

Water Quality Monitoring Report—2024

Sacramento Municipal Utility District

Hydro License Implementation • June 2025

Upper American River Project

FERC Project No. 2101

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ACRONYMS AND ABBREVIATIONS

Acronym	Definition
°C	degrees Celsius
CFU	colony-forming unit
COLD	cold freshwater habitat
EPA	United States Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
m	meter
MDL	Method Detection Limit
mg/L	milligram per liter
mL	milliliter
MPN	most probable number
NTU	Nephelometric Turbidity Unit
Plan	Water Quality Monitoring Plan, Revision 3
REC-1	recreational water contact
Report	Water Quality Monitoring Report
RL	Method Reporting Limit
RWQCB	Regional Water Quality Control Board
SM	standard method
SMUD	Sacramento Municipal Utility District
SPWN	spawning, reproduction, and/or early development
s.u.	standard unit of pH
SWRCB	State Water Resources Control Board
UARP	Upper American River Project
uS/cm	microsiemens per centimeter
YSI	Yellow Springs Instruments

1.0 INTRODUCTION AND BACKGROUND

This Water Quality Monitoring Report (Report) addresses monitoring requirements set forth in Sacramento Municipal Utility District's (SMUD) Water Quality Monitoring Plan Revision 3 (Plan) (SMUD 2021a). The requirements for the Plan are found in State Water Resources Control Board (SWRCB) Condition 8.J, and U.S. Department of Agriculture, Forest Service 4(e) Condition 31.10, located in Appendices A and B, respectively, of the Federal Energy Regulatory Commission's (FERC) Order Issuing New License for the Upper American River Project (UARP, FERC Project No. 2101), dated 23 July 2014. The Plan was developed by SMUD in coordination with the Consultation Group and Resource Agencies stipulated in the License (FERC 2014, SMUD 2015a). The Plan was revised in 2015 (Revision 1) (SMUD 2015b), 2016 (Revision 2) (SMUD 2016), and 2021 (Revision 3) (SMUD 2021a) to update the referenced analytical methods for various sub-programs within the Plan. Revision 3 of the Plan reduced the bacterial monitoring frequency at several sites to occur only during even years (i.e., 2022, 2024, 2026...) since no exceedances of the 2018 Basin Plan (CRWQCB 2018) or the 2019 Revised Basin Plan (CRWQCB 2019) objectives for the recreational water contact (REC-1) designated beneficial use were identified at these sites during the 2015 through 2020 monitoring period (SMUD 2020, 2021b; CRWQCB 2018).

This Report describes the results of the tenth year (2024) of water quality monitoring of basic *in situ* parameters and bacteria for the UARP.

SMUD owns and operates the UARP. The UARP lies within El Dorado and Sacramento counties, primarily within lands of the Eldorado National Forest. The UARP consists of three major storage reservoirs (Loon Lake, Union Valley, and Ice House) with a combined capacity of approximately 379,000 acre-feet, eight smaller regulating or diversion reservoirs, and eight powerhouses. The UARP also includes recreation facilities containing over 700 campsites, five boat ramps, hiking paths, and bicycle trails at the reservoirs.

2.0 MONITORING OBJECTIVE

The objective of the 2024 monitoring program was to perform *in situ* water quality and bacteria monitoring in UARP reservoirs and stream reaches to meet the objectives and rationale of SWRCB Water Quality Certification Condition 8.J.

The rationale for water quality monitoring, as described by the SWRCB Water Quality Certification, is as follows:

“Water quality monitoring is important for determining compliance with state and federal water quality standards and examining long-term trends in water quality. The frequency of monitoring for any compound can be

reduced if shown to be at background or non-detect levels for a statistically significant period of time.”

3.0 STUDY AREA

The study area included UARP reservoirs and diverted stream reaches. Nine UARP reservoirs (Rubicon, Buck Island, Loon Lake, Gerle Creek, Ice House, Union Valley, Junction, Camino, and Slab Creek) were included in the 2024 monitoring program; Brush Creek Reservoir and the relatively small Robbs Peak Forebay (30 acre-feet) were not included. Rockbound Lake, although hydraulically associated with the UARP, is not a UARP reservoir and is not included within the FERC-defined UARP boundary. The diverted stream reaches included in the monitoring program represent all streams and rivers downstream of UARP reservoirs (Figure 3-1).

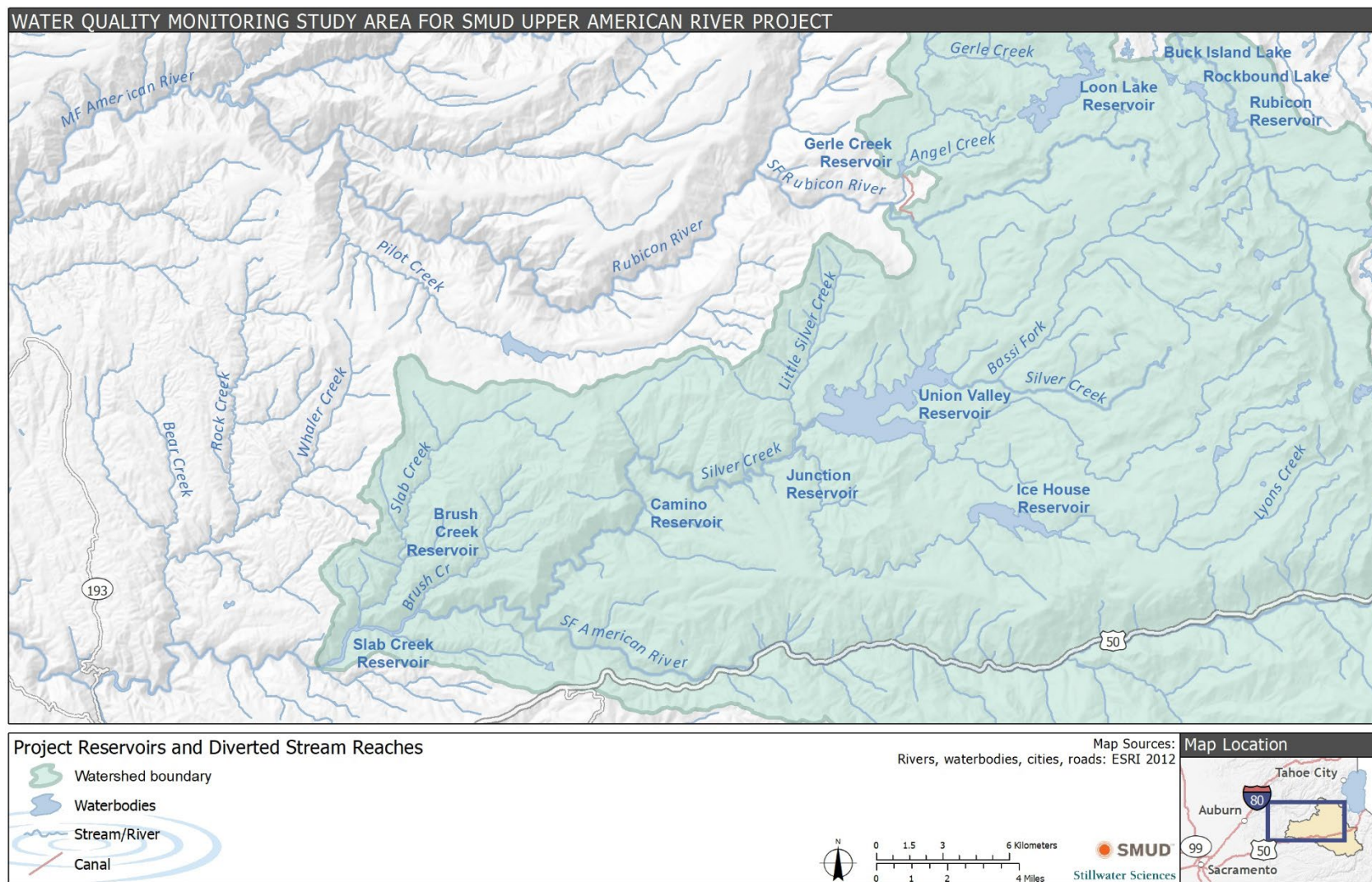


Figure 3-1. Study area for SMUD Upper American River Project *in situ* and bacteria monitoring.

4.0 SAMPLING FREQUENCY AND LOCATIONS

Year 10 (2024) sampling frequency for *in situ* water quality was consistent with winter, spring, summer, and fall monitoring periods designated in the Plan (SMUD 2021a) (Table 4-1). Required bacteria monitoring in 2024 was conducted by sampling the middle elevation UARP reservoir sites (Gerle Creek, Union Valley, Junction, Ice House, Brush Creek, Slab Creek) during the 30-day period surrounding Independence Day and sampling the upper elevation UARP reservoir sites (Loon Lake, Buck Island) during the 30-day period surrounding Labor Day.

Table 4-1. Year 10 (2024) Sampling Frequency for *In Situ* Parameters and Bacteria.

Type	Frequency
<i>In situ</i> reservoir	Once in spring: April–May Once in fall: October–November
<i>In situ</i> riverine	Once in winter: January–February Once in spring: April–May Once in summer: August Once in fall: November
Bacteria	Five samples within 30 days: Around Independence Day Five samples within 30 days: Around Labor Day

Specific sampling locations within reservoirs and diverted stream reaches varied depending on the water quality parameter or constituent of interest. As specified in the Plan, *in situ* monitoring occurred at 15 representative reservoir locations (Figures 4-1 and 4-2, Table 4-2) and 19 representative stream reaches (Figures 4-1 and 4-2, Table 4-3). The two reservoir sites on Slab Creek Reservoir could not be safely sampled during the spring survey because the reservoir was spilling, and the three reservoir sites on Loon Lake Reservoir could not be safely sampled in the fall due to winter storms. Eight riverine sites could not be safely sampled during the winter surveys due to snow accumulation. Three of these sites were also inaccessible during spring and fall surveys due to snow accumulation or winter storms (Table 4-4). Bacteria sampling occurred at 15 locations in 2024, following the updated bacterial monitoring schedule in Revision 3 of the Plan (Figures 4-1 and 4-2, Table 4-5) (SMUD 2021a).



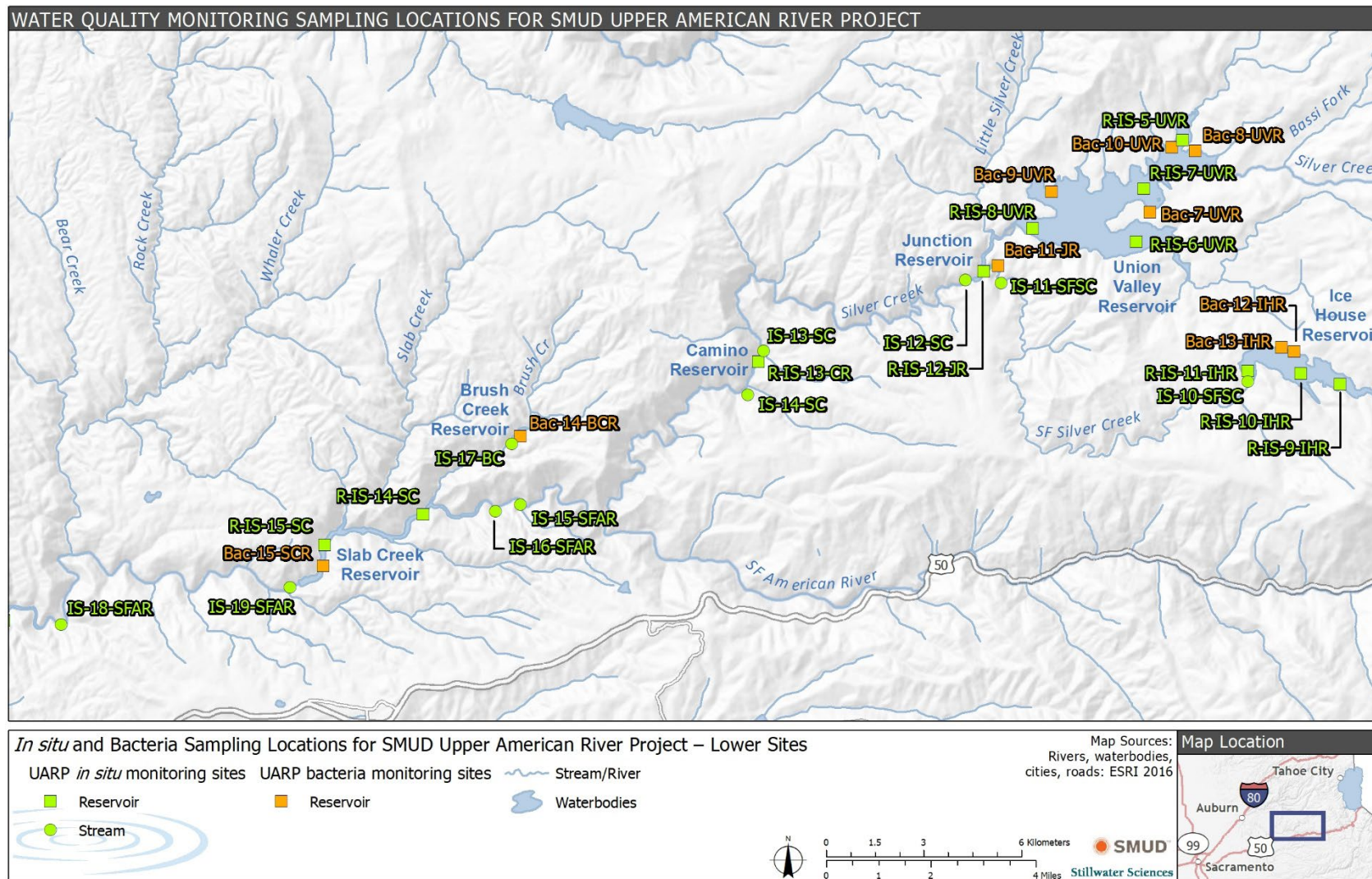


Figure 4-2. *In situ* water quality and bacteria sampling locations for SMUD Upper American River Project—lower sites, 2024.

Table 4-2. *In Situ* Water Quality Sampling Locations and Dates for SMUD Upper American River Project Reservoir Sites, 2024.

SMUD Site Name	Site ID	Location	Sample Date
R-4C	R-IS-1-LL	Loon Lake Reservoir, upper reservoir (northeast body)	5/29
R-4B	R-IS-2-LL	Loon Lake Reservoir, mid-reservoir (west body)	5/29
R-4A	R-IS-3-LL	Loon Lake Reservoir, near dam	5/29
R-5	R-IS-4-GC	Gerle Creek Reservoir, mid-reservoir	5/3, 10/29
R-6C	R-IS-5-UVR	Union Valley Reservoir, Robbs Powerhouse tailrace zone	5/2, 10/30
R-6D	R-IS-6-UVR	Union Valley Reservoir, Jones Fork Silver Creek arm	5/2, 10/30
R-6B	R-IS-7-UVR	Union Valley Reservoir, mid-reservoir	5/2, 10/30
R-6A	R-IS-8-UVR	Union Valley Reservoir, near dam	5/2, 10/30
R-7C	R-IS-9-IHR	Ice House Reservoir, upper lake body	5/3, 10/29
R-7B	R-IS-10-IHR	Ice House Reservoir, mid-reservoir	5/3, 10/29
R-7A	R-IS-11-IHR	Ice House Reservoir, near dam	5/3, 10/29
R-8	R-IS-12-JR	Junction Reservoir, mid-reservoir between arms	5/1, 10/27
R-9	R-IS-13-CR	Camino Reservoir, mid-reservoir	5/1, 10/27
R-11B	R-IS-14-SC	Slab Creek Reservoir, upper reservoir	10/28
R-11A	R-IS-15-SC	Slab Creek Reservoir, mid-reservoir	10/28

Table 4-3. *In Situ* Water Quality Sampling Locations and Dates for SMUD Upper American River Project Riverine Sites, 2024.

SMUD Site Name	Site ID	Location	Sample Date
2	IS-1-RR	Rubicon River outflow from Rubicon Reservoir	8/20
5	IS-2-LRR	Little Rubicon River outflow from Rockbound Lake	8/20
6	IS-3-LRR	Little Rubicon River outflow from Buck Island Reservoir	8/21
7	IS-4-GC	Gerle Creek outflow from Loon Lake Reservoir	5/29, 8/19, 11/6
14	IS-5-GC	Gerle Creek inflow to Gerle Creek Reservoir	5/3, 8/19, 11/6
15	IS-6-GC	Gerle Creek outflow from Gerle Creek Reservoir	5/3, 8/19, 11/6
18	IS-7-SFRR	S.F. Rubicon upstream of Gerle Creek confluence	5/3, 8/19, 11/6
19	IS-8-SFRR	S.F. Rubicon downstream of Gerle Creek confluence	5/3, 8/19, 11/6
16	IS-9-GCC	Gerle Creek Canal inflow to Robbs Forebay	5/3, 8/19, 11/6
25	IS-10-SFSC	S.F. Silver Creek outflow from Ice House Reservoir	2/6, 5/3, 8/19, 11/5
27	IS-11-SFSC	S.F. Silver Creek inflow to Junction Reservoir	2/6, 4/29, 8/22, 11/5
29	IS-12-SC	Silver Creek outflow from Junction Reservoir	2/6, 4/29, 8/22, 11/5
32	IS-13-SC	Silver Creek inflow to Camino Reservoir	2/6, 4/29, 8/22, 11/5
34	IS-14-SC	Silver Creek outflow from Camino Reservoir	2/6, 4/29, 8/22, 11/5
38	IS-15-SFAR	South Fork American River (SFAR) upstream of Camino Powerhouse	2/6, 4/29, 8/22, 11/5
41	IS-16-SFAR	SFAR downstream of Camino Powerhouse	2/6, 4/29, 8/22, 11/5
40	IS-17-BC	Brush Creek outflow from Brush Creek Reservoir	2/6, 4/29, 8/22, 11/5
60	IS-18-SFAR	SFAR upstream of White Rock Powerhouse	2/7, 4/30, 8/22, 11/4
43	IS-19-SFAR	SFAR downstream of Slab Creek Reservoir	2/7, 4/30, 8/22, 11/4

Table 4-4. *In Situ* Water Quality Sampling Locations Not Sampled for SMUD Upper American River Project Riverine and Reservoir Sites, 2024.

SMUD Site Name	Site ID	Location	Reason Not Sampled
Winter			
2	IS-1-RR	Rubicon River outflow from Rubicon Reservoir	Snow accumulation
5	IS-2-LRR	Little Rubicon River outflow from Rockbound Lake	Snow accumulation
6	IS-3-LRR	Little Rubicon outflow from Buck Island Reservoir	Snow accumulation
7	IS-4-GC	Gerle Creek outflow from Loon Lake Reservoir	Snow accumulation
14	IS-5-GC	Gerle Creek inflow to Gerle Creek Reservoir	Snow accumulation
15	IS-6-GC	Gerle Creek outflow from Gerle Creek Reservoir	Snow accumulation
18	IS-7-SFRR	S.F. Rubicon upstream of Gerle Creek confluence	Snow accumulation
19	IS-8-SFRR	S.F. Rubicon downstream of Gerle Creek confluence	Snow accumulation
Spring			
2	IS-1-RR	Rubicon River outflow from Rubicon Reservoir	Snow accumulation
5	IS-2-LRR	Little Rubicon River outflow from Rockbound Lake	Snow accumulation
6	IS-3-LRR	Little Rubicon outflow from Buck Island Reservoir	Snow accumulation
R-11B	R-IS-14-SC	Slab Creek Reservoir, upper reservoir	Spilling
R-11A	R-IS-15-SC	Slab Creek Reservoir, mid-reservoir	Spilling
Fall			
2	IS-1-RR	Rubicon River outflow from Rubicon Reservoir	Winter storm
5	IS-2-LRR	Little Rubicon River outflow from Rockbound Lake	Winter storm
6	IS-3-LRR	Little Rubicon outflow from Buck Island Reservoir	Winter storm
R-4C	R-IS-1-LL	Loon Lake, upper reservoir (northeast body)	Winter storm
R-4B	R-IS-2-LL	Loon Lake, mid-reservoir (west body)	Winter storm
R-4A	R-IS-3-LL	Loon Lake, near dam	Winter storm

Table 4-5. Bacteria Sampling Locations and Dates for SMUD Upper American River Project Sites, 2024.

Reservoir	SMUD Site Name	Site ID	Location	Sample Dates
Buck Island Reservoir	R-3B	Bac-1-BI	On north shore, near dam and off-highway vehicle camping	8/21, 8/29, 9/3, 9/10, 9/17
	77	Bac-2-BI	On south shore, near Rubicon hiking trail	8/21, 8/29, 9/3, 9/10, 9/17
Loon Lake Reservoir	64	Bac-3-LL	West of main dam, near Red Fir Campground	8/21, 8/29, 9/3, 9/10, 9/17
	65	Bac-4-LL	West of Loon Lake Campground, near boat launch	8/21, 8/29, 9/3, 9/10, 9/17
Gerle Creek Reservoir	66	Bac-5-GCR	Near Gerle Creek Campground	6/19, 6/25, 7/2, 7/9, 7/16
	67	Bac-6-GCR	Near Angel Creek picnic area	6/19, 6/25, 7/2, 7/9, 7/16
Union Valley Reservoir	R-6H	Bac-7-UVR	At Fashoda Beach	6/19, 6/25, 7/2, 7/9, 7/16
	R-6E	Bac-8-UVR	Near Wench Creek Campground	6/19, 6/25, 7/2, 7/9, 7/16
	FC-2	Bac-9-UVR	Near Camino Cove Campground	6/19, 6/25, 7/2, 7/9, 7/16
	R-6F	Bac-10-UVR	Near Yellowjacket Campground	6/19, 6/25, 7/2, 7/9, 7/16
Junction Reservoir	R-8B	Bac-11-JR	Near boat launch	6/19, 6/25, 7/2, 7/9, 7/16
Ice House Reservoir (beach locations)	68	Bac-12-IHR	Northshore near private campground access	6/19, 6/25, 7/2, 7/9, 7/16
	69	Bac-13-IHR	East of boat launch and picnic area	6/19, 6/25, 7/2, 7/9, 7/16
Brush Creek Reservoir	R-10B	Bac-14-BCR	Near boat launch	6/19, 6/25, 7/2, 7/9, 7/17
Slab Creek Reservoir	R-11C	Bac-15-SCR	Near boat launch	6/19, 6/25, 7/2, 7/9, 7/17

5.0 METHODS

5.1 *IN SITU* PARAMETERS

A multi-probe sonde (Yellow Springs Instruments [YSI] EXO2S) was used for measurement of *in situ* water quality parameters, including water temperature, conductivity, dissolved oxygen, pH, and turbidity (Table 5-1). Data were recorded on a field tablet using ArcGIS Survey123.

Table 5-1. *In Situ* Water Quality Parameters and Measurement Methods.

Parameter	Method	Units	MDL
Water temperature	EPA 170.1	Degrees Celsius (°C)	0.1
Conductivity	SM 2510-B	Microsiemens per centimeter (uS/cm)	1.0
Dissolved oxygen	SM 4500-O(G)	Milligrams per liter (mg/L)	0.1
pH	SM 4500-H	Standard unit of pH (s.u.)	0.1
Turbidity	SM 2130B	Nephelometric turbidity unit (NTU)	0.1
Secchi depth (Secchi disk)	USGS	Meter (m)	0.1

Notes: EPA = U.S. Environmental Protection Agency
MDL = Method Detection Limit
SM = Standard Method
USGS = United States Geological Survey

Reservoir *in situ* water quality monitoring was conducted by watercraft to access mid-reservoir areas (Figure 5-1). At each reservoir site, a vertical water column profile was collected at 1-meter-depth intervals for all *in situ* water quality parameters. For bottom water samples, the sonde was drawn back 0.5 meter (m) from the sediment layer before taking a reading. Prior to taking each reading, the sonde was allowed to stabilize (typically requiring no more than 90 seconds to 2 minutes, as needed). Water transparency was measured at reservoir stations with a standard 7.9-inch-diameter Secchi disk.



Figure 5-1. Example of mid-reservoir *in situ* water quality sampling site (Site R-IS-8-UVR) at Union Valley Reservoir during the fall 2024 sampling event.

At riverine sites, sonde readings were obtained where sufficient stream turbulence provided good lateral and vertical mixing of the water and as near as possible to the stream thalweg (Figure 5-2). Prior to taking each reading, the sonde was allowed to stabilize (typically requiring no more than 90 seconds to 2 minutes, as needed) such that there was little variability in parameter readings at each location.



Figure 5-2. Example of an *in situ* riverine water quality sampling site (Site IS-6-GC) at the Gerle Creek outflow from Gerle Creek Reservoir during the summer 2024 sampling event.

For both reservoir and riverine *in situ* monitoring, sonde calibration was conducted prior to the start of each sampling day. Dissolved oxygen percent saturation calibrations were checked on site, and dissolved oxygen percent saturation was recalibrated to account for barometric pressure variation with changes in altitude or local weather if the instrument reading differed from the standard by more than one percentage point. A post-sampling calibration check was conducted following each sampling day using standard solutions and recorded on a field tablet using ArcGIS Survey123 (Appendix A). Post-sampling and post-calibration values were compared and data designated “accepted”, “qualified”, or “rejected” based on the measurement quality objective criteria for each *in situ* parameter (Table 5-2).

Table 5-2. Measurement Quality Objective Criteria for *In Situ* Parameters.

Parameter	Units	Accept	Qualify	Reject
Dissolved oxygen	% saturation	≤ 5%	> 5% and ≤ 10%	> 10%
Specific conductance ¹	uS/cm	≤ 5%	> 5% and ≤ 15%	> 15%
pH	s.u.	≤ 0.2	> 0.2 and ≤ 0.5	> 0.5
Turbidity	NTU	≤ 5% ²	> 5% and ≤ 10%	> 10%

Notes: uS/cm = microsiemens per centimeter
NTU = nephelometric turbidity unit
s.u.= standard units

¹ YSI recommends calibrating the conductivity sensor using specific conductance as the calibration parameter. Calibrating for specific conductivity automatically calibrates for conductivity. See also Appendix A.

² Due to the inherent variation in deionized water turbidity, ±1 NTU on the deionized water post-sampling calibration check is considered acceptable. See also Appendix A.

Other data collected at each monitoring site included date, time, site name, sampling location, collector's name, weather conditions, and any other pertinent observations. Following each field event, data were added to a database template provided by SMUD for eventual transfer into SMUD's master database.

5.2 BACTERIA

Bacteria grab samples were collected near reservoir shorelines in shallow water, particularly at swim areas and beach locations (Table 4-5, Figure 5-3). Samples were collected in sterilized bottles supplied by the analytical laboratory. Field sampling personnel wearing sterile gloves filled each sample bottle by direct immersion in the reservoir. Immediately after collection, samples were placed on ice for transport to the analytical laboratory within the required field hold time for fecal coliform and *Escherichia coli* (*E. coli*) analyses (Table 5-3).



Figure 5-3. Example of a bacteria sampling site at Loon Lake Reservoir (Site Bac-3-LL).

Table 5-3. Bacteria Analytical Methods and Field Hold Times.

Analyte	Method	Units	MDL	Hold Time
<i>Escherichia coli</i>	SM9223B (Quantitray)	MPN/100 mL	1.0	8 hours
<i>Fecal coliform</i>	SM9221E (MPN 15 or 25)	MPN/100 mL	1.8	8 hours

Notes: MDL= method detection limit
MPN= most probable number
mL= milliliter
SM= standard method

Field-based quality assurance/quality control for bacterial samples was assured by accurate and thoroughly completed sample labels and chain of custody forms (Appendix B). Sample labels included sample identification code, date, time, preservative, client name, collector's name, reservoir name, sampling location, and analysis type.

6.0 RESULTS

6.1 *IN SITU* PARAMETERS

6.1.1 Reservoir Sites

In situ water quality data for selected UARP reservoir sites are presented in Figures 6-1 and 6-2 as representative of vertical profiles at similar sites. Field data records are provided in Appendix C, and tabular and graphical profile data for all reservoirs are presented in Appendices D and E, respectively. Slab Creek Reservoir could not be sampled during spring because the reservoir was spilling. Loon Lake Reservoir could not be sampled during the fall due to winter storms (Table 4-4).

6.1.1.1 Water Temperature

During the spring sampling event, reservoir surface water temperatures ranged from approximately 7 to 14 degrees Celsius (°C) and bottom water temperatures from approximately 5 to 8°C (Figure 6-1; Appendix D, Table D-1; Appendix E, Figures E-1 through E-9). Loon Lake Reservoir sites generally exhibited a steady decrease in water temperature with depth (Appendix E, Figures E-1 and E-2). All Union Valley and Ice House reservoir sites exhibited a thermocline, defined as a temperature change of more than 1°C per 1.0 m of depth (Figure 6-1 and Appendix E, Figures E-4 through E-7). At all sites in Union Valley Reservoir, the thermocline was located within 7 m of the water surface. Ice House Reservoir sites exhibited a thermocline within 10 m of the water surface. The onset of thermal stratification was also evident in Junction Reservoir (Appendix E, Figure E-8).

During the fall sampling event, reservoir surface water temperatures ranged from approximately 9 to 15°C and bottom water temperatures from approximately 7 to 15°C (Figure 6-2; Appendix D, Table D-2; Appendix E, Figures E-10 through E-17). Four sites exhibited a thermocline: Site R-IS-7-UVR (27 m depth; Appendix E, Figure E-12), Site R-IS-8-UVR (26 m depth; Appendix E, Figure E-12), Site R-IS-9-IHR (14 m depth; Figure 6-2, Appendix E, Figure E-13), and Site R-IS-11-IHR (15 m depth; Appendix E, Figure E-14). The remaining reservoir sites exhibited little to no variation in water temperature with depth, indicating well-mixed conditions (e.g., Sites R-IS-15-SC, R-IS-4-GC, R-IS-6-UVR, Figure 6-2, Appendix A, Figures E-10 and E-11).

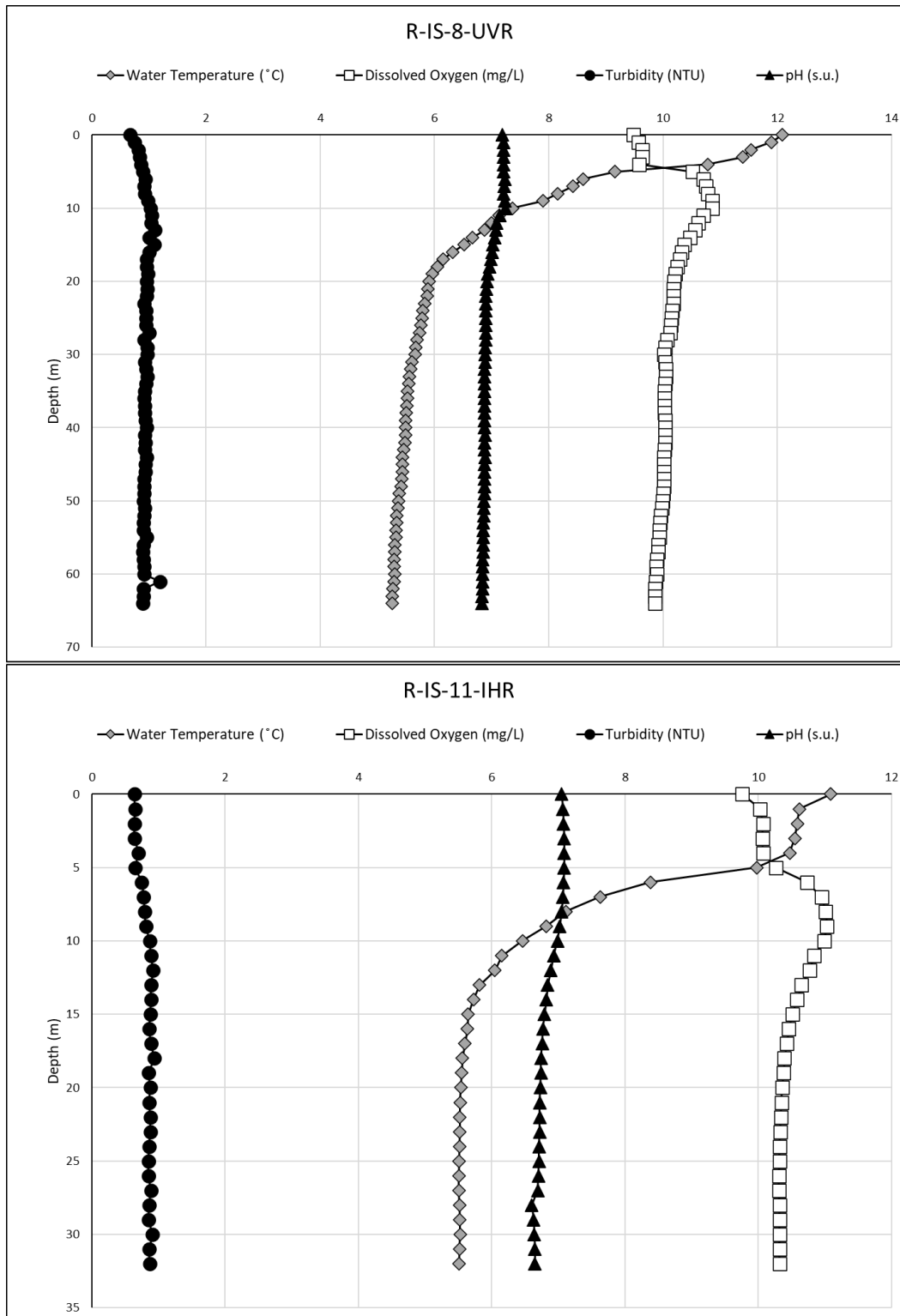


Figure 6-1. *In situ* water temperature, dissolved oxygen, turbidity, and pH at Union Valley Reservoir Site R-IS-8-UVR and Ice House Reservoir Site R-IS-11-IHR, spring 2024.

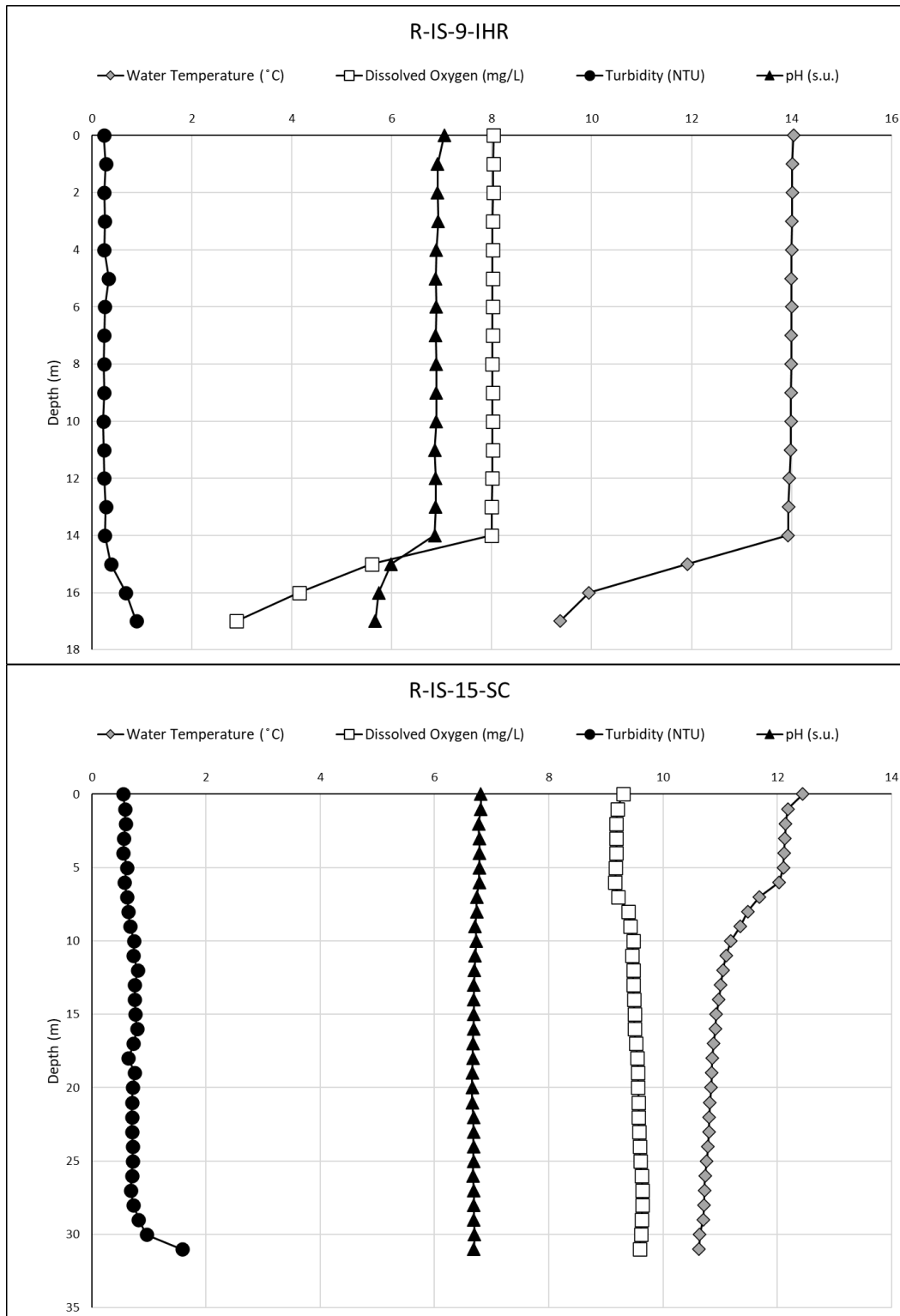


Figure 6-2. *In situ* water temperature, dissolved oxygen, turbidity and pH at Ice House Reservoir Site R-IS-9-IHR and Slab Creek Reservoir Site R-IS-15-SC, fall 2024.

6.1.1.2 pH

At all reservoir sites, pH was generally constant with depth, though slight decreases in pH with depth coincided with thermoclines at Union Valley and Ice House reservoirs in fall (Figure 6-2; Appendix D, Table D-2; Appendix E, Figures E-1 through E-17). Reservoir pH ranged from 6.4 to 7.3 standard units (s.u.) in spring and 5.7 to 7.1 s.u. in fall (Appendix D, Tables D-1 and D-2). pH was below the Basin Plan (CRWQCB 2019) instantaneous minimum pH objective (6.5 s.u.) near the bottom of the water column at Site R-IS-1-LL during the spring *in situ* sampling event (Appendix D, Table D-1; Appendix E, Figure E-1). pH was below 6.5 s.u. in the middle to bottom of the water column at Sites R-IS-7-UVR, R-IS-8-UVR, R-IS-9-IHR, and R-IS-11-IHR and throughout the water column at Site R-IS-12-JR during the fall *in situ* sampling event (Appendix D, Table D-2; Appendix E, Figures E-12 through E-16). No measurements exceeded the Basin Plan instantaneous maximum pH objective (8.5 s.u.).

6.1.1.3 Dissolved Oxygen

Dissolved oxygen concentrations were above the Basin Plan (CRWQCB 2019) instantaneous minimum objective of 7.0 milligrams per liter (mg/L) for cold freshwater habitat (COLD) and spawning, reproduction, and/or early development (SPWN) designated beneficial uses throughout the water column at all reservoir sites during the spring *in situ* sampling event, ranging from 8.4 mg/L to 11.0 mg/L (75 to 92% saturation) (Appendix D, Table D-1; Appendix E, Figures E-1 through E-9). Dissolved oxygen concentrations were lowest at the surface and generally increased with depth and decreasing water temperature (Appendix E, Figures E-1 through E-9). At Sites R-IS-6-UVR, R-IS-7-UVR, R-IS-8-UVR, R-IS-11-IHR, and R-IS-12-JR, the highest dissolved oxygen concentrations occurred within or near the thermocline before decreasing gradually with depth.

Dissolved oxygen concentrations at reservoir sites were lower during the fall *in situ* sampling event, ranging from 2.9 mg/L (25% saturation) in bottom waters to 10.8 mg/L (94% saturation) in surface waters. Dissolved oxygen concentrations showed little to no variation in the top 15 to 25 meters of all reservoirs, which represented most or all of the water column in the relatively shallow reservoirs (e.g., Junction Reservoir, Appendix E, Figure E-15). At Sites R-IS-7-UVR, R-IS-9-IHR, and R-IS-11-IHR, dissolved oxygen decreased through the thermocline, with deep waters exhibiting dissolved oxygen concentrations as low as 2.9 mg/L near the reservoir bottom (Appendix D, Table D-2; Appendix E, Figures E-12 through E-14). Dissolved oxygen fell below the Basin Plan (CRWQCB 2019) instantaneous minimum objective of 7.0 mg/L for COLD and SPWN designated beneficial uses in much of the deeper waters of Union Valley and Ice House reservoirs (Figure 6-2; Appendix D, Table D-2; Appendix E, Figures E-11 through E-14).

6.1.1.4 Conductivity

Typical of granitic watersheds, conductivity at all reservoir sites was low throughout the year. Conductivity was generally higher during the fall *in situ* sampling event (8 to 20 microsiemens per centimeter [uS/cm]) than during the spring *in situ* sampling event (5 to 12 uS/cm) (Appendices D and E).

6.1.1.5 Turbidity

Reservoir turbidity was very low (less than 2.0 Nephelometric Turbidity Units [NTU]) during both sampling events and generally consistent with depth across all sites (Appendices D and E).

6.1.2 Riverine Sites

In situ water quality data for UARP riverine sites are shown in Table 6-1. Field data records are provided in Appendix C. Several riverine sites were inaccessible during at least one sampling event in 2024 (Table 4-4).

6.1.2.1 Water Temperature

Instantaneous water temperature measurements varied seasonally, with the highest temperatures occurring during the summer *in situ* sampling event (7.2 to 20.8°C) and the lowest temperatures occurring during the winter *in situ* sampling event (3.1 to 8.1°C) (Table 6-1).

6.1.2.2 pH

Riverine pH levels were similar across all four sampling events, ranging from 6.4 to 7.5 s.u. One measurement (6.4 s.u. at Site IS-4-GC in the summer) fell below the Basin Plan instantaneous minimum pH objective (6.5 s.u.). No pH measurements exceeded the instantaneous maximum pH objective (8.5 s.u.) (Table 6-1).

6.1.2.3 Dissolved Oxygen

Riverine dissolved oxygen ranged from 9.1 to 11.8 mg/L (77 to 100% saturation) during the winter, spring, and fall *in situ* sampling events. Riverine dissolved oxygen was lower during the summer *in situ* sampling event, ranging from 7.0 to 10.4 mg/L (78 to 101% saturation) (Table 6-1). All dissolved oxygen measurements were equal to or higher than the Basin Plan instantaneous minimum concentration objective of 7.0 mg/L for COLD (Table 6-1).

6.1.2.4 Conductivity

Typical of granitic watersheds, conductivity at all riverine sites was low throughout the year, ranging from 5 to 47 uS/cm (Table 6-1). In general, conductivity was higher at

downstream sites (i.e., Silver Creek, Brush Creek, and South Fork American River [SFAR] sites) relative to sites farther upstream (i.e., Rubicon River, Little Rubicon River, and Gerle Creek sites).

6.1.2.5 Turbidity

Turbidity was generally low (3.5 NTU or less) at riverine sites throughout the year.

Table 6-1. *In Situ* Water Quality for Upper American River Project Riverine Sites, 2024.

Site ID	Sample Date	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)
Winter							
IS-1-RR	–	–	–	–	–	–	–
IS-2-LRR	–	–	–	–	–	–	–
IS-3-LRR	–	–	–	–	–	–	–
IS-4-GC	–	–	–	–	–	–	–
IS-5-GC	–	–	–	–	–	–	–
IS-6-GC	–	–	–	–	–	–	–
IS-7-SFRR	–	–	–	–	–	–	–
IS-8-SFRR	–	–	–	–	–	–	–
IS-9-GCC	–	–	–	–	–	–	–
IS-10-SFSC	2/6	4.2	6.5	10.6	81	7	0.6
IS-11-SFSC	2/6	3.5	6.6	10.9	82	10	0.4
IS-12-SC	2/6	3.1	6.8	11.1	83	10	0.5
IS-13-SC	2/6	5.5	6.8	11.1	88	12	0.5
IS-14-SC	2/6	6.1	6.8	10.7	87	15	0.2
IS-15-SFAR	2/6	6.0	7.2	11.7	94	33	2.5
IS-16-SFAR	2/6	5.6	7.1	11.8	94	25	1.8
IS-17-BC	2/6	6.6	7.1	11.0	90	16	0.7
IS-18-SFAR	2/7	8.1	6.8	11.3	95	39	1.9 ^Q
IS-19-SFAR	2/7	6.1	6.6	11.4	92	27	1.3 ^Q
Spring							
IS-1-RR	–	–	–	–	–	–	–
IS-2-LRR	–	–	–	–	–	–	–
IS-3-LRR	–	–	–	–	–	–	–
IS-4-GC	5/29	6.9	6.9	9.4	77	5	1.2
IS-5-GC	5/3	7.3	6.8	10.0	83	6	0.5
IS-6-GC	5/3	5.4	6.8	10.5	83	6	0.6
IS-7-SFRR	5/3	8.7	7.0	10.0	86	8	0.7
IS-8-SFRR	5/3	8.9	6.9	10.1	87	8	0.4

Site ID	Sample Date	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)
IS-9-GCC	5/3	7.0	6.8	10.7	88	6	0.5
IS-10-SFSC	5/3	5.8	7.0	10.4	83	8	1.1
IS-11-SFSC	4/29	6.3	7.0	10.6	86	11	0.8
IS-12-SC	4/29	6.1	7.0	10.3	83	9	0.7
IS-13-SC	4/29	9.7	7.2	10.4	92	11	0.9
IS-14-SC	4/29	8.4	7.1	10.8	92	11	0.6
IS-15-SFAR	4/29	9.2	7.4	10.7	93	24	3.5
IS-16-SFAR	4/29	8.8	7.2	11.0	95	22	2.7
IS-17-BC	4/29	9.6	7.2	9.9	87	17	1.0
IS-18-SFAR	4/30	9.2	7.3	11.4	100	27	1.4
IS-19-SFAR	4/30	8.7	7.4	11.0	95	21	1.8
Summer							
IS-1-RR	8/20	20.4	6.7	7.1	79	14	0.8
IS-2-LRR	8/20	19.5	6.9	7.3	80	10	0.6
IS-3-LRR	8/21	20.8	6.9	7.0	78	9	0.5 ^Q
IS-4-GC	8/19	10.3	6.4	8.8	78	6	0.6
IS-5-GC	8/19	15.2	6.7	8.3	82	8	0.4
IS-6-GC	8/19	15.0	6.6	8.3	82	8	0.3
IS-7-SFRR	8/19	16.0	6.9	8.2	83	9	0.2
IS-8-SFRR	8/19	15.4	6.8	8.3	83	9	0.4
IS-9-GCC	8/19	17.1	6.6	8.2	85	9	0.2
IS-10-SFSC	8/19	7.8	6.7	9.6	81	8	1.0
IS-11-SFSC	8/22	11.6	6.8	9.4	86	11	0.8 ^Q
IS-12-SC	8/22	7.2	6.8	10.3	85	9	0.9 ^Q
IS-13-SC	8/22	13.6	6.8	9.4	91	12	1.4 ^Q
IS-14-SC	8/22	9.7	7.0	10.4	92	10	0.8 ^Q
IS-15-SFAR	8/22	18.3	7.6	8.9	95	47	1.0 ^Q
IS-16-SFAR	8/22	14.3	7.1	10.4	101	25	0.9 ^Q
IS-17-BC	8/22	17.1	7.1	8.5	88	30	2.5 ^Q
IS-18-SFAR	8/22	18.4	7.5	9.3	99	25	0.7 ^Q
IS-19-SFAR	8/22	13.9	7.1	9.6	93	16	1.3 ^Q

Site ID	Sample Date	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)
Fall							
IS-1-RR	–	–	–	–	–	–	–
IS-2-LRR	–	–	–	–	–	–	–
IS-3-LRR	–	–	–	–	–	–	–
IS-4-GC	11/6	9.3	7.1	9.1	79	6	1.0
IS-5-GC	11/6	4.4	7.1	10.5	81	7	1.1
IS-6-GC	11/6	7.5	6.6	10.0	83	9	1.1
IS-7-SFRR	11/6	5.2	6.7	10.8	85	10	1.1
IS-8-SFRR	11/6	5.4	7.0	10.7	85	9	1.1
IS-9-GCC	11/6	7.2	6.8	9.7	80	10	1.1
IS-10-SFSC	11/5	7.6	6.7	9.4	79	9	1.4 ^Q
IS-11-SFSC	11/5	7.0	7.2	10.1	83	11	0.8 ^Q
IS-12-SC	11/5	7.0	7.0	9.9	81	9	0.8 ^Q
IS-13-SC	11/5	7.4	7.1	11.0	92	11	0.1 ^Q
IS-14-SC	11/5	8.8	7.3	10.7	92	10	0.9 ^Q
IS-15-SFAR	11/5	7.0	7.2	11.7	96	40	1.0 ^Q
IS-16-SFAR	11/5	8.4	7.0	11.8	101	22	0.8 ^Q
IS-17-BC	11/5	12.9	7.1	9.7	92	20	1.1 ^Q
IS-18-SFAR	11/4	8.8	7.2	11.3	97	24	0.9 ^Q
IS-19-SFAR	11/4	9.6	7.2	10.4	91	19	1.0 ^Q

Notes: °C = degrees Celsius
% sat= percent saturation
uS/cm= microsiemens per centimeter
mg/L= milligrams per liter
NTU= nephelometric turbidity unit

“–” Data were not collected due to site inaccessibility. See also Table 4-4.

^Q Data are designated as “qualified” because the post-sampling calibration check measurement quality objective for acceptability was not met (see Appendix A for detailed calibration data). Qualified values are known with relatively less certainty (see Table 5-2).

6.2 BACTERIA

Instantaneous fecal coliform counts ranged from less than the method detection limit (MDL) (i.e., 1.8 most probable number per 100 milliliters [MPN/100 mL]) to 350 MPN/100 mL during the 2024 Independence Day and Labor Day sampling events (Appendix F, Tables F-1 and F-2). No fecal coliform results exceeded the Basin Plan

instantaneous maximum objective of 400 MPN/100 mL for the REC-1 designated beneficial use (CRWQCB 2019).

The geometric means of fecal coliform counts at all sites during the 2024 Independence Day and Labor Day sampling events were well below the Basin Plan objective of 200 MPN/100 mL for REC-1 designated beneficial use (CRWQCB 2019). The lowest fecal coliform geometric mean counts (0.9 MPN/100 mL) occurred in Buck Island (Site Bac-2-BI), Ice House (Site Bac-13-IHR), and Brush Creek (Site Bac-14-BCR) reservoirs, and the highest fecal coliform geometric mean count (24.2 MPN/100 mL) occurred in Junction Reservoir (Site Bac-11-JR) (Table 6-2). Instantaneous fecal coliform counts less than the MDL were treated as half the MDL (i.e., 0.9 MPN/100 mL) for geometric mean calculations.

Table 6-2. Bacteria Counts for Upper American River Project Reservoir Sites, Independence Day and Labor Day Sampling Events, 2024.

Site ID	Fecal coliform geometric mean ^{1,2} (MPN/100 mL)	<i>E. coli</i> geometric mean ¹ (MPN/100 mL)
Independence Day		
Bac-5-GCR	22.0	7.8
Bac-6-GCR	22.1	9.5
Bac-7-UVR	14.3	9.7
Bac-8-UVR	8.3	7.3
Bac-9-UVR	1.2	1.2
Bac-10-UVR	3.9	1.7
Bac-11-JR	24.2	7.5
Bac-12-IHR	1.6	0.6
Bac-13-IHR	0.9	0.5
Bac-14-BCR	0.9	0.7
Bac-15-SCR	13.6	9.4
Labor Day		
Bac-1-BI	1.8	0.5
Bac-2-BI	0.9	0.6
Bac-3-LL	1.7	0.5
Bac-4-LL	1.1	0.5

Notes: mL = milliliter

MPN = most probable number

¹ Method detection limit (MDL for fecal coliform = 1.8 MPN/100 mL. MDL for *E. coli* = 1.0 MPN/100 mL). Individual results less than the MDL were treated as 0.5 x MDL for the geometric mean calculations.

² The Basin Plan REC-1 water quality objectives for fecal coliform are 200 MPN/100 mL expressed as the geometric mean of five samples collected over 30 days, and no more than 10% of the total number of samples collected during any 30-day period shall exceed 400 MPN/100 mL (CRWQCB 2019).

Instantaneous *E. coli* counts ranged from less than the MDL (i.e., <1.0 MPN/100 mL) to 488.4 MPN/100 mL (in Gerle Creek Reservoir, Site Bac-5-GCR) during the 2024 Independence Day and Labor Day sampling events (Appendix F, Tables F-1 and F-2). There is no Basin Plan instantaneous objective for *E. coli*.¹

The lowest geometric mean of *E. coli* counts (0.5 MPN/100 mL) occurred in Buck Island (Site Bac-1-BI), Loon Lake (Site Bac-3-LL and Site Bac-4-LL), and Ice House (Site Bac-13-IHR) reservoirs, and the highest geometric mean of *E. coli* counts (9.7 MPN/100 mL) occurred in Union Valley Reservoir (Site Bac-7-UVR) (Table 6-2). There is no Basin Plan geometric mean objective for *E. coli*.¹ Instantaneous *E. coli* counts less than the MDL were treated as half the MDL (i.e., 0.5 MPN/100 mL) for geometric mean calculations.

2024 Independence Day and Labor Day geometric mean fecal coliform and *E. coli* counts were generally similar to or lower than 2020 and 2022 counts (SMUD 2021b, 2023). Geometric mean fecal coliform and *E. coli* counts at Gerle Creek and Junction reservoirs were elevated relative to counts at other sites in 2024, as in previous monitoring years.

6.3 INCIDENTAL SPECIES OBSERVATIONS

The invasive diatomaceous algae *Didymosphenia geminata* (*Didymo*) was incidentally observed at multiple monitoring sites in the UARP on Silver Creek downstream of Junction and Camino reservoirs (Table 6-3, Figure 6-3) during 2024 Aquatic Macroinvertebrate, Trout, Riparian Vegetation (SMUD 2025) and Water Quality annual monitoring surveys. Samples were collected at a subset of sites and examined under a compound microscope to confirm positive *Didymo* identification.

¹ While there is no Basin Plan instantaneous objective for *E. coli*, the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Water Quality Control Plan) (SWRCB 2019) has replaced the Basin Plan instantaneous fecal coliform objective of 200 MPN/100 mL (reported above) with an instantaneous *E. coli* objective that is based on colony-forming units (CFUs) (i.e., 320 CFU/100 mL). The Water Quality Control Plan has also replaced the geometric mean fecal coliform objective with a geometric mean *E. coli* objective of 100 CFU/100 mL for no fewer than five samples distributed over a six-week period. Although the geometric mean periods for the Basin Plan and Water Quality Control Plan are similar, and MPN and CFU counts are approximately equivalent, future comparisons of *E. coli* results to the Water Quality Control Plan instantaneous objective of 320 CFU/100 mL or the geometric mean objective of 100 CFU/100 mL would require use of a heterotrophic plate count method (Standard Method 9215b) for *E. coli* analysis, rather than Standard Method 9223B (Quantitray) that is specified in the Plan (SMUD 2021a).

Table 6-3. *Didymosphenia geminata* (Didymo) observations at Upper American River Project Monitoring Sites, 2024.

Location	Survey	SMUD Site	Date
Silver Creek downstream of Junction Dam, near Junction Adit access	Aquatic Macroinvertebrate	JD-I4 ^{1,2}	9/11
	Trout	JD-F3 ^{1,2}	9/30
Silver Creek downstream of Camino Dam	Trout	CD-F1 ^{1,3}	10/1
	Water Quality	IS-14-SC ²	11/5
Silver Creek downstream of Camino Dam, near Camino Adit access	Riparian Vegetation	CD-RV4 ^{1,3}	7/16
	Aquatic Macroinvertebrate	CD-I2 ^{1,3}	9/17
	Amphibian and Aquatic Reptile	CD-A3 ^{1,2}	6/11
Silver Creek downstream of Camino Dam, upstream of South Fork American River confluence	Aquatic Macroinvertebrate	CD-I3 ^{1,2}	9/12
	Amphibian and Aquatic Reptile	CD-A4 ^{1,2}	6/11

¹ Locations shown on SMUD (2025) Figures 1-2 and 1-3.

² Field *Didymo* identification.

³ Sample collected and positive *Didymo* identification confirmed with compound microscope.



Figure 6-3. *Didymosphenia geminata* at Aquatic Macroinvertebrate Site JD-I4, September 2024.

7.0 CONCLUSIONS

Based on 2024 *in situ* monitoring results, reservoir water quality was generally good, with few values measured below the Basin Plan instantaneous minimum objectives. Dissolved oxygen in the bottom waters of stratified reservoirs during fall (i.e., Ice House Reservoir, Union Valley Reservoir) was less than the Basin Plan instantaneous minimum objective (7.0 mg/L), which is not uncommon for deep waterbodies that have been thermally stratified for several months. Reservoir pH was below the Basin Plan instantaneous minimum pH objective near the bottom of the water column in Loon Lake in spring, in bottom waters at many of the stratified sites sampled in fall, and throughout the water column at Junction Reservoir in the fall.

Riverine water quality in the UARP study area met Basin Plan water quality objectives for dissolved oxygen and turbidity. Dissolved oxygen measurements were consistently higher than the Basin Plan instantaneous minimum objective (7.0 mg/L) for COLD and SPWN. There was one instance of pH measured below the Basin Plan instantaneous minimum objective (6.5 s.u.). Low pH values are likely due to the low buffering capacity characteristic of headwater reaches in predominantly granitic watersheds, whereby the relatively low weathering rates of granitic rocks result in low alkalinity (<17 mg/L across all sites in 2017 and 2022 [SMUD 2018, 2023]) and low hardness (<20 mg/L across all sites in 2017 and 2022 [SMUD 2018, 2023]). Low alkalinity and hardness make the waters susceptible to pH decreases when naturally acidic inputs occur, such as snowmelt, rainfall, and tannins from surrounding vegetation.

There were no exceedances of the Basin Plan instantaneous maximum or geometric mean objectives for fecal coliform for REC-1 designated beneficial use during the Independence Day and Labor Day sampling events.

Didymo has been intermittently observed in the UARP. In 2010, *Didymo* was observed in the SFAR downstream of Slab Creek Reservoir (ECORP 2011, SMUD 2014). In 2016, *Didymo* was detected in laboratory analysis of algae samples from South Fork Rubicon River downstream of the Gerle Creek confluence, Silver Creek downstream of Junction and Camino reservoirs, and the SFAR upstream of White Rock Powerhouse (SMUD 2017). 2024 was the first year since 2016 in which *Didymo* was positively identified in any of these reaches, with only a subset of sample identifications confirmed by examination with a compound microscope (Table 6-3). Observations in future monitoring years will further characterize the distribution and persistence of *Didymo* in the UARP.

Despite low pH measurements, 2024 monitoring results indicate that overall, surface waters of the UARP study area support designated beneficial uses, including COLD, SPWN, and REC-1.

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APPENDIX A***In Situ* Field Calibration Records**

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Table A-1. *In situ* Field Pre-Sampling Calibration Records.

Date & Time (Local)	Instrument Used	Survey Recorded By	Weather	Standard Values									Barometric Pressure (mmHg)	Notes
				Specific Conductance (uS/cm @ 25°C) ¹	Specific Conductance (uS/cm @ 25°C) ¹	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	pH 4 (s.u.)	pH 7 (s.u.)	pH 10 (s.u.)	Turbidity (NTU)	Turbidity (NTU)		
2/6/2024 6:54	YSI EXO2S	Esther Adelstein	Clear and cold	1000	1413	93	9.5	4.00	7.00	10.00	0.0	12.4	704.7	-
2/7/2024 5:59	YSI EXO2S	Esther Adelstein	Mild and clear	1000	1413	93	8.5	4.00	7.00	10.00	0.0	12.4	705.6	Turbidity calibrated in FNU
4/29/2024 8:23	YSI EXO2S	Elliott Allen	Sunny, cool	1000	1413	88	7.9	4.00	7.00	10.00	0.0	12.4	669.7	-
4/29/2024 10:12	YSI EXO2S	Elliott Allen	Sunny, cool	-	-	85	-	-	-	-	-	-	648.6	DO% saturation onsite recalibration
4/29/2024 14:24	YSI EXO2S	Elliott Allen	Sunny	-	-	94	-	-	-	-	-	-	712.6	DO% saturation onsite recalibration
4/29/2024 16:40	YSI EXO2S	Michael Schweiker	Cool, clear	1000	1413	-	-	4.00	7.00	10.00	0.0	12.4	668.5	Just calibrated pH, conduct, and turb. Will calibrate DO at site in morning
4/30/2024 8:46	YSI EXO2S	Elliott Allen	Sunny, cool	-	-	95	-	-	-	-	-	-	718.1	DO% saturation onsite recalibration
4/30/2024 11:28	YSI EXO2S	Elliott Allen	Sunny, warm	1000	1413	98	-	4.00	7.00	10.00	0.0	12.4	741.1	-
4/30/2024 18:55	YSI EXO2S	Elliott Allen	Sunny, warm	1000	1413	-	-	4.00	7.00	10.00	0.0	12.4	758.7	DO will be done tomorrow am
5/1/2024 10:25	YSI EXO2S	Michael Schweiker	Clear, calm, warm	-	-	90	8.5	-	-	-	-	-	685.1	DO% saturation onsite recalibration
5/1/2024 12:21	YSI EXO2S	Michael Schweiker	Cool, calm, clear	-	-	85	7.8	-	-	-	-	-	647.7	DO% saturation onsite recalibration
5/1/2024 15:10	YSI EXO2S	Michael Schweiker	Clear hot	1000	1413	-	-	4.00	7.00	10.00	0.0	12.4	711.7	Did not calibrate DO, will do tomorrow 5/2
5/2/2024 9:38	YSI EXO2S	Elliott Allen	Sunny, cool	-	-	84	7.8	-	-	-	-	-	638.8	DO% saturation onsite recalibration
5/2/2024 19:05	YSI EXO2S	Elliott Allen	Indoors	1000	1413	-	-	4.00	7.00	10.00	0.0	12.4	757.6	DO will be done at field site tmrw am
5/3/2024 9:09	YSI EXO2S	Michael Schweiker	Clear, calm, warm	-	-	82	7.1	-	-	-	-	-	623.3	DO% saturation onsite recalibration
5/28/2024 14:45	YSI EXO2S	Michael Schweiker	Calm clear	1000	1413	80	6.5	4.00	7.00	10.00	0.0	12.4	606.4	-
8/19/2024 10:00	YSI EXO2S	Elliott Allen	Sunny, warm	1000	1413	80	6.9	4.00	7.00	10.00	0.0	12.4	609.7	-
8/19/2024 15:45	YSI EXO2S	Michael Schweiker	Sunny, warm	-	-	97	-	-	-	-	-	-	736.5	DO% saturation onsite recalibration
8/19/2024 17:39	YSI EXO2S	Michael Schweiker	Sunny, warm	1000	1413	80	7.0	4.00	7.00	10.00	0.0	12.4	606.5	-
8/21/2024 13:47	YSI EXO2S	Elliott Allen	Sunny, clear	1000	1413	85	7.7	4.00	7.00	10.00	0.0	12.4	647.8	-
8/22/2024 11:00	YSI EXO2S	Elliott Allen	Sunny, clear	1000	1413	94	-	4.00	7.00	10.00	0.0	12.4	710.4	-
10/26/2024 9:40	YSI EXO2S	Elliott Allen	Indoors	1000	1413	91	8.1	4.00	7.00	10.00	0.0	12.4	688.7	-
10/27/2024 13:24	YSI EXO2S	Elliott Allen	Clear, sunny, windy	-	-	86	-	-	-	-	-	-	651.1	DO% saturation onsite recalibration
10/27/2024 18:00	YSI EXO2S	Elliott Allen	Indoors	1000	1413	97	9.1	4.00	7.00	10.00	0.0	12.4	735.8	-
10/28/2024 12:00	YSI EXO2S	Michael Schweiker	Sunny	-	-	94	-	-	-	-	-	-	713.2	DO% saturation onsite recalibration
10/28/2024 16:00	YSI EXO2S	Michael Schweiker	Indoors	1000	1413	82	7.8	4.00	7.00	10.00	0.0	12.4	623.8	-
10/29/2024 13:00	YSI EXO2S	Elliott Allen	indoors	-	-	83	-	-	-	-	-	-	628.3	DO% saturation onsite recalibration
10/29/2024 15:00	YSI EXO2S	Elliott Allen	Indoors	1000	1413	84	8.5	4.00	7.00	10.00	0.0	12.4	641.7	-
11/3/2024 8:30	YSI EXO2S	Elliott Allen	Indoors	1000	1413	95	10.0	4.00	7.00	10.00	0.3	12.4	720.4	-
11/4/2024 10:00	YSI EXO2S	Elliott Allen	Sunny	-	-	98	10.3	-	-	-	-	-	745.8	DO% saturation onsite recalibration
11/4/2024 17:30	YSI EXO2S	Michael Schweiker	Indoors	1000	1413	94	8.5	4.00	7.00	10.00	0.3	12.4	715.2	-
11/5/2024 13:15	YSI EXO2S	Michael Schweiker	Sunny	-	-	86	-	-	-	-	-	-	652.4	DO% saturation onsite recalibration
11/5/2024 17:00	YSI EXO2S	Michael Schweiker	Indoors	1000	1413	80	7.6	4.00	7.00	10.00	0.3	12.4	604.9	-

Table A-1 continued. *In situ* Field Pre-Sampling Calibration Records.

Date & Time (Local)	Instrument Used	Survey Recorded By	Weather	Temperature of Standard during Calibration (°C)									Barometric Pressure (mmHg)	Notes
				Specific Conductance (uS/cm @ 25°C) ¹	Specific Conductance (uS/cm @ 25°C) ¹	Dissolved Oxygen (% sat)	Dissolved Oxygen (mg/L)	pH 4 (s.u.)	pH 7 (s.u.)	pH 10 (s.u.)	Turbidity (NTU)	Turbidity (NTU)		
2/6/2024 6:54	YSI EXO2S	Esther Adelstein	Clear and cold	11.3	11.5	14.7	14.5	10.6	10.1	10.7	11.0	10.5	704.7	-
2/7/2024 5:59	YSI EXO2S	Esther Adelstein	Mild and clear	8.3	8.8	20.3	19.9	9.7	9.3	8.6	9.0	8.3	705.6	Turbidity calibrated in FNU
4/29/2024 8:23	YSI EXO2S	Elliott Allen	Sunny, cool	16.7	16.9	20.6	20.6	16.2	16.8	17.1	18.4	18.3	669.7	-
4/29/2024 10:12	YSI EXO2S	Elliott Allen	Sunny, cool	-	-	24.7	-	-	-	-	-	-	648.6	DO% saturation onsite recalibration
4/29/2024 14:24	YSI EXO2S	Elliott Allen	Sunny	-	-	19.5	-	-	-	-	-	-	712.6	DO% saturation onsite recalibration
4/29/2024 16:40	YSI EXO2S	Michael Schweiker	Cool, clear	21.3	21.5	-	-	20.9	21.2	21	21.9	21.0	668.5	Just calibrated pH, conduct, and turb. Will calibrate DO at site in morning
4/30/2024 8:46	YSI EXO2S	Elliott Allen	Sunny, cool	-	-	13.5	-	-	-	-	-	-	718.1	DO% saturation onsite recalibration
4/30/2024 11:28	YSI EXO2S	Elliott Allen	Sunny, warm	-	-	14.2	-	-	-	-	-	-	741.1	-
4/30/2024 18:55	YSI EXO2S	Elliott Allen	Sunny, warm	19.2	19.7	-	-	18.8	18.3	18.6	18.1	19.3	758.7	DO will be done tomorrow am
5/1/2024 10:25	YSI EXO2S	Michael Schweiker	Clear, calm, warm	-	-	17.6	18.4	-	-	-	-	-	685.1	DO% saturation onsite recalibration
5/1/2024 12:21	YSI EXO2S	Michael Schweiker	Cool, calm, clear	-	-	19.2	19.8	-	-	-	-	-	647.7	DO% saturation onsite recalibration
5/1/2024 15:10	YSI EXO2S	Michael Schweiker	Clear hot	26.2	26.9	-	-	24.8	23.6	25.3	24.0	25.1	711.7	Did not calibrate DO, will do tomorrow 5/2
5/2/2024 9:38	YSI EXO2S	Elliott Allen	Sunny, cool	-	-	18.7	19.0	-	-	-	-	-	638.8	DO% saturation onsite recalibration
5/2/2024 19:05	YSI EXO2S	Elliott Allen	Indoors	21.5	22.2	-	-	21.3	21.9	21.6	18.9	21.3	757.6	DO will be done at field site tmrw am
5/3/2024 9:09	YSI EXO2S	Michael Schweiker	Clear, calm, warm	-	-	22.6	22.9	-	-	-	-	-	623.3	DO% saturation onsite recalibration
5/28/2024 14:45	YSI EXO2S	Michael Schweiker	Calm clear	21.7	21.7	25.7	25.8	21.2	21.6	21.4	23.4	21.2	606.4	-
8/19/2024 10:00	YSI EXO2S	Elliott Allen	Sunny, warm	23.0	22.8	22.7	22.7	22.5	22.6	23.1	23.2	22.8	609.7	-
8/19/2024 15:45	YSI EXO2S	Michael Schweiker	Sunny, warm	-	-	22.8	22.8	-	-	-	-	-	736.5	DO% saturation onsite recalibration
8/19/2024 17:39	YSI EXO2S	Michael Schweiker	Sunny, warm	26.5	26.9	22.1	21.9	25.8	25.5	25.7	26.9	28.3	606.5	-
8/21/2024 13:47	YSI EXO2S	Elliott Allen	Sunny, clear	19.9	20.0	19.9	19.9	20.2	20.4	19.5	23.0	22.4	647.8	-
8/22/2024 11:00	YSI EXO2S	Elliott Allen	Sunny, clear	-	-	20.9	20.9	-	-	-	-	-	710.4	-
10/26/2024 9:40	YSI EXO2S	Elliott Allen	Indoors	18.9	18.3	21.0	21.0	18.3	17.1	19.2	18.7	19.4	688.7	-
10/27/2024 13:24	YSI EXO2S	Elliott Allen	Clear, sunny, windy	-	-	10.4	10.4	-	-	-	-	-	651.1	DO% saturation onsite recalibration
10/27/2024 18:00	YSI EXO2S	Elliott Allen	Indoors	21.3	21.0	18.6	18.6	20.9	20.8	20.8	21.4	21.4	735.8	-
10/28/2024 12:00	YSI EXO2S	Michael Schweiker	Sunny	-	-	12.1	-	-	-	-	-	-	713.2	DO% saturation onsite recalibration
10/28/2024 16:00	YSI EXO2S	Michael Schweiker	Indoors	20.8	20.6	17.6	17.6	20	19.9	20	29.9	22.3	623.8	-
10/29/2024 13:00	YSI EXO2S	Elliott Allen	Indoors	-	-	9.2	-	-	-	-	-	-	628.3	DO% saturation onsite recalibration
10/29/2024 15:00	YSI EXO2S	Elliott Allen	Indoors	17.8	17.9	15.5	15.5	16.6	17.2	17	27.0	22.8	641.7	-
11/3/2024 8:30	YSI EXO2S	Elliott Allen	Indoors	16.0	15.3	15.6	15.6	16	16.4	15.6	17.6	17.1	720.4	-
11/4/2024 10:00	YSI EXO2S	Elliott Allen	Sunny	-	-	13.3	13.3	-	-	-	-	-	745.8	DO% saturation onsite recalibration
11/4/2024 17:30	YSI EXO2S	Michael Schweiker	Indoors	20.1	19.7	20.1	20.1	19.5	19.4	19.4	17.8	19.4	715.2	-
11/5/2024 13:15	YSI EXO2S	Michael Schweiker	Sunny	-	-	15.4	15.4	-	-	-	-	-	652.4	DO% saturation onsite recalibration
11/5/2024 17:00	YSI EXO2S	Michael Schweiker	Indoors	19.3	19.2	17.4	17.4	19.1	19.4	19.5	16.9	19.8	604.9	-

Table A-1, continued. *In situ* Field Pre-Sampling Calibration Records.

Date & Time (Local)	Instrument Used	Survey Recorded By	Weather	Pre-Calibration Value									Barometric Pressure (mmHg)	Notes
				Specific Conductance (uS/cm @ 25°C) ¹	Specific Conductance (uS/cm @ 25°C) ¹	Dissolved Oxygen (% sat)	Dissolved Oxygen (mg/L)	pH 4 (s.u.)	pH 7 (s.u.)	pH 10 (s.u.)	Turbidity (NTU)	Turbidity (NTU)		
2/6/2024 6:54	YSI EXO2S	Esther Adelstein	Clear and cold	1006	1400	94	9.5	4.41	7.16	10.10	0.2	13.3	704.7	-
2/7/2024 5:59	YSI EXO2S	Esther Adelstein	Mild and clear	1003	1412	93	8.5	4.08	6.99	10.11	0.1	12.2	705.6	Turbidity calibrated in FNU
4/29/2024 8:23	YSI EXO2S	Elliott Allen	Sunny, cool	980	-	92	-	4.03	7.03	10.07	0.1	12.9	669.7	-
4/29/2024 10:12	YSI EXO2S	Elliott Allen	Sunny, cool	-	-	83	-	-	-	-	-	-	648.6	DO% saturation onsite recalibration
4/29/2024 14:24	YSI EXO2S	Elliott Allen	Sunny	-	-	97	-	-	-	-	-	-	712.6	DO% saturation onsite recalibration
4/29/2024 16:40	YSI EXO2S	Michael Schweiker	Cool, clear	1003	-	-	-	4.02	6.97	9.95	-0.2	13.3	668.5	Just calibrated pH, conduct, and turb. Will calibrate DO at site in morning
4/30/2024 8:46	YSI EXO2S	Elliott Allen	Sunny, cool	-	-	91	-	-	-	-	-	-	718.1	DO% saturation onsite recalibration
4/30/2024 11:28	YSI EXO2S	Elliott Allen	Sunny, warm	-	-	106	-	-	-	-	-	-	741.1	-
4/30/2024 18:55	YSI EXO2S	Elliott Allen	Sunny, warm	997	-	-	-	4.04	7.02	10.15	0.2	11.8	758.7	DO will be done tomorrow am
5/1/2024 10:25	YSI EXO2S	Michael Schweiker	Clear, calm, warm	-	-	97	-	-	-	-	-	-	685.1	DO% saturation onsite recalibration
5/1/2024 12:21	YSI EXO2S	Michael Schweiker	Cool, calm, clear	-	-	76	-	-	-	-	-	-	647.7	DO% saturation onsite recalibration
5/1/2024 15:10	YSI EXO2S	Michael Schweiker	Clear hot	1028	-	-	-	4.09	7.02	9.96	-0.2	12.1	711.7	Did not calibrate DO, will do tomorrow 5/2
5/2/2024 9:38	YSI EXO2S	Elliott Allen	Sunny, cool	-	-	82	7.8	-	-	-	-	-	638.8	DO% saturation onsite recalibration
5/2/2024 19:05	YSI EXO2S	Elliott Allen	Indoors	1001	1388	-	-	4.05	7.1	10.13	0.3	12.6	757.6	DO will be done at field site tmrw am
5/3/2024 9:09	YSI EXO2S	Michael Schweiker	Clear, calm, warm	-	-	79	-	-	-	-	-	-	623.3	DO% saturation onsite recalibration
5/28/2024 14:45	YSI EXO2S	Michael Schweiker	Calm clear	994	-	84	-	4	6.94	10.00	0.4	13.4	606.4	-
8/19/2024 10:00	YSI EXO2S	Elliott Allen	Sunny, warm	984	-	81	-	4.13	7.1	10.10	0.3	12.6	609.7	-
8/19/2024 15:45	YSI EXO2S	Michael Schweiker	Sunny, warm	-	-	93	-	-	-	-	-	-	736.5	DO% saturation onsite recalibration
8/19/2024 17:39	YSI EXO2S	Michael Schweiker	Sunny, warm	991	-	82	-	4.01	7.04	9.99	-0.5	12.0	606.5	-
8/21/2024 13:47	YSI EXO2S	Elliott Allen	Sunny, clear	1018	-	84	-	3.89	6.92	9.98	0.2	11.4	647.8	-
8/22/2024 11:00	YSI EXO2S	Elliott Allen	Sunny, clear	-	-	96	-	-	-	-	-	-	710.4	-
10/26/2024 9:40	YSI EXO2S	Elliott Allen	Indoors	996	-	90	-	4.1	7.05	10.09	0.0	11.7	688.7	-
10/27/2024 13:24	YSI EXO2S	Elliott Allen	Clear, sunny, windy	-	-	86	-	-	-	-	-	-	651.1	DO% saturation onsite recalibration
10/27/2024 18:00	YSI EXO2S	Elliott Allen	Indoors	995	-	97	-	3.93	6.9	9.91	-0.1	12.3	735.8	-
10/28/2024 12:00	YSI EXO2S	Michael Schweiker	Sunny	-	-	95	-	-	-	-	-	-	713.2	DO% saturation onsite recalibration
10/28/2024 16:00	YSI EXO2S	Michael Schweiker	Indoors	1001	-	82	-	3.97	6.96	9.96	0.1	12.3	623.8	-
10/29/2024 13:00	YSI EXO2S	Elliott Allen	Indoors	-	-	84	-	-	-	-	-	-	628.3	DO% saturation onsite recalibration
10/29/2024 15:00	YSI EXO2S	Elliott Allen	Indoors	998	-	83	-	4.05	7.04	10.11	0.7	13.1	641.7	-
11/3/2024 8:30	YSI EXO2S	Elliott Allen	Indoors	1002	-	96	-	4.12	7.08	10.13	0.6	12.4	720.4	-
11/4/2024 10:00	YSI EXO2S	Elliott Allen	Sunny	-	-	99	-	-	-	-	-	-	745.8	DO% saturation onsite recalibration
11/4/2024 17:30	YSI EXO2S	Michael Schweiker	Indoors	999	-	93	-	3.94	6.9	9.87	0.4	11.5	715.2	-
11/5/2024 13:15	YSI EXO2S	Michael Schweiker	Sunny	-	-	91	-	-	-	-	-	-	652.4	DO% saturation onsite recalibration
11/5/2024 17:00	YSI EXO2S	Michael Schweiker	Indoors	979	-	76	-	4	6.91	10.02	0.2	11.8	604.9	-

Table A-1, continued. *In situ* Field Pre-Sampling Calibration Records.

Date & Time (Local)	Instrument Used	Survey Recorded By	Weather	Post-Calibration Value									Barometric Pressure (mmHg)	Notes
				Specific Conductance (uS/cm @ 25°C) ¹	Specific Conductance (uS/cm @ 25°C) ¹	Dissolved Oxygen (% sat)	Dissolved Oxygen (mg/L)	pH 4 (s.u.)	pH 7 (s.u.)	pH 10 (s.u.)	Turbidity (NTU)	Turbidity (NTU)		
2/6/2024 6:54	YSI EXO2S	Esther Adelstein	Clear and cold	1000	1400	93	9.5	4.00	7.00	10.00	0.0	12.4	704.7	-
2/7/2024 5:59	YSI EXO2S	Esther Adelstein	Mild and clear	1000	1412	93	8.5	4.00	7.00	10.00	0.0	12.4	705.6	Turbidity calibrated in FNU
4/29/2024 8:23	YSI EXO2S	Elliott Allen	Sunny, cool	1000	1403	88	7.9	4.00	7.00	10.00	0.0	12.4	669.7	-
4/29/2024 10:12	YSI EXO2S	Elliott Allen	Sunny, cool	-	-	85	-	-	-	-	-	-	648.6	DO% saturation onsite recalibration
4/29/2024 14:24	YSI EXO2S	Elliott Allen	Sunny	-	-	94	8.5	-	-	-	-	-	712.6	DO% saturation onsite recalibration
4/29/2024 16:40	YSI EXO2S	Michael Schweiker	Cool, clear	1000	1407	-	-	4.00	7.00	10.00	0.0	12.4	668.5	Just calibrated pH, conduct, and turb. Will calibrate DO at site in morning
4/30/2024 8:46	YSI EXO2S	Elliott Allen	Sunny, cool	-	-	95	9.9	-	-	-	-	-	718.1	DO% saturation onsite recalibration
4/30/2024 11:28	YSI EXO2S	Elliott Allen	Sunny, warm	-	-	98	10.0	-	-	-	-	-	741.1	-
4/30/2024 18:55	YSI EXO2S	Elliott Allen	Sunny, warm	1000	1410	-	-	4.00	7.00	10.00	0.0	12.4	758.7	DO will be done tomorrow am
5/1/2024 10:25	YSI EXO2S	Michael Schweiker	Clear, calm, warm	-	-	90	8.4	-	-	-	-	-	685.1	DO% saturation onsite recalibration
5/1/2024 12:21	YSI EXO2S	Michael Schweiker	Cool, calm, clear	-	-	85	7.8	-	-	-	-	-	647.7	DO% saturation onsite recalibration
5/1/2024 15:10	YSI EXO2S	Michael Schweiker	Clear hot	1000	1425	-	-	4.00	7.00	10.00	0.0	12.4	711.7	Did not calibrate DO, will do tomorrow
5/2/2024 9:38	YSI EXO2S	Elliott Allen	Sunny, cool	-	-	84	7.8	-	-	-	-	-	638.8	DO% saturation onsite recalibration
5/2/2024 19:05	YSI EXO2S	Elliott Allen	Indoors	1000	1388	-	-	4.00	7.00	10.00	0.0	12.4	757.6	DO will be done at field site tmrw am
5/3/2024 9:09	YSI EXO2S	Michael Schweiker	Clear, calm, warm	-	-	82	7.0	-	-	-	-	-	623.3	DO% saturation onsite recalibration
5/28/2024 14:45	YSI EXO2S	Michael Schweiker	Calm clear	1000	1407	80	6.5	4.00	7.00	10.00	0.0	12.4	606.4	-
8/19/2024 10:00	YSI EXO2S	Elliott Allen	Sunny, warm	1000	1401	80	6.9	4.00	7.00	10.00	0.0	12.4	609.7	-
8/19/2024 15:45	YSI EXO2S	Michael Schweiker	Sunny, warm	-	-	97	8.4	-	-	-	-	-	736.5	DO% saturation onsite recalibration
8/19/2024 17:39	YSI EXO2S	Michael Schweiker	Sunny, warm	1000	1429	80	7.0	4.00	7.00	10.00	0.0	12.4	606.5	-
8/21/2024 13:47	YSI EXO2S	Elliott Allen	Sunny, clear	1000	1399	85	7.7	4.00	7.00	10.00	0.0	12.4	647.8	-
8/22/2024 11:00	YSI EXO2S	Elliott Allen	Sunny, clear	-	-	94	8.3	-	-	-	-	-	710.4	-
10/26/2024 9:40	YSI EXO2S	Elliott Allen	Indoors	1000	1410	91	8.1	4.00	7.00	10.00	0.0	12.4	688.7	-
10/27/2024 13:24	YSI EXO2S	Elliott Allen	Clear, sunny, windy	-	-	86	9.6	-	-	-	-	-	651.1	DO% saturation onsite recalibration
10/27/2024 18:00	YSI EXO2S	Elliott Allen	Indoors	1000	1413	97	9.1	4.00	7.00	10.00	0.0	12.4	735.8	-
10/28/2024 12:00	YSI EXO2S	Michael Schweiker	Sunny	-	-	94	-	-	-	-	-	-	713.2	DO% saturation onsite recalibration
10/28/2024 16:00	YSI EXO2S	Michael Schweiker	Indoors	1000	1412	82	7.8	4.00	7.00	10.00	0.0	12.4	623.8	-
10/29/2024 13:00	YSI EXO2S	Elliott Allen	Indoors	-	-	83	-	-	-	-	-	-	628.3	DO% saturation onsite recalibration
10/29/2024 15:00	YSI EXO2S	Elliott Allen	Indoors	1000	1416	84	8.5	4.00	7.00	10.00	0.0	12.4	641.7	-
11/3/2024 8:30	YSI EXO2S	Elliott Allen	Indoors	1000	1413	95	9.4	4.00	7.00	10.00	0.3	12.4	720.4	-
11/4/2024 10:00	YSI EXO2S	Elliott Allen	Sunny	-	-	98	10.2	-	-	-	-	-	745.8	DO% saturation onsite recalibration
11/4/2024 17:30	YSI EXO2S	Michael Schweiker	Indoors	1000	1409	94	8.7	4.00	7.00	10.00	0.3	12.4	715.2	-
11/5/2024 13:15	YSI EXO2S	Michael Schweiker	Sunny	-	-	86	8.6	-	-	-	-	-	652.4	DO% saturation onsite recalibration
11/5/2024 17:00	YSI EXO2S	Michael Schweiker	Indoors	1000	1436	80	7.7	4.00	7.00	10.00	0.3	12.4	604.9	-

¹ YSI recommends calibrating the conductivity sensor using specific conductance as the calibration parameter. Calibrating for specific conductance automatically calibrates for conductivity.

Table A-2. Post-Sampling Calibration Standard Checks.

Date	Standard									Measured								
	Specific Conductance (uS/cm @ 25°C) ¹	Specific Conductance (uS/cm @ 25°C) ¹	Dissolved Oxygen (% sat)	Dissolved Oxygen (mg/L)	pH 4 (s.u.)	pH 7 (s.u.)	pH 10 (s.u.)	Turbidity (NTU)	Turbidity (NTU)	Specific Conductance (uS/cm @ 25°C) ¹	Specific Conductance (uS/cm @ 25°C) ¹	Dissolved Oxygen (% sat)	Dissolved Oxygen (mg/L)	pH 4 (s.u.)	pH 7 (s.u.)	pH 10 (s.u.)	Turbidity (NTU)	Turbidity (NTU)
2/6/2024	1000	1413	96	11.1	4.00	7.00	10.00	0.0	12.4	1000	1401	94	11.1	3.90	6.81	10.06	0.0	12.9
2/7/2024	1000	1413	96	10.9	4.00	7.00	10.00	0.0	12.4	996	1410	97	10.9	3.87	6.80	9.91	-0.1	11.4
4/29/2024	1000	1413	88	7.9	4.00	7.00	10.00	0.0	12.4	1005	1408	87	7.9	4.04	6.99	10	0.0	12.6
4/30/2024	1000	1413	94	7.9	4.00	7.00	10.00	0.0	12.4	1014	1414	92	7.9	4.02	7.02	10.06	0.2	12.6
5/1/2024	1000	1413	85	8.7	4.00	7.00	10.00	0.0	12.4	1013	1419	85	8.7	4.14	7.05	9.96	0.2	12.5
5/2/2024	1000	1413	84	7.8	4.00	7.00	10.00	0.0	12.4	1001	1385	84	7.8	4.06	7.10	10.13	0.1	12.6
5/3/2024	1000	1413	83	8.5	4.00	7.00	10.00	0.0	12.4	1038	1400	84	8.5	4.04	6.97	9.88	-0.4	12.4
5/29/2024	1000	1413	80	6.9	4.00	7.00	10.00	0.0	12.4	1002	1409	78	6.5	4.02	6.98	10	0.1	12.3
8/19/2024	1000	1413	94	7.3	4.00	7.00	10.00	0.0	12.4	1005	1400	95	7.5	4.01	7.04	9.99	-0.5	12.0
8/21/2024	1000	1413	80	7.5	4.00	7.00	10.00	0.0	12.4	1018	1398	80	7.5	3.89	6.92	9.98	0.2	11.4
8/22/2024	1000	1413	97	7.8	4.00	7.00	10.00	0.0	12.4	1010	1405	95	7.8	4.13	6.99	9.99	0.0	13.1
10/27/2024	1000	1413	84	8.5	4.00	7.00	10.00	0.0	12.4	995	1414	85	8.5	3.94	6.90	9.91	-0.1	12.3
10/28/2024	1000	1413	94	8.9	4.00	7.00	10.00	0.0	12.4	1001	1402	93	9.0	3.97	6.96	9.96	0.1	12.3
10/29/2024	1000	1413	83	8.6	4.00	7.00	10.00	0.0	12.4	998	1378	82	8.6	4.05	7.04	10.11	0.7	13.1
10/30/2024	1000	1413	84	8.5	4.00	7.00	10.00	0.0	12.4	1005	1400	85	8.5	3.99	6.97	9.99	-0.5	12.6
11/4/2024	1000	1413	95	10.2	4.00	7.00	10.00	0.0	12.4	999	1405	95	10.2	3.94	6.90	9.87	0.4	11.5
11/5/2024	1000	1413	83	9.3	4.00	7.00	10.00	0.0	12.4	979	1421	81	9.3	4.00	6.91	10.02	0.2	11.8
11/6/2024	1000	1413	79	7.6	4.00	7.00	10.00	0.0	12.4	985	1406	79	7.6	4.04	6.96	9.98	0.2	12.1
Date:	Error ²									Qualification Code								
	Specific Conductance (uS/cm @ 25°C) ¹	Specific Conductance (uS/cm @ 25°C) ¹	Dissolved Oxygen (% sat)	Dissolved Oxygen (mg/L)	pH 4 (s.u.)	pH 7 (s.u.)	pH 10 (s.u.)	Turbidity (NTU)	Turbidity (NTU)	Specific Conductance (uS/cm @ 25°C) ¹	Specific Conductance (uS/cm @ 25°C) ¹	Dissolved Oxygen (% sat)	Dissolved Oxygen (mg/L)	pH 4 (s.u.)	pH 7 (s.u.)	pH 10 (s.u.)	Turbidity (NTU) ³	Turbidity (NTU)
2/6/2024	0%	1%	2%	0%	0.10	0.19	0.06	0.0	4%	A	A	A	A	A	A	A	A	A
2/7/2024	0%	0%	1%	0%	0.13	0.20	0.09	0.1	8%	A	A	A	A	A	A	A	A	Q
4/29/2024	1%	0%	1%	1%	0.04	0.01	0.00	0.0	1%	A	A	A	A	A	A	A	A	A
4/30/2024	1%	0%	2%	0%	0.02	0.02	0.06	0.2	1%	A	A	A	A	A	A	A	A	A
5/1/2024	1%	0%	0%	0%	0.14	0.05	0.04	0.2	1%	A	A	A	A	A	A	A	A	A
5/2/2024	0%	2%	0%	0%	0.06	0.10	0.13	0.1	2%	A	A	A	A	A	A	A	A	A
5/3/2024	4%	1%	1%	0%	0.04	0.03	0.12	0.4	0%	A	A	A	A	A	A	A	A	A
5/29/2024	0%	0%	3%	5%	0.02	0.02	0.00	0.1	1%	A	A	A	A	A	A	A	A	A
8/19/2024	1%	1%	1%	3%	0.01	0.04	0.01	0.5	3%	A	A	A	A	A	A	A	A	A
8/21/2024	2%	1%	0%	0%	0.11	0.08	0.02	0.2	8%	A	A	A	A	A	A	A	A	Q
8/22/2024	1%	1%	2%	0%	0.13	0.01	0.01	0.0	5%	A	A	A	A	A	A	A	A	Q
10/27/2024	1%	0%	1%	0%	0.06	0.10	0.09	0.1	1%	A	A	A	A	A	A	A	A	A
10/28/2024	0%	1%	1%	1%	0.03	0.04	0.04	0.1	1%	A	A	A	A	A	A	A	A	A
10/29/2024	0%	2%	1%	0%	0.05	0.04	0.11	0.7	6%	A	A	A	A	A	A	A	A	Q
10/30/2024	1%	1%	1%	0%	0.01	0.03	0.01	0.5	2%	A	A	A	A	A	A	A	A	A
11/4/2024	0%	1%	0%	0%	0.06	0.10	0.13	0.4	7%	A	A	A	A	A	A	A	A	Q
11/5/2024	2%	1%	2%	0%	0.00	0.09	0.02	0.2	5%	A	A	A	A	A	A	A	A	Q
11/6/2024	2%	0%	0%	0%	0.04	0.04	0.02	0.2	3%	A	A	A	A	A	A	A	A	A

¹ YSI recommends calibrating the conductivity sensor using specific conductance as the calibration parameter. Calibrating for specific conductance automatically calibrates for conductivity.

² Error calculated as the absolute value of (Measured - Standard)/Standard for specific conductance, dissolved oxygen, and turbidity (where standard = 12.4 NTU). Error calculated as the absolute value of Measured - Standard for pH and turbidity (where standard = 0.0 NTU).

³ Due to the inherent variation in deionized water turbidity, ±1 NTU on the deionized water post-sampling calibration check is considered acceptable.

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APPENDIX B**Analytical Laboratory Bacteria Reports**

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CALIFORNIA LABORATORY SERVICES

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June 26, 2024

CLS Work Order #: 24F0912
COC #:

Esther Adelstein
Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project Name: SMUD UARP Bac-T Monitoring

Enclosed are the results of analyses for samples received by the laboratory on 06/19/24 15:55. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

Daniel Johnson
Technical Director

CA SWRCB ELAP Accreditation/Registration number 1233

CLS ID. NO. 24F0912 (___ of ___)

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CALIFORNIA LABORATORY SERVICES
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Page 1 of 3

06/26/24 15:30

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01
Project Manager: Esther Adelstein

CLS Work Order #: 24F0912
COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac - 13 - 1HR (24F0912-01) Water Sampled: 06/19/24 08:21 Received: 06/19/24 15:55									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2404847	06/19/24 16:00	06/22/24	SM 9221	
E. Coli	<1	1.0	"	"	2404851	06/19/24 16:30	06/20/24	SM9223	
Bac - 6 - GCR (24F0912-02) Water Sampled: 06/19/24 09:27 Received: 06/19/24 15:55									
Fecal Coliforms	23	1.8	MPN/100 mL	1	2404847	06/19/24 16:00	06/22/24	SM 9221	
E. Coli	24.3	1.0	"	"	2404851	06/19/24 16:30	06/20/24	SM9223	
Bac - 9 - UVR (24F0912-03) Water Sampled: 06/19/24 12:00 Received: 06/19/24 15:55									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2404847	06/19/24 16:00	06/22/24	SM 9221	
E. Coli	1.0	1.0	"	"	2404851	06/19/24 16:30	06/20/24	SM9223	
Bac - 14 - BCR (24F0912-04) Water Sampled: 06/19/24 13:35 Received: 06/19/24 15:55									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2404847	06/19/24 16:00	06/22/24	SM 9221	
E. Coli	<1	1.0	"	"	2404851	06/19/24 16:30	06/20/24	SM9223	
Bac - 12 - 1HR (24F0912-05) Water Sampled: 06/19/24 08:35 Received: 06/19/24 15:55									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2404847	06/19/24 16:00	06/22/24	SM 9221	
E. Coli	<1	1.0	"	"	2404851	06/19/24 16:30	06/20/24	SM9223	
Bac - 8 - UVR (24F0912-06) Water Sampled: 06/19/24 11:05 Received: 06/19/24 15:55									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2404847	06/19/24 16:00	06/22/24	SM 9221	
E. Coli	3.1	1.0	"	"	2404851	06/19/24 16:30	06/20/24	SM9223	
Bac - 11 - JR (24F0912-07) Water Sampled: 06/19/24 12:18 Received: 06/19/24 15:55									
Fecal Coliforms	33	1.8	MPN/100 mL	1	2404847	06/19/24 16:00	06/22/24	SM 9221	
E. Coli	29.2	1.0	"	"	2404851	06/19/24 16:30	06/20/24	SM9223	



CALIFORNIA LABORATORY SERVICES
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Page 2 of 3

06/26/24 15:30

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01 **CLS Work Order #: 24F0912**
Project Manager: Esther Adelstein COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac - 15 - SCR (24F0912-08) Water Sampled: 06/19/24 14:45 Received: 06/19/24 15:55									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2404847	06/19/24 16:00	06/22/24	SM 9221	
E. Coli	1.0	1.0	"	"	2404851	06/19/24 16:30	06/20/24	SM9223	
Bac - 10 - UVR (24F0912-09) Water Sampled: 06/19/24 11:32 Received: 06/19/24 15:55									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2404847	06/19/24 16:00	06/22/24	SM 9221	
E. Coli	1.0	1.0	"	"	2404851	06/19/24 16:30	06/20/24	SM9223	
Bac - 7 - UVR (24F0912-10) Water Sampled: 06/19/24 10:35 Received: 06/19/24 15:55									
Fecal Coliforms	2.0	1.8	MPN/100 mL	1	2404847	06/19/24 16:00	06/22/24	SM 9221	
E. Coli	1.0	1.0	"	"	2404851	06/19/24 16:30	06/20/24	SM9223	
Bac - 5 - GCR (24F0912-11) Water Sampled: 06/19/24 09:50 Received: 06/19/24 15:55									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2404847	06/19/24 16:00	06/22/24	SM 9221	
E. Coli	<1	1.0	"	"	2404851	06/19/24 16:30	06/20/24	SM9223	



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Page 3 of 3

06/26/24 15:30

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01 **CLS Work Order #: 24F0912**
Project Manager: Esther Adelstein COC #:

Notes and Definitions

BT-4a	<1.8
BT-4	<1
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



CALIFORNIA LABORATORY SERVICES

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July 02, 2024

CLS Work Order #: 24F1161
COC #:

Esther Adelstein
Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project Name: SMUD UARP Bac-T Monitoring

Enclosed are the results of analyses for samples received by the laboratory on 06/25/24 16:07. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

Daniel Johnson
Technical Director

CA SWRCB ELAP Accreditation/Registration number 1233

Page 2 of 5



CALIFORNIA LABORATORY SERVICES
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Page 1 of 3

07/02/24 13:00

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01
Project Manager: Esther Adelstein

CLS Work Order #: 24F1161
COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac - 12 - 1HR (24F1161-01) Water Sampled: 06/25/24 09:10 Received: 06/25/24 16:07									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2405035	06/25/24 16:20	06/26/24	SM 9221	
E. Coli	<1	1.0	"	"	2405027	06/25/24 17:30	06/26/24	SM9223	
Bac - 13 - 1HR (24F1161-02) Water Sampled: 06/25/24 08:55 Received: 06/25/24 16:07									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2405035	06/25/24 16:20	06/26/24	SM 9221	
E. Coli	<1	1.0	"	"	2405027	06/25/24 17:30	06/26/24	SM9223	
Bac - 7 - UVR (24F1161-03) Water Sampled: 06/25/24 09:38 Received: 06/25/24 16:07									
Fecal Coliforms	7.8	1.8	MPN/100 mL	1	2405035	06/25/24 16:20	06/26/24	SM 9221	
E. Coli	6.3	1.0	"	"	2405027	06/25/24 17:30	06/26/24	SM9223	
Bac - 5- GCR (24F1161-04) Water Sampled: 06/25/24 11:14 Received: 06/25/24 16:07									
Fecal Coliforms	33	1.8	MPN/100 mL	1	2405035	06/25/24 16:20	06/26/24	SM 9221	
E. Coli	5.2	1.0	"	"	2405027	06/25/24 17:30	06/26/24	SM9223	
Bac - 8 - UVR (24F1161-05) Water Sampled: 06/25/24 10:25 Received: 06/25/24 16:07									
Fecal Coliforms	23	1.8	MPN/100 mL	1	2405035	06/25/24 16:20	06/26/24	SM 9221	
E. Coli	14.8	1.0	"	"	2405027	06/25/24 17:30	06/26/24	SM9223	
Bac - 10 - UVR (24F1161-06) Water Sampled: 06/25/24 11:51 Received: 06/25/24 16:07									
Fecal Coliforms	2.0	1.8	MPN/100 mL	1	2405035	06/25/24 16:20	06/26/24	SM 9221	
E. Coli	1.0	1.0	"	"	2405027	06/25/24 17:30	06/26/24	SM9223	
Bac - 6 - GCR (24F1161-07) Water Sampled: 06/25/24 10:57 Received: 06/25/24 16:07									
Fecal Coliforms	11	1.8	MPN/100 mL	1	2405035	06/25/24 16:20	06/26/24	SM 9221	
E. Coli	1.0	1.0	"	"	2405027	06/25/24 17:30	06/26/24	SM9223	



CALIFORNIA LABORATORY SERVICES
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Page 2 of 3

07/02/24 13:00

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01
Project Manager: Esther Adelstein
CLS Work Order #: 24F1161
COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac - 11 - JR (24F1161-08) Water Sampled: 06/25/24 12:30 Received: 06/25/24 16:07									
Fecal Coliforms	6.8	1.8	MPN/100 mL	1	2405035	06/25/24 16:20	06/26/24	SM 9221	
E. Coli	<1	1.0	"	"	2405027	06/25/24 17:30	06/26/24	SM9223	
Bac - 9 - UVR (24F1161-09) Water Sampled: 06/25/24 12:07 Received: 06/25/24 16:07									
Fecal Coliforms	2.0	1.8	MPN/100 mL	1	2405035	06/25/24 16:20	06/26/24	SM 9221	
E. Coli	1.0	1.0	"	"	2405027	06/25/24 17:30	06/26/24	SM9223	
Bac - 14 - BCR (24F1161-10) Water Sampled: 06/25/24 13:42 Received: 06/25/24 16:07									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2405035	06/25/24 16:20	06/26/24	SM 9221	
E. Coli	1.0	1.0	"	"	2405027	06/25/24 17:30	06/26/24	SM9223	
Bac - 15 - SCR (24F1161-11) Water Sampled: 06/25/24 14:51 Received: 06/25/24 16:07									
Fecal Coliforms	7.8	1.8	MPN/100 mL	1	2405035	06/25/24 16:20	06/26/24	SM 9221	
E. Coli	2.0	1.0	"	"	2405027	06/25/24 17:30	06/26/24	SM9223	



CALIFORNIA LABORATORY SERVICES

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Page 3 of 3

07/02/24 13:00

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01 **CLS Work Order #: 24F1161**
Project Manager: Esther Adelstein COC #:

Notes and Definitions

BT-4a	<1.8
BT-4	<1
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



CALIFORNIA LABORATORY SERVICES

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July 11, 2024

CLS Work Order #: 24G0183
COC #:

Esther Adelstein
Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project Name: SMUD UARP Bac-T Monitoring

Enclosed are the results of analyses for samples received by the laboratory on 07/02/24 15:21. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

Daniel Johnson
Technical Director

CA SWRCB ELAP Accreditation/Registration number 1233

Report To:				Client Job Number 750.10 Task 0700.01			ANALYSIS REQUESTED										GEOTRACKER					
Stillwater Sciences 279 Cousteau Place Suite 400 Davis, CA 95618				Destination Laboratory Rancho Cordova			PRESERVATIVES Fecal coliform-15 Tube E. coli Quanti-tray										EDF REPORT YES ☒ NO ☐					
Project Manager Esther Adelstein eadelstein@stillwatersci.com				☒ CLS (916) 638-7301 3249 Fitzgerald Road Rancho Cordova, CA 95742 www.californialab.com ☐ OTHER													GLOBAL ID.					
Project Name SMUD UARP Bac-T Monitoring																	FIELD CONDITIONS:					
Sampled By <i>Camille Hymes + Reyna Carrillo</i>																						
Job Description Monitor seasonal bacteria levels in UARP reaches.																						
Site Location UARP							TURNAROUND TIME IN DAYS					SPECIAL INSTRUCTIONS										
DATE	TIME	SAMPLE IDENTIFICATION	FIELD ID.	MATRIX	NO.	TYPE	▼										1	2	3	5		
7/2/24	10:14	Bac-5-GCR		Surface water	2		6	1													X	
7/2/24	09:57	Bac-6-GCR		Surface water	2		6	1												X		
7/2/24	09:09	Bac-7-UVR		Surface water	2		6	1												X		
7/2/24	09:29	Bac-8-UVR		Surface water	2		6	1												X		
7/2/24	11:06	Bac-9-UVR		Surface water	2		6	1												X		
7/2/24	10:44	Bac-10-UVR		Surface water	2		6	1												X		
7/2/24	11:30	Bac-11-JR		Surface water	2		6	1												X	INVOICE TO:	
7/2/24	00:32	Bac-12-1HR		Surface water	2		6	1												X	Stillwater Sciences	
7/2/24	00:21	Bac-13-1HR		Surface water	2		6	1												X	Same as above	
7/2/24	12:48	Bac-14-BCR		Surface water	2		6	1												X		
7/2/24	14:07	Bac-15-SCR		Surface water	2		6	1												X	Project No. 750.10 Task 0800.01	
7/2/24				Surface water			6													X	QUOTE#	
SUSPECTED CONSTITUENTS							SAMPLE RETENTION TIME					PRESERVATIVES (1) HCL (3) = COLD (2) HNO ₃ (4) = H ₂ SO ₄										
RELINQUISHED BY (Signature)			PRINT NAME/COMPANY			DATE/TIME		RECEIVED BY (Signature)					PRINT NAME/COMPANY									
<i>Camille Hymes</i>			Camille Hymes / Stillwater Science			7/2/24 15:21																
RECEIVED AT LAB BY: <i>[Signature]</i>				DATE/TIME: 07/02/24 1524		CONDITIONS/COMMENTS: 7.4/8.6 +1.2																
SHIPPED BY:		☐ FED EX ☐ UPS ☐ OTHER																		AIR BILL #		



Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01
Project Manager: Esther Adelstein
CLS Work Order #: 24G0183
COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac - 5 - GCR (24G0183-01) Water Sampled: 07/02/24 10:14 Received: 07/02/24 15:21									
Fecal Coliforms	15	1.8	MPN/100 mL	1	2405232	07/02/24 15:45	07/05/24	SM 9221	
E. Coli	7.3	1.0	"	"	2405229	07/02/24 16:25	07/03/24	SM9223	
Bac - 6 - GCR (24G0183-02) Water Sampled: 07/02/24 09:57 Received: 07/02/24 15:21									
Fecal Coliforms	49	1.8	MPN/100 mL	1	2405232	07/02/24 15:45	07/05/24	SM 9221	
E. Coli	52.9	1.0	"	"	2405229	07/02/24 16:25	07/03/24	SM9223	
Bac - 7 - UVR (24G0183-03) Water Sampled: 07/02/24 09:09 Received: 07/02/24 15:21									
Fecal Coliforms	63	1.8	MPN/100 mL	1	2405232	07/02/24 15:45	07/05/24	SM 9221	
E. Coli	27.1	1.0	"	"	2405229	07/02/24 16:25	07/03/24	SM9223	
Bac - 8 - UVR (24G0183-04) Water Sampled: 07/02/24 09:29 Received: 07/02/24 15:21									
Fecal Coliforms	4.5	1.8	MPN/100 mL	1	2405232	07/02/24 15:45	07/05/24	SM 9221	
E. Coli	3.1	1.0	"	"	2405229	07/02/24 16:25	07/03/24	SM9223	
Bac - 9 - UVR (24G0183-05) Water Sampled: 07/02/24 11:06 Received: 07/02/24 15:21									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2405232	07/02/24 15:45	07/05/24	SM 9221	
E. Coli	1.0	1.0	"	"	2405229	07/02/24 16:25	07/03/24	SM9223	
Bac - 10 - UVR (24G0183-06) Water Sampled: 07/02/24 10:44 Received: 07/02/24 15:21									
Fecal Coliforms	22	1.8	MPN/100 mL	1	2405232	07/02/24 15:45	07/05/24	SM 9221	
E. Coli	5.2	1.0	"	"	2405229	07/02/24 16:25	07/03/24	SM9223	
Bac - 11 - JR (24G0183-07) Water Sampled: 07/02/24 11:30 Received: 07/02/24 15:21									
Fecal Coliforms	49	1.8	MPN/100 mL	1	2405232	07/02/24 15:45	07/05/24	SM 9221	
E. Coli	5.2	1.0	"	"	2405229	07/02/24 16:25	07/03/24	SM9223	



CALIFORNIA LABORATORY SERVICES
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Page 2 of 3

07/11/24 14:17

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01
Project Manager: Esther Adelstein

CLS Work Order #: 24G0183
COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac - 12 - 1 HR (24G0183-08) Water Sampled: 07/02/24 08:32 Received: 07/02/24 15:21									
Fecal Coliforms	2.0	1.8	MPN/100 mL	1	2405232	07/02/24 15:45	07/05/24	SM 9221	
E. Coli	<1	1.0	"	"	2405229	07/02/24 16:25	07/03/24	SM9223	
Bac - 13 - 1 HR (24G0183-09) Water Sampled: 07/02/24 08:21 Received: 07/02/24 15:21									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2405232	07/02/24 15:45	07/05/24	SM 9221	
E. Coli	<1	1.0	"	"	2405229	07/02/24 16:25	07/03/24	SM9223	
Bac - 14 - BCR (24G0183-10) Water Sampled: 07/02/24 12:48 Received: 07/02/24 15:21									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2405232	07/02/24 15:45	07/05/24	SM 9221	
E. Coli	<1	1.0	"	"	2405229	07/02/24 16:25	07/03/24	SM9223	
Bac - 15 - SCR (24G0183-11) Water Sampled: 07/02/24 14:07 Received: 07/02/24 15:21									
Fecal Coliforms	17	1.8	MPN/100 mL	1	2405232	07/02/24 15:45	07/05/24	SM 9221	
E. Coli	8.6	1.0	"	"	2405229	07/02/24 16:25	07/03/24	SM9223	



CALIFORNIA LABORATORY SERVICES

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Page 3 of 3

07/11/24 14:17

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01 **CLS Work Order #: 24G0183**
Project Manager: Esther Adelstein COC #:

Notes and Definitions

BT-4a	<1.8
BT-4	<1
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



CALIFORNIA LABORATORY SERVICES

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July 16, 2024

CLS Work Order #: 24G0529
COC #:

Esther Adelstein
Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project Name: SMUD UARP Bac-T Monitoring

Enclosed are the results of analyses for samples received by the laboratory on 07/09/24 16:15. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

Daniel Johnson
Technical Director

Report To:

Stillwater Sciences
279 Cousteau Place Suite 400
Davis, CA 95618

Project Manager
Esther Adelstein eadelstein@stillwatersci.com

Project Name
SMUD UARP Bac-T Monitoring

Sampled By
Rosalie Julius

Job Description
Monitor seasonal bacteria levels in UARP reaches.

Site Location UARP

Client Job Number
750.10 Task 0700.01

Destination Laboratory
Rancho Cordova

☒ **CLS** (916) 638-7301
3249 Fitzgerald Road
Rancho Cordova, CA
95742
www.californialab.com

☐ **OTHER**

ANALYSIS REQUESTED

GEOTRACKER

EDF REPORT YES ☒ NO ☐

GLOBAL ID.

FIELD CONDITIONS:

TURNAROUND * SPECIAL
TIME IN DAYS INSTRUCTIONS

1 2 3 5

DATE	TIME	SAMPLE IDENTIFICATION	FIELD ID.	CONTAINER			PRESERVATIVES	ANALYSIS REQUESTED					TURNAROUND * SPECIAL				
				MATRIX	NO.	TYPE							1	2	3	5	INSTRUCTIONS
7/9/24	8:50	Bac-13-1HR		Surface water	2		6	1			1						X
7/9/24	11:36	Bac-10-UVR		Surface water	2		6	1			1						X
7/9/24	9:34	Bac-7-UVR		Surface water	2		6	1			1						X
7/9/24	9:56	Bac-8-UVR		Surface water	2		6	1			1						X
7/9/24	13:49	Bac-14-BCR		Surface water	2		6	1			1						X
7/9/24	12:22	Bac-11-JR		Surface water	2		6	1			1						X
7/9/24	11:55	Bac-9-UVR		Surface water	2		6	1			1						X
7/9/24	9:05	Bac-12-1HR		Surface water	2		6	1			1						X
7/9/24	10:43	Bac-6-GCR		Surface water	2		6	1			1						X
7/9/24	14:59	Bac-15-SCR		Surface water	2		6	1			1						X
7/9/24	10:57	Bac-5-GCR		Surface water	2		6	1			1						X
				Surface water			6										X

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

PRESERVATIVES (1) HCL (3) = COLD
(2) HNO₃ (4) = H₂SO₄

RELINQUISHED BY (Signature)

PRINT NAME/COMPANY

DATE/TIME

RECEIVED BY (Signature)

PRINT NAME/COMPANY

RECEIVED AT LAB BY: [Signature]

DATE/TIME: 07/09/24 16:15

CONDITIONS/COMMENTS: 2.4 / 3.6

SHIPPED BY:

☐ FED EX ☐ UPS ☐ OTHER

AIR BILL # 41.2

INVOICE TO:

Stillwater Sciences

Same as above

Project No. 750.10 Task
0800.01

QUOTE#



CALIFORNIA LABORATORY SERVICES
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Page 1 of 3

07/16/24 14:33

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01
Project Manager: Esther Adelstein

CLS Work Order #: 24G0529
COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac - 13 - 1HR (24G0529-01) Water Sampled: 07/09/24 08:50 Received: 07/09/24 16:15									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2405372	07/09/24 16:30	07/10/24	SM 9221	
E. Coli	<1	1.0	"	"	2405369	07/09/24 17:40	07/10/24	SM9223	
Bac - 10 - UVR (24G0529-02) Water Sampled: 07/09/24 11:36 Received: 07/09/24 16:15									
Fecal Coliforms	2.0	1.8	MPN/100 mL	1	2405372	07/09/24 16:30	07/10/24	SM 9221	
E. Coli	<1	1.0	"	"	2405369	07/09/24 17:40	07/10/24	SM9223	
Bac - 7 - UVR (24G0529-03) Water Sampled: 07/09/24 09:34 Received: 07/09/24 16:15									
Fecal Coliforms	79	1.8	MPN/100 mL	1	2405372	07/09/24 16:30	07/10/24	SM 9221	
E. Coli	83.9	1.0	"	"	2405369	07/09/24 17:40	07/10/24	SM9223	
Bac - 8 - UVR (24G0529-04) Water Sampled: 07/09/24 09:36 Received: 07/09/24 16:15									
Fecal Coliforms	13	1.8	MPN/100 mL	1	2405372	07/09/24 16:30	07/10/24	SM 9221	
E. Coli	6.3	1.0	"	"	2405369	07/09/24 17:40	07/10/24	SM9223	
Bac - 14 - BCR (24G0529-05) Water Sampled: 07/09/24 13:49 Received: 07/09/24 16:15									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2405372	07/09/24 16:30	07/10/24	SM 9221	
E. Coli	<1	1.0	"	"	2405369	07/09/24 17:40	07/10/24	SM9223	
Bac - 11 - JR (24G0529-06) Water Sampled: 07/09/24 12:22 Received: 07/09/24 16:15									
Fecal Coliforms	23	1.8	MPN/100 mL	1	2405372	07/09/24 16:30	07/10/24	SM 9221	
E. Coli	13.5	1.0	"	"	2405369	07/09/24 17:40	07/10/24	SM9223	
Bac - 9 - UVR (24G0529-07) Water Sampled: 07/09/24 11:55 Received: 07/09/24 16:15									
Fecal Coliforms	2.0	1.8	MPN/100 mL	1	2405372	07/09/24 16:30	07/10/24	SM 9221	
E. Coli	5.2	1.0	"	"	2405369	07/09/24 17:40	07/10/24	SM9223	



CALIFORNIA LABORATORY SERVICES

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Page 2 of 3

07/16/24 14:33

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01
Project Manager: Esther Adelstein

CLS Work Order #: 24G0529
COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac - 12 - 1HR (24G0529-08) Water Sampled: 07/09/24 09:05 Received: 07/09/24 16:15									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2405372	07/09/24 16:30	07/10/24	SM 9221	
E. Coli	<1	1.0	"	"	2405369	07/09/24 17:40	07/10/24	SM9223	
Bac - 6 - GCR (24G0529-09) Water Sampled: 07/09/24 10:43 Received: 07/09/24 16:15									
Fecal Coliforms	33	1.8	MPN/100 mL	1	2405372	07/09/24 16:30	07/10/24	SM 9221	
E. Coli	9.8	1.0	"	"	2405369	07/09/24 17:40	07/10/24	SM9223	
Bac - 15 - SCR (24G0529-10) Water Sampled: 07/09/24 14:59 Received: 07/09/24 16:15									
Fecal Coliforms	170	1.8	MPN/100 mL	1	2405372	07/09/24 16:30	07/10/24	SM 9221	
E. Coli	186.0	1.0	"	"	2405369	07/09/24 17:40	07/10/24	SM9223	
Bac - 5 - GCR (24G0529-11) Water Sampled: 07/09/24 10:57 Received: 07/09/24 16:15									
Fecal Coliforms	33	1.8	MPN/100 mL	1	2405372	07/09/24 16:30	07/10/24	SM 9221	
E. Coli	3.1	1.0	"	"	2405369	07/09/24 17:40	07/10/24	SM9223	



CALIFORNIA LABORATORY SERVICES

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Page 3 of 3

07/16/24 14:33

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01 **CLS Work Order #: 24G0529**
Project Manager: Esther Adelstein COC #:

Notes and Definitions

BT-4a	<1.8
BT-4	<1
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



CALIFORNIA LABORATORY SERVICES

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July 23, 2024

CLS Work Order #: 24G0952
COC #:

Esther Adelstein
Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project Name: SMUD UARP Bac-T Monitoring

Enclosed are the results of analyses for samples received by the laboratory on 07/16/24 14:50. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

Daniel Johnson
Technical Director

(of)

Report To:				Client Job Number 750.10 Task 0700.01		ANALYSIS REQUESTED											
Stillwater Sciences 279 Cousteau Place Suite 400 Davis, CA 95618				Destination Laboratory Rancho Cordova													
Project Manager Esther Adelstein eadelstein@stillwatersci.com				☒ CLS (916) 638-7301 3249 Fitzgerald Road Rancho Cordova, CA 95742 www.californialab.com													
Project Name SMUD UARP Bac-T Monitoring				☐ OTHER													
Sampled By Camille Hymes																	
Job Description Monitor seasonal bacteria levels in UARP reaches.																	
Site Location UARP																	
DATE	TIME	SAMPLE IDENTIFICATION	FIELD ID.	CONTAINER			PRESERVATIVES	ANALYSIS REQUESTED					GEOTRACKER				
				MATRIX	NO.	TYPE		Fecal coliform-15 Tube	E. coli Quanti-tray	TURNAROUND TIME IN DAYS	SPECIAL INSTRUCTIONS	YES	NO				
7/16/24	9:44	Bac-13-1HR		Surface water	2		6	1									
7/16/24	12:55	Bac-9-UVR		Surface water	2		6	1									
7/16/24	9:58	Bac-12-1HR		Surface water	2		6	1									
		Bac-13-1HR		Surface water			6										
7/16/24	10:25	Bac-7-UVR		Surface water	2		6	1						X			
7/16/24	13:11	Bac-11-JR		Surface water	2		6	1						X			
7/16/24	11:31	Bac-6-GCR		Surface water	2		6	1						X	INVOICE TO:		
7/16/24	11:44	Bac-5-GCR		Surface water	2		6	1						X	Stillwater Sciences		
7/16/24	10:57	Bac-8-UVR		Surface water	2		6	1						X	Same as above		
7/16/24	12:26	BAC-10-UVR		Surface water	2		6	1						X			
				Surface water			6							X	Project No. 750.10 Task 0800.01		
				Surface water			6							X	QUOTE#		
SUSPECTED CONSTITUENTS							SAMPLE RETENTION TIME					PRESERVATIVES: (1) HCL (3) = COLD (2) HNO ₃ (4) = H ₂ SO ₄					
RELINQUISHED BY (Signature)			PRINT NAME/COMPANY			DATE/TIME		RECEIVED BY (Signature)				PRINT NAME/COMPANY					
			Camille Hymes / Stillwater Science			7/16/24 14:50											
RECEIVED AT LAB BY:					DATE/TIME: 7/16/24 14:50		CONDITIONS/COMMENTS: 1.1/2.3										
SHIPPED BY:		☐ FED EX ☐ UPS ☐ OTHER AIR BILL #															



CALIFORNIA LABORATORY SERVICES
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Page 1 of 3

07/23/24 15:44

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01
Project Manager: Esther Adelstein

CLS Work Order #: 24G0952
COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac - 13 - 1HR (24G0952-01) Water Sampled: 07/16/24 09:44 Received: 07/16/24 14:50									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2405628	07/16/24 15:00	07/17/24	SM 9221	
E. Coli	<1	1.0	"	"	2405620	07/16/24 17:45	07/17/24	SM9223	
Bac - 9 - UVR (24G0952-02) Water Sampled: 07/16/24 12:55 Received: 07/16/24 14:50									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2405628	07/16/24 15:00	07/17/24	SM 9221	
E. Coli	<1	1.0	"	"	2405620	07/16/24 17:45	07/17/24	SM9223	
Bac - 12 - 1HR (24G0952-03) Water Sampled: 07/16/24 09:58 Received: 07/16/24 14:50									
Fecal Coliforms	6.8	1.8	MPN/100 mL	1	2405628	07/16/24 15:00	07/17/24	SM 9221	
E. Coli	1.0	1.0	"	"	2405620	07/16/24 17:45	07/17/24	SM9223	
Bac - 7 - UVR (24G0952-04) Water Sampled: 07/16/24 10:25 Received: 07/16/24 14:50									
Fecal Coliforms	7.8	1.8	MPN/100 mL	1	2405628	07/16/24 15:00	07/17/24	SM 9221	
E. Coli	6.1	1.0	"	"	2405620	07/16/24 17:45	07/17/24	SM9223	
Bac - 11 - JR (24G0952-05) Water Sampled: 07/16/24 13:11 Received: 07/16/24 14:50									
Fecal Coliforms	33	1.8	MPN/100 mL	1	2405628	07/16/24 15:00	07/17/24	SM 9221	
E. Coli	22.8	1.0	"	"	2405620	07/16/24 17:45	07/17/24	SM9223	
Bac - 6 - GCR (24G0952-06) Water Sampled: 07/16/24 11:31 Received: 07/16/24 14:50									
Fecal Coliforms	13	1.8	MPN/100 mL	1	2405628	07/16/24 15:00	07/17/24	SM 9221	
E. Coli	6.3	1.0	"	"	2405620	07/16/24 17:45	07/17/24	SM9223	
Bac - 5 - GCR (24G0952-07) Water Sampled: 07/16/24 11:44 Received: 07/16/24 14:50									
Fecal Coliforms	350	1.8	MPN/100 mL	1	2405628	07/16/24 15:00	07/17/24	SM 9221	
E. Coli	488.4	1.0	"	"	2405620	07/16/24 17:45	07/17/24	SM9223	



CALIFORNIA LABORATORY SERVICES
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Page 2 of 3

07/23/24 15:44

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01
Project Manager: Esther Adelstein
CLS Work Order #: 24G0952
COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac - 8 - UVR (24G0952-08) Water Sampled: 07/16/24 10:57 Received: 07/16/24 14:50									
Fecal Coliforms	33	1.8	MPN/100 mL	1	2405628	07/16/24 15:00	07/17/24	SM 9221	
E. Coli	22.6	1.0	"	"	2405620	07/16/24 17:45	07/17/24	SM9223	
Bac - 10 - UVR (24G0952-09) Water Sampled: 07/16/24 12:26 Received: 07/16/24 14:50									
Fecal Coliforms	11	1.8	MPN/100 mL	1	2405628	07/16/24 15:00	07/17/24	SM 9221	
E. Coli	5.2	1.0	"	"	2405620	07/16/24 17:45	07/17/24	SM9223	



CALIFORNIA LABORATORY SERVICES

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Page 3 of 3

07/23/24 15:44

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01 **CLS Work Order #: 24G0952**
Project Manager: Esther Adelstein COC #:

Notes and Definitions

BT-4a	<1.8
BT-4	<1
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



CALIFORNIA LABORATORY SERVICES

Committed. Responsive. Flexible.

July 24, 2024

CLS Work Order #: 24G1041

COC #:

Esther Adelstein
Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project Name: SMUD UARP Bac-T Monitoring

Enclosed are the results of analyses for samples received by the laboratory on 07/17/24 11:40. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

Daniel Johnson
Technical Director

CA SWRCB ELAP Accreditation/Registration number 1233

Page 2 of 4



CALIFORNIA LABORATORY SERVICES

Committed. Responsive. Flexible.

Page 2 of 3

07/24/24 16:00

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01
Project Manager: Esther Adelstein

CLS Work Order #: 24G1041
COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac-14-BCR (24G1041-01) Water Sampled: 07/17/24 09:06 Received: 07/17/24 11:40									
E. Coli	1.0	1.0	MPN/100 mL	1	2405665	07/17/24	07/18/24	SM9223	
Fecal Coliforms	<1.8	1.8	"	"	2405661	07/17/24	07/18/24	SM 9221	
Bac-15-SCR (24G1041-02) Water Sampled: 07/17/24 10:18 Received: 07/17/24 11:40									
E. Coli	22.6	1.0	MPN/100 mL	1	2405665	07/17/24	07/18/24	SM9223	
Fecal Coliforms	23	1.8	"	"	2405661	07/17/24	07/18/24	SM 9221	



CALIFORNIA LABORATORY SERVICES

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Page 3 of 3

07/24/24 16:00

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0700.01
Project Manager: Esther Adelstein

CLS Work Order #: 24G1041
COC #:

Notes and Definitions

BT-4	<1.8
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



CALIFORNIA LABORATORY SERVICES

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August 28, 2024

CLS Work Order #: 24H1100

COC #:

Esther Adelstein
Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project Name: SMUD UARP Bac-T Monitoring

Enclosed are the results of analyses for samples received by the laboratory on 08/21/24 15:00. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

Daniel Johnson
Technical Director

CA SWRCB ELAP Accreditation/Registration number 1233



CALIFORNIA LABORATORY SERVICES

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08/28/24 11:21

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0800.01
Project Manager: Esther Adelstein

CLS Work Order #: 24H1100

COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac-4-LL (24H1100-01) Surface Water Sampled: 08/21/24 11:40 Received: 08/21/24 15:00										
E. Coli	<1	1.0	1.0	MPN/100 mL	1	2406700	08/21/24	08/22/24	SM9223	
Fecal Coliforms	<1.8	1.8	1.8	"	"	2406711	08/21/24	08/22/24	SM 9221	
Bac-3-LL (24H1100-02) Surface Water Sampled: 08/21/24 12:00 Received: 08/21/24 15:00										
E. Coli	<1	1.0	1.0	MPN/100 mL	1	2406700	08/21/24	08/22/24	SM9223	
Fecal Coliforms	<1.8	1.8	1.8	"	"	2406711	08/21/24	08/22/24	SM 9221	
Bac-1-BI (24H1100-03) Surface Water Sampled: 08/21/24 08:00 Received: 08/21/24 15:00										
E. Coli	<1	1.0	1.0	MPN/100 mL	1	2406700	08/21/24	08/22/24	SM9223	
Fecal Coliforms	<1.8	1.8	1.8	"	"	2406711	08/21/24	08/22/24	SM 9221	
Bac-2-BI (24H1100-04) Surface Water Sampled: 08/21/24 08:45 Received: 08/21/24 15:00										
E. Coli	1.0	1.0	1.0	MPN/100 mL	1	2406700	08/21/24	08/22/24	SM9223	
Fecal Coliforms	<1.8	1.8	1.8	"	"	2406711	08/21/24	08/22/24	SM 9221	



CALIFORNIA LABORATORY SERVICES

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08/28/24 11:21

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0800.01
Project Manager: Esther Adelstein
CLS Work Order #: 24H1100
COC #:

Notes and Definitions

BT-4a	<1.8
BT-4	<1
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

This is a “MDL Report”, thus if the report denotes an “ND” for a particular analyte, it should be noted that the analyte was not detected at or above the MDL.

CALIFORNIA LABORATORY SERVICES CHAIN OF CUSTODY

CLS ID. NO. 2441100 (of)

Report To:				Client Job Number 750.10 Task 0800.01		ANALYSIS REQUESTED										GEOTRACKER					
Stillwater Sciences 279 Cousteau Place Suite 400 Davis, CA 95618				Destination Laboratory Rancho Cordova		PRESERVATIVES Fecal coliform-15 Tube E. coli Quanti-tray										EDF REPORT YES ☒ NO ☐					
Project Manager Esther Adelstein eadelstein@stillwatersci.com				☒ CLS (916) 638-7301 3249 Fitzgerald Road Rancho Cordova, CA 95742 www.californialab.com ☐ OTHER												GLOBAL ID.					
Project Name SMUD UARP Bac-T Monitoring																FIELD CONDITIONS:					
Sampled By GFA																					
Job Description Monitor seasonal bacteria levels in UARP reaches.																					
Site Location UARP						TURNAROUND TIME IN DAYS SPECIAL INSTRUCTIONS															
DATE	TIME	SAMPLE IDENTIFICATION	FIELD ID.	MATRIX	NO.	TYPE											1	2	3	5	
7/21	1140	Bac-4-LL		Surface water			6	X											X		
	1200	Bac-3-LL		Surface water			6	J											X		
	800	Bac-1-BI		Surface water			6	J											X		
	845	Bac-2-BI		Surface water			6	J											X		
				Surface water			6												X		
				Surface water			6												X		
				Surface water			6												X	INVOICE TO:	
				Surface water			6												X	Stillwater Sciences	
				Surface water			6												X	Same as above	
				Surface water			6												X		
				Surface water			6												X	Project No. 750.10 Task 0800.01	
				Surface water			6												X	QUOTE#	
SUSPECTED CONSTITUENTS							SAMPLE RETENTION TIME					PRESERVATIVES (1) HCL (3) = COLD (2) HNO ₃ (4) = H ₂ SO ₄									
RELINQUISHED BY (Signature) E. Hallen				PRINT NAME/COMPANY SWS			DATE/TIME 1500 7/21		RECEIVED BY (Signature)					PRINT NAME/COMPANY							
RECEIVED AT LAB BY [Signature]							DATE/TIME: 08/21/24 1500		CONDITIONS/COMMENTS: 7.3 / 8.5 +1.2												
SHIPPED BY:		☐ FED EX ☐ UPS ☐ OTHER																		AIR BILL #	



CALIFORNIA LABORATORY SERVICES

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September 06, 2024

CLS Work Order #: 24H1531

COC #:

Esther Adelstein
Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project Name: SMUD UARP Bac-T Monitoring

Enclosed are the results of analyses for samples received by the laboratory on 08/29/24 15:10. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

Daniel Johnson
Technical Director

CA SWRCB ELAP Accreditation/Registration number 1233



CALIFORNIA LABORATORY SERVICES
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09/06/24 14:26

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0800.01
Project Manager: Esther Adelstein

CLS Work Order #: 24H1531
COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac-1-BI (24H1531-01) Surface Water Sampled: 08/29/24 08:30 Received: 08/29/24 15:10										
E. Coli	<1	1.0	1.0	MPN/100 mL	1	2406966	08/29/24	08/30/24	SM9223	
Fecal Coliforms	33	1.8	1.8	"	"	2406969	08/29/24	08/30/24	SM 9221	
Bac-2-BI (24H1531-02) Surface Water Sampled: 08/29/24 09:20 Received: 08/29/24 15:10										
E. Coli	<1	1.0	1.0	MPN/100 mL	1	2406966	08/29/24	08/30/24	SM9223	
Fecal Coliforms	<1.8	1.8	1.8	"	"	2406969	08/29/24	08/30/24	SM 9221	
Bac-3-LL (24H1531-03) Surface Water Sampled: 08/29/24 11:35 Received: 08/29/24 15:10										
E. Coli	<1	1.0	1.0	MPN/100 mL	1	2406966	08/29/24	08/30/24	SM9223	
Fecal Coliforms	23	1.8	1.8	"	"	2406969	08/29/24	08/30/24	SM 9221	
Bac-4-LL (24H1531-04) Surface Water Sampled: 08/29/24 12:00 Received: 08/29/24 15:10										
E. Coli	<1	1.0	1.0	MPN/100 mL	1	2406966	08/29/24	08/30/24	SM9223	
Fecal Coliforms	2.0	1.8	1.8	"	"	2406969	08/29/24	08/30/24	SM 9221	



CALIFORNIA LABORATORY SERVICES

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09/06/24 14:26

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0800.01
Project Manager: Esther Adelstein
CLS Work Order #: 24H1531
COC #:

Notes and Definitions

BT-4a	<1.8
BT-4	<1
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

This is a “MDL Report”, thus if the report denotes an “ND” for a particular analyte, it should be noted that the analyte was not detected at or above the MDL.

CALIFORNIA LABORATORY SERVICES CHAIN OF CUSTODY

CLS ID. NO.

2441531

(of)

Report To:				Client Job Number 750.10 Task 0800.01		ANALYSIS REQUESTED				GEOTRACKER									
Stillwater Sciences 279 Cousteau Place Suite 400 Davis, CA 95618				Destination Laboratory Rancho Cordova		PRESERVATIVES Fecal coliform-15 Tube E. coli Quantity 6 6 6 6 6 6 6 6 6 6				EDFREPORT YES ☒ NO ☐									
Project Manager Esther Adelstein eadelstein@stillwatersci.com				☒ CLS (916) 638-7301 3249 Fitzgerald Road Rancho Cordova, CA 95742 www.californialab.com ☐ OTHER						GLOBAL ID.									
Project Name SMUD UARP Bac-T Monitoring										FIELD CONDITIONS:									
Sampled By MEG, EPA																			
Job Description Monitor seasonal bacteria levels in UARP reaches.																			
Site Location UARP						TURNAROUND TIME IN DAYS				SPECIAL INSTRUCTIONS									
DATE		TIME		SAMPLE IDENTIFICATION		FIELD ID.		CONTAINER		1		2		3		5			
								MATRIX NO. TYPE											
8/29/24		8:30		Bac-1-BI				Surface water 2		6		X				X			
9:20				Bac-2-BI				Surface water 2		6		X				X			
11:35				Bac-3-LL				Surface water 2		6		X				X			
12:00				Bac-4-LL				Surface water 2		6		X				X			
								Surface water		6						X			
								Surface water		6						X			
								Surface water		6						X			
								Surface water		6						X			
								Surface water		6						X			
								Surface water		6						X			
								Surface water		6						X			
								Surface water		6						X			
								Surface water		6						X			
								Surface water		6						X			
								Surface water		6						X			
SUSPECTED CONSTITUENTS										SAMPLE RETENTION TIME				PRESERVATIVES (1) HCL (2) HNO3 (3) - COLD (4) - H2SO4					
RELINQUISHED BY (Signature)				PRINT NAME/COMPANY				DATE/TIME				RECEIVED BY (Signature)				PRINT NAME/COMPANY			
				Elliott Allen/Stillwater				8/29 1510											
RECEIVED AT LAB BY:				DATE/TIME: 8/29 1510				CONDITIONS/COMMENTS:				9.1 / 10.3							
SHIPPED BY:				☒ FED EX ☐ UPS ☐ OTHER				AIR BILL #											



CALIFORNIA LABORATORY SERVICES

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September 10, 2024

CLS Work Order #: 24I0051
COC #:

Esther Adelstein
Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project Name: SMUD UARP Bac-T Monitoring

Enclosed are the results of analyses for samples received by the laboratory on 09/03/24 14:35. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

Daniel Johnson
Technical Director

CA SWRCB ELAP Accreditation/Registration number 1233

CLS ID. NO. 245003 (of)

Page 2 of 4



CALIFORNIA LABORATORY SERVICES
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Page 1 of 2

09/10/24 15:07

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0800.01
Project Manager: Esther Adelstein

CLS Work Order #: 24I0051
COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac-1-BI (24I0051-01) Surface Water Sampled: 09/03/24 08:30 Received: 09/03/24 14:35									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2407125	09/03/24 14:55	09/04/24	SM 9221	
E. Coli	<1	1.0	"	"	2407119	09/03/24 17:30	09/04/24	SM9223	
Bac-2-BI (24I0051-02) Surface Water Sampled: 09/03/24 09:06 Received: 09/03/24 14:35									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2407125	09/03/24 14:55	09/04/24	SM 9221	
E. Coli	<1	1.0	"	"	2407119	09/03/24 17:30	09/04/24	SM9223	
Bac-3-LL (24I0051-03) Surface Water Sampled: 09/03/24 11:20 Received: 09/03/24 14:35									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2407125	09/03/24 14:55	09/04/24	SM 9221	
E. Coli	<1	1.0	"	"	2407119	09/03/24 17:30	09/04/24	SM9223	
Bac-4-LL (24I0051-04) Surface Water Sampled: 09/03/24 11:37 Received: 09/03/24 14:35									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2407125	09/03/24 14:55	09/04/24	SM 9221	
E. Coli	<1	1.0	"	"	2407119	09/03/24 17:30	09/04/24	SM9223	



CALIFORNIA LABORATORY SERVICES

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Page 2 of 2

09/10/24 15:07

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0800.01
Project Manager: Esther Adelstein

CLS Work Order #: 24I0051
COC #:

Notes and Definitions

BT-4a	<1.8
BT-4	<1
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



CALIFORNIA LABORATORY SERVICES

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September 17, 2024

CLS Work Order #: **2410441**
COC #:

Esther Adelstein
Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project Name: SMUD UARP Bac-T Monitoring

Enclosed are the results of analyses for samples received by the laboratory on 09/10/24 14:01. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

Daniel Johnson
Technical Director

CA SWRCB ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES CHAIN OF CUSTODY

CLS ID. NO. 2410441 (___ of ___)

Report To:				Client Job Number 750.10 Task 0800.01		ANALYSIS REQUESTED						GEOTRACKER EDF REPORT YES ☒ NO ☐ GLOBAL ID.													
Stillwater Sciences 279 Cousteau Place Suite 400 Davis, CA 95618				Destination Laboratory Rancho Cordova		PRESERVATIVES Fecal coliform-15 Tube	E. coli Quanti-tray						FIELD CONDITIONS:												
Project Manager Esther Adelstein eadelstein@stillwatersci.com				☒ CLS (916) 638-7301 3249 Fitzgerald Road Rancho Cordova, CA 95742 www.californialab.com ☐ OTHER									TURNAROUND TIME IN DAYS <table style="width:100%; text-align: center;"> <tr><td>1</td><td>2</td><td>3</td><td>5</td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table> SPECIAL INSTRUCTIONS					1	2	3	5				
1	2	3	5																						
Project Name SMUD UARP Bac-T Monitoring																									
Sampled By EHA + ERDA																									
Job Description Monitor seasonal bacteria levels in UARP reaches.																									
Site Location UARP																									
DATE	TIME	SAMPLE IDENTIFICATION	FIELD ID.	MATRIX	NO.	TYPE	6																		
9/10/24	1010	Bac-1-BI		Surface water	2		6	X			X														
9/10/24	1030	Bac-2-BI		Surface water	2		6	X		X															
9/10/24	0730	Bac-3-LL		Surface water	2		6	X		X															
9/10/24	0735	Bac-4-LL		Surface water	2		6	X		X															
				Surface water			6																		
				Surface water			6																		
				Surface water			6										INVOICE TO:								
				Surface water			6										Stillwater Sciences								
				Surface water			6										Same as above								
				Surface water			6																		
				Surface water			6										Project No. 750.10 Task 0800.01								
				Surface water			6										QUOTE#								
SUSPECTED CONSTITUENTS							SAMPLE RETENTION TIME					PRESERVATIVES (1) HCL (3) = COLD (2) HNO3 (4) = H2SO4													
RELINQUISHED BY (Signature)			PRINT NAME/COMPANY			DATE/TIME		RECEIVED BY (Signature)			PRINT NAME/COMPANY														
			Esther Adelstein/Stillwater			9/10/24 1401																			
RECEIVED AT LAB BY:						DATE/TIME: 09/12/24 1401		CONDITIONS/COMMENTS: 4.3/5-1 +0.8																	
SHIPPED BY:		☐ FED EX ☐ UPS ☐ OTHER																							
AIR BILL #																									



CALIFORNIA LABORATORY SERVICES
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Page 1 of 2

09/17/24 15:45

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0800.01
Project Manager: Esther Adelstein

CLS Work Order #: 24I0441
COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac-1-BI (24I0441-01) Surface Water Sampled: 09/10/24 10:10 Received: 09/10/24 14:01									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2407323	09/10/24 14:25	09/11/24	SM 9221	
E. Coli	<1	1.0	"	"	2407334	09/10/24 16:50	09/11/24	SM9223	
Bac-2-BI (24I0441-02) Surface Water Sampled: 09/10/24 10:30 Received: 09/10/24 14:01									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2407323	09/10/24 14:25	09/11/24	SM 9221	
E. Coli	<1	1.0	"	"	2407334	09/10/24 16:50	09/11/24	SM9223	
Bac-3-LL (24I0441-03) Surface Water Sampled: 09/10/24 07:30 Received: 09/10/24 14:01									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2407323	09/10/24 14:25	09/11/24	SM 9221	
E. Coli	<1	1.0	"	"	2407334	09/10/24 16:50	09/11/24	SM9223	
Bac-4-LL (24I0441-04) Surface Water Sampled: 09/10/24 07:35 Received: 09/10/24 14:01									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2407323	09/10/24 14:25	09/11/24	SM 9221	
E. Coli	<1	1.0	"	"	2407334	09/10/24 16:50	09/11/24	SM9223	



CALIFORNIA LABORATORY SERVICES

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Page 2 of 2

09/17/24 15:45

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0800.01
Project Manager: Esther Adelstein

CLS Work Order #: 24I0441
COC #:

Notes and Definitions

BT-4a	<1.8
BT-4	<1
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



CALIFORNIA LABORATORY SERVICES

Committed. Responsive. Flexible.

September 24, 2024

CLS Work Order #: **2410796**
COC #:

Esther Adelstein
Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project Name: SMUD UARP Bac-T Monitoring

Enclosed are the results of analyses for samples received by the laboratory on 09/17/24 15:02. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness. Any comments and exceptions are addressed under the Notes and Definitions section.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

Daniel Johnson
Technical Director

CALIFORNIA LABORATORY SERVICES CHAIN OF CUSTODY

CLS ID. NO. 2410796 (of)

Report To:				Client Job Number 750.10 Task 0800.01		ANALYSIS REQUESTED				GEOTRACKER								
Stillwater Sciences 279 Cousteau Place Suite 400				Destination Laboratory Rancho Cordova		PRESERVATIVES Fecal coliform-15 Tube	E. coli Quanti-Tray	EDF REPORT YES ☒ NO ☐						GLOBAL ID.				
Davis, CA 95618				☒ CLS (916) 638-7301 3249 Fitzgerald Road Rancho Cordova, CA 95742 www.californialab.com ☐ OTHER										FIELD CONDITIONS:				
Project Manager Esther Adelstein eadelstein@stillwatersci.com																		
Project Name SMUD UARP Bac-T Monitoring																		
Sampled By Rosalie Julius, Michael Gengo																		
Job Description Monitor seasonal bacteria levels in UARP reaches.																		
Site Location <u>UARP</u>																		
DATE	TIME	SAMPLE IDENTIFICATION	FIELD ID.	CONTAINER			▼						TURNAROUND TIME IN DAYS				SPECIAL INSTRUCTIONS	
				MATRIX	NO.	TYPE		1	2	3	5							
09/17/24	09:20	Bac-1-B1		Surface water	2		6	1									X	
09/17/24	09:48	Bac-2-B1		Surface water	2		6	1									X	
09/17/24	12:10	Bac-3-LL		Surface water	2		6	1									X	
09/17/24	12:29	Bac-4-LL		Surface water	2		6	1									X	
				Surface water			6										X	
				Surface water			6										X	
				Surface water			6										X	INVOICE TO:
				Surface water			6										X	Stillwater Sciences
				Surface water			6										X	Same as above
				Surface water			6										X	
				Surface water			6										X	Project No. 750.10 Task 0800.01
				Surface water			6										X	QUOTE#
SUSPECTED CONSTITUENTS							SAMPLE RETENTION TIME					PRESERVATIVES (1) HCL (3) - COLD (2) HNO ₃ (4) - H ₂ SO ₄						
RELINQUISHED BY (Signature)			PRINT NAME/COMPANY			DATE/TIME		RECEIVED BY (Signature)					PRINT NAME/COMPANY					
			Rosalie Julius			09/17/24												
			Stillwater Sciences			15:02												
RECEIVED AT LAB BY:				DATE/TIME: 9/17/24 15:02		CONDITIONS/COMMENTS: 6.1/5.3												
SHIPPED BY:		☐ FED EX ☐ UPS ☐ OTHER AIR BILL # _____																



CALIFORNIA LABORATORY SERVICES
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09/24/24 15:15

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0800.01
Project Manager: Esther Adelstein

CLS Work Order #: 24I0796
COC #:

Microbiological Parameters by APHA Standard Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bac-1-BI (24I0796-01) Surface Water Sampled: 09/17/24 09:20 Received: 09/17/24 15:02									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2407538	09/17/24 15:15	09/18/24	SM 9221	
E. Coli	<1	1.0	"	"	2407527	09/17/24 15:50	09/18/24	SM9223	
Bac-2-BI (24I0796-02) Surface Water Sampled: 09/17/24 09:48 Received: 09/17/24 15:02									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2407538	09/17/24 15:15	09/18/24	SM 9221	
E. Coli	<1	1.0	"	"	2407527	09/17/24 15:50	09/18/24	SM9223	
Bac-3-LL (24I0796-03) Surface Water Sampled: 09/17/24 12:10 Received: 09/17/24 15:02									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2407538	09/17/24 15:15	09/18/24	SM 9221	
E. Coli	<1	1.0	"	"	2407527	09/17/24 15:50	09/18/24	SM9223	
Bac-4-LL (24I0796-04) Surface Water Sampled: 09/17/24 12:29 Received: 09/17/24 15:02									
Fecal Coliforms	<1.8	1.8	MPN/100 mL	1	2407538	09/17/24 15:15	09/18/24	SM 9221	
E. Coli	<1	1.0	"	"	2407527	09/17/24 15:50	09/18/24	SM9223	



CALIFORNIA LABORATORY SERVICES

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09/24/24 15:15

Stillwater Sciences
2855 Telegraph Ave., Suite 400
Berkeley, CA 94705

Project: SMUD UARP Bac-T Monitoring
Project Number: 750.10 Task 0800.01
Project Manager: Esther Adelstein

CLS Work Order #: 2410796
COC #:

Notes and Definitions

BT-4a	<1.8
BT-4	<1
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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APPENDIX C***In Situ* Field Data**

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Table C-1. *In situ* Tablet Raw Data, UARP Riverine Sites.

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Barometric Pressure (mm Hg) ¹	Notes
2/6/24 9:02	YSI EXO2S	Esther Adelstein	Cold and clear	IS-11-SFSC	3.480	10.92	82.2	10.3	0.017	6.61	0.43	639.20	-
2/6/24 9:21	YSI EXO2S	Esther Adelstein	Cold and clear	IS-12-SC	3.099	11.10	82.7	9.7	0.017	6.81	0.46	643.30	-
2/6/24 10:19	YSI EXO2S	Esther Adelstein	Clear and cool	IS-13-SC	5.464	11.05	87.6	11.5	0.018	6.84	0.53	677.30	-
2/6/24 10:51	YSI EXO2S	Esther Adelstein	Cold and overcast	IS-14-SC	6.111	10.73	86.6	14.9	0.023	6.79	0.18	681.00	-
2/6/24 12:05	YSI EXO2S	Esther Adelstein	Cold and cloudy, light snow	IS-10-SFSC	4.202	10.62	81.4	7.1	0.012	6.53	0.58	618.40	-
2/6/24 14:24	YSI EXO2S	Esther Adelstein	Overcast and drizzly	IS-16-SFAR	5.570	11.84	94.2	24.9	0.040	7.08	1.78	703.00	-
2/6/24 14:37	YSI EXO2S	Esther Adelstein	Overcast and drizzly	IS-15-SFAR	5.997	11.70	94.0	33.3	0.052	7.23	2.45	702.70	Turbulent
2/6/24 15:14	YSI EXO2S	Esther Adelstein	Overcast and drizzly	IS-17-BC	6.646	10.96	89.5	16.1	0.025	7.10	0.69	680.60	-
2/7/24 7:41	YSI EXO2S	Elliott Allen	Overcast, rain	IS-19-SFAR	6.142	11.38	91.7	27.3	0.043	6.55	1.28	711.50	-
2/7/24 8:24	YSI EXO2S	Elliott Allen	Ovrkst	IS-18-SFAR	8.051	11.25	95.3	38.9	0.058	6.82	1.91	729.20	-
4/29/24 10:08	YSI EXO2S	Elliott Allen	Sunny, 55	IS-11-SFSC	6.334	10.58	85.7	11.2	0.017	6.98	0.84	649.20	-
4/29/24 10:40	YSI EXO2S	Elliott Allen	Sunny, 55	IS-12-SC	6.124	10.27	82.8	8.7	0.014	6.95	0.73	653.20	-
4/29/24 11:33	YSI EXO2S	Elliott Allen	Sunny, 60	IS-13-SC	9.673	10.42	91.6	11.4	0.016	7.15	0.89	686.90	-
4/29/24 12:00	YSI EXO2S	Elliott Allen	Sunny, 60	IS-14-SC	8.371	10.82	92.2	10.5	0.015	7.12	0.60	690.50	-
4/29/24 13:58	YSI EXO2S	Elliott Allen	Sunny, 70	IS-16-SFAR	8.821	11.00	94.8	21.6	0.031	7.23	2.67	713.10	-
4/29/24 14:27	YSI EXO2S	Elliott Allen	Sunny, 70	IS-15-SFAR	9.234	10.69	93.0	24.2	0.035	7.37	3.49	712.90	-
4/29/24 15:03	YSI EXO2S	Elliott Allen	Sunny, 70	IS-17-BC	9.587	9.94	87.2	16.9	0.024	7.24	0.95	690.80	-
4/30/24 8:50	YSI EXO2S	Elliott Allen	Sunny, 55	IS-19-SFAR	8.722	11.02	94.7	21.0	0.030	7.36	1.75	718.10	-
4/30/24 9:40	YSI EXO2S	Elliott Allen	Sunny, 60	IS-18-SFAR	9.209	11.44	99.5	27.0	0.039	7.31	1.43	734.60	-
5/3/24 11:43	YSI EXO2S	Elliott Allen	Sunny, 65	IS-10-SFSC	5.781	10.37	82.7	7.7	0.012	6.99	1.11	627.00	-
5/3/24 13:52	YSI EXO2S	Michael Schweiker	Clear, cool, calm	IS-5-GC	7.291	9.96	82.6	6.1	0.009	6.82	0.49	625.00	-
5/3/24 14:06	YSI EXO2S	Elliott Allen	Sunny, 65	IS-6-GC	5.379	10.54	83.3	5.9	0.009	6.76	0.59	629.50	-
5/3/24 14:20	YSI EXO2S	Elliott Allen	Sunny, 70	IS-9-GCC	7.006	10.71	88.3	6.3	0.010	6.80	0.49	628.30	-
5/3/24 14:37	YSI EXO2S	Elliott Allen	Sunny, 65	IS-8-SFRR	8.878	10.08	87.0	7.5	0.011	6.91	0.42	634.60	-
5/3/24 14:47	YSI EXO2S	Elliott Allen	Sunny, 65	IS-7-SFRR	8.688	10.00	85.8	7.8	0.011	7.02	0.67	633.60	-
5/29/24 11:15	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable	IS-4-GC	6.947	9.37	77.1	5.3	0.008	6.91	1.18	609.00	-
8/19/24 12:01	YSI EXO2S	Elliott Allen	Sunny, 70	IS-4-GC	10.269	8.80	78.4	6.4	0.009	6.37	0.56	610.00	-
8/19/24 12:35	YSI EXO2S	Elliott Allen	Sunny, 75	IS-5-GC	15.228	8.27	82.4	8.4	0.010	6.70	0.38	630.70	-
8/19/24 12:59	YSI EXO2S	Elliott Allen	Sunny, 75	IS-6-GC	15.016	8.26	82.0	8.3	0.010	6.57	0.29	634.90	-
8/19/24 13:15	YSI EXO2S	Elliott Allen	Sunny, 75	IS-9-GCC	17.089	8.20	85.0	8.8	0.010	6.60	0.24	633.70	-
8/19/24 13:31	YSI EXO2S	Elliott Allen	Sunny, 75	IS-8-SFRR	15.414	8.33	83.3	8.9	0.011	6.79	0.38	640.00	-
8/19/24 13:41	YSI EXO2S	Elliott Allen	Sunny, 75	IS-7-SFRR	15.998	8.17	82.8	9.2	0.011	6.87	0.15	639.00	-
8/19/24 14:25	YSI EXO2S	Elliott Allen	Sunny, 75	IS-10-SFSC	7.841	9.62	80.9	8.2	0.012	6.66	0.95	632.40	-
8/20/24 14:12	YSI EXO2S	Elliott Allen	Sunny, 75	IS-1-RR	20.364	7.11	78.7	13.6	0.015	6.68	0.79	605.20	-
8/20/24 16:20	YSI EXO2S	Elliott Allen	Sunny, 75	IS-2-LRR	19.474	7.31	79.6	10.2	0.011	6.94	0.57	605.50	Stream is not flowing. Pool seems isolated.
8/20/24 17:17	YSI EXO2S	Elliott Allen	Sunny, 75	IS-3-LRR	20.787	6.96	77.7	9.1	0.010	6.94	0.45	607.20	-
8/22/24 8:16	YSI EXO2S	Elliott Allen	Clear, cool	IS-11-SFSC	11.593	9.36	86.0	11.3	0.015	6.84	0.77	648.60	-
8/22/24 8:37	YSI EXO2S	Elliott Allen	Sunny, cool	IS-12-SC	7.205	10.28	85.1	8.5	0.013	6.77	0.92	652.40	-



Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Barometric Pressure (mm Hg) ¹	Notes
8/22/24 9:26	YSI EXO2S	Elliott Allen	Sunny, cool	IS-13-SC	13.645	9.42	90.7	12.4	0.016	6.79	1.35	684.80	-
8/22/24 9:48	YSI EXO2S	Elliott Allen	Sunny, cool, shaded	IS-14-SC	9.662	10.44	91.8	10.1	0.014	6.95	0.77	688.30	-
8/22/24 11:19	YSI EXO2S	Elliott Allen	Sunny, warm, clear	IS-16-SFAR	14.253	10.37	101.2	25.2	0.032	7.11	0.91	710.30	-
8/22/24 11:32	YSI EXO2S	Elliott Allen	Sunny, clear, warm	IS-15-SFAR	18.349	8.89	94.5	46.5	0.053	7.60	1.04	710.20	-
8/22/24 12:05	YSI EXO2S	Elliott Allen	Clear, sunny, cool	IS-17-BC	17.131	8.51	88.3	29.8	0.035	7.12	2.54	688.90	-
8/22/24 13:24	YSI EXO2S	Elliott Allen	Sunny, bright, clear	IS-19-SFAR	13.887	9.61	93.0	16.4	0.021	7.10	1.29	715.50	-
8/22/24 14:09	YSI EXO2S	Elliott Allen	Clear, warm, sunny	IS-18-SFAR	18.447	9.26	98.8	24.9	0.028	7.45	0.69	732.00	-
11/4/24 7:23	YSI EXO2S	Elliott Allen	Sunny, 40	IS-19-SFAR	9.564	10.41	91.3	18.8	0.027	7.15	1.04	722.20	-
11/4/24 8:36	YSI EXO2S	Elliott Allen	Sunny, 40	IS-18-SFAR	8.848	11.25	97.0	23.7	0.034	7.18	0.85	739.90	-
11/5/24 9:08	YSI EXO2S	Elliott Allen	Cloudy, 45	IS-16-SFAR	8.417	11.81	100.7	21.8	0.032	7.01	0.84	715.60	-
11/5/24 9:20	YSI EXO2S	Elliott Allen	Cloudy, 40	IS-15-SFAR	6.955	11.65	95.8	39.5	0.060	7.23	0.95	715.20	-
11/5/24 10:01	YSI EXO2S	Elliott Allen	Cloudy, 45	IS-17-BC	12.863	9.68	91.6	20.1	0.026	7.05	1.12	692.90	-
11/5/24 11:47	YSI EXO2S	Elliott Allen	Sunny, 60	IS-13-SC	7.405	11.03	91.9	10.6	0.016	7.14	0.08	686.50	-
11/5/24 12:06	YSI EXO2S	Elliott Allen	Sunny, 60	IS-14-SC	8.826	10.71	92.2	9.7	0.014	7.30	0.85	690.00	-
11/5/24 13:22	YSI EXO2S	Michael Schweiker	Clear, cool, calm	IS-12-SC	6.974	9.88	81.3	9.2	0.014	6.98	0.83	652.50	-
11/5/24 13:29	YSI EXO2S	Elliott Allen	Sunny, 60	IS-11-SFSC	6.967	10.07	82.9	10.5	0.016	7.18	0.84	648.40	-
11/5/24 14:06	YSI EXO2S	Elliott Allen	Sunny, 60	IS-10-SFSC	7.637	9.39	78.6	9.1	0.014	6.65	1.44	628.60	-
11/6/24 8:51	YSI EXO2S	Elliott Allen	Cold, windy	IS-4-GC	9.293	9.07	79.0	6.1	0.009	7.08	0.99	605.60	-
11/6/24 9:18	YSI EXO2S	Elliott Allen	Cold, windy	IS-5-GC	4.434	10.52	81.2	6.5	0.011	7.14	1.13	627.10	-
11/6/24 9:38	YSI EXO2S	Elliott Allen	Windy, cold	IS-6-GC	7.470	9.99	83.3	9.4	0.014	6.63	1.08	631.60	-
11/6/24 9:51	YSI EXO2S	Elliott Allen	Cold, calm	IS-9-GCC	7.167	9.65	79.8	9.5	0.014	6.80	1.08	630.10	-
11/6/24 10:06	YSI EXO2S	Elliott Allen	Cold, calm	IS-8-SFRR	5.438	10.70	84.8	9.1	0.015	7.01	1.12	636.70	-
11/6/24 10:12	YSI EXO2S	Elliott Allen	Cold, windy	IS-7-SFRR	5.201	10.83	85.3	10.2	0.016	6.74	1.12	635.80	-

¹ Data were transcribed from the YSI EXO2S to a tablet, including additional digits beyond the parameter method detection limit (MDL).

Table C-2. *In situ* Tablet Raw Data, UARP Reservoir Sites.

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
5/1/2024 10:39	YSI EXO2S	Michael Schweiker	Clear, calm, warm	R-IS-13-CR	0	6.794	9.68	79.3	9.4	0.014	6.97	0.77	19.1	685.1	-
5/1/2024 10:39	YSI EXO2S	Michael Schweiker	Clear, calm, warm	R-IS-13-CR	1	6.685	9.70	79.3	9.4	0.014	6.83	0.77	19.1	685.1	-
5/1/2024 10:39	YSI EXO2S	Michael Schweiker	Clear, calm, warm	R-IS-13-CR	2	6.632	9.71	79.3	9.4	0.014	6.77	0.81	19.1	685.1	-
5/1/2024 10:39	YSI EXO2S	Michael Schweiker	Clear, calm, warm	R-IS-13-CR	3	6.638	9.72	79.3	9.4	0.014	6.81	0.78	19.1	685.1	-
5/1/2024 10:39	YSI EXO2S	Michael Schweiker	Clear, calm, warm	R-IS-13-CR	4	6.599	9.74	79.4	9.4	0.014	6.81	0.79	19.1	685.1	-
5/1/2024 10:39	YSI EXO2S	Michael Schweiker	Clear, calm, warm	R-IS-13-CR	5	6.587	9.74	79.4	9.3	0.014	6.78	0.80	19.1	685.1	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	0	10.345	9.56	85.4	11.6	0.016	7.05	0.54	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	1	9.100	9.64	83.6	11.2	0.016	7.04	0.60	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	2	8.173	9.92	84.1	10.6	0.016	7.01	0.68	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	3	7.086	10.05	83.0	11.0	0.017	7.05	0.84	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	4	6.657	10.22	83.5	9.7	0.015	6.97	0.76	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	5	6.477	10.30	83.7	9.3	0.014	6.89	0.77	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	6	6.468	10.23	83.1	10.2	0.016	6.87	0.76	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	7	6.292	10.19	83.5	10.1	0.016	6.91	0.80	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	8	6.186	10.19	82.2	10.1	0.016	6.92	0.80	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	9	6.076	10.17	81.8	9.4	0.015	6.89	0.81	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	10	6.015	10.17	81.8	9.8	0.015	6.85	0.80	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	11	5.917	10.13	81.2	9.4	0.015	6.84	0.77	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	12	5.882	10.15	81.3	9.2	0.015	6.85	0.79	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	13	5.845	10.13	81.0	9.2	0.015	6.80	0.79	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	14	5.811	10.11	80.8	9.2	0.015	6.89	0.77	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	15	5.765	10.09	80.6	9.0	0.014	6.87	0.77	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	16	5.759	10.08	80.5	9.0	0.014	6.79	0.75	23.2	647.5	-
5/1/2024 12:24	YSI EXO2S	Michael Schweiker	Clear, cool ,calm	R-IS-12-JR	17	5.755	10.07	80.4	9.0	0.014	6.77	0.77	23.2	647.5	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	0	12.651	9.47	89.2	9.6	0.013	7.05	0.74	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	1	12.305	9.55	89.2	9.5	0.013	7.11	0.76	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	2	12.073	9.56	88.9	9.5	0.013	7.12	0.73	21.8	638.8	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	3	11.887	9.60	88.9	9.4	0.013	7.12	0.77	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	4	10.774	9.92	89.5	8.9	0.012	7.08	0.79	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	5	10.123	10.08	89.6	8.6	0.012	7.05	0.83	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	6	9.634	10.17	89.3	8.4	0.012	7.03	0.84	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	7	9.239	10.25	89.2	8.2	0.012	6.98	0.83	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	8	9.018	10.31	89.2	8.2	0.012	6.97	0.82	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	9	8.658	10.34	88.7	8.1	0.012	6.93	0.84	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	10	8.007	10.41	87.9	7.8	0.012	6.90	0.87	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	11	7.778	10.42	87.5	7.7	0.012	6.86	0.84	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	12	7.269	10.49	87.0	7.8	0.012	6.83	0.90	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	13	6.959	10.50	86.4	7.8	0.012	6.82	0.96	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	14	6.510	10.48	85.3	7.8	0.012	6.79	0.96	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	15	6.345	10.47	84.8	7.8	0.012	6.78	0.99	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	16	6.290	10.45	84.5	7.7	0.012	6.76	0.96	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	17	6.229	10.43	84.3	7.7	0.012	6.75	0.93	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	18	6.205	10.42	84.1	7.7	0.012	6.74	0.96	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	19	6.167	10.41	84.0	7.7	0.012	6.75	0.98	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	20	6.119	10.40	83.8	7.7	0.012	6.72	0.95	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	21	6.074	10.40	83.7	7.7	0.012	6.75	0.94	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	22	6.014	10.39	83.5	7.6	0.012	6.72	0.96	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	23	5.998	10.39	83.4	7.6	0.012	6.84	0.94	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	24	5.956	10.39	83.4	7.6	0.012	6.72	0.94	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	25	5.836	10.35	82.8	7.6	0.012	6.67	0.96	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	26	5.776	10.33	82.5	7.6	0.012	6.66	0.95	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	27	5.721	10.29	82.1	7.6	0.012	6.66	0.94	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	28	5.699	10.26	81.8	7.6	0.012	6.64	0.99	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	29	5.659	10.22	81.4	7.7	0.012	6.69	0.96	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	30	5.631	10.20	81.2	7.7	0.012	6.64	0.93	21.8	638.8	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	31	5.619	10.19	81.0	7.7	0.012	6.63	0.93	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	32	5.613	10.17	80.9	7.7	0.012	6.66	0.92	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	33	5.614	10.17	80.9	7.7	0.012	6.64	0.94	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	34	5.586	10.15	80.7	7.7	0.012	6.62	0.96	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	35	5.570	10.11	80.4	7.8	0.012	6.64	0.97	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	36	5.569	10.11	80.3	7.8	0.012	6.62	0.95	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	37	5.563	10.10	80.2	7.8	0.012	6.63	0.92	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	38	5.543	10.08	80.0	7.8	0.012	6.62	0.91	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	39	5.528	10.06	79.9	7.8	0.012	6.61	0.94	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	40	5.503	10.04	79.6	7.9	0.013	6.61	0.95	21.8	638.8	-
5/2/2024 10:20	YSI EXO2S	Michael Schweiker	Sunny, calm, clear, balmy	R-IS-7-UVR	41	5.434	9.92	78.5	8.0	0.013	6.61	0.93	21.8	638.8	Bottom at 41.5m
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	0	12.867	9.42	89.2	9.7	0.013	7.17	0.68	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	1	12.643	9.49	89.3	9.6	0.013	7.16	0.72	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	2	12.242	9.52	88.8	9.5	0.013	7.17	0.75	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	3	11.457	9.69	88.8	9.2	0.012	7.16	0.72	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	4	9.907	10.09	89.2	8.6	0.012	7.10	0.77	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	5	9.689	10.14	89.2	8.6	0.012	7.08	0.83	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	6	9.390	10.19	88.9	8.5	0.012	7.08	0.76	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	7	9.222	10.23	89.0	8.4	0.012	7.06	0.78	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	8	8.853	10.28	88.6	8.3	0.012	7.05	0.81	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	9	8.575	10.31	88.2	8.1	0.012	7.04	0.81	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	10	8.399	10.34	88.2	8.1	0.012	7.04	0.82	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	11	8.192	10.36	87.9	8.0	0.012	7.01	0.80	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	12	8.025	10.38	87.7	7.9	0.012	7.00	0.84	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	13	7.447	10.39	86.6	7.5	0.011	6.99	0.89	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	14	6.578	10.49	85.5	7.1	0.011	6.94	0.89	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	15	6.350	10.48	84.9	7.0	0.011	6.91	0.93	24.3	638.5	-
5/2/2024 11:37	YSI EXO2S	Michael Schweiker	Clear, warm, light breeze	R-IS-5-UVR	16	6.136	10.46	84.3	6.9	0.011	6.88	0.91	24.3	638.5	Bottom at 16.1m

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	0	12.396	9.34	87.4	9.7	0.013	7.20	0.68	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	1	12.219	9.54	88.9	9.6	0.013	7.20	0.77	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	2	12.070	9.56	88.9	9.6	0.013	7.20	0.84	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	3	11.894	9.60	88.9	9.5	0.013	7.21	0.84	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	4	11.885	9.60	88.9	9.5	0.013	7.21	0.77	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	5	11.511	9.64	88.4	9.4	0.013	7.21	0.90	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	6	10.780	9.91	89.4	9.2	0.013	7.21	0.85	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	7	9.291	10.28	89.5	9.7	0.012	7.22	0.87	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	8	8.562	10.50	89.9	8.5	0.012	7.19	1.01	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	9	8.055	10.61	89.7	8.4	0.012	7.19	1.06	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	10	7.976	10.65	89.8	8.4	0.012	7.18	1.07	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	11	7.845	10.67	89.7	8.3	0.012	7.17	1.04	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	12	7.537	10.58	88.3	8.3	0.012	7.13	0.99	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	13	7.287	10.57	87.7	8.2	0.012	7.10	1.01	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	14	7.201	10.56	87.4	8.2	0.012	7.08	1.02	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	15	7.040	10.48	86.5	8.2	0.013	7.05	1.05	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	16	6.945	10.41	85.7	8.2	0.012	7.02	1.00	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	17	6.817	10.34	84.8	8.1	0.012	7.00	0.99	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	18	6.425	10.26	83.3	8.0	0.012	6.97	1.02	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	19	6.287	10.22	82.7	8.1	0.013	6.94	1.01	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	20	6.072	10.20	82.1	8.1	0.013	6.94	0.99	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	21	5.800	10.12	80.9	8.1	0.013	6.92	0.99	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	22	5.764	10.07	80.4	8.1	0.013	6.90	0.99	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	23	5.755	10.06	80.3	8.1	0.013	6.90	0.99	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	24	5.722	10.03	80.0	8.1	0.013	6.89	0.99	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	25	5.635	10.00	79.6	8.1	0.010	6.89	0.99	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	26	5.595	9.98	79.3	8.1	0.013	6.88	1.01	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	27	5.577	9.96	79.2	8.2	0.013	6.87	0.95	18.2	638.7	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	28	5.529	9.95	78.9	8.1	0.013	6.86	0.98	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	29	5.519	9.93	78.8	8.1	0.013	6.86	0.96	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	30	5.507	9.92	78.7	8.2	0.013	6.86	0.98	18.2	638.7	-
5/2/2024 12:20	YSI EXO2S	Michael Schweiker	Clear, cool, slightly windy	R-IS-6-UVR	31	5.505	9.91	78.6	8.2	0.013	6.85	1.00	18.2	638.7	Bottom at 31.8m
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	0	12.088	9.48	88.1	9.6	0.013	7.19	0.67	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	1	11.896	9.57	88.6	9.6	0.013	7.21	0.75	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	2	11.537	9.64	88.5	9.5	0.013	7.21	0.82	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	3	11.391	9.64	88.2	9.4	0.013	7.21	0.84	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	4	10.780	9.58	86.5	9.1	0.013	7.21	0.86	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	5	9.163	10.52	91.4	8.7	0.013	7.21	0.89	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	6	8.606	10.71	91.7	8.6	0.012	7.23	0.94	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	7	8.418	10.75	91.7	8.5	0.012	7.22	0.92	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	8	8.159	10.78	91.4	8.4	0.012	7.21	0.93	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	9	7.898	10.86	91.4	8.5	0.013	7.23	0.98	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	10	7.364	10.86	90.2	8.4	0.013	7.24	1.03	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	11	7.136	10.71	88.6	8.3	0.013	7.14	1.05	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	12	7.000	10.62	87.5	8.3	0.013	7.09	1.04	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	13	6.880	10.56	86.7	8.4	0.013	7.08	1.11	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	14	6.667	10.47	85.5	8.4	0.013	7.05	1.00	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	15	6.514	10.37	84.4	8.3	0.013	7.02	1.09	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	16	6.320	10.33	83.6	8.3	0.013	7.01	1.00	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	17	6.148	10.29	82.9	8.2	0.013	6.99	0.96	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	18	6.051	10.25	82.5	8.2	0.013	6.96	0.96	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	19	5.963	10.22	82.0	8.2	0.013	6.93	0.98	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	20	5.900	10.19	81.7	8.2	0.013	6.92	0.96	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	21	5.885	10.18	81.6	8.2	0.013	6.91	0.97	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	22	5.871	10.18	81.5	8.1	0.013	6.90	0.96	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	23	5.825	10.18	81.4	8.2	0.013	6.90	0.92	19.6	638.2	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	24	5.794	10.16	81.2	8.2	0.013	6.90	0.95	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	25	5.781	10.15	81.1	8.2	0.013	6.90	0.95	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	26	5.761	10.14	80.9	8.2	0.013	6.90	0.95	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	27	5.740	10.13	80.8	8.2	0.013	6.90	1.00	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	28	5.697	10.07	80.2	8.2	0.013	6.90	0.92	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	29	5.673	10.04	80.0	8.2	0.013	6.89	0.97	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	30	5.665	10.01	79.8	8.2	0.013	6.89	0.97	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	31	5.602	10.04	79.9	8.1	0.013	6.89	0.93	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	32	5.578	10.05	79.9	8.2	0.013	6.88	0.95	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	33	5.565	10.05	79.9	8.2	0.013	6.88	0.97	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	34	5.545	10.04	79.7	8.2	0.013	6.88	0.95	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	35	5.527	10.03	79.6	8.2	0.013	6.88	0.93	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	36	5.523	10.03	79.6	8.2	0.013	6.88	0.92	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	37	5.514	10.03	79.6	8.2	0.013	6.87	0.93	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	38	5.506	10.03	79.6	8.1	0.013	6.88	0.93	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	39	5.497	10.04	79.6	8.1	0.013	6.88	0.94	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	40	5.494	10.04	79.6	8.1	0.013	6.88	0.96	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	41	5.490	10.04	79.6	8.1	0.013	6.89	0.93	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	42	5.482	10.04	79.6	8.1	0.013	6.88	0.94	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	43	5.458	10.03	79.4	8.1	0.013	6.88	0.93	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	44	5.443	10.02	79.4	8.1	0.013	6.89	0.96	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	45	5.439	10.02	79.4	8.1	0.013	6.87	0.94	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	46	5.434	10.01	79.3	8.2	0.013	6.87	0.94	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	47	5.427	10.01	71.2	8.1	0.013	6.87	0.92	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	48	5.410	10.01	79.2	8.1	0.013	6.87	0.92	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	49	5.386	10.00	79.1	8.1	0.013	6.87	0.92	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	50	5.367	9.99	79.0	8.1	0.013	6.86	0.90	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	51	5.357	9.98	78.8	8.1	0.013	6.86	0.93	19.6	638.2	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	52	5.340	9.96	78.7	8.1	0.013	6.86	0.92	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	53	5.334	9.95	78.6	8.1	0.013	6.85	0.91	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	54	5.328	9.94	78.5	8.1	0.013	6.85	0.90	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	55	5.322	9.94	78.5	8.1	0.013	6.85	0.96	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	56	5.307	9.92	78.3	8.1	0.013	6.85	0.91	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	57	5.302	9.92	78.2	8.1	0.013	6.85	0.89	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	58	5.297	9.89	78.1	8.1	0.013	6.84	0.90	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	59	5.298	9.88	78.0	8.1	0.013	6.84	0.92	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	60	5.301	9.89	78.0	8.1	0.013	6.84	0.92	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	61	5.290	9.87	77.8	8.1	0.013	6.84	1.19	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	62	5.275	9.86	77.8	8.1	0.013	6.84	0.91	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	63	5.262	9.86	77.7	8.1	0.013	6.83	0.91	19.6	638.2	-
5/2/2024 13:47	YSI EXO2S	Michael Schweiker	Cool, calm, clear, breezy	R-IS-8-UVR	64	5.261	9.86	77.7	8.1	0.013	6.83	0.89	19.6	638.2	Bottom at 64.2m
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	0	10.975	9.82	89.0	8.9	0.012	7.27	0.54	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	1	10.705	9.91	89.3	8.9	0.012	7.18	0.67	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	2	10.617	9.94	89.4	8.8	0.012	7.16	0.68	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	3	9.195	10.24	89.0	8.3	0.012	7.13	0.77	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	4	8.882	10.35	89.3	8.2	0.012	7.10	0.70	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	5	8.079	10.48	88.6	7.9	0.012	7.07	0.80	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	6	7.559	10.55	88.1	7.7	0.012	7.04	0.82	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	7	6.454	10.68	86.8	7.6	0.012	7.00	0.79	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	8	6.097	10.71	86.3	7.5	0.012	6.96	0.78	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	9	5.982	10.72	86.1	7.5	0.012	6.91	0.79	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	10	5.964	10.71	85.9	7.5	0.012	6.89	0.97	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	11	5.877	10.66	85.4	7.6	0.012	6.85	0.82	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	12	5.845	10.63	85.1	7.6	0.012	6.84	0.81	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	13	5.820	10.62	84.9	7.6	0.012	6.83	0.92	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	14	5.754	10.59	84.6	7.6	0.012	6.81	0.82	15.7	623.5	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	15	5.713	10.57	84.3	7.6	0.012	6.80	0.87	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	16	5.697	10.54	84.0	7.6	0.012	6.79	0.84	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	17.00	5.672	10.52	83.8	7.6	0.012	6.70	0.83	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	18	5.659	10.51	83.7	7.6	0.012	6.77	0.83	15.7	623.5	-
5/3/2024 9:37	YSI EXO2S	Michael Schweiker	clear, calm, cool	R-IS-9-IHR	19	5.649	10.50	83.6	7.6	0.012	6.76	0.87	15.7	623.5	Bottom at 19.2m
5/3/2024 10:13	YSI EXO2S	Michael Schweiker	Clear, cool ,sunny	R-IS-10-IHR	0	10.937	9.99	90.5	8.9	0.012	7.09	0.65	15.9	623.7	-
5/3/2024 10:13	YSI EXO2S	Michael Schweiker	Clear, cool ,sunny	R-IS-10-IHR	1	10.790	9.99	90.2	8.9	0.012	7.09	0.67	15.9	623.7	-
5/3/2024 10:13	YSI EXO2S	Michael Schweiker	Clear, cool ,sunny	R-IS-10-IHR	2	10.636	10.02	90.1	8.9	0.012	7.09	0.66	15.9	623.7	-
5/3/2024 10:13	YSI EXO2S	Michael Schweiker	Clear, cool ,sunny	R-IS-10-IHR	3	10.413	10.05	89.9	8.8	0.012	7.09	0.67	15.9	623.7	-
5/3/2024 10:13	YSI EXO2S	Michael Schweiker	Clear, cool ,sunny	R-IS-10-IHR	4	10.169	10.10	89.6	8.7	0.012	7.08	0.67	15.9	623.7	-
5/3/2024 10:13	YSI EXO2S	Michael Schweiker	Clear, cool ,sunny	R-IS-10-IHR	5	9.458	10.27	89.9	8.5	0.012	7.06	0.70	15.9	623.7	-
5/3/2024 10:13	YSI EXO2S	Michael Schweiker	Clear, cool ,sunny	R-IS-10-IHR	6	8.977	10.38	89.7	8.3	0.012	7.04	0.74	15.9	623.7	-
5/3/2024 10:13	YSI EXO2S	Michael Schweiker	Clear, cool ,sunny	R-IS-10-IHR	7	8.764	10.43	89.7	8.3	0.012	7.02	0.75	15.9	623.7	-
5/3/2024 10:13	YSI EXO2S	Michael Schweiker	Clear, cool ,sunny	R-IS-10-IHR	8	8.191	10.52	89.2	8.2	0.012	6.99	0.77	15.9	623.7	-
5/3/2024 10:13	YSI EXO2S	Michael Schweiker	Clear, cool ,sunny	R-IS-10-IHR	9	8.240	10.51	89.2	8.2	0.012	6.99	0.77	15.9	623.7	-
5/3/2024 10:13	YSI EXO2S	Michael Schweiker	Clear, cool ,sunny	R-IS-10-IHR	10	7.117	10.70	88.4	7.9	0.012	6.95	0.78	15.9	623.7	-
5/3/2024 10:13	YSI EXO2S	Michael Schweiker	Clear, cool ,sunny	R-IS-10-IHR	11	6.926	10.73	88.2	7.8	0.012	6.93	0.78	15.9	623.7	-
5/3/2024 10:13	YSI EXO2S	Michael Schweiker	Clear, cool ,sunny	R-IS-10-IHR	12	6.806	10.72	87.9	7.8	0.012	6.92	0.84	15.9	623.7	-
5/3/2024 10:13	YSI EXO2S	Michael Schweiker	Clear, cool ,sunny	R-IS-10-IHR	13	6.500	10.71	87.1	7.8	0.012	6.89	0.88	15.9	623.7	Bottom at 13.1m
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	0	11.088	9.76	88.7	9.0	0.012	7.05	0.64	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	1	10.616	10.03	90.1	8.9	0.012	7.07	0.65	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	2	10.587	10.07	90.4	8.9	0.012	7.08	0.64	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	3	10.551	10.06	90.3	8.9	0.012	7.09	0.64	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	4	10.473	10.07	90.2	8.8	0.012	7.09	0.70	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	5	9.977	10.26	90.9	8.7	0.012	7.09	0.65	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	6	8.380	10.73	91.5	8.2	0.012	7.08	0.75	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	7	7.626	10.95	91.6	8.0	0.012	7.07	0.78	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	8	7.114	11.01	90.9	7.9	0.012	7.05	0.79	17.2	623.7	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	9	6.820	11.03	90.4	7.9	0.012	7.02	0.81	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	10	6.463	10.99	89.3	7.8	0.012	6.99	0.87	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	11	6.152	10.84	87.4	7.8	0.012	6.93	0.89	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	12	6.049	10.77	86.7	7.7	0.012	6.89	0.92	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	13	5.817	10.65	85.1	7.7	0.012	6.84	0.89	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	14	5.730	10.58	84.4	7.7	0.012	6.82	0.89	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	15	5.645	10.51	83.6	7.7	0.012	6.79	0.88	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	16	5.636	10.46	83.3	7.7	0.012	6.77	0.86	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	17	5.598	10.43	83.0	7.7	0.012	6.76	0.89	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	18	5.563	10.39	82.6	7.7	0.012	6.74	0.94	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	19	5.553	10.38	82.4	7.7	0.012	6.74	0.85	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	20	5.538	10.36	82.2	7.7	0.012	6.73	0.88	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	21	5.529	10.35	82.1	7.7	0.012	6.72	0.86	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	22	5.524	10.34	82.0	7.7	0.012	6.72	0.88	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	23	5.521	10.33	81.9	7.7	0.012	6.72	0.88	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	24	5.518	10.32	81.9	7.7	0.012	6.71	0.86	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	25	5.512	10.32	81.9	7.7	0.012	6.71	0.85	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	26	5.507	10.31	81.8	7.7	0.012	6.70	0.85	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	27	5.508	10.31	81.8	7.7	0.012	6.69	0.89	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	28	5.520	10.32	81.9	7.7	0.012	6.60	0.86	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	29	5.524	10.32	81.9	7.7	0.012	6.63	0.85	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	30	5.527	10.32	81.9	7.7	0.012	6.64	0.91	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	31	5.520	10.32	81.9	7.7	0.012	6.65	0.86	17.2	623.7	-
5/3/2024 10:40	YSI EXO2S	Michael Schweiker	clear, cool, calm	R-IS-11-IHR	32	5.511	10.32	81.8	7.7	0.012	6.65	0.87	17.2	623.7	Bottom at 32.7m
5/3/2024 13:05	YSI EXO2S	Michael Schweiker	Clear, calm, Cool, sustained breeze	R-IS-4-GC	0	7.383	10.19	84.7	6.5	0.010	6.78	0.20	23.4	628.3	-
5/3/2024 13:05	YSI EXO2S	Michael Schweiker	Clear, calm, Cool, sustained breeze	R-IS-4-GC	1	6.366	10.72	86.9	6.3	0.010	6.75	0.48	23.4	628.3	-
5/3/2024 13:05	YSI EXO2S	Michael Schweiker	Clear, calm, Cool, sustained breeze	R-IS-4-GC	2	6.305	10.76	87.1	6.3	0.010	6.75	0.52	23.4	628.3	-
5/3/2024 13:05	YSI EXO2S	Michael Schweiker	Clear, calm, Cool, sustained breeze	R-IS-4-GC	3	6.195	10.79	87.1	6.9	0.011	6.75	0.55	23.4	628.3	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
5/3/2024 13:05	YSI EXO2S	Michael Schweiker	Clear, calm, Cool, sustained breeze	R-IS-4-GC	4	6.155	10.82	87.3	7.0	0.011	6.76	0.54	23.4	628.3	-
5/3/2024 13:05	YSI EXO2S	Michael Schweiker	Clear, calm, Cool, sustained breeze	R-IS-4-GC	5	5.948	10.85	87.1	6.2	0.010	6.77	0.60	23.4	628.3	-
5/3/2024 13:05	YSI EXO2S	Michael Schweiker	Clear, calm, Cool, sustained breeze	R-IS-4-GC	6	5.549	10.96	87.0	6.0	0.010	6.77	0.69	23.4	628.3	Bottom at 6.7m
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	0	14.004	8.40	81.5	6.2	0.008	6.87	0.03	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	1	13.784	8.43	81.4	6.2	0.008	6.85	0.00	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	2	13.048	8.54	81.2	6.1	0.008	6.82	0.01	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	3	12.585	8.60	80.9	6.0	0.008	6.79	0.03	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	4	11.835	8.73	80.7	5.9	0.008	6.73	0.10	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	5	11.584	8.76	80.6	5.8	0.008	6.73	0.10	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	6	11.020	8.85	80.3	5.7	0.008	6.70	0.13	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	7	10.660	8.92	80.3	5.7	0.008	6.70	0.14	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	8	10.437	8.96	80.2	5.7	0.008	6.67	0.16	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	9	10.231	8.99	80.0	5.6	0.008	6.71	0.15	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	10	9.616	9.00	79.0	5.6	0.008	6.63	0.18	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	11	8.935	9.16	79.1	5.5	0.008	6.63	0.26	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	12	8.422	9.22	78.6	5.5	0.008	6.57	0.25	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	13	8.330	9.24	78.6	5.5	0.008	6.71	0.27	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	14	8.103	9.25	78.3	5.4	0.008	6.56	0.27	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	15	7.626	9.26	77.5	5.4	0.008	6.51	0.32	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	16	7.475	9.27	77.3	5.4	0.008	6.56	0.33	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	17	7.371	9.27	77.1	5.3	0.008	6.51	0.33	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	18	7.326	9.27	76.9	5.4	0.008	6.50	0.36	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	19	7.181	9.26	76.6	5.4	0.008	6.49	0.33	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	20	6.844	9.26	76.0	5.3	0.008	6.48	0.36	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	21	6.521	9.26	75.4	5.3	0.008	6.46	0.38	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	22	6.365	9.26	75.1	5.3	0.008	6.44	0.38	25.1	606.4	-
5/29/2024 10:20	YSI EXO2S	Elliott Allen	Sunny, 65, light wind, variable	R-IS-1-LL	23	6.220	9.25	74.8	5.3	0.008	6.44	0.65	25.1	606.4	Bottom at 23.1m
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	0	13.370	8.60	82.3	6.2	0.008	6.89	0.02	25.9	606.6	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	1	13.200	8.64	82.4	6.2	0.008	6.87	0.03	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	2	12.863	8.65	81.8	6.1	0.008	6.85	0.03	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	3	12.634	8.67	81.6	6.0	0.008	6.85	0.03	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	4	12.177	8.74	81.4	5.9	0.008	6.85	0.08	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	5	11.747	8.79	81.1	5.9	0.008	6.82	0.07	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	6	10.931	8.92	80.8	5.7	0.008	6.83	0.14	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	7	10.557	8.99	80.7	5.7	0.008	6.81	0.15	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	8	10.177	9.04	80.5	5.7	0.008	6.80	0.14	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	9	9.695	9.12	80.2	5.6	0.008	6.78	0.18	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	10	9.383	9.17	80.0	5.5	0.008	6.75	0.20	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	11	9.061	9.19	79.6	5.5	0.008	6.72	0.24	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	12	8.674	9.25	79.4	5.4	0.008	6.70	0.25	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	13	8.504	9.31	79.6	5.4	0.008	6.72	0.28	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	14	7.712	9.35	78.4	5.3	0.008	6.66	0.29	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	15	7.290	9.38	77.8	5.3	0.008	6.64	0.32	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	16	7.055	9.40	77.6	5.3	0.008	6.65	0.31	25.9	606.6	-
5/29/2024 11:35	YSI EXO2S	Elliott Allen	Sunny, 65, light and variable wind	R-IS-2-LL	17	6.950	9.40	77.3	5.3	0.008	6.61	0.39	25.9	606.6	Bottom at 17.5m
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	0	12.728	8.52	80.4	6.1	0.008	6.92	0.03	26.9	606.6	-
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	1	12.271	8.75	81.7	6.0	0.008	6.84	0.05	26.9	606.6	-
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	2	11.944	8.78	81.4	5.9	0.008	6.84	0.08	26.9	606.6	-
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	3	11.667	8.84	81.4	5.9	0.008	6.83	0.12	26.9	606.6	-
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	4	11.600	8.85	81.4	5.9	0.008	6.82	0.14	26.9	606.6	-
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	5	11.380	8.87	81.1	5.9	0.008	6.82	0.12	26.9	606.6	-
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	6	11.262	8.86	80.8	5.8	0.008	6.82	0.12	26.9	606.6	-
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	7	11.160	8.90	81.0	5.8	0.008	6.82	0.15	26.9	606.6	-
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	8	11.043	8.90	80.7	5.8	0.008	6.82	0.13	26.9	606.6	-
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	9	10.680	8.97	80.7	5.8	0.008	6.81	0.15	26.9	606.6	-
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	10	9.757	9.09	80.1	5.6	0.008	6.78	0.18	26.9	606.6	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	11	8.994	9.24	79.9	5.5	0.008	6.72	0.25	26.9	606.6	-
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	12	8.522	9.29	79.4	5.5	0.008	6.71	0.25	26.9	606.6	-
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	13	8.093	9.33	78.9	5.4	0.008	6.70	0.25	26.9	606.6	-
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	14	7.906	9.36	78.8	5.4	0.008	6.68	0.29	26.9	606.6	-
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	15	7.425	9.36	77.9	5.3	0.008	6.65	0.31	26.9	606.6	-
5/29/2024 12:05	YSI EXO2S	Elliott Allen	Sunny, wind variable	R-IS-3-LL	16	7.165	9.29	76.8	5.3	0.008	6.61	0.35	26.9	606.6	Bottom at 16.3m
10/27/2024 11:44	YSI EXO2S	Michael Schweiker	clear, slightly windy, cool	R-IS-13-CR	0	9.151	10.35	89.8	9.5	0.014	7.01	0.33	17.8	688.7	-
10/27/2024 11:44	YSI EXO2S	Michael Schweiker	clear, slightly windy, cool	R-IS-13-CR	1	8.962	10.64	92.0	9.5	0.014	6.61	0.50	17.8	688.7	-
10/27/2024 11:44	YSI EXO2S	Michael Schweiker	clear, slightly windy, cool	R-IS-13-CR	2	8.921	10.67	92.1	9.5	0.014	6.55	0.53	17.8	688.7	-
10/27/2024 11:44	YSI EXO2S	Michael Schweiker	clear, slightly windy, cool	R-IS-13-CR	3	8.909	10.69	92.2	9.5	0.014	6.50	0.51	17.8	688.7	-
10/27/2024 11:44	YSI EXO2S	Michael Schweiker	clear, slightly windy, cool	R-IS-13-CR	4	8.903	10.69	92.3	9.5	0.014	6.51	0.56	17.8	688.7	-
10/27/2024 11:44	YSI EXO2S	Michael Schweiker	clear, slightly windy, cool	R-IS-13-CR	5	8.899	10.69	92.3	9.5	0.014	6.45	0.51	17.8	688.7	-
10/27/2024 13:21	YSI EXO2S	Michael Schweiker	Clear, Sunny, windy	R-IS-12-JR	0	9.414	9.32	81.4	9.0	0.013	6.33	0.43	18.0	651.1	-
10/27/2024 13:21	YSI EXO2S	Michael Schweiker	Clear, Sunny, windy	R-IS-12-JR	1	9.024	8.67	75.1	8.9	0.013	6.14	0.49	18.0	651.1	-
10/27/2024 13:21	YSI EXO2S	Michael Schweiker	Clear, Sunny, windy	R-IS-12-JR	2	8.926	8.68	75.0	8.9	0.013	6.09	0.56	18.0	651.1	-
10/27/2024 13:21	YSI EXO2S	Michael Schweiker	Clear, Sunny, windy	R-IS-12-JR	3	8.894	8.67	74.8	8.9	0.013	6.06	0.52	18.0	651.1	-
10/27/2024 13:21	YSI EXO2S	Michael Schweiker	Clear, Sunny, windy	R-IS-12-JR	4	8.889	8.66	74.7	8.9	0.013	6.01	0.53	18.0	651.1	-
10/27/2024 13:21	YSI EXO2S	Michael Schweiker	Clear, Sunny, windy	R-IS-12-JR	5	8.832	8.73	75.2	8.9	0.013	6.01	0.51	18.0	651.1	-
10/27/2024 13:21	YSI EXO2S	Michael Schweiker	Clear, Sunny, windy	R-IS-12-JR	6	8.825	8.76	75.4	8.9	0.013	5.98	0.51	18.0	651.1	-
10/27/2024 13:21	YSI EXO2S	Michael Schweiker	Clear, Sunny, windy	R-IS-12-JR	7	8.822	8.75	75.4	8.9	0.013	5.97	0.54	18.0	651.1	-
10/27/2024 13:21	YSI EXO2S	Michael Schweiker	Clear, Sunny, windy	R-IS-12-JR	8	8.800	8.78	75.6	8.9	0.013	5.96	0.53	18.0	651.1	-
10/27/2024 13:21	YSI EXO2S	Michael Schweiker	Clear, Sunny, windy	R-IS-12-JR	9	8.779	8.83	75.9	8.9	0.013	5.95	0.52	18.0	651.1	-
10/27/2024 13:21	YSI EXO2S	Michael Schweiker	Clear, Sunny, windy	R-IS-12-JR	10	8.743	8.86	76.2	8.9	0.013	5.97	0.53	18.0	651.1	-
10/27/2024 13:21	YSI EXO2S	Michael Schweiker	Clear, Sunny, windy	R-IS-12-JR	11	8.661	8.92	76.5	9.0	0.013	5.98	0.53	18.0	651.1	-
10/27/2024 13:21	YSI EXO2S	Michael Schweiker	Clear, Sunny, windy	R-IS-12-JR	12	8.490	9.01	77.0	9.1	0.013	5.98	0.60	18.0	651.1	-
10/28/2024 11:42	YSI EXO2S	Michael Schweiker	Clear, calm, shaded	R-IS-14-SC	0	9.549	10.71	93.8	14.0	0.020	6.90	0.64	15.0	713.1	-
10/28/2024 11:42	YSI EXO2S	Michael Schweiker	Clear, calm, shaded	R-IS-14-SC	1	9.520	10.76	94.2	13.9	0.020	6.68	0.69	15.0	713.1	-
10/28/2024 11:42	YSI EXO2S	Michael Schweiker	Clear, calm, shaded	R-IS-14-SC	2	9.503	10.76	94.2	13.8	0.020	6.60	0.80	15.0	713.1	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
10/28/2024 11:42	YSI EXO2S	Michael Schweiker	Clear, calm, shaded	R-IS-14-SC	3	9.497	10.77	94.3	13.5	0.019	6.52	0.80	15.0	713.1	-
10/28/2024 11:42	YSI EXO2S	Michael Schweiker	Clear, calm, shaded	R-IS-14-SC	4	9.477	10.78	94.3	13.2	0.019	6.51	0.86	15.0	713.1	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	0	12.446	9.30	87.2	20.2	0.027	6.81	0.55	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	1	12.182	9.20	85.8	20.1	0.027	6.81	0.58	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	2	12.147	9.18	85.5	20.1	0.027	6.77	0.59	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	3	12.133	9.18	85.5	20.0	0.027	6.78	0.56	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	4	12.118	9.18	85.4	20.0	0.027	6.79	0.55	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	5	12.107	9.17	85.3	20.1	0.027	6.78	0.62	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	6	12.035	9.16	85.1	20.1	0.027	6.78	0.57	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	7	11.687	9.21	84.8	20.0	0.027	6.74	0.62	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	8	11.483	9.39	86.1	20.3	0.027	6.74	0.64	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	9	11.352	9.43	86.2	20.1	0.027	6.71	0.67	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	10	11.187	9.48	86.3	19.6	0.027	6.73	0.74	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	11	11.106	9.46	86.0	19.6	0.027	6.71	0.73	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	12	11.050	9.48	86.1	19.3	0.026	6.70	0.80	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	13	11.010	9.48	86.0	19.4	0.026	6.69	0.75	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	14	10.977	9.49	86.0	19.1	0.026	6.69	0.75	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	15	10.932	9.50	86.0	18.7	0.026	6.69	0.76	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	16	10.914	9.50	86.0	18.2	0.025	6.68	0.79	16.0	713.0	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	17	10.885	9.52	86.1	18.2	0.025	6.67	0.73	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	18	10.860	9.55	86.3	18.0	0.025	6.67	0.64	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	19	10.851	9.56	86.4	18.1	0.025	6.66	0.75	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	20	10.840	9.56	86.4	18.3	0.025	6.66	0.72	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	21	10.819	9.57	86.5	18.3	0.025	6.66	0.70	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	22	10.811	9.57	86.4	18.3	0.025	6.68	0.70	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	23	10.801	9.58	86.5	18.2	0.025	6.68	0.70	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	24	10.784	9.59	86.5	18.4	0.025	6.68	0.72	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	25	10.766	9.60	86.6	18.4	0.025	6.68	0.71	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	26	10.737	9.62	86.8	18.5	0.025	6.67	0.70	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	27	10.727	9.64	86.9	18.5	0.025	6.69	0.68	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	28	10.721	9.64	86.9	18.5	0.025	6.69	0.73	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	29	10.704	9.62	86.7	18.7	0.026	6.69	0.82	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	30	10.642	9.61	86.5	18.9	0.026	6.70	0.96	16.0	713.0	-
10/28/2024 12:18	YSI EXO2S	Michael Schweiker	Clear, calm, slight/moderate wind, sunny	R-IS-15-SC	31	10.628	9.59	86.2	19.0	0.026	6.69	1.58	16.0	713.0	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	0	14.038	8.04	78.0	9.5	0.012	7.05	0.24	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	1	14.012	8.03	77.9	9.5	0.012	6.92	0.28	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	2	14.012	8.03	77.8	9.5	0.012	6.92	0.25	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	3	14.007	8.02	77.9	9.5	0.012	6.93	0.26	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	4	14.000	8.02	77.8	9.5	0.012	6.89	0.25	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	5	13.997	8.02	77.8	9.5	0.012	6.88	0.34	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	6	14.002	8.02	77.8	9.5	0.012	6.89	0.26	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	7	13.996	8.02	77.8	9.5	0.012	6.88	0.25	24.0	624.1	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	8	13.993	8.01	77.8	9.5	0.012	6.89	0.24	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	9	13.990	8.02	77.8	9.5	0.012	6.89	0.25	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	10	13.986	8.02	77.8	9.5	0.012	6.89	0.23	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	11	13.980	8.02	77.8	9.5	0.012	6.86	0.24	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	12	13.955	8.01	77.7	9.5	0.012	6.88	0.25	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	13	13.937	8.00	77.5	9.5	0.012	6.88	0.28	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	14	13.931	8.00	77.5	9.5	0.012	6.86	0.26	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	15	11.922	5.60	51.9	9.2	0.012	5.99	0.38	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	16	9.947	4.15	36.7	9.2	0.013	5.74	0.68	24.0	624.1	-
10/29/2024 9:50	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-9-IHR	17	9.369	2.89	25.2	9.7	0.014	5.67	0.89	24.0	624.1	-
10/29/2024 10:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-10-IHR	0	13.859	8.23	79.6	9.5	0.012	6.91	0.37	23.5	624.5	-
10/29/2024 10:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-10-IHR	1	13.971	8.07	78.3	9.5	0.012	6.93	0.28	23.5	624.5	-
10/29/2024 10:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-10-IHR	2	13.972	8.06	78.2	9.5	0.012	6.94	0.29	23.5	624.5	-
10/29/2024 10:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-10-IHR	3	13.972	8.05	78.1	9.5	0.012	6.92	0.27	23.5	624.5	-
10/29/2024 10:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-10-IHR	4	13.966	8.05	78.0	9.5	0.012	6.90	0.30	23.5	624.5	-
10/29/2024 10:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-10-IHR	5	13.964	8.05	78.0	9.5	0.012	6.92	0.27	23.5	624.5	-
10/29/2024 10:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-10-IHR	6	13.961	8.05	78.0	9.5	0.012	6.91	0.30	23.5	624.5	-
10/29/2024 10:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-10-IHR	7	13.956	8.05	78.0	9.5	0.012	6.94	0.25	23.5	624.5	-
10/29/2024 10:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-10-IHR	8	13.951	8.05	78.0	9.5	0.012	6.92	0.22	23.5	624.5	-
10/29/2024 10:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-10-IHR	9	13.930	8.05	78.0	9.5	0.012	6.93	0.26	23.5	624.5	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	0	13.921	8.18	79.2	9.5	0.012	7.05	0.32	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	1	13.936	8.09	78.4	9.5	0.012	6.99	0.30	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	2	13.929	8.09	78.3	9.5	0.012	6.97	0.27	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	3	13.921	8.08	78.3	9.5	0.012	6.98	0.24	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	4	13.910	8.07	78.1	9.5	0.012	6.94	0.27	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	5	13.899	8.05	78.0	9.5	0.012	6.96	0.23	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	6	13.894	8.03	77.8	9.5	0.012	6.96	0.25	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	7	13.895	8.03	77.7	9.5	0.012	6.96	0.31	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	8	13.892	8.03	77.7	9.5	0.012	6.95	0.25	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	9	13.891	8.02	77.6	9.5	0.012	6.94	0.26	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	10	13.889	8.02	77.6	9.5	0.012	6.95	0.25	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	11	13.889	8.01	77.6	9.5	0.012	6.92	0.28	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	12	13.884	8.01	77.5	9.5	0.012	6.93	0.26	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	13	13.860	7.99	77.3	9.5	0.012	6.94	0.31	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	14	13.831	7.96	77.0	9.5	0.012	6.89	0.29	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	15	13.658	7.87	75.8	9.5	0.012	6.87	0.27	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	16	10.983	6.10	55.3	8.9	0.012	6.27	0.35	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	17	9.716	5.48	48.2	8.8	0.012	6.16	0.45	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	18	9.004	5.05	43.7	8.7	0.013	6.15	0.46	24.2	624.3	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	19	8.397	4.62	39.4	8.8	0.013	6.15	0.56	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	20	8.201	4.58	38.9	8.7	0.013	6.02	0.61	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	21	8.009	4.74	40.0	8.6	0.013	6.08	0.62	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	22	7.910	4.71	39.7	8.6	0.013	6.06	0.60	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	23	7.803	4.66	39.2	8.7	0.013	6.04	0.67	24.2	624.3	-
10/29/2024 10:54	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-11-IHR	24	7.719	4.53	38.0	8.7	0.013	6.03	3.75	24.2	624.3	-
10/29/2024 13:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-4-GC	0	10.260	8.84	78.8	9.4	0.013	6.86	0.52	23.1	628.9	-
10/29/2024 13:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-4-GC	1	9.795	8.87	78.2	9.7	0.014	6.82	0.58	23.1	628.9	-
10/29/2024 13:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-4-GC	2	9.752	8.85	77.9	9.2	0.013	6.80	0.59	23.1	628.9	-
10/29/2024 13:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-4-GC	3	9.658	8.79	77.2	9.3	0.013	6.80	0.62	23.1	628.9	-
10/29/2024 13:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-4-GC	4	9.631	8.76	77.0	9.3	0.013	6.76	0.58	23.1	628.9	-
10/29/2024 13:30	YSI EXO2S	Elliott Allen	Sunny, 45	R-IS-4-GC	5	9.097	8.80	76.3	8.2	0.012	6.74	1.46	23.1	628.9	-
10/30/2024 10:43	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-5-UVR	0	14.984	8.10	80.3	10.1	0.013	6.86	-0.45	23.2	641.7	Turb is negative
10/30/2024 10:43	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-5-UVR	1	14.786	8.13	80.2	10.5	0.013	6.78	-0.39	23.2	641.7	-
10/30/2024 10:43	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-5-UVR	2	14.701	8.11	79.9	10.5	0.013	6.76	-0.35	23.2	641.7	-
10/30/2024 10:43	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-5-UVR	3	14.664	8.11	79.8	10.6	0.013	6.75	-0.30	23.2	641.7	-
10/30/2024 10:43	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-5-UVR	4	14.627	8.12	79.9	10.5	0.013	6.78	-0.36	23.2	641.7	-
10/30/2024 10:43	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-5-UVR	5	14.595	8.12	79.8	10.5	0.013	6.76	-0.41	23.2	641.7	-
10/30/2024 10:43	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-5-UVR	6	14.580	8.13	79.9	10.4	0.013	6.78	-0.33	23.2	641.7	-
10/30/2024 10:43	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-5-UVR	7	14.571	8.14	80.0	10.4	0.013	6.75	-0.41	23.2	641.7	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	0	15.334	8.03	80.2	10.4	0.013	6.82	-0.35	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	1	15.348	7.99	79.8	10.4	0.013	6.77	-0.41	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	2	15.351	7.98	79.7	10.4	0.013	6.75	-0.38	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	3	15.353	7.98	79.7	10.4	0.013	6.77	-0.39	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	4	15.350	7.98	79.7	10.4	0.013	6.73	-0.41	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	5	15.347	7.97	79.7	10.4	0.013	6.76	-0.38	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	6	15.347	7.97	79.6	10.4	0.013	6.73	-0.40	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	7	15.346	7.97	79.6	10.4	0.013	6.74	-0.44	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	8	15.341	7.96	79.5	10.4	0.013	6.73	-0.40	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	9	15.338	7.96	79.5	10.4	0.013	6.70	-0.41	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	10	15.338	7.96	79.5	10.4	0.013	6.71	-0.38	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	11	15.321	7.96	79.4	10.4	0.013	6.74	-0.42	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	12	15.306	7.96	79.4	10.4	0.013	6.74	-0.42	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	13	15.276	7.96	79.4	10.4	0.013	6.75	-0.41	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	14	15.271	7.94	79.2	10.4	0.013	6.27	-0.40	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	15	15.270	7.94	79.2	10.4	0.013	6.74	-0.40	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	16	15.271	7.94	79.2	10.4	0.013	6.73	-0.41	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	17	15.262	7.94	79.2	10.4	0.013	6.71	-0.40	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	18	15.228	7.93	79.1	10.4	0.013	6.73	-0.44	23.7	642.1	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	19	15.246	7.94	79.1	10.4	0.013	6.73	-0.38	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	20	15.145	7.91	78.7	10.5	0.013	6.71	-0.37	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	21	15.118	7.89	78.5	10.5	0.013	6.72	-0.39	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	22	15.113	7.87	78.2	10.5	0.013	6.70	-0.39	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	23	15.102	7.86	78.1	10.4	0.013	6.69	-0.37	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	24	15.090	7.84	77.9	10.5	0.013	6.68	-0.40	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	25	15.057	7.80	77.4	10.4	0.013	6.63	-0.38	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	26	14.703	7.55	74.4	10.4	0.013	6.58	-0.35	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	27	13.621	6.35	61.1	10.0	0.013	6.24	-0.28	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	28	12.677	5.50	58.1	9.9	0.013	6.08	-0.24	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	29	12.489	5.18	48.6	9.9	0.013	6.06	-0.15	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	30	12.293	4.84	45.2	10.1	0.013	6.02	0.01	23.7	642.1	-
10/30/2024 11:12	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-7-UVR	31	12.023	4.37	40.5	10.4	0.014	6.00	0.28	23.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	0	15.308	8.04	80.3	10.3	0.013	6.90	-0.37	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	1	15.311	8.01	80.0	10.3	0.013	6.87	-0.33	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	2	15.320	7.99	79.8	10.3	0.013	6.84	-0.35	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	3	15.311	7.99	79.7	10.3	0.013	6.85	-0.38	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	4	15.309	7.99	79.7	10.3	0.013	6.83	-0.37	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	5	15.307	7.98	79.7	10.3	0.013	6.83	-0.35	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	6	15.305	7.98	79.7	10.3	0.013	6.85	-0.38	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	7	15.300	7.98	79.6	10.3	0.013	6.82	-0.37	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	8	15.298	7.97	79.6	10.3	0.013	6.84	-0.37	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	9	15.293	7.97	79.5	10.3	0.013	6.83	-0.37	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	10	15.289	7.96	79.5	10.3	0.013	6.81	-0.35	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	11	15.282	7.96	79.4	10.3	0.013	6.81	-0.37	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	12	15.281	7.96	79.4	10.3	0.013	6.83	-0.36	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	13	15.278	7.96	79.5	10.3	0.013	6.83	-0.38	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	14	15.273	7.96	79.4	10.3	0.013	6.81	-0.36	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	15	15.268	7.97	79.4	10.3	0.013	6.83	-0.40	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	16	15.266	7.97	79.5	10.3	0.013	6.84	-0.37	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	17	15.262	7.97	79.5	10.3	0.013	6.82	-0.38	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	18	15.257	7.97	79.5	10.3	0.013	6.82	-0.38	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	19	15.253	7.98	79.5	10.3	0.013	6.83	-0.41	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	20	15.247	7.98	79.6	10.3	0.013	6.83	-0.39	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	21	15.238	7.98	79.5	10.3	0.013	6.81	-0.31	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	22	15.143	7.91	78.7	10.3	0.013	6.77	-0.38	17.7	642.1	-
10/30/2024 12:07	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-6-UVR	23	15.119	7.88	78.4	10.3	0.013	6.76	-0.37	17.7	642.1	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	0	15.416	7.96	79.5	10.3	0.013	6.80	-0.37	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	1	15.388	7.93	79.3	10.3	0.013	6.76	-0.37	17.3	641.5	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	2	15.382	7.92	79.2	10.3	0.013	6.77	-0.36	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	3	15.373	7.91	79.1	10.3	0.013	6.79	-0.39	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	4	15.369	7.90	79.0	10.3	0.013	6.78	-0.37	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	5	15.367	7.90	79.0	10.3	0.013	6.79	-0.42	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	6	15.363	7.90	79.0	10.3	0.013	6.76	-0.41	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	7	15.361	7.90	79.0	10.3	0.013	6.79	-0.45	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	8	15.359	7.90	78.9	10.3	0.013	6.78	-0.41	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	9	15.359	7.90	78.9	10.3	0.013	6.79	-0.40	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	10	15.357	7.90	78.9	10.3	0.013	6.78	-0.40	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	11	15.356	7.89	78.9	10.3	0.013	6.76	-0.37	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	12	15.357	7.89	78.8	10.3	0.013	6.77	-0.44	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	13	15.356	7.89	78.8	10.3	0.013	6.78	-0.40	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	14	15.351	7.88	78.8	10.3	0.013	6.79	-0.38	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	15	15.346	7.88	78.7	10.3	0.013	6.76	-0.41	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	16	15.341	7.87	78.6	10.3	0.013	6.74	-0.40	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	17	15.335	7.87	78.6	10.3	0.013	6.78	-0.43	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	18	15.334	7.87	78.5	10.3	0.013	6.74	-0.44	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	19	15.326	7.86	78.5	10.3	0.013	6.73	-0.43	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	20	15.301	7.83	78.2	10.3	0.013	6.74	-0.42	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	21	15.294	7.83	78.1	10.3	0.013	6.74	-0.40	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	22	15.291	7.82	78.0	10.3	0.013	6.74	-0.43	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	23	15.290	7.82	78.0	10.3	0.013	6.74	-0.42	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	24	15.169	77.00	7.7	10.2	0.013	6.67	-0.41	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	25	14.926	7.47	74.0	10.1	0.013	6.61	-0.42	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	26	14.598	7.02	69.0	10.0	0.012	6.41	-0.46	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	27	13.016	6.48	61.6	9.5	0.012	6.23	-0.50	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	28	12.699	6.57	61.9	9.4	0.012	6.23	-0.45	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	29	12.265	6.44	60.2	9.5	0.013	6.20	-0.45	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	30	11.677	6.55	60.7	9.4	0.012	6.21	-0.45	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	31	11.698	6.34	58.6	9.6	0.013	6.20	-0.44	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	32	11.516	6.52	59.8	9.3	0.013	6.20	-0.47	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	33	11.391	6.53	59.7	9.4	0.013	6.23	-0.45	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	34	11.306	6.45	58.9	9.4	0.013	6.20	-0.43	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	35	11.130	6.56	59.6	9.2	0.012	6.22	-0.45	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	36	10.984	6.51	59.0	9.2	0.013	6.19	-0.43	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	37	10.850	6.47	58.5	9.2	0.013	6.21	-0.43	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	38	10.714	6.62	59.6	9.1	0.012	6.23	-0.43	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	39	10.567	6.81	61.1	9.1	0.013	6.18	-0.41	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	40	10.460	6.86	61.4	9.0	0.012	6.14	-0.44	17.3	641.5	-

Date & Time	Instrument Used	Survey Recorded By	Weather	SWS Site ID	Depth (m)	Temperature (°C) ¹	Dissolved Oxygen (mg/L) ¹	Dissolved Oxygen (% sat) ¹	Conductivity (uS/cm) ¹	Specific Conductance (mS/cm) ¹	pH (s.u.) ¹	Turbidity (NTU) ¹	Secchi Depth (ft) ¹	Barometric Pressure (mm Hg) ¹	Notes
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	41	10.360	6.87	61.3	9.0	0.013	6.13	-0.40	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	42	10.239	6.88	61.3	9.0	0.013	6.06	-0.40	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	43	10.164	6.90	61.4	9.0	0.013	5.99	-0.31	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	44	10.103	6.95	61.7	8.9	0.013	5.92	-0.41	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	45	10.019	6.96	61.7	8.9	0.013	5.90	-0.41	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	46	9.948	6.92	61.3	8.9	0.013	5.86	-0.39	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	47	9.853	6.95	61.4	8.9	0.013	5.85	-0.34	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	48	9.806	6.96	61.4	8.9	0.013	5.86	-0.40	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	49	9.682	6.91	60.8	8.9	0.013	5.82	-0.34	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	50	9.596	6.89	60.4	8.9	0.013	5.85	-0.37	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	51	9.530	6.74	59.1	9.0	0.013	5.81	-0.37	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	52	9.437	6.80	59.4	8.9	0.013	5.82	-0.38	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	53	9.331	6.71	58.5	9.0	0.013	5.80	-0.36	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	54	9.198	6.57	57.1	9.0	0.013	5.77	-0.37	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	55	9.130	6.49	56.3	9.0	0.013	5.76	-0.36	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	56	9.044	6.47	56.0	9.0	0.013	5.75	-0.34	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	57	8.938	6.49	56.1	9.0	0.013	5.76	-0.34	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	58	8.793	6.50	56.0	9.0	0.013	5.77	-0.34	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	59	8.646	6.49	55.7	9.0	0.013	5.77	-0.34	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	60	8.340	6.48	55.2	8.9	0.013	5.73	-0.30	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	61	8.046	6.51	55.0	8.9	0.013	5.73	-0.33	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	62	7.697	6.64	55.6	8.8	0.013	5.75	-0.30	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	63	7.442	6.77	56.3	8.8	0.013	5.75	-0.28	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	64	7.145	6.98	57.7	8.8	0.013	5.73	-0.28	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	65	6.893	7.05	57.9	8.8	0.013	5.76	-0.25	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	66	6.818	7.09	58.1	8.8	0.013	5.79	-0.26	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	67	6.787	7.09	58.1	8.8	0.013	5.77	-0.28	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	68	6.747	7.09	58.0	8.8	0.014	5.76	-0.25	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	69	6.715	7.02	57.5	8.8	0.014	5.76	-0.27	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	70	6.702	7.00	57.3	8.8	0.014	5.76	-0.23	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	71	6.690	6.99	57.1	8.8	0.012	5.77	-0.13	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	72	6.678	7.00	57.2	8.8	0.014	5.76	-0.22	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	73	6.663	6.94	56.7	8.9	0.014	5.75	-0.22	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	74	6.647	6.99	57.1	8.8	0.014	5.75	-0.24	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	75	6.637	6.95	56.7	8.9	0.014	5.77	-0.20	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	76	6.623	6.87	56.1	8.9	0.014	5.77	-0.21	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	77	6.620	6.86	55.9	8.9	0.014	5.77	-0.22	17.3	641.5	-
10/30/2024 13:02	YSI EXO2S	Elliott Allen	Cloudy, 45	R-IS-8-UVR	78	6.617	6.86	55.9	9.0	0.014	5.75	0.09	17.3	641.5	-

¹ Data were transcribed from the YSI EXO2 or EXO2S to a tablet, including additional digits beyond the parameter method detection limit (MDL).

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APPENDIX D***In Situ* Vertical Profile Data for UARP Reservoir Sites**

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Table D-1. Vertical Profile Data for UARP Reservoir Sites—Spring (May) *In Situ* Surveys.

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
Loon Lake Reservoir									
R-IS-1-LL	5/29	Surface	14.0	6.9	8.4	82	6	0.0	7.7
		1	13.8	6.9	8.4	81	6	0.0	
		2	13.0	6.8	8.5	81	6	0.0	
		3	12.6	6.8	8.6	81	6	0.0	
		4	11.8	6.7	8.7	81	6	0.1	
		5	11.6	6.7	8.8	81	6	0.1	
		6	11.0	6.7	8.9	80	6	0.1	
		7	10.7	6.7	8.9	80	6	0.1	
		8	10.4	6.7	9.0	80	6	0.2	
		9	10.2	6.7	9.0	80	6	0.2	
		10	9.6	6.6	9.0	79	6	0.2	
		11	8.9	6.6	9.2	79	6	0.3	
		12	8.4	6.6	9.2	79	6	0.3	
		13	8.3	6.7	9.2	79	6	0.3	
		14	8.1	6.6	9.3	78	5	0.3	
		15	7.6	6.5	9.3	78	5	0.3	
		16	7.5	6.6	9.3	77	5	0.3	
		17	7.4	6.5	9.3	77	5	0.3	
		18	7.3	6.5	9.3	77	5	0.4	
		19	7.2	6.5	9.3	77	5	0.3	
		20	6.8	6.5	9.3	76	5	0.4	
		21	6.5	6.5	9.3	75	5	0.4	
		22	6.4	6.4	9.3	75	5	0.4	
		23	6.2	6.4	9.3	75	5	0.7	
R-IS-2-LL	5/29	Surface	13.4	6.9	8.6	82	6	0.0	7.9
		1	13.2	6.9	8.6	82	6	0.0	
		2	12.9	6.9	8.7	82	6	0.0	
		3	12.6	6.9	8.7	82	6	0.0	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-2-LL	5/29	4	12.2	6.9	8.7	81	6	0.1	7.9
		5	11.7	6.8	8.8	81	6	0.1	
		6	10.9	6.8	8.9	81	6	0.1	
		7	10.6	6.8	9.0	81	6	0.2	
		8	10.2	6.8	9.0	81	6	0.1	
		9	9.7	6.8	9.1	80	6	0.2	
		10	9.4	6.8	9.2	80	6	0.2	
		11	9.1	6.7	9.2	80	6	0.2	
		12	8.7	6.7	9.3	79	5	0.3	
		13	8.5	6.7	9.3	80	5	0.3	
		14	7.7	6.7	9.4	78	5	0.3	
		15	7.3	6.6	9.4	78	5	0.3	
		16	7.1	6.7	9.4	78	5	0.3	
		17	7.0	6.6	9.4	77	5	0.4	
R-IS-3-LL	5/29	Surface	12.7	6.9	8.5	80	6	0.0	8.2
		1	12.3	6.8	8.8	82	6	0.1	
		2	11.9	6.8	8.8	81	6	0.1	
		3	11.7	6.8	8.8	81	6	0.1	
		4	11.6	6.8	8.9	81	6	0.1	
		5	11.4	6.8	8.9	81	6	0.1	
		6	11.3	6.8	8.9	81	6	0.1	
		7	11.2	6.8	8.9	81	6	0.2	
		8	11.0	6.8	8.9	81	6	0.1	
		9	10.7	6.8	9.0	81	6	0.2	
		10	9.8	6.8	9.1	80	6	0.2	
		11	9.0	6.7	9.2	80	6	0.3	
		12	8.5	6.7	9.3	79	6	0.3	
		13	8.1	6.7	9.3	79	5	0.3	
		14	7.9	6.7	9.4	79	5	0.3	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-3-LL	5/29	15	7.4	6.7	9.4	78	5	0.3	8.2
		16	7.2	6.6	9.3	77	5	0.4	
Gerle Creek Reservoir									
R-IS-4-GC	5/3	Surface	7.4	6.8	10.2	85	7	0.2	7.1
		1	6.4	6.8	10.7	87	6	0.5	
		2	6.3	6.8	10.8	87	6	0.5	
		3	6.2	6.8	10.8	87	7	0.6	
		4	6.2	6.8	10.8	87	7	0.5	
		5	5.9	6.8	10.9	87	6	0.6	
		6	5.5	6.8	11.0	87	6	0.7	
Union Valley Reservoir									
R-IS-5-UVR	5/2	Surface	12.9	7.2	9.4	89	10	0.7	7.4
		1	12.6	7.2	9.5	89	10	0.7	
		2	12.2	7.2	9.5	89	10	0.8	
		3	11.5	7.2	9.7	89	9	0.7	
		4	9.9	7.1	10.1	89	9	0.8	
		5	9.7	7.1	10.1	89	9	0.8	
		6	9.4	7.1	10.2	89	9	0.8	
		7	9.2	7.1	10.2	89	8	0.8	
		8	8.9	7.1	10.3	89	8	0.8	
		9	8.6	7.0	10.3	88	8	0.8	
		10	8.4	7.0	10.3	88	8	0.8	
		11	8.2	7.0	10.4	88	8	0.8	
		12	8.0	7.0	10.4	88	8	0.8	
		13	7.4	7.0	10.4	87	8	0.9	
		14	6.6	6.9	10.5	86	7	0.9	
		15	6.4	6.9	10.5	85	7	0.9	
		16	6.1	6.9	10.5	84	7	0.9	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-6-UVR	5/2	Surface	12.4	7.2	9.3	87	10	0.7	5.5
		1	12.2	7.2	9.5	89	10	0.8	
		2	12.1	7.2	9.6	89	10	0.8	
		3	11.9	7.2	9.6	89	10	0.8	
		4	11.9	7.2	9.6	89	10	0.8	
		5	11.5	7.2	9.6	88	9	0.9	
		6	10.8	7.2	9.9	89	9	0.9	
		7	9.3	7.2	10.3	90	10	0.9	
		8	8.6	7.2	10.5	90	9	1.0	
		9	8.1	7.2	10.6	90	8	1.1	
		10	8.0	7.2	10.7	90	8	1.1	
		11	7.8	7.2	10.7	90	8	1.0	
		12	7.5	7.1	10.6	88	8	1.0	
		13	7.3	7.1	10.6	88	8	1.0	
		14	7.2	7.1	10.6	87	8	1.0	
		15	7.0	7.1	10.5	87	8	1.1	
		16	6.9	7.0	10.4	86	8	1.0	
		17	6.8	7.0	10.3	85	8	1.0	
		18	6.4	7.0	10.3	83	8	1.0	
		19	6.3	6.9	10.2	83	8	1.0	
		20	6.1	6.9	10.2	82	8	1.0	
		21	5.8	6.9	10.1	81	8	1.0	
		22	5.8	6.9	10.1	80	8	1.0	
		23	5.8	6.9	10.1	80	8	1.0	
		24	5.7	6.9	10.0	80	8	1.0	
		25	5.6	6.9	10.0	80	8	1.0	
		26	5.6	6.9	10.0	79	8	1.0	
		27	5.6	6.9	10.0	79	8	1.0	
		28	5.5	6.9	10.0	79	8	1.0	
		29	5.5	6.9	9.9	79	8	1.0	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-6-UVR	5/2	30	5.5	6.9	9.9	79	8	1.0	5.5
		31	5.5	6.9	9.9	79	8	1.0	
R-IS-7-UVR	5/2	Surface	12.7	7.1	9.5	89	10	0.7	6.6
		1	12.3	7.1	9.6	89	10	0.8	
		2	12.1	7.1	9.6	89	10	0.7	
		3	11.9	7.1	9.6	89	9	0.8	
		4	10.8	7.1	9.9	90	9	0.8	
		5	10.1	7.1	10.1	90	9	0.8	
		6	9.6	7.0	10.2	89	8	0.8	
		7	9.2	7.0	10.3	89	8	0.8	
		8	9.0	7.0	10.3	89	8	0.8	
		9	8.7	6.9	10.3	89	8	0.8	
		10	8.0	6.9	10.4	88	8	0.9	
		11	7.8	6.9	10.4	88	8	0.8	
		12	7.3	6.8	10.5	87	8	0.9	
		13	7.0	6.8	10.5	86	8	1.0	
		14	6.5	6.8	10.5	85	8	1.0	
		15	6.3	6.8	10.5	85	8	1.0	
		16	6.3	6.8	10.5	85	8	1.0	
		17	6.2	6.8	10.4	84	8	0.9	
		18	6.2	6.7	10.4	84	8	1.0	
		19	6.2	6.8	10.4	84	8	1.0	
		20	6.1	6.7	10.4	84	8	1.0	
		21	6.1	6.8	10.4	84	8	0.9	
		22	6.0	6.7	10.4	84	8	1.0	
		23	6.0	6.8	10.4	83	8	0.9	
		24	6.0	6.7	10.4	83	8	0.9	
		25	5.8	6.7	10.4	83	8	1.0	
		26	5.8	6.7	10.3	83	8	1.0	
		27	5.7	6.7	10.3	82	8	0.9	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-7-UVR	5/2	28	5.7	6.6	10.3	82	8	1.0	6.6
		29	5.7	6.7	10.2	81	8	1.0	
		30	5.6	6.6	10.2	81	8	0.9	
		31	5.6	6.6	10.2	81	8	0.9	
		33	5.6	6.6	10.2	81	8	0.9	
		32	5.6	6.7	10.2	81	8	0.9	
		34	5.6	6.6	10.2	81	8	1.0	
		35	5.6	6.6	10.1	80	8	1.0	
		36	5.6	6.6	10.1	80	8	1.0	
		37	5.6	6.6	10.1	80	8	0.9	
		38	5.5	6.6	10.1	80	8	0.9	
		39	5.5	6.6	10.1	80	8	0.9	
		40	5.5	6.6	10.0	80	8	1.0	
		41	5.4	6.6	9.9	79	8	0.9	
R-IS-8-UVR	5/2	Surface	12.1	7.2	9.5	88	10	0.7	6.0
		1	11.9	7.2	9.6	89	10	0.8	
		2	11.5	7.2	9.6	89	10	0.8	
		3	11.4	7.2	9.6	88	9	0.8	
		4	10.8	7.2	9.6	87	9	0.9	
		5	9.2	7.2	10.5	91	9	0.9	
		6	8.6	7.2	10.7	92	9	0.9	
		7	8.4	7.2	10.8	92	9	0.9	
		8	8.2	7.2	10.8	91	8	0.9	
		9	7.9	7.2	10.9	91	9	1.0	
		10	7.4	7.2	10.9	90	8	1.0	
		11	7.1	7.1	10.7	89	8	1.1	
		12	7.0	7.1	10.6	88	8	1.0	
		13	6.9	7.1	10.6	87	8	1.1	
		14	6.7	7.1	10.5	86	8	1.0	
		15	6.5	7.0	10.4	84	8	1.1	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-8-UVR	5/2	16	6.3	7.0	10.3	84	8	1.0	6.0
		17	6.1	7.0	10.3	83	8	1.0	
		18	6.1	7.0	10.3	83	8	1.0	
		19	6.0	6.9	10.2	82	8	1.0	
		20	5.9	6.9	10.2	82	8	1.0	
		21	5.9	6.9	10.2	82	8	1.0	
		22	5.9	6.9	10.2	82	8	1.0	
		23	5.8	6.9	10.2	81	8	0.9	
		24	5.8	6.9	10.2	81	8	1.0	
		25	5.8	6.9	10.2	81	8	1.0	
		26	5.8	6.9	10.1	81	8	1.0	
		27	5.7	6.9	10.1	81	8	1.0	
		28	5.7	6.9	10.1	80	8	0.9	
		29	5.7	6.9	10.0	80	8	1.0	
		30	5.7	6.9	10.0	80	8	1.0	
		31	5.6	6.9	10.0	80	8	0.9	
		32	5.6	6.9	10.1	80	8	1.0	
		33	5.6	6.9	10.1	80	8	1.0	
		34	5.5	6.9	10.0	80	8	1.0	
		35	5.5	6.9	10.0	80	8	0.9	
		36	5.5	6.9	10.0	80	8	0.9	
		37	5.5	6.9	10.0	80	8	0.9	
		38	5.5	6.9	10.0	80	8	0.9	
		39	5.5	6.9	10.0	80	8	0.9	
		40	5.5	6.9	10.0	80	8	1.0	
		41	5.5	6.9	10.0	80	8	0.9	
		42	5.5	6.9	10.0	80	8	0.9	
		43	5.5	6.9	10.0	79	8	0.9	
		44	5.4	6.9	10.0	79	8	1.0	
		45	5.4	6.9	10.0	79	8	0.9	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-8-UVR	5/2	46	5.4	6.9	10.0	79	8	0.9	6.0
		47	5.4	6.9	10.0	79	8	0.9	
		48	5.4	6.9	10.0	79	8	0.9	
		49	5.4	6.9	10.0	79	8	0.9	
		50	5.4	6.9	10.0	79	8	0.9	
		51	5.4	6.9	10.0	79	8	0.9	
		52	5.3	6.9	10.0	79	8	0.9	
		53	5.3	6.9	10.0	79	8	0.9	
		54	5.3	6.9	9.9	79	8	0.9	
		55	5.3	6.9	9.9	79	8	1.0	
		56	5.3	6.9	9.9	78	8	0.9	
		57	5.3	6.9	9.9	78	8	0.9	
		58	5.3	6.8	9.9	78	8	0.9	
		59	5.3	6.8	9.9	78	8	0.9	
		60	5.3	6.8	9.9	78	8	0.9	
		61	5.3	6.8	9.9	78	8	1.2	
		62	5.3	6.8	9.9	78	8	0.9	
		63	5.3	6.8	9.9	78	8	0.9	
		64	5.3	6.8	9.9	78	8	0.9	
Ice House Reservoir									
R-IS-9-IHR	5/3	Surface	11.0	7.3	9.8	89	9	0.5	4.8
		1	10.7	7.2	9.9	89	9	0.7	
		2	10.6	7.2	9.9	89	9	0.7	
		3	9.2	7.1	10.2	89	8	0.8	
		4	8.9	7.1	10.4	89	8	0.7	
		5	8.1	7.1	10.5	89	8	0.8	
		6	7.6	7.0	10.6	88	8	0.8	
		7	6.5	7.0	10.7	87	8	0.8	
		8	6.1	7.0	10.7	86	8	0.8	
		9	6.0	6.9	10.7	86	8	0.8	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-9-IHR	5/3	10	6.0	6.9	10.7	86	8	1.0	4.8
		11	5.9	6.9	10.7	85	8	0.8	
		12	5.8	6.8	10.6	85	8	0.8	
		13	5.8	6.8	10.6	85	8	0.9	
		14	5.8	6.8	10.6	85	8	0.8	
		15	5.7	6.8	10.6	84	8	0.9	
		16	5.7	6.8	10.5	84	8	0.8	
		17	5.7	6.7	10.5	84	8	0.8	
		18	5.7	6.8	10.5	84	8	0.8	
		19	5.6	6.8	10.5	84	8	0.9	
R-IS-10-IHR	5/3	Surface	10.9	7.1	10.0	91	9	0.7	4.8
		1	10.8	7.1	10.0	90	9	0.7	
		2	10.6	7.1	10.0	90	9	0.7	
		3	10.4	7.1	10.1	90	9	0.7	
		4	10.2	7.1	10.1	90	9	0.7	
		5	9.5	7.1	10.3	90	9	0.7	
		6	9.0	7.0	10.4	90	8	0.7	
		7	8.8	7.0	10.4	90	8	0.8	
		8	8.2	7.0	10.5	89	8	0.8	
		9	8.2	7.0	10.5	89	8	0.8	
		10	7.1	7.0	10.7	88	8	0.8	
		11	6.9	6.9	10.7	88	8	0.8	
		12	6.8	6.9	10.7	88	8	0.8	
		13	6.5	6.9	10.7	87	8	0.9	
R-IS-11-IHR	5/3	Surface	11.1	7.1	9.8	89	9	0.6	5.2
		1	10.6	7.1	10.0	90	9	0.7	
		2	10.6	7.1	10.1	90	9	0.6	
		3	10.6	7.1	10.1	90	9	0.6	
		4	10.5	7.1	10.1	90	9	0.7	
		5	10.0	7.1	10.3	91	9	0.7	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)			
R-IS-11-IHR	5/3	6	8.4	7.1	10.7	92	8	0.8	5.2			
		7	7.6	7.1	11.0	92	8	0.8				
		8	7.1	7.1	11.0	91	8	0.8				
		9	6.8	7.0	11.0	90	8	0.8				
		10	6.5	7.0	11.0	89	8	0.9				
		11	6.2	6.9	10.8	87	8	0.9				
		12	6.0	6.9	10.8	87	8	0.9				
		13	5.8	6.8	10.7	85	8	0.9				
		14	5.7	6.8	10.6	84	8	0.9				
		15	5.6	6.8	10.5	84	8	0.9				
		16	5.6	6.8	10.5	83	8	0.9				
		17	5.6	6.8	10.4	83	8	0.9				
		18	5.6	6.7	10.4	83	8	0.9				
		19	5.6	6.7	10.4	82	8	0.9				
		20	5.5	6.7	10.4	82	8	0.9				
		21	5.5	6.7	10.4	82	8	0.9				
		22	5.5	6.7	10.3	82	8	0.9				
		23	5.5	6.7	10.3	82	8	0.9				
		24	5.5	6.7	10.3	82	8	0.9				
		25	5.5	6.7	10.3	82	8	0.9				
		26	5.5	6.7	10.3	82	8	0.9				
		27	5.5	6.7	10.3	82	8	0.9				
		28	5.5	6.6	10.3	82	8	0.9				
		29	5.5	6.6	10.3	82	8	0.9				
		30	5.5	6.6	10.3	82	8	0.9				
		31	5.5	6.7	10.3	82	8	0.9				
		32	5.5	6.7	10.3	82	8	0.9				
		Junction Reservoir										
		R-IS-12-JR	5/1	Surface	10.3	7.1	9.6	85		12	0.5	7.1
				1	9.1	7.0	9.6	84		11	0.6	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-12-JR	5/1	2	8.2	7.0	9.9	84	11	0.7	7.1
		3	7.1	7.1	10.1	83	11	0.8	
		4	6.7	7.0	10.2	84	10	0.8	
		5	6.5	6.9	10.3	84	9	0.8	
		6	6.5	6.9	10.2	83	10	0.8	
		7	6.3	6.9	10.2	84	10	0.8	
		8	6.2	6.9	10.2	82	10	0.8	
		9	6.1	6.9	10.2	82	9	0.8	
		10	6.0	6.9	10.2	82	10	0.8	
		11	5.9	6.8	10.1	81	9	0.8	
		12	5.9	6.9	10.2	81	9	0.8	
		13	5.8	6.8	10.1	81	9	0.8	
		14	5.8	6.9	10.1	81	9	0.8	
		15	5.8	6.9	10.1	81	9	0.8	
		16	5.8	6.8	10.1	81	9	0.8	
Camino Reservoir									
R-IS-13-CR	5/1	Surface	6.8	7.0	9.7	79	9	0.8	5.8
		1	6.7	6.8	9.7	79	9	0.8	
		2	6.6	6.8	9.7	79	9	0.8	
		3	6.6	6.8	9.7	79	9	0.8	
		4	6.6	6.8	9.7	79	9	0.8	
		5	6.6	6.8	9.7	79	9	0.8	

Notes: °C = degrees Celsius
% sat = percent saturation
NTU = Nephelometric Turbidity Unit
m = meter(s)
s.u. = standard unit
mg/L = milligrams per liter
uS/cm = microsiemens per centimeter

Table D-2. Vertical Profile Data for UARP Reservoir Sites—Fall (October) *In Situ* Surveys.

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
Gerle Creek Reservoir									
R-IS-4-GC	10/29	0	10.3	6.9	8.8	79	9	0.5 ^Q	7.0
		1	9.8	6.8	8.9	78	10	0.6 ^Q	
		2	9.8	6.8	8.9	78	9	0.6 ^Q	
		3	9.7	6.8	8.8	77	9	0.6 ^Q	
		4	9.6	6.8	8.8	77	9	0.6 ^Q	
		5	9.1	6.7	8.8	76	8	1.5 ^Q	
Union Valley Reservoir									
R-IS-5-UVR	10/30	0	15.0	6.9	8.1	80	10	-0.5 ^a	7.1
		1	14.8	6.8	8.1	80	11	-0.4 ^a	
		2	14.7	6.8	8.1	80	11	-0.4 ^a	
		3	14.7	6.8	8.1	80	11	-0.3 ^a	
		4	14.6	6.8	8.1	80	11	-0.4 ^a	
		5	14.6	6.8	8.1	80	11	-0.4 ^a	
		6	14.6	6.8	8.1	80	10	-0.3 ^a	
		7	14.6	6.8	8.1	80	10	-0.4 ^a	
R-IS-6-UVR	10/30	0	15.3	6.9	8.0	80	10	-0.4 ^a	5.4
		1	15.3	6.9	8.0	80	10	-0.3 ^a	
		2	15.3	6.8	8.0	80	10	-0.4 ^a	
		3	15.3	6.9	8.0	80	10	-0.4 ^a	
		4	15.3	6.8	8.0	80	10	-0.4 ^a	
		5	15.3	6.8	8.0	80	10	-0.4 ^a	
		6	15.3	6.9	8.0	80	10	-0.4 ^a	
		7	15.3	6.8	8.0	80	10	-0.4 ^a	
		8	15.3	6.8	8.0	80	10	-0.4 ^a	
		9	15.3	6.8	8.0	80	10	-0.4 ^a	
		10	15.3	6.8	8.0	80	10	-0.4 ^a	
		11	15.3	6.8	8.0	79	10	-0.4 ^a	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-6-UVR	10/30	12	15.3	6.8	8.0	79	10	-0.4 ^a	5.4
		13	15.3	6.8	8.0	80	10	-0.4 ^a	
		14	15.3	6.8	8.0	79	10	-0.4 ^a	
		15	15.3	6.8	8.0	79	10	-0.4 ^a	
		16	15.3	6.8	8.0	80	10	-0.4 ^a	
		17	15.3	6.8	8.0	80	10	-0.4 ^a	
		18	15.3	6.8	8.0	80	10	-0.4 ^a	
		19	15.3	6.8	8.0	80	10	-0.4 ^a	
		20	15.2	6.8	8.0	80	10	-0.4 ^a	
		21	15.2	6.8	8.0	80	10	-0.3 ^a	
		22	15.1	6.8	7.9	79	10	-0.4 ^a	
		23	15.1	6.8	7.9	78	10	-0.4 ^a	
R-IS-7-UVR	10/30	0	15.3	6.8	8.0	80	10	-0.4 ^a	7.2
		1	15.3	6.8	8.0	80	10	-0.4 ^a	
		2	15.4	6.8	8.0	80	10	-0.4 ^a	
		3	15.4	6.8	8.0	80	10	-0.4 ^a	
		4	15.4	6.7	8.0	80	10	-0.4 ^a	
		5	15.3	6.8	8.0	80	10	-0.4 ^a	
		6	15.3	6.7	8.0	80	10	-0.4 ^a	
		7	15.3	6.7	8.0	80	10	-0.4 ^a	
		8	15.3	6.7	8.0	80	10	-0.4 ^a	
		9	15.3	6.7	8.0	80	10	-0.4 ^a	
		10	15.3	6.7	8.0	80	10	-0.4 ^a	
		11	15.3	6.7	8.0	79	10	-0.4 ^a	
		12	15.3	6.7	8.0	79	10	-0.4 ^a	
		13	15.3	6.8	8.0	79	10	-0.4 ^a	
		14	15.3	6.3	7.9	79	10	-0.4 ^a	
		15	15.3	6.7	7.9	79	10	-0.4 ^a	
		16	15.3	6.7	7.9	79	10	-0.4 ^a	
		17	15.3	6.7	7.9	79	10	-0.4 ^{1a}	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-7-UVR	10/30	18	15.2	6.7	7.9	79	10	-0.4 ^a	7.2
		19	15.2	6.7	7.9	79	10	-0.4 ^a	
		20	15.1	6.7	7.9	79	11	-0.4 ^a	
		21	15.1	6.7	7.9	79	11	-0.4 ^a	
		22	15.1	6.7	7.9	78	11	-0.4 ^a	
		23	15.1	6.7	7.9	78	10	-0.4 ^a	
		24	15.1	6.7	7.8	78	11	-0.4 ^a	
		25	15.1	6.6	7.8	77	10	-0.4 ^a	
		26	14.7	6.6	7.6	74	10	-0.4 ^a	
		27	13.6	6.2	6.4	61	10	-0.3 ^a	
		28	12.7	6.1	5.5	58	10	-0.2 ^a	
		29	12.5	6.1	5.2	49	10	-0.2 ^a	
		30	12.3	6.0	4.8	45	10	0.0	
		31	12.0	6.0	4.4	41	10	0.3	
R-IS-8-UVR	10/30	0	15.4	6.8	8.0	80	10	-0.4 ^a	6.2
		1	15.4	6.8	7.9	79	10	-0.4 ^a	
		2	15.4	6.8	7.9	79	10	-0.4 ^a	
		3	15.4	6.8	7.9	79	10	-0.4 ^a	
		4	15.4	6.8	7.9	79	10	-0.4 ^a	
		5	15.4	6.8	7.9	79	10	-0.4 ^a	
		6	15.4	6.8	7.9	79	10	-0.4 ^a	
		7	15.4	6.8	7.9	79	10	-0.5 ^a	
		8	15.4	6.8	7.9	79	10	-0.4 ^a	
		9	15.4	6.8	7.9	79	10	-0.4 ^a	
		10	15.4	6.8	7.9	79	10	-0.4 ^a	
		11	15.4	6.8	7.9	79	10	-0.4 ^a	
		12	15.4	6.8	7.9	79	10	-0.4 ^a	
		13	15.4	6.8	7.9	79	10	-0.4 ^a	
		14	15.4	6.8	7.9	79	10	-0.4 ^a	
		15	15.3	6.8	7.9	79	10	-0.4 ^a	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-8-UVR	10/30	16	15.3	6.7	7.9	79	10	-0.4 ^a	6.2
		17	15.3	6.8	7.9	79	10	-0.4 ^a	
		18	15.3	6.7	7.9	79	10	-0.4 ^a	
		19	15.3	6.7	7.9	79	10	-0.4 ^a	
		20	15.3	6.7	7.8	78	10	-0.4 ^a	
		21	15.3	6.7	7.8	78	10	-0.4 ^a	
		22	15.3	6.7	7.8	78	10	-0.4 ^a	
		23	15.3	6.7	7.8	78	10	-0.4 ^a	
		24	15.2	6.7	7.7	77	10	-0.4 ^a	
		25	14.9	6.6	7.5	74	10	-0.4 ^a	
		26	14.6	6.4	7.0	69	10	-0.5 ^a	
		27	13.0	6.2	6.5	62	10	-0.5 ^a	
		28	12.7	6.2	6.6	62	9	-0.5 ^a	
		29	12.3	6.2	6.4	60	10	-0.5 ^a	
		30	11.7	6.2	6.6	61	9	-0.5 ^a	
		31	11.7	6.2	6.3	59	10	-0.4 ^a	
		32	11.5	6.2	6.5	60	9	-0.5 ^a	
		33	11.4	6.2	6.5	60	9	-0.5 ^a	
		34	11.3	6.2	6.5	59	9	-0.4 ^a	
		35	11.1	6.2	6.6	60	9	-0.5 ^a	
		36	11.0	6.2	6.5	59	9	-0.4 ^a	
		37	10.9	6.2	6.5	59	9	-0.4 ^a	
		38	10.7	6.2	6.6	60	9	-0.4 ^a	
		39	10.6	6.2	6.8	61	9	-0.4 ^a	
		40	10.5	6.1	6.9	61	9	-0.4 ^a	
		41	10.4	6.1	6.9	61	9	-0.4 ^a	
		42	10.2	6.1	6.9	61	9	-0.4 ^a	
		43	10.2	6.0	6.9	61	9	-0.3 ^a	
		44	10.1	5.9	7.0	62	9	-0.4 ^a	
		45	10.0	5.9	7.0	62	9	-0.4 ^a	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-8-UVR	10/30	46	9.9	5.9	6.9	61	9	-0.4 ^a	6.2
		47	9.9	5.9	7.0	61	9	-0.3 ^a	
		48	9.8	5.9	7.0	61	9	-0.4 ^a	
		49	9.7	5.8	6.9	61	9	-0.3 ^a	
		50	9.6	5.9	6.9	60	9	-0.4 ^a	
		51	9.5	5.8	6.7	59	9	-0.4 ^a	
		52	9.4	5.8	6.8	59	9	-0.4 ^a	
		53	9.3	5.8	6.7	59	9	-0.4 ^a	
		54	9.2	5.8	6.6	57	9	-0.4 ^a	
		55	9.1	5.8	6.5	56	9	-0.4 ^a	
		56	9.0	5.8	6.5	56	9	-0.3 ^a	
		57	8.9	5.8	6.5	56	9	-0.3 ^a	
		58	8.8	5.8	6.5	56	9	-0.3 ^a	
		59	8.6	5.8	6.5	56	9	-0.3 ^a	
		60	8.3	5.7	6.5	55	9	-0.3 ^a	
		61	8.0	5.7	6.5	55	9	-0.3 ^a	
		62	7.7	5.8	6.6	56	9	-0.3 ^a	
		63	7.4	5.8	6.8	56	9	-0.3 ^a	
		64	7.1	5.7	7.0	58	9	-0.3 ^a	
		65	6.9	5.8	7.1	58	9	-0.3 ^a	
		66	6.8	5.8	7.1	58	9	-0.3 ^a	
		67	6.8	5.8	7.1	58	9	-0.3 ^a	
		68	6.7	5.8	7.1	58	9	-0.3 ^a	
		69	6.7	5.8	7.0	58	9	-0.3 ^a	
		70	6.7	5.8	7.0	57	9	-0.2 ^a	
		71	6.7	5.8	7.0	57	9	-0.1 ^a	
		72	6.7	5.8	7.0	57	9	-0.2 ^a	
		73	6.7	5.8	6.9	57	9	-0.2 ^a	
		74	6.6	5.8	7.0	57	9	-0.2 ^a	
		75	6.6	5.8	7.0	57	9	-0.2 ^a	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-8-UVR	10/30	76	6.6	5.8	6.9	56	9	-0.2 ^a	6.2
		77	6.6	5.8	6.9	56	9	-0.2 ^a	
		78	6.6	5.8	6.9	56	9	0.1	
Ice House Reservoir									
R-IS-9-IHR	10/29	0	14.0	7.1	8.0	78	10	0.2 ^Q	7.3
		1	14.0	6.9	8.0	78	10	0.3 ^Q	
		2	14.0	6.9	8.0	78	10	0.3 ^Q	
		3	14.0	6.9	8.0	78	10	0.3 ^Q	
		4	14.0	6.9	8.0	78	10	0.3 ^Q	
		5	14.0	6.9	8.0	78	10	0.3 ^Q	
		6	14.0	6.9	8.0	78	10	0.3 ^Q	
		7	14.0	6.9	8.0	78	10	0.3 ^Q	
		8	14.0	6.9	8.0	78	10	0.2 ^Q	
		9	14.0	6.9	8.0	78	10	0.3 ^Q	
		10	14.0	6.9	8.0	78	10	0.2 ^Q	
		11	14.0	6.9	8.0	78	10	0.2 ^Q	
		12	14.0	6.9	8.0	78	10	0.3 ^Q	
		13	13.9	6.9	8.0	78	10	0.3 ^Q	
		14	13.9	6.9	8.0	78	10	0.3 ^Q	
		15	11.9	6.0	5.6	52	9	0.4 ^Q	
		16	9.9	5.7	4.2	37	9	0.7 ^Q	
		17	9.4	5.7	2.9	25	10	0.9 ^Q	
R-IS-10-IHR	10/29	0	13.9	6.9	8.2	80	10	0.4 ^Q	7.2
		1	14.0	6.9	8.1	78	10	0.3 ^Q	
		2	14.0	6.9	8.1	78	10	0.3 ^Q	
		3	14.0	6.9	8.1	78	10	0.3 ^Q	
		4	14.0	6.9	8.1	78	10	0.3 ^Q	
		5	14.0	6.9	8.1	78	10	0.3 ^Q	
		6	14.0	6.9	8.1	78	10	0.3 ^Q	
		7	14.0	6.9	8.1	78	10	0.3 ^Q	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-10-IHR	10/29	8	14.0	6.9	8.1	78	10	0.2 ^Q	7.2
		9	13.9	6.9	8.1	78	10	0.3 ^Q	
R-IS-11-IHR	10/29	0	13.9	7.1	8.2	79	10	0.3 ^Q	7.4
		1	13.9	7.0	8.1	78	10	0.3 ^Q	
		2	13.9	7.0	8.1	78	10	0.3 ^Q	
		3	13.9	7.0	8.1	78	10	0.2 ^Q	
		4	13.9	6.9	8.1	78	10	0.3 ^Q	
		5	13.9	7.0	8.1	78	10	0.2 ^Q	
		6	13.9	7.0	8.0	78	10	0.3 ^Q	
		7	13.9	7.0	8.0	78	10	0.3 ^Q	
		8	13.9	7.0	8.0	78	10	0.3 ^Q	
		9	13.9	6.9	8.0	78	10	0.3 ^Q	
		10	13.9	7.0	8.0	78	10	0.3 ^Q	
		11	13.9	6.9	8.0	78	10	0.3 ^Q	
		12	13.9	6.9	8.0	78	10	0.3 ^Q	
		13	13.9	6.9	8.0	77	10	0.3 ^Q	
		14	13.8	6.9	8.0	77	10	0.3 ^Q	
		15	13.7	6.9	7.9	76	10	0.3 ^Q	
		16	11.0	6.3	6.1	55	9	0.4 ^Q	
		17	9.7	6.2	5.5	48	9	0.5 ^Q	
		18	9.0	6.2	5.1	44	9	0.5 ^Q	
		19	8.4	6.2	4.6	39	9	0.6 ^Q	
		20	8.2	6.0	4.6	39	9	0.6 ^Q	
		21	8.0	6.1	4.7	40	9	0.6 ^Q	
		22	7.9	6.1	4.7	40	9	0.6 ^Q	
		23	7.8	6.0	4.7	39	9	0.7 ^Q	
Junction Reservoir									
R-IS-12-JR	10/27	0	9.4	6.3	9.3	81	9	0.4	5.5
		1	9.0	6.1	8.7	75	9	0.5	
		2	8.9	6.1	8.7	75	9	0.6	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-12-JR	10/27	3	8.9	6.1	8.7	75	9	0.5	5.5
		4	8.9	6.0	8.7	75	9	0.5	
		5	8.8	6.0	8.7	75	9	0.5	
		6	8.8	6.0	8.8	75	9	0.5	
		7	8.8	6.0	8.8	75	9	0.5	
		8	8.8	6.0	8.8	76	9	0.5	
		9	8.8	6.0	8.8	76	9	0.5	
		10	8.7	6.0	8.9	76	9	0.5	
		11	8.7	6.0	8.9	77	9	0.5	
		12	8.5	6.0	9.0	77	9	0.6	
Camino Reservoir									
R-IS-13-CR	10/27	0	9.2	7.0	10.4	90	10	0.3	5.8
		1	9.0	6.6	10.6	92	10	0.5	
		2	8.9	6.6	10.7	92	10	0.5	
		3	8.9	6.5	10.7	92	10	0.5	
		4	8.9	6.5	10.7	92	10	0.6	
		5	8.9	6.5	10.7	92	10	0.5	
Slab Creek Reservoir									
R-IS-14-SC	10/28	0	9.5	6.9	10.7	94	14	0.6	4.6
		1	9.5	6.7	10.8	94	14	0.7	
		2	9.5	6.6	10.8	94	14	0.8	
		3	9.5	6.5	10.8	94	14	0.8	
		4	9.5	6.5	10.8	94	13	0.9	
R-IS-15-SC	10/28	0	12.4	6.8	9.3	87	20	0.6	4.9
		1	12.2	6.8	9.2	86	20	0.6	
		2	12.1	6.8	9.2	86	20	0.6	
		3	12.1	6.8	9.2	86	20	0.6	
		4	12.1	6.8	9.2	85	20	0.6	
		5	12.1	6.8	9.2	85	20	0.6	
		6	12.0	6.8	9.2	85	20	0.6	

Site ID	2024 Sample Date	Sample Depth (m)	Water Temperature (°C)	pH (s.u.)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (% sat)	Conductivity (uS/cm)	Turbidity (NTU)	Secchi Disk (m)
R-IS-15-SC	10/28	7	11.7	6.7	9.2	85	20	0.6	4.9
		8	11.5	6.7	9.4	86	20	0.6	
		9	11.4	6.7	9.4	86	20	0.7	
		10	11.2	6.7	9.5	86	20	0.7	
		11	11.1	6.7	9.5	86	20	0.7	
		12	11.1	6.7	9.5	86	19	0.8	
		13	11.0	6.7	9.5	86	19	0.8	
		14	11.0	6.7	9.5	86	19	0.8	
		15	10.9	6.7	9.5	86	19	0.8	
		16	10.9	6.7	9.5	86	18	0.8	
		17	10.9	6.7	9.5	86	18	0.7	
		18	10.9	6.7	9.6	86	18	0.6	
		19	10.9	6.7	9.6	86	18	0.8	
		20	10.8	6.7	9.6	86	18	0.7	
		21	10.8	6.7	9.6	87	18	0.7	
		22	10.8	6.7	9.6	86	18	0.7	
		23	10.8	6.7	9.6	87	18	0.7	
		24	10.8	6.7	9.6	87	18	0.7	
		25	10.8	6.7	9.6	87	18	0.7	
		26	10.7	6.7	9.6	87	19	0.7	
		27	10.7	6.7	9.6	87	19	0.7	
		28	10.7	6.7	9.6	87	19	0.7	
		29	10.7	6.7	9.6	87	19	0.8	
		30	10.6	6.7	9.6	87	19	1.0	
		31	10.6	6.7	9.6	86	19	1.6	

Notes: °C = degrees Celsius mg/L = milligrams per liter uS/cm= microsiemens per centimeter
% sat = percent saturation NTU = Nephelometric Turbidity Unit
m = meter(s) s.u. = standard unit of pH

^a Negative turbidity values are the result of inherent variation in turbidity of deionized water used for calibration. Deionized water may register up to approximately 1 NTU; calibrating with deionized water may yield slightly negative turbidity measurements (i.e., between -1 and 0 NTU) in waters with very low turbidity.

^Q Data are designated as “qualified” because the post-sampling calibration check measurement quality objective for acceptability was not met (see Appendix A for detailed calibration data). Qualified values are known with relatively less certainty (see Table 5-2).

APPENDIX E***In Situ* Vertical Profiles for UARP Reservoir Sites**

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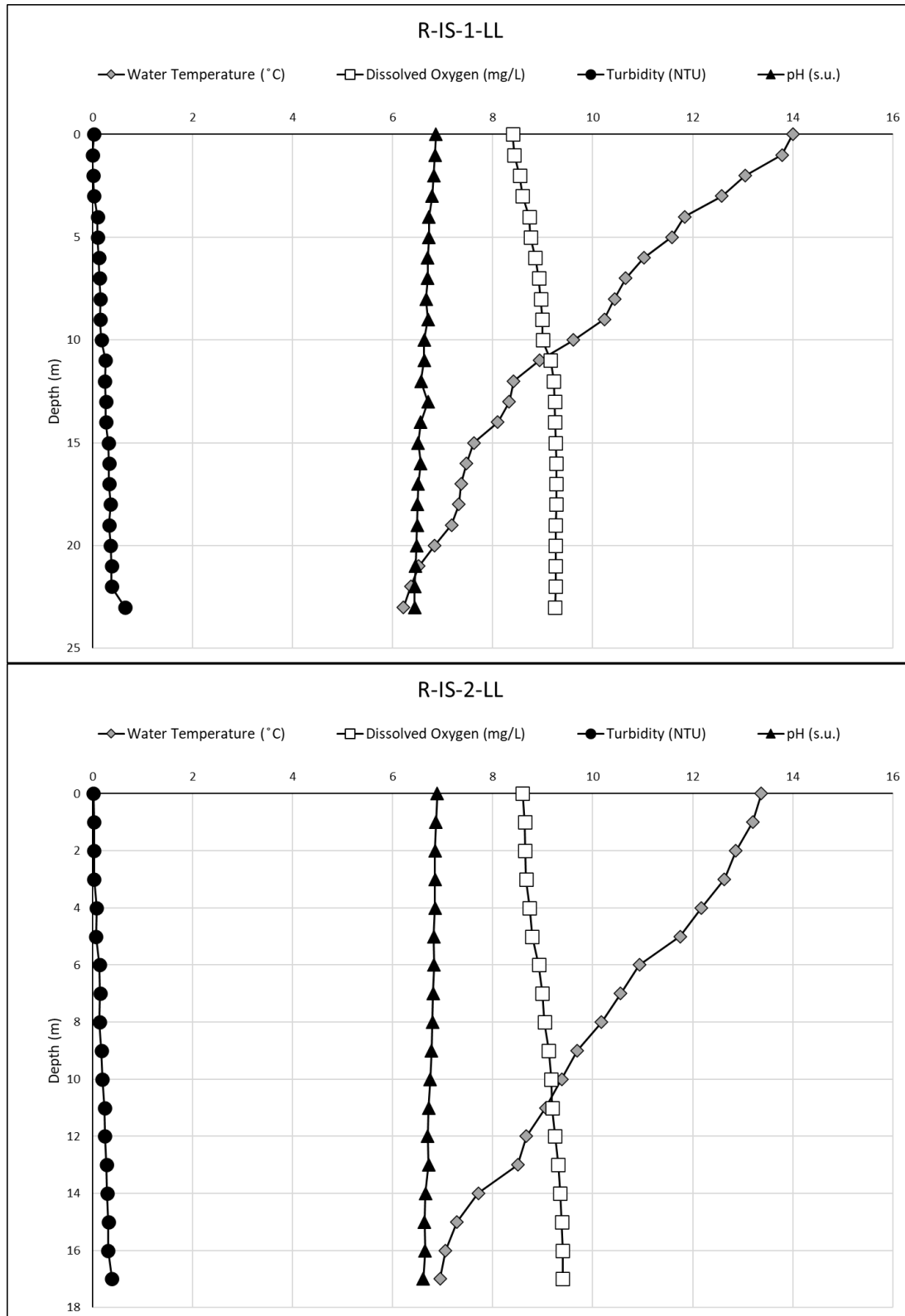


Figure E-1. *In situ* water temperature, dissolved oxygen, turbidity and pH at Loon Lake Reservoir Sites R-IS-1-LL and R-IS-2-LL, spring 2024.

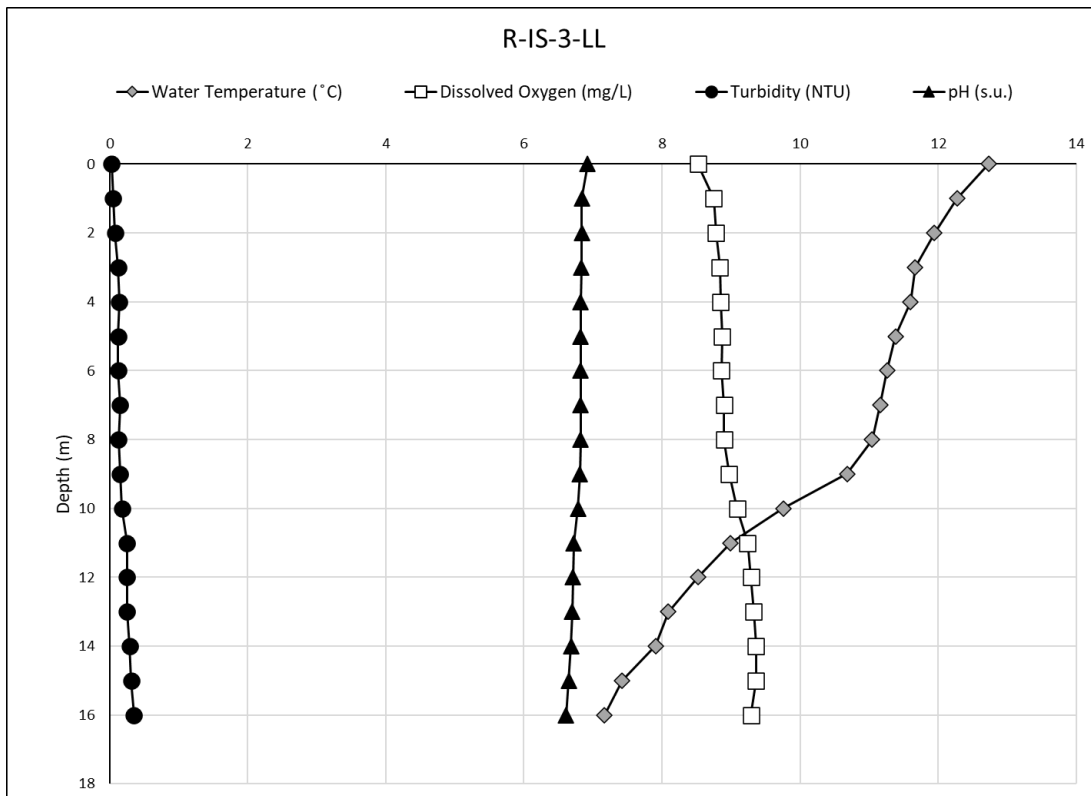


Figure E-2. *In situ* water temperature, dissolved oxygen, turbidity and pH at Loon Lake Reservoir Site R-IS-3-LL, spring 2024.

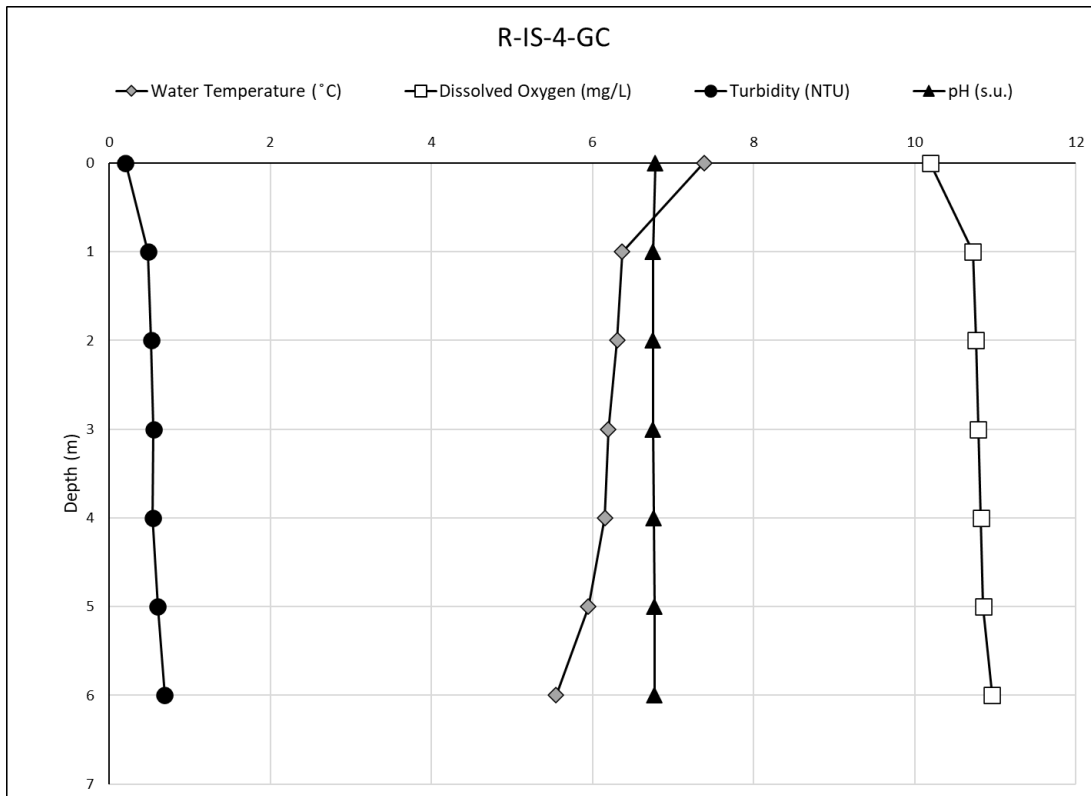


Figure E-3. *In situ* water temperature, dissolved oxygen, turbidity and pH at Gerle Creek Reservoir Site R-IS-4-GC, spring 2024.

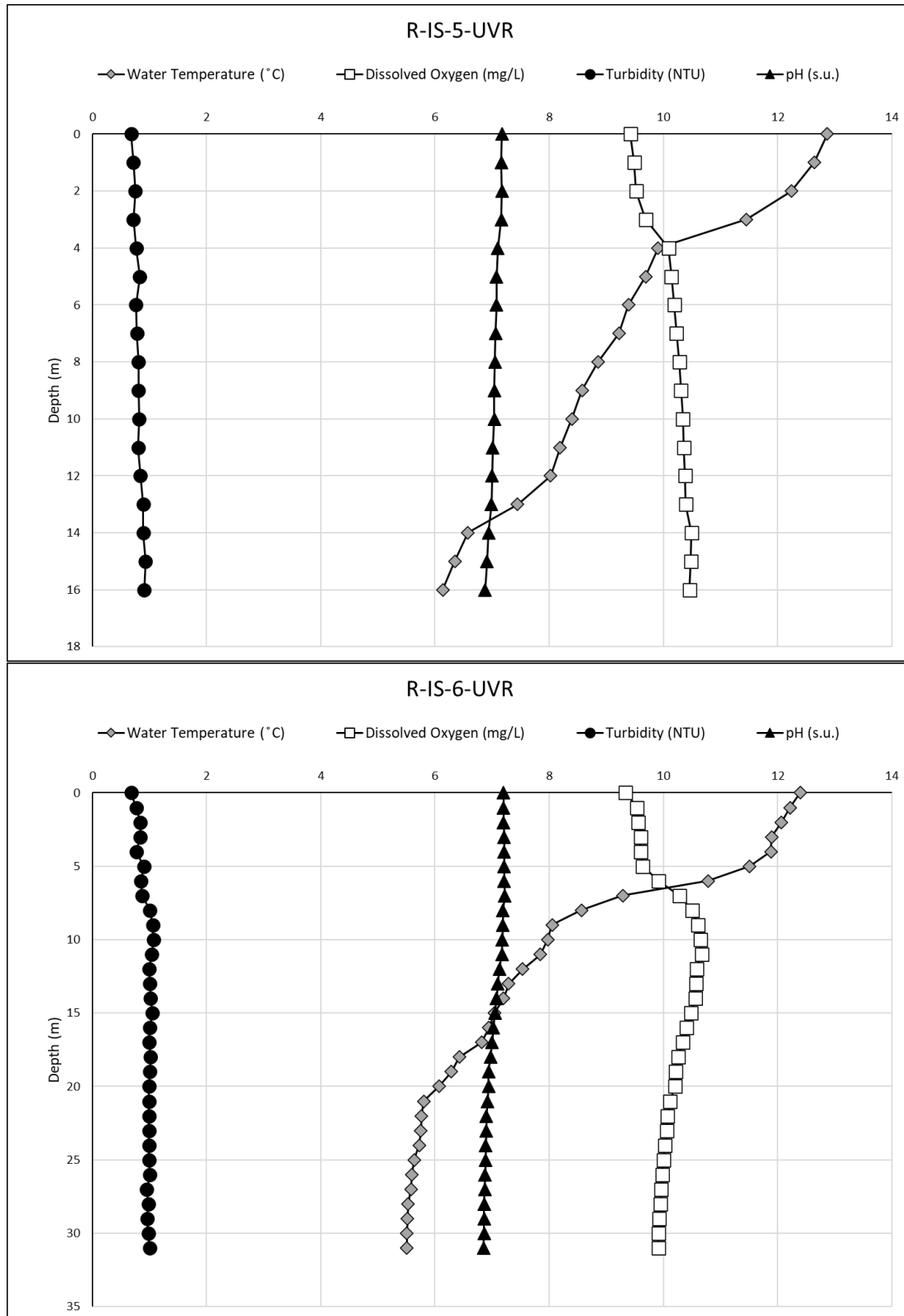


Figure E-4. *In situ* water temperature, dissolved oxygen, turbidity and pH at Union Valley Reservoir Sites R-IS-5-UVR and R-IS-6-UVR, spring 2024.

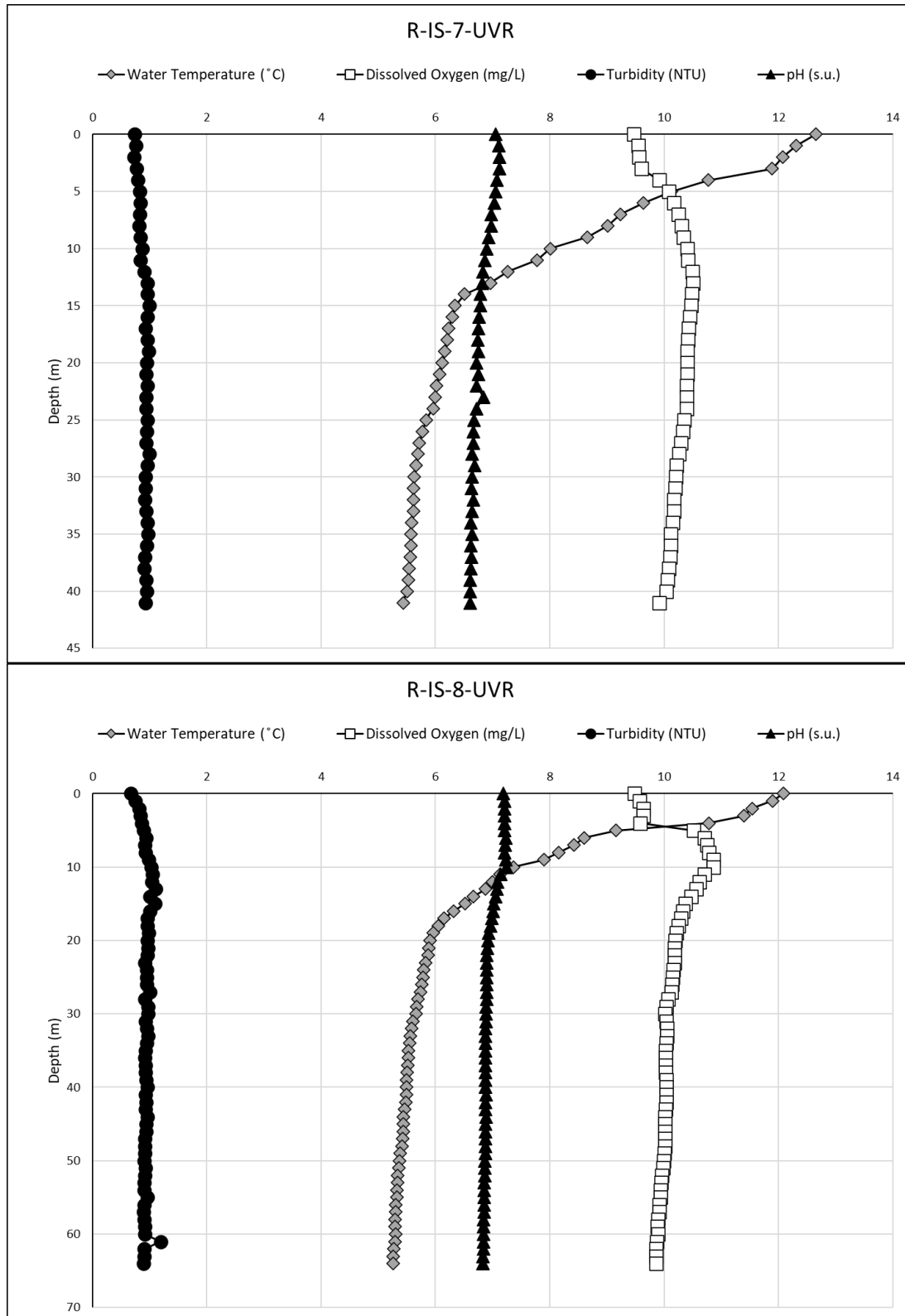


Figure E-5. *In situ* water temperature, dissolved oxygen, turbidity and pH at Union Valley Reservoir Sites R-IS-7-UVR and R-IS-8-UVR, spring 2024.

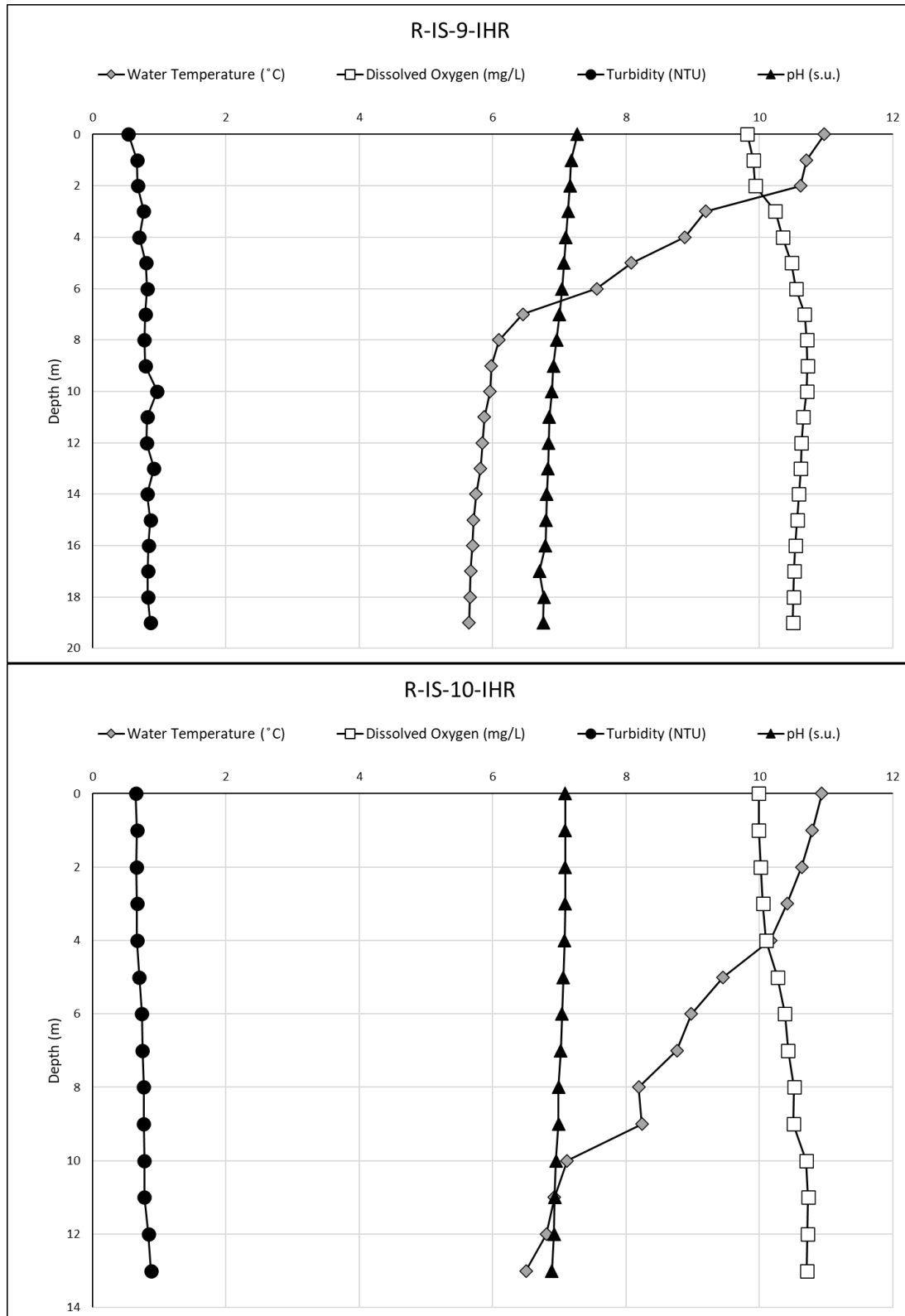


Figure E-6. *In situ* water temperature, dissolved oxygen, turbidity and pH at Ice House Reservoir Sites R-IS-9-IHR and R-IS-10-IHR, spring 2024.

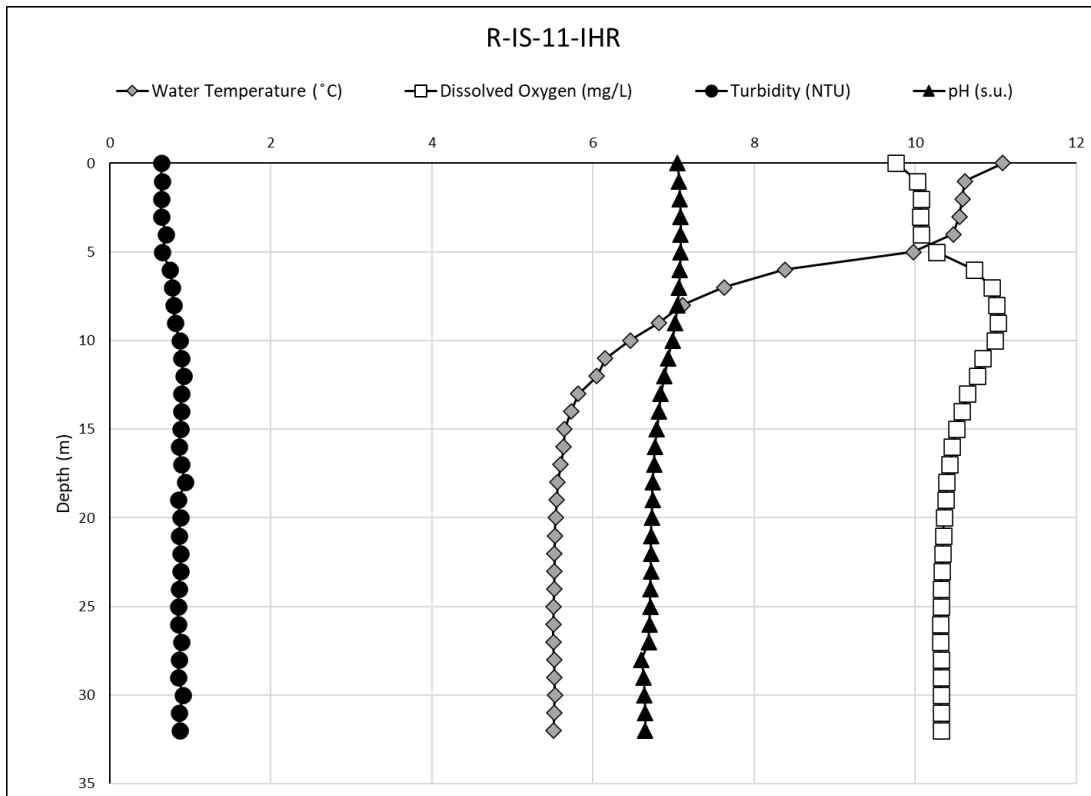


Figure E-7. *In situ* water temperature, dissolved oxygen, turbidity and pH at Ice House Reservoir Site R-IS-11-IHR, spring 2024.

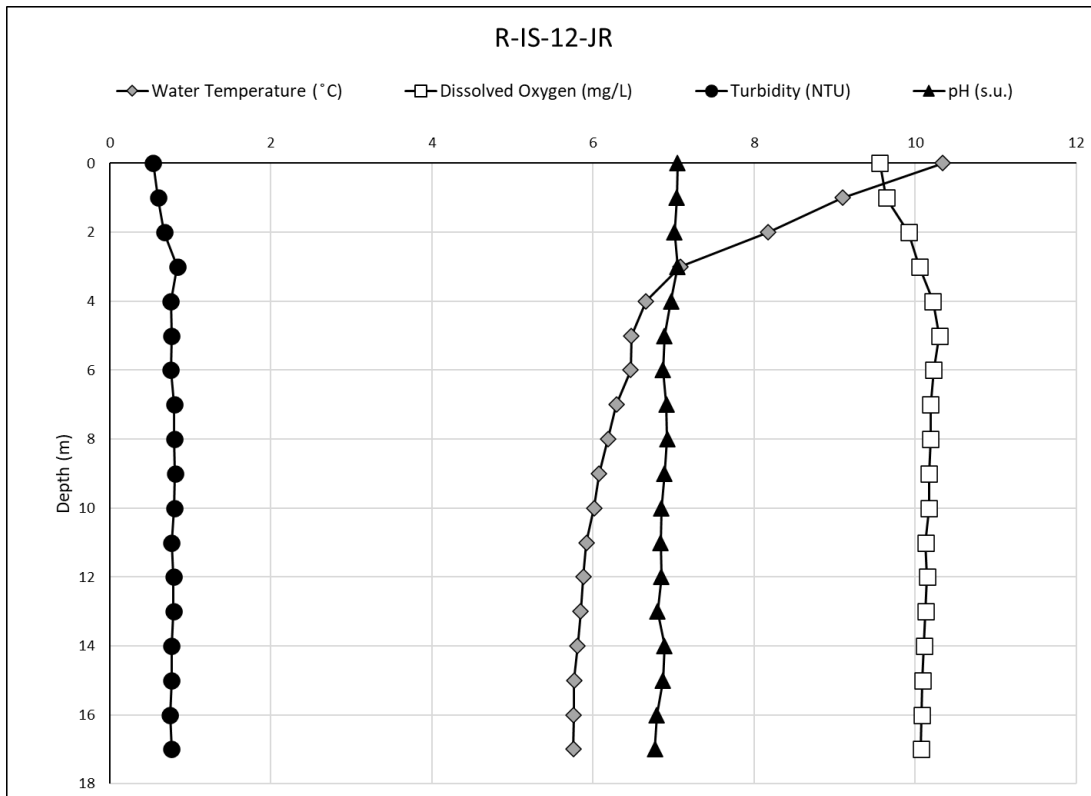


Figure E-8. *In situ* water temperature, dissolved oxygen, turbidity and pH at Junction Reservoir Site R-IS-12-JR, spring 2024.

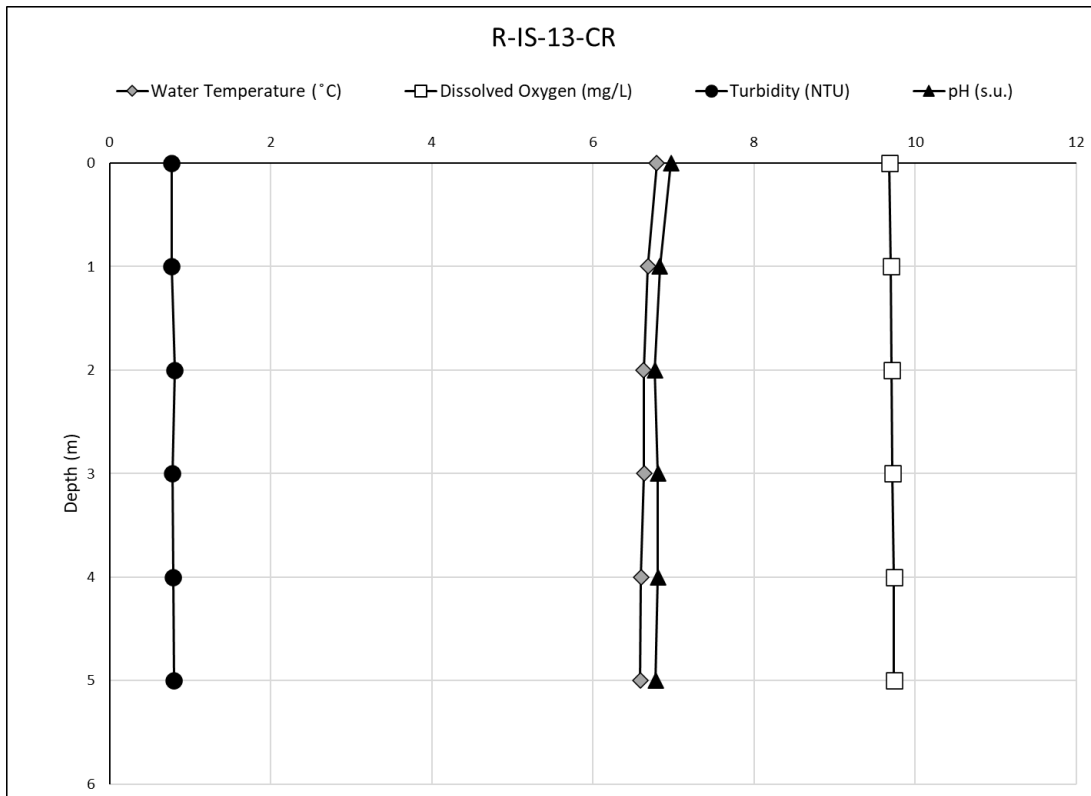


Figure E-9. *In situ* water temperature, dissolved oxygen, turbidity and pH at Camino Reservoir Site R-IS-13-CR, spring 2024.

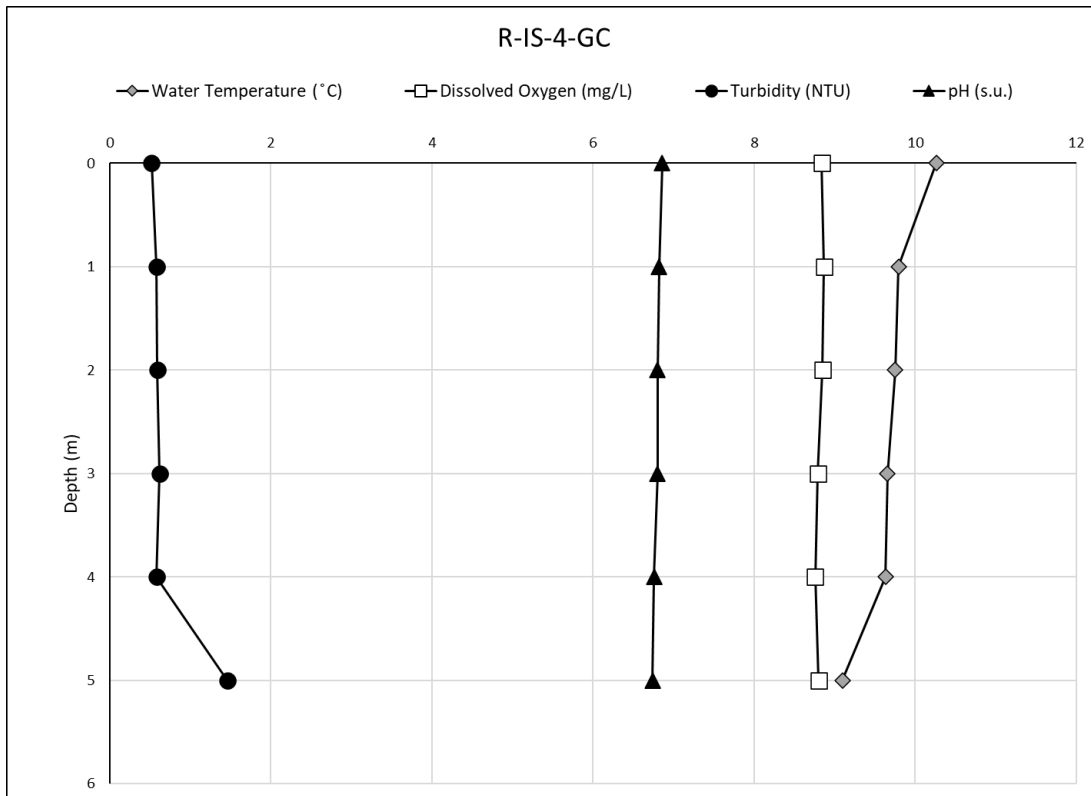
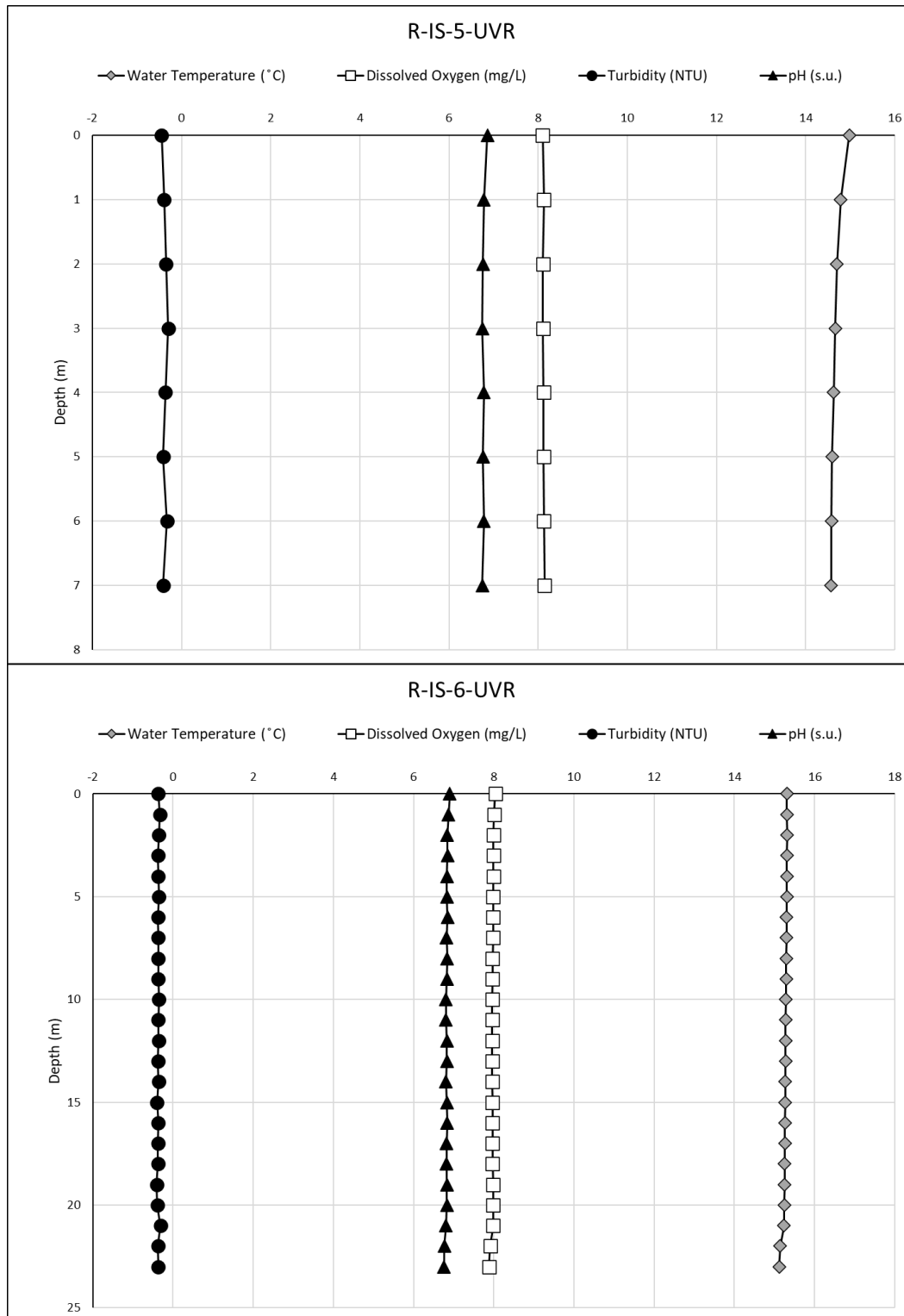
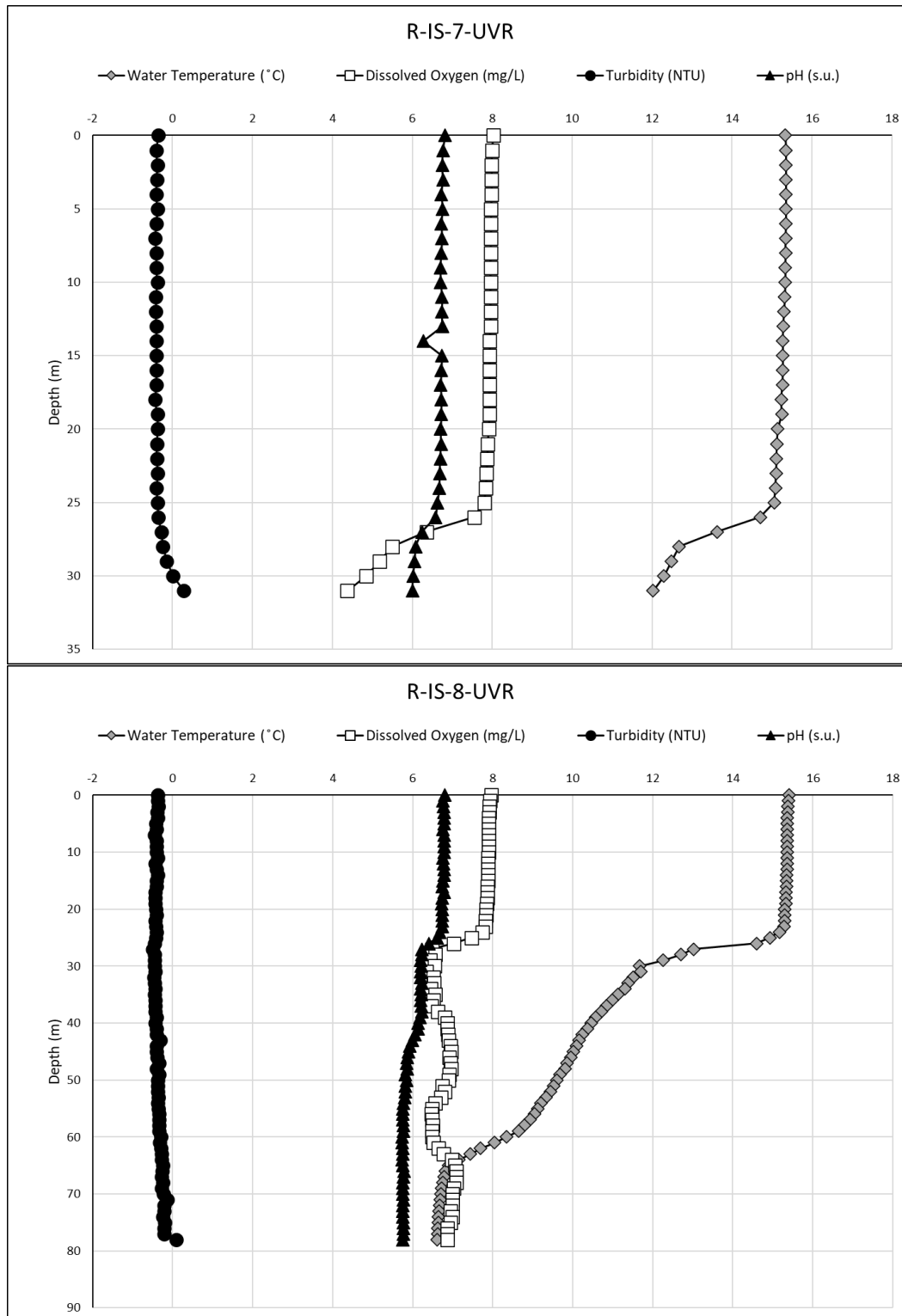


Figure E-10. *In situ* water temperature, dissolved oxygen, turbidity and pH at Gerle Creek Reservoir Site R-IS-4-GC, fall 2024.



Note: Negative turbidity results from inherent variation in turbidity of deionized water used for calibration (see Appendix D, Table D-2).

Figure E-11. *In situ* water temperature, dissolved oxygen, turbidity and pH at Union Valley Reservoir Sites R-IS-5-UVR and R-IS-6-UVR, fall 2024.



Note: Negative turbidity results from inherent variation in turbidity of deionized water used for calibration (see Appendix D, Table D-2).

Figure E-12. *In situ* water temperature, dissolved oxygen, turbidity and pH at Union Valley Reservoir Sites R-IS-7-UVR and R-IS-8-UVR, fall 2024.

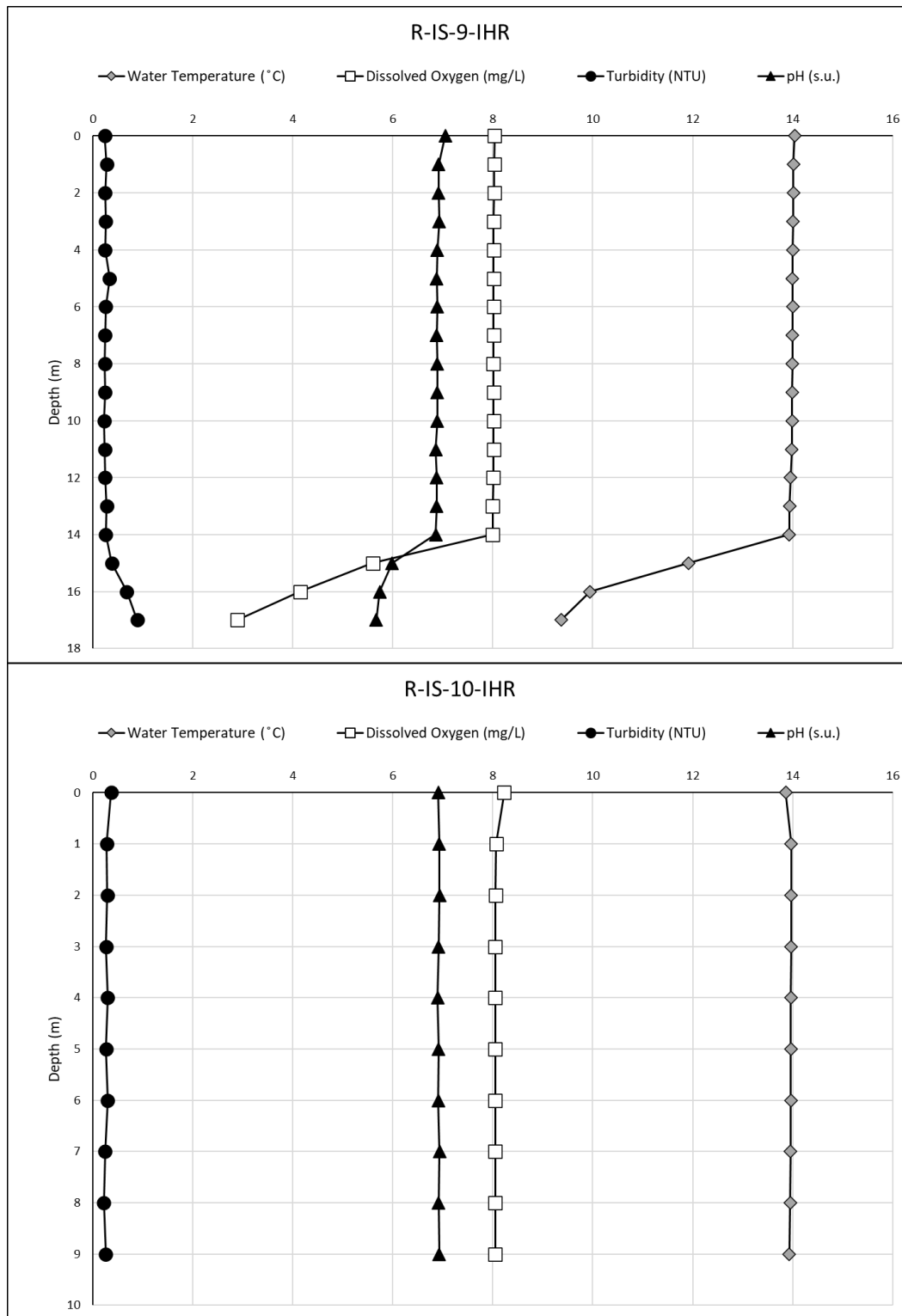


Figure E-13. *In situ* water temperature, dissolved oxygen, turbidity and pH at Ice House Reservoir Sites R-IS-9-IHR and R-IS-10-IHR, fall 2024.

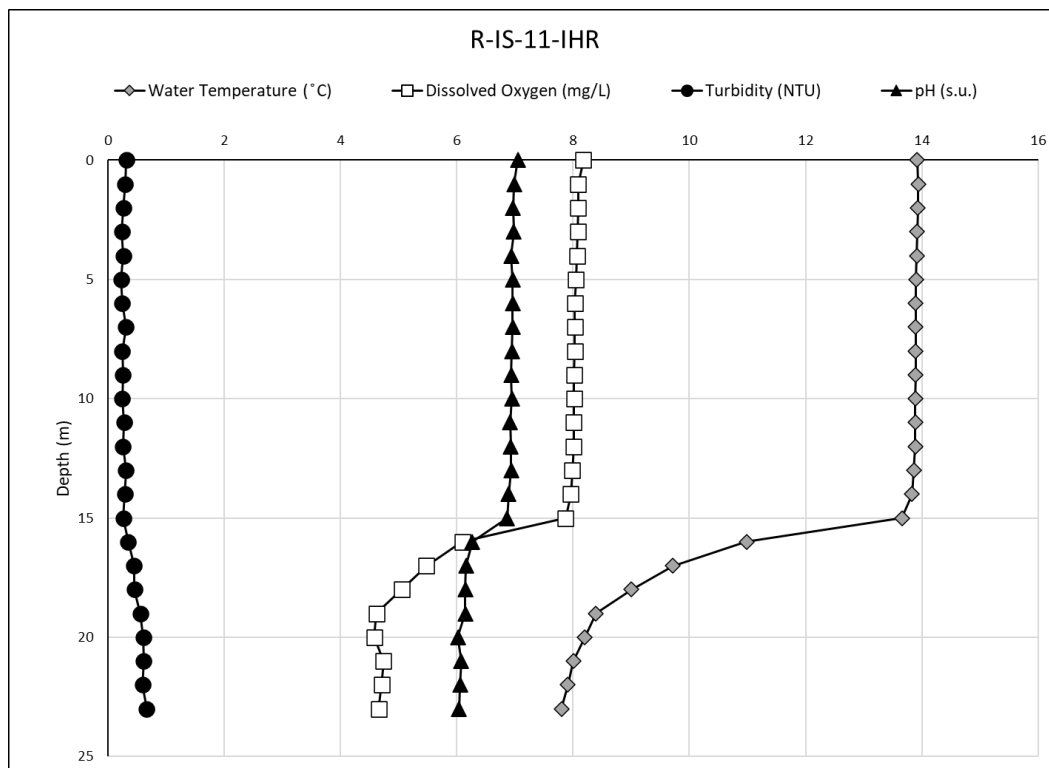


Figure E-14. *In situ* water temperature, dissolved oxygen, turbidity and pH at Ice House Reservoir Site R-IS-11-IHR, fall 2024.

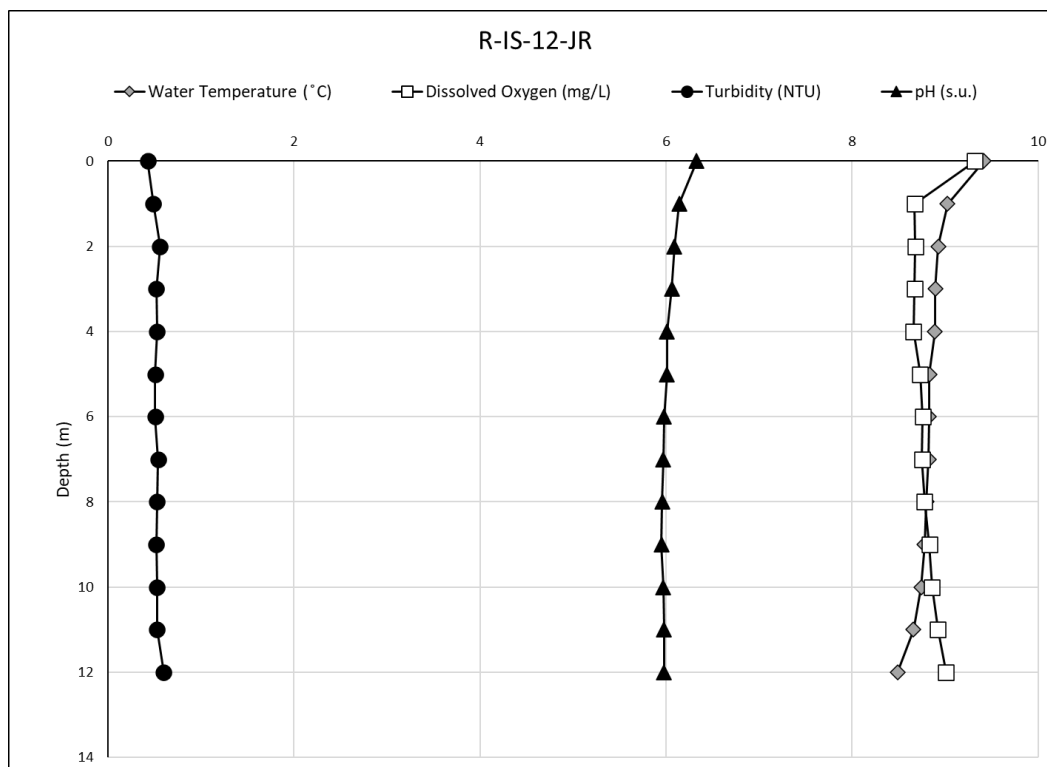


Figure E-15. *In situ* water temperature, dissolved oxygen, turbidity and pH at Junction Reservoir Site R-IS-12-JR, fall 2024.

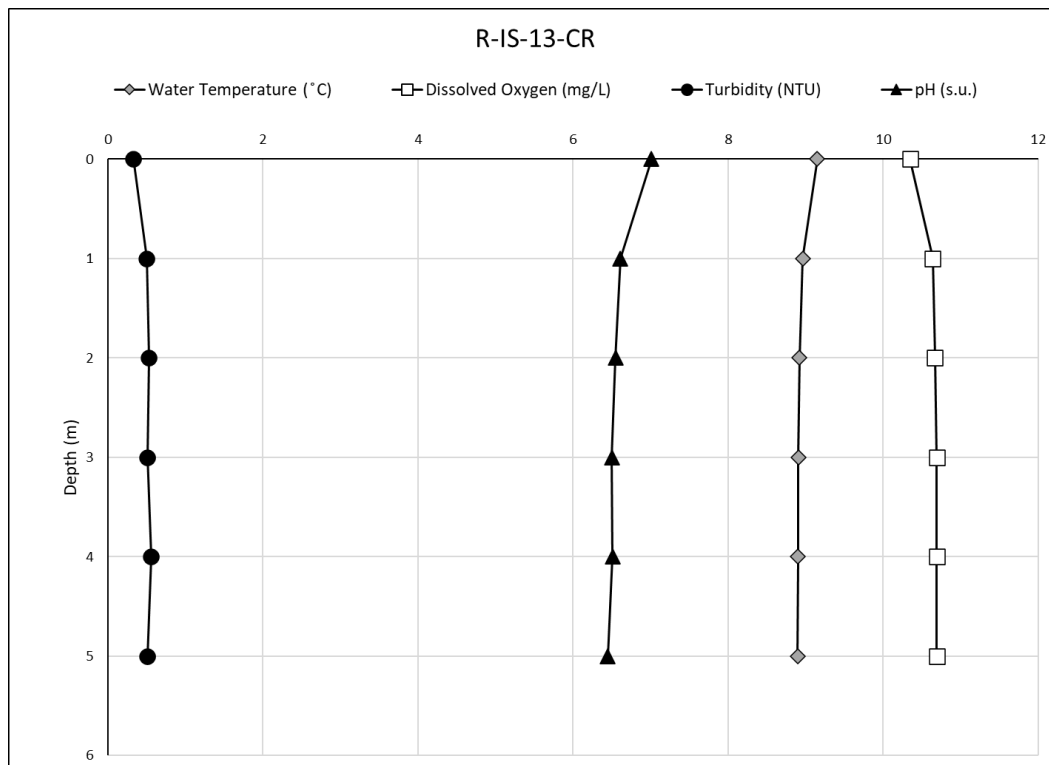


Figure E-16. *In situ* water temperature, dissolved oxygen, turbidity and pH at Camino Reservoir Site R-IS-13-CR, fall 2024.

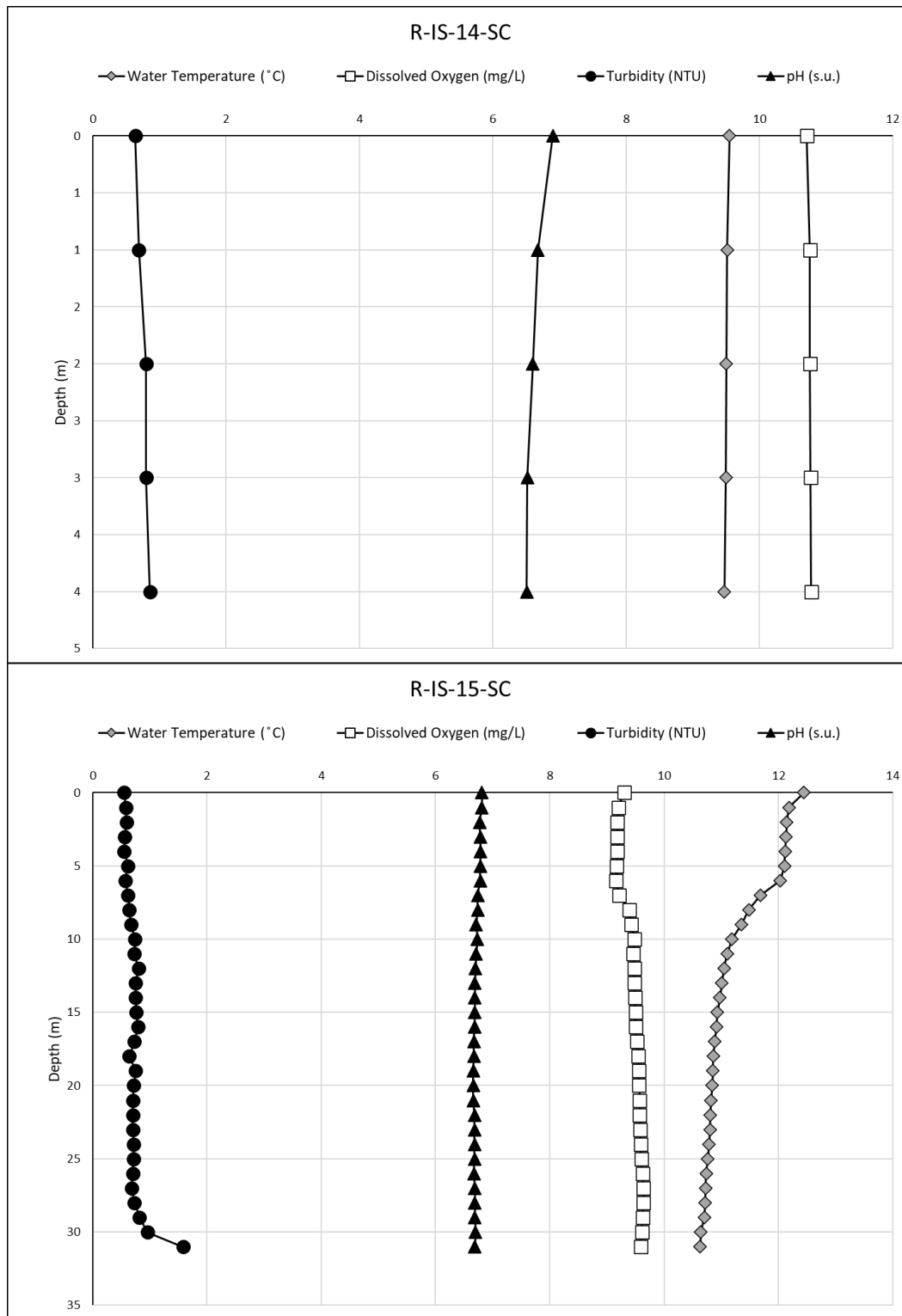


Figure E-17. *In situ* water temperature, dissolved oxygen, turbidity and pH at Slab Creek Reservoir Sites R-IS-14-SC and R-IS-15-SC, fall 2024.

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APPENDIX F

Bacteria Results for UARP Reservoir Sites

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Table F-1. Bacteria (MPN/100mL) for Upper American River Project Sites during the 30-day Period Surrounding Independence Day.

Site ID	Sample 1		Sample 2		Sample 3		Sample 4		Sample 5		Fecal coliform geometric mean ¹	<i>E. coli</i> geometric mean ¹
	Fecal coliform	<i>E. coli</i>	Fecal coliform	<i>E. coli</i>	Fecal coliform	<i>E. coli</i>	Fecal coliform	<i>E. coli</i>	Fecal coliform	<i>E. coli</i>		
Bac-5-GCR	<1.8	<1.0	33.0	5.2	15.0	7.3	33.0	3.1	350.0	488.4	22.0	7.8
Bac-6-GCR	23.0	24.3	11.0	1.0	49.0	52.9	33.0	9.8	13.0	6.3	22.1	9.5
Bac-7-UVR	2.0	1.0	7.8	6.3	63.0	27.1	79.0	83.9	7.8	6.1	14.3	9.7
Bac-8-UVR	<1.8	3.1	23.0	14.8	4.5	3.1	13.0	6.3	33.0	22.6	8.3	7.3
Bac-9-UVR	<1.8	1.0	2.0	1.0	<1.8	1.0	2.0	5.2	<1.8	<1.0	1.2	1.2
Bac-10-UVR	<1.8	1.0	2.0	1.0	22.0	5.2	2.0	<1.0	11.0	5.2	3.9	1.7
Bac-11-JR	33.0	29.2	6.8	<1.0	49.0	5.2	23.0	13.5	33.0	22.8	24.2	7.5
Bac-12-IHR	<1.8	<1.0	<1.8	<1.0	2.0	<1.0	<1.8	<1.0	6.8	1.0	1.6	0.6
Bac-13-IHR	<1.8	<1.0	<1.8	<1.0	<1.8	<1.0	<1.8	<1.0	<1.8	<1.0	0.9	0.5
Bac-14-BCR	<1.8	<1.0	<1.8	1.0	<1.8	<1.0	<1.8	<1.0	<1.8	1.0	0.9	0.7
Bac-15-SCR	<1.8	1.0	7.8	2.0	17.0	8.6	170.0	186.0	23.0	22.6	13.6	9.4
MDL	1.8	1.0	1.8	1.0	1.8	1.0	1.8	1.0	1.8	1.0	-	-
RL	1.8	1.0	1.8	1.0	1.8	1.0	1.8	1.0	1.8	1.0	-	-

Notes: MDL = method detection limit
mL = milliliter
MPN = most probable number
RL = method reporting limit

¹ Individual results less than the MDL were treated as 0.5 x MDL for the geometric mean calculations.

Table F-2. Bacteria (MPN/100mL) for Upper American River Project Sites during the 30-day Period Surrounding Labor Day.

Site ID	Sample 1		Sample 2		Sample 3		Sample 4		Sample 5		Fecal coliform geometric mean ¹	<i>E. coli</i> geometric mean ¹
	Fecal coliform	<i>E. coli</i>	Fecal coliform	<i>E. coli</i>	Fecal coliform	<i>E. coli</i>	Fecal coliform	<i>E. coli</i>	Fecal coliform	<i>E. coli</i>		
Bac-1-BI	<1.8	<1	33	<1	<1.8	<1	<1.8	<1	<1.8	<1	1.8	0.5
Bac-2-BI	<1.8	1	<1.8	<1	<1.8	<1	<1.8	<1	<1.8	<1	0.9	0.6
Bac-3-LL	<1.8	<1	23	<1	<1.8	<1	<1.8	<1	<1.8	<1	1.7	0.5
Bac-4-LL	<1.8	<1	2	<1	<1.8	<1	<1.8	<1	<1.8	<1	1.1	0.5
MDL	1.8	1.0	1.8	1.0	1.8	1.0	1.8	1.0	1.8	1.0	-	-
RL	1.8	1.0	1.8	1.0	1.8	1.0	1.8	1.0	1.8	1.0	-	-

Notes: MDL = method detection limit

mL = milliliter

MPN = most probable number

RL = method reporting limit

¹ Individual results less than the MDL were treated as 0.5 x MDL for the geometric mean calculations.