0	0	0	0	0
OR102616-SG	10/26/2016	7:58	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OR111616-SG	11/16/2016	8:07	KROR	Klamath River at Orleans (USGS) (RM 59.1; Public Health)	Karuk	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WE062816-SG	6/28/2016	10:18	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	<0.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
WE062916-SG	6/29/2016	10:18	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	NS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WE070616-SG	7/6/2016	11:53	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WE071316-SG	7/13/2016	10:47	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	23	0	0	0	0
WE072016-SG	7/20/2016	10:57	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	33	0	0	0
WE072716-SG	7/27/2016	10:17	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WE080216-SG	8/2/2016	9:42	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	NS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WE080316-SG	8/3/2016	9:42	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	<0.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
WE081016-SG	8/10/2016	10:48	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WE081716-SG	8/17/2016	9:55	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	0.46	0	0	635	0	0	0	0	0	0	0	0	0	0	0
WE082416-SG	8/24/2016	10:13	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	0.31	0	0	0	0	0	22	0	0	0	0	0	0	0	0
WE083116-SG	8/31/2016	11:26	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	0.16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WE090716-SG	9/7/2016	10:47	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WE091316-SG	9/13/2016	10:31	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	NS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WE091416-SG	9/14/2016	10:31	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	<0.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
WE092116-SG	9/21/2016	11:19	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WE092816-SG	9/28/2016	10:16	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WE100516-SG	10/5/2016	11:14	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WE101216-SG	10/12/2016	9:37	KRWE	Klamath River at Weitchpec (RM 43.5; Public Health)	Yurok	0.1	0.29	0	131	27	0	0	0	0	0	0	0	0	0	0	0
TG062816-SG	6/28/2016	12:46	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TG070516-SG	7/5/2016	16:37	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TG071216-SG	7/12/2016	12:35	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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TG071916-SG	7/19/2016	12:25	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	NS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TG072016-SG	7/20/2016	12:25	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	<0.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TG072616-SG	7/26/2016	12:48	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TG080216-SG	8/2/2016	12:08	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TG080916-SG	8/9/2016	11:26	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	<0.15	0	0	81	0	0	0	0	0	0	0	0	0	0	0
TG081616-SG	8/16/2016	13:10	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	0.39	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TG081716-SG	8/17/2016	13:10	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	NS	0	0	0	0	0	64	0	0	0	0	0	0	0	0
TG082316-SG	8/23/2016	12:53	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TG083016-SG	8/30/2016	12:30	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	33	0	0	0	0	0	0	0	0
TG090616-SG	9/6/2016	12:32	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TG091316-SG	9/13/2016	12:26	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TG092016-SG	9/20/2016	13:15	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	<0.15	0	373	0	0	0	0	0	0	0	0	0	0	0	0
TG092716-SG	9/27/2016	12:59	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TG100416-SG	10/4/2016	13:05	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TG101116-SG	10/11/2016	12:52	KRTG	Klamath River near Klamath (RM 6.0; Public Health)	Yurok	0.1	0.41	0	2020	0	0	0	0	0	0	0	0	0	0	0	0
SS062816-SG	6/28/2016	13:30	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SS070516-SG	7/5/2016	17:05	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SS071216-SG	7/12/2016	12:01	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SS071916-SG	7/19/2016	12:00	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	NS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SS072016-SG	7/20/2016	12:00	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	<0.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SS072616-SG	7/26/2016	13:53	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	23567	0
SS080216-SG	8/2/2016	11:32	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	16451	0	0	0	0	0	0	0	0
SS080916-SG	8/9/2016	12:28	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	268	0	0	0	0	0	0	0	0
SS081616-SG	8/16/2016	12:33	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	0.45	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SS081716-SG	8/17/2016	12:33	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	NS	0	0	0	0	0	2223661	0	0	0	31961	0	0	0	0
SS082316-SG	8/23/2016	12:20	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth .m	Microcystin µg/l	Dolichospermum flos- aquae cells/ml	Aphanizomenon flos- aquae cells/ml	Microcystis aeruginosa cells/ml	Dolichospermum circinale cells/ml	Dolichospermum planctonica cells/ml	Dolichospermum sp. cells/ml	Aphanizomenon sp. cells/ml	Geotrichia echinulata cells/ml	Lyngbya sp. cells/ml	Planktothrix limosa cells/ml	Planktothrix sp. cells/ml	Pseudo-Dolichospermum sp. cells/ml	Dolichospermum variatilis cells/ml	Limnodithrix sp. cells/ml
SS083016-SG	8/30/2016	12:03	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	1696	0	0	0	0	0	0	0	0
SS090616-SG	9/6/2016	12:02	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	33	0	0	0	0	0	0	0	0
SS091316-SG	9/13/2016	13:00	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	0.18	0	0	0	0	184116	0	0	0	0	0	0	0	0	12989
SS092016-SG	9/20/2016	13:00	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SS092716-SG	9/27/2016	12:19	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SS100416-SG	10/4/2016	12:19	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SS101116-SG	10/11/2016	13:30	KRSS	Klamath River at South Slough (RM 0.1; Public Health)	Yurok	0.1	<0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table D-2. Mass spectroscopy data for the 2016 samples collected by the Yurok tribe. Note: Results are presented in micrograms per liter (µg/l). NA = Samples not analyzed for these constituents during 2016.

Sample ID	Date	Time	Site ID	Site Name	Agency	Depth, m	Lab	Microcystin -RR µg/l	MC-Desmethyl -RR µg/l	Microcystin -LR µg/l	MC-Desmethyl -LR µg/l	Microcystin -YR µg/l	Microcystin -LA µg/l	Microcystin-LW (screening only) µg/l	Microcystin -LF µg/l	Microcystin -LY µg/l	Domoic acid µg/l	Okadaic acid µg/l	Nodularin µg/l
LESGW052416-OC	5/24/2016	12:01	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	Greenwater	<0.03	<0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.03	NA	NA	NA
LESGW062116-OC	6/21/2016	12:13	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	Greenwater	<0.03	<0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.03	NA	NA	NA
LESGW072616-OC	7/26/2016	11:58	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	Greenwater	<0.03	<0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.03	NA	NA	NA
LESGW082316-OC	8/23/2016	11:03	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	Greenwater	<0.03	<0.03	<0.02	<0.02	<0.02	0.13	<0.02	<0.01	<0.03	NA	NA	NA
LESGW092716-OC	9/27/2016	11:23	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	Greenwater	<0.03	<0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.03	NA	NA	NA
LESGW102516-OC	10/25/2016	12:03	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	Greenwater	<0.03	<0.03	<0.02	<0.02	<0.02	0.02	<0.02	<0.01	<0.03	NA	NA	NA

Table D-3. Results for anatoxin-a analysis for samples collected by PacifiCorp, the Karuk Tribe, and the Yurok Tribe.

Sample ID	Date	Standard Time	Site ID	Site Name	Agency	Depth, m	Lab	Total Anatoxin-a µg/l
KR16826	08/11/16	8:00	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	Greenwater	<0.05
KR16836	09/06/16	18:20	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	Greenwater	<0.05
KR16841	09/26/16	16:25	CRCC	Copco Reservoir at Copco Cove (Public Health)	PacifiCorp	0.1	Greenwater	<0.05
IB060816-SG	6/8/2016	12:21	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	Greenwater	<0.05
IB062216-SG	6/22/2016	12:40	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	Greenwater	<0.05
IB071316-SG	7/13/2016	12:43	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	Greenwater	<0.05
IB081016-SG	8/10/2016	13:03	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	Greenwater	<0.05
IB091416-SG	9/14/2016	13:24	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	Greenwater	<0.05
IB101216-SG	10/12/2016	12:21	KRIB	Klamath River at I-5 Rest Area (RM 179.20; Public Health)	Karuk	0.1	Greenwater	<0.05
WA071316-OC	7/13/2016	11:51	KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	Karuk	0.5	Greenwater	<0.05
WA091416-OC	9/14/2016	12:03	KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	Karuk	0.5	Greenwater	<0.05
WA101216-OC	10/12/2016	11:33	KR15626	Klamath River at Walker Bridge (RM 156.26; Baseline)	Karuk	0.5	Greenwater	<0.05
WEGW101216-OC	10/12/2016	9:37	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	Greenwater	<0.05
WEGW091416-OC	9/14/2016	10:15	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	Greenwater	<0.05
WEGW081016-OC	8/10/2016	10:26	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	Greenwater	<0.05
WEDFG071316-OC	7/13/2016	10:30	KR04350	Klamath River at Weitchpec (RM 43.5; Baseline)	Yurok	0.5	Greenwater	<0.05
LESGW082316-OC	8/23/2016	11:03	KR00050	Klamath River Estuary (RM 0.5; Baseline)	Yurok	0.5	Greenwater	<0.05